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INDONESIA

LN-1373

NUTRITION

SUPERVISION REPORTS

1980-

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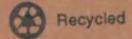


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OFFICE MEMORANDUM

~~AE/SSC 4613~~
Hi. Dewan

DATE: June 25, 1985

TO: Mr. Shiv S. Kapur, DGO

FROM: *W. Watanabe*
Yukinori Watanabe, Director, OED

EXTENSION: 32954

SUBJECT: Selective Auditing Procedure; Pass-through
Project Completion Report: Indonesia First
Nutrition Development Project (Loan 1373-IND)

1. Under the revised procedure for selective auditing, it was decided not to carry out a performance audit of the above project by OED staff. The Project Completion Report was prepared by the Population, Health and Nutrition Department of OPS. The report was sent to the Borrower on March 22, 1985 for comments. Comments which were received have been taken into account and incorporated as an annex. The report is now being released to the Executive Directors and the President.

Attachment

cc: Messrs. Husain, OPSVP
Karaosmanoglu, AENVP ✓
Shihata, LEGVP

Project Completion Report No 5757
K. I. Husain
A. Hamid
our your info
6135

INDONESIA
NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)
PROJECT COMPLETION REPORT

Population, Health and Nutrition Department
June 1985

ACRONYMS

AN	Academy of Nutrition
ANP	Applied Nutrition Program
BPGD	Village Nutrition Improvement Coordinating Committee
BAPPENAS	National Development Planning Agency
BKKBN	National Family Planning Coordinating Board
CRDN	Center for Research and Development in Nutrition
DIP	Development Budget
FNU	Food and Nutrition Unit
FTDC	Food Technology Development Center
GOI	Government of Indonesia
HVG	Home and Village Gardens
MEU	Monitoring and Evaluation Unit
MHA	Ministry of Home Affairs
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
NCBC	Nutrition Communication and Behavioral Change
NIPP	Nutrition Intervention Pilot Project
PKK	Voluntary Women's Group
REPELITA	Five-Year National Development Plan
UNICEF	United Nations Children's Fund
UPGK	Family Nutrition Improvement Program
WHO	World Health Organization

FISCAL YEAR OF BORROWER April 1 - March 31

CURRENCY EXCHANGE RATES

Currency (Abbreviation)	Rupiah (Rp)
Year:	
Appraisal Year Average (1976)	US\$1 = Rp 415
Intervening Years (1977-1982)	US\$1 = Rp 535
Completion Year (1983)	US\$1 = Rp 625

INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

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INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

PREFACE

This is the completion report of the First Nutrition Development Project in Indonesia (LN 1373-IND), which was identified by the Government of Indonesia (GOI) and Bank staff in 1973. Appraisal was conducted in August-September 1975 and its findings were presented in March 1976 to the Bank's Board of Directors for a preliminary review; in accordance with the instructions governing new projects with unique or unusual features. Based on Board comments, several components with direct linkages with agricultural productivity were added, and after a Post-Appraisal Mission in June 1976, Board approval was obtained in March 1977 for a US\$13.0 million loan. The project was originally scheduled for completion by March 1981, but was extended, and the loan account was finally closed in August 1983. A mid-term report was presented to the Board in June 1980, and an external evaluation of the project was conducted by an international team of experts in 1982. The summary and recommendations of this external evaluation report is attached as Annex 4.

This completion report was prepared by the Population, Health and Nutrition Department (PHN) and is based on a review of the Staff Appraisal Report (No. 1318-IND dated February 16, 1977), President's Report (No. P-1998-IND dated February 16, 1977), Loan Agreement (dated March 14, 1977), supervision reports, the mid-term evaluation report of June 1980, the external evaluation report of December 1982, the Government's draft completion report of June 1983, and the findings of a Bank completion mission to Indonesia in July 1983. The mid-term and external evaluation reports are available from PHN.

The Project Completion Report (PCR) was completed on July 13, 1984 and submitted to OED. The project was not selected for audit by OED and the PCR was sent to the Borrower for comments on March 22, 1985. Comments received on May 14, 1985 have been taken into account and are attached to the PCR as Annex 6.

When lending for nutrition first began, the Board felt that the Bank should proceed cautiously and with only a few projects from which it could learn. To date the Bank has financed only four nutrition projects. Projects in Brazil and Indonesia have been completed, and the project in Colombia is expected to be completed soon. These three projects approved in 1976 and 1977 were heavily multisectoral, with agriculture, water supply and sanitation, and food marketing components sometimes added to more direct nutrition actions. The India Tamil Nadu Nutrition Project, approved in 1980 was designed to concentrate on fewer actions: this project is expected to be completed in about two years time.

From the beginning, nutrition projects continued to receive substantial policy level review. As part of the review of the basic needs nutrition paper it was decided that the Bank should improve its nutrition knowledge through country economic and sectoral work. Since then, analyses of varying intensity have been completed for 16 countries. In late 1983, a major internal review of nutrition projects was undertaken within PHN. In summary this review concluded that although there was a need for more systematic and stronger emphasis on nutrition in the Bank's population and health program, the Bank would no longer be involved in complex multi-sectoral nutrition projects and only under appropriate circumstances would it finance more narrowly focused free-standing nutrition projects.

Thus, the Bank has in fact learned major lessons from its involvement in nutrition lending. Audits of these projects would hardly make additional contributions to the lesson-learning process. OED has therefore decided that it would be much more cost-effective to pass-through this nutrition PCR and undertake a special impact-evaluation type study of all four nutrition projects at some future date.

PROJECT COMPLETION REPORT BASIC DATA SHEET

INDONESIA: NUTRITION DEVELOPMENT PROJECT
(LN-1373-IND)

KEY PROJECT DATA

	Appraisal Expectations	Actual or Current Estimate	Actual as % of Appraisal Estimates
Total Project Cost (US\$ million)	26.0	22.0 ^{a/}	84.6
Loan Amount (US\$ million)	13.0	12.66 ^{b/}	97.4
Date Physical Components Completed	6/79	12/82 ^{c/}	
Economic Rate of Return	N/A	N/A	
Financial Performance	-	Good	
Institutional Performance	-	V. Good	

CUMULATIVE ESTIMATED AND ACTUAL DISBURSEMENTS

	FY78	FY79	FY80	FY81	FY82	FY83	FY84
Appraisal Estimate (US\$ million)	0.3	1.9	5.7	10.2	13.0	-	-
Actual (US\$ million)	0.0	0.1	1.2	2.8	6.0	10.3	12.66 ^{d/}
Actual as % of Appraisal (%)	0.00	0.77	9.23	21.54	46.15	79.23	97.38
Date of Final Disbursement:	August 25, 1983						

PROJECT DATES

	Original Plan	Revisions	Actual
Identification	6/73		6/73
Negotiations	1/17/77		1/17/77
Board Approval	3/23/76 ^{e/}		3/01/77
Loan Signing	3/14/77		3/14/77
Effectiveness	3/31/77		4/01/77
Closing	3/31/81	3/31/82 3/31/83	8/25/83

MISSION DATA

Mission	Month/ Year	No. of Persons	Mandays in Field ^{f/}	Specializations Represented ^{g/}	Performance Rating ^{h/}	Trend ^{i/}	Types of ^{j/} Problems
Identification I	6/73	2	60	N, P			
Identification II	7/73	1	2	E			
Preparation I	2/74	2	20	P			
Preparation II	4/74	1	10	N			
Preparation III	5/74	1	30	N			
Preparation IV	6/74	2	8	P, A			
Preparation V	9/74	2	60	N, P			
Subtotal			190				
Pre-Appraisal	3/75	7	105	N, P, F, A, E			
Follow-up	7/75	1	20	N			
Appraisal	9/75	8	260	N, F, A, E, P, T, C			
Post-Appraisal	6/76	1	20	N			
Subtotal			405				
Supervision I	8/77	3	63	N, A	1	2	-
Supervision II	4/78	3	76	N, A	2	2	N/A
Supervision III	8/78	2	56	N, A	2	2	F, M
Supervision IV	2/79	3	72	N, E	2	1	F, M
Supervision V	6/79	5	165	N, E, H	2	1	F, M
Supervision VI	9/79	3	18	N, A, F	2	2	F, M
Supervision VII	2/80	5	120	N, E, H, Fin	2	2	F, M
Supervision VIII	7/80	3	80	N, A, E	2	2	M, F
Supervision IX	11/80	3	60	N, A, E	2	1	M, F
Supervision X	6/81	3	63	N, A, E	2	1	M, F
Supervision XI	1/82	5	50	N, A, E, C	2	1	M
Supervision XII	6/82	3	36	E, P, R	1	1	M
Supervision XIII	12/82	1	2	E	1	1	M
Completion	7/83	3	3	E, P, A	-	-	-
Subtotal			864				
TOTAL			1,459				

OTHER PROJECT DATA

Borrower	Government of Indonesia
Executing Agency	Ministry of Health (MOH), assisted primarily by Ministries of Education (MOE), Agriculture (MDA), and Home Affairs (MHA)
Preceding Project	None
Follow-on project	k/

Footnotes on following page.

Footnotes

- a/ Current estimate (para. 3.18). The US\$4.0 million decrease in total project cost resulted from savings in civil works, furniture and vehicles, consultants and fellowships, staff salaries and other operating costs. The original project is estimated to have cost US\$9.3 million less than appraisal estimates (para. 3.17)
- b/ The loan was reallocated in 1981, and a number of activities were either extended or added (para. 3.17 and 3.18)
- c/ Including new activities added in January 1981 (para. 3.18).
- d/ Final disbursement, as of August 25, 1983
- e/ Data of preliminary presentation to the Board (para. 2.03)
- f/ From supervision summary sheets.
- g/ N = Nutrition; E = Economics; A = Architecture; H = Horticulture; F = Food Technology; Fin = Finance; C = Communication; P = Population and Policy Planning; R = Rural Development
- h/ 1 = Problem-free or minor problems; 2 = Moderate problems; 3 = major problems.
- i/ I = Improving; 2 = Stationary; 3 = Deteriorating.
- j/ F = Financial; M = Managerial; T = Technical; P = Political; O = Other
- k/ The second nutrition project was appraised in March 1985.

INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

HIGHLIGHTS

1. In the early seventies when the project was conceived, nutrition problems in Indonesia were widespread, with almost two-thirds of the 130 million population malnourished. Children under five years of age, and pregnant and lactating mothers were the most vulnerable group; but nutritional anemia among males was the highest ever recorded in any country during non-famine conditions. Vitamin A and iodine deficiencies were severe and endemic, particularly among children. The project, approved by the Board in March 1977, sought to overcome some of these problems. It was completed in August 1983, and met most of its objectives. An external evaluation conducted in July-August 1982 by an international team of experts credited the project with "strengthening and expanding the infrastructure for a large scale nutrition program in Indonesia" and noted the "quite impressive" impact of its action programs (para. 5.10).^{1/} As a follow-up, the Bank has recently appraised a second nutrition project in Indonesia.

2. The first project was prepared in 1973-1977; and the loan became effective on March 31, 1977, just a fortnight after loan signing. Implementation encountered start-up problems (para. 3.02), with budgetary and management difficulties (paras. 3.03 to 3.07) taking almost two years to resolve. By June 1980, however, when a mid-term report was submitted to the Board, project status and trends had started improving, and by August 1983--although two years behind schedule--the project had met or exceeded most of its appraisal targets.

3. The project objectives (para. 2.06) were to:

- (i) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation;
- (ii) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and
- (iii) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

4. Specific project components (described in para. 2.06) included, among others, activities emphasizing institution-building (paras. 4.02 to 4.05), testing and delivery of an integrated package of nutrition-related interventions in the field (paras. 4.12 to 4.15), anemia prevention and

1. All paragraph numbers refer to this PCR.

control (para. 4.19), nutrition communication and behavioral change (paras. 4.20 to 4.26), and national nutrition policy formulation (paras. 4.30 and 4.31). All these activities have been completed satisfactorily.

5. The project components originally financed from the Bank loan were estimated in 1980 at approximately US\$9.3 million less than the US\$13.0 million appraisal estimate. The loan was therefore reallocated in January 1981, utilizing \$4.9 million savings in loan funds, leaving a net savings of about \$4.4 million in total project cost. No change in objectives was required (paras. 3.17 and 3.18). The extension or addition of several new activities necessitated an 18-month extension in the loan closing date.

6. Bank contributions to the design and implementation of the project have been substantial (para. 6.01), particularly the effective policy dialogue since 1973 (para. 6.04), and the direct action-oriented nutrition interventions suggested for addition by the Board (paras. 2.04 and 6.03). However, the project could have benefited during start-up from greater attention to improving the project staff's knowledge of GOI and Bank procedures, and from more realistic implementation schedules (para. 6.05).

7. The project has demonstrated the feasibility in Indonesia of multi-sectoral (nutrition and health) field interventions whose success depends not only on inputs provided by government agencies but also on resources available locally at the village level (paras. 4.15, 4.20 and 7.02). However, substantial effort over a long period of time was needed, involving experimentation, training, technical assistance, and improvements in management systems of the agencies involved. Simpler procedures for monitoring and evaluation, closer but decentralized supervision of field activities, faster and more flexible approval mechanisms for funds and staff, and better coordination among various agencies would also have been helpful (paras. 7.06 to 7.09). Government is taking steps to improve the performance of its national nutrition program in all these areas; and it is expected that the second project, appraised in March 1985, will help expand and strengthen these efforts.

INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

I. INTRODUCTION

1.01 This completion report for Indonesia's Nutrition Development Project (LN 1373-IND) reviews project experience from June 1973 (the first identification mission by Bank staff) to loan closing in August 1983. The first four years were spent on preparation and appraisal, including a special preliminary presentation to the Bank's Board of Executive Directors in March 1976. After Board approval the following year, project implementation got off to a slow start, with initial budgetary and management problems taking almost two years to get resolved. By June 1980, however, when a mid-term report was submitted to the Board, project status and trends had already begun to show marked improvement; and by August 1983--although two years behind schedule--the project ended with a strong record of achievement, with most appraisal targets met or exceeded. More important, the project appears to have contributed substantially to the level of interest in Indonesia to the nutrition problems and, though an ongoing policy dialogue made possible by the project, to the level and quality of analysis undertaken.

1.02 When the project was first conceived, almost two-thirds of Indonesia's 130 million population were malnourished, with children under five years of age and pregnant and lactating mothers comprising the most vulnerable groups. Nutrition problems were widespread, the incidence of nutritional anemia among males was the highest ever recorded in any country during non-famine conditions, and vitamin A and iodine deficiencies (which cause blindness and goiter, respectively) were severe and endemic, particularly among children. The major reasons were inadequate and maldistributed income, high processing and storage losses, and unbalanced diets due to inappropriate feeding habits, especially of infants and young children.

1.03 Government efforts to overcome these problems were relatively small-scale and ineffective, suffering from lack of policy direction, paucity of baseline data, inadequate institutional capacity for policy formulation and implementation, and poorly trained and insufficient manpower. An evaluation conducted in 1973 found that GOI's Applied Nutrition Program in eight provinces had neither clear objectives nor target groups; the Academy of Nutrition had limited enrollment and was unable to cater to the growing need for trained nutritionists; and the Nutrition Research Institute (under the Ministry of Health) had neither the physical capacity nor the professionals, technicians, and modern equipment needed for investigating the determinants and consequences of malnutrition and suggesting cost-effective solutions. There was no organization charged with improvements in food technology, particularly for village food processing and storage. Furthermore, although the Government was interested in developing and implementing a comprehensive nationwide Family Nutrition Improvement Program (UPGK), its approach thus far to nutritional problems had been fragmented and uncoordinated, with few links between nutrition, health and agriculture. As a result, the poor neither participated in, nor benefited very much from the ongoing programs.

1.04 The project sought to address all these deficiencies. With the overall objective of helping the Government formulate and execute a more comprehensive food and nutrition program on a national scale, project activities emphasized national policy formulation, institution building, and design, testing and delivery of an integrated package of nutrition-related interventions in the field. Most of these activities were very satisfactorily completed. As a result, the project has helped lay the foundation for a much stronger nationwide program, to which the Government is already committed in its next five-year plan.

II. PROJECT IDENTIFICATION, PREPARATION AND APPRAISAL

2.01 The project was the second free-standing nutrition project supported by the Bank. (The first was in Brazil, approved six months before the Indonesian project). Government of Indonesia's (GOI) major interest in nutrition was also of recent origin. However, once the severity of the nutrition problem was recognized, both parties showed a strong commitment and willingness to collaborate on a comprehensive, multisectoral nutrition project addressing the long-term needs of the country.

2.02 A Bank mission visited Indonesia in June 1973 to initiate a dialogue with the Government, and to identify the broad outlines of a possible nutrition project. GOI was very receptive to an indepth, wide-ranging review of major nutritional issues facing the country. A Presidential Instruction (No. 14, dated 13 September 1974) directed a committee of 10 ministers, chaired by the Minister of State for People's Welfare, to "execute activities for the improvement of the people's menu on a national scale." In February 1975 an inter-departmental Technical Commission was established, headed by the Deputy Chairman of BAPPENAS (the National Development Planning Agency), to undertake detailed planning and coordination of program implementation. Six sub-committees were formed to address the following areas: policy, nutrition research, food technology, nutrition demonstration, food fortification, and training.

2.03 Project components were designed by these government committees, assisted periodically by Bank staff and experts from UNICEF and WHO. Appraisal was conducted in August-September 1975, and finalized details for the following major components: (a) strengthening and expanding the Center for Research and Development in Nutrition (CRDN, previously called the Nutrition Research Institute); (b) establishing a new Food Technology Development Center (FTDC); (c) initiating a Nutrition Intervention Pilot Project (NIPP) to test approaches for direct delivery of nutrition services in eight selected regencies; (d) developing a nutrition education (later termed the communication and behavioral change) program; (e) manpower training; (f) preparing a national food and nutrition program; and (g) setting up

a project monitoring and evaluation system. The project was presented in March 1976 to the Bank's Board of Executive Directors for a preliminary review, in accordance with instructions governing "new projects with unique or unusual features."

2.04 The Bank's Board, while generally agreeing with the broad thrust of the project -- including its emphasis on institutional development, research, and experimental activities -- emphasized the need for strengthening the project's direct and indirect linkages with agricultural productivity and production. The following activities were therefore added to the project: (a) designing and testing food storage units in 30 NIPP villages; (b) initiating a program for increasing productivity by controlling nutritional anemia on three publicly owned plantations; (c) technical assistance for the Food and Nutrition Unit (FNU) in the Ministry of Agriculture, for developing a capacity for analysis of food policy as it relates to nutrition; (d) establishing home gardens in NIPP villages, to increase production of vegetables and fruits for home consumption; and (e) training agricultural extension staff in nutrition and horticulture.

2.05 The complex and multisectoral project thus produced was approved by the Board on March 1, 1977. A loan for US\$13.0 million was signed on March 14, and became effective a fortnight later. The scheduled completion date stipulated in the Loan Agreement was March 31, 1981, thus giving a four year implementation period. A mid-term report was scheduled for presentation to the Board in two years; and loan closing was scheduled for March 31, 1982.

2.06 As described in the President's Report dated February 16, 1977, project objectives and description were as noted below:

Objectives

- (i) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation;
- (ii) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and
- (iii) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

Description

- (i) Strengthen institutional capacities:

- (a) Expand the Center for Research and Development in Nutrition (CRDN) under the Ministry of Health through the provision of funds for additional staff, training, technical assistance, necessary equipment, and a modest expansion of physical facilities.
- (b) Strengthen the Food Technology Development Center (FTDC) at the Agricultural University, Bogor, with provision of funds for facilities, equipment, technical assistance and staff.
- (c) Improve the planning, coordination and evaluation of nutrition activities through technical assistance to the Ministries of Health, Education and Agriculture.

(ii) Direct Nutrition Action Programs:

- (d) Initiation of a Nutrition Intervention Pilot Project (NIPP) through the provision of funds for additional staff, training, technical assistance, buildings, equipment and materials. These programs would provide nutrition, education, agricultural, health and food supplementation services to those people most affected by malnourishment in 180 villages of seven districts with a population of approximately 740,000.
- (e) Increase production of nutritious vegetables and fruits in about 18,000 home/village gardens by provision of improved seeds, development of model garden packages and intensification of extension efforts.
- (f) Improve food storage at village level through assistance to the Food Technology Development Center which would, in collaboration with the Ministry of Agriculture, develop an appropriate small-scale storage program.
- (g) Initiate an iron supplementation program under the National Institute for Industrial Hygiene and Occupational Health to tackle nutritional anemia among 3,000 families in a selected number of plantations with a view to developing a national program to cover all government and privately owned plantations.

(iii) Education and Training:

- (h) Develop and test alternative nutrition communication methods to bring about desirable changes in nutrition behavior.

- (i) Upgrade and expand the training of nutritionists in the Academy of Nutrition at Jakarta by provision of equipment, staff and necessary physical facilities.
- (j) Improve the training of agricultural extension staff by introducing nutrition in the curriculum of the basic training centers and the secondary agricultural schools of the Agency for Education, Training and Extension.

(iv) National Food and Nutrition Plan:

- (k) Provide technical services for the formulation of a national food and nutrition program incorporating the most effective elements of the nutrition activities initiated under the proposed project.

2.07 The breakdown of total project cost of US\$26.0 million and Bank loan of US\$13.0 million was as tabulated below:

A. Estimated Project Cost by Component/Activities

Center for Research and Development in Nutrition (CRDN)	\$5.9 m
Food Technology Development Center (FTDC)	\$5.5 m
Direct Nutrition Action Programs	\$3.5 m
Nutrition Education	\$1.0 m
Nutrition Training	\$1.7 m
Organization and Management	\$1.0 m
Formulation of National Food and Nutrition Program	\$0.2 m
Physical Contingencies	\$1.2 m
Price Contingencies	<u>\$6.0 m</u>
Total Project Cost	<u>\$26.0 m</u>

B. Loan Allocation by Expenditure Categories

	<u>Amount</u>	<u>Percentage</u>
Civil Works	\$6.0 m	46%
Vehicles and Equipment	\$3.0 m	23%
Technical Assistance	\$3.0 m	23%
Unallocated	<u>\$1.0 m</u>	<u>8%</u>
Total Loan	<u>\$13.0 m</u>	<u>100%</u>

2.08 The management of each component was to be carried out through existing organizational channels of the Government of Indonesia. (See Annex 1 for organizational chart of project arrangements). Briefly, project organization and management was to be as follows: (a) a part-time Project Director in the Ministry of Health responsible for overall coordination and implementation, assisted by a full-time Project Secretariat (with a Project Manager -- later called Executive Secretary, a Deputy Project Manager -- later Deputy Executive Secretary, a Finance Officer and a Procurement Officer), and further assisted by a full-time management adviser for two years, a procurement adviser, and planning consultants; (b) three Project Co-Directors, one each from the Ministries of Education (MOE), Agriculture (MOA), and Home Affairs (MHA); (c) a separate Monitoring and Evaluation Unit (MEU) reporting directly to the Project Director; (d) the CRDN and FTDC administered by their respective Directors, assisted by special finance and procurement officers; (e) an interagency Research and Coordinating Committee; (f) the NIPP component administered by a national level NIPP Coordinator within MOH, reporting to the Project Director, and assisted by suitable staff; (g) NIPP administration at the provincial and kabupaten levels by the Nutrition Improvement Coordinating Committees, reporting to the Provincial Governors and Bupatis respectively; (h) anemia prevention and control administered in the field by the National Institute for Industrial Hygiene and Occupational Health, through the respective regional institutes under the Ministry of Manpower, Transmigration and Cooperatives, in close collaboration with MOA and MOH, (i) training and nutrition education by the Center for Manpower Education and Training in MOH; (j) civil works by the engineering division of MOH; and (k) preparation of a national food and nutrition program by the Project Director, assisted by the MEU, in close collaboration with CRDN, FTDC, the planning bureaus of MOH and MOA, the FNU, and BAPPENAS.

III. PROJECT IMPLEMENTATION

3.01 Project implementation is discussed below in two parts. Section III gives an overview of the general activities undertaken in support of virtually all components, and discusses the problems faced during 1977-79; and Section IV reviews project accomplishments by component, up to their completion in March 1983.

3.02 Project Start-up. Budgetary and management problems emerged soon after loan effectiveness, primarily because this was the first Bank-assisted project in the Ministry of Health and project staff were inexperienced in managing a large foreign-funded multisectoral project. Time was needed for mastering GOI procedures for budget release, Bank procedures for disbursement

and procurement, and organizational procedures for inter-agency coordination. A devaluation of the rupiah by about 50% in November 1978 added to the burden, by necessitating renegotiation of civil works contracts and retendering for equipment and supplies. Technical assistance from advisers and consultants, which was supposed to fill the experience-gap and to provide the needed professional support, also got delayed. The start-up period was thus stretched to almost two years. By March 31, 1979 -- the mid-point of the expected four year implementation period -- only \$100,000 was disbursed, against an appraisal estimate of \$1.9 million.

3.03 Budgetary Procedures and Disbursements. GOI's budgetary regulations and procedures were a source of many problems. Since the various project components were being implemented through different ministries, each component manager had to become adept at anticipating and overcoming procedural bottlenecks. Three examples are given below. First, the development budget (DIP) for the project had two parts -- DIP Murni (expenditures financed only out of GOI funds), and DIP Supplement (expenditures financed by GOI but reimbursed by the Bank) -- and the percentages of the total allocated to the two DIPs had to exactly match the disbursement percentages detailed in the Loan Agreement. Failure to achieve such matching resulted in time-consuming discussions between BAPPENAS, the Ministry of Finance, Bank of Indonesia, the project management and component heads. The original DIPs for 1977-78 did not match, and the process of revision was not completed until February 1978, reflecting the complexity of procedures and inexperience of project staff. The problem recurred in 1978-79. In addition, the arrangements made by the Ministry of Finance for pre-financing the DIP Supplement were found to be complicated and time consuming. As a result, no major project activity could be financed during the first year of implementation; and no withdrawal applications were submitted to the Bank that year for reimbursement.

3.04 Second, carryover funds could only be used after a specific authorization letter was issued; and this could not be done until after the DIPs for the current financial year -- which themselves were delayed by 3 to 6 months -- had been approved. Third, subsequent to the devaluation of the rupiah, prices rose sharply but contracts could not be renegotiated until BAPPENAS had issued instructions on how cost-escalation was to be worked out, and this took time. When the instructions were finally issued, even though prices of building materials had risen by about 80% and gasoline by 37%, GOI agreed to raise contract values by only 38%; and this was not satisfactory to contractors who either slowed down or stopped work altogether.

3.05 It was only after intensive discussions between Bank staff, project management, and officials of the Ministry of Finance and BAPPENAS that government simplified some budgetary regulations and permitted greater flexibility in others. By 1979, project staff became familiar with Bank

procurement procedures and GOI civil works contracting. BAPPENAS officials chaired regular meetings of the project finance officers and helped reduce the lag in submitting withdrawal applications (in early 1979, for instance, \$1.5 million had been reimbursable but had not been applied for). From 1980 onwards, although procedural delays due to the general budgetary regulations remained, project-specific problems were substantially overcome. Disbursements rose sharply from \$1.5 million in June 1980 to \$3.9 million a year later, and to \$7.0 million by June 1982 (Annex 2). The loan account was finally closed on August 25, 1983, eighteen months behind schedule, with \$12.66 million disbursed and the unspent balance of \$337,500 cancelled.

3.06 Organization and Management. Problems of project administration stemmed from a variety of factors, including the following: project complexity and the need for multi-agency coordination (due partly to board add-on, see paras. 2.04 and 6.02), inexperienced staff, delays in appointing consultants, and the organizational status of the Project Secretariat. Bank missions noted in 1978-79 that "the complexity of the project demanded that the staff of the secretariat function as a team, be fully familiar with all project aspects, devote full time to the project, and work closely with component officers in Jakarta and in the provinces." However, despite repeated recommendations that project officials interact more fully and frequently with component staff and officers of various ministries and BAPPENAS, inter-departmental coordination remained weak throughout project implementation.

3.07 The major problem during the crucial early years was weak leadership: a part-time Project Director loaded with other responsibilities and having limited time, and a relatively junior Executive Secretary who could not provide the forceful leadership essential for a multisectoral project. The Project Secretariat -- despite appraisal recommendations to the contrary -- was not integrated with the Ministry of Health, could only hire staff on fixed-term contracts, was unable to match the salaries prevalent in the open market, did not attract qualified senior civil servants, and did not receive its own budgetary allocations (DIPS). In addition, the monitoring and evaluation unit, necessary for a project with experimental activities, was not adequately staffed for over two years despite repeated assurances given to visiting Bank missions; and recruitment of advisers was delayed until 1979 due to strong political opposition to hiring highly paid expatriate consultants.

3.08 Most of these problems were resolved just prior to the mid-term review, after considerable follow-up by Bank staff. A number of corrective actions were taken, the most important being the following: the Deputy Executive Secretary replaced the former Executive Secretary who was transferred; an economist was hired for the monitoring and evaluation unit; a local firm of management consultants was hired to conduct a management audit, design the monitoring system, and provide planning advice; a new

Director of Nutrition was appointed in MOH and was given the concurrent responsibility for coordinating the NIPP component; the interagency coordinating committee was re-established by BAPPENAS; the Project Director, who was also assigned the responsibilities of Project Manager, was instructed by the Minister of Health to give higher priority to solving implementation problems; expatriate consultants were appointed for procurement, finance, and overall project management; the Nutrition Directorate was reorganized to absorb the Project Secretariat and MEU; and in the field, component agencies started cooperating actively after regency administrators and provincial governors began taking direct interest in the project. As a result of these changes, project management improved considerably, and implementation progress was relatively rapid after 1980.

3.09 Civil Works and Procurement. As mentioned in para. 2.07, \$6.0 million was allocated for civil works, and \$3.0 million for procurement of vehicles and equipment. Preparation of architectural drawings, design specifications, cost estimates, and invitations to bid were to be completed early in 1977, in the hope that construction could begin by May 1977 and be completed by June 30, 1979. GOI procedures for bidding, construction, contract control, and general and on-site supervision were to be used, following the practices of the Ministry of Works. Procurement was to be undertaken in accordance with standard Bank and GOI regulations, as specified in the loan agreement.

3.10 Contract documentation was in fact prepared according to schedule, but because of budgetary problems already mentioned the contracts for civil works were not awarded until August 1978, and for provision of fittings and utilities a few months later. Furthermore, construction contracts had to be renegotiated after the devaluation of the rupiah, and procurement of equipment had to be retendered. Construction activities fell behind appraisal schedules by about one year, and equipment procurement and provision of services (including gas, electricity, water) by almost two years. By mid-1979, even though construction of CRDN and FTDC buildings had started, no payments had been made to contractors. The payment of \$50,000 towards retroactive financing of consultant architects was also held up for two years after the work was completed, largely due to delays in contract finalization. As a result, virtually all other project components were correspondingly delayed, and sequencing and scheduling of activities had to be revised several times.

3.11 Procurement committees were particularly slow in bid evaluation; and by the time government approval was obtained, price validity periods were generally exceeded, providing suppliers an easy excuse for not maintaining prices. Despite the resultant price increases, however, total costs remained well below the provisions made in the loan agreement, primarily because BAPPENAS had sanctioned expenditures for buildings

constructed to lesser architectural standards than those assumed in the Appraisal report. This, together with the effects of devaluation, resulted in considerable savings, which were then utilized for additional buildings and equipment, including a new Nutrition Assistants Training Center sanctioned in 1981 as part of a general loan reallocation exercise.

3.12 Technical Assistance. Since one of the primary aims of the project was strengthening institutions and personnel capabilities, \$3.0 million out of loan funds was allocated for consultant's services, fellowships and salaries of local experts. Assistance from expatriate and Indonesian consultants was expected to help virtually all project components in setting up systems for planning, monitoring and control. Consultants were also to be hired for technical design and development work, especially for CRDN, FTDC and NIPP. Fellowships of varying durations, both local and foreign, were meant to upgrade the technical competence of staff at all levels. Roughly equal amounts were allocated for consultants and fellowships, but the funds for technical assistance were spread out according to need over the various project components.

3.13 There were initial delays of one to two years in arranging fellowships and long term training, partly due to inappropriate and rigid procedures for obtaining Bank approval (see para. 6.06). However, once satisfactory procedures were established, progress was smooth and appraisal targets were met. Twenty-four of CRDN's staff members received long term training (3 Ph.D, 19 MS, and 2 BS), and only three persons failed to acquire the degree attempted. Twenty-three staff members from FTDC earned their degrees or diplomas (4 Ph.D, 16 MS, 3 BS and 14 diplomas). Personnel from other components such as Nutrition Communication and Behavioral Change (NCBC), NIPP and the Project Secretariat also availed themselves of fellowships, as envisaged in the appraisal report. Most long-term training was undertaken in Indonesia, due to various factors: difficulties in securing admission to foreign universities (because staff lacked proficiency in English, and some degrees earned earlier in Indonesia were not recognized abroad), strict government regulations regarding minimum service requirements prior to such training, and difficulties in obtaining leave of absence from regular jobs. A few fellowships were, however, undertaken abroad -- in the Philippines, England, Holland, and the USA. Short-term training was also received by a number of project staff, both locally and abroad.

3.14 Of the 40 man-years of consultants envisaged under the project, 17 man-years were allotted for foreign experts. The latter were generally difficult to obtain: senior consultants were not available for long duration contracts, and negotiations and approvals took unduly long, partly due to the low fee structure approved by BAPPENAS. As a result, most expatriate consultants, could only be hired during the second half of the project, and a number of consultants visited more than once, for short periods. Local consultants, were also governed by GOI's ceilings on fees, were easier to arrange and were used wherever appropriate.

3.15 At CRDN, 19 consultants (including 2 on long-term contracts) provided over 30 man-months of service, helping to develop technical programs and staff. At FTDC, 14 (mostly junior) consultants were hired for 85 man-months of work; but unexpected delays in the provision of infrastructure and procurement of equipment forced a bunching of consultants during the last years of implementation, thus reducing their overall contribution to related project components. At the Academy of Nutrition, 30 man-months of consultants were used for manpower training, planning, and laboratory research; and at the Project Secretariat, 84 man-months were used for planning, procurement, and management. In addition, short-term local and foreign consultants were used for preparing a background policy paper which served as the primary input for formulating a national food and nutrition program for REPELITA IV.

3.16 Most of the consulting services obtained were found to be relevant and useful: over two-thirds of the expatriate consultants came from developing countries (notably India and the Philippines). Four of every five consultants to the FTDC, Academy of Nutrition, and project secretariat were from developing countries, as were a third of those who aided the CRDN. Indonesian consultants were generally experienced and knowledgeable about local conditions and needs. The scientific and technical calibre of consultants was high, and most of their recommendations have been implemented, subject to limitations of funding. Advice on field-oriented systems improvement, primarily for monitoring and evaluation of NIPP and anemia prevention and control was provided by a local consultant group, and was very pragmatic and useful. Further refinements in the system suggested by consultants are being made on the basis of field experience, and should help improve the overall performance of direct-action programs.

3.17 Loan Reallocation. In 1980 it was estimated that project activities would cost approximately \$9.3 million less than the appraisal expectation. The cost reduction was mainly due to the 50% devaluation of the rupiah, the use of lower construction standards, and the reduced use of technical assistance. GOI officials suggested that the successful project activities be expanded and some money be reallocated between expenditure categories. Accordingly, a loan reallocation was done in January 1981. It utilized the \$4.9 million savings in loan funds, thus leaving a net savings of \$4.4 million in total project cost. No change in objectives or scope of the project was required. Since the total project cost had gone down while the loan amount remained the same, the loan as a percentage of total costs went up from 50% at appraisal to 60%. An 18 month extension in the project completion date was also approved.

3.18 Allocations for some components were increased by the following amounts: nutritional anemia pilot project by \$1.3 million (for expanding operations from 3,100 to 75,000 plantation workers, including workers covered by the Bank-funded transmigration project); manpower training by \$2.0 million (for constructing a new four-story Nutrition Training Center);

nutrition intervention pilot project by \$1.0 million (to cover an additional 372 villages); and nutrition communication and behavioral change by \$0.6 million (for supply of newly designed communication materials). At the same time, allocations for CRDN and FTDC were reduced by \$4.4 million and \$2.2 million respectively, and minor reductions were made in the other remaining components. As a result, the loan allocation for civil works went down from \$6.0 million to \$3.5 million, while funds earmarked for vehicles, equipment, and supplies went up from \$3.0 million to \$6.0 million. No changes were made in the percentages of expenditures financed in each category. The final project cost is estimated to be about US\$22.0 million. Actual figures have not been compiled at any central accounting office in MOH, partly because the various components were implemented by different agencies who maintained their own accounting records.

3.19 Accounts and Audit. Section 4.02(b) of the loan agreement stipulated that all agencies participating in the project maintain separate accounts for it, and that an accounting unit within MOH be responsible for consolidating these accounts. Though such accounts were maintained, the accounting procedure followed did not disaggregate expenditures by source of funds (DIP Murni, DIP Supplement and Direct Payments). After several requests by Bank missions, a uniform reporting format was circulated to all concerned finance officers, and accounting practices were improved.

3.20 Despite this progress, annual audit reports were considerably delayed (see Annex 3 on compliance with loan covenants). Section 3.05(d) of the loan agreement required that these audit reports be furnished to the Bank within 6 months of the close of each fiscal year; but the first certified reports were submitted only in 1981 -- after the Bank insisted that the loan allocation be made conditional upon receipt of the pending audits. The delays were apparently traceable to a procedural omission: while DIP Murni accounts were routinely audited by state auditors, special instructions were needed for auditing the DIP Supplement as well. However, even after this oversight was corrected reports for subsequent years were delayed by 1 to 2 years.

IV. PROJECT ACCOMPLISHMENTS

4.01 A mid-term report was submitted to the Board in June 1980 (para. 2.05). The project was also evaluated comprehensively in July 1982 by an independent team of internationally renowned nutrition experts. Their report (see Summary and Recommendations attached as Annex 4), the Government's own analysis of the project, and various other studies and documents have been used for arriving at the assessments given below. Since initial difficulties in construction, procurement, technical assistance, and organization and management were common to all components and have already been reviewed in Section III, these issues are not dealt with again. Instead, the discussion highlights the major objectives and accomplishments of each project component.

A. Institution Building

4.02 Three institutions were supported under the project -- the Center for Research and Development in Nutrition (CRDN), the Food Technology Development Center (FTDC), and the Academy of Nutrition (AN). Funds were provided for civil works, equipment, staff, training, and technical assistance. Most of the physical and quantitative targets set at appraisal have been met or exceeded, though delayed by the administrative constraints discussed earlier. The three institutions have contributed to the project's direct-action programs; and are now helping other government agencies (primarily the Ministries of Health, Education and Agriculture, BAPPENAS, and the central Nutrition Working Group) in planning and evaluating nutrition-related programs at the national level.

4.03 Center for Research and Development in Nutrition. CRDN's research was expected to be applied and interdisciplinary, focusing on evaluation of the integrated nutrition intervention program, investigation of foods with high nutritional value, and studies leading to general recommendations for strategies to improve nutritional status. The Center has undertaken a number of studies on NIPP, including the baseline data survey in 1977, the follow-up three years later, the technical design of data collection procedures for monitoring NIPP, and an assessment of their suitability for nationwide use. Other studies include evaluation of the following: the government's basic model UPGK program in 21 kabupatens of 6 provinces, the nutrition component of primary health care, and the nutrition anemia control pilot project. The quality of these studies has been variable.

4.04 Strengthening the nutrition research center was a slow process, requiring major technical assistance from foreign consultants. The center is now considered the best of Indonesia's five medical research institutes and the work of some of its staff meets international standards. But CRDN is not yet consistently capable of evaluating nutrition work effectively enough to be useful for the planning agency; that is one of the disappointments of the project. In short, the CRDN has made great gains in five years and now has facilities, equipment, and most other prerequisites to meet international standards but has yet to regularly achieve that level.

4.05 Now that project inputs (facilities, equipment, staff) are in place, CRDN's research activities can be expected to expand in the future. However, since staff is already thinly spread over several concurrent investigations, increased selectivity in accepting research requests and in determining the Center's work program is needed, so that scarce professional resources and funds are used only for high-priority nationally significant research. Greater emphasis on socio-economic analysis of alternative nutrition strategies and on monitoring of existing programs -- both of which were key project objectives for CRDN -- is also warranted.

4.06 Food Technology Development Center. FTDC's specific functions under the project were the following: to serve as the main source of information and advice on appropriate village-level food technology; provide training for food technologists and extensionists; identify problems and opportunities associated with food conservation, preservation and processing; advise the government on food and nutrition issues; and support the education and research programs of its parent organization, the Bogor-Agricultural University under the Ministry of Education. Most of these functions have been satisfactorily performed, although after considerable initial delay. Built with project funds, FTDC now has a highly qualified staff of 84 (including 9 Ph.Ds and 10 with Masters degrees), a modern well-equipped laboratory and pilot plant, and good library and documentation facilities. Consultants, both long and short-term, have helped the Center formulate and execute research and development activities, and train staff. Also, senior staff of FTDC have fulfilled their teaching obligations to the Bogor Agricultural University.

4.07 The Center's involvement with the project's direct-action activities has been very useful. Baseline surveys were conducted in NIPP areas to collect information on food production, storage, eating habits and unmet nutritional needs. The data were then used for designing and testing several cereal-legume based recipes (BMC) for supplementary feeding and weaning of malnourished children in the NIPP areas. Equipment for village level formulation and storage of BMC was designed, fabricated and tested; after which a private manufacturing firm was licensed to produce and supply the equipment to NIPP areas. Although the size of BMC units is reported to be too large -- something the Ministry of Agriculture's extension agents should have pointed out at the pilot stage -- and the quality of the equipment is uneven, several hundred units have been installed and are reportedly in use.

4.08 The development of improved food storage structures at the village level was also undertaken, and these were introduced in NIPP villages through two workshops organized in January 1979 and May 1980. In addition, small-scale rural industries have been promoted, keeping in view the infrastructure, logistics, credit, and other facilities available in NIPP areas. Prototype equipment has been designed and tested for improved processing of cassava flour, fruit juices, legumes, and egg and banana products; and the transfer of technology has been carried out through demonstration, training, information booklets and manuals, and village level workshops. At the central level, FTDC has participated in the preparation of a strategy for national and village level food security, has collaborated with BKKBN in developing an integrated package of nutrition and family planning services, and has helped set national standards on foods and beverages.

4.09 As in the case of CRDN, construction and procurement problems were the major constraints, and recruitment and proper use of consultants and staff was difficult until laboratory and pilot equipment was installed and chemicals were available. Inadequate intersectoral coordination with the Ministry of Agriculture's (MOA) extension wing has been the second source of reduced effectiveness, especially in developing and transferring appropriate technology. (This could now improve, since FTDC's Director has concurrently been appointed Special Adviser to MOA). Having invested about US\$5.5 million in setting up the FTDC, the government should provide sufficient funds for staffing (including the hiring of extension workers), maintenance, and other operational requirements of the Center. Also, in order to maintain the FTDC's focus on field operations rather than on academic teaching and research, its autonomy within the Bogor Agricultural University should be safeguarded.

4.10 Nutrition Manpower Training. It was envisaged at appraisal that with the expansion of facilities and staff the Academy of Nutrition would double its student intake to 200 and produce 60 graduates annually (three times the number in 1977). These targets have been met: student enrollment is close to 200 and the Academy should turn out 80 to 100 graduates a year by 1986. Faculty recruitment, provision of scholarships to students, expansion of physical infrastructure, and curricula reform (to emphasize community nutrition and field work in rural areas), have all been undertaken as planned. To upgrade the teaching competence of new faculty (most of whom were recent Academy graduates), staff development was given high priority. As a result, two faculty members earned their Ph.Ds, seven got Masters degrees, 12 more received short-term training, and an average of 12 per year obtained 2 to 3 months in-service training at CRDN and the General Hospital in Jakarta. The Academy's nutrition program relies heavily on field work, is considered one of the best in Asia, and is now attracting students from neighboring countries.

4.11 Efforts have also been made to upgrade the skills of middle level nutrition workers. The government currently plans to cover some 65,000 villages under UPGK during REPELITA IV (see Annex 4 for background information on UPGK), thus creating a much greater demand for nutritionists than was envisaged under the project. To overcome the resultant shortfall of trained graduates, GOI decided in 1980 to use trained assistant nutritionists at the field level. Reallocated project funds have therefore been used to modify the Nutrition High School (which was giving three years training to Junior High School graduates) into a School for Assistant Nutritionists, with one year's training given to Senior High School graduates. The Assistant Nutritionists so produced, plus the graduates of three to four similar schools being planned, and the Health Center workers being given short-term training in nutrition are expected to help meet current manpower needs. In

addition, the Ministry of Health has assessed the total manpower needs for REPELITA IV (1984-89) and beyond (up to the year 2000), so that additional training facilities can be built in advance. The project has also funded programs for upgrading the skills of trainers, and these have apparently been very useful.

B. Direct Nutrition Action Programs

4.12 Nutrition Intervention Pilot Project (NIPP). The largest action program was an intensive version of the UPGK known as NIPP or UPGK-plus; designed to test new ways of delivering nutrition and health services to children under the age of three and pregnant and lactating women. The NIPP was a field test of a range of community nutrition interventions (growth monitoring, oral rehydration, nutrition education with emphasis on breastfeeding and weaning foods, home village gardens designed to increase production of nutritious fruits and vegetables, and small-scale food processing and food storage, along with immunization and, in selected areas, family planning), with the intention that some combination might later be integrated into a national nutrition strategy.

4.13 The initial objective of NIPP was to provide a processed nutritious product made from locally grown foods (BMC) to malnourished children and pregnant and lactating women. Village volunteers (Kaders) would monitor the growth of pre-school children, distribute food to those who were not growing adequately, and provide nutrition education to their mothers. The program was to begin in two kabupaters in the first year (the major subdivision of provinces in Indonesia), expand to two more in the second, and after a mid-project review, add three more by the fourth year. That schedule was followed, but with Bank agreement the program was extended to 43% more villages than the 258 planned. Overall, over 200,000 persons have directly benefited, 800 village level nutrition centers have been established, and more than 2,000 cadres conducted nutrition education and other activities.

4.14 Poor management at all levels and an unwieldy monitoring system considerably hampered early execution of the program. The mid-project evaluation recommended several substantial changes, and by the summer of 1982 significant progress had been made in resolving many of the project's problems. A team of Ministry of Health and UNICEF consultants concluded that NIPP-type short-term rehabilitative feeding, targeted to children who fail to gain weight for three consecutive months and using prepackaged BMC, was preferable to approaches used in other government nutrition programs. In early 1983, the NIPP approach was adopted for the major government programs.

4.15 The NIPP program has demonstrated the operational feasibility of a village-based nutrition rehabilitation effort, managed by the community kaders supervised by health center staff and using locally produced processed food to rehabilitate seriously malnourished children. It has developed a monitoring and reporting system, portions of which are being introduced into the national program. And it has established the value of a field laboratory to test new operational ideas.

4.16 Home and Village Gardens. The HVG component was expected to promote home gardens in 18,000 village homes (100 per NIPP village), and to establish with the help of community efforts on community land, one seed farm and model fruit and vegetable garden in each NIPP village. The component was to use ten agricultural extension workers for assisting 10-15 contact farmers in each village, who in turn were to train 7 to 10 neighbors. A special GOI grant of about \$4.50 per family was provided annually for the first three years (1977-80) for seeds, fertilizers, pesticides and routine agricultural implements.

4.17 The program started in 1977-78 with 1,800 village homes, made steady progress until 1980-81 when it covered 12,000 homes, but then declined to 6,600 homes the following year. The major problems were uncertainties of GOI funding (sanctioned on an ad hoc year-to-year basis), and weak coordination (especially after 1980) between the agricultural extension workers and NIPP field staff. The appraisal report's stipulation that assistance be provided to the 100 poorest farmers in each village also proved infeasible since most poor farmers in this category had little land around their homes. Similarly, since most villages had insufficient community land for starting a village seed farm, and no provision was made at appraisal (or subsequently) for renting private land for this purpose, progress was considerably less than expected. It seems the project's VHG component, was apparently overshadowed by a similar but larger UNICEF-supported program under UPGK, which was apparently better coordinated at the national and local levels.

4.18 An evaluation conducted by a private consulting firm in early 1982 concluded that an objective assessment of the impact and efficiency of HVG was impossible, primarily because no baseline survey had been done and no data on inputs (fertilizer, insecticide, etc.), and outputs (increased production of fruits and vegetables) was available. However, there was subjective evidence that home gardens provided about 20% of the family income in some areas, and participants reported higher yields, adopted improved methods, and had more area under home gardens than did non-participants. However, it was difficult for many farmers to perceive the advantages of the

home gardens since yield increases were small and land devoted to vegetables was limited. In the case of seed gardens, a few of which were created, recurrent costs of maintenance and supervision were excessive. (In contrast, under the UPGK program no special village seed gardens were created; instead, government contracted with farmers in the village to grow seed and then purchased and distributed these to other villagers). The agricultural extension workers who were to have been trained in horticulture and nutrition and seconded to the project's HVG component remained uninvolved in what they perceived as peripheral responsibilities.

4.19 Anemia Prevention and Control Pilot Project. This component had the following objectives: reduce nutritional anemia on three government plantations by providing iron-fortified salt and iron pills to 3,000 workers; reduce hookworm infestation by providing medication, boots and latrines; and assess the overall cost-benefits of a delivery system suitable for large scale application. Based on preliminary results of the pilot project, the practice of iron supplementation has spread spontaneously, and now covers over 300,000 workers and their families in 11 government and 10 private plantations. Productivity and income gains vary from one plantation to another, and might be as high as 7% in some cases. In the absence of strict monitoring of results and of methodologically sound evaluation studies, it is difficult to accurately assess the reduction in iron anemia or hookworm infestation, but some studies indicate that 70-75% of the target population is now free from these ailments. The delivery system for iron-supplementation has proven effective, and its further expansion is definitely feasible.

4.20 Nutrition Communication and Behavioral Change. The nutrition education component, aimed at molding nutritional behavior, initially was to be implemented in 60 villages in five kabupatens, one of them a NIPP area. The first two years of the program were a preparatory phase, devoted to infrastructure-building, selective training of village volunteers (kaders), administrative preparation, and setting up a growth-monitoring program. The next year was used to test concepts -- households, each including a pregnant or lactating woman or a mother of a malnourished child, met individually with interviewers to agree on a set of dietary modifications that the family then tried out. This trial step helped the nutrition education team determine what precisely the program should aim to do -- for example, introduce a home-made weaning food -- and the best media and methods for doing it -- for example, posters for the kaders that mothers were asked to mark every time they performed a prescribed action, or radio spots in dialogue format, using the mothers' own words.

4.21 One year after the communication strategy went into operation, an evaluation of program and comparison areas showed that the target kaders had learned the program messages and had more specific advice to offer than kaders in other nutrition education programs in comparison areas; they were

devoting on average nearly 14 hours per month to nutrition work compared to less than 7 hours by workers in comparison areas. In project villages, 67% of households had been visited by a nutrition kader, in comparison villages 44%; project village mothers averaged 47% correct recall on nutrition messages, comparison mothers 28%.

4.22 After four years of project operation and a year of intense education activity, an evaluation of households confirmed trends of improvement in the nutritional status of mothers and children in the project areas. At all ages mean weights for program children were higher than for comparison children, and at 24 months of age there was a highly significant difference of half a standard deviation between the mean weights. There were half as many moderately and severely malnourished children (those less than 75% of median weight-for-age) in the program group. These differences in nutritional status were seen not only across the entire sample but also in each geographic region.

4.23 Detailed evaluation of the component has indicated that the difference in nutritional status can be attributed to the program rather than to schooling level or other factors. Women applied the knowledge thus gained to feeding their children more of the recommended foods. In program areas 87% of the children consumed more than half of the recommended calorie intake and 82% of the children consumed more than half of the recommended protein intake; for children in the comparison sample, the figures were 62 and 60%, respectively.

4.24 The effectiveness of specific messages was demonstrated, the strongest correlation being between knowing and preparing the weaning food that is important to the nutritional status of five-to-eight month infants at a crucial time in their development.

4.25 The project appears to have overcome one of the largest constraints to improved nutrition, the level of the mother's education. Children's nutritional status was determined less by the level of maternal education for children in the target group than for those in the comparison sample.

4.26 This was the most successful of the field programs, the success attributable to thorough research, a carefully conceptualized media strategy, good implementation of the initial phase, and evaluation from the outset. The program had a demonstrably positive effect on the nutritional status of the target population. It provided only nutrition education, utilizing a combination of personal and mass-media contacts. Technical assistance was vital to the development of this component. The government has announced its intention of using the messages and media strategy in its national program.

C. National Nutrition Policy

4.27 Two small but vital components of the project focused on national nutrition policy issues: the Research Coordinating Committee provided oversight of research conducted primarily by the CRDN and FTDC, and the Food and Nutrition Unit (FNU) examined the larger question of integrating nutritional issues with GOI's agricultural policies.

4.28 Research Coordinating Committee. This Committee was officially established by the Project Director on September 1, 1977, and consisted of senior experts from various national institutes, centers and ministries. The Directors of CRDN and FTDC chaired the Committee by rotation, and the first few meetings were devoted largely to identifying its role and decision making authority with respect to specific research programs undertaken by the two Centers. The smooth functioning of the Committee was easier to achieve when the Center directors were in agreement, and for matters that did not need sanction from their respective ministries (CRDN was under MOH, while FTDC was within the University of Bogor, under MOE.) However, since the research programs and priorities of the two centers were not clearly articulated, and the Committee lacked hierarchical authority over the two Centers to enforce a common research strategy, its effectiveness was severely limited.

4.29 Despite this general problem, some activities were undertaken enthusiastically by Committee members: research reviews were compiled in two successive annual reports (for 1979-81), and members participated actively in national workshops and seminars attended by Indonesian and foreign nutrition experts. These forums, arranged as often as four times during some years, provided regular opportunities to influence and shape the content of a national food and nutrition policy, and have proven very useful.

4.30 Food and Nutrition Unit. A small FNU was set up in 1969 within the Ministry of Agriculture (MOA) to advise GOI on steps needed for increasing food production, improving the quality of diets, studying the effects of economic and social factors on human food consumption, and coordinating MOA's nutritional activities with those of other ministries. In 1975 a 12 member team of MOA officials was made responsible for these tasks on a part-time basis and in 1977 the project proposed strengthening the FNU with technical assistance from a nutrition planner, a food economist and a data analyst, along with in-service training and fellowships for MOA staff.

4.31 Despite these good intentions, the FNU remained a skeletal unit until 1979, primarily due to insufficient interest in the Ministry of Agriculture, lack of leadership and trained staff, and inadequate authority to carry out its assignment. Its "coordination" activities were initially confined to collecting data on food supply. However, following a visit in 1980 to India by officials from the Ministries of Health, Agriculture and Interior, there has been an increased awareness of the benefits of inter-sectoral planning of nutrition policy. Two senior staff members were sent

for training to the International Food Policy Research Institute in Washington, D.C., and are now back at the FNU. An intersectoral Training Workshop on Food and Nutrition Planning was also held in February 1983, with major technical inputs from the Unit. Assisted by consultants, the FNU has recently completed a study of major food production, consumption and nutrition problems in Indonesia, and has proposed strategies to overcome them. This study has formed the basis for recommending food and nutrition policies for REPELITA IV.

V. PROJECT IMPACT

5.01 Most project components, considered separately, have achieved or exceeded appraisal targets; taken together, their benefits are substantial, and extend far beyond the immediate activities of the project. In general, the project had a catalytic effect on sectoral activities; and its greatest benefit has been the considerable interest generated in nutrition related issues, at all levels of society. This sharpening of focus on nutritional problems and on broad-based action needed to overcome them, led the government to include a national food and nutrition chapter in REPELITA III and IV. The policy objectives now being finalized are likely to be implemented through an ongoing nationwide program -- an expanded basic UP GK incorporating aspects of NIPP -- possibly supplemented by a Bank-funded follow-on nutrition project currently under preparation.

5.02 The support institutions needed for long term research, technology development, and training (namely CRDN, FTDC, and the Academy of Nutrition respectively) have already been established under the project. The work of some of CRDN's staff meets international standards; but the Center has not yet established an economic and social studies unit on the scale envisaged (partly due to its difficulty in attracting economists), thus limiting its role as a bridge between the scientists and government planning groups such as BAPPENAS. The FTDC has performed better: it is perhaps the first major facility in the world devoted largely to village-level food technology, and has well-trained and highly-motivated staff. Similarly, the Nutrition Academy has now developed an international reputation, and most of its training objectives have been met. The main manpower gap at this stage is at the field management and supervision level, for which additional training centers are being planned. In the Ministry of Agriculture, only a small fraction of the technical assistance envisioned for the Food and Nutrition Unit was utilized; a strong analytic unit has yet to be developed.

5.03 The institution-building strategy included a sizable training and technical assistance elements to broaden capacity to plan and operate programs. Training has covered a broad range of skills and sophistication. In Indonesia, for example, the head of nutrition in the national planning agency was completing a Ph.D. in nutrition planning at the same time village kaders were learning about nutrition education. The project also funded 24 long-term fellowships and 180 short-course grants for technical specialists, training of kader supervisors, and training of nutritionists. Indonesia's

Nutrition Academy, whose facilities and staff were improved, has increased its annual number of nutritionist graduates from 60 to 200 and outside evaluators have praised the quality of their preparation. A national staffing plan for nutrition, developed in the project to accompany the fourth National Development Plan, is being implemented on schedule. (The drafting of the food and nutrition chapters of the plan was the responsibility of the officer mentioned above who received his doctorate under the project. Upon receiving his degree, he was given responsibility for both health and nutrition in the national planning agency.)

5.04 Two studies have been undertaken comparing the experience of children in the NIPP villages to those in the basic UP GK program before it was modified to incorporate certain features included in NIPP. In one, NIPP children started lower in nutrition status than those in UP GK but showed marginally greater improvement in growth, reaching the same levels by the end of the study. The study shows that NIPP children participated in the program to a greater extent (for example, attending an average of 23 weighing sessions in 25 months compared to 18 for the basic UP GK group), and that there was greater change in knowledge and behavior. Interestingly, the average education level of the NIPP mothers was lower than basic UP GK mothers.

5.05 The other study showed that the portion of children under three who were judged "well-nourished" (based on weight-for-height standards) rose from 39 to 44 percent in West Lombok (compared to an unchanging 43 percent in basic UP GK comparison villages) and from 36 to 46 percent in Bojonegoro (compared to an increase from 47 to 48 percent in basic UP GK villages). However, as best as can be judged, nutritional impact varied from area to area; in Bojonegoro, the results showed that local leadership had been more committed and active than in West Lombok.

5.06 NIPP has produced several techniques and activities that are being introduced into an expanded national program, e.g., the NIPP monitoring and reporting system, a village-based rehabilitative effort use of locally processed foods. The project's supplementary feeding approach will become the standard for all other programs. Also, the Government has adopted the NIPP concept of "village laboratories" to test new program ideas.

5.07 One of the more impressive outcomes of the project in Indonesia has been the spontaneous response of villages. Communities near NIPP villages have organized themselves and established similar programs with their own resources. (One regency, Bojonegoro, has arranged funding from local sources to permit NIPP to continue there.)

5.08 The nutrition education component was the most effective activity of the type conducted any place and already is being looked to as a model,

worldwide. Impact of component is noted in paras. 4.21 to 4.26. The nutritional status of children up to 24 months old in five areas where nutrition education under the project was offered can be compared with that in five areas that received different programs of nutrition education and other nutrition inputs from three major government programs. One year after the full implementation of the communications strategy, there were significant differences in percentages of malnourished children, as measured by weight for age:

Percent of Standard Weight-for Age	Percent of Children in	
	Nutrition Education Villages	Comprison Villages
Less than 60	0.0	1.2
60 - 74	10.0	18.2
75 - 89	42.4	40.0
90 +	47.6	40.6

Based on cost estimates and the finding that 40% of the children in the nutrition education program were growing more rapidly than those in the comparison group, the cost per child with improved nutrition status was \$9.85 per year during the pilot phase and has been projected at \$5.15 a year for an expanded program.

5.09 Another major objective of the project was to aid the government in the formulation and execution of a national food and nutrition program; and many background papers sponsored by the project and the ongoing policy dialogue between Bank and GOI staff have been geared toward that end. In February 1983, at a Food and Nutrition Planning Workshop funded by the project, the coordinating minister for economy, finance, and industry gave a strong endorsement for assigning nutrition high priority and expanding nutrition activities. This was reiterated six months later in a meeting that discussed recent work on the nutrition section of REPELITA IV. A National Nutrition Improvement Working Conference was opened on April 12, 1984 by President Soeharto who strongly reiterated GOI's continuing interest in nutrition issues, as an integral part of the national five-year plan. This dramatically increased government and public support for nutrition and augers well for the future.

5.10 The 1982 evaluation team of international and Indonesian nutrition experts credited the project with "strengthening and expanding the infrastructure for a larger scale nutrition program in Indonesia" and noted the "quite impressive" impact of its action programs. The report linked the

greatly increased emphasis on nutrition in the national plan -- which now extends nutrition activities to approximately 30,000 villages -- to the project. Other international agencies, particularly UNICEF, have also played a very important role in raising the consciousness of the government concerning nutrition, as well as in funding nutrition activities. The Ministry of Health and BAPPENAS, and to a lesser extent the Ministry of Agriculture, have become more conscious of the importance of nutrition and the possibilities for effective intervention. Interest in component evaluation (clearly one of the project's weak points in the early stages) has not only increased but has spread to nutrition activities beyond the project.

5.11 Finally, the evaluation shortcomings, the institutional strengthening still need, and other (particularly management and coordination) problems should not detract from the fact that the government has established a strong base in a remarkably short period. Nutrition now plays so large a role in Indonesia (including as an entry point for family planning and women's development activities) that it frequently is referred to as a movement, with few parallels elsewhere. The Bank project is widely credited in Indonesia with having contributed, directly and indirectly, to this. The government has now asked the Bank for a loan for a second nutrition project.

VI. BANK PERFORMANCE

6.01 Bank contribution to project design and implementation has been substantial. Until the early 1970s, the GOI's Applied Nutrition Program had remained confined to a few activities in a limited geographical area, and did not attract high level political attention. The project sought to change this. As originally designed by GOI, its major components (institution-building, field delivery and national policy analysis) were designed to serve as initial building blocks for a gradually expanding national program, and sought long-term impact rather than immediate results.

6.02 On reviewing this strategy in March 1976, the Bank's Board suggested the addition of directly productive and/or productivity-oriented field-action programs, so that the project could contribute more directly to improvements in agricultural output (para. 2.04). These various "add-ons" though small in dollar value, introduced a sharper field-intervention orientation, though still on a pilot basis (the components added included anemia control, food storage, home and village gardens, and nutritional training to agricultural extension workers). Most of these components, though not multisectoral in nature, had to be implemented with the assistance of or through other government agencies. The Board's suggestions therefore increased both the technical and administrative complexity of the project.

6.03 As discussed in earlier sections, the effects of these changes in project design were far reaching. Increased administrative complexity made the project difficult to implement, and magnified the problems caused by weak organizational and managerial capabilities in MOH. However the additional components, when finally implemented, proved very beneficial and contributed greatly to project success and impact. These direct-action components, when combined with the original core components of the project, produced a comprehensive package of inputs that has strengthened Indonesia's national nutrition program in a variety of ways, from the central to the village levels.

6.04 The Bank, has therefore helped to design and implement a project that now serves as a prototype for an expanded national program. The project also made possible a continuous and effective policy dialogue with GOI officials. As a result, the primary gains from the project are its substantial impact on the priority, commitment, policy and program choices, and level of government support for nutrition actions in Indonesia. The close association between nutrition and food policies is now recognized in REPELITA IV; and the connection between food habits and nutritional status has also been made in the minds of the intended beneficiaries, and is reflected in changing attitudes and behavior at the village level. The latter benefit is primarily due to NIPP's supplementary feeding program and the nutritional communication component, both of which have been effectively implemented.

6.05 Of course, these benefits also entailed heavy costs of preparation and supervision. Bank missions from Washington spent over 224 man-weeks (roughly 4.5 man-years) in Indonesia and were assisted by resident staff in the country. Almost equal amounts of Bank staff time were spent before and after project effectiveness in April 1977, averaging about three missions a year between 1973-80. However, despite the long period (four years) of preparation and appraisal, and even though the loan was declared effective a mere fortnight after loan signing, GOI staff were not ready for a quick start-up. Since the project was administratively complex and required the cooperation of a number of government agencies (para. 2.08), the expectations of a four-year implementation period (1977-81) were perhaps unrealistic. Although expatriate consultants were sought to be provided to compensate for the weak managerial capabilities of MOH staff, it is not certain that consultants could have reduced the initial problems caused by inexperienced staff and rigid government systems. Therefore it appears in retrospect that the project might have benefited from additional attention to improving the project staff's knowledge of GOI and Bank procedures, and from more realistic implementation schedules.

6.06 During the early years, management problems and tight schedules put great pressures on Bank and GOI officials to show progress by the time of the

mid-term review in 1980. As discussed earlier, a number of administrative constraints were overcome in 1979 (para. 3.08) and project progress became much easier as a result. Although a two-year learning period was certainly a major factor contributing to this improved pace of implementation, Bank staff's persistent urging must also have helped. In fact, some GOI officials seem to have felt that the pressure was more than needed, and that the appraisal report, which had been translated in all its details into Bahasa Indonesia and widely circulated, was initially used "more as a bible than as a guide." (One of the examples cited is the manner in which individual fellowships were required to be approved by Bank staff during the early years. The procedure was later changed, and broad criteria of eligibility and candidate lists rather than individual applications were submitted for Bank approval). However, the Bank also showed some flexibility during loan reallocation, for appointment of local consultants, and in the implementation procedures used for NIPP. As a result, the concerted and joint efforts of Bank and GOI officials have largely paid off, as is amply documented under project accomplishments.

VII. CONCLUSIONS

7.01 The status of nutrition-related activities in Indonesia is far better today than a decade ago when the project was initiated; and several factors, including substantial non-project inputs provided by GOI and other donor agencies have jointly produced this favorable outcome. A number of project activities have been particularly successful, and have important lessons for similar projects elsewhere. Among the field interventions undertaken, the nutrition education component proved most effective since it was designed to modify specific behavior. Working with intended audiences, allowing them to try different alternatives and to formulate new ones, gave both relevance and specificity to the overall project strategy. (One of the keys to success was the work of a nutrition anthropologist who lived in Javanese villages during most of the 14-month period of program formulation). This component's objectives were based on what people could and would do, addressed a few priorities, were transmitted easily and effectively by village workers in home visits and growth monitoring sessions, and these efforts were reinforced by radio. Thus, the nutrition education component was highly successful because it built on the resources that already existed in the community.

7.02 The potential for linking health and nutrition delivery has also been demonstrated: the weight monitoring and selective feeding approach for screening and servicing nutritional needs required the establishment of a common network of village-based workers, and this has been successfully done. The project has also demonstrated the feasibility of a multisectoral nutrition intervention whose success depended not only on inputs provided by

government agencies but also on the abilities of village families to help themselves. Both these field activities have required intensive and sustained effort over a long period of time, both for generating an awareness of nutritional issues and for guiding and technically backstopping the activities of village-level volunteers and community groups.

7.03 The program to reduce anemia was managed so efficiently on a large scale, with apparently positive effects on worker productivity, as to make it worthwhile for plantation owners to complement the project at their own expense. A nationwide expansion of this component is clearly feasible. The Indonesian experience with village home gardens demonstrated, however, that since such a program only benefits those who have land to devote to gardens, there is little benefit for those most in need of improved nutrition. The project also showed the importance of community seed gardens; although the number of seed gardens under the project fell short of appraisal targets, the concept nonetheless remains worth replicating.

7.04 The project can perhaps be faulted for optimistically assuming a high degree of management and organizational skills, despite its considerable administrative complexity: communications and coordination among agencies remained poor throughout implementation, even after consultants for management, planning and procurement had been provided. However, it appears that the overall project impact would definitely have been reduced if any of these components had been deleted in an effort to make the project "simpler" to implement.

7.05 This is because most project components have been mutually reinforcing. The CRDN has taken a role in the evaluation of both NIPP and the anemia prevention and control programs, and it formulated the food used in NIPP's supplementary feeding program. The village-level technology for production of the food was designed and produced by FTDC. In addition, the gardening and storage programs were implemented in the same villages as NIPP. The institution-building strategy included sizable training and technical assistance elements to broaden the capacity to plan and operate programs. This turned out to be one of the most effective and important elements in the project in that it helped put Indonesia in the position today to substantially enlarge its program and to improve it as local authorities plan to do. Simultaneously, attention was given to developing a monitoring and evaluation capability, and for undertaking national policy analysis. Each of these project components has contributed to strengthening the national program; together their impact has been very substantial.

7.06 Therefore, rather than reduce the number of components, perhaps greater attention should have been given to selection of competent project management and staff, upgrading their skills and knowledge of Bank and GOI procedures, and improving the coordination between activities such as budgeting, contracting, procurement and technical assistance.

It appears that greater administrative preparation (as against technical preparation of components) would have helped, perhaps through something like the "project launch workshops" used for some urban projects. In addition, and perhaps more important for project effectiveness than organizational form, the support and involvement of politically powerful decisionmakers was also needed. Perhaps recognizing this, BAPPENAS pushed ahead without knowing all the answers to technical and administrative uncertainties, because it believed its program was moving in the right direction and that (in the words of the assistant director) "seizing the opportunity while there is interest and resources" would pay the greatest dividends ten years later. Project experience has clearly demonstrated the merits of this pragmatic approach.

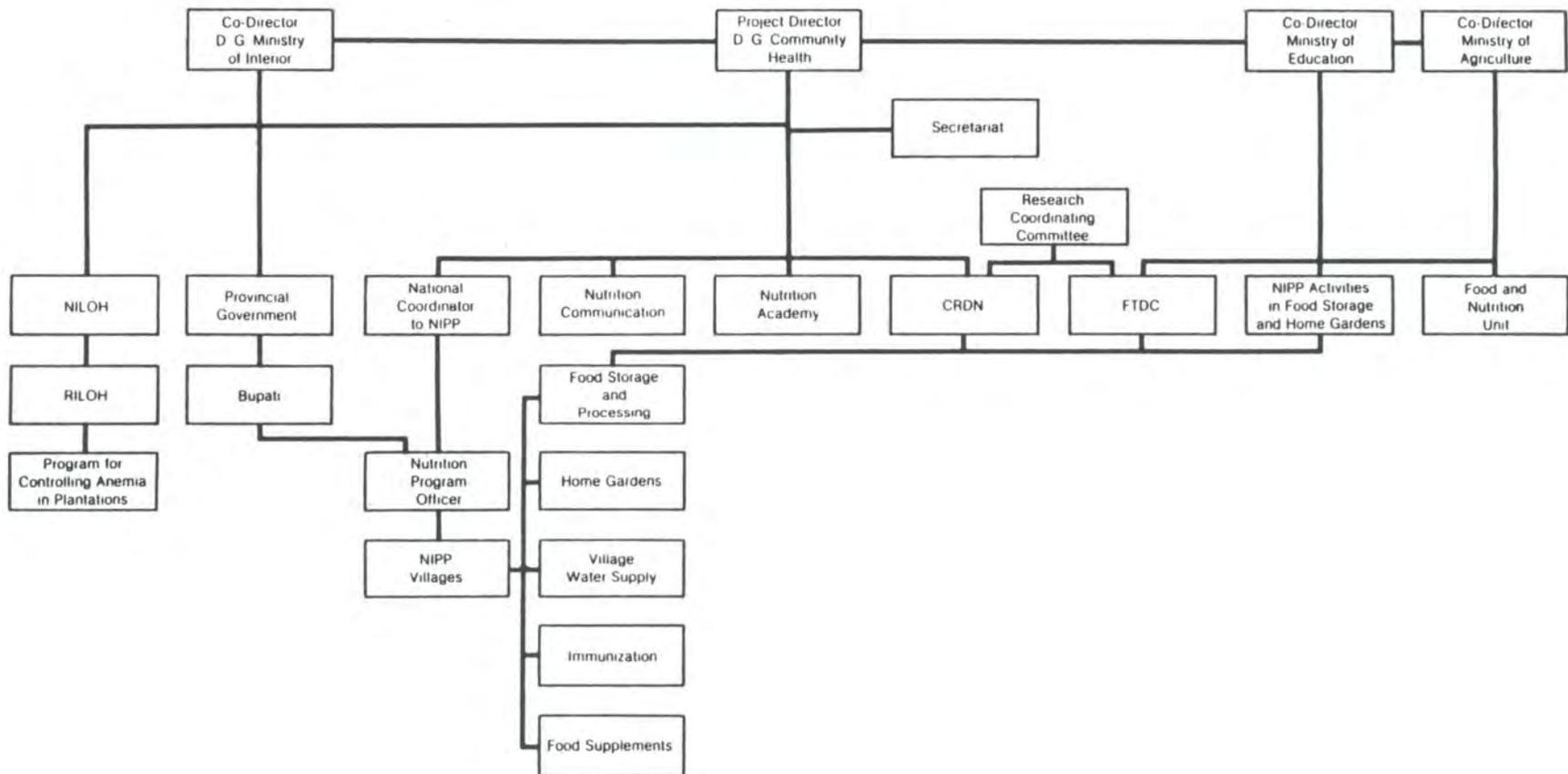
7.07 Nevertheless, delays in implementation and the heavy supervision required in early years provide evidence that the development of managerial capability required more time than project circumstances and tight schedules permitted. Inappropriate and inflexible approval mechanisms (such as those used initially for budget and fellowship approvals), and unfamiliarity with Bank and GOI procedures caused avoidable delays. Close supervision by Washington-based Bank staff, though initially necessary for putting pressure on government officials to remove administrative constraints, was obviously unable to compensate for weak local leadership. However, closer involvement of the Bank's resident staff in Indonesia in routine follow-up of project progress might have provided the additional technical and "political" support needed by the newly appointed project management, especially since this was the first Bank-funded nutrition project in Indonesia.

7.08 The monitoring and evaluation component also proved particularly difficult. Generally, although the plans and funding for evaluation were there, the value of assessing performance as a management tool was not appreciated (except for the nutrition communication and behavioral change component); and neither the recording and analysis of routine data for monitoring operations nor special studies to evaluate impact were viewed initially as integral parts of project implementation. The situation improved in later years, after a local consulting firm helped simplify and revise the monitoring system (for NIPP especially), making it possible for relatively untrained field staff to generate meaningful data and undertake timely analysis. Unfortunately, however, despite some noticeable progress in research and evaluation capability, firm conclusions regarding replicability, cost effectiveness, and impact must await more accurate data and analysis. The few studies that are available use different assumptions and bases for allocating costs and assessing benefits, and do not lend themselves to objective comparisons and generalizations. Greater attention to these aspects of the project was clearly needed.

7.09 Despite these obvious shortcomings, the project has definitely been worthwhile. All three major objectives -- concerning institution building,

testing of field level interventions, and policy formulation -- have been largely met. Some of the lessons learnt from the project have already been incorporated into the national UPGK program, and the basic research facilities, equipment, manpower, and infrastructure for nutrition delivery are now in place. An expanded and more intensive national program will require a well-coordinated but flexible decentralized management, highly motivated staff and volunteers, and accurate monitoring and evaluation, all of which are yet to be fully developed. Fortunately, however, in recent years, there has clearly been a general improvement in Indonesia's administrative and institutional capabilities; and the government is strongly committed to improving the nutritional status of its vast population. This high level political support must now be supplemented with government funds for operational requirements (of staff, training, vehicles, equipment, maintenance) which tend to become scarce once capital investments are in place. Unless these are provided in adequate amounts, future success can hardly be assured, and even though the project has helped lay a strong foundation for an expanded program, it is only an important first step. Consequently, the proposed second nutrition project, which has recently been appraised, is timely and appropriate, and will help improve Indonesia's nutritional status even further.

**INDONESIA NUTRITION DEVELOPMENT PROJECT
PROJECT ORGANIZATION**



SCHEDULE OF DISBURSEMENTS

Fiscal Year and Quarter Ending	Cumulative Disbursements (US\$ Million)		
	Appraisal Estimate	Actual Total	Actual or Latest Estimated Dis- bursement as Percent of Total
FY78			
March 31, 1978	0.3	0.0	0.00
FY79			
March 31, 1979	1.9	0.1	0.77
FY80			
March 31, 1980	5.7	1.2	9.23
June 30, 1980	6.6	1.5	11.54
FY81			
September 30, 1980	7.8	1.8	13.85
December 31, 1980	9.0	2.3	17.69
March 31, 1981	10.2	2.8	21.54
June 30, 1981	10.8	3.9	30.00
FY82			
September 30, 1981	11.6	4.5	34.61
December 31, 1981	12.7	4.9	37.69
March 31, 1982	13.0	6.0	46.15
June 30, 1982		7.0	53.85
FY83			
September 30, 1982		8.5	65.38
December 31, 1982		9.5	73.08
March 31, 1983		10.3	79.23
June 30, 1983		11.4	87.69
FY84			
September 30, 1983		12.66	97.38

COMPLIANCE WITH LOAN CONDITIONS

Conditions	Remarks
1. <u>Section 3.02</u>	
The Borrower shall employ consultants whose qualifications, experience and terms and conditions of employment shall be satisfactory to the Bank.	Consultants satisfactory to the Bank were employed.
2. <u>Section 3.03</u>	
The Borrower shall afford the Bank a reasonable opportunity to comment on the qualification and experience of any person proposed to be appointed to the positions of Project Director, Project Co-Director and Project Manager and NIPP Coordinator prior to the making of such appointment.	The Bank's approval was sought prior to the appointment of staff to these positions.
3. <u>Section 3.04 (c)</u>	
The Project Director shall be required to prepare and furnish to the Bank semi-annual reports on project progress.	Semi-annual reports were submitted regularly to the Bank.
4. <u>Section 3.05 (d)</u>	
The accounts of all project audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies.	Reports delayed, but submitted.
5. <u>Section 3.07 (i)</u>	
The Borrower shall maintain a Research Coordinating Committee to facilitate coordination of the nutrition-related research programs.	The Research Coordinating Committee met frequently.

COMPLIANCE WITH LOAN CONDITIONS

Conditions	Remarks
6. <u>Section 3.07 (ii)</u>	
The Borrower shall submit to the Bank annual progress reports on research programs.	The research program was submitted to the national food and nutrition workshop held in February 1983.
7. <u>Section 3.08</u>	
The Borrower shall carry out a review of the NIPP program at the end of the second year.	Completed.
8. <u>Section 3.09</u>	
The Borrower shall carry out a review of the home/village garden component at the end of the third year of the NIPP program.	Completed and report available.

EXTERNAL EVALUATION REPORT: SUMMARY AND RECOMMENDATIONS

(i) The Indonesia Nutrition Development Project (INDP) commenced in 1977 with three main objectives. As stated in the Appraisal of a Nutrition Development Project (World Bank Report No. 1373-IND), these were:

- a. To strengthen and expand the existing nucleus of personnel and institutions in Indonesia to develop more effective capacity for: formulation, execution and evaluation of nutrition programs, operational research, and manpower training in nutrition;
- b. To develop nationally replicable and cost-effective measures to improve the nutritional status of mal-nourished target groups through field level action programs and their evaluation; and
- c. To aid the Government of Indonesia in the formulation and execution of more comprehensive food and nutrition program on a national scale based on the combination of the above actions.

(ii) The team believes that the primary objective of strengthening and expanding the infrastructure for a larger scale nutrition program in Indonesia has been achieved in good measure. The various components: Center for Research and Development in Nutrition, Food Technology Development Center (FTDC), Nutrition Manpower Training (NMPT), Nutrition Intervention Pilot Project (NIPP), Home and Village Gardens (HVG), Anemia Prevention and Control Pilot Project (APC), Nutrition Communication and Behavior Change (NCBC), and Food and Nutrition Unit (FNU) have enabled the development of a better basis for the formulation and implementation of food and nutrition policy and programs in the coming Fourth Five Year Development Plan (REPELITA IV).

The project is highly successful in reaching rural populations with pragmatic nutrition education measures that sensitize the population to the importance of paying attention to nutrition. In particular, the field level action program NIPP and NCBC, in 258 villages, 55 provincial sub-district levels (kecamatan) in Java, Nusa Tenggara Barat (NFB) and South Sumatra have had a catalytic influence on the initiation of the Family Health and Nutrition Program (UPGK) and other related activities in the surrounding areas utilizing local resources.

While the Project has provided for elaborate monitoring and evaluation systems, the team notes that the result of evaluation are not yet available in an appropriate form to assess the impact of the action components of this project on the nutritional status of target groups. However, the overall impact of the programs in different areas has been quite impressive, leading to a demonstration cum spread effect.

In addition, the lessons learned from NIPP are being and will continue to be applied to upgrade the management of the extended UPGK programs.

(iii) The team believes that despite the overall successful impact of INDP, there are major problems which merit immediate attention. These are:

- a. Failures of monitoring and evaluation systems for almost all activities of the Project, specifically in operating a reliable system for collecting information on the impact of the various components;
- b. Inadequate arrangements for sustaining the infrastructure, especially the institutions built up at considerable cost such as CRDN, FTDC, Nutrition Academy (Akademi Gizi), and School for Assistant Nutritionists (SPAG). There is a need, in particular, of funds for maintenance, staff, upkeep of equipment and training;
- c. Serious gaps in trained nutrition manpower at the village level to supervise, coordinate, and monitor nutrition activities in the field; and
- d. Weakness of arrangements for intersectoral coordination for planning and execution of nutrition programs especially at operational levels.

(iv) Based on the above findings, the team recommends that:

- a. With a view to maintaining the institutions that have been set up under the INDP, on which substantial national resources have been spent, adequate funds and continued policy support be provided by the Government of Indonesia. In particular, CRDN, FTDC, Akademi Gizi and SPAG should be allowed to retain their identity, and be given support to maintain and expand their activities as national focal points in the field;

- b. Efforts be devoted to expnd the UPGK progressively to cover more villages, utilizing the experience and the lessons derived from NIPP and other programs which have been part of INDP;
- c. A more effective monitoring and evaluation system, especially for programs similar to NIPP and UPGK, be established;
- d. The Health Center (PUSKESMAS) at the kecamatan level should be strengthened by the addition of an assistant nutritionist to coordinate, supervise, monitor and evaluate the expanded nutrition program at village level.
- e. The coordinating arrangements be improved under a structure with the explicit authority for determining its own policies, the means and personnel for the implementation of its programs, and its own budget.
- f. The team recommends that a Task Force of experts be set up early to draw up an outline of the programs for the future, particularly REPELITA IV in the field of nutrition activities, with a proper assessment of costs, manpower requirements and feasibility.

National Family Nutrition Improvement Program (UPGK)*

Background and Focus of the Family Nutrition Improvement Programme (UPGK)

1. The Indonesian Family Nutrition Improvement Programme herein referred to as UPGK (Usana Perbaikan Gizi Keluarga), is a national inter-sectoral programme which integrates activities and messages in nutrition, health, birth-spacing, home food production and religion in an effort to promote improvements in family nutrition and child survival. Four sectors work together to provide an integrated package of activities including the Ministry of Health (MOH), National Family Planning Coordinating Board (BKKBN), Ministry of Agriculture (MOA) and the Ministry of Religion (MOR). The first three of these sectors are directly involved in UPGK service delivery, while MOR stimulates awareness and community participation in the programme.

2. UPGK is targeted to under-five children and their mothers, and pregnant and lactating women. It is focused on the village and the home and aims at an effective utilization of resources available within the community and the household. UPGK is based on the premise that the mother is the critical agent to maintain the health of her child, and the focal point for bringing about behavioral changes to improve child survival. Hence, all aspects of the programme are designed around assisting the mother in identifying when her child is "at risk" of becoming malnourished and helping her to modify her behaviour to prevent more serious problems from occurring.

3. The major activity of UPGK, nutrition education through growth monitoring is based on the assumption that monthly weighing of children together with advice and education of mothers and referral of children "at risk" is sufficient to prevent most cases of severe malnutrition. For most children household resources are presumed to be adequate to prevent severe malnutrition if mobilized properly. This assumption was based on an earlier study which found that the incidence of childhood PEM was as widespread in "food adequate" households as in "food deficient" households. Other studies concur that the problem is largely one of existing food distribution practices among household members and child feeding habits, and emphasize the need for nutrition policies and interventions directed at changing behavioural practices of mothers.

4. The major UPGK theme "a growing child is a healthy child," is easily understood down to the level of individual mothers and is supported by their day to day experience. The scale used to weigh children, and the chart used to monitor growth and identify those not gaining weight, are easily used by mothers and village volunteers with minimal training.

* Terrel M. Hill, Rodolfo Florentino, and Leona D'Agnes, "The Indonesian National Family Nutrition Improvement Programme (UPGK); Analysis of Programme Experience," Report submitted to UNICEF Executive Board, December 1983 (mimeographed).

UPGK Service Packages

5. UPGK consists of comprehensive nutrition and child survival activities encompassed in two service delivery packages: a "basic" package and a "complete" package. The "basic" package includes child weighing, education in nutrition and home food production, distribution of nutritional first aids, promotion of birth-spacing, breastfeeding and oral rehydration, and referral to local health facilities for immunization and other health services. The "complete" package includes the basic package plus a subsidy for rehabilitative feeding of malnourished children - which is provided by the government and administered in the community. Seeds for home gardens, and special "coaching" by agriculture extension workers are also provided in the complete package to promote local food production in "food deficit" programme areas.

6. The centre of UPGK activity is the sub-village nutrition weighing post where mothers bring their babies and young children for growth monitoring and other preventive health services offered simultaneously with monthly weighing sessions. The weighing post is equipped with a scale, growth charts, nutrition education materials, reporting and recording forms, facilities for preparation of foods for group demonstrations and "educational" feeding activities, and nutritional first aids (vitamin A capsules for prevention of childhood blindness, iron folate tablets for prevention of anemia in pregnant women, and oral rehydration salts for management of children with diarrhoea).

7. All activities are conducted by village volunteers (cadres) who are unpaid workers selected from the community on the basis of their ability to read and write, and their interest in participating in the programme. Mothers themselves are often selected as village cadres, as well as members of the local women's social affairs organization (PKK) which includes all women of the village in its membership. Cadres are trained to implement the programme in a preliminary three to five day training session, and work under the supervision of the local village leader (lurah) and his wife. Technical backstopping and supervision are provided to village leaders and cadres by trained midwives of the MCH and paid extension workers of the MOA and BKKBN.

8. The UPGK package includes elements of GOBI-FF, a check-list of low-cost highly effective measures to enhance child survival recently advocated by the Executive Director of UNICEF in the 1982-83 State of the World's Children. The GOBI-FF measures of Oral rehydration and Food supplements are included in the nutritional first aids component of UPGK (oral rehydration salts, vitamin A capsules and iron supplements). Growth monitoring and Breastfeeding promotion are provided through UPGK, together

with referral to health facilities and village family planning posts for assistance in Family-spacing of children. The UPGK weighing posts are also beginning to be used as a forum for Immunization activities.

9. The UPGK programme is now estimated to operate in over 30,000 villages where 70% (14.9 million) of the nation's under-fives live. Millions of mothers throughout the country are taking their babies and young children to "weighing posts" in their villages to learn if their children are healthy, to prevent malnutrition, and to protect them against blindness caused by vitamin A deficiency and dehydration resulting from diarrhoea. More than 400 thousand village volunteers (cadres) record monthly weight changes on growth charts which are kept at home and serve as a constant reminder to mothers of the health status of their children. Severely malnourished children are referred to health centres for rehabilitative feeding and other health services.

10. Although a nationwide impact study of UPGK has yet to be undertaken by the GOI, limited case studies and site visits have indicated a high potential for positive change both on nutritional status of children and knowledge and behaviour of mothers brought about by UPGK implementation. (It should be recognized, however, that it would be extremely difficult to demonstrate impact in a programme of this size because of the presence of numerous intervening factors unrelated to the programme itself).

11. A number of spin-off and multiplier effects have been generated by the UPGK experience. It is estimated that UPGK provided an impetus for more than 2,000 villages throughout the country to start their own programme without recourse to outside resources. In a number of UPGK programme areas, cadres have developed independent village support for "educational" feeding activities through innovative income generating and credit-savings schemes. In still other villages, mothers contribute excess produce from home gardens to support monthly "educational" feeding of needy children in the village.

MINISTRY OF HEALTH REPUBLIC OF INDONESIA
DIRECTORATE GENERAL OF COMMUNITY HEALTH
JAKARTA

Jalan Prapatan No. 10

Phone:

Number : 562/BGM/TU/V85
Reference: IBRD Loan No. 1373-IND
Subject : Cable INTBAFRAD

Jakarta: May 1985

IBRD - RSI Jakarta
Jl. Rasuna Said

JALAN PRAPATAN

Dear Sir,

We would appreciate it very much if you could convey the following message to Mr. Jukinari Watanabe, IBRD, Washington, D.C., USA.

Cable Address: INTBAFRAD
For : Mr. Yukinori Watanabe, Director Operations
Evaluation Dept.
Re : IBRD Loan No. 1373-IND

REVIEWED DRAFT PCR INDP (LOAN 1373-IND). NO OTHER COMPONENT FROM US. ITEM ANNEX 3 NO. 4 REGARDING AUDIT REPORT FOR FISCAL YEAR 1981-82 ALREADY SENT FEBRUARY 1983 AND FOR FISCAL YEAR 1982-83 SENT JULY 1984.

REGARDS, SUYONO YAHYA, M.D.

Thank you for your kind assistance.

(Signed)

cc:

1. The Secretary Directorate General of Community Health
2. File

SPN/TU/10/05/85

*Typed from partially legible fascimile copy of letter received from the Ministry of Health.

OFFICE MEMORANDUM

DATE June 20, 1985

TO Mr. Graham Donaldson, Chief, OEDD1

FROM Ishrat Z. Husain, Chief, PHND2

EXTENSION ^{M.} 61535/6

SUBJECT INDONESIA: Project Completion Report - Indonesia Nutrition
Development Project (Loan 1373-IND)

Please refer to your memorandum of June 10, 1985 concerning the above subject. Our staff held a meeting with Mr. van der Lugt at which it was agreed that after updating the PCR, we should await the receipt of the Government's comments, expected by June 7, 1985, and then incorporate them into the report. The due date for the revised PCR was mentioned by Mr. van der Lugt as June 30, 1985. The revised report is attached.

JJKisa:br
INDO-LN 1373/Nutr

INDONESIA
NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)
PROJECT COMPLETION REPORT

Population, Health and Nutrition Department
June 1985

ACRONYMS

AN	Academy of Nutrition
ANP	Applied Nutrition Program
BPGD	Village Nutrition Improvement Coordinating Committee
BAPPENAS	National Development Planning Agency
BKKBN	National Family Planning Coordinating Board
CRDN	Center for Research and Development in Nutrition
DIP	Development Budget
FNU	Food and Nutrition Unit
FTDC	Food Technology Development Center
GOI	Government of Indonesia
HVG	Home and Village Gardens
MEU	Monitoring and Evaluation Unit
MHA	Ministry of Home Affairs
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
NCBC	Nutrition Communication and Behavioral Change
NIPP	Nutrition Intervention Pilot Project
PKK	Voluntary Women's Group
REPELITA	Five-Year National Development Plan
UNICEF	United Nations Children's Fund
UPGK	Family Nutrition Improvement Program
WHO	World Health Organization

FISCAL YEAR OF BORROWER
April 1 - March 31

CURRENCY EXCHANGE RATES

Currency (Abbreviation) Year:	Rupiah (Rp)
Appraisal Year Average (1976)	US\$1 = Rp 415
Intervening Years (1977-1982)	US\$1 = Rp 535
Completion Year (1983)	US\$1 = Rp 625

INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

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INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

PREFACE

This is the completion report of the First Nutrition Development Project in Indonesia (LN 1373-IND), which was identified by the Government of Indonesia (GOI) and Bank staff in 1973. Appraisal was conducted in August-September 1975 and its findings were presented in March 1976 to the Bank's Board of Directors for a preliminary review; in accordance with the instructions governing new projects with unique or unusual features. Based on Board comments, several components with direct linkages with agricultural productivity were added, and after a Post-Appraisal Mission in June 1976, Board approval was obtained in March 1977 for a US\$13.0 million loan. The project was originally scheduled for completion by March 1981, but was extended, and the loan account was finally closed in August 1983. A mid-term report was presented to the Board in June 1980, and an external evaluation of the project was conducted by an international team of experts in 1982. The summary and recommendations of this external evaluation report is attached as Annex 4.

This completion report was prepared by the Population, Health and Nutrition Department (PHN) and is based on a review of the Staff Appraisal Report (No. 1318-IND dated February 16, 1977), President's Report (No. P-1998-IND dated February 16, 1977), Loan Agreement (dated March 14, 1977), supervision reports, the mid-term evaluation report of June 1980, the external evaluation report of December 1982, the Government's draft completion report of June 1983, and the findings of a Bank completion mission to Indonesia in July 1983. The mid-term and external evaluation reports are available from PHN.

The Project Completion Report (PCR) was completed on July 13, 1984 and submitted to OED. The project was not selected for audit by OED and the PCR was sent to the Borrower for comments on March 22, 1985. Comments received on May 14, 1985 have been taken into account and are attached to the PCR as Annex 6.

When lending for nutrition first began, the Board felt that the Bank should proceed cautiously and with only a few projects from which it could learn. To date the Bank has financed only four nutrition projects. Projects in Brazil and Indonesia have been completed, and the project in Colombia is expected to be completed soon. These three projects approved in 1976 and 1977 were heavily multisectoral, with agriculture, water supply and sanitation, and food marketing components sometimes added to more direct nutrition actions. The India Tamil Nadu Nutrition Project, approved in 1980 was designed to concentrate on fewer actions: this project is expected to be completed in about two years time.

From the beginning, nutrition projects continued to receive substantial policy level review. As part of the review of the basic needs nutrition paper it was decided that the Bank should improve its nutrition knowledge through country economic and sectoral work. Since then, analyses of varying intensity have been completed for 16 countries. In late 1983, a major internal review of nutrition projects was undertaken within PHN. In summary this review concluded that although there was a need for more systematic and stronger emphasis on nutrition in the Bank's population and health program, the Bank would no longer be involved in complex multi-sectoral nutrition projects and only under appropriate circumstances would it finance more narrowly focused free-standing nutrition projects.

Thus, the Bank has in fact learned major lessons from its involvement in nutrition lending. Audits of these projects would hardly make additional contributions to the lesson-learning process. OED has therefore decided that it would be much more cost-effective to pass-through this nutrition PCR and undertake a special impact-evaluation type study of all four nutrition projects at some future date.

PROJECT COMPLETION REPORT BASIC DATA SHEET

INDONESIA: NUTRITION DEVELOPMENT PROJECT
(LN-1373-IND)

KEY PROJECT DATA

	Appraisal Expectations	Actual or Current Estimate	Actual as % of Appraisal Estimates
Total Project Cost (US\$ million)	26.0	22.0 ^{a/}	84.6
Loan Amount (US\$ million)	13.0	12.66 ^{b/}	97.4
Date Physical Components Completed	6/79	12/82 ^{c/}	
Economic Rate of Return	N/A	N/A	
Financial Performance	-	Good	
Institutional Performance	-	V. Good	

CUMULATIVE ESTIMATED AND ACTUAL DISBURSEMENTS

	FY78	FY79	FY80	FY81	FY82	FY83	FY84
Appraisal Estimate (US\$ million)	0.3	1.9	5.7	10.2	13.0	-	-
Actual (US\$ million)	0.0	0.1	1.2	2.8	6.0	10.3	12.66 ^{d/}
Actual as % of Appraisal (%)	0.00	0.77	9.23	21.54	46.15	79.23	97.38
Date of Final Disbursement:	August 25, 1983						

PROJECT DATES

	Original Plan	Revisions	Actual
Identification	6/73		6/73
Negotiations	1/17/77		1/17/77
Board Approval	3/23/76 ^{e/}		3/01/77
Loan Signing	3/14/77		3/14/77
Effectiveness	3/31/77		4/01/77
Closing	3/31/81	3/31/82 3/31/83	8/25/83

MISSION DATA

Mission	Month/ Year	No. of Persons	Mandays in Field ^{f/}	Specializations Represented ^{g/}	Performance Rating ^{h/}	Trend ^{i/}	Types of/ Problems
Identification I	6/73	2	60	N,P			
Identification II	7/73	1	2	E			
Preparation I	2/74	2	20	P			
Preparation II	4/74	1	10	N			
Preparation III	5/74	1	30	N			
Preparation IV	6/74	2	8	P,A			
Preparation V	9/74	2	60	N,P			
Subtotal			190				
Pre-Appraisal	3/75	7	105	N,P,F,A,E			
Follow-up	7/75	1	20	N			
Appraisal	9/75	8	260	N,P,A,E,P,T,C			
Post-Appraisal	6/76	1	20	N			
Subtotal			405				
Supervision I	8/77	3	63	N,A	1	2	-
Supervision II	4/78	3	76	N,A	2	2	N/A
Supervision III	8/78	2	56	N,A	2	2	F,M
Supervision IV	2/79	3	72	N,E	2	1	F,M
Supervision V	6/79	5	165	N,E,H	2	1	F,M
Supervision VI	9/79	3	18	N,A,P	2	2	F,M
Supervision VII	2/80	5	120	N,E,H,Fin	2	2	F,M
Supervision VIII	7/80	3	80	N,A,E	2	2	M,F
Supervision IX	11/80	3	60	N,A,E	2	1	M,F
Supervision X	6/81	3	63	N,A,E	2	1	M,F
Supervision XI	1/82	5	50	N,A,E,C	2	1	M
Supervision XII	6/82	3	36	E,P,R	1	1	M
Supervision XIII	12/82	1	2	E	1	1	M
Completion	7/83	3	3	E,P,A	-	-	-
Subtotal			864				
TOTAL			1,459				

OTHER PROJECT DATA

Borrower	Government of Indonesia
Executing Agency	Ministry of Health (MOH), assisted primarily by Ministries of Education (MOE), Agriculture (MOA), and Home Affairs (MHA)
Preceding Project	None
Follow-on project	k/

Footnotes on following page.

Footnotes

- a/ Current estimate (para. 3.18). The US\$4.0 million decrease in total project cost resulted from savings in civil works, furniture and vehicles, consultants and fellowships, staff salaries and other operating costs. The original project is estimated to have cost US\$9.3 million less than appraisal estimates (para. 3.17)
- b/ The loan was reallocated in 1981, and a number of activities were either extended or added (para. 3.17 and 3.18)
- c/ Including new activities added in January 1981 (para. 3.18).
- d/ Final disbursement, as of August 25, 1983
- e/ Data of preliminary presentation to the Board (para. 2.03)
- f/ From supervision summary sheets.
- g/ N = Nutrition; E = Economics; A = Architecture; H = Horticulture; F = Food Technology; Fin = Finance; C = Communication; P = Population and Policy Planning; R = Rural Development
- h/ 1 = Problem-free or minor problems; 2 = Moderate problems; 3 = major problems.
- i/ I = Improving; 2 = Stationary; 3 = Deteriorating.
- j/ F = Financial; M = Managerial; T = Technical; P = Political; O = Other
- k/ The second nutrition project was appraised in March 1985.

INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

HIGHLIGHTS

1. In the early seventies when the project was conceived, nutrition problems in Indonesia were widespread, with almost two-thirds of the 130 million population malnourished. Children under five years of age, and pregnant and lactating mothers were the most vulnerable group; but nutritional anemia among males was the highest ever recorded in any country during non-famine conditions. Vitamin A and iodine deficiencies were severe and endemic, particularly among children. The project, approved by the Board in March 1977, sought to overcome some of these problems. It was completed in August 1983, and met most of its objectives. An external evaluation conducted in July-August 1982 by an international team of experts credited the project with "strengthening and expanding the infrastructure for a large scale nutrition program in Indonesia" and noted the "quite impressive" impact of its action programs (para. 5.10).^{1/} As a follow-up, the Bank has recently appraised a second nutrition project in Indonesia.

2. The first project was prepared in 1973-1977; and the loan became effective on March 31, 1977, just a fortnight after loan signing. Implementation encountered start-up problems (para. 3.02), with budgetary and management difficulties (paras. 3.03 to 3.07) taking almost two years to resolve. By June 1980, however, when a mid-term report was submitted to the Board, project status and trends had started improving, and by August 1983--although two years behind schedule--the project had met or exceeded most of its appraisal targets.

3. The project objectives (para. 2.06) were to:

- (i) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation;
- (ii) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and
- (iii) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

4. Specific project components (described in para. 2.06) included, among others, activities emphasizing institution-building (paras. 4.02 to 4.05), testing and delivery of an integrated package of nutrition-related interventions in the field (paras. 4.12 to 4.15), anemia prevention and

1. All paragraph numbers refer to this PCR.

control (para. 4.19), nutrition communication and behavioral change (paras. 4.20 to 4.26), and national nutrition policy formulation (paras. 4.30 and 4.31). All these activities have been completed satisfactorily.

5. The project components originally financed from the Bank loan were estimated in 1980 at approximately US\$9.3 million less than the US\$13.0 million appraisal estimate. The loan was therefore reallocated in January 1981, utilizing \$4.9 million savings in loan funds, leaving a net savings of about \$4.4 million in total project cost. No change in objectives was required (paras. 3.17 and 3.18). The extension or addition of several new activities necessitated an 18-month extension in the loan closing date.

6. Bank contributions to the design and implementation of the project have been substantial (para. 6.01), particularly the effective policy dialogue since 1973 (para. 6.04), and the direct action-oriented nutrition interventions suggested for addition by the Board (paras. 2.04 and 6.03). However, the project could have benefited during start-up from greater attention to improving the project staff's knowledge of GOI and Bank procedures, and from more realistic implementation schedules (para. 6.05).

7. The project has demonstrated the feasibility in Indonesia of multi-sectoral (nutrition and health) field interventions whose success depends not only on inputs provided by government agencies but also on resources available locally at the village level (paras. 4.15, 4.20 and 7.02). However, substantial effort over a long period of time was needed, involving experimentation, training, technical assistance, and improvements in management systems of the agencies involved. Simpler procedures for monitoring and evaluation, closer but decentralized supervision of field activities, faster and more flexible approval mechanisms for funds and staff, and better coordination among various agencies would also have been helpful (paras. 7.06 to 7.09). Government is taking steps to improve the performance of its national nutrition program in all these areas; and it is expected that the second project, appraised in March 1985, will help expand and strengthen these efforts.

INDONESIA

NUTRITION DEVELOPMENT PROJECT (LN 1373-IND)

PROJECT COMPLETION REPORT

I. INTRODUCTION

1.01 This completion report for Indonesia's Nutrition Development Project (LN 1373-IND) reviews project experience from June 1973 (the first identification mission by Bank staff) to loan closing in August 1983. The first four years were spent on preparation and appraisal, including a special preliminary presentation to the Bank's Board of Executive Directors in March 1976. After Board approval the following year, project implementation got off to a slow start, with initial budgetary and management problems taking almost two years to get resolved. By June 1980, however, when a mid-term report was submitted to the Board, project status and trends had already begun to show marked improvement; and by August 1983--although two years behind schedule--the project ended with a strong record of achievement, with most appraisal targets met or exceeded. More important, the project appears to have contributed substantially to the level of interest in Indonesia to the nutrition problems and, though an ongoing policy dialogue made possible by the project, to the level and quality of analysis undertaken.

1.02 When the project was first conceived, almost two-thirds of Indonesia's 130 million population were malnourished, with children under five years of age and pregnant and lactating mothers comprising the most vulnerable groups. Nutrition problems were widespread, the incidence of nutritional anemia among males was the highest ever recorded in any country during non-famine conditions, and vitamin A and iodine deficiencies (which cause blindness and goiter, respectively) were severe and endemic, particularly among children. The major reasons were inadequate and maldistributed income, high processing and storage losses, and unbalanced diets due to inappropriate feeding habits, especially of infants and young children.

1.03 Government efforts to overcome these problems were relatively small-scale and ineffective, suffering from lack of policy direction, paucity of baseline data, inadequate institutional capacity for policy formulation and implementation, and poorly trained and insufficient manpower. An evaluation conducted in 1973 found that GOI's Applied Nutrition Program in eight provinces had neither clear objectives nor target groups; the Academy of Nutrition had limited enrollment and was unable to cater to the growing need for trained nutritionists; and the Nutrition Research Institute (under the Ministry of Health) had neither the physical capacity nor the professionals, technicians, and modern equipment needed for investigating the determinants and consequences of malnutrition and suggesting cost-effective solutions. There was no organization charged with improvements in food technology, particularly for village food processing and storage. Furthermore, although the Government was interested in developing and implementing a comprehensive nationwide Family Nutrition Improvement Program (UPGK), its approach thus far to nutritional problems had been fragmented and uncoordinated, with few links between nutrition, health and agriculture. As a result, the poor neither participated in, nor benefited very much from the ongoing programs.

1.04 The project sought to address all these deficiencies. With the overall objective of helping the Government formulate and execute a more comprehensive food and nutrition program on a national scale, project activities emphasized national policy formulation, institution building, and design, testing and delivery of an integrated package of nutrition-related interventions in the field. Most of these activities were very satisfactorily completed. As a result, the project has helped lay the foundation for a much stronger nationwide program, to which the Government is already committed in its next five-year plan.

II. PROJECT IDENTIFICATION, PREPARATION AND APPRAISAL

2.01 The project was the second free-standing nutrition project supported by the Bank. (The first was in Brazil, approved six months before the Indonesian project). Government of Indonesia's (GOI) major interest in nutrition was also of recent origin. However, once the severity of the nutrition problem was recognized, both parties showed a strong commitment and willingness to collaborate on a comprehensive, multisectoral nutrition project addressing the long-term needs of the country.

2.02 A Bank mission visited Indonesia in June 1973 to initiate a dialogue with the Government, and to identify the broad outlines of a possible nutrition project. GOI was very receptive to an indepth, wide-ranging review of major nutritional issues facing the country. A Presidential Instruction (No. 14, dated 13 September 1974) directed a committee of 10 ministers, chaired by the Minister of State for People's Welfare, to "execute activities for the improvement of the people's menu on a national scale." In February 1975 an inter-departmental Technical Commission was established, headed by the Deputy Chairman of BAPPENAS (the National Development Planning Agency), to undertake detailed planning and coordination of program implementation. Six sub-committees were formed to address the following areas: policy, nutrition research, food technology, nutrition demonstration, food fortification, and training.

2.03 Project components were designed by these government committees, assisted periodically by Bank staff and experts from UNICEF and WHO. Appraisal was conducted in August-September 1975, and finalized details for the following major components: (a) strengthening and expanding the Center for Research and Development in Nutrition (CRDN, previously called the Nutrition Research Institute); (b) establishing a new Food Technology Development Center (FTDC); (c) initiating a Nutrition Intervention Pilot Project (NIPP) to test approaches for direct delivery of nutrition services in eight selected regencies; (d) developing a nutrition education (later termed the communication and behavioral change) program; (e) manpower training; (f) preparing a national food and nutrition program; and (g) setting up

a project monitoring and evaluation system. The project was presented in March 1976 to the Bank's Board of Executive Directors for a preliminary review, in accordance with instructions governing "new projects with unique or unusual features."

2.04 The Bank's Board, while generally agreeing with the broad thrust of the project -- including its emphasis on institutional development, research, and experimental activities -- emphasized the need for strengthening the project's direct and indirect linkages with agricultural productivity and production. The following activities were therefore added to the project: (a) designing and testing food storage units in 30 NIPP villages; (b) initiating a program for increasing productivity by controlling nutritional anemia on three publicly owned plantations; (c) technical assistance for the Food and Nutrition Unit (FNU) in the Ministry of Agriculture, for developing a capacity for analysis of food policy as it relates to nutrition; (d) establishing home gardens in NIPP villages, to increase production of vegetables and fruits for home consumption; and (e) training agricultural extension staff in nutrition and horticulture.

2.05 The complex and multisectoral project thus produced was approved by the Board on March 1, 1977. A loan for US\$13.0 million was signed on March 14, and became effective a fortnight later. The scheduled completion date stipulated in the Loan Agreement was March 31, 1981, thus giving a four year implementation period. A mid-term report was scheduled for presentation to the Board in two years; and loan closing was scheduled for March 31, 1982.

2.06 As described in the President's Report dated February 16, 1977, project objectives and description were as noted below:

Objectives

- (i) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation;
- (ii) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and
- (iii) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

Description

- (i) Strengthen institutional capacities:

- (a) Expand the Center for Research and Development in Nutrition (CRDN) under the Ministry of Health through the provision of funds for additional staff, training, technical assistance, necessary equipment, and a modest expansion of physical facilities.
- (b) Strengthen the Food Technology Development Center (FTDC) at the Agricultural University, Bogor, with provision of funds for facilities, equipment, technical assistance and staff.
- (c) Improve the planning, coordination and evaluation of nutrition activities through technical assistance to the Ministries of Health, Education and Agriculture.

(ii) Direct Nutrition Action Programs:

- (d) Initiation of a Nutrition Intervention Pilot Project (NIPP) through the provision of funds for additional staff, training, technical assistance, buildings, equipment and materials. These programs would provide nutrition, education, agricultural, health and food supplementation services to those people most affected by malnourishment in 180 villages of seven districts with a population of approximately 740,000.
- (e) Increase production of nutritious vegetables and fruits in about 18,000 home/village gardens by provision of improved seeds, development of model garden packages and intensification of extension efforts.
- (f) Improve food storage at village level through assistance to the Food Technology Development Center which would, in collaboration with the Ministry of Agriculture, develop an appropriate small-scale storage program.
- (g) Initiate an iron supplementation program under the National Institute for Industrial Hygiene and Occupational Health to tackle nutritional anemia among 3,000 families in a selected number of plantations with a view to developing a national program to cover all government and privately owned plantations.

(iii) Education and Training:

- (h) Develop and test alternative nutrition communication methods to bring about desirable changes in nutrition behavior.

- (i) Upgrade and expand the training of nutritionists in the Academy of Nutrition at Jakarta by provision of equipment, staff and necessary physical facilities.
- (j) Improve the training of agricultural extension staff by introducing nutrition in the curriculum of the basic training centers and the secondary agricultural schools of the Agency for Education, Training and Extension.

(iv) National Food and Nutrition Plan:

- (k) Provide technical services for the formulation of a national food and nutrition program incorporating the most effective elements of the nutrition activities initiated under the proposed project.

2.07 The breakdown of total project cost of US\$26.0 million and Bank loan of US\$13.0 million was as tabulated below:

A. Estimated Project Cost by Component/Activities

Center for Research and Development in Nutrition (CRDN)	\$5.9 m
Food Technology Development Center (FTDC)	\$5.5 m
Direct Nutrition Action Programs	\$3.5 m
Nutrition Education	\$1.0 m
Nutrition Training	\$1.7 m
Organization and Management	\$1.0 m
Formulation of National Food and Nutrition Program	\$0.2 m
Physical Contingencies	\$1.2 m
Price Contingencies	<u>\$6.0 m</u>
Total Project Cost	<u><u>\$26.0 m</u></u>

B. Loan Allocation by Expenditure Categories

	<u>Amount</u>	<u>Percentage</u>
Civil Works	\$6.0 m	46%
Vehicles and Equipment	\$3.0 m	23%
Technical Assistance	\$3.0 m	23%
Unallocated	<u>\$1.0 m</u>	<u>8%</u>
Total Loan	<u><u>\$13.0 m</u></u>	<u><u>100%</u></u>

2.08 The management of each component was to be carried out through existing organizational channels of the Government of Indonesia. (See Annex 1 for organizational chart of project arrangements). Briefly, project organization and management was to be as follows: (a) a part-time Project Director in the Ministry of Health responsible for overall coordination and implementation, assisted by a full-time Project Secretariat (with a Project Manager -- later called Executive Secretary, a Deputy Project Manager -- later Deputy Executive Secretary, a Finance Officer and a Procurement Officer), and further assisted by a full-time management adviser for two years, a procurement adviser, and planning consultants; (b) three Project Co-Directors, one each from the Ministries of Education (MOE), Agriculture (MOA), and Home Affairs (MHA); (c) a separate Monitoring and Evaluation Unit (MEU) reporting directly to the Project Director; (d) the CRDN and FTDC administered by their respective Directors, assisted by special finance and procurement officers; (e) an interagency Research and Coordinating Committee; (f) the NIPP component administered by a national level NIPP Coordinator within MOH, reporting to the Project Director, and assisted by suitable staff; (g) NIPP administration at the provincial and kabupaten levels by the Nutrition Improvement Coordinating Committees, reporting to the Provincial Governors and Bupatis respectively; (h) anemia prevention and control administered in the field by the National Institute for Industrial Hygiene and Occupational Health, through the respective regional institutes under the Ministry of Manpower, Transmigration and Cooperatives, in close collaboration with MOA and MOH, (i) training and nutrition education by the Center for Manpower Education and Training in MOH; (j) civil works by the engineering division of MOH; and (k) preparation of a national food and nutrition program by the Project Director, assisted by the MEU, in close collaboration with CRDN, FTDC, the planning bureaus of MOH and MOA, the FNU, and BAPPENAS.

III. PROJECT IMPLEMENTATION

3.01 Project implementation is discussed below in two parts. Section III gives an overview of the general activities undertaken in support of virtually all components, and discusses the problems faced during 1977-79; and Section IV reviews project accomplishments by component, up to their completion in March 1983.

3.02 Project Start-up. Budgetary and management problems emerged soon after loan effectiveness, primarily because this was the first Bank-assisted project in the Ministry of Health and project staff were inexperienced in managing a large foreign-funded multisectoral project. Time was needed for mastering GOI procedures for budget release, Bank procedures for disbursement

and procurement, and organizational procedures for inter-agency coordination. A devaluation of the rupiah by about 50% in November 1978 added to the burden, by necessitating renegotiation of civil works contracts and retendering for equipment and supplies. Technical assistance from advisers and consultants, which was supposed to fill the experience-gap and to provide the needed professional support, also got delayed. The start-up period was thus stretched to almost two years. By March 31, 1979 -- the mid-point of the expected four year implementation period -- only \$100,000 was disbursed, against an appraisal estimate of \$1.9 million.

3.03 Budgetary Procedures and Disbursements. GOI's budgetary regulations and procedures were a source of many problems. Since the various project components were being implemented through different ministries, each component manager had to become adept at anticipating and overcoming procedural bottlenecks. Three examples are given below. First, the development budget (DIP) for the project had two parts -- DIP Murni (expenditures financed only out of GOI funds), and DIP Supplement (expenditures financed by GOI but reimbursed by the Bank) -- and the percentages of the total allocated to the two DIPs had to exactly match the disbursement percentages detailed in the Loan Agreement. Failure to achieve such matching resulted in time-consuming discussions between BAPPENAS, the Ministry of Finance, Bank of Indonesia, the project management and component heads. The original DIPs for 1977-78 did not match, and the process of revision was not completed until February 1978, reflecting the complexity of procedures and inexperience of project staff. The problem recurred in 1978-79. In addition, the arrangements made by the Ministry of Finance for pre-financing the DIP Supplement were found to be complicated and time consuming. As a result, no major project activity could be financed during the first year of implementation; and no withdrawal applications were submitted to the Bank that year for reimbursement.

3.04 Second, carryover funds could only be used after a specific authorization letter was issued; and this could not be done until after the DIPs for the current financial year -- which themselves were delayed by 3 to 6 months -- had been approved. Third, subsequent to the devaluation of the rupiah, prices rose sharply but contracts could not be renegotiated until BAPPENAS had issued instructions on how cost-escalation was to be worked out, and this took time. When the instructions were finally issued, even though prices of building materials had risen by about 80% and gasoline by 37%, GOI agreed to raise contract values by only 38%; and this was not satisfactory to contractors who either slowed down or stopped work altogether.

3.05 It was only after intensive discussions between Bank staff, project management, and officials of the Ministry of Finance and BAPPENAS that government simplified some budgetary regulations and permitted greater flexibility in others. By 1979, project staff became familiar with Bank

procurement procedures and GOI civil works contracting. BAPPENAS officials chaired regular meetings of the project finance officers and helped reduce the lag in submitting withdrawal applications (in early 1979, for instance, \$1.5 million had been reimbursable but had not been applied for). From 1980 onwards, although procedural delays due to the general budgetary regulations remained, project-specific problems were substantially overcome. Disbursements rose sharply from \$1.5 million in June 1980 to \$3.9 million a year later, and to \$7.0 million by June 1982 (Annex 2). The loan account was finally closed on August 25, 1983, eighteen months behind schedule, with \$12.66 million disbursed and the unspent balance of \$337,500 cancelled.

3.06 Organization and Management. Problems of project administration stemmed from a variety of factors, including the following: project complexity and the need for multi-agency coordination (due partly to board add-on, see paras. 2.04 and 6.02), inexperienced staff, delays in appointing consultants, and the organizational status of the Project Secretariat. Bank missions noted in 1978-79 that "the complexity of the project demanded that the staff of the secretariat function as a team, be fully familiar with all project aspects, devote full time to the project, and work closely with component officers in Jakarta and in the provinces." However, despite repeated recommendations that project officials interact more fully and frequently with component staff and officers of various ministries and BAPPENAS, inter-departmental coordination remained weak throughout project implementation.

3.07 The major problem during the crucial early years was weak leadership: a part-time Project Director loaded with other responsibilities and having limited time, and a relatively junior Executive Secretary who could not provide the forceful leadership essential for a multisectoral project. The Project Secretariat -- despite appraisal recommendations to the contrary -- was not integrated with the Ministry of Health, could only hire staff on fixed-term contracts, was unable to match the salaries prevalent in the open market, did not attract qualified senior civil servants, and did not receive its own budgetary allocations (DIPS). In addition, the monitoring and evaluation unit, necessary for a project with experimental activities, was not adequately staffed for over two years despite repeated assurances given to visiting Bank missions; and recruitment of advisers was delayed until 1979 due to strong political opposition to hiring highly paid expatriate consultants.

3.08 Most of these problems were resolved just prior to the mid-term review, after considerable follow-up by Bank staff. A number of corrective actions were taken, the most important being the following: the Deputy Executive Secretary replaced the former Executive Secretary who was transferred; an economist was hired for the monitoring and evaluation unit; a local firm of management consultants was hired to conduct a management audit, design the monitoring system, and provide planning advice; a new

Director of Nutrition was appointed in MOH and was given the concurrent responsibility for coordinating the NIPP component; the interagency coordinating committee was re-established by BAPPENAS; the Project Director, who was also assigned the responsibilities of Project Manager, was instructed by the Minister of Health to give higher priority to solving implementation problems; expatriate consultants were appointed for procurement, finance, and overall project management; the Nutrition Directorate was reorganized to absorb the Project Secretariat and MEU; and in the field, component agencies started cooperating actively after regency administrators and provincial governors began taking direct interest in the project. As a result of these changes, project management improved considerably, and implementation progress was relatively rapid after 1980.

3.09 Civil Works and Procurement. As mentioned in para. 2.07, \$6.0 million was allocated for civil works, and \$3.0 million for procurement of vehicles and equipment. Preparation of architectural drawings, design specifications, cost estimates, and invitations to bid were to be completed early in 1977, in the hope that construction could begin by May 1977 and be completed by June 30, 1979. GOI procedures for bidding, construction, contract control, and general and on-site supervision were to be used, following the practices of the Ministry of Works. Procurement was to be undertaken in accordance with standard Bank and GOI regulations, as specified in the loan agreement.

3.10 Contract documentation was in fact prepared according to schedule, but because of budgetary problems already mentioned the contracts for civil works were not awarded until August 1978, and for provision of fittings and utilities a few months later. Furthermore, construction contracts had to be renegotiated after the devaluation of the rupiah, and procurement of equipment had to be retendered. Construction activities fell behind appraisal schedules by about one year, and equipment procurement and provision of services (including gas, electricity, water) by almost two years. By mid-1979, even though construction of CRDN and FTDC buildings had started, no payments had been made to contractors. The payment of \$50,000 towards retroactive financing of consultant architects was also held up for two years after the work was completed, largely due to delays in contract finalization. As a result, virtually all other project components were correspondingly delayed, and sequencing and scheduling of activities had to be revised several times.

3.11 Procurement committees were particularly slow in bid evaluation; and by the time government approval was obtained, price validity periods were generally exceeded, providing suppliers an easy excuse for not maintaining prices. Despite the resultant price increases, however, total costs remained well below the provisions made in the loan agreement, primarily because BAPPENAS had sanctioned expenditures for buildings

constructed to lesser architectural standards than those assumed in the Appraisal report. This, together with the effects of devaluation, resulted in considerable savings, which were then utilized for additional buildings and equipment, including a new Nutrition Assistants Training Center sanctioned in 1981 as part of a general loan reallocation exercise.

3.12 Technical Assistance. Since one of the primary aims of the project was strengthening institutions and personnel capabilities, \$3.0 million out of loan funds was allocated for consultant's services, fellowships and salaries of local experts. Assistance from expatriate and Indonesian consultants was expected to help virtually all project components in setting up systems for planning, monitoring and control. Consultants were also to be hired for technical design and development work, especially for CRDN, FTDC and NIPP. Fellowships of varying durations, both local and foreign, were meant to upgrade the technical competence of staff at all levels. Roughly equal amounts were allocated for consultants and fellowships, but the funds for technical assistance were spread out according to need over the various project components.

3.13 There were initial delays of one to two years in arranging fellowships and long term training, partly due to inappropriate and rigid procedures for obtaining Bank approval (see para. 6.06). However, once satisfactory procedures were established, progress was smooth and appraisal targets were met. Twenty-four of CRDN's staff members received long term training (3 Ph.D, 19 MS, and 2 BS), and only three persons failed to acquire the degree attempted. Twenty-three staff members from FTDC earned their degrees or diplomas (4 Ph.D, 16 MS, 3 BS and 14 diplomas). Personnel from other components such as Nutrition Communication and Behavioral Change (NCBC), NIPP and the Project Secretariat also availed themselves of fellowships, as envisaged in the appraisal report. Most long-term training was undertaken in Indonesia, due to various factors: difficulties in securing admission to foreign universities (because staff lacked proficiency in English, and some degrees earned earlier in Indonesia were not recognized abroad), strict government regulations regarding minimum service requirements prior to such training, and difficulties in obtaining leave of absence from regular jobs. A few fellowships were, however, undertaken abroad -- in the Philippines, England, Holland, and the USA. Short-term training was also received by a number of project staff, both locally and abroad.

3.14 Of the 40 man-years of consultants envisaged under the project, 17 man-years were allotted for foreign experts. The latter were generally difficult to obtain: senior consultants were not available for long duration contracts, and negotiations and approvals took unduly long, partly due to the low fee structure approved by BAPPENAS. As a result, most expatriate consultants, could only be hired during the second half of the project, and a number of consultants visited more than once, for short periods. Local consultants, were also governed by GOI's ceilings on fees, were easier to arrange and were used wherever appropriate.

3.15 At CRDN, 19 consultants (including 2 on long-term contracts) provided over 30 man-months of service, helping to develop technical programs and staff. At FTDC, 14 (mostly junior) consultants were hired for 85 man-months of work; but unexpected delays in the provision of infrastructure and procurement of equipment forced a bunching of consultants during the last years of implementation, thus reducing their overall contribution to related project components. At the Academy of Nutrition, 30 man-months of consultants were used for manpower training, planning, and laboratory research; and at the Project Secretariat, 84 man-months were used for planning, procurement, and management. In addition, short-term local and foreign consultants were used for preparing a background policy paper which served as the primary input for formulating a national food and nutrition program for REPELITA IV.

3.16 Most of the consulting services obtained were found to be relevant and useful: over two-thirds of the expatriate consultants came from developing countries (notably India and the Philippines). Four of every five consultants to the FTDC, Academy of Nutrition, and project secretariat were from developing countries, as were a third of those who aided the CRDN. Indonesian consultants were generally experienced and knowledgeable about local conditions and needs. The scientific and technical calibre of consultants was high, and most of their recommendations have been implemented, subject to limitations of funding. Advice on field-oriented systems improvement, primarily for monitoring and evaluation of NIPP and anemia prevention and control was provided by a local consultant group, and was very pragmatic and useful. Further refinements in the system suggested by consultants are being made on the basis of field experience, and should help improve the overall performance of direct-action programs.

3.17 Loan Reallocation. In 1980 it was estimated that project activities would cost approximately \$9.3 million less than the appraisal expectation. The cost reduction was mainly due to the 50% devaluation of the rupiah, the use of lower construction standards, and the reduced use of technical assistance. GOI officials suggested that the successful project activities be expanded and some money be reallocated between expenditure categories. Accordingly, a loan reallocation was done in January 1981. It utilized the \$4.9 million savings in loan funds, thus leaving a net savings of \$4.4 million in total project cost. No change in objectives or scope of the project was required. Since the total project cost had gone down while the loan amount remained the same, the loan as a percentage of total costs went up from 50% at appraisal to 60%. An 18 month extension in the project completion date was also approved.

3.18 Allocations for some components were increased by the following amounts: nutritional anemia pilot project by \$1.3 million (for expanding operations from 3,100 to 75,000 plantation workers, including workers covered by the Bank-funded transmigration project); manpower training by \$2.0 million (for constructing a new four-story Nutrition Training Center);

nutrition intervention pilot project by \$1.0 million (to cover an additional 372 villages); and nutrition communication and behavioral change by \$0.6 million (for supply of newly designed communication materials). At the same time, allocations for CRDN and FTDC were reduced by \$4.4 million and \$2.2 million respectively, and minor reductions were made in the other remaining components. As a result, the loan allocation for civil works went down from \$6.0 million to \$3.5 million, while funds earmarked for vehicles, equipment, and supplies went up from \$3.0 million to \$6.0 million. No changes were made in the percentages of expenditures financed in each category. The final project cost is estimated to be about US\$22.0 million. Actual figures have not been compiled at any central accounting office in MOH, partly because the various components were implemented by different agencies who maintained their own accounting records.

3.19 Accounts and Audit. Section 4.02(b) of the loan agreement stipulated that all agencies participating in the project maintain separate accounts for it, and that an accounting unit within MOH be responsible for consolidating these accounts. Though such accounts were maintained, the accounting procedure followed did not disaggregate expenditures by source of funds (DIP Murni, DIP Supplement and Direct Payments). After several requests by Bank missions, a uniform reporting format was circulated to all concerned finance officers, and accounting practices were improved.

3.20 Despite this progress, annual audit reports were considerably delayed (see Annex 3 on compliance with loan covenants). Section 3.05(d) of the loan agreement required that these audit reports be furnished to the Bank within 6 months of the close of each fiscal year, but the first certified reports were submitted only in 1981 -- after the Bank insisted that the loan allocation be made conditional upon receipt of the pending audits. The delays were apparently traceable to a procedural omission: while DIP Murni accounts were routinely audited by state auditors, special instructions were needed for auditing the DIP Supplement as well. However, even after this oversight was corrected reports for subsequent years were delayed by 1 to 2 years.

IV. PROJECT ACCOMPLISHMENTS

4.01 A mid-term report was submitted to the Board in June 1980 (para. 2.05). The project was also evaluated comprehensively in July 1982 by an independent team of internationally renowned nutrition experts. Their report (see Summary and Recommendations attached as Annex 4), the Government's own analysis of the project, and various other studies and documents have been used for arriving at the assessments given below. Since initial difficulties in construction, procurement, technical assistance, and organization and management were common to all components and have already been reviewed in Section III, these issues are not dealt with again. Instead, the discussion highlights the major objectives and accomplishments of each project component.

A. Institution Building

4.02 Three institutions were supported under the project -- the Center for Research and Development in Nutrition (CRDN), the Food Technology Development Center (FTDC), and the Academy of Nutrition (AN). Funds were provided for civil works, equipment, staff, training, and technical assistance. Most of the physical and quantitative targets set at appraisal have been met or exceeded, though delayed by the administrative constraints discussed earlier. The three institutions have contributed to the project's direct-action programs; and are now helping other government agencies (primarily the Ministries of Health, Education and Agriculture, BAPPENAS, and the central Nutrition Working Group) in planning and evaluating nutrition-related programs at the national level.

4.03 Center for Research and Development in Nutrition. CRDN's research was expected to be applied and interdisciplinary, focusing on evaluation of the integrated nutrition intervention program, investigation of foods with high nutritional value, and studies leading to general recommendations for strategies to improve nutritional status. The Center has undertaken a number of studies on NIPP, including the baseline data survey in 1977, the follow-up three years later, the technical design of data collection procedures for monitoring NIPP, and an assessment of their suitability for nationwide use. Other studies include evaluation of the following: the government's basic model UPGK program in 21 kabupatens of 6 provinces, the nutrition component of primary health care, and the nutrition anemia control pilot project. The quality of these studies has been variable.

4.04 Strengthening the nutrition research center was a slow process, requiring major technical assistance from foreign consultants. The center is now considered the best of Indonesia's five medical research institutes and the work of some of its staff meets international standards. But CRDN is not yet consistently capable of evaluating nutrition work effectively enough to be useful for the planning agency; that is one of the disappointments of the project. In short, the CRDN has made great gains in five years and now has facilities, equipment, and most other prerequisites to meet international standards but has yet to regularly achieve that level.

4.05 Now that project inputs (facilities, equipment, staff) are in place, CRDN's research activities can be expected to expand in the future. However, since staff is already thinly spread over several concurrent investigations, increased selectivity in accepting research requests and in determining the Center's work program is needed, so that scarce professional resources and funds are used only for high-priority nationally significant research. Greater emphasis on socio-economic analysis of alternative nutrition strategies and on monitoring of existing programs -- both of which were key project objectives for CRDN -- is also warranted.

4.06 Food Technology Development Center. FTDC's specific functions under the project were the following: to serve as the main source of information and advice on appropriate village-level food technology; provide training for food technologists and extensionists; identify problems and opportunities associated with food conservation, preservation and processing; advise the government on food and nutrition issues; and support the education and research programs of its parent organization, the Bogor-Agricultural University under the Ministry of Education. Most of these functions have been satisfactorily performed, although after considerable initial delay. Built with project funds, FTDC now has a highly qualified staff of 84 (including 9 Ph.Ds and 10 with Masters degrees), a modern well-equipped laboratory and pilot plant, and good library and documentation facilities. Consultants, both long and short-term, have helped the Center formulate and execute research and development activities, and train staff. Also, senior staff of FTDC have fulfilled their teaching obligations to the Bogor Agricultural University.

4.07 The Center's involvement with the project's direct-action activities has been very useful. Baseline surveys were conducted in NIPP areas to collect information on food production, storage, eating habits and unmet nutritional needs. The data were then used for designing and testing several cereal-legume based recipes (BMC) for supplementary feeding and weaning of malnourished children in the NIPP areas. Equipment for village level formulation and storage of BMC was designed, fabricated and tested; after which a private manufacturing firm was licensed to produce and supply the equipment to NIPP areas. Although the size of BMC units is reported to be too large -- something the Ministry of Agriculture's extension agents should have pointed out at the pilot stage -- and the quality of the equipment is uneven, several hundred units have been installed and are reportedly in use.

4.08 The development of improved food storage structures at the village level was also undertaken, and these were introduced in NIPP villages through two workshops organized in January 1979 and May 1980. In addition, small-scale rural industries have been promoted, keeping in view the infrastructure, logistics, credit, and other facilities available in NIPP areas. Prototype equipment has been designed and tested for improved processing of cassava flour, fruit juices, legumes, and egg and banana products; and the transfer of technology has been carried out through demonstration, training, information booklets and manuals, and village level workshops. At the central level, FTDC has participated in the preparation of a strategy for national and village level food security, has collaborated with BKKBN in developing an integrated package of nutrition and family planning services, and has helped set national standards on foods and beverages.

4.09 As in the case of CRDN, construction and procurement problems were the major constraints, and recruitment and proper use of consultants and staff was difficult until laboratory and pilot equipment was installed and chemicals were available. Inadequate intersectoral coordination with the Ministry of Agriculture's (MOA) extension wing has been the second source of reduced effectiveness, especially in developing and transferring appropriate technology. (This could now improve, since FTDC's Director has concurrently been appointed Special Adviser to MOA). Having invested about US\$5.5 million in setting up the FTDC, the government should provide sufficient funds for staffing (including the hiring of extension workers), maintenance, and other operational requirements of the Center. Also, in order to maintain the FTDC's focus on field operations rather than on academic teaching and research, its autonomy within the Bogor Agricultural University should be safeguarded.

4.10 Nutrition Manpower Training. It was envisaged at appraisal that with the expansion of facilities and staff the Academy of Nutrition would double its student intake to 200 and produce 60 graduates annually (three times the number in 1977). These targets have been met: student enrollment is close to 200 and the Academy should turn out 80 to 100 graduates a year by 1986. Faculty recruitment, provision of scholarships to students, expansion of physical infrastructure, and curricula reform (to emphasize community nutrition and field work in rural areas), have all been undertaken as planned. To upgrade the teaching competence of new faculty (most of whom were recent Academy graduates), staff development was given high priority. As a result, two faculty members earned their Ph.Ds, seven got Masters degrees, 12 more received short-term training, and an average of 12 per year obtained 2 to 3 months in-service training at CRDN and the General Hospital in Jakarta. The Academy's nutrition program relies heavily on field work, is considered one of the best in Asia, and is now attracting students from neighboring countries.

4.11 Efforts have also been made to upgrade the skills of middle level nutrition workers. The government currently plans to cover some 65,000 villages under UPGK during REPELITA IV (see Annex 4 for background information on UPGK), thus creating a much greater demand for nutritionists than was envisaged under the project. To overcome the resultant shortfall of trained graduates, GOI decided in 1980 to use trained assistant nutritionists at the field level. Reallocated project funds have therefore been used to modify the Nutrition High School (which was giving three years training to Junior High School graduates) into a School for Assistant Nutritionists, with one year's training given to Senior High School graduates. The Assistant Nutritionists so produced, plus the graduates of three to four similar schools being planned, and the Health Center workers being given short-term training in nutrition are expected to help meet current manpower needs. In

addition, the Ministry of Health has assessed the total manpower needs for REPELITA IV (1984-89) and beyond (up to the year 2000), so that additional training facilities can be built in advance. The project has also funded programs for upgrading the skills of trainers, and these have apparently been very useful.

B. Direct Nutrition Action Programs

4.12 Nutrition Intervention Pilot Project (NIPP). The largest action program was an intensive version of the UPGK known as NIPP or UPGK-plus; designed to test new ways of delivering nutrition and health services to children under the age of three and pregnant and lactating women. The NIPP was a field test of a range of community nutrition interventions (growth monitoring, oral rehydration, nutrition education with emphasis on breastfeeding and weaning foods, home village gardens designed to increase production of nutritious fruits and vegetables, and small-scale food processing and food storage, along with immunization and, in selected areas, family planning), with the intention that some combination might later be integrated into a national nutrition strategy.

4.13 The initial objective of NIPP was to provide a processed nutritious product made from locally grown foods (BMC) to malnourished children and pregnant and lactating women. Village volunteers (Kaders) would monitor the growth of pre-school children, distribute food to those who were not growing adequately, and provide nutrition education to their mothers. The program was to begin in two kabupatens in the first year (the major subdivision of provinces in Indonesia), expand to two more in the second, and after a mid-project review, add three more by the fourth year. That schedule was followed, but with Bank agreement the program was extended to 43% more villages than the 258 planned. Overall, over 200,000 persons have directly benefited, 800 village level nutrition centers have been established, and more than 2,000 cadres conducted nutrition education and other activities.

4.14 Poor management at all levels and an unwieldy monitoring system considerably hampered early execution of the program. The mid-project evaluation recommended several substantial changes, and by the summer of 1982 significant progress had been made in resolving many of the project's problems. A team of Ministry of Health and UNICEF consultants concluded that NIPP-type short-term rehabilitative feeding, targeted to children who fail to gain weight for three consecutive months and using prepackaged BMC, was preferable to approaches used in other government nutrition programs. In early 1983, the NIPP approach was adopted for the major government programs.

4.15 The NIPP program has demonstrated the operational feasibility of a village-based nutrition rehabilitation effort, managed by the community kaders supervised by health center staff and using locally produced processed food to rehabilitate seriously malnourished children. It has developed a monitoring and reporting system, portions of which are being introduced into the national program. And it has established the value of a field laboratory to test new operational ideas.

4.16 Home and Village Gardens. The HVG component was expected to promote home gardens in 18,000 village homes (100 per NIPP village), and to establish with the help of community efforts on community land, one seed farm and model fruit and vegetable garden in each NIPP village. The component was to use ten agricultural extension workers for assisting 10-15 contact farmers in each village, who in turn were to train 7 to 10 neighbors. A special GOI grant of about \$4.50 per family was provided annually for the first three years (1977-80) for seeds, fertilizers, pesticides and routine agricultural implements.

4.17 The program started in 1977-78 with 1,800 village homes, made steady progress until 1980-81 when it covered 12,000 homes, but then declined to 6,600 homes the following year. The major problems were uncertainties of GOI funding (sanctioned on an ad hoc year-to-year basis), and weak coordination (especially after 1980) between the agricultural extension workers and NIPP field staff. The appraisal report's stipulation that assistance be provided to the 100 poorest farmers in each village also proved infeasible since most poor farmers in this category had little land around their homes. Similarly, since most villages had insufficient community land for starting a village seed farm, and no provision was made at appraisal (or subsequently) for renting private land for this purpose, progress was considerably less than expected. It seems the project's VHG component, was apparently overshadowed by a similar but larger UNICEF-supported program under UPGK, which was apparently better coordinated at the national and local levels.

4.18 An evaluation conducted by a private consulting firm in early 1982 concluded that an objective assessment of the impact and efficiency of HVG was impossible, primarily because no baseline survey had been done and no data on inputs (fertilizer, insecticide, etc.), and outputs (increased production of fruits and vegetables) was available. However, there was subjective evidence that home gardens provided about 20% of the family income in some areas, and participants reported higher yields, adopted improved methods, and had more area under home gardens than did non-participants. However, it was difficult for many farmers to perceive the advantages of the

home gardens since yield increases were small and land devoted to vegetables was limited. In the case of seed gardens, a few of which were created, recurrent costs of maintenance and supervision were excessive. (In contrast, under the UPGK program no special village seed gardens were created; instead, government contracted with farmers in the village to grow seed and then purchased and distributed these to other villagers). The agricultural extension workers who were to have been trained in horticulture and nutrition and seconded to the project's HVG component remained uninvolved in what they perceived as peripheral responsibilities.

4.19 Anemia Prevention and Control Pilot Project. This component had the following objectives: reduce nutritional anemia on three government plantations by providing iron-fortified salt and iron pills to 3,000 workers; reduce hookworm infestation by providing medication, boots and latrines; and assess the overall cost-benefits of a delivery system suitable for large scale application. Based on preliminary results of the pilot project, the practice of iron supplementation has spread spontaneously, and now covers over 300,000 workers and their families in 11 government and 10 private plantations. Productivity and income gains vary from one plantation to another, and might be as high as 7% in some cases. In the absence of strict monitoring of results and of methodologically sound evaluation studies, it is difficult to accurately assess the reduction in iron anemia or hookworm infestation, but some studies indicate that 70-75% of the target population is now free from these ailments. The delivery system for iron-supplementation has proven effective, and its further expansion is definitely feasible.

4.20 Nutrition Communication and Behavioral Change. The nutrition education component, aimed at molding nutritional behavior, initially was to be implemented in 60 villages in five kabupatens, one of them a NIPP area. The first two years of the program were a preparatory phase, devoted to infrastructure-building, selective training of village volunteers (kaders), administrative preparation, and setting up a growth-monitoring program. The next year was used to test concepts -- households, each including a pregnant or lactating woman or a mother of a malnourished child, met individually with interviewers to agree on a set of dietary modifications that the family then tried out. This trial step helped the nutrition education team determine what precisely the program should aim to do -- for example, introduce a home-made weaning food -- and the best media and methods for doing it -- for example, posters for the kaders that mothers were asked to mark every time they performed a prescribed action, or radio spots in dialogue format, using the mothers' own words.

4.21 One year after the communication strategy went into operation, an evaluation of program and comparison areas showed that the target kaders had learned the program messages and had more specific advice to offer than kaders in other nutrition education programs in comparison areas; they were

devoting on average nearly 14 hours per month to nutrition work compared to less than 7 hours by workers in comparison areas. In project villages, 67% of households had been visited by a nutrition kader, in comparison villages 44%; project village mothers averaged 47% correct recall on nutrition messages, comparison mothers 28%.

4.22 After four years of project operation and a year of intense education activity, an evaluation of households confirmed trends of improvement in the nutritional status of mothers and children in the project areas. At all ages mean weights for program children were higher than for comparison children, and at 24 months of age there was a highly significant difference of half a standard deviation between the mean weights. There were half as many moderately and severely malnourished children (those less than 75% of median weight-for-age) in the program group. These differences in nutritional status were seen not only across the entire sample but also in each geographic region.

4.23 Detailed evaluation of the component has indicated that the difference in nutritional status can be attributed to the program rather than to schooling level or other factors. Women applied the knowledge thus gained to feeding their children more of the recommended foods. In program areas 87% of the children consumed more than half of the recommended calorie intake and 82% of the children consumed more than half of the recommended protein intake; for children in the comparison sample, the figures were 62 and 60%, respectively.

4.24 The effectiveness of specific messages was demonstrated, the strongest correlation being between knowing and preparing the weaning food that is important to the nutritional status of five-to-eight month infants at a crucial time in their development.

4.25 The project appears to have overcome one of the largest constraints to improved nutrition, the level of the mother's education. Children's nutritional status was determined less by the level of maternal education for children in the target group than for those in the comparison sample.

4.26 This was the most successful of the field programs, the success attributable to thorough research, a carefully conceptualized media strategy, good implementation of the initial phase, and evaluation from the outset. The program had a demonstrably positive effect on the nutritional status of the target population. It provided only nutrition education, utilizing a combination of personal and mass-media contacts. Technical assistance was vital to the development of this component. The government has announced its intention of using the messages and media strategy in its national program.

C. National Nutrition Policy

4.27 Two small but vital components of the project focused on national nutrition policy issues: the Research Coordinating Committee provided oversight of research conducted primarily by the CRDN and FTDC, and the Food and Nutrition Unit (FNU) examined the larger question of integrating nutritional issues with GOI's agricultural policies.

4.28 Research Coordinating Committee. This Committee was officially established by the Project Director on September 1, 1977, and consisted of senior experts from various national institutes, centers and ministries. The Directors of CRDN and FTDC chaired the Committee by rotation, and the first few meetings were devoted largely to identifying its role and decision making authority with respect to specific research programs undertaken by the two Centers. The smooth functioning of the Committee was easier to achieve when the Center directors were in agreement, and for matters that did not need sanction from their respective ministries (CRDN was under MOH, while FTDC was within the University of Bogor, under MOE.) However, since the research programs and priorities of the two centers were not clearly articulated, and the Committee lacked hierarchical authority over the two Centers to enforce a common research strategy, its effectiveness was severely limited.

4.29 Despite this general problem, some activities were undertaken enthusiastically by Committee members: research reviews were compiled in two successive annual reports (for 1979-81), and members participated actively in national workshops and seminars attended by Indonesian and foreign nutrition experts. These forums, arranged as often as four times during some years, provided regular opportunities to influence and shape the content of a national food and nutrition policy, and have proven very useful.

4.30 Food and Nutrition Unit. A small FNU was set up in 1969 within the Ministry of Agriculture (MOA) to advise GOI on steps needed for increasing food production, improving the quality of diets, studying the effects of economic and social factors on human food consumption, and coordinating MOA's nutritional activities with those of other ministries. In 1975 a 12 member team of MOA officials was made responsible for these tasks on a part-time basis and in 1977 the project proposed strengthening the FNU with technical assistance from a nutrition planner, a food economist and a data analyst, along with in-service training and fellowships for MOA staff.

4.31 Despite these good intentions, the FNU remained a skeletal unit until 1979, primarily due to insufficient interest in the Ministry of Agriculture, lack of leadership and trained staff, and inadequate authority to carry out its assignment. Its "coordination" activities were initially confined to collecting data on food supply. However, following a visit in 1980 to India by officials from the Ministries of Health, Agriculture and Interior, there has been an increased awareness of the benefits of inter-sectoral planning of nutrition policy. Two senior staff members were sent

for training to the International Food Policy Research Institute in Washington, D.C., and are now back at the FNU. An intersectoral Training Workshop on Food and Nutrition Planning was also held in February 1983, with major technical inputs from the Unit. Assisted by consultants, the FNU has recently completed a study of major food production, consumption and nutrition problems in Indonesia, and has proposed strategies to overcome them. This study has formed the basis for recommending food and nutrition policies for REPELITA IV.

V. PROJECT IMPACT

5.01 Most project components, considered separately, have achieved or exceeded appraisal targets; taken together, their benefits are substantial, and extend far beyond the immediate activities of the project. In general, the project had a catalytic effect on sectoral activities; and its greatest benefit has been the considerable interest generated in nutrition related issues, at all levels of society. This sharpening of focus on nutritional problems and on broad-based action needed to overcome them, led the government to include a national food and nutrition chapter in REPELITA III and IV. The policy objectives now being finalized are likely to be implemented through an ongoing nationwide program -- an expanded basic UPKG incorporating aspects of NIPP -- possibly supplemented by a Bank-funded follow-on nutrition project currently under preparation.

5.02 The support institutions needed for long term research, technology development, and training (namely CRDN, FTDC, and the Academy of Nutrition respectively) have already been established under the project. The work of some of CRDN's staff meets international standards; but the Center has not yet established an economic and social studies unit on the scale envisaged (partly due to its difficulty in attracting economists), thus limiting its role as a bridge between the scientists and government planning groups such as BAPPENAS. The FTDC has performed better: it is perhaps the first major facility in the world devoted largely to village-level food technology, and has well-trained and highly-motivated staff. Similarly, the Nutrition Academy has now developed an international reputation, and most of its training objectives have been met. The main manpower gap at this stage is at the field management and supervision level, for which additional training centers are being planned. In the Ministry of Agriculture, only a small fraction of the technical assistance envisioned for the Food and Nutrition Unit was utilized; a strong analytic unit has yet to be developed.

5.03 The institution-building strategy included a sizable training and technical assistance elements to broaden capacity to plan and operate programs. Training has covered a broad range of skills and sophistication. In Indonesia, for example, the head of nutrition in the national planning agency was completing a Ph.D. in nutrition planning at the same time village kaders were learning about nutrition education. The project also funded 24 long-term fellowships and 180 short-course grants for technical specialists, training of kader supervisors, and training of nutritionists. Indonesia's

Nutrition Academy, whose facilities and staff were improved, has increased its annual number of nutritionist graduates from 60 to 200 and outside evaluators have praised the quality of their preparation. A national staffing plan for nutrition, developed in the project to accompany the fourth National Development Plan, is being implemented on schedule. (The drafting of the food and nutrition chapters of the plan was the responsibility of the officer mentioned above who received his doctorate under the project. Upon receiving his degree, he was given responsibility for both health and nutrition in the national planning agency.)

5.04 Two studies have been undertaken comparing the experience of children in the NIPP villages to those in the basic UP GK program before it was modified to incorporate certain features included in NIPP. In one, NIPP children started lower in nutrition status than those in UP GK but showed marginally greater improvement in growth, reaching the same levels by the end of the study. The study shows that NIPP children participated in the program to a greater extent (for example, attending an average of 23 weighing sessions in 25 months compared to 18 for the basic UP GK group), and that there was greater change in knowledge and behavior. Interestingly, the average education level of the NIPP mothers was lower than basic UP GK mothers.

5.05 The other study showed that the portion of children under three who were judged "well-nourished" (based on weight-for-height standards) rose from 39 to 44 percent in West Lombok (compared to an unchanging 43 percent in basic UP GK comparison villages) and from 36 to 46 percent in Bojonegoro (compared to an increase from 47 to 48 percent in basic UP GK villages). However, as best as can be judged, nutritional impact varied from area to area; in Bojonegoro, the results showed that local leadership had been more committed and active than in West Lombok.

5.06 NIPP has produced several techniques and activities that are being introduced into an expanded national program, e.g., the NIPP monitoring and reporting system, a village-based rehabilitative effort use of locally processed foods. The project's supplementary feeding approach will become the standard for all other programs. Also, the Government has adopted the NIPP concept of "village laboratories" to test new program ideas.

5.07 One of the more impressive outcomes of the project in Indonesia has been the spontaneous response of villages. Communities near NIPP villages have organized themselves and established similar programs with their own resources. (One regency, Bojonegoro, has arranged funding from local sources to permit NIPP to continue there.)

5.08 The nutrition education component was the most effective activity of the type conducted any place and already is being looked to as a model,

worldwide. Impact of component is noted in paras. 4.21 to 4.26. The nutritional status of children up to 24 months old in five areas where nutrition education under the project was offered can be compared with that in five areas that received different programs of nutrition education and other nutrition inputs from three major government programs. One year after the full implementation of the communications strategy, there were significant differences in percentages of malnourished children, as measured by weight for age:

Percent of Standard Weight-for Age	Percent of Children in	
	Nutrition Education Villages	Comparison Villages
Less than 60	0.0	1.2
60 - 74	10.0	18.2
75 - 89	42.4	40.0
90 +	47.6	40.6

Based on cost estimates and the finding that 40% of the children in the nutrition education program were growing more rapidly than those in the comparison group, the cost per child with improved nutrition status was \$9.85 per year during the pilot phase and has been projected at \$5.15 a year for an expanded program.

5.09 Another major objective of the project was to aid the government in the formulation and execution of a national food and nutrition program; and many background papers sponsored by the project and the ongoing policy dialogue between Bank and GOI staff have been geared toward that end. In February 1983, at a Food and Nutrition Planning Workshop funded by the project, the coordinating minister for economy, finance, and industry gave a strong endorsement for assigning nutrition high priority and expanding nutrition activities. This was reiterated six months later in a meeting that discussed recent work on the nutrition section of REPELITA IV. A National Nutrition Improvement Working Conference was opened on April 12, 1984 by President Soeharto who strongly reiterated GOI's continuing interest in nutrition issues, as an integral part of the national five-year plan. This dramatically increased government and public support for nutrition and augers well for the future.

5.10 The 1982 evaluation team of international and Indonesian nutrition experts credited the project with "strengthening and expanding the infrastructure for a larger scale nutrition program in Indonesia" and noted the "quite impressive" impact of its action programs. The report linked the

greatly increased emphasis on nutrition in the national plan -- which now extends nutrition activities to approximately 30,000 villages -- to the project. Other international agencies, particularly UNICEF, have also played a very important role in raising the consciousness of the government concerning nutrition, as well as in funding nutrition activities. The Ministry of Health and BAPPENAS, and to a lesser extent the Ministry of Agriculture, have become more conscious of the importance of nutrition and the possibilities for effective intervention. Interest in component evaluation (clearly one of the project's weak points in the early stages) has not only increased but has spread to nutrition activities beyond the project.

5.11 Finally, the evaluation shortcomings, the institutional strengthening still need, and other (particularly management and coordination) problems should not detract from the fact that the government has established a strong base in a remarkably short period. Nutrition now plays so large a role in Indonesia (including as an entry point for family planning and women's development activities) that it frequently is referred to as a movement, with few parallels elsewhere. The Bank project is widely credited in Indonesia with having contributed, directly and indirectly, to this. The government has now asked the Bank for a loan for a second nutrition project.

VI. BANK PERFORMANCE

6.01 Bank contribution to project design and implementation has been substantial. Until the early 1970s, the GOI's Applied Nutrition Program had remained confined to a few activities in a limited geographical area, and did not attract high level political attention. The project sought to change this. As originally designed by GOI, its major components (institution-building, field delivery and national policy analysis) were designed to serve as initial building blocks for a gradually expanding national program, and sought long-term impact rather than immediate results.

6.02 On reviewing this strategy in March 1976, the Bank's Board suggested the addition of directly productive and/or productivity-oriented field-action programs, so that the project could contribute more directly to improvements in agricultural output (para. 2.04). These various "add-ons" though small in dollar value, introduced a sharper field-intervention orientation, though still on a pilot basis (the components added included anemia control, food storage, home and village gardens, and nutritional training to agricultural extension workers). Most of these components, though not multisectoral in nature, had to be implemented with the assistance of or through other government agencies. The Board's suggestions therefore increased both the technical and administrative complexity of the project.

6.03 As discussed in earlier sections, the effects of these changes in project design were far reaching. Increased administrative complexity made the project difficult to implement, and magnified the problems caused by weak organizational and managerial capabilities in MOH. However the additional components, when finally implemented, proved very beneficial and contributed greatly to project success and impact. These direct-action components, when combined with the original core components of the project, produced a comprehensive package of inputs that has strengthened Indonesia's national nutrition program in a variety of ways, from the central to the village levels.

6.04 The Bank, has therefore helped to design and implement a project that now serves as a prototype for an expanded national program. The project also made possible a continuous and effective policy dialogue with GOI officials. As a result, the primary gains from the project are its substantial impact on the priority, commitment, policy and program choices, and level of government support for nutrition actions in Indonesia. The close association between nutrition and food policies is now recognized in REPELITA IV; and the connection between food habits and nutritional status has also been made in the minds of the intended beneficiaries, and is reflected in changing attitudes and behavior at the village level. The latter benefit is primarily due to NIPP's supplementary feeding program and the nutritional communication component, both of which have been effectively implemented.

6.05 Of course, these benefits also entailed heavy costs of preparation and supervision. Bank missions from Washington spent over 224 man-weeks (roughly 4.5 man-years) in Indonesia and were assisted by resident staff in the country. Almost equal amounts of Bank staff time were spent before and after project effectiveness in April 1977, averaging about three missions a year between 1973-80. However, despite the long period (four years) of preparation and appraisal, and even though the loan was declared effective a mere fortnight after loan signing, GOI staff were not ready for a quick start-up. Since the project was administratively complex and required the cooperation of a number of government agencies (para. 2.08), the expectations of a four-year implementation period (1977-81) were perhaps unrealistic. Although expatriate consultants were sought to be provided to compensate for the weak managerial capabilities of MOH staff, it is not certain that consultants could have reduced the initial problems caused by inexperienced staff and rigid government systems. Therefore it appears in retrospect that the project might have benefited from additional attention to improving the project staff's knowledge of GOI and Bank procedures, and from more realistic implementation schedules.

6.06 During the early years, management problems and tight schedules put great pressures on Bank and GOI officials to show progress by the time of the

mid-term review in 1980. As discussed earlier, a number of administrative constraints were overcome in 1979 (para. 3.08) and project progress became much easier as a result. Although a two-year learning period was certainly a major factor contributing to this improved pace of implementation, Bank staff's persistent urging must also have helped. In fact, some GOI officials seem to have felt that the pressure was more than needed, and that the appraisal report, which had been translated in all its details into Bahasa Indonesia and widely circulated, was initially used "more as a bible than as a guide." (One of the examples cited is the manner in which individual fellowships were required to be approved by Bank staff during the early years. The procedure was later changed, and broad criteria of eligibility and candidate lists rather than individual applications were submitted for Bank approval). However, the Bank also showed some flexibility during loan reallocation, for appointment of local consultants, and in the implementation procedures used for NIPP. As a result, the concerted and joint efforts of Bank and GOI officials have largely paid off, as is amply documented under project accomplishments.

VII. CONCLUSIONS

7.01 The status of nutrition-related activities in Indonesia is far better today than a decade ago when the project was initiated; and several factors, including substantial non-project inputs provided by GOI and other donor agencies have jointly produced this favorable outcome. A number of project activities have been particularly successful, and have important lessons for similar projects elsewhere. Among the field interventions undertaken, the nutrition education component proved most effective since it was designed to modify specific behavior. Working with intended audiences, allowing them to try different alternatives and to formulate new ones, gave both relevance and specificity to the overall project strategy. (One of the keys to success was the work of a nutrition anthropologist who lived in Javanese villages during most of the 14-month period of program formulation). This component's objectives were based on what people could and would do, addressed a few priorities, were transmitted easily and effectively by village workers in home visits and growth monitoring sessions, and these efforts were reinforced by radio. Thus, the nutrition education component was highly successful because it built on the resources that already existed in the community.

7.02 The potential for linking health and nutrition delivery has also been demonstrated: the weight monitoring and selective feeding approach for screening and servicing nutritional needs required the establishment of a common network of village-based workers, and this has been successfully done. The project has also demonstrated the feasibility of a multisectoral nutrition intervention whose success depended not only on inputs provided by

government agencies but also on the abilities of village families to help themselves. Both these field activities have required intensive and sustained effort over a long period of time, both for generating an awareness of nutritional issues and for guiding and technically backstopping the activities of village-level volunteers and community groups.

7.03 The program to reduce anemia was managed so efficiently on a large scale, with apparently positive effects on worker productivity, as to make it worthwhile for plantation owners to complement the project at their own expense. A nationwide expansion of this component is clearly feasible. The Indonesian experience with village home gardens demonstrated, however, that since such a program only benefits those who have land to devote to gardens, there is little benefit for those most in need of improved nutrition. The project also showed the importance of community seed gardens; although the number of seed gardens under the project fell short of appraisal targets, the concept nonetheless remains worth replicating.

7.04 The project can perhaps be faulted for optimistically assuming a high degree of management and organizational skills, despite its considerable administrative complexity: communications and coordination among agencies remained poor throughout implementation, even after consultants for management, planning and procurement had been provided. However, it appears that the overall project impact would definitely have been reduced if any of these components had been deleted in an effort to make the project "simpler" to implement.

7.05 This is because most project components have been mutually reinforcing. The CRDN has taken a role in the evaluation of both NIPP and the anemia prevention and control programs, and it formulated the food used in NIPP's supplementary feeding program. The village-level technology for production of the food was designed and produced by FTDC. In addition, the gardening and storage programs were implemented in the same villages as NIPP. The institution-building strategy included sizable training and technical assistance elements to broaden the capacity to plan and operate programs. This turned out to be one of the most effective and important elements in the project in that it helped put Indonesia in the position today to substantially enlarge its program and to improve it as local authorities plan to do. Simultaneously, attention was given to developing a monitoring and evaluation capability, and for undertaking national policy analysis. Each of these project components has contributed to strengthening the national program; together their impact has been very substantial.

7.06 Therefore, rather than reduce the number of components, perhaps greater attention should have been given to selection of competent project management and staff, upgrading their skills and knowledge of Bank and GOI procedures, and improving the coordination between activities such as budgeting, contracting, procurement and technical assistance.

It appears that greater administrative preparation (as against technical preparation of components) would have helped, perhaps through something like the "project launch workshops" used for some urban projects. In addition, and perhaps more important for project effectiveness than organizational form, the support and involvement of politically powerful decisionmakers was also needed. Perhaps recognizing this, BAPPENAS pushed ahead without knowing all the answers to technical and administrative uncertainties, because it believed its program was moving in the right direction and that (in the words of the assistant director) "seizing the opportunity while there is interest and resources" would pay the greatest dividends ten years later. Project experience has clearly demonstrated the merits of this pragmatic approach.

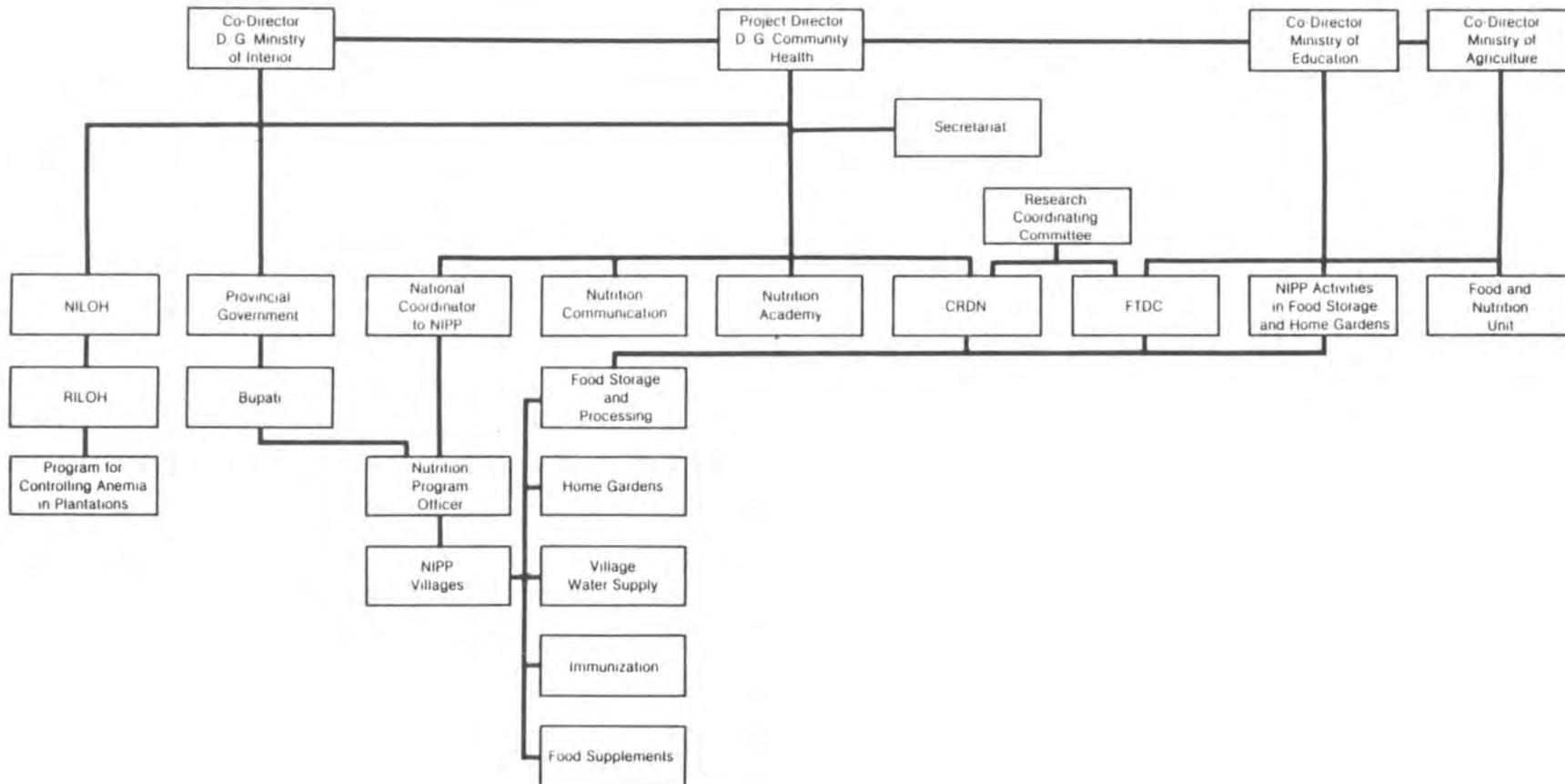
7.07 Nevertheless, delays in implementation and the heavy supervision required in early years provide evidence that the development of managerial capability required more time than project circumstances and tight schedules permitted. Inappropriate and inflexible approval mechanisms (such as those used initially for budget and fellowship approvals), and unfamiliarity with Bank and GOI procedures caused avoidable delays. Close supervision by Washington-based Bank staff, though initially necessary for putting pressure on government officials to remove administrative constraints, was obviously unable to compensate for weak local leadership. However, closer involvement of the Bank's resident staff in Indonesia in routine follow-up of project progress might have provided the additional technical and "political" support needed by the newly appointed project management, especially since this was the first Bank-funded nutrition project in Indonesia.

7.08 The monitoring and evaluation component also proved particularly difficult. Generally, although the plans and funding for evaluation were there, the value of assessing performance as a management tool was not appreciated (except for the nutrition communication and behavioral change component); and neither the recording and analysis of routine data for monitoring operations nor special studies to evaluate impact were viewed initially as integral parts of project implementation. The situation improved in later years, after a local consulting firm helped simplify and revise the monitoring system (for NIPP especially), making it possible for relatively untrained field staff to generate meaningful data and undertake timely analysis. Unfortunately, however, despite some noticeable progress in research and evaluation capability, firm conclusions regarding replicability, cost effectiveness, and impact must await more accurate data and analysis. The few studies that are available use different assumptions and bases for allocating costs and assessing benefits, and do not lend themselves to objective comparisons and generalizations. Greater attention to these aspects of the project was clearly needed.

7.09 Despite these obvious shortcomings, the project has definitely been worthwhile. All three major objectives -- concerning institution building,

testing of field level interventions, and policy formulation -- have been largely met. Some of the lessons learnt from the project have already been incorporated into the national UPGK program, and the basic research facilities, equipment, manpower, and infrastructure for nutrition delivery are now in place. An expanded and more intensive national program will require a well-coordinated but flexible decentralized management, highly motivated staff and volunteers, and accurate monitoring and evaluation, all of which are yet to be fully developed. Fortunately, however, in recent years, there has clearly been a general improvement in Indonesia's administrative and institutional capabilities; and the government is strongly committed to improving the nutritional status of its vast population. This high level political support must now be supplemented with government funds for operational requirements (of staff, training, vehicles, equipment, maintenance) which tend to become scarce once capital investments are in place. Unless these are provided in adequate amounts, future success can hardly be assured, and even though the project has helped lay a strong foundation for an expanded program, it is only an important first step. Consequently, the proposed second nutrition project, which has recently been appraised, is timely and appropriate, and will help improve Indonesia's nutritional status even further.

**INDONESIA NUTRITION DEVELOPMENT PROJECT
PROJECT ORGANIZATION**



SCHEDULE OF DISBURSEMENTS

Fiscal Year and Quarter Ending	Cumulative Disbursements (US\$ Million)		
	Appraisal Estimate	Actual Total	Actual or Latest Estimated Dis- bursement as Percent of Total
FY78			
March 31, 1978	0.3	0.0	0.00
FY79			
March 31, 1979	1.9	0.1	0.77
FY80			
March 31, 1980	5.7	1.2	9.23
June 30, 1980	6.6	1.5	11.54
FY81			
September 30, 1980	7.8	1.8	13.85
December 31, 1980	9.0	2.3	17.69
March 31, 1981	10.2	2.8	21.54
June 30, 1981	10.8	3.9	30.00
FY82			
September 30, 1981	11.6	4.5	34.61
December 31, 1981	12.7	4.9	37.69
March 31, 1982	13.0	6.0	46.15
June 30, 1982		7.0	53.85
FY83			
September 30, 1982		8.5	65.38
December 31, 1982		9.5	73.08
March 31, 1983		10.3	79.23
June 30, 1983		11.4	87.69
FY84			
September 30, 1983		12.66	97.38

COMPLIANCE WITH LOAN CONDITIONS

Conditions	Remarks
1. <u>Section 3.02</u>	
The Borrower shall employ consultants whose qualifications, experience and terms and conditions of employment shall be satisfactory to the Bank.	Consultants satisfactory to the Bank were employed.
2. <u>Section 3.03</u>	
The Borrower shall afford the Bank a reasonable opportunity to comment on the qualification and experience of any person proposed to be appointed to the positions of Project Director, Project Co-Director and Project Manager and NIPP Coordinator prior to the making of such appointment.	The Bank's approval was sought prior to the appointment of staff to these positions.
3. <u>Section 3.04 (c)</u>	
The Project Director shall be required to prepare and furnish to the Bank semi-annual reports on project progress.	Semi-annual reports were submitted regularly to the Bank.
4. <u>Section 3.05 (d)</u>	
The accounts of all project audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies.	Reports delayed, but submitted.
5. <u>Section 3.07 (i)</u>	
The Borrower shall maintain a Research Coordinating Committee to facilitate coordination of the nutrition-related research programs.	The Research Coordinating Committee met frequently.

COMPLIANCE WITH LOAN CONDITIONS

Conditions	Remarks
6. <u>Section 3.07 (ii)</u>	
The Borrower shall submit to the Bank annual progress reports on research programs.	The research program was submitted to the national food and nutrition workshop held in February 1983.
7. <u>Section 3.08</u>	
The Borrower shall carry out a review of the NIPP program at the end of the second year.	Completed.
8. <u>Section 3.09</u>	
The Borrower shall carry out a review of the home/village garden component at the end of the third year of the NIPP program.	Completed and report available.

EXTERNAL EVALUATION REPORT: SUMMARY AND RECOMMENDATIONS

(i) The Indonesia Nutrition Development Project (INDP) commenced in 1977 with three main objectives. As stated in the Appraisal of a Nutrition Development Project (World Bank Report No. 1373-IND), these were:

- a. To strengthen and expand the existing nucleus of personnel and institutions in Indonesia to develop more effective capacity for: formulation, execution and evaluation of nutrition programs, operational research, and manpower training in nutrition;
- b. To develop nationally replicable and cost-effective measures to improve the nutritional status of mal-nourished target groups through field level action programs and their evaluation; and
- c. To aid the Government of Indonesia in the formulation and execution of more comprehensive food and nutrition program on a national scale based on the combination of the above actions.

(ii) The team believes that the primary objective of strengthening and expanding the infrastructure for a larger scale nutrition program in Indonesia has been achieved in good measure. The various components: Center for Research and Development in Nutrition, Food Technology Development Center (FTDC), Nutrition Manpower Training (NMPT), Nutrition Intervention Pilot Project (NIPP), Home and Village Gardens (HVG), Anemia Prevention and Control Pilot Project (APC), Nutrition Communication and Behavior Change (NCBC), and Food and Nutrition Unit (FNU) have enabled the development of a better basis for the formulation and implementation of food and nutrition policy and programs in the coming Fourth Five Year Development Plan (REPELITA IV).

The project is highly successful in reaching rural populations with pragmatic nutrition education measures that sensitize the population to the importance of paying attention to nutrition. In particular, the field level action program NIPP and NCBC, in 258 villages, 55 provincial sub-district levels (kecamatan) in Java, Nusa Tenggara Barat (NFB) and South Sumatra have had a catalytic influence on the initiation of the Family Health and Nutrition Program (UPGK) and other related activities in the surrounding areas utilizing local resources.

While the Project has provided for elaborate monitoring and evaluation systems, the team notes that the result of evaluation are not yet available in an appropriate form to assess the impact of the action components of this project on the nutritional status of target groups. However, the overall impact of the programs in different areas has been quite impressive, leading to a demonstration cum spread effect.

In addition, the lessons learned from NIPP are being and will continue to be applied to upgrade the management of the extended UPGK programs.

(iii) The team believes that despite the overall successful impact of INDP, there are major problems which merit immediate attention. These are:

- a. Failures of monitoring and evaluation systems for almost all activities of the Project, specifically in operating a reliable system for collecting information on the impact of the various components;
- b. Inadequate arrangements for sustaining the infrastructure, especially the institutions built up at considerable cost such as CRDN, FTDC, Nutrition Academy (Akademi Gizi), and School for Assistant Nutritionists (SPAG). There is a need, in particular, of funds for maintenance, staff, upkeep of equipment and training;
- c. Serious gaps in trained nutrition manpower at the village level to supervise, coordinate, and monitor nutrition activities in the field; and
- d. Weakness of arrangements for intersectoral coordination for planning and execution of nutrition programs especially at operational levels.

(iv) Based on the above findings, the team recommends that:

- a. With a view to maintaining the institutions that have been set up under the INDP, on which substantial national resources have been spent, adequate funds and continued policy support be provided by the Government of Indonesia. In particular, CRDN, FTDC, Akademi Gizi and SPAG should be allowed to retain their identity, and be given support to maintain and expand their activities as national focal points in the field;

- b. Efforts be devoted to expand the UPGK progressively to cover more villages, utilizing the experience and the lessons derived from NIPP and other programs which have been part of INDP;
- c. A more effective monitoring and evaluation system, especially for programs similar to NIPP and UPGK, be established;
- d. The Health Center (PUSKESMAS) at the kecamatan level should be strengthened by the addition of an assistant nutritionist to coordinate, supervise, monitor and evaluate the expanded nutrition program at village level.
- e. The coordinating arrangements be improved under a structure with the explicit authority for determining its own policies, the means and personnel for the implementation of its programs, and its own budget.
- f. The team recommends that a Task Force of experts be set up early to draw up an outline of the programs for the future, particularly REPELITA IV in the field of nutrition activities, with a proper assessment of costs, manpower requirements and feasibility.

National Family Nutrition Improvement Program (UPGK)*

Background and Focus of the Family Nutrition Improvement Programme (UPGK)

1. The Indonesian Family Nutrition Improvement Programme herein referred to as UPGK (Usana Perbaikan Gizi Keluarga), is a national inter-sectoral programme which integrates activities and messages in nutrition, health, birth-spacing, home food production and religion in an effort to promote improvements in family nutrition and child survival. Four sectors work together to provide an integrated package of activities including the Ministry of Health (MOH), National Family Planning Coordinating Board (BKKBN), Ministry of Agriculture (MOA) and the Ministry of Religion (MOR). The first three of these sectors are directly involved in UPGK service delivery, while MOR stimulates awareness and community participation in the programme.

2. UPGK is targeted to under-five children and their mothers, and pregnant and lactating women. It is focused on the village and the home and aims at an effective utilization of resources available within the community and the household. UPGK is based on the premise that the mother is the critical agent to maintain the health of her child, and the focal point for bringing about behavioral changes to improve child survival. Hence, all aspects of the programme are designed around assisting the mother in identifying when her child is "at risk" of becoming malnourished and helping her to modify her behaviour to prevent more serious problems from occurring.

3. The major activity of UPGK, nutrition education through growth monitoring is based on the assumption that monthly weighing of children together with advice and education of mothers and referral of children "at risk" is sufficient to prevent most cases of severe malnutrition. For most children household resources are presumed to be adequate to prevent severe malnutrition if mobilized properly. This assumption was based on an earlier study which found that the incidence of childhood PEM was as widespread in "food adequate" households as in "food deficient" households. Other studies concur that the problem is largely one of existing food distribution practices among household members and child feeding habits, and emphasize the need for nutrition policies and interventions directed at changing behavioural practices of mothers.

4. The major UPGK theme "a growing child is a healthy child," is easily understood down to the level of individual mothers and is supported by their day to day experience. The scale used to weigh children, and the chart used to monitor growth and identify those not gaining weight, are easily used by mothers and village volunteers with minimal training.

* Terrel M. Hill, Rodolfo Florentino, and Leona D'Agnes, "The Indonesian National Family Nutrition Improvement Programme (UPGK); Analysis of Programme Experience," Report submitted to UNICEF Executive Board, December 1983 (mimeographed).

UPGK Service Packages

5. UPGK consists of comprehensive nutrition and child survival activities encompassed in two service delivery packages: a "basic" package and a "complete" package. The "basic" package includes child weighing, education in nutrition and home food production, distribution of nutritional first aids, promotion of birth-spacing, breastfeeding and oral rehydration, and referral to local health facilities for immunization and other health services. The "complete" package includes the basic package plus a subsidy for rehabilitative feeding of malnourished children - which is provided by the government and administered in the community. Seeds for home gardens, and special "coaching" by agriculture extension workers are also provided in the complete package to promote local food production in "food deficit" programme areas.

6. The centre of UPGK activity is the sub-village nutrition weighing post where mothers bring their babies and young children for growth monitoring and other preventive health services offered simultaneously with monthly weighing sessions. The weighing post is equipped with a scale, growth charts, nutrition education materials, reporting and recording forms, facilities for preparation of foods for group demonstrations and "educational" feeding activities, and nutritional first aids (vitamin A capsules for prevention of childhood blindness, iron folate tablets for prevention of anemia in pregnant women, and oral rehydration salts for management of children with diarrhoea).

7. All activities are conducted by village volunteers (cadres) who are unpaid workers selected from the community on the basis of their ability to read and write, and their interest in participating in the programme. Mothers themselves are often selected as village cadres, as well as members of the local women's social affairs organization (PKK) which includes all women of the village in its membership. Cadres are trained to implement the programme in a preliminary three to five day training session, and work under the supervision of the local village leader (lurah) and his wife. Technical backstopping and supervision are provided to village leaders and cadres by trained midwives of the MCH and paid extension workers of the MOA and BKKBN.

8. The UPGK package includes elements of GOBI-FF, a check-list of low-cost highly effective measures to enhance child survival recently advocated by the Executive Director of UNICEF in the 1982-83 State of the World's Children. The GOBI-FF measures of Oral rehydration and Food supplements are included in the nutritional first aids component of UPGK (oral rehydration salts, vitamin A capsules and iron supplements). Growth monitoring and Breastfeeding promotion are provided through UPGK, together

with referral to health facilities and village family planning posts for assistance in Family-spacing of children. The UPGK weighing posts are also beginning to be used as a forum for Immunization activities.

9. The UPGK programme is now estimated to operate in over 30,000 villages where 70% (14.9 million) of the nation's under-fives live. Millions of mothers throughout the country are taking their babies and young children to "weighing posts" in their villages to learn if their children are healthy, to prevent malnutrition, and to protect them against blindness caused by vitamin A deficiency and dehydration resulting from diarrhoea. More than 400 thousand village volunteers (cadres) record monthly weight changes on growth charts which are kept at home and serve as a constant reminder to mothers of the health status of their children. Severely malnourished children are referred to health centres for rehabilitative feeding and other health services.

10. Although a nationwide impact study of UPGK has yet to be undertaken by the GOI, limited case studies and site visits have indicated a high potential for positive change both on nutritional status of children and knowledge and behaviour of mothers brought about by UPGK implementation. (It should be recognized, however, that it would be extremely difficult to demonstrate impact in a programme of this size because of the presence of numerous intervening factors unrelated to the programme itself).

11. A number of spin-off and multiplier effects have been generated by the UPGK experience. It is estimated that UPGK provided an impetus for more than 2,000 villages throughout the country to start their own programme without recourse to outside resources. In a number of UPGK programme areas, cadres have developed independent village support for "educational" feeding activities through innovative income generating and credit-savings schemes. In still other villages, mothers contribute excess produce from home gardens to support monthly "educational" feeding of needy children in the village.

MINISTRY OF HEALTH REPUBLIC OF INDONESIA
DIRECTORATE GENERAL OF COMMUNITY HEALTH
JAKARTA

Jalan Prapatan No. 10

Phone:

Number : 562/BGM/TU/V85
Reference: IBRD Loan No. 1373-IND
Subject : Cable INTBAFRAD

Jakarta: May 1985

IBRD - RSI Jakarta
Jl. Rasuna Said

JALAN PRAPATAN

Dear Sir,

We would appreciate it very much if you could convey the following message to Mr. Jukinari Watanabe, IBRD, Washington, D.C., USA.

Cable Address: INTBAFRAD
For : Mr. Yukinori Watanabe, Director Operations
Evaluation Dept.
Re : IBRD Loan No. 1373-IND

REVIEWED DRAFT PCR INDP (LOAN 1373-IND). NO OTHER COMPONENT FROM US. ITEM ANNEX 3 NO. 4 REGARDING AUDIT REPORT FOR FISCAL YEAR 1981-82 ALREADY SENT FEBRUARY 1983 AND FOR FISCAL YEAR 1982-83 SENT JULY 1984.

REGARDS, SUYONO YAHYA, M.D.

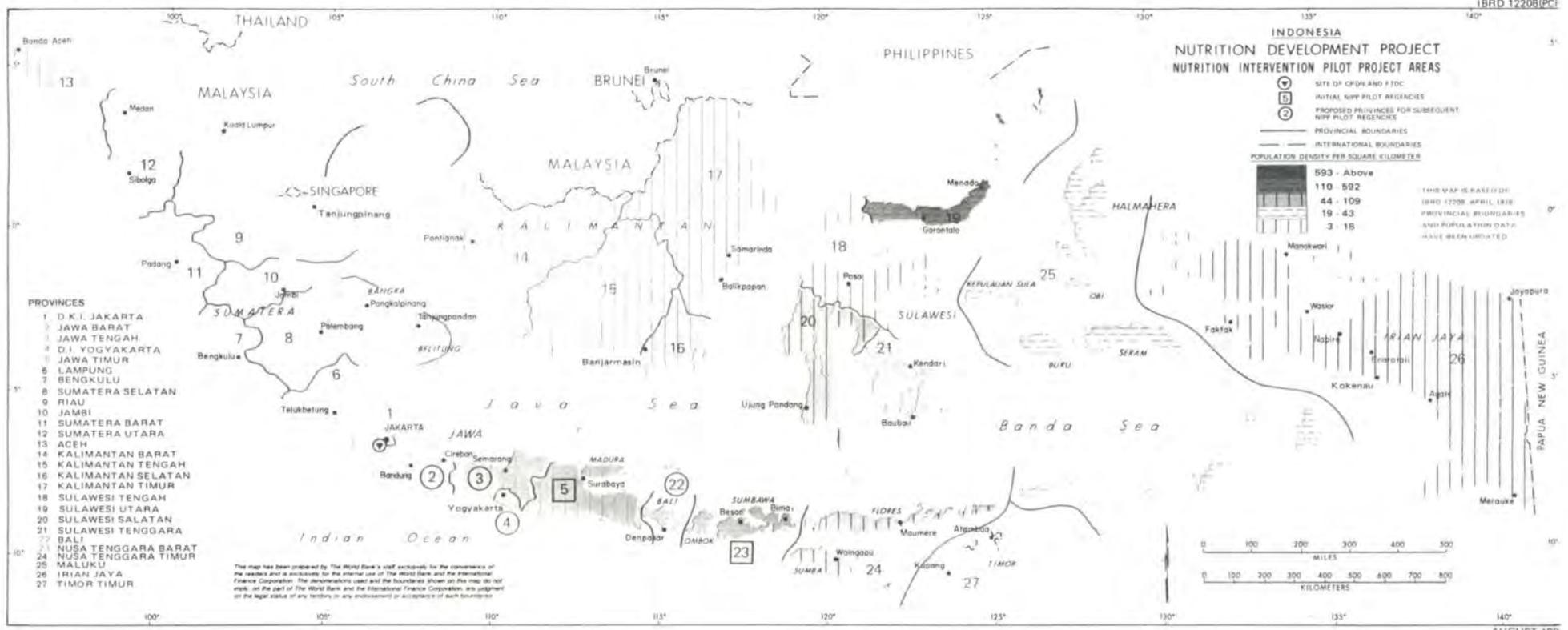
Thank you for your kind assistance.

(Signed)

cc:
1. The Secretary Directorate General of Community Health
2. File

SPN/TU/10/05/85

*Typed from partially legible fascimile copy of letter received from the Ministry of Health.



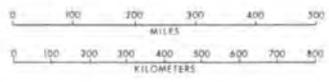
INDONESIA
NUTRITION DEVELOPMENT PROJECT
NUTRITION INTERVENTION PILOT PROJECT AREAS

(1) SITE OF CDD AND FDC
 (2) INITIAL NPP PILOT REGENCIES
 (3) PROPOSED PROVINCES FOR SUBSEQUENT NPP PILOT REGENCIES
 — PROVINCIAL BOUNDARIES
 - - - INTERNATIONAL BOUNDARIES
 POPULATION DENSITY PER SQUARE KILOMETER
 593 - Above
 110 - 592
 44 - 109
 19 - 43
 3 - 18

THIS MAP IS BASED ON:
 IBRD 12208 APRIL 1988
 PROVINCIAL BOUNDARIES
 AND POPULATION DATA
 HAVE BEEN UPDATED

- PROVINCES**
- 1 D. K. I. JAKARTA
 - 2 JAWA BARAT
 - 3 JAWA TENGAH
 - 4 D. I. YOGYAKARTA
 - 5 JAWA TIMUR
 - 6 LAMPUNG
 - 7 BENGKULU
 - 8 SUMATERA SELATAN
 - 9 RIAU
 - 10 JAMBI
 - 11 SUMATERA BARAT
 - 12 SUMATERA UTARA
 - 13 ACEH
 - 14 KALIMANTAN BARAT
 - 15 KALIMANTAN TENGAH
 - 16 KALIMANTAN SELATAN
 - 17 KALIMANTAN TIMUR
 - 18 SULAWESI TENGAH
 - 19 SULAWESI UTARA
 - 20 SULAWESI SELATAN
 - 21 SULAWESI TENGGARA
 - 22 BALI
 - 23 NUSA TENGGARA BARAT
 - 24 NUSA TENGGARA TIMUR
 - 25 MALUKU
 - 26 IRIAN JAYA
 - 27 TIMOR TIMUR

The map has been prepared by The World Bank's staff exclusively for the convenience of the readers and is exclusively for the internal use of The World Bank and the International Finance Corporation. The demarcations used and the boundaries shown on the map do not imply, on the part of The World Bank and the International Finance Corporation, any judgment on the legal status of any territory in any endorsement or acceptance of such boundaries.



ROUTING SLIP		DATE: 6/17	
NAME		ROOM NO.	
✓ Jack,			
12H Razaat seen			
this.			
Cora		Cora	
Thanks. JPK		As we discussed we should write reply	
APPROPRIATE DISPOSITION	NOTE AND RETURN		
APPROVAL	NOTE AND SEND ON		
CLEARANCE	PER OUR CONVERSATION		
COMMENT	PER YOUR REQUEST		
FOR ACTION	PREPARE REPLY		
INFORMATION	RECOMMENDATION		
INITIAL	SIGNATURE		
NOTE AND FILE	URGENT		
REMARKS: <u>Ishrat</u> We're working on this. According to Watanabe's memo of 3/20/85, G.I. comments were expected by 6/7/85. We received them on 5/28/85. JPK 6/13/85			
FROM:		ROOM NO.:	EXTENSION:

~~Obsolet~~

BR

Do you want
to keep this?

They should be
placed on file.
JJK
6/25/85

PLEASE NOTE FOR FILING:

- Correspondence should be Xeroxed for the Division with original sent to Information Center

To be filed in: Ind. Nut. Dev. Proj.
(Ln/Gr.# 1373-IND)
Crossfiled in: _____

- Document should be sent to Information Center accompanied by Form, for assignment of Cataloguing #

OFFICE MEMORANDUM

PHND2 Received

Date: 6/12

DATE: June 10, 1985

TO: Ms. Ishrat Z. Husain, Division Chief, PHND2

FROM: Graham Donaldson, Division Chief, OEDD1

EXTENSION: 32893

SUBJECT: Project Completion Report: Indonesia
Nutrition Development Project (Loan 1373-IND)

1. On March 20, 1985 we returned the above PCR to you for updating and standardizing in accordance with our report format. We also made some further suggestions for your consideration when reviewing the PCR.
2. To date, the updated PCR has not been received. In accordance with normal practice, the final PCR would be circulated to the Board shortly after the due date for Government comments. As these comments were due on May 31, 1985, we would appreciate if the report were returned to us as soon as possible.

ROUTING SLIP		DATE: 5/22/85	
NAME		ROOM NO.	
Mrs. Husain			
PHND2 Received			
Date: 5/24/85			
APPROPRIATE DISPOSITION		NOTE AND RETURN	
APPROVAL		NOTE AND SEND ON	
CLEARANCE		PER OUR CONVERSATION	
COMMENT		PER YOUR REQUEST	
<input checked="" type="checkbox"/> FOR ACTION		PREPARE REPLY	
INFORMATION		RECOMMENDATION	
INITIAL		SIGNATURE	
NOTE AND FILE		URGENT	
REMARKS:			
<p>Re: <u>PCR - Indonesia Nutrition</u></p> <p>Comments have been received by facsimile from MOH. These will need to be incorporated into the report per March 20 memo (attached) along with other requested changes. The original copy of the PCR is also enclosed. Thank you.</p>			
FROM: R. van der Lugt		ROOM NO.:	EXTENSION:
		H6077	32888

returned to van der Lugt
FRONT
on his request of 5/22/85

FACSIMILE TRANSMITTAL FORM

0621
MAY 22 1985

Date : May 22, 1985
Number of pages : Two
From : RSI Jakarta (M.C. Zenick) *Manuel Zenick*
To : World Bank, Washington (MR. Watanabe, oed)
Fax No. : F/1130
Subject : PCR for Loan 1373-IND

Attached is a message which the Directorate General of
Community Health asked us to convey to you.

Regards

Manuel Zenick

File: Loan 1373-IND
MCZenick/mi

annex 6
E2

MINISTRY OF HEALTH - REPUBLIC OF INDONESIA
DIRECTORATE GENERAL OF COMMUNITY HEALTH
JAKARTA

JALAN PRAPATAN No. 10

PHONE :

Number : 562/BGN/TU/V/85
REFERENCE : IBRD Loan No. 1373-IND.
Subject : Cable INT BAFRAD

JAKARTA, July 1985.

JUL 1985

IBRD - PSI Jakarta
Jl. Rasuna Said
Kor. 2-10, P.O. Box 10000
JALAN PRAPATAN

Dear Sir,

We would appreciate it very much if you could convey the message to Mr. Jukinari Watanabe, Washington D.C., USA,

Cable Address : INT BAFRAD
For : Mr. Jukinari Watanabe, Director, Evaluation Dept.
Re : IBRD Loan No. 1373-IND

REVIEWED DRAFT PCR (LOAN 1373-IND) - POWER COMPONENT FROM US,
ITEM ANNEX 3 NO. 4 REQUESTING AUDIT REPORT FOR FISCAL YEAR 1981-1982
ALREADY SENT FEBRUARY 1985 FOR FISCAL YEAR 1982-1983 JULY 1984,

SUKONO YAHYA, M.D.,

Thank you for your kind assistance.



On behalf of
The Directorate
General of
Director Directorate

CC :

- 1. The Secretary Directorate General of Community Health
- 2. File.

By SRN/TU/10/05/85.

Add to
Project

(A)

(4)

project completion report

The (PCR) was completed on (July 13, 1984 for ~~Indonesia~~ and ~~December 21, 1984 for Brazil~~) and submitted to OED. The project was not selected for audit by OED and the PCR was sent to the Borrower for comments on (March 22, 1985 for ~~Indonesia~~ and ~~March 28, 1985 for Brazil~~). Comments received ^{/ on} have been taken into account and are attached to the PCR. (~~or: No comments have been received~~).

When lending for nutrition first began, the Board felt that the Bank should proceed cautiously and with only a few projects from ^{which} it could learn. To date the Bank has financed only four nutrition projects. Projects in Brazil and Indonesia have been completed, and the project in Colombia is expected to be completed soon. These three projects initiated in 1976 and 1977 were heavily multisectoral, with agriculture, watersupply and sanitation, and food marketing components sometimes added to more direct nutrition actions. The India Tamil Nadu Nutrition Project, approved in 1980 was designed to concentrate on fewer actions; this project is expected to be completed in about two years time. From the beginning nutrition projects continued to receive substantial policy level review. As part of the review of the basic needs nutrition paper it was decided that the Bank should improve its nutrition knowledge through country economic and sector work. Since then, analyses of varying intensity have been completed for 16 countries. In late 1983, a major internal review of nutrition projects was undertaken within the ^{BHN} Bank's Population, Health and Nutrition Department. In summary this review concluded that, although there was a need for more systematic and stronger emphasis on nutrition in the Bank's health and population program, the Bank would no longer be involved in complex multisectoral nutrition projects and only under appropriate circumstances would finance more narrowly focussed free-standing nutrition projects. Thus the Bank has in fact learned major lessons from its involvement in nutrition lending. Audits of these projects would be costly as they would involve substantial consultants' inputs and would hardly make additional contributions to the lesson-learning process. OED has therefore decided that it would be much more cost-effective to pass-through these nutrition PCRs and undertake a special impact-evaluation type study of all four nutrition projects at some future date.

— 7 —

DATE: March 20, 1985

TO: Mr. S. Shahid Husain, Vice President, OPSVP

FROM: Yukinori Watanabe, Director, OED

EXTENSION: 32924

SUBJECT: Project Completion Report: Indonesia First Nutrition Development Project (Loan 1373-IND)

1. In accordance with the revised procedures for project performance audit reporting approved by Management and the Executive Directors, the attached Project Completion Report has been read in this Department. It is not proposed to undertake an audit of this project by OED staff.

2. The Project Completion Report will be sent to the Borrower and its agencies on March 29, 1985 for comments. These comments will be expected to reach us by June 7, 1985 and, on receipt, will be sent to you to be reflected in the report and reproduced as appendices.

3. In the meantime, I would request that the following changes/additions be made to the PCR:

- ✓ (i) Add back-up page with weights and measures, currency equivalents and fiscal year;
- ✓ (ii) updated Table of Contents;
- ✓ (iii) a Preface needs to be added including a paragraph about the reasons for pass-through decision;
- ✓ (iv) Basic Data Sheet needs to be presented in standard format;
- ✗ (v) Highlights need to be added including a summary of project experience as well as lessons learned with appropriate cross-references; and
- ✓ (vi) a map needs to be added.

Also, several additional annexes are suggested:

- ✗ (i) a comparative table with estimated as well as actual costs;
- ✗ (ii) a comparative listing in three columns of project description at appraisal, revisions during implementation and achievements; and
- ✓ (iii) a major evaluation of the project was made by a team of Indonesian and international experts; if their report includes a summary, this could be usefully added as an annex to the PCR.

RvanderLugt/GDonalson:rs
Attachment

cc: Messrs. Karaosmanoglu, EANVP; Kapur, DGO (o/r);
North, PHNDR; Kirmani, AEPDR; Kaji, AEADR; Blaxall, AEPDR;

Ms Husain PHNS2

OFFICIAL FILE COPY

actually
5/3/85

Jk

CABLE : NFPCB.
P.O BOX : 186 JKT
TELEX : 48181 BKKBN IA
TELP. : 811308



BADAN KOORDINASI KELUARGA BERENCANA NASIONAL

JALAN LET. JEN. M.T. HARYONO — JAKARTA

No.: 2804/RC.202/C4/85.

March 25, 1985.

*rec'd
4/3/85*

Ms. Ishrat Husain
Population, Health and Nutrition Department
The World Bank
Washington

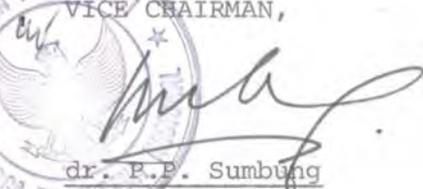
Re: Project Completion Report, Ln. 1472 IND.

Dear Madam,

Please find the attached Project Completion Report, Ln. 1472 IND.
The report now is being discussed among Bureaus in the NFPCB, and if
there is any additional information, we will submit it to you later on.

Your kind attention is highly appreciated.

Best personal regards,

VICE CHAIRMAN,

dr. P.P. Sumbung

- C.c.: 1. RSI, Jakarta.
att. Mr. Zenick.
2. File.

Encl. : 1 (one) doc.

CJ/rn.

SECOND POPULATION PROJECT (LOAN 1472-IND)

COMPLETION REPORT

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APPENDICES

I. INTRODUCTION

A. The Project

A Loan Agreement between the Government of Indonesia (GOI) and the International Bank for Reconstruction and Development (IBRD) was signed on July 6, 1977. Its purpose was to jointly finance a US\$ 60 million Second Population Project (Loan 1472-IND) for assistance over a five-year period (1977-1982) to Indonesia's National Family Planning Coordination Board (NFPCB). The Second Project followed on the implementation of a First Population Project (Loan 300-IND) during the period 1972-1977, financed jointly by the GOI, the International Development Association (IDA) and the United Nations Fund for Population Activities (UNFPA).

1971-
2000

The overall objective of the Second Project was to continue to provide assistance so that the national family planning program will achieve its long-term goal, which is to reduce fertility during the period 1976-2000 by 50 percent. In order to meet this goal, a program strategy was developed by the NFPCB for the period of the Third Five-Year Plan (1978/79-1983/84), which focused on an extension of distribution and motivation activities at the community level. The strategy reflected a change in program direction, specifically from the development of static service centres during the Second Plan towards expansion of community-oriented service and motivation activities during the Third Plan.

The Project had three specific objectives, namely :

- a. to extend family planning services to remote areas difficult of access by enhancing the mobility of family planning staff;

- b. to strengthen the management and administration of the national family planning program by providing office facilities and assistance for its plan to achieve a national contraceptive production capability; and
- c. to expand and support the national family planning program's education and motivation activities at the community level.

The activities of the project were aimed to support the national family planning program in Java, Bali and 10 outer island provinces. Project inputs included a large construction program to support the expansion of the program and the development of family planning training to 10 outer islands. This activity accounted for about 35% of project funds. An additional 20% of project funds were earmarked for mobile family planning services in support of the program's expanding the program's motivational and contraceptive delivery services and strengthening the mobility of family planning staff. Other components included a \$4 million population education program covering the provision of education materials, seminars, workshops, fellowships and technical assistance, as well as over \$5 million for the implementation of two research studies, i.e. the pilot Community Incentive Scheme and Raw Materials for Oral Contraceptives Study.

B. Sector Background

The population census of 1980 revealed that the population of Indonesia has reached approximately 147.5 millions. The results of the census also indicated that the average annual growth rate during the period 1971-1980 was 2.34% as compared to 2.1% per annum during the period 1961-1971.

Population growth in Indonesia is determined primarily by the difference between births and deaths within the country. The rising growth rate is due to a substantial decline in mortality without substantial change in fertility prior to 1970. Furthermore, the population age structure is characterized by a high percentage in the younger age groups, a significant factor contributing to the rising growth rate. In 1980, 42% of the population was aged 15 years and below.

Another striking characteristic of Indonesia's population is its uneven distribution. Java, which accounts for only 7% of the total land area of the archipelago, harbored some 62% of the total population in 1980. In 1980, the density of Java was 690 persons per square kilometer, in comparison with 59 for Sumatra, 12 for Kalimantan, 55 for Sulawesi and 19 for other islands. However, the percentage of the population on the islands outside Java, is increasing. The 1980 census showed that the highest population growth was in Sumatra (3.3% per annum), followed by Kalimantan and Sulawesi, at 2.8% and 2.2% per annum respectively. The rising growth in the outer islands can be attributed to natural increase as well as to the flow of net in-migration to these islands.

The relatively high rate of urbanization is another demographic trend. Jakarta has been the primary recipient of this phenomenon; its population increased from 4.5 million in 1971 to 6.5 million in 1980, a 42% rise. The growth of the population in various other cities reflect growth rates surpassing that of

the total population. The population of Semarang in Central Java rose from over 640,000 in 1971 to about 1.03 million in 1980, up by 59%. Medan in North Sumatra had a population of over 635,000 in 1971, which went up to over 1.37 million in 1980 (up by over 115%). The population in Ujung Pandang in South Sulawesi increased from 435,000 in 1971 to over 709,000 in 1980, up by over 62%.

Aware that the rapid growth of the population is a potential threat to socio-economic development, the GOI began to adopt a population policy in 1968, by establishing a family planning program which focused on the distribution of contraceptives in Java and Bali. A National Family Planning Institute was established, which was transformed in 1970 into the National Family Planning Coordinating Board (NFPCB). The NFPCB became a government agency fully responsible for administering all government family planning activities, i.e. program policy, planning, supervision and evaluation, as well as coordination of services provided by other government agencies and voluntary organizations.

Population and family planning policy during the First Five-Year Plan (1968/69 - 1973/74) focused on the relationship between family planning and mother and child care, and stipulated a target of 3 million new contraceptive acceptors over the next five years. The estimate goal of the program was a 50% reduction in fertility by the year 2000. A clinic-based system was expanded on Java and Bali by the Ministry of Health, which viewed family planning as a health care issue. However, it became apparent early in the program's infancy that clinic services alone could not reach an audience large enough to produce the targeted fertility decline, and that a health care approach was not enough to motivate general acceptance of modern contraceptive methods. Hence, a clinic-based outreach approach was initiated, emphasizing homevisits and information, education and communication (IEC) efforts. This in turn necessitated recruitment, training and supervision of NFPCB field workers.

In 1972, in response to changing program strategies and needs, the NFPCB underwent a major structural reorganization, which strengthened systems for programming and monitoring reporting, contraceptive distribution and logistics, making possible decentralization and increased community initiative and participation. The NFPCB began a program strategy which concentrated on improved service delivery and institution building, using trained staff at the district-level health center as well as newly-recruited fieldworkers for homevisiting in the rural areas. It was in support of this program strategy that the joint IDA/UNFPA-assisted First Population Project was designed and initiated in 1972. Project components included training, information, education and information (IEC), research and evaluation, and establishment of a decentralized service organization. These activities were supported by the provision of technical assistance and fellowships, equipment and vehicles, and the construction of physical facilities such as headquarters and provincial offices for the NFPCB, training schools and rural health clinics, all in Java and Bali.

In 1974, the Second Five-Year Plan (1974/75 - 1978/79) was launched and called for a decentralized approach to population control. Family planning program services were expanded beyond Java and Bali, to the first group of 10 outer island provinces (Outer Islands I).^{*} The NFPCB proceeded further to institutionalize family planning by extending program staff training and clinical services to these outer island provinces, and by initiating the Village Contraceptive Distribution Center (VCDC), first in Java and Bali in 1975, and later in the Outer Islands I in 1977. These centers are family planning posts run by village volunteers, and play an important and crucial role in recruiting acceptors and supplying them with oral contraceptives and condoms, as well as creating information and motivation links between the program and the community.

* These provinces are Aceh, North Sumatra, West Sumatra, South Sumatra, Lampung, West Kalimantan, South Kalimantan, North Sulawesi, South Sulawesi and West Nusatenggara.

In 1976, the NFPCB developed a program strategy for the strengthening and expansion of the national program through the end of the Third Five-Year Plan (1979/80 - 1983/84). The objective of the program was to reduce fertility to a level at which the crude birth rate would be 34 per 1000 at the end of that period. In operational terms, this meant recruiting some 20.3 million new acceptors during the period of the Third Plan. The Second Population Project was designed and initiated to assist the NFPCB in attaining its medium-term plans to bring fertility down to 34 per 1000 by 1984.

II. PROJECT IMPLEMENTATION

A. Project Management

The NFPCB, through its implementing units, was responsible for coordination and administration of the project. It was agreed prior to implementation that the creation of a special Project Implementation Unit (PIU) was not necessary to administer the project.

This reflected a departure from the prevailing World Bank procedural requirement that a PIU be established and added to the existing organizational framework, and be responsible for administering and supervising all aspects of a project receiving World Bank loan funds. For the implementation of the First Population Project (1972-1977), the NFPCB was willing to adhere to conditions set forth by the Creditors, i.e. that a PIU be set up and include the recruitment of local full-time staff as well as employment of a foreign management consulting firm to advise and support the PIU. The NFPCB was at the time a relatively new organization with limited experience in managing aid-assisted projects. However, implementation of the First Project through a PIU encountered a number of problems which eventually limited the PIU's effectiveness.

A major problem which emanated from the fact that the PIU was a self-contained unit and therefore semi-autonomous was the overlapping lines of authority. There was a tendency toward "dual leadership", which hampered synchronization of policies or decisions made by the Chairman of the NFPCB with those made by the head of the PIU. This was attributable to the lack of clarity as to definition of roles and to the extent of PIU authority.

Other substantial problems which constrained project implementation included: the distinct procedural requirements (GOI versus IDA/UNFPA) which the PIU had to adhere to; the PIU's lack of familiarity with GOI procedures; the difference in incentive scale between PIU staff and NFPCB staff (PIU staff received better salaries and facilities); the inability of PIU staff to implement "software" components of the Project.

Draft PCR prepared by BKKBA on First Project maintained that the PIU had been found a useful instrument for implementing the Project.

The problems encountered with the PIU structure while implementing the First Project led the NFPCB to decide against creating a similar structure for implementation of the Second Project. Experience in handling the First Project strengthened NFPCB program management capabilities and the NFPCB felt sufficiently competent to implement the Second Project through appropriate bureaus of its existing structure.

This was the real reason for not having a PIU for the second project. How Jones should enlighten us on this.

The structure which administered the Second Project was indicative of the willingness of both the NFPCB and the Bank to compromise and adjust to each other's procedural requirements. Specifically, project management was divided into two components administrative and technical. A major activity of the Second Project was the civil works component (US\$ 21.5 million out of US\$ 60.0 million was allocated for construction). Fully aware that there were no units within its organizational structure capable of implementing construction activities, the NFPCB retained one section of the former PIU of the previous Bank-assisted population project, specifically the civil works staff. Under the direction of the NFPCB Secretariat, these staff members made up the administrative component responsible for carrying out the civil works activities. They retained the same status they held while working in the previous PIU, in that they remained full-time project staff outside the existing NFPCB structure but differed in that they were responsible to the Secretariat, a unit within the structure. The technical component of the project (training, mobile family planning services, population

education and research) was the responsibility of the appropriate bureau, such as the Center for Education and Training, the Bureau for Contraceptives, the Bureau for Research and Development and the Bureau for Program Coordination. The day-to-day operations of the entire project which include the construction as well as the technical components was coordinated by a Project Officer. This project structure remained in effect until all project components were completed.

B. Activities

1. Service Delivery

a. Mobile Family Planning Services

An important component which contributed to effective service delivery is mobile family planning services, supported by the project through the provision of minibuses, jeeps and motorcycles. In view of the difficulties of communication in the rural areas, it was imperative that family planning and health center staff be as mobile as possible in order to motivate potential acceptors. The provision of these vehicles has enhanced the mobility of field-level staff and facilitated IEC activities as well as follow-up care of acceptors. By August of 1980, a total of 303 jeeps had been distributed for use by province- and kabupaten-level BKKBN staff, MOH and Armed Forces units in 16 provinces (6 in Java-Bali and 10 in outer islands) and a total of 1683 motorcycles distributed for use by NFPCB fieldworkers in 16 provinces. These vehicles were intended to be mobile service units for IUD insertion and for provision of family planning services to population groups in remote areas.

In addition, the project was supposed to have provided 8 motorboats for 5 outer island provinces where road transportation is difficult and rivers are the most practical means of communications. However, the NFPCB decided to cancel the procurement of the motorboats, since the MOH were already operating boats in these areas. Instead of the motorboats, these areas received jeeps and motorcycles. Some of the NFPCB provincial offices have expressed regret that thus far no boats have been made available. For certain regions in South Kalimantan, West Kalimantan and South Sumatra, where rivers are the major means of communications, vehicles such as jeeps and motorcycles are inappropriate. For example, in Kabupaten Batola

Why were they included in the project at all?

This should have been determined before the boats were cancelled. What about the MOH boats? Why were they not provided?

of South Kalimantan, only 39 out of 194 villages can be reached by motorcycles. The rest are accessible only by boat. Similarly, in Kabupaten Kotabaru, a group of islands off the shore of South Kalimantan, boats would have been more useful to reach the communities than the jeeps and motorcycles, which according to NFPCB provincial officials are already beginning to show signs of rust. In the province of West Kalimantan, Kabupaten Kapuas Hulu, Kabupaten Ketapang and Kabupaten Sintang are geographically similar to those in South Kalimantan. No road transportation exist in these areas, and family planning achievement are relatively lower than other kabupatens in the province. In South Sumatra, a large portion of the population (7 percent) are river communities, which are more accessible by boats than by road transport.

In general, however, the availability of the vehicles has greatly strengthened the capacity of field staff throughout the country to promote IEC to outreach communities, as well as improved the provision of family planning services in these areas

Some attempt should be made to quantify the impact.

At least some qualifications should be made with respect to Kalimantan.

The project also procured special equipment to equip both the jeeps and the motorcycles. These included IUD kits, physician kits, public health nurse kits and MCH kits, kerosene lamps and flashlights for all jeeps procured under the project. IUD mini kits were provided for all motorcycles procured under the project as well as for all motorcycles already in operation in Java and Bali. Gynaecological beds were also procured, originally to equip only the jeeps. But because loan savings were incurred as a result of the 1978 rupiah devaluation, additional beds were purchased for health centers in the Java-Bali provinces as well as the 10 provinces covered by the Second Project.

The kits and the beds are being utilized, both at the kabupaten and the kecamatan levels. The IUD mini kits are kept by midwives and nurses at the health centers, and only taken with them on the motorcycles on fieldtrips. NFPCB field

How many family planning acceptors have been recruited using the IUD kits and gynecological beds?

readily admitted that there is a tendency to easily lose kerosene lamps and flashlights, and it is difficult for them to assess how many of these items are still in place in the jeeps.

Why?

What impact have the mobile service units had on recruiting and maintaining acceptors?

b. Information, Education and Communication (IEC)

Although IEC is not a separate component of the project, a substantial portion of project funds were allocated to support IEC activities which are important to strengthen the effectiveness of the national family planning program.

The purchase of AVA and reprographic equipment for the NTC and the 10 PTCs outside Java-Bali, for instance, constitutes an important category of the project which supports IEC activities. These equipment included film and slide projectors, overhead projectors, portable cassette recorders, cameras, AVA equipment as well as stencil machines - all of which are in place at the training centers (with the exception of the ones in North Sulawesi which were lost when fire accident burnt the PTC in 1982). The PTCs seem to be effectively using the equipment.

Evidence?

To supplement the software for the Mobile Information Units which were provided by the First Population Project (Credit 300-IND), the Second Project provided family planning films. A total of 10 titles were printed, and 110 copies of each title were reproduced. Two copies of each title are currently located at the NTC, while the remaining 108 copies of each title were distributed to the kabupaten (district) level. They are placed at the mobile information units (MIU) of the BFPCB as well as of the Department of Information. The films have succeeded in enabling the MIUs to attract larger audiences.

Quantify.

Another contribution of the Second Project in strengthening the IEC component was the procurement of 2200 public address systems. The PA system is a battery-operated, hand carried mini-loudspeaker which is used by the fieldworker when organizing or addressing a group meeting at the village level. Together with 5500 PA systems which were procured through the Third Population Project, these PA systems have been distributed to 3329 kecamatans (sub-districts) in 27 provinces throughout Indonesia. In 3 of the provinces, namely Jakarta, West Java, Central Java and East Java, each kecamatan received 3 PA systems. In 11 provinces (Jakarta, Yogyakarta, Lampung, South Sumatra, North Sumatra, West Sumatra, South Kalimantan, South Sulawesi, West Nusatenggara, East Nusatenggara and Bali), each kecamatan were given 2 PA systems. The kecamatans in the remaining 13 provinces received one PA system each. An evaluation conducted in August 1984 indicates that the equipment has helped to improve the communications effectiveness as well as the personal prestige of the fieldworkers. This is because the PA system is a rare piece of technology in the village setting. The family planning program is maximizing the use of this equipment, particularly in gaining the support of the local leaders at the grassroots level.

*Report
of
availability?
we
should
obtain
a copy.*

c. Population Education

The main objective of the population education component was to continue and extend the activities which had been started during the First Population Project. The results of a pilot project implemented during the First Project indicated that the introduction of population education into the existing educational system of the country was feasible and was well-received. The introduction of a new curriculum in 1975 provided a good opportunity for introducing population education elements into various school subjects, as well as incorporating them into the training of teachers at all levels of the formal school system. As a result, the GOI made plans to integrate population education not only into the formal school sector but also into the non-formal education programs. Thus, the population education component of the Second Project was to assist in completing the integration process through the support of a number of activities, namely teacher training, production and provision of teaching materials (books as well as audiovisual aids), technical assistance, for curriculum development, and fellowships. The bulk of the funds allocated (almost 70%) were for teacher training and materials development. Since 1979, over 44,500 teachers have received training in population education through the Second Project.

Audiovisual aids and teaching materials represented a significant portion of the Population education component. Slide/film strip projects and population education teaching kits (slide/cassettes, scripts, radio cassettes, posters) were distributed to all provinces throughout Indonesia. These were distributed not only to NFPCB provincial offices, but also to units of the Ministry of Educational ¹⁸ Culture as well as to teacher training institutes involved in implementing population education in the provinces.

Implementation of the population education activities has been, since the First Project, the responsibility of the National Population Education Project (PNPK), a project unit within the Ministry of Education and Culture, in close liaison with the NFPCB. Completion of component activities under the Second Project was scheduled for October 1982. However, due to implementation delays the completion date was rescheduled for April 1984. In July 1984, activities still in process of implementation are the production of teaching materials and the purchase of journals and textbooks.

Only the secondary component

Actual implementation of component activities, originally scheduled to begin in the fall of 1977, started only in August of 1978. The printing and production of textual and teachers handbooks were carried out in August 1978. Distribution of some of the textual materials, scheduled to have been completed by 1979, were delayed by a year. Similarly the production of teaching materials/kits, scheduled for implementation during 1977-1979, did not begin until 1981.

Why?

Implementation delays can be attributed to the organizational mechanism by which the population education components has been implemented. As mentioned above, the responsibility for implementing the population education activities has been in the hands of PNPK, a project unit within the Ministry of Education and Culture. Because of its project status, PNPK faced some structural constraints within the Ministry. Until 1981, PNPK was located within the Directorate General of Primary and Secondary Education. PNPK lacked the authority required to demand commitment from the Ministry's provincial offices. As a result, the distribution of materials in the provinces were often hampered because of this lack of involvement. Since 1981, however, PNPK was moved and placed as a project within the Ministry's Center for Education and Development, a more strategic position to mobilize the necessary support and technical commitment from the various Directorate Generals at the central level.

What caused delay in the production of teaching materials? With what results?

This relocation of PNPK has not improved the situation at all (see Mehta's March 1985 report). Under Pop IV the Loan Agreement calls for transfer responsibility for PNPK to the

The implementation of two other component activities, namely technical assistance and seminars and workshops, have been completed and the funds allocated for these activities have been fully utilized. One specific component activity which will not be completely implemented is fellowships. Although some of the funds for the short-term fellowships have been utilized prior to 1981, the GOI has since cancelled all short-term study tours for all sectors. The funds for the long-term postgraduate studies have thus far not been used due to the unavailability of potential candidates. Specifically those who were able to meet the language and academic requirements of foreign institutions were too busy to leave their positions.

This should have been foreseen during project preparation.

Several evaluation studies on the population education component have been conducted. The Teachers Training Institute of Bandung conducted an evaluation of the population education component of the formal school program in 1979. The evaluation concluded that, although teachers and secondary school students were responsive to population education, primary school students still encountered difficulties in comprehending the concepts. In addition, the study found that, although the training of teachers have ^{so} by ^a large been effective, the number of textbooks and teaching materials were inadequate to support them. This problem has been addressed by the provision of printed materials and audio visual aids through the Second Project.

A second evaluation study of the population education component was conducted by the Population Studies Centre of Gajah Mada University in 1982. The study revealed that teachers who had received training in population education had included population education in subjects that they taught. Furthermore, the study administered population education tests among some 11,000 students among purposely selected schools (both primary and secondary) in 9 provinces. The results showed that the students were able to answer 50% of the questions correctly. However, the study also revealed a number of problems, the most substantial being the inadequate number of teaching materials.

Some 25% of teachers in the formal school program indicated that they had not received any textbooks or teachers manuals in population education. An even more substantial number of teachers/facilitators in the out-school program have not received teaching materials. This is reflective of the problems encountered in the distribution of instructional materials, caused perhaps partially by the delay in project implementation. These problems were expected to be addressed with the implementation of the population education component during the last two years. *Needs elaboration.* *How?*

Since the 1982 evaluation study, a new policy was adopted to integrate the subject of population education into the existing social studies curricula in primary as well as secondary schools. This ensures that teachers cover the topic as they teach other social studies subjects. It also partially solves the problem of availability of teaching materials, in that the subject of population education is not covered in a separate textbook but integrated into already existing social studies textbooks. This is an advantage for the family planning program because it institutionalizes the subject into the existing curricula.

2. Training

The main activities of the training component comprised of the construction and equipment of a National Training Center (NTC) in Jakarta and 10 Provincial Training Centers (PTC) in outer island provinces, and 2) a staff development program which included technical assistance, fellowships and study tours.

Until 1976, much of the family planning training activities had been sub-contracted to the International Planned Parenthood Association (IPPA) and the Ministry of Health (MOH) by the NFPCB. Although the IPPA-MOH trainings had been substantial, the need for adequate trained manpower to support an expanding national family planning program became imperative. In addition, a cohesive national family planning training system and a uniformity in training approaches were required. For this reason, in 1976 the NFPCB decided to assume full responsibility

for family planning training in Indonesia. Under the First Population Project, six PTCs and 10 Sub-Provincial Training Centers (STC) were built in Java and Bali. These facilities were completed and became operational by 1977 (with the exception of the Surabaya PTC which was completed in 1978).

Under the Second Project, facilities for the NTC in Jakarta were built to house the NFPCB's Centre for Education and Training, which became an operational unit in 1978. The Center's primary responsibility is to implement training activities at the central level, and to coordinate and supervise training at the provincial level undertaken by the PTCs. Construction of the NTC suffered considerable delays and was completed in 1981, almost four years after project implementation started. (A detailed account of the implementation of the construction component is described in the section on Physical Facilities).

With the extension of the national family planning program to 10 outer island provinces in 1974, the NFPCB needed more training facilities. The Second Project provided in each of these provinces facilities for training as well as family planning/population centers. Civil works activities of the PTCs went much more smoothly than that of the NTC. By the end of 1979, seven of the PTCs had been completed. The remaining three were completed in August 1980.

✓ The PTCs are responsible for training and educating family planning personnel, government officials and community leaders in the provinces. Since the beginning of the Third Five-Year Plan, the categories of training activities at the PTCs include the following: a) training of Health Center staff (doctors, midwives, administrative staff); b) training of IEC officers (kabupaten- and kecamatan-level officials, village motivators); c) training of field personnel; d) population education courses for school teachers, religious leaders, community education fieldworkers,, informal leaders; e) in some provinces, training to support integrated programs such as the Family Planning/Nutrition Program and income generating activities.

The extension of NFPCB's training capacity to the 10 outer island provinces have had substantial ancillary and subsidiary benefits which have accrued to NFPCB. The most obvious benefit, the expansion of its physical facilities for training, has allowed NFPCB to institutionalize its training program in 10 provinces. Institutionalization has also allowed NFPCB to establish a training infrastructure in each province, and by 1984 that training infrastructure had extended down to the village level. Without the provincial facilities necessary to accommodate professional training staff, it would have been impossible for NFPCB to expand its scope to that extent in 10 more provinces.

In addition, the completion of 10 new training centers brought the number of training centers managed and operated by NFPCB to 26. This large number of facilities accentuated the need for a central level bureaucracy to administratively support these centers, and for a standardized training management system which would govern all 26 training centers. As a result NFPCB, using funds from its annual development budget, has developed standardized procedural manuals covering organization and staffing of the training centers, financial management, annual planning and budgeting processes, and training program supervision and monitoring during the period covered by this project.

During the period April 1979 through September 1983, the 10 PTCs built by the Second Project have trained an estimated 42,600 trainees. See Appendices 2 and 3.

The project also provided publications for the libraries at the NTC and the 10 PTCs. The publications, mostly technical books on management, training curriculum and health related subjects, are in place at the libraries.

Although most of these books are in English, they are directed towards the trainers, most of whom have an adequate command of English reading comprehension to benefit from their existence. The relative paucity of training materials in Bahasa Indonesia have necessitated the purchase of English language books in their stead. Regardless of trainer reading comprehension capacities in English, the scarcity of Indonesian language books still hampers optimum utilization of these resources.

There was a balance of approximately \$2.3 million from other components of IND 1472 which was used to purchase replacement AVA equipment at the NTC, the PTCs in Java-Bali, and additional AVA equipment for in the outer islands. (See section on IEC).

3. Research

The research component of the Second Project comprised of the following major activities :

- a) a feasibility study to explore the possibility of finding raw materials from indigenous plants for the local production of oral contraceptives;
- b) the introduction of a pilot Community Incentive Scheme in selected sub-districts in Java, Bali, North Sumatra, South Sulawesi and West Nusatenggara.

Implementation of the activities mentioned are described as follows.

a) Raw Materials for Oral Contraceptives

The objective of carrying out this study is to support the GOI's plans to eventually produce oral contraceptives using domestic resources. The annual consumption of oral contraceptives has increased rapidly, from over 450,000 cycles in 1960, to 14.6 million cycles in 1974, to about 30 million in 1976-77. By 1983-84, total consumption has reached over 105 million cycles.

Until 1976, 99% of contraceptive supply were provided for by USAID. Since then, USAID discontinued the free supply of oral contraceptives and provided a loan to cover supplies for the following fiscal year. Accordingly, the GOI has selected a Government-controlled pharmaceutical manufacturer to produce oral contraceptives using foreign sources of raw materials. However, in order to prevent the dependency of raw materials for oral contraceptives from abroad, the GOI has also decided to explore the feasibility of using local raw materials to produce oral contraceptives. To this end, the Second Project provided the funds to support the implementation of a research study, which included technical assistance, fellowships and special equipment. Implementation

of the study has been coordinated by the Research and Development Bureau of the NFPCB, and involved a number of other institutions, most notably the Bogor Agricultural University, and the Pharmaceutical Research Center of the MOH.

The study was carried out in three stages :

1) exploration, 2) analysis and 3) adaptation.

Each stage involved three phases of implementation.

Phase I of the exploration stage began in 1979-80, when an inventory of over 4000 species of Dioscorea was carried out in the provinces of North Sumatra, Maluku and East Nusatenggara. This was followed by Phase II of the exploration stage in 1980, involving inventory of species of Dioscorea in 5 other provinces (North Sulawesi, Central Sulawesi, Southeast Sulawesi, East Kalimantan and South Sumatra). However, analytical results of potential specimens identified during the first two phases of exploration indicated that none contained high enough diosgenin to produce the necessary steroid hormones for oral contraceptives. The results of these two phases of exploration were presented in a national seminar in 1981, where it was decided that the third and final phase of exploration should concentrate on exploring and identifying species of Costus which also yield diosgenin, as well as species of Solanum which are potential sources of solasodine, a precursor of steroid hormones. The third phase of exploration was conducted in 1982, in the regions of North Sumatra, South Kalimantan, Central Kalimantan, East Kalimantan and Irian Jaya.

At the present time, all phases of exploration have been completed; while the Pharmaceutical Research Center of the MOH is still carrying out the third phase of analysis, which is screening species of Costus and Solanum. Implementation of exploration activities experienced delays, due to unforeseen weather conditions and the distances of

many of the exploration sites. As a result, samples of species have not been received on time by the analytical team, thus causing the delays in implementation. In January 1984, preliminary results indicated the possibility of a 3% solasodine content of a *Solanum* specimen.

The adaptation stage began in February of 1982 and is still undergoing implementation. Because it was found that the degree of diosgenin in *Dioscorea* species was too low, it was decided to conduct adaptation activities only for species of *Solanum* and *Costus*. Adaptation has been carried out in 20 locations in the provinces of North Sumatra, West Java, Central Java, East Java and South Sulawesi. Thus far, 81 samples have been sent to the analysis team.

In August 1984, a national seminar was held by the NFPCB to discuss the findings of the research activity to date. The two principal investigators of the study, namely the Agricultural University at Bogor and the Pharmaceutical Research Center of the MOH participated in the seminar, in addition to policymakers from government institutions (Health, Agriculture, Industry, Forestry) and scientists from a number of academic institutions.

It was concluded at the seminar that *Solanum khasianum*, a type of eggplant from India, is the most promising plant for adaptation, in terms of technical and economic feasibility. *Solanum khasianum* has about 2.75% solasodine content. One hectare of *solanum khasianum* can produce some 5.6 kilograms of pure solasodine each month. Researchers also calculated that the cost of producing solasodine from *solanum khasianum* is about \$16 per kilogram, in comparison with the cost of importing raw materials for oral contraceptives which is currently estimated at \$50 per kilogram. It has also been estimated that the current demand for imported raw materials can be met by planting 400 hectares of *solanum khasianum*.

It was agreed and recommended at the seminar that the development of solanum khasianum should be continued on a pilot project basis in the next five years. The initial planting of solanum khasianum on a pilot basis will allow time to develop and train local expertise in the technology of converting the solasodine through about synthesizing stages to produce noreethindione and ethylisastrodiol, the raw materials needed to produce the pill.

b) Community Incentive Scheme

The implementation of the Community Incentive Scheme was delayed by over three years. The major reason for the delay is due to disagreements between BAPPENAS, the NFPCB and the research institution assigned to undertake certain aspects of the component, regarding the conceptual framework of the scheme and its application in the field. The conceptual framework was subsequently revised and sent for approval to the World Bank, which took considerable time and delayed implementation until February 1981.

Bank approval did not take a considerable time, nor was it the reason for delayed implementation (see relevant correspondence)

The Community Incentive Scheme is a pilot project, aimed at testing whether the promotion and acceptance of the small family norm could be encouraged by applying incentives for pre-defined community achievements in family planning. The notion of incentive refers to an amount of funds provided to support development project or activity selected by the community itself, either a physical infrastructure (sources of water, roads, community meeting halls) or an income-generating activity which would improve the community's socio-economic conditions. It is hoped that the incentives will contribute to an overall reduction in fertility.

Communities which were eligible to participate in the scheme were those who met the following criteria :

- 1) community groups which fall within the poorest and most densely populated areas of the provinces selected;
- 2) communities which indicate a minimum level of performance in family planning, i.e. 35% of current users; *35% contraceptive prevalence i.e. current users constitute 35% of eligible couples.*
- 3) communities located in accessible areas for monitoring purposes;
- 4) communities located in sub-districts where there are good NFPCB field workers who are able to assist in the field implementation of the scheme;
- 5) communities which have not received much development input.

As mentioned above, there are two modes of incentives available to a participating group, specifically 1) funds to build simple infrastructure, and 2) funds for income-generating activities. The type of infrastructure built are decided by the communities, through a process of needs assessment in which the informal leaders of the communities are involved. Management of the construction is the responsibility of the local village leader, supported by experienced technical expertise to make the design and budget, as well as local contractors to do actual implementation. Funds for income-generating activities are in the form of capital loans given to acceptor groups. The acceptor groups are responsible to manage the capital, supervised and monitored by the village leadership and the NFPCB fieldworker. The capital may be used for the group's income-generating activity or for individual members who need the loan for their own small businesses. Each group will have

the capital for a period of 1-2 years, after which the funds are returned to the village leaders and given to other eligible acceptor groups in need of capital.

The NFPCB began implementing activities for the scheme in February 1981. The activities included training, workshops, technical assistance, and monitoring and evaluation. Until July 1981, the activities comprised of setting up project management, holding a national meeting of central-level NFPCB and provincial-level NFPCB staff to discuss the project and set selection criteria, and conducting a feasibility study of project areas. As a result, 64 villages in 32 sub-districts (kecamatan) in 9 provinces were selected as pilot project areas. In July 1981, baseline surveys were started in the project areas, conducted by a private research institution. This activity was completed in March 1982. Actual effectiveness of IBRD funds began in January 1982 with the appointment of consultants for technical assistance. By this time, an academic institution (LAPI-ITB) and a private non-governmental organization (Dian Desa) had been assigned to design the physical facilities for the project areas, supervise construction, and train the local people to maintain the facilities. In addition, another non-governmental institution (YSTM) was appointed to conduct training of acceptor groups receiving capital for income-generating activities.

In March 1982, a national workshop was held, in which central-level NFPCB staff as well as those from the 9 project provinces participated. Also involved were all consultants appointed for technical assistance and representatives of the various institutions participating in the scheme.

The distribution of funds to all project areas, for construction as well as capital, began in April-May 1982.

Before any funds were handed over to acceptor groups, the leaders of each eligible acceptor group (usually the head, treasurer and secretary) were given a 3-day training in simple administrative and book-keeping skills. The training was held at the sub-district level for each project area, and was conducted by YSTM, a non-governmental organization with experience in and background in co-operatives and training at the grassroots level. The most substantial problem encountered by the acceptor groups were the limited educational background of the acceptors. This problem was already identified during training. Those with low levels of education had difficulties following the training and encountered problems when they actually managed the capital funds and carried out the administrative tasks. In some cases, the amount of funds given had to be reduced in order to prevent potential problems. A range of income-generating activities carried out by acceptor groups included small-scale production of soyabeans, cattle raising, handicrafts, food and grocery stalls, pig raising and transport services.

In August 1983, the NFPCB decided to implement a second phase of the Community Incentive Scheme, in the same sub-districts of the nine provinces of the first phase, but in different village communities. The same process was carried out as in the previous phase, starting with a needs assessment to determine the physical activities and identify acceptor groups eligible for capital loans. For the second phase, LAPI-ITB was contracted again to provide technical assistance and training for the construction activities, and YSTM assigned to train acceptors in basic management skills. A third institution, specifically the Food Technical Development Center of Bogor Agricultural University, was hired to provide training to acceptor groups in appropriate food technology. As during the first phase, all training activities were conducted at the sub-district level in project areas. The second phase of the scheme is scheduled for completion in October 1984.

In conjunction with the implementation of the Community Incentive Scheme, a vital registration system was started in April 1982 in the 9 project provinces.

In order to determine the impact of the Community Incentive Scheme, particularly the extent of institutionalization of family planning in village communities, the NFPCB assigned the School of Public Health of the University of Indonesia to conduct an evaluation of the first phase of the scheme. The evaluation was conducted in all the provinces where the scheme is being implemented, and covered 1353 respondents. These respondents included staff of NFPCB province offices as well as kabupaten offices, representatives of various departments (Public Works, Cooperatives, Internal Affairs), and NFPCB field workers, village heads as well as acceptors at the village level. The evaluation focused mainly on the impact of project input and of implementation process.

The findings of the evaluation can be summarized as follows:

- 1) Project inputs were considered sufficient to support the implementation process of the scheme.
- 2) Some acceptors' groups felt that the amount of money they received as loan was insufficient to give any meaningful effect on their income. The current policy is to give an equal amount of money to every group of acceptors. Ideally, it should be based on the needs of each group and the type of economic activity that each group is involved in. In addition, for certain economic activities, such as cattle-breeding, a one-year loan period is considered insufficient.
- 3) The content of training for the acceptor groups was considered relevant to their needs.

- 4) The local village government played a significant role in mobilizing the participation of the various sectors in implementing the scheme.
- 5) Monitoring and supervision of the scheme was considered inadequate. The reporting and recording system should be simplified.
- 6) A total of 318 acceptor groups had received loans during the scheme. 224 physical facilities of various types were constructed through the scheme. About 80% of 204 administrators at the field level had received special training through this project.
- 7) A significant increase of family planning users were noted in villages where the scheme is implemented. A trend has also been identified that due to the scheme, some acceptors had converted from less effective methods to more reliable methods.

This needs more analysis - Were these changes attributable to the scheme or were there other factors?

4. Technical Assistance and Fellowships

Three components of the project, namely training, population education and research, included technical assistance and fellowships as part of project support.

a) Technical Assistance

A number of consultants, were appointed to provide assistance for varying durations. Two domestic advisers provided assistance to the Center for Education and Training for curriculum development. In general, staff members of the Center gave favorable assessment regarding the effectiveness of the consultants. With the increasing number of training staff being sent abroad for study as well as the fact that a substantial amount of funds for training originate from foreign aid, it is felt that the presence and assistance of consultants have greatly facilitated communications with training institutions abroad, as well as donor agencies in terms of disbursement and utilization of funds.

Did the consultants produce any reports?

Four domestic consultants were appointed for the population education component. All four advisers - highly respected senior faculty members of the Teachers Training Institute in Jakarta and Bandung, - possessed background in curriculum development and population education. Because of their full-time status at their respective academic institutions, all were hired for short-term durations, each on a six-month contract basis. The consultants were assessed by NFPCB staff as highly-qualified and useful in providing technical input and developing population education materials. It is also felt, however, that their input tended to be theoretical and academic in nature and that more applied and practical input would have been helpful for some staff members who lack the experience and have limited background in curriculum development. Another disadvantage was the

Reports?

short-term duration and part-time status of the advisers, thus limiting the time actually spent at the NFPCB which can be used for transferring more applied know-how to NFPCB staff.

Local consultants also provided assistance for the research components, both the Community Incentive Scheme as well as the Raw Materials or Oral Contraceptives Study. A number of institutions were contracted for the Community Incentive Scheme. Two institutions, LAPI-ITB (an academic institution) and Dian Desa (a private non-government organization) were assigned to provide technical assistance for the physical construction component of the scheme. Another non-government organization, YSTM/Bina Swadaya, provided training in simple administrative and organizational skills for those acceptor groups which received capital for income-generating activities. For the second phase of the scheme, another academic institution, namely the Food Technology Development Center (FTDC) of Bogor Agricultural University, provided training in processing of locally-available foods to participating acceptor groups. In general, there was positive feedback regarding the technical assistance provided by these institutions, particularly LAPI-ITB and YSTM/Bina Swadaya.

In addition to support for technical assistance described above, local consultants were also contracted to 1) provide technical assistance to the staff of the NFPCB's Bureau of Finance and develop their capability in financial management, and 2) assist in the preparation of a Project Completion Report.

b) Fellowships

The project provided fellowships, both for short-term study tours as well as for post-graduate training at overseas institutions.

For the training component, fellowships were utilized to send 28 people for study tours - three to the United States and the remaining to neighboring ASEAN countries. The visits focused on management and administration and on information and documentation networks. For population education, nine people were sent for study visits, also to the United States and ASEAN countries, and 18 received in-country fellowships toward Masters degrees. In addition, six people received fellowships for the Oral Contraceptive Study, and participated in study visits to Japan, the United States and Europe.

The funds for fellowships were not fully utilized, and this category accounts for a substantial portion of the balance of project funds. In 1982, the GOI issued a regulation restricting the use of fellowships for short-term training for all sectors, and as a result no NFPCB staff participated in short-term study visits after fiscal year 1981/82.

In addition, none of the fellowships provided for post-graduate studies overseas under the Second Project was utilized because of the unavailability of potential candidates. Either the candidates could not meet the language or academic requirements of foreign institutions, or those who were able to meet the requirements were too busy and indispensable to leave their positions at the NFPCB.

The realization of NFPCB shortcomings related to its ability to identify, recruit, and process candidates for long term overseas training led NFPCB to reassess and re-evaluate its institutional capacities in this area. As a result NFPCB undertook an intensive effort in 1983 to upgrade its long-term overseas training capacity. A training management system has been installed for identifying, recruiting, processing and financially supporting NFPCB's long-term overseas training participants. As a consequence NFPCB has been able to send 109 persons abroad for masters or doctoral training in the academic years beginning in 1983, 1984, and 1985.

These could not have been financed out of Lu 1472-INS. Maybe USAID.

C. Facilities, Equipment and Vehicles

1. Physical Facilities

In order to achieve its objectives, the Second Project provided a number of inputs in the form of buildings, equipment and vehicles.

The civil works component was originally designed to totally finance the construction of a four-storey, 2250 square-meter National Training Center in Jakarta. Also provided for in this component was 100% financing for the construction of provincial training centers (PTC) and office facilities (PO) in the 10 outer islands. ^{provinces} All construction sites were provided by the GOI between the time of signing of the Loan Agreement and the effective date of the loan. Actual construction, initially planned to take 14 months for the NTC and 12 months for each PTC, ran behind schedule.

Initiation of the construction of the NTC in Jakarta was significantly delayed due to difficulties encountered by the NFPCB in obtaining a building permit from the Jakarta Provincial Government. Issuance of the permit was delayed because the master plan of the City of Jakarta required that buildings on the proposed site be of a minimum of eight floors. The loan agreement, however, provided funds for the construction of a four-floor building only.

Was this not known at the time of project preparation?

Debate and deliberation between the NFPCB, World Bank and the Jakarta Provincial House of Representatives ensued until a permit was finally issued based on a proposal by the World Bank, whereby a foundation would be laid for eventual construction of an eight-floor building, but only the first four floors would be built initially. Construction finally began in October 1979, a full two years after the effective date of the loan.

Not party to the debate. Only approved final proposal.

However, check with Mr. Mills.

Another complication arose, however, early in 1980. A structural reorganization of the NFPCB in 1978 resulted in a 400% increase in NFPCB staff and an acute shortage of office space. This dilemma led to the decision to build the four extra floors required by the Jakarta Provincial Government, but the issue remained as to how to finance the additional four floors. The NFPCB and the World Bank managed to make the necessary funding adjustments without having to alter the loan agreement.

It took additional more time, however, before construction of the additional four floors could begin because there was the issue of whether or not to tender again for this second phase of construction. Presidential decree (No. 14A dated April 1980) required that any government contract greater than US\$ 800,000 be tendered through and approved by the State Secretariat. The NFPCB, for practical and security reasons, preferred to retain the same contractor/builder of the first floors. Debate and discussion continued for two months before the State Secretariat was willing to relax the regulations and allow construction of the second phase of the NTC. Construction of the second phase began by July 1980 and completion of the entire eight-floor building was achieved by May 1981.

The first four floors of the building was originally designed to house the NTC and its staff. As from July 1984, however, the NTC occupies barely two floors since the remaining two floors have been taken for NFPCB office space. This can largely be attributed to the NFPCB organizational change in 1983 (Presidential Decree No. 64), which resulted in the creation of new bureaus, which in turn resulted in the need for additional space for new staff members. Of the remaining two floors which the NTC currently occupies, one floor is used for NTC administrative staff, thus leaving only one floor for dormitory space as well as space for educational and training activities. The office space used for the administrative staff, designed to

occupy 3-4 people, now has an average of 7-8 staff members per room. In summary, the current physical facilities of the NTC are overcrowded and inadequate for educational and training purposes.

A new one is to be built under POP IV.

Civil works activities went much more smoothly in terms of the 10 PTCs and POs. By May 1978, seven months after project initiation, the following activities had been accomplished: one architectural firm and its design for buildings for all 10 PTCs/POs had been approved; tender committees had been formed in each province, made up of representatives of the Provincial NFPCB and Public Works offices; and invitations to bid had been made public.

The provincial tender committee was responsible for inviting local contractors to bid and for selection of the construction firm. These firms were then recommended to the Project Officer at NFPCB headquarters in Jakarta for ultimate approval by the World Bank in Washington. Contracts from all provinces were signed by August 1978, and construction theoretically commenced simultaneously. By the end of 1979, construction activities in seven of the 10 provinces were completed, while construction in the remaining PTCs/POs were completed by August 1980.

✓ All POs and PTCs have now been utilized for 4-5 years. Most of the buildings are still in satisfactory condition. The PTC in North Sulawesi, specifically the building which holds the classrooms and office for training staff, was burnt down in 1982, apparently caused by a short circuit in the electrical system. Plans for rehabilitation was already under way by February 1984, the funds having been provided by the GOI. The PTC in Aceh also suffered damages due to a severe earthquake in 1983, but has recently been completely rehabilitated.

The buildings in West Kalimantan and South Kalimantan have encountered some problems, in that some of the floors have been slowly sinking. This is attributable to the fact that the sites on which they are located were previously swampy areas, which account for most of the land in these two provinces. For this reason, buildings in these areas are usually built on foundation made of special type of wood which is resistant to water. Floors of buildings are also usually wooden, supported by stilts a few meters above the level of the soil. Concrete foundations and cemented floors, such those which support the PTCs in West and South Kalimantan have the tendency to sink after several years when built on swampy areas. The NFPCB, however, have continuously monitored this problem and have made provisions in the annual budgets for rehabilitation purposes.

The two-storeyed dormitory building in 9 provinces have had problems with the water pipes in the bathrooms, which have caused leakages from the second floor through the ceiling of the floor below. One PTC, specifically in South Sumatra, has taken the initiative to move all bathrooms to the first floor, thus solving the leakage problem permanently. There seems to have been a flow in the piping system. NFPCB officials attribute this to the possibility that the pipes used which were domestically produced, were low quality material. When these buildings were constructed, the Department had not passed the quality standardization of construction materials, such as the one which now exist. Thus, at the time the PTCs were constructed it was difficult to assess the quality of materials available in the market. All PTCs have reported this problem to the NFPCB, which in turn has made arrangements to provide the budgets for repair purposes.

The architectural consultants should have detected this before the material was put in place.

The POs are already showing indications of inadequate space. Work space in the POs were originally designed to accommodate a total number of 42 people. As from July 1984, staff members in each PO already numbered 70-80 people. The recent reorganization in 1983 requires an addition of 2 new divisions with 27 staff members. These positions are not filled yet. NFPCB chairmen in a number of provinces have expressed concern over the tremendous burden that these additional positions will create on the current available work space.

2. Procurement

The project provided for the procurement of furniture, vehicles and special equipment, which in general proceeded smoothly. Furniture were procured locally for the NTC in Jakarta as well as the PTCs and POs. All furniture were distributed and available for use within one month of completion of the physical facilities. In July 1984, all furniture were still in use in all provinces and in fair condition.

In addition to furniture, the NTC and all POs/PTCs were provided with AVA and reprographic equipment, telephones and office equipment, all of which were purchased locally. Also, for training purposes, each PTC was provided with anatomical dolls, IUD insertion sets, vasectomy kits, books, films and film strips.

A major project component was the procurement of vehicles, in the form of four-wheel drive jeeps for use of mobile teams at the kabupaten level, and motorcycles for mobile teams at the kecamatan level. A total of 274 jeeps were procured, of which 34 were distributed to the MOH and the Armed Forces at the central level and in each of the 10 outer island provinces. A total of 1683 motorcycles were purchased and distributed to NFPCB fieldworkers and health centers at the kecamatan level in 16 provinces, 6 in Java and Bali and 10 in the outer islands.

All vehicles were procured on the basis of international competitive bidding and were directly imported from Japan. While it was more advantageous for the GOI to import these vehicles, problem encountered by program managers in practically all provinces is spareparts. Because the Nissan jeeps and minibuses imported by the project are not assembled locally, spareparts for these particular models are not available in the provinces and can only be purchased through certain dealers in Jakarta, which usually take months.

Another problem expressed by the program managers in the field is the fact that all provinces received the same type of vehicles, regardless of the geographical conditions of each province. In areas such as West Kalimantan, South Kalimantan, and South Sumatra, where rivers are present the most practical means of communications, jeeps and motorcycles can only be used at the province levels and in some cases at kabupaten levels where there are paved roads. The project was supposed to have provided 8 boats for riverine areas, but the NFPCB cancelled purchase of these boats because the MOH experience with maintenance of boat clinics is very costly. In addition, the motorcycles provided by the project are too small in capacity for some of the areas with rough mountainous terrain in Sumatra and Sulawesi.

To equip the vehicles (both jeeps and motorcycles), the project procured special equipment on the basis of local competitive bidding in the form of 1) IUD kits, physician kits, public health nurse kits and MCH kits, kerosene lamps and flash lights for the jeeps procured under the project, and 2) IUD mini kits for all motorcycles procured by the project as well as for all motorcycles already in operation in Java and Bali. In addition, gynaecological beds were procured, originally to equip the jeeps. But because loan savings were incurred as a result of the 1978 rupiah devaluation, additional beds were purchased to equip health centers in the Java-Bali provinces as well as the 10 outer islands provinces.

This is a different reason from the one given at p. 10.

Other equipment procured by the project were those for the research component, specifically for the Study of Raw Materials for Oral Contraceptives. Because the Pharmaceutical Research Center of the MOH do not have adequate equipment, the project provided the Center with equipment for analytical purposes such as a vacuum drying oven, a balance centrifuge, a grinder, an atomic absorption spectrophotometer.

D. Disbursements and Costs

1. Disbursements

The disbursement schedule has been affected by a number of factors. One factor was the delays in start-up of a number of components, specifically the research study on the Community Incentive Scheme (delayed by about three years), and the Construction of the National Training Center in Jakarta (delayed by two years). Another factor which affected disbursements was the fact that project funds underwent reallocation three times during implementation.

The first reallocation of funds was approved by the Bank in January 1982. In December 1981, only US\$9.9 million out of a planned US\$ 22.3 million had actually been disbursed, due to the fact that there was an excess balance of approximately US\$ 7 million. This balance can be attributed to two factors. Firstly, some US\$ 3.7 million accounted for "savings" of funds originally allocated for civil works and largely resulted from the devaluation of the rupiah in November 1978 (from 41⁵ rupiahs to the US dollar to 625 rupiahs to the US dollar). Secondly, an amount of US\$ 3.3 million was unallocated in the loan agreement. Hence the NFPCB proposed an amendment to the original loan allocation to enable them to utilize the balance for procurement of equipment and bicycles.

The second reallocation occurred a year later in February 1983. A disagreement between the Bank and the GOI State Secretariate regarding the procurement of bicycles resulted in the cancellation of this item. Thus the original IBRD loan allocation of US\$ 24.5 million was lessened by the US\$3.8 million allocated to purchase the bicycles, and the new total loan became US\$ 20.7 million. In addition to the cancelled funds, there was an excess balance of US\$ 3.3 million which resulted from the fact that equipment procured under the first reallocated funds were below the amount of funds allocated. This balance was reallocated for purchasing more medical equipment, public

address equipment, reprinting of films, books for population education, as well as for hiring the services of a financial consulting firm. At the same time, the ^{loan} project closing date, which was originally scheduled for April 30, 1983, was extended by one year to allow for additional time required for the expanded activities resulting from the second re-allocation.

In July 1983, an assessment on the financial status of the project indicate that expenditures on research activities and consulting services were below the funds allocated, resulting in an additional excess of US\$2.4 million. The NFPCB proposed a reallocation for the third time, and received Bank approval in September 1983 to purchase more teaching aids and to conduct training for staff of the Bureau of Finance.

The expanded activities resulting from the reallocation of excess of funds have affected both the implementation as well as disbursement schedule. Disbursements have not been carried out as planned in the Appraisal. Official figures of the NFPCB indicate that as from the end of February 1984, approximately US\$ 16 million have been disbursed. In July 1984, unofficial figures indicate an additional US\$ 2.7 million have been disbursed. Project management anticipates an excess balance of US\$ 750.000 - US\$ 1 million, again because procurement expenditures amounted to less than the funds allocated. The IBRD account officially closed on September 30, 1984.

2. Costs

The following table shows a comparison of appraisal cost estimates with actual expenditures.

Table 1

Appraisal Estimates and Actual Costs

Item	Appraisal Estimate (US\$ millions)	Actual Cost (US\$ millions)
Civil Works	10.78	8.98
Vehicles	3.20	4.0 <i>was it not less?</i>
Special Equipment & Materials	2.33	8.4
Seminars & Workshops	0.85	0.43
Surveys & Evaluation	2.54	2.69
Preparation & Production of Training Aids	1.12	0.9
Fellowships and Advisors	0.71	1.1
Incremental Operating Costs	22.84	67.9
Contingencies	15.65	0.1
Total	60.02	94.5

Originally estimated to cost US\$ 60 million, of which US\$24.5 million was to be financed by IBRD loan and the remainder covered by GOI counterpart funding, the project now is estimated to have cost US\$94.5 million. As mentioned in the previous section, the original IBRD loan of US\$24.5 million was reduced to US\$ 20.7 million, when the procurement of bicycles costing US\$ 3.8 million was cancelled in February 1983.

The GOI share of the financing covered incremental recurrent expenditures such as salaries, maintenance and operating costs for implementation, as well as site development costs such as land purchase costs, building fees, taxes and surveys. Of the total US\$ 75 million allocated by the GOI to cover project costs, almost US\$ 68 million accounted for incremental operating costs, more than triple the amount originally estimated prior to implementation. This substantial increase is

It should be actual, not estimate.

attributed to the unforeseen rise in NFPCB personnel by about 400% since the loan agreement was signed in 1977.

Why should increase in NFPCB personnel have caused increase in project cost?

The estimated original operating costs of US\$22.8 million were based on a projected 100% increase in staffing. Following the 1978 organizational restructuring, however, the NFPCB was given the opportunity to increase its staff by the National Board for Civil Service Administration, with the expansion of the family planning program to the provinces beyond Java and Bali, the NFPCB made the decision to accept more employees. By 1980, NFPCB staff at central and regional levels had, in the words of a central level official, actually "swelled" by almost 400%. It is this enormous increase in personnel which caused a rise in operational costs, in particular salaries, incentives and supervision costs.

The link with project cost needs to be clarified.

III. PROGRAM PERFORMANCE

A. Contraceptive Acceptance

The efforts to recruit new family planning acceptors thus far has brought satisfying results. The number of new acceptors has been increasing since the initiation of the family planning program. During the First Five Year Plan, the target of new acceptors was set at 3,025,000. Actual achievement was 3,201,458 or 105.8% of the target. For the Second Five Year Plan, the target was surpassed by over a million or 113.7% of the target. During the Third Five Year Plan, by December 1983 the target has been exceeded by about one million or 106.9%. (See Appendix 5)

In the Outer Islands I, the number of acceptors recruited has also been increasing continuously. In 1974/75, the number of family planning acceptors was only about 118,000 while five years later some 350,000 acceptors had been recruited in the Outer Islands I. Toward the end of the Third Five Year Plan (December 1983), acceptor recruitment has reached 730,000 or 86.6% of the target. (See Appendix 5)

Regarding the characteristics of the new acceptors, about 59% of new acceptors in 1980/81 were below the age of 30 years. The median age of new acceptors was 28.6 years. Occupational characteristics of their husbands indicated that about 60% of the acceptors were farmers and 82.9% have had only elementary school education or below. In relation to the number of living children of each new acceptor, the average parity was 3.3 children.

Based upon the known characteristics as described above, it may be concluded that they could be categorized as couples with relatively low parity, young age, have had little or no education, and farming as their main source of income.

The percentage of eligible couples using contraceptives increased sharply during the Third Five Year Plan. By May 1984, current users total almost 14.5 million, accounting for some 64.3% of eligible couples. This is a dramatic increase from 5.5 million current users or 29.7% of eligible couples recorded at the end of the Second Five Year Plan. In Outer Islands I, current users as from May 1984 has reached over 3 million, accounting for over 51% of eligible couples. (See Appendix 6)

No. Eligible couples are about 24 million.

B. Fertility Decline

No new survey with regard to fertility has been conducted for the whole country since the Inter-Censal Population Survey in 1976. From the results of this 1976 survey, the crude birth rate (CBR) for Java and Bali was reported to have been 34-36 per thousand. Compared with the CBR at the beginning of the family planning program in 1970, which was around 43-44 per thousand, this means that, there was a reduction of about 18-20 percent. The decline in fertility during the sixties and after the implementation of the National Family Planning Program became evident from the results of the World Fertility Survey conducted in 1976. In Java and Bali the total fertility rate (TFR) was 5.5 children. In the seventies, there was a slight decrease and by 1972 the TFR was 5.0 children. By 1973/74, it decreased significantly to almost 4.0 children. The age-specific fertility rate (ASFR) declined for all age levels except the age group 45-49 which remained stable. The ASFR decrease was paralleled with the use of contraceptives by all fertility age groups.

The numbers are wrong! TFR was 4.3 in 1982 (1980 WFS) and 4.7 according to 1980 census.

This fertility decrease has been associated not only with development activities in the country as a whole but has also been closely related to the success of the population and family planning program. More specifically, in those provinces where

the family planning program has been more successful than other provinces, specifically Bali, East Java, Central Java and Yogyakarta, the reduction of the fertility rate is closely related with the family planning acceptance rate. This also can be observed from the results of the National Socio-Economic Survey in 1979 which reported that the TFR in Bali had decreased by 23% from the situation in 1971 to 1977, from 5.3 to 4.1 children respectively. In East Java, the TFR reduction was 19%, a drop from 4.4 children in 1971 to 3.4 in 1977. The decrease for Central Java during the same period was 10%, a drop from 4.8 to 4.3 children. And in Yogyakarta, the decrease was 18% from 4.3 to 3.5.

For the provinces of West Java and Jakarta, where family planning performance rates were relatively low, their fertility rates decreased by 7.3% and 6.5% respectively. It can be assumed that in areas where the prevalence rate of contraceptive use was high, the decrease of its TFR was proportionally high.

In Outer Islands I, viewed from the growth of total current users, which has been increasing annually, the family planning program is expected to play a significant role in decreasing the fertility rate.

Efforts to maintain family ^{planning} acceptance which may eventually lead to fertility decline can also be measured by the continuation rates of contraceptive use. The results of the Modular Survey undertaken by the NFPCB in 1983 indicate that in the Java-Bali region, the continuation rate for using the pill during 1978-1982 was about 80%, while that for using the IUD and Condom was 90.4% and 76% respectively. Continuation rates of contraceptive use in the Outer Islands I provinces indicate slightly although not substantially lower figures. (See Appendix 10)

An attempt should be made to link program performance with the project.

IV. BANK PERFORMANCE

The Bank's contribution was substantial during the project identification, formulation and appraisal stages. Bank staff collaborated with GOI officials (NFPCB, BAPPENAS and Ministry of Finance) in designing and formulating the Second Project.

The First Population Project was designed to strengthen the newly established national family planning program in the 1970s which was at the time concentrated in the provinces of Java and Bali. The Second Project was designed to support and expand the national family planning efforts beyond Java and Bali. The First Project had succeeded in getting the support and urgent commitment of GOI and international agencies to the family planning program, and enabling the program to make the transition from a clinic-centered approach to one based on an outreach network. The Second Project succeeded in transferring the same sense of commitment to the community and to the individual. This was accomplished through the improvement of motivational and contraceptive delivery services, as well of improvement of program management, supervision and professional skills at the central and field levels.

As described in the section on Program Management above, the Bank was willing to compromise with and adhere to the NFPCB's decision against setting up a Project Implementing Unit (PIU) to manage and administer the Project, which is a prevailing Bank procedural requirement. The NFPCB encountered a number of problems with the PIU structure during the First Project. Having undergone five years of experience in implementing the First Project, during which time program management was improved and strengthened, the NFPCB felt itself sufficiently competent to implement the Second Project through its existing administrative structure. The Bank is to be commended for its willingness to be flexible and to adjust to the borrower's conditions. Similarly, the NFPCB was willing to compromise by retaining one section of the former PIU to handle the civil works component because

there were no units within the current NFPCB organizational structure which can supervise and implement construction activities.

Project supervision of Bank staff contributed to the timely implementation of the project, and maintained close liaison with NFPCB staff in monitoring project progress. On the average, Bank missions to Jakarta were undertaken at six month intervals to review utilization of funds as well as the progress of project activities.

NFPCB staff who have been closely involved in implementing the project would like to see some delegation of authority given to Bank resident staff (RSI) in Indonesia. The prevailing procedure has been to acquire Bank approval from Washington for use or reallocation of undisbursed funds to other components or activities. NFPCB officials feel that this procedure is often too time-consuming, and affects decision-making internally. If the RSI is given some authority on reallocation of funds, decisions can be made more effectively and facilitate project implementation.

NFPCB project staff would also like to see a more simplified procedure for withdrawing loan funds. What has prevailed is that loan-funded expenditures were pre-financed with GOI funds and then later reimbursed by the Bank. Withdrawal applications are submitted after detailed documentation and vouchers of payment have been reviewed by the NFPCB and by two Directorate-generals of the Ministry of Finance. A more simplified disbursement procedure this a time-consuming process which has to a certain extent affected the estimated disbursement schedule.

*Rather thin on Bank performance.
What about GOI performance?*

V. CONCLUSIONS

The Second Population Project set out to achieve a number of objectives, an important one of which was to extend the mobility of family planning field staff to enable them to extend services to remote areas. Program managers in the field are in agreement that project inputs, in particular such physical facilities as training centers and vehicles have played a major role in meeting this objective. Without these facilities, extension of the family planning program in the Outer Islands would not have been possible. The number of new acceptors as well as current users have been increasing substantially, both not only throughout the country as a whole but also in Outer Islands I specifically (See Appendices 5-9).

The provincial training centers in Outer Islands I, built with funds of the project, have trained over 42,000 participants since 1979, almost 17% over the appraisal estimate of 36,000. The training of family planning staff as well as community leaders was essential to enable extension of service delivery beyond Java and Bali.

The study on raw materials for oral contraceptives has brought new light on the possibility future local production of oral contraceptives. Although implementation of the study has been delayed, preliminary findings indicate the possibility of producing local oral contraceptives through species of *Costus* and *Solanum*, which yield diosgenin and solasodine respectively, both of which are precursors of steroid hormones required to produce oral contraceptives.

Project inputs have also been instrumental in expanding the family planning program's education and motivation activities at the community level. Besides training facilities and vehicles, provision of equipment such as audio-visual aids and population education teaching kits contributed to extending IEC in the outer islands.

A number of factors contributed to project achievements. The amount of GOI counterpart funding, which accounts for over three times the amount estimated in the appraisal, is indicative of the continuous political commitment and support of the family planning program which are prerequisites to program success. The impressive increase in family planning personnel in the last five years reflects the importance which the GOI placed on institutional building.

The experience of the NFPCB in implementing the Second Population Project provides implications which should be taken into account in the planning and programming of future projects. It is important to note for example, the degree of complexity of internal administrative management had a significant bearing on project implementation. Implementation of the hardware components such as the civil works and procurement of vehicles and equipment went more smoothly than the software activities of the project. This is due to fact that management of hardware activities was heavily centralized. Decision-making, control of funds and procurement were carried out by central-level staff. The decision-making process for a hardware component is more clear-cut and straightforward and involved relatively few people, in that contractors were directly accountable to the Project Officer and his staff at the central-level. There was only one level in the hierarchy to deal with in terms of decision-making, which facilitated and accelerated implementation. In addition, the assignment of full-time staff solely to concentrate in supervising the hardware components of the project was a positive factor which helped to accelerate the timely completion of civil works and procurement.

Decision-making for software activities seemed to be more elaborate, as illustrated by some of the more qualitative components of the project. Implementation of the Population Education component, for example, while technically directed by the Center for Education and Training of the NFPCB, has been under the coordination of the Ministry of Education and Culture.

Should be the other way around: MOEC implements, NFPCB coordinates the funding -- only for pop. ed in the formal education sector.

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The study of indigenous raw materials for oral contraceptives, undertaken by the Bureau of Research and Development, involved exploration activities in such outreach locations as Maluku, East Nusa Tenggara, Southeast Sulawesi, East Kalimantan and Irian Jaya. Hence, completion of these activities was heavily dependent on local weather conditions, travel and infrastructure within these less developed regions.

The Community Incentive Scheme in particular experienced a series of delays, mainly due to disagreements between BAPPENAS, the NFPCB and the research component assigned to undertake various aspects of the pilot project. Project planners underestimated the time and effort required to undertake these software activities, which involved more people in the decision-making process. Hence, the implication for the future is that when decision-making becomes more elaborate, planners should allocate more time to allow for project implementation. ✓

Despite the fact that the reallocation of savings was a major factor in causing extensions in implementation schedule and project completion "delays", savings reallocation made possible additional new activities and procurement of more equipment for the NFPCB Central office as well as its offices in the provinces.

In general, implementation of the Second Population Project was good and relatively problem-free. The experience of having managed the previous Bank assisted First Project enabled NFPCB staff to implement the Second Project with success.

Notes:

1. Project impact does not come out very clearly.
2. Lessons learned are scanty.

Reallocation was not the reason for extension of loan closing date; it was delays in the implementation of the research component. If they had been completed on schedule savings would have been conserved.

FULFILLMENT OF LOAN AGREEMENT COVENANTS

<u>Agreements</u>	<u>Actions Taken</u>
a. Arrangements satisfactory to the Bank will be made to monitor from time to time the maintenance and operation of vehicles provided during the project implementation period;	The NFPCB has set up a monitoring system.
b. Not later than four months after the end of each GOI fiscal year, the GOI will submit a detailed report on the progress of the community incentive scheme to the Bank for Review and will consult the Bank on the adequacy of the scope and form of the study;	Done. Reports were submitted to the Bank.
c. within twenty months after the start and within three months after the completion of the oral contraceptive raw materials feasibility study, the GOI will submit to the Bank for review a detailed report on: 1) the progress of the study; and 2) the oral contraceptive needs and sources of supply for the national family planning program, and will consult the Bank on the technical and economical desirability of continuing the study;	Done
d. all land and rights in respect of such land for the construction and operation of the facilities included in the project will be acquired by October 31, 1977;	Done.
e. copies of the audited project account will be submitted to the Bank no later than six months after the end of each GOI fiscal year;	Done.
f. qualified and experienced staff in adequate numbers including at least one construction coordinator, two engineers, four job captains, two draftsmen and supporting clerical staff, will be appointed by October 31, 1977, to assist the NFPCB Secretariat to implement the Civil Works component.	Done. Civil Works staff of former PIU under First Project continued to implement civil works component of Second Project.

EDUCATION AND TRAINING: POPULATION AND
FAMILY PLANNING PERSONNEL DURING
PELITA III

CATEGORY	TOTAL
<u>A. Central</u>	
Population and Family Planning	6163
Seminar/Study Tour/Foreign Training	422
Domestic Training (long-term)	154
Domestic Training (short-term)	398
Course on Demography	1197
Personnel training	75
<u>B. Java and Bali Provinces</u>	
Family Planning	46324
Population	21522
Personnel	2364
<u>C. Outside Java and Bali Provinces I</u>	
Family Planning)	
Population)	42606
Personnel Training)	
<u>D. Outside Java and Bali Provinces II</u>	
Family Planning	7961
Population	5841
TOTAL (A,B,C,D)	135027

Source: NFPCB.

Number of population and family planning
personnel participating in education and
training program during 1979/80-1983/84
in Outer Islands I

<u>Provinces :</u>	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>	<u>1983/84</u>
<u>1. North Sulawesi</u>					
Family Planning Personnel	155	109	273	434	228
Population Personnel	218	460	276	63	180
Others				130	53
	373	569	549	627	461
<u>2. South Sulawesi</u>					
FP Personnel	551	871	577	1028	884
Population Personnel	756	29	420	270	1227
	1307	900	997	1298	2111
<u>3. North Sumatra</u>					
FP Personnel	979	988	713	636	1496
Population Personnel	2081	867	327	303	Dec. 1983
	3060	1855	1040	938	1496
<u>4. South Sumatra</u>					
FP Personnel	421	1640	744	2117	577
Population Personnel	13			119	615
	434	1640	744	2236	1192
<u>5. Lampung</u>					
FP Personnel	178	195	361	679	528
Population Personnel	284	420	150	177	586
	462	615	511	856	1114
<u>6. Aceh</u>					
FP Personnel	-	440	481	673	491
Population Personnel					
		440	481	673	491

<u>Provinces :</u>	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>	<u>1983/84</u>
7. <u>West Kalimantan</u>					
FP Personnel	232	192	371	376	94
Population Personnel	788	440	145	60	178
	1020	632	516	436	272
8. <u>West Sumatra</u>					
FP Personnel	282	420	575	462	442
Population Personnel	454	420	306	388	1039
	736	840	881	850	1481
9. <u>West Nusa Tenggara</u>					
FP Personnel	156	205	266	410	513
Population Personnel	254	391	520	300	156
	410	596	786	710	669
10. <u>South Kalimantan</u>					
FP Personnel)					
Population Personnel)	311	509	349	618	514
	311	509	349	618	514
<u>Grand Total</u>	8113	8596	6854	9242	9801

Source: NFPCB

CURRENT CONTRACEPTIVE USERS IN COMMUNITY INCENTIVE
PROJECT SITES (BEFORE AND AFTER THE SCHEME)

	<u>BEFORE</u>					<u>AFTER</u>				
	IUD	PILL	CONDOM	STERILIZATION	INJECTION/ DEPO PROV.	IUD	PILL	CONDOM	STERILIZATION	INJECTION/ DEPO PROV.
Central Java (13 villages)	657	523	91	45	49	1153	718	75	139	137
Yogyakarta (4 villages)	438	988	443	30	52	679	889	361	42	81
East Nusa Tenggara (4 villages)	4	136	1	14	13	7	219	1	16	57
South Sulawesi (8 villages)	148	1721	48	12	91	311	4090	91	15	352
North Sumatera (8 villages)	84	1404	147	44	228	255	1894	231	58	318
East Java (10 villages)	1230	1777	52	4	13	1509	1529	18	27	57
Bali (4 villages)	892	92	408	47	7	1049	67	406	57	11
West Nusa Tenggara (4 villages)	90	1778	65	-	-	483	1955	43	2	2
West Java (6 villages)	161	1151	-	3	40	323	1788	-	25	585

Source : NFPCB

PERCENTAGE OF CURRENT USERS BY
METHOD 1979/80-1981/82

	PILL	IUD	CONDOM	INJECTION	OTHERS	TOTAL
1979/1980	63.5	26.9	6.3	1.0	2.3	6,497,382
1980/1981	64.1	25.9	6.1	1.4	2.5	7,791,537
1981/1982	64.4	26.9	5.8	0.9	2.0	8,809,020
<u>March 1982</u>						
Java-Bali	4,282,115 (61.5)	2,059,224 (29.6)	365,956 (5.3)	60,391 (0.9)	199,520 (2.9)	
Outer Islands (I)	1,195,094 (73.4)	240,841 (14.8)	125,987 (7.7)	15,962 (1.0)	50,437 (3.1)	
Outer Islands (II)	142,009 (66.5)	47,395 (22.2)	13,176 (6.2)	4,881 (2.3)	6,032 (2.8)	
	5,619,218 (63.8)	2,347,460 (26.6)	505,119 (5.7)	81,234 (0.9)	255,989 (2.9)	

Source : NFPCB

NUMBER OF ACCEPTORS ACCORDING TO
METHOD USED
(May 1984)

Province	IUD	PILL	CONDOM	INJECTION	OTHERS
<u>Java - Bali</u>					
1. Jakarta	229,776	174,814	26,776	96,378	49,763
2. West Java	653,030	1,771,823	6,557	628,604	60,778
3. Central Java	891,120	1,532,010	207,088	239,311	89,372
4. Yogyakarta	107,249	69,988	63,515	7,444	35,979
5. East-Java	1,222,141	2,077,643	108,074	116,316	95,407
6. Bali	213,569	31,952	18,115	6,383	19,898
	3,316,885	5,658,230	430,125	1,094,436	351,197
	(30.5%)	(52.1%)	(3.9%)	(10.0%)	(3.2%)
<u>Outside Java-Bali (I)</u>					
1. Aceh	11,007	127,759	10,502	17,768	1,487
2. North Sumatra	101,499	343,429	107,617	57,762	39,396
3. West Sumatra	79,208	124,484	22,908	15,487	6,572
4. South Sumatra	50,974	233,789	41,846	16,030	13,097
5. Lampung	71,024	254,435	9,931	19,276	2,886
6. West Nusa Tenggara	47,922	159,509	1,920	3,546	1,738
7. West Kalimantan	14,940	156,056	21,598	8,414	2,296
8. South Kalimantan	13,244	163,729	2,428	9,204	2,353
9. North Sulawesi	70,425	102,649	1,964	30,168	6,275
10. South Sulawesi	57,385	424,885	8,087	25,987	6,423
	517,628	2,090,724	228,801	203,642	82,523
	(16.5%)	(66.9%)	(7.3%)	(6.5%)	(2.6%)
<u>Outside Java-Bali (II)</u>					
	112,363	263,441	21,685	89,262	14,241
	(22.4%)	(52.5%)	(4.3%)	(17.8%)	(2.8%)

Source: NFPCB

FAMILY PLANNING NEW ACCEPTORSTarget and Results of New Acceptors

Year	Targets	Result	% of Target
1969/70 - 1973/74	3,025,000	3,201,458	105.8
1974/75 - 1978/79	9,000,000	10,236,618	113.7
1979/80 - 1983/84	14,661,553	15,667,422	106.9

Source: NFPCB

Family Planning New Acceptors
in Outer Island I

Year	Total New Acceptors (000's)	% target achieved
1974/75	118	11.8%
1978/79	350	87.9%
1983/84	730	86.6%

Source: NFPCB

CURRENT USERSTrend in Family Planning Current-Users

Year	Number of C.U. Recruited	% of Eligible Couples
1969-1973	7,680,665	12.41
1974-1978	5,541,517	29.71
1979-1984	14,475,183	64.3

Source: NFPCB

Current Users by Geographic Region

(May 1984)

Regions	Total Eligible couples	Current Users as of May 1984	% of CU toward number of Elco
Java and Bali	14,338,416	10,850,873	75,68
Outer Islands I	6,038,408	3,123,318	51,7
Outer Islands II	2,137,287	500,992	23,4
Indonesia	22,514,111	14,475,183	64,3

Source: NFPCB

NUMBER OF POPULATION, ELIGIBLE COUPLES, TARGET
AND ACHIEVEMENTS OF CURRENT-USERS IN OUTER ISLANDS I
1979/80 - 1983/84
(000's)

Province		1979/80	1980/81	1981/82	1982/83	1983/84
1. South Kalimantan:	Population	1,915.9	2,004.0	2,049.2	2,097.8	2,149.0
	Elco	279.9	296.4	314.1	327.3	346.5
	% target of C.U.	22.3	27.7	34.8	41.1	49.7
	Achievement	52.8	80.9	100.2	142.2	173.2
	% of achievement	18.8	27.3	31.9	43.5	50.0
2. West Kalimantan :	Population	2,503.0	2,575.8	2,651.6	2,733.1	2,818.1
	Elco	375.4	386.4	392.9	392.3	405.9
	% target of C.U.	17.4	18.8	99.2	153.3	178.5
	% of achievement	7.3	13.1	25.3	39.1	44.1
3. West Sumatra :	Population	3,124.0	3,165.1	3,204.9	3,246.9	3,285.5
	C.U.	468.6	474.8	475.8	487.6	492.8
	% target of C.U.	15.4	22.8	23.0	26.5	
	Achievement	67.6	96.9	141.7	165.2	248.7
	% of achievement	14.4	20.4	26.9	33.5	

APPENDIX 8 (2)

Province		1979/80	1980/81	1981/82	1982/83	1983/84
4. North Sumatra	: Population	8,141.4	8,345.5	8,550.3	8,763.5	8,977.1
	Elco	1,221.2	1,251.8	1,282.5	1,314.5	1,346.6
	% target of C.U.	15.2	21.4	27.6	33.8	40.0
	% of achievement	10.2	12.6	23.8	41.6	50.0
5. South Sumatra	: Population	4,247.3	4,374.9	4,509.9	4,656.6	4,811.9
	Elco	643.0	661.1	700.7	743.7	725.7
	% target of C.U.	13.6	20.2	26.8	33.4	40.0
	Achievement	55.6	86.3	140.5	251.6	374.4
	% of achievement	8.6	13.1	20.0	34.2	51.6
6. North Sulawesi	: Population	2,035.3	2,078.1	2,120.7	2,165.3	2,209.7
	Elco	305.3	311.7	313.1	324.8	331.5
	% target of C.U.	27.0	34.0	41.0	48.0	55.0
	% of achievement	29.8	35.3	32.8	45.7	59.0
7. West Nusa Tenggara	: Population	2,549.4	2,598.8	2,649.1	2,702.6	2,757.2
	Elco	382.4	389.8	397.4	405.4	413.6
	% target of C.U.	14.4	20.8	27.2	33.6	40.0
	% of achievement					

Province		1979/80	1980/81	1981/82	1982/83	1983/84
8. South Sulawesi	: Population	6,105.3	6,261.3	6,428.8	6,614.1	6,812.4
	Elco	915.8	939.2	964.3	992.1	1,021.9
	% target of C.U.	13.6	20.2	26.8	33.4	40.4
	% of achievement					
9. Aceh	: Population	2,403.4	2,462.2	2,523.1	2,588.5	2,656.2
	Elco	360.5	369.3	378.4	388.3	389.4
	% target of C.U.	11.4	16.8	22.2	27.6	33.0
	% of achievement					
10. Lampung	: Population	3,990.8	4,134.7	4,280.9	4,433.0	4,587.2
	Elco	598.6	620.2	642.1	664.9	688.1
	% target of C.U.	20.4	27.8	35.2	42.6	50.0
	% of achievement					

Source : NFPCB

TRENDS IN FERTILITY DECLINE

Total Fertility Rates (1971-1977) and Family
Planning Prevalence Rate in 1977 for Java-Bali

Province	TFR 1971	TFR 1977	Decrease TFR Rate %	% of C.U. toward Elco
Bali	5.3	4.1	23	42.8
East Java	4.2	3.8	19	40.2
Yogyakarta	4.3	3.5	18	26.9
Central Java	4.8	4.3	10	26.3
West Java	5.5	5.1	7.3	23.0
Jakarta	4.6	4.3	6.5	21.0

Source: NFPCB

Continuation Rates of Contraceptive Use in
Java-Bali and Outer Islands I (1978 - 1982)

Region	Method	Continuation rate (in month)					
		6 months	12	18	24	30	36
<u>Java and Bali</u>	Pill	87.8	80.1	73.0	67.1	60.2	55.2
	IUD	94.8	90.4	86.4	82.7	78.6	75.1
	Condom	93.8	76.1	64.7	53.6	45.3	40.4
<u>Outer Islands I</u>	Pill	79.9	74.2	68.2	63.6	58.5	54.2
	IUD	86.0	82.4	79.0	75.6	72.1	69.3
	Condom	68.5	59.8	51.4	46.1	41.0	-

Source: Modular Survey 1983, NFPCB

Report No. 1318-IND

Indonesia: Appraisal of a Nutrition Development Project

February 16, 1977

Agriculture and Rural Development Department

1373 IND

Agreements + Bk lipas

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CURRENCY EQUIVALENTS

US\$1	=	Rupiahs (Rp) 115
Rp 1	=	US\$0.002
Rp 1,000,000	=	US\$2,410

WEIGHTS AND MEASURES

1 metric ton	=	1,000 kilograms (kg)	=	2205 pounds	=	0.98 long ton
1 meter (m)	=	29.37 inches	=	3.28 feet	=	1.09 yards
1 hectare (ha)	=	10,000 m ²	=	2.47 acres		
1 square kilometer (km ²)	=	100 ha	=	0.39 square miles		

ABBREVIATIONS

AETE	=	Agency for (Agricultural) Education, Training and Extension
ANP	=	Applied Nutrition Program
ANPO	=	Assistant Nutrition Program Officer
ARD	=	Agency for (Agricultural) Research and Development
BAPPEDA	=	Provincial Planning Authority
BAPPENAS	=	National Development and Planning Agency
BIMAS/INMAS	=	Mass Guidance Program for Self-sufficiency in Rice and Palawija Crops
BPDG	=	Nutrition Improvement Coordinating Committee
BULOG	=	National Logistics Body - rice procurement agency
BUUD/KUD	=	Local Village Cooperative
CARE	=	Cooperative for American Relief Everywhere
CRDN	=	Center for Research and Development in Nutrition
FAC	=	Food and Agriculture Organization
FNU	=	Food and Nutrition Unit
FTDC	=	Food Technology Development Center
IPB	=	Agricultural University, Bogor
IRRI	=	International Rice Research Institute
MCH	=	Maternal and Child Health
MEU	=	Monitoring and Evaluation Unit
NILHOH	=	National Institute for Industrial Hygiene and Occupational Health
NIPP	=	Nutrition Intervention Pilot Project
NPO	=	Nutrition Program Officer
NRI	=	Nutrition Research Institute
PCM	=	Protein-Calorie Malnutrition
PKK	=	Members of Voluntary Organizations
PMD	=	Community Development Board
REC	=	Rural Extension Center
RILHOH	=	Regional Institute of Industrial Hygiene and Occupational Health
TAC	=	Technical Advisory Committee
UDKP	=	Units for Community Development
UNICEF	=	United Nations Children's Fund
UPGK	=	Unit for Family Health and Nutrition
USAID	=	United States Agency for International Development
VANPO	=	Village Assistant Nutrition Program Officer
WFP	=	World Food Program
WHO	=	World Health Organization

GLOSSARY

Bupati	=	Chief Executive of the Kabupaten
BUTSI	=	Indonesian Village Youth Corps
Camat	=	Executive Head of Sub-district
INPRES	=	Presidential Instruction
Kabupaten	=	Administrative Sub-division of a Province
Kampung	=	Villages
Kecamatan	=	Sub-district Level of Provinces
Lurah	=	Village Headman or Chief
Walikota	=	Chief Executives of Sub-district

PROJECT IN INDONESIA

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This report is based on the findings of an appraisal mission which visited Indonesia in August 1975. The appraisal mission consisted of: Mr. S. Venkitaramanan (Chief of Mission), Dr. K. V. Ranganathan, Dr. T. Tiglaio, Mr. A. Shaw, Mr. D. Mills, Mr. E. Thomson, Mr. J. Worgan and Dr. M. Behar (Consultants). Mr. Venkitaramanan made an updating mission in February 1976. A post-appraisal mission was made in June/July 1976 by Messrs. E. M. Schebeck (Chief of Mission), S. Venkitaramanan and E. Thomson. The missions were greatly assisted by Bank Resident Mission representatives.

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ANNEXES

1. Nutritional Status and Food Habits
2. Center for Research and Development of Nutrition
3. Food Technology Development Center
4. Nutrition Intervention Pilot Program
5. Anemia Prevention and Control Pilot Project
6. Nutrition Communication and Behavioral Change
7. Manpower Training
- 8a. Project Organization
- 8b. Food and Nutrition Unit, Ministry of Agriculture
9. Monitoring and Evaluation
10. Civil Works
11. Project Cost Estimates
12. Disbursement Schedule
13. Schedule of Technical Assistance
14. Schedule of Key Implementation Actions

INDONESIA NUTRITION DEVELOPMENT PROJECT

SUMMARY AND CONCLUSIONS

(i) Despite significant improvements in real per capita incomes in Indonesia in recent years, widespread malnutrition represents a constraint on human productive capacity that hinders efforts to achieve national development goals. Malnutrition could be more effectively combated if nutrition problems were better understood and if the institutions and personnel required were developed to plan and conduct an effective national-scale program of research and development and of action.

(ii) Indonesia's development program addresses directly the problems of employment, production, and income generation. Successful execution of the program will have a significant impact on the nutritional status of the population. Yet, actions to increase employment, output and incomes are not by themselves sufficient to deal with the problems of malnutrition, particularly of those who now, and probably for many years to come, will be living in poverty. In the context of Indonesia's overall development strategy, nutrition activities are complementary to other efforts in agriculture, health and education. Well directed nutrition policies and programs can lower mortality and morbidity rates, contribute to raising productivity levels, help to achieve family planning and education objectives, optimize the use of available food resources, and improve the level of human well-being which is the ultimate goal of all development activities. Nutrition programs also serve as a direct means of improving income distribution and the social and economic conditions of the disadvantaged portion of the population.

(iii) Nutrition problems - particularly protein-calorie malnutrition (PCM), vitamin A and iodine deficiencies, and nutritional anemia - are widespread throughout Indonesia. The high rate of infant mortality - between 110 and 150 per 1,000 - can be traced in part to PCM. Malnutrition in Indonesia is a result of a combination of different factors, foremost of which are: inadequate production and inadequate availability of foods, and especially nutritionally valuable foods, to a large proportion of the population; and insufficient understanding of nutritional requirements.

(iv) Indonesia's daily average per capita availability of food is about 1,880 calories and 43 daily grams of protein compared to a recommended requirement of about 1,920 calories and 40 grams of protein. However, given the income distribution in Indonesia, almost two-thirds of the population is getting well below the required amounts. Since the First Development Plan period (1969-74), the Government has concentrated on increased production of rice, the main staple food, in an effort to keep pace with growing requirements.

(v) At the same time, the Government has become increasingly concerned about the prevalence of malnutrition among its population and has committed itself to improving this situation. Past Indonesian efforts, supported by

UNICEF, WHO, CARE and FAO, to achieve nutritional improvements have had only moderate success because of their rather limited size and coverage. The proposed project, which was prepared by an Indonesian task force, builds on the experience from these activities. The Government's commitment towards improving the nutritional status of Indonesia's poor is reflected by its intention to develop and implement a comprehensive national nutrition program. However, it now lacks basic prerequisites: sufficient manpower and institutional capacity capable of planning and executing large-scale programs, knowledge concerning the effectiveness of alternative forms of nutrition interventions and delivery systems, and an adequate data base from which to analyse the effectiveness of possible nutrition activities.

(vi) The purpose of the proposed project is threefold. First, it will strengthen and expand the existing nucleus of personnel and institutions in Indonesia to develop more effective capacity for: formulation and execution and evaluation of nutrition programs; operational research; and manpower training in nutrition. Second, through field level action programs and their evaluation, nationally replicable and cost-effective measures will be developed to improve the nutritional status of malnourished target groups. Third, the combination of the above actions will aid the Government in the formulation and execution of a more comprehensive food and nutrition program on a national scale. More specifically, the proposed project, consisting of several parallel components, would assist the Government in:

(a) Institution Building

- (i) strengthen the Center for Research and Development in Nutrition (CRDN), under the Ministry of Health, through funds for additional staff, training, technical assistance, necessary equipment and modest expansion of physical facilities;
- (ii) support the establishment of the Food Technology Development Center (FTDC), under the Ministry of Education, at the Agricultural University, with physical facilities, equipment, training, technical assistance and additional staff;
- (iii) improve planning, coordination and evaluation of nutrition activities through provision of technical assistance to the Ministries of Health, Education and Agriculture;

(b) Direct Nutrition Action Programs

- (i) initiate a Nutrition Intervention Pilot Project (NIPP) - administered by the Ministry of Health - through funds for additional staff, training, technical assistance, buildings, equipment and materials

to provide integrated nutritional, educational, agricultural and health activities and selective food supplementation to vulnerable target groups in seven Kabupatens, with a total population of about 740,000;

- (ii) increase the production of nutritious vegetables and fruits in 18,000 home/village gardens through provision of improved seeds, development of model garden packages and intensification of agricultural extension efforts;
- (iii) improve food storage, especially at the village level through assistance to the Food Technology Development Center which would, in collaboration with the Ministry of Agriculture, develop an appropriate small-scale storage program for a total capacity of 300 tons for which financing would be provided;
- (iv) initiate an iron supplementation program administered under the National Institute for Industrial Hygiene and Occupational Health, through funds for iron pills, iron fortified salt, medication and materials to tackle nutritional anemia among 3,000 families in a selected number of plantations with a view to developing a national program to cover all government and privately owned plantations;

(c) Education and Training

- (i) implement and test the efficiency of alternative nutrition communication methods affecting 110,000 beneficiaries to bring about desirable changes in nutrition behavior through funds for equipment, technical assistance and incremental operating costs;
- (ii) upgrade and expand the training of nutritionists in the Academy of Nutrition at Jakarta, under the Ministry of Health, by provision of equipment, staff, training, technical assistance and necessary physical facilities;
- (iii) improve the training of agricultural extensionists by introduction of nutrition in the curriculum of the basic training centers and of the secondary agricultural schools of the Agency for Education, Training and Extension through funds for curriculum development, equipment and instructors; and

(d) Assistance for Formulation of a National Food and Nutrition Program

assist the Government in the formulation of a national food and nutrition program by taking into account inter alia: the results of the evaluation of the various nutrition actions taken under the proposed project and their cost effectiveness and replicability; manpower availability; and the managerial skills and institutions developed as a result of the project.

(vii) Specific linkages would be established between the proposed project and ongoing development activities, including those assisted by the Bank, particularly agricultural research and extension and training, agricultural credit, population programs and others.

(viii) As a result of the project, the Government would have developed: (a) a cadre of trained professionals and strengthened institutions equipped to execute nutrition programs on a national scale; (b) an assessment of the effectiveness of various direct nutrition action programs; (c) programs for more efficient techniques of food storage and processing, and for fortification of certain foods; (d) techniques for community education in nutrition; (e) nutritional considerations in its agricultural programs; and (f) a comprehensive national food and nutrition program.

(ix) In addition to the above benefits which are national in scope, other immediate side benefits can be expected in the areas where direct pilot nutrition action programs will have been carried out. Approximately 30,000 children affected by PCM would have been rehabilitated; about 110,000 families and 45,000 pregnant and/or lactating women would receive nutrition education; 17,000 pregnant and/or lactating women would receive food supplements; and 100,000 children would have been immunized from infectious diseases. Some 18,000 farm families would participate in the home/village garden programs and would improve their nutritional status through on-farm consumption. The introduction of improved, low cost on-farm/village level storage facilities would mark the beginning of a nationwide program to reduce food losses and thereby to raise food availability. Since the proposed project is in a pioneering field for Indonesia, it carries an inherent risk. A risk specific to this project arises from the fact that its implementation involves many ministries and their coordinated actions. Organizational arrangements included in the project are considered satisfactory to minimize this risk.

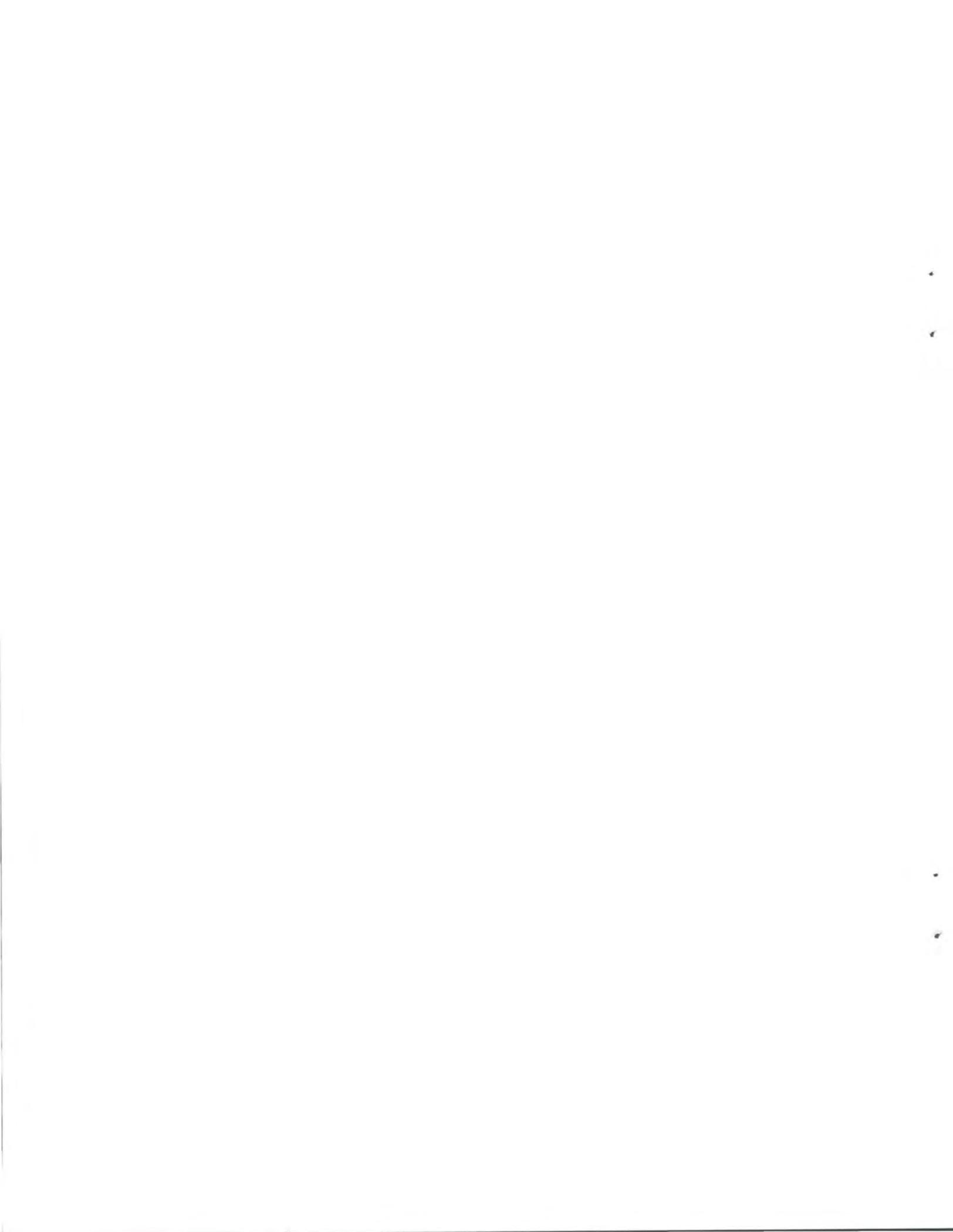
(x) Each of the components of the proposed project would be implemented within the existing organizational structure of the Government. The overall coordination of the project would rest with the Director General of Community Health in the Ministry of Health, who is the designated Project Director. To ensure the full cooperation of the Ministries of Home Affairs, Education and Agriculture, a part-time co-director within each of these ministries, would work in close cooperation with the Project Director in identifying and solving problems of interministerial coordination. The CRDN, in the Ministry of Health, and the FTDC, in the Ministry of Education, would be administered by their respective directors. The NIPP component would be

administered at the national level by a coordinator stationed in the Ministry of Health. In the provinces, the Governor of the Province would be responsible for coordination and implementation of NIPP. The Anemia Prevention and Control Project would be administered by the National Institute for Industrial Hygiene and Occupational Health, through delegation to its regional institutes, in close collaboration with the Directorate General of Plantations of the Ministry of Agriculture and the NIPP Coordinator. Provision has also been made for about 35 man-years of consultant specialists, for periods varying from few weeks to four years, who would compensate for the current scarcity of Indonesian personnel with training and experience necessary to support the project. About 44 Indonesians would be provided with fellowships for training in nutrition and food technology, either abroad or in Indonesia.

(xi) Total costs of the proposed four-year project are estimated at US\$26 million (Rp 10.8 billion, including contingencies). The foreign exchange component is about 40 percent. Out of the total base costs of US\$18.8 million, US\$8.9 million are capital costs, US\$3.0 million are for technical assistance, US\$5.5 million are incremental operating costs, US\$0.7 million are for agricultural activities and US\$0.6 million are for evaluation. Civil works contracts in excess of US\$1.0 million would be awarded on the basis of international competitive bidding in accordance with the Bank's guidelines; domestic contractors would be given a 7 1/2 percent preference. Contracts below US\$1.0 million would be awarded on the basis of competitive bidding advertised locally, with no restriction on bidding by foreign firms, and in accordance with normal government procedures which are satisfactory to the Bank. Equipment and furniture contracts in excess of US\$50,000 would be awarded on the basis of international competitive bidding in accordance with the Bank's guidelines; domestic manufacturers would be allowed a preferential margin of 15 percent or the existing customs duty, whichever is the lower, over the c.i.f. price of competing imports. Contracts for equipment and furniture which cannot reasonably be grouped in packages of at least US\$50,000 equivalent could be awarded on the basis of competitive bidding advertised locally following normal government procedures which are satisfactory to the Bank. Procurement of vehicles (except for 10 required for start-up) would be on the basis of international competitive bidding subject to Bank guidelines.

(xii) Disbursement would be made at the rate of 100 percent against expenditures for foreign and local consultants, fellowships, project staff in the Office of the Project Director, directly imported equipment, library supplies, furniture and vehicles; 95 percent of the ex-factory price of equipment manufactured locally; 80 percent of civil works expenditures; 65 percent of imported equipment procured locally; and 40 percent of vehicles procured locally. Expenditures for consultant architects incurred after October 1975 would be financed retroactively from the proposed loan up to a total of US\$50,000 equivalent.

(xiii) The proposed project is suitable for a Bank loan of US\$13 million equivalent to the Government of Indonesia for a term of 20 years, including a grace period of 4 1/2 years.



INDONESIA

NUTRITION DEVELOPMENT PROJECT

I. INTRODUCTION

1.01 The Government of Indonesia is increasingly concerned about the prevalence of malnutrition among its population. Recognizing that the primary cause of malnutrition is inadequate availability of food, the Government has undertaken major programs to increase the production and availability of staple foods. It has also undertaken important supplementary programs to remedy specific nutritional deficiencies and to upgrade health, feeding and nutrition practices among the most nutritionally vulnerable. ^{1/} These limited nutrition programs, however, have lacked the organized, systematic and sustained approach needed to combat effectively malnutrition, its causes and its derivative ills on a national scale.

1.02 The Government has requested Bank assistance in:

- (i) developing the institutional infrastructure and the personnel necessary for effective formulation, execution and evaluation of a comprehensive national food and nutrition program;
- (ii) strengthening on-going programs of nutrition research; and
- (iii) improving food technology, nutrition education and training.

In order that the national food and nutrition program will have the greatest impact on nutritional status, a range of pilot action projects will be required to test organizational arrangements, program costs and benefits, and the feasibility of replicability on a national scale.

^{1/} The most nutritionally vulnerable include young children, pregnant women and lactating mothers.

1.03 The project is based upon a study prepared by an Indonesian task force consisting of representatives of relevant ministries, established in 1973 by the BAPPENAS (The National Development and Planning Agency), with assistance from Bank staff, UNICEF, WHO, FAO and consultants. Project appraisal commenced with missions in August/September 1975 and in February 1976. In accordance with the special procedures established during discussion of the Policy Guidelines for Bank Nutrition Activities, 1/ a preliminary report on this project was discussed by the Executive Directors on March 23, 1976. In the light of the Board discussion, further work was carried out by a post-appraisal mission which visited Indonesia in June 1976. The proposed project embodies changes which provide for pilot action operations, closer ties to agricultural research, extension, and credit activities and to the Government's nutrition action program. This project would be the first Bank loan to Indonesia in the field of nutrition, but substantial linkages are envisioned between this and other ongoing Bank projects (see paras. 3.05 to 3.08).

II. BACKGROUND

A. Nutrition and Economic Development

2.01 While often a consequence of economic development in many countries, adequate nutrition is a precursor and pre-condition of better productivity and development. Indonesia's 1973 per capita GDP is estimated at US\$184. Although real per capita incomes have improved significantly in recent years, it is estimated that some two-thirds of the population have inadequate daily calorie and protein intake. Nutritional deficiency of such a large part of Indonesia's population is not only a problem of human concern but also of economic development. Well-directed nutrition policies and investments can lower mortality and morbidity rates, contribute to increases in productivity, help achieve family planning and education objectives, serve as a direct means of income distribution and, in general, improve the social and economic conditions of disadvantaged portions of the population.

1/ Document R73-247, October 21, 1973.

2.02 The relationship between better nutrition and improved output has been demonstrated in a number of studies. In Indonesia, studies have shown, for instance, that non-anemic workers have a 20 percent higher productivity than that of anemic workers. ^{1/} Well organized feeding programs for industrial workers in many parts of the world have demonstrated reduced rates of accidents, absenteeism and labor turnover, resulting in improved skills and greater productive capacity and output.

2.03 Improvement in nutrition also increases the efficiency of other forms of investment in human capital. There is a positive correlation between nutritional status in early childhood and brain development, since 80 percent of eventual brain weight is reached during the first 24 months of life. Malnutrition interferes with a child's ability to concentrate and to learn. School performance of malnourished children is marked by chronic absenteeism, high drop-out rates and high rates of grade repetition. Investments in nutrition thus assist in better utilization of the education system. Even if there is no guarantee of adequate nutrition in adulthood, better nutrition in childhood or in utero enables the child to reach a higher level of mental and physical development and so better adapt to the challenges of adulthood.

2.04 Sound nutrition policies can optimize the use of available food resources. Reducing food and nutrient losses through better storage, processing and dietary combinations of foodstuffs increases the effective availability of food at given production levels. Effective interaction of nutrition policies with agricultural and economic policy actions is therefore essential.

2.05 The relevance of nutrition to development in Indonesia has to be seen in the broad context of the country's development strategy. To establish an explicit relationship between improved nutritional status of the population and employment and income generation is difficult. Indonesia's development program, supported in many instances by multi and bilateral aid programs, does address directly the problems of employment and income generation. Nutrition activities should be seen as complementary to these efforts. Adequate nutrition improves the quality of human capital both immediately and over the longer-run by increasing

^{1/} "Nutrition and Health of Indonesian Construction Workers: Endurance and Anemia", D. Karyadi and S. Basta, IBRD Staff Working Paper 152 (1973); "Iron Deficiency and the Productivity of Adult Males in Indonesia," S. Basta and A. Churchill, IBRD Staff Working Paper 175 (1974).

production capacity of the current work force as well as the educability and potential productivity of children. Besides promoting more effective use of investments to develop agriculture, health and education, nutrition programs can effect some income redistribution, particularly in rural areas, and help reduce poverty.

B. The Nutrition Problem

2.06 The Government, in collaboration with various international agencies, has identified four major nutrition problems in Indonesia: (i) protein-calorie malnutrition, (ii) vitamin A deficiency, (iii) iodine deficiency, and (iv) nutritional anemia. These problems are wide-spread throughout Indonesia, although regional, ecological and cultural differences, that affect food availability and consumption account for geographical variations in the nature and intensity of malnutrition (see Annex 1).

Protein-Calorie Malnutrition (PCM)

2.07 Inadequate intake of calories and protein is the most basic nutrition problem in Indonesia. Close to one-third of all children under the age of five (about 7 million) are estimated to suffer from moderate to severe PCM. In 1974, a WHO-sponsored team determined from existing surveys that PCM among Indonesian children below the age of two was particularly severe: over 50 percent of these children in Java were found to suffer from second and third degree malnutrition (i.e. body-weights less than 75 percent and 60 percent respectively of the WHO norm). Pregnant women are another highly vulnerable group, although insufficient study has been done to allow for a reliable estimate of the incidence of PCM among this group. More than half of all lactating mothers (about 5.6 million) are affected by moderate PCM.

2.08 PCM is a major cause of Indonesia's high rate of infant mortality, either directly or by lowering infants' resistance to infectious disease. Infant deaths in Indonesia lie between 110 and 150 per 1,000, compared to infant mortality rates (per thousand live births) of 18 in North America, 139 in India, 142 in Pakistan and 38 in neighboring Malaysia, which has considerable geographic and cultural similarities with Indonesia. If PCM is untreated among survivors, particularly before the age of two years, it retards physical growth and impairs mental development. After the age of three years, the recovery of lost growth caused by PCM is extremely difficult if not impossible.

Vitamin A Deficiency

2.09 The incidence of vitamin A deficiency among Indonesia's population, particularly among children, is one of the highest in the world. This deficiency affects growth and weakens resistance to other nutritional diseases. Prolonged vitamin A deficiency causes serious lesions of the eye, clinically known as xerophthalmia, which compete with trachoma as a leading cause of blindness in the country. The incidence of xerophthalmia among children has been found to be 4-5 percent in rural Java, reaching up to 22 percent in urban squatter areas.

Iodine Deficiency

2.10 Goiter, caused by iodine deficiency, has been prevalent in Indonesia for centuries. In its early stages, endemic goiter may display no symptoms, but untreated goiter causes difficulty in breathing, coughing and voice changes. Recent studies show increasing incidence of goiter, 1/ especially among children. (Between 50 to 80 percent of those surveyed in North and West Sumatra, East Java and Bali were found to have goiter). Iodine deficiency can lead to cretinism, a more serious iodine deficiency disease, which manifests itself through a wide range of symptoms: mental retardation, impaired physical development (dwarfism), deafness, deaf-mutism and neurological abnormalities. A 1973 study indicates there are about 100,000 cases of cretinism, and about 500,000 mild cases of cretinism in Indonesia.

Nutritional Anemia

2.11 Indonesia has the highest country incidence of nutritional anemia ever recorded in a male population during non-famine conditions. In a joint research project undertaken in 1973 and 1974 by the Indonesian Nutrition Research Institute and the Bank 2/, the prevalence of anemia among a sample population of Indonesian male workers was found to be between 28 to 52 percent. The variations reflect the incidence of anemia in different geographical regions. More than three-quarters of the anemic workers suffered from iron deficiency. Anemia was also found to be prevalent among non-pregnant women (35 to 85 percent) and among pregnant women (50 to 92 percent, mostly

1/ Nain, D.A. et al, "The Prevalence of Endemic Goiter among School Children in Some Parts of Sumatra, Java and Bali, Indonesia" Second Asian Nutrition Congress, Manila, 1973.

2/ D. Karyadi and S. Basta, "Nutrition and Health of Indonesia Construction Workers," IBRD Staff Working Paper 152 (1973), and S. Basta and A. Churchill, "Iron Deficiency and the Productivity of Adult Males in Indonesia," IBRD Staff Working Paper 175 (1974).

due to iron deficiency). 1/ The results of the research projects corroborate the findings of other field surveys indicating anemia as a major health problem. Nutritional anemia leads to lower productivity, lassitude and poor work habits, which in turn lead to lower incomes and poor nutrition. The 1974 study found that productivity of non-anemic workers was about 20% higher than that of anemic workers.

C. Causes of Malnutrition

2.12 Malnutrition in Indonesia is a result of a combination of factors, mainly inadequate production and availability of food, inequitable distribution of available food and insufficient awareness of the nutritional needs of and by vulnerable groups. Poor food habits compound the problem. Concurrent parasite infestations and infections adversely affect intake through reduction in appetite and absorption of needed nutrients. Indonesia's average per capita availability of food is about 1880 calories and 43 grams of protein compared to a recommended daily requirement of about 1920 calories and 40 grams of protein. 2/ However, these averages do not convey the seriousness of the overall problem. Uneven distribution of income and unequal access to food in Indonesia cause a substantial percentage of the population to be in a state of chronic under-nutrition. While general economic development strategies are required to correct income inadequacies, nutrition activities can increase effective food availability and utilization especially for the nutritionally vulnerable.

Food Production

2.13 Indonesia's First Five Year Development Plan period (1969-74) concentrated on increasing production of rice, the main staple food, through improvement and development of irrigation facilities, appropriate pricing policies, expanded and improved supply and distribution of fertilizer and other inputs, provision of farm credit and extension services. Rice production expanded at the rate of 4.7 percent per year. The production of

1/ Soekirman, "Priorities in Dealing with Nutrition Problems in Indonesia," Cornell International Nutrition Monograph Series (1974).

2/ The recommended daily requirements are based on FAO/WHO Committee Recommendations for Energy and Protein Requirements for the Southeast Asia Region, Short-term targets (1973).

secondary crops, however, declined during this period. 1/ Based on calorie content, the production of all food crops rose by only 3 percent per year and did not keep pace with increased demand for food crops resulting from higher incomes and population growth. 2/

2.14 For the Second Five Year Development Plan period (1974-1979), growth in rice production has been projected at 5 percent per annum. Also, the Government plans to intensify secondary food crop production.

2.15 Preliminary indications suggest food wastages of up to 25 percent due to storage and distribution losses and nutrient losses in processing. The Government recognizes the need for an action program to improve food processing, storage and marketing in order to make maximum use of agricultural output.

Food Habits

2.16 Poor food habits and lack of awareness of nutritional requirements among a large segment of the population adversely affect nutritional status, particularly among the nutritionally vulnerable (for details see Annex 1). In most areas, the preferred staple is rice, frequently mixed with maize, cassava or sweet potatoes, for one of the two meals per day. Very few families can afford to consume animal protein. Protein rich vegetables are seasonal and are used only infrequently in meals. Locally processed soybean products are popular, but are not available in sufficient quantities to provide adequate levels of protein or calories.

2.17 Fortunately, breast-feeding of children, normally until the first and often until the second year, is almost universally practised in rural areas. But there is little understanding of the importance of additional solid foods other than soft rice or bananas for children after 5-6 months. Vegetables, meat and fish are generally not provided to young children in any form, due in part to local practices and beliefs that such foods may be harmful.

1/ Maize, soybeans, groundnuts, cassava and other tubers. For details on crop production see IBRD Report No. 708-IND, 1975, p. 8.

2/ The population of Indonesia is estimated at 130 million and is increasing at a rate of 2.3 percent per year. Because income levels in Indonesia remains low (GDP was estimated at \$184 per capita in 1973), between 55 and 60 percent of income growth is translated into demand for foodstuffs.

D. Actions to Counter Malnutrition

2.18 The Government is strongly committed to increase production and availability of food. It recognizes that an increase in rice production alone will not be sufficient to control malnutrition and is implementing actions through the BIMAS/INMAS 1/ programs to increase production of diverse food crops. The Bank has recently approved a National Food Crops Extension Project which will intensify and expand the extension service for these programs. However, further actions are required to meet the nutritional needs of specific age and income groups. Although available data reveal the gravity of the nutrition problem and general direction of action, the Government's attempts to promote an intensified attack on the nutritional problem are handicapped by insufficient manpower and institutional capacity and by an inadequate data-base from which to analyze the effectiveness of possible nutrition activities.

On-going Programs

2.19 Indonesia's on-going nutrition programs, though limited in scope, supplement agricultural policies and reflect an appreciation of the gravity and multi-sectoral nature of the problem.

The Applied Nutrition Program (ANP)

- (a) The Applied Nutrition Program began in the Province of Central Java in the early 1960s and was supported until 1974 by UNICEF, FAO and WHO. Since 1970, pilot projects have been undertaken in over 100 villages. ANP projects promote the production and consumption of protective 2/ and protein-rich foods (i.e. poultry, milk and fish) through nutrition education. The Ministry of Health currently supports and administers the program with the participation of the local administration and provincial and regional nutrition committees.

1/ Mass guidance program for self-sufficiency in rice and palawija (pulses, soyabeans and other intercropped varieties). The BIMAS program was initiated in 1965/66 and by 1974/75 covered about 2.2 million ha of rice land. Its key feature is an approach whereby eligible farmers obtain credit for current inputs and for living allowance together with extension service. The INMAS program commenced in 1967/68 to provide subsidized inputs, without credit or extension.

2/ Protective foods are foods rich in vitamins and minerals, such as dark green leafy vegetables, orange or yellow fruits and vegetables.

Vitamin A Distribution

- (b) Assisted by UNICEF, the Ministry of Health, over the last two years, has distributed vitamin A capsules (each containing 200,000 internal units) to 200,000 children between the ages of 1 and 4 years, or 1 percent of the age-specific population, as a prophylaxis against xerophthalmia.

Salt Iodization

- (c) Agreement has recently been reached between the Government and UNICEF on a program to fortify 120,000 tons of salt per year with potassium iodate in large state salt works as protection against goiter. The possibility for iodating people's salts, i.e., salt produced by traditional methods in small salt pans by cooperatives and other producers is also under active investigation.

Lipiodol

- (d) In areas where endemic cretinism is a serious problem, injections of lipiodol, an iodine compound dissolved in oil, are being carried out. This is expected to protect injected persons for five years. The target of this program, which began in 1975, is to cover 300,000 people per year.

Distribution of Milk Powder

- (e) Milk powder has been provided to about 2,000 Maternal and Child Health (MCH) Centers with the assistance of the World Food Program (WFP) since the early sixties.

School Feeding Programs

- (f) In West Java, CARE has organized a school feeding program that now covers approximately 300,000 children. Catholic Relief Services and the Church World Service support feeding programs for a further 50,000 school children in Central Java.

2.20 These programs have been on a relatively small scale, diffuse in character and content, and have lacked baseline nutritional data on which to analyze their effectiveness. More importantly, adequate attention has not been given to problems of inter-ministerial/inter-sectoral coordination at the national and local levels. The ANP program, while successful in increasing the awareness of nutritional problems in project areas, had few identifiable benefits commensurate with the outlay. A 1973 evaluation of the program indicated that the program placed too great an emphasis on increasing protein intake, particularly of animal origin, which is not an economically feasible solution for the majority of the population. The program also aimed at blanket coverage of the population within small pilot areas rather than being directed at those most in need. School feeding programs have relied on imported foods and donations, but are now being scaled down, due to the reduction in available grant supply. No action program has been developed to combat the widespread anemia. The effect of the distribution of milk powder has been hampered by low and irregular attendance at MCH centers and administrative problems. Less than two-thirds of the milk powder supplied has been delivered to those attending the clinics, who are mainly the better off and the better educated. The cost of vitamin A distribution in capsule form has been high and can be regarded only as a temporary expedient. Food wastage in store and processing is another serious problem which has not yet been tackled adequately. In its plans to reduce food losses, the Government is hampered by inadequate institutional capacity. However, despite their various shortcomings, these initiatives have contributed to an increase in general awareness regarding nutrition problems in government circles and this review of their respective implementation experiences has contributed valuable information to the formulation of this project.

E. Existing Institutional and Organizational Structures for Nutrition Activities

2.21 The Indonesian Nutrition Research Institute was established at Bogor in 1960 under the administration of the Ministry of Health. In 1975, its functions were broadened and it was converted into the Center for Research and Development in Nutrition. The research undertaken at the Institute has been essentially bio-medical in orientation. The present work program is of good quality but is limited by shortages of staff, funds and equipment.

2.22 The Academy of Nutrition at Jakarta offers three years of training and awards Bachelor of Science degrees in nutrition to about twenty-five graduates a year. In 1973, there were 417 trained nutritionists in Indonesia 1/ -- less than half the number required to implement the presently proposed Government programs. The Government plans to post nutritionists to 26 provinces and to each of the 260 Kabupatens, 2/ in addition

1/ 352 are Bachelor of Science in Nutrition, 36 are Masters of Science, one has a Doctorate in Nutrition and 28 are physicians.

2/ Kabupatens are administrative sub-divisions of provinces.

to providing dieticians for the large hospitals. At a higher level, nutrition staff are required for medical schools and universities. The shortage of adequately trained nutritionists is a major constraint on the level and scope of nutrition activities.

2.23 The Ministry of Health has been primarily responsible for all nutrition activities in Indonesia. Following a 1974 national nutrition conference, a Presidential Instruction (INPRES) was issued on September 3, 1974, establishing a Ministerial Committee responsible for coordination and implementation of an overall national nutrition program. The Committee is chaired by the Minister of State for People's Welfare, and consists of the Ministers of Finance, Planning, Industry, Interior, Agriculture, Education, Religion, Information and Health. The Minister of Interior has instructed the Governors of Provinces and Bupati (chief executives) of Kabupatens of their responsibility for coordinating the existing nutrition programs, as well as the proposed nutrition intervention program, within their respective areas of jurisdiction. Subsequently, the nutrition committees established at provincial and Kabupaten levels under the ANP have been strengthened in order that they can provide advice on the coordination and implementation of all nutrition activities. In provinces where ANP is not operating, similar committees are being established.

2.24 The Ministerial Committee is advised by a Technical Commission, chaired by the Deputy Chairman of BAPPENAS, in charge of social welfare, people's housing and health. Membership consists of working level representatives from the various ministries. The Technical Commission has appointed sub-committees to make recommendations on policies regarding goiter, vitamin A prophylaxis, a revised ANP program, nutrition education and breast-feeding. In BAPPENAS, a nutrition planner has been placed in the Bureau of Social Welfare, People's Housing and Health.

III. THE PROJECT

A. Goals and Strategy

3.01 The purpose of the proposed project is threefold. First, it will strengthen and expand the existing nucleus of personnel and institutions in Indonesia, to bring about more effective capacity for: formulation and execution of nutrition programs; operational research; manpower training in nutrition, and project monitoring and evaluation. Second, through field level action programs and their evaluation, nationally replicable and cost-effective measures will be developed to improve the nutritional status of malnourished target groups. Third, the combination of the above actions will aid the Government in the formulation and execution of a more comprehensive food and nutrition program on a national scale. On a national scale, the objectives would be to:

- (a) strengthen the institutional and technical capacity for applied research and development of improved food technology at the village level in order to increase the available quantity and quality of food;
- (b) provide information to help rationalize food and agricultural policies and programs, leading when appropriate to increased investments in production of nutritious foods;
- (c) seek to bring about changes in food usage in order to optimize the use of food resources so that nutritional status can be improved and sustained without outside assistance;
- (d) interact with ongoing agricultural research programs to develop nutritionally efficient crop varieties;
- (e) provide a monitoring, evaluation and planning system to assess and, if necessary, modify project action components in the light of implementation experience; and
- (f) assist in the formulation of a national food and nutrition program and develop the managerial base for its execution.

3.02 At the field level, the objective would be to evaluate the nutritional impact, social acceptability, administrative feasibility, cost-effectiveness and national replicability of various combinations of nutritional activities, in sufficiently large but diverse areas including rural township. These activities would be directed at pregnant women, lactating mothers, children under the age of three years and anemic plantation labor, located mainly in low-income communities. The package of nutrition measures under the various pilot projects would emphasize: use of local food resources; production of nutritious food in home gardens primarily for own consumption; integrating existing knowledge with adaptations resulting from nutrition research; education and manpower training; and better methods of village food processing, preparation, storage and distribution.

B. Project Description

3.03 The proposed nutrition development project would assist the Government in:

(a) Institution Building

- (i) strengthen the Center for Research and Development in Nutrition (CRDN), under the Ministry of Health, through funds for additional staff, training, technical assistance, necessary equipment and modest expansion of physical facilities;
- (ii) support the establishment of the Food Technology Development Center (FTDC), under the Ministry of Education, at the Agricultural University, with physical facilities, equipment, training, technical assistance and additional staff;
- (iii) improve planning, coordination and evaluation of nutrition activities through provision of technical assistance to the Ministries of Health, Education and Agriculture;

(b) Direct Nutrition Action Programs

- (i) initiate a Nutrition Intervention Pilot Project (NIPP) - administered by the Ministry of Health - through funds for additional staff, training, technical assistance, buildings, equipment and materials to provide integrated nutritional, educational, agricultural and health activities and selective food supplementation to vulnerable target groups in 180 villages of seven Kabupatens with a population of about 740,000;
- (ii) increase the production of nutritious vegetables and fruits in 18,000 home/village gardens through provision of improved seeds, development of model garden packages and intensification of agricultural extension efforts;
- (iii) improve food storage, especially at the village level, through assistance to the Food Technology Development Center which would, in collaboration with the Ministry of Agriculture, develop an appropriate small-scale storage program for a total capacity of 300 tons for which financing would be provided;
- (iv) initiate an iron supplementation program, administered under the National Institute for Industrial Hygiene and Occupational Health, through funds for iron pills, iron fortified salt, medication and materials to tackle nutritional anemia among 3,000 families in a selected number of plantations with a view to developing a national program to cover all government and privately owned plantations;

(c) Education and Training

- (i) initiate and test the efficiency of alternative nutrition communication methods affecting 110,000 beneficiaries to bring about desirable changes in nutrition behavior through funds for equipment, technical assistance and incremental operating costs;
- (ii) upgrade and expand the training of nutritionists in the Academy of Nutrition at Jakarta, under the Ministry of Health, by provision of equipment, staff, training, technical assistance and necessary physical facilities;
- (iii) improve the training of agricultural extensionists by introduction of nutrition in the curriculum of the basic training centers and of the secondary agricultural schools of the Agency for Education, Training and Extension through funds for curriculum development, equipment and instructors; and

(d) Assistance for Formulation of a National Food and Nutrition Program

assist the Government in the preparation of a national food and nutrition program by taking into account inter alia: the results of the evaluation of the various nutrition actions taken up under the proposed project and their cost effectiveness and replicability; manpower availability; and the managerial skills and institutions developed as a result of the project.

C. Linkages of the Proposed Nutrition Project with Ongoing Projects Assisted by the Bank

3.04 In addition to the general linkages between Indonesia's national development program and nutrition (discussed in paras. 2.01 to 2.05), the proposed project would establish specific ties with ongoing activities assisted by the Bank. Most of these are agricultural projects ^{1/} which are aimed at quantitative increases in production. The proposed nutrition development project would complement these efforts by increasing the efficiency of processing and storage and improving the quality of foods consumed by the poorer sections of the population.

^{1/} Bank Group operations in Indonesia include 22 projects in the agricultural sector. The total of loans and credits approved amounts to US\$528 million. These include: agricultural research and extension (2), agricultural commodity estates (5), irrigation rehabilitation (8), fertilizer (3), fisheries (2), beef cattle (1) and seeds (1).

3.05 The Government, through its National Food Crops Extension Project (Bank Loan 1267-IND; implementation period 1977-1982), expects to increase the number of field extension agents, provide them with adequate training, improve the rural extension infrastructure and introduce sound extension methodologies with emphasis on continuous training and regular farm visits. While this extension project provides training solely for production support, it also provides opportunities for future linkages with the nutrition development project for educating extension workers at the Rural Extension Centers in nutrition, horticulture and simple food-handling techniques. They could then impart these methods to small farmers in an effort to encourage the optimal production, storage and processing of foods, keeping in mind regional and national nutrition requirements.

3.06 The Government's Agricultural Research and Extension Project (Bank Loan 1179-IND; implementation period 1976 - 81), supports production-oriented research for rice, "palawija" crops (maize, soybeans, sorghum and cassava), highland vegetables and rubber, and assists in establishing national and regional information centers to prepare materials needed for extension of research findings to small farmers. The centers for research supported by the nutrition development project would coordinate closely with agricultural research centers to help set research priorities, and to increase the production of more nutritious varieties of cereals, legumes and vegetables and to improve methods of food storage and processing (see paras. 3.11 and 3.12). The nutrition development project would provide for inclusion of nutrition and horticulture into the curricula of the agricultural high schools and the agricultural training and extension centers administered by the Agency for Education, Training and Extension (AETE).

3.07 Indonesia has an active population program assisted by IDA Credit 300. Field staff of the proposed nutrition development project would evaluate the relationship, disclosed in some studies, between improved nutritional status and reduced infant mortality on the one hand, and reduced desired family size and better acceptance of family planning on the other.

3.08 Nutrition development would also be linked with other government initiatives e.g., the Transmigration Project (Bank Loan 1318), the Second Urban Development Project (Bank Loan 1336), and the proposed sugar project, which would offer possibilities for fortification of sugar with micro-nutrients.

D. Detailed Features

The Center for Research and Development in Nutrition (US\$5.9 million)

3.09 The operations of the Center for Research and Development in Nutrition (CRDN), which is led by capable professionals, are presently constrained by inadequate physical facilities and shortage of staff. The project component would strengthen the CRDN to broaden the scope of its activities so that it can undertake the nutritional and related operational research needed with a view to assisting the Government to formulate

and execute a national food and nutrition program (see Annex 2). The component includes construction of additional laboratories, enlarging present facilities (including the auditorium, library and staff housing), provision of necessary equipment and assistance in research and development program formulation. In addition, it would provide funds for recruitment and training of additional staff (to expand the professional staff from the present 12 to a total of 44), for consultants and for fellowships.

3.10 The Center will work closely with the Food Technology and Development Center (FTDC), the Agency for (Agriculture) Research Development (ARD) and the Agency for (Agricultural) Education, Training and Extension (AETE). The latter two are supported under other Bank-assisted projects. In particular, work emphasis would be on planning, monitoring and evaluation of direct nutrition intervention programs such as the NIPP field activities proposed under this project (see para. 3.15). The work program of the Center, detailed in Annex 2, would be handled by four divisions in the areas of food sciences, biochemical nutrition, community nutrition and socio-economics. In addition to its main research function, the Center would serve as an important training institute, providing facilities for practical laboratory and field work and for training faculty for the Nutrition Academy at Jakarta. A unit to coordinate these training activities would be established in CRDN.

Food Technology Development Center (US\$5.5 Million)

3.11 The component provides for the construction of buildings, (including laboratories, library and pilot plant facilities), laboratory equipment, staff development, consultants and fellowships for the Food Technology Center (FTDC). This Center is being established within the Agricultural University of Bogor, to improve the level of applied technology, particularly with respect to village level processing and storage. It would be used for research and training in food technology and would develop a pilot extension service to identify problems in rural food processing and storage and to provide information to rural communities, especially but not exclusively in NIPP areas. It would also carry out work related to the food processing industry. The FTDC would work in close coordination with the CRDN, the Agency for (Agricultural) Research and Development (ARD), the Directorate-General of Food Crops and the Agency for (Agricultural) Education, Training and Extension (AETE) (see para 5.06).

3.12 The emphasis of FTDC's work program, which the Appraisal Mission reviewed and found satisfactory, will be on:

- (a) Assessing traditional processing and storage technology to form the basis for developing and testing more efficient methods for reducing wastage in storage and processing and thereby increasing the availability of food products. Evaluation for technical and cost effectiveness would precede the development of a national storage program (see para. 3.25-3.26).
- (b) Developing efficient rice drying methods to prevent deterioration during storage and packing methods to minimize transport and storage losses.

- (c) Improving food processing with a view to increase the nutritive value and yield of processed products. (For example, it would explore rice parboiling, presently not practiced in Indonesia. Parboiling would reduce the vitamin losses which occur when rice is polished, improve its value as a source of protein both in quantity and quality and enhance its storage ability.)
- (d) Assessing opportunities for food fortification; preservation of perishable crops; increasing the nutritional value of processed foods; utilization of waste products such as rice bran; the processing of foods for urban markets and for export; and methods of quality control.

3.13 To ensure that FTDC's work is operationally oriented, experimental designs would be tested first in simple food storage and processing units adjacent to FTDC which simulate village conditions. Thereafter, satisfactory prototypes would be tested in rural areas. FTDC's activities will be closely coordinated with the agricultural research programs supported through the Agricultural Research and Extension Project. In addition, FTDC would establish a ten-man extension unit which would:

- (a) act as a link between the FTDC and selected villages;
- (b) transmit information about existing storage and processing practices to FTDC;
- (c) introduce new methods to the selected villages;
- (d) help train government extension service personnel in these methods; and
- (e) cooperate with the University Extension Center at the Agricultural University, Bogor.

3.14 The Center would train annually up to 25 food technology students of the Agricultural University. In addition, it also would provide short courses for the extension staff of the Department of Agriculture, food industry technicians and nutritionists. The project component also would assist in staff development for the Center through training opportunities locally and abroad to 18 graduate candidates and 28 undergraduate candidates. Additional information concerning this component appears in Annex 3.

Direct Nutrition Action Programs

3.15 The Nutrition Intervention Pilot Project (NIPP) (US\$2.6 million). The NIPP component would improve the nutritional status of children under the age of three, pregnant women and lactating mothers in about 180 villages distributed in 7 Kabupatens (see Annex 4 for details). The component would finance: the immunization of 100,000 children against infectious diseases; supplementary feeding of 30,000 potentially severe and moderately malnourished children under the age of 3 and of 17,000 pregnant and lactating women; the

nutrition education of about 100,000 families; supply of iodized salt, vitamin A and iron supplements to the target population at risk; salaries of staff to train village volunteers (village cadres) and supervise them; evaluation of the effectiveness of the combined package of these measures and technical assistance to plan and implement these activities. The villages included in this component would also benefit from home/village garden programs and improvements of storage and processing (see Annex 4, paras. 27 to 40). The pilot action component would take place initially in two Kabupatens in Bonjonegoro, typical of conditions prevailing on East Java, and in West Lombok in Nusa Tenggara Barat, which represents the less densely populated areas. Two additional Kabupatens would be added in the second year. After a mid-project review by the Bank and the Government, an additional 3 Kabupatens would be included, making in all a total of 7 Kabupatens 1/ by the fourth year.

3.16 The proposed NIPP activities would draw on Indonesia's experience with the Applied Nutrition Program (ANP) and the results of the 1974 evaluation of ANP (see Annex 4). Nutrition committees originally established for ANP at provincial headquarters and Kabupaten levels would now review and advise NIPP. New committees would be created at the sub-district level (Kecamatan) as part of the project.

3.17 In each NIPP village, about 1 volunteer per 50 households would be chosen from among primarily female extension workers, teachers and social workers to: (a) identify moderate and severe PCM cases among children and pregnant and lactating women; (b) provide simple means of nutrition education; (c) ensure efficient delivery of food supplements; and (d) check monthly the weight of children. BUTSI 2/ volunteers under the supervision of the Bupati would supervise these cadres. Both the Butsi volunteers and the cadres would be trained by Assistant Nutrition Program Officers (see Annex 4, para. 53 to 57). Those with unsatisfactory gains indicating existing and potential PCM cases then receive free food supplements based as far as feasible on food produced in the NIPP area. The malnourished pregnant and lactating mothers eligible for food supplementation would be selected on the basis of agreed criteria, chief among which would be low family income levels. While in the initial stages there is no cost recovery, the Government anticipates that ultimately, after sufficient project experience, the better-off villages will share in the cost of NIPP. Details will be worked out during the proposed NIPP review which is part of the project. Nutrition education emphasizing the importance of adequate child feeding would accompany the food supplementation, since in the long-run the teaching of better feeding is far more important than the curative aspect of supplementary feeding programs. Nutrition education will be based on currently accepted packages. These packages will be refined based on the tests carried out under the component dealing with nutrition communication and behavioral change (para. 3.29). MCH personnel of the provincial health system would visit the villages periodically to give immunizations and these costs would be supported by the project.

1/ Subsequently Kabupatens will be selected for the project, one in each of the provinces of Central Java, South Sumatra, West Java, Yogyakarta and Bali.

2/ BUTSI is a voluntary agency using Indonesian graduates to work in rural settings on approved projects.

3.18 In the experimental stage, the annual costs of the NIPP program averages US\$3,400 per village or about US\$1 per capita. In addition to food supplementation, immunization, regular salaries and overhead, these costs include special evaluation and project management. Because of the pilot nature and the relative small population coverage, the per capita costs are higher than when the project becomes a national program. It is also expected that the number of PCM children given food supplementation would be relatively smaller after the initial phase of the program. It is, therefore, anticipated that when NIPP becomes a national program, the costs of selective food supplementation and immunization in a typical village (population 3,000) would be around US\$700 annually, or US\$0.23 per capita. The Government expects that local communities would ultimately share in the costs of food supplementation (see Annex 4, para. 24).

3.19 Baseline data would be collected in the NIPP areas under the technical supervision of CRDN. CRDN would be responsible for surveying nutritional status and evaluating the results of nutritional and other activities on both a midterm and final basis. These evaluations, which would take into account both the nutritional and cost effectiveness of the various nutrition interventions, would help to determine feasible replicability and thus provide the basis for their expansion into a comprehensive national food and nutrition program.

3.20 Detailed plan of operations are presently being prepared for the first two NIPP Kabupatens, indicating the villages to be selected and the planning of various activities particularly including: arrangements for food procurement; processing and distribution; program for selection and training of village cadres; coordination of health activities; specific location of villages for supportive water supply programs; and agricultural extension work related to establishment of village-home gardens, storage and processing. (The timing of these activities is presented in Annex 4, Appendix 5 and 6). The nutrition program officer of each province would prepare these plans at each Kabupaten headquarter in consultation with the Kabupaten nutrition committees approved by the provincial BAPPEDA (Planning Authority) and the national coordinator of NIPP. The first year of NIPP operation in each Kabupaten would be devoted to baseline surveys, preparing plans for operations, staff training, field trial of food supplements and procurement of equipment.

3.21 At the national level, NIPP would be managed by a coordinator in the Ministry of Health; assisted by a provincial nutrition program officer and two assistant nutrition program officers (ANPO) at Kabupaten level. The coordination of the different activities involved at Kabupaten level necessitates the ANPO working under the administrative control of the Bupati, the executive head of the Kabupaten.

3.22 Assurances were obtained from the Government that:

- (a) The plan of operations for the initial two NIPP Kabupatens would be submitted to the Bank for review prior to implementation and not later than August 1, 1977.

- (b) The selection of new Kabupatens would be made in consultation with the Bank, according to criteria agreed with the Bank (see Annex 4 para. 7). The third and fourth Kabupaten would be selected not later than October 1, 1977. The remaining three Kabupatens would be selected not later than August 1, 1978.
- (c) A review of the NIPP would be conducted at the end of the second year of project operation with a view to determining program effectiveness and any necessary changes of program direction and content.

3.23 Action Program for Home/Village Gardens (US\$0.5 million): Increasing the production and availability of nutritious vegetables and fruits through improvement of home-gardens has been a part of the Applied Nutrition Program. Such a program would be an important aspect of the NIPP plan of operations, and would be implemented through the existing agricultural extension service. The lack of improved vegetable seeds and agricultural extension staff trained in horticulture constitutes a severe constraint to production. This component would provide salaries for 10 agricultural extension staff, seeds, fertilizer and other production oriented services. The annual costs for this program per farm family are expected to be in the order of US\$4.5. In order to establish the necessary demonstration effect the program would be provided for a 3 year period on a grant basis. Prior to project completion, the Government and the Bank would review the results and in light of the findings determine whether this subcomponent should be prepared for more general replication (i.e. a credit program to be administered under BIMAS.) ^{1/} Assurances to this effect were obtained. A total of 18,000 individual farmers in the NIPP villages would receive an initial supply of seeds and other inputs needed for home gardens. Community efforts would be mobilized through the Lurah (Village Chief) and village nutrition cadres in setting up village gardens - for each village - on communally owned land. One extension worker would be available to about 1,800 farm families within his area, but he would focus his efforts on group of 10-15 progressive farmers, headed by a contact farmer. Each progressive farmer in turn would transmit the advice received from the extension worker to a group of 7-10 neighboring farmers. Each extension worker would be assigned to 16 farmer groups, visiting each group once a fortnight on a fixed day and time. He would motivate farmers to rapidly adopt improved methods so that their gardens would serve as models to their neighbors. A part of the output of these gardens would be marketed locally or purchased by NIPP management to be used for food supplementation of the nutritionally vulnerable groups. At the time of full project implementation the additional production of vegetables from these home/village gardens would reach a value of about US\$500,000 annually.

3.24 In addition to tested seed varieties available in Indonesia, the project would provide for imports of vegetable seeds from institutes such as the Asia Vegetable Research and Development Center in Taiwan. These seeds

^{1/} Recently, the Government expended the BIMAS program to commercially marketed vegetables on an experimental basis.

would be tested during the first year of the project at the Agricultural University before being used in the NIPP areas. The University, in cooperation with the Directorate General of Food Crops and the ARD, would also undertake field testing of recently developed model home/ village garden packages, taking into account what is agronomically and economically feasible as well as acceptable to small farmers. The above institutions would also develop:

- (i) a list of vegetables, tree crops, tubers and other plants that can be grown in home/village gardens of the different NIPP areas;
- (ii) methods of laying out demonstration seed gardens which can be replicated in villages; and
- (iii) training curricula and schedules for agricultural extension workers.

Assurances were obtained from the Government that the Directorate General of Food Crops, Ministry of Agriculture, would allocate the 10 necessary additional extension staff to the selected NIPP areas.

Action Program for On-Farm and Village Level Storage (US\$0.2 million):

3.25 The FTDC would, on the basis of a twelve month study, prepare recommendations to improve traditional on-farm and village level storage in the seven NIPP Kabupatens, using local materials as far as possible.

3.26 The project provides financing for the establishment of small-scale storage units in those NIPP villages which have no storage facilities at present. The total capacity of these units would be 300 tons. These units, varying in size from 1 to 10 tons, would be managed by the BUUD (local village cooperative). The storage would be provided to the BUUD on a loan basis in accordance with the existing credit terms under the Food Storage Program. Since this would be the first phase in the application of this program monitoring and evaluation would be needed and undertaken by the FTDC (see para. 3.12 and 3.15).

Anemia Prevention and Control Pilot Project - Plantations (US\$0.2 million):

3.27 Nutritional anemia among plantation workers primarily due to iron deficiency has been demonstrated to be a main factor causing low labor productivity. This component would test the logistical feasibility of establishing a delivery system for iron supplementation with a view to ultimate replication on a national scale (see Annex 5). The project provides financing for:

- (i) the supply of iron pills to cure nutritionally anemic plantation workers;
- (ii) medication and provision of shoes for tackling the problem of hookworm infection;

- (iii) imports of iron fortified salt in the initial stage to be followed by fortification of salt in Indonesia as needed for the project;
- (iv) delivery of iron fortified salt to workers to ensure that an adequate iron level is maintained; and
- (v) monitoring and evaluation.

This component would initiate an integrated program of attack on nutritional anemia on three government owned plantations: two in East Java, each with about 500 workers and one in North Sumatra, with about 1,000 workers, taking full advantage of the plantation's system of medical and health care facilities. The inclusion of 10 small, privately owned plantations in South Sulawesi and West Sumatra, each employing about 100 workers, is planned at a later stage, provided the Directorate General of Manpower Protection and Care of the Ministry of Manpower, Transmigration and Cooperatives can establish a delivery and health system in these localities. It is expected that the ultimate number of beneficiaries would be around 10,000.

3.28 The CRDN would be in charge of baseline surveys and final evaluation. The scientific and technical design of the component would be the responsibility of the CRDN and the National Institute for Industrial Hygiene and Occupational Health (NILHOH) with close cooperation of the Directorate General of Plantations, Ministry of Agriculture and the NIPP Coordinator. The actual field administration would be carried out by the Regional Institute of Industrial Hygiene and Occupational Health (RILHOH). Both national and regional institutes are under the Directorate General of Manpower Protection and Care. The feasibility of the delivery system proposed, namely the plantation administration and/or health clinics would be evaluated. Initially, the iron supplementation would be given on grant basis to the plantations, with average annual cost of less than US\$1 per person. If, as is expected, the increased labor productivity would be significantly greater than the cost of this program, then a general application of the measures would be initiated by government regulations with the individual estates bearing the cost. In case the general application will arise, NILHOH would have to be strengthened in order to initiate, implement and monitor a national program. Provision has been made for such action.

Nutrition Communication and Behavioral Change (US\$1.0 million)

3.29 The 1973 evaluation study of the Applied Nutrition Program found that even in the higher income families who were able to afford enough food, about 40 percent were deficient in both protein and calorie intake. This finding gives an indication of the lack of knowledge about the use of available food. Food habits relating to choice of foods, methods of preparing and cooking foods, distribution of foods within the family, weaning practices and the feeding of a sick child are likely to be responsible for the gap between food availability and consumption. Behavioral constraints are among the critical factors bringing about improvement in nutritional status.

3.30 The general objective of this component (detailed in Annex 6) would be to identify the most critical behavioral constraints and develop measures to bring about desirable changes in nutritional behavior in the selected areas for later replication on a national scale. Among the specific objectives would be:

- (i) to develop the know-how and skills required to overcome behavioral problems and implement remedial measures;
- (ii) to reflect the above in the content of nutritional messages and to select the appropriate media mix to be used and the methods of operation;
- (iii) to train village cadres as the contact personnel, sub-district staff to supervise them and technicians to handle the communications equipment;
- (iv) to identify the contribution of mass media and prepare test material potentially useful for wider application;
- (v) to develop feasible and nationally replicable techniques for nutrition communication.

Workshops, meetings and seminars at various administrative levels would be required. Baseline information with respect to food habits and nutritional status of the population would be used for planning the education program and later for the evaluation of its effectiveness. This work would be carried out by the CRDN. The immediate program would test the behavioral response of people to nutrition communication in one Kabupaten each in Central Java, Yogyakarta and South Sumatra, one of which would be in a NIPP area. These Kabupatens have been selected as Units for Community Development (UDKP) under the Second Development Plan. The three areas have 36 villages with about 110,000 direct beneficiaries.

3.31 The messages would be communicated through village cadres, the utilization of audio-visual equipment and seminars. Nutrition education messages would be pre-tested to ensure that messages are interpreted as intended. Village cadres, mostly women, would engage in interpersonal communication with members of the communities. They would be selected by the village people from among members of voluntary organizations (PKK), i.e. community development workers, paramedical personnel or informal leaders. One cadre would be responsible for 50 households, so that on average each village would have 12 cadres. Three villages would be under one Kabupaten supervisor. He would also be responsible for the initial one month training of cadres and for organizing periodic cadre meetings as a means to feedback information.

Also, the component would provide audio-visual equipment to simulate T.V. and radio broadcasts. Their relative costs and effectiveness would be evaluated. Through feedback from the use of this equipment, "soft ware" of nutrition messages would be developed for subsequent use in the national nutrition plan and for utilizing the mass communications hardware provided through other government projects in education and extension assisted by the Bank. Close liaison with the Office of Education Development, Ministry of Education, would ensure that the nutritional "soft ware" would be incorporated in the overall program for the communication satellite already launched. The component would provide an educational technologist/ communications consultant for one year to advise on the most efficient and effective use of Indonesia's media (the type and quantity of various media to be used, the staff and training required, the production facilities needed and the necessary coordination mechanisms), as well as fellowships both within and outside Indonesia to train specialists in nutrition communication techniques particularly for mass media use.

3.32 The component would be managed by the Chairman of the Center for Manpower Training, Ministry of Health. He would be assisted by a team of four full-time specialists in nutrition, health, communications and administration.

Nutrition Manpower Training (US\$1.5 million)

3.33 Training for Nutritionists: This component would finance two teaching laboratories, a library, an audio-visual room, related facilities and equipment and staff for the Academy of Nutrition (see para. 2.22). This would increase its output of nutritionists from 25 to 60 graduates a year. In addition, financing would be provided for fellowships for training of existing and newly recruited staff. The Academy gives three years of training (beyond 12 years of basic education) in community nutrition and dietetics. Expanding the Academy would help to bridge the anticipated gap of 400 nutritionists. The estimated demand, by 1985 will be 750 nutritionists but the availability with existing facilities would be only around 350. The curriculum of the Academy, which is currently undergoing revision on satisfactory lines, would be continually improved, taking into account the advice of the CRDN and FTDC and the experience of the NIPP and nutrition education components. (In addition, the components relating to CRDN, FTDC, NIPP and Nutrition Education include all training elements for different levels of technical personnel, as part of staff development. Particularly, the training activities contemplated as part of NIPP would cover nearly 2,000 village cadres.)

3.34 Training for Agriculture Extension Staff: To improve the effectiveness of the agriculture extension staff in the field of nutrition, provisions would be made for inclusion of nutrition and home gardens into the curricula of the agricultural high schools and the agricultural training and extension centers. Substantive agreement has been reached with the Agency for Education, Training and Extension (AETE) of the Ministry of Agriculture to develop the detailed curriculum. Agreement has been reached that training of extension workers specializing in home gardens in the NIPP areas will be undertaken through the Rural Extension Center (REC) under the Directorate

General for Food Crops, Ministry of Agriculture. This subcomponent would finance only the incremental cost of the AETE and the REC for curriculum development, equipment and instructors. Annex 7 contains the details of this component.

Assistance for Formulation of a National Food and Nutrition Program
(US\$0.2 million)

3.35 The experience gained in the implementation and evaluation of all elements of the proposed project would aid the Government in both the formulation and the execution of a comprehensive national food and nutrition program. The planning staff of the Ministries of Health and Agriculture will utilize the preliminary results for drawing up an indicative national nutrition program by mid-1978 for consideration by BAPPENAS. As project operations continue to be evaluated, through the project period, the program would be refined.

3.36 The Project Director, assisted by staff in the monitoring and evaluation unit and consultants provided under technical assistance, would be in charge of program preparation. In this task, he would draw on the contributions of the CRDN (with respect to evaluation of the nutritional effectiveness of various components), the FTDC (with respect to evaluation and formulation of storage and processing activities), and the Food and Nutrition Unit (FNU) in the Ministry of Agriculture (with respect to the nutritional aspects of agricultural policies and projects). The project would provide technical assistance to the FNU which would focus on the inclusion of nutritional considerations in agricultural policy planning. The evaluation of different components of the project would help develop national replicable and cost effective nutrition delivery systems which would focus on design of appropriate agricultural and industrial policies and programs to optimise nutritional benefits to the vulnerable sections of the lower 40 percent of Indonesia's population. The staff of the Project Director would utilize these studies and the contributions of CRDN, FTDC and FNU to develop a national program to be presented through the Technical Commission to the Ministerial Committee by the end of the project period. The draft of the national food and nutrition program would be reviewed by BAPPENAS in consultation with the Bank. During negotiations, agreement was reached that the project results would be utilized for formulation and execution of the national nutrition program.

Capital Works

3.37 The project includes construction of laboratory buildings (477 m²) together with associated utilities, libraries and auditorium, 32 staff houses and renovations (2200 m²) of existing buildings (for details see Annex 10). Base costs which have been prepared by a local firm of consultant architects and scrutinised by the appraisal mission, have been updated to June 1976. They

follow appropriate guidelines laid down by the Government and are considered satisfactory. All preliminary plans have been completed, detailed drawings are being prepared under the guidance of a task force of experts and all sites have been selected. The implementation of the civil works would be through the Chief Engineer of the Ministry of Health.

Technical Assistance (US\$3.0 million)

3.38 The project would provide a total of about 40 man-years of Consultants, of which about 17 man-years are expected to be foreign, estimated to cost US\$1.5 million, financed under different components. (Annex 13 contains a schedule of technical assistance and the detailed terms of reference for consultants are included in the relevant Annexes.) Two man-years of experts for CRDN and 8 man-years of experts for FTDC would be provided in the fields of community nutrition, food policy, nutrition research and food technology. Consultancies for nutrition education for about 4 man-years would include assistance for preparation of training manuals and advice on nutrition communication. For NIPP activities, a total of 7 man-years of consultants would be provided. At project management level, a management specialist (2 man-years) would advise the Project Director on the integrated operation of different components of the project, and an additional 15 man-years of short-term, local consultants would be available to assist in monitoring and evaluation and in the preparation of a national food and nutrition program. Two man-years of consultancy would be provided to strengthen the Food and Nutrition Unit set up under the Planning Bureau of the Ministry of Agriculture (see Annex 8b). Agreement was reached with the Government on the details of the technical assistance schedule included in Annex 13.

3.39 Fellowships included in the project would provide for training of 44 Indonesian experts either locally or abroad in nutrition and food technology. Short-term study tours are also provided under the nutrition education component for 7 staff members.

IV. COSTS, FINANCING, PROCUREMENT AND DISBURSEMENTS

4.01 Project Costs: Total costs of the proposed four-year project, including contingencies, are estimated at US\$26.0 million equivalent. Cost estimates by expenditure categories are given in Table 1 and by component in Table 2. Details are in Annex 11.

4.02 Base costs refer to estimated prices in June 1976. All operating costs are incremental. Physical contingencies have been applied at a rate of 10 percent to all civil works and at 5 percent to all other items. The provision for expected price contingencies has been computed based on the following projection of annual inflation rates: for civil works, 14 percent in 1976, 12 percent in 1977-79, and 10 percent in 1980; for equipment and services, 10 percent in 1976, 8 percent in 1977-79, and 7 percent in 1980.

4.03 Project Financing: Project costs would be financed by a Bank loan of US\$13 million covering the foreign exchange costs of US\$10.2 million and US\$2.8 million of local costs. The remaining US\$13 million would be financed by the Government of Indonesia.

4.04 Procurement: 1/ Civil works contracts in excess of US\$1.0 million -- mainly for construction of research and training facilities at the CRDN, the FTDC and the Nutrition Academy (US\$5.9 million) -- would be awarded on the basis of international competitive bidding in accordance with the Bank's guidelines. Contracts below this amount would be awarded on the basis of competitive bidding, advertised locally, with no restriction on foreign bidding, and in accordance with normal government procedures which are satisfactory to the Bank. For purpose of bid comparison for civil works contracts, local contractors would receive a preference of 7-1/2 percent. Indonesia has a viable local contracting industry and it is expected that local contractors would win all bids for civil works. Research and information equipment (US\$2.5 million) is specialized in character and service after sales is of critical importance. This would be procured locally on the basis of competitive procurement procedures involving the solicitation of at least three price quotations. Contracts for equipment, including furniture, which cannot reasonably be grouped in packages of at least US\$50,000 equivalent, could be procured on the basis of competitive bidding based on local advertisement, in accordance with normal government procedures, which are satisfactory to the Bank. Contracts in excess of US\$50,000 would be awarded on the basis of international competitive bidding, in accordance with the Bank's guidelines; domestic manufacturers would be allowed a preferential margin of 15 percent, or the existing customs duty, whichever is the lower, over the c.i.f. price of competing imports. With respect to vehicles (US\$520,000), procurement would be on the basis of international competitive bidding, subject to Bank guidelines. The Government has given assurances that vehicles imported under the project would be exempt from existing import restrictions. For the start-up of the project ten vehicles would be procured locally for which finance up to 40 percent of local costs would be provided. Selection of consultants paid for by the project would be made in accordance with Bank guidelines.

1/ Costs in this section are shown without physical and price contingencies.

4.05 Disbursements: The loan would meet 50 percent of the project costs. Disbursement would be made on the following basis:

- (a) 100 percent of costs for both foreign and local consultants, fellowships and project staff in the Office of the Project Director;
- (b) 100 percent of the c.i.f. value of directly imported equipment, library supplies and furniture, 95 percent of the ex-factory price of equipment manufactured locally, and 65 percent of imported equipment procured locally;
- (c) 100 percent of the c.i.f. value of imported vehicles, and 40 percent of the total cost of vehicles procured locally; and
- (d) 80 percent of civil works expenditures.

Undisbursed funds would be available for reallocation to other components or activities related to the project, contingent on Bank approval. The estimated disbursement schedule is shown in Annex 12. Expenditures for consultant architects incurred after October 1975 would be financed retroactively from the proposed loan up to a total of US\$50,000 equivalent.

4.06 Accounts and Audit: Each of the project entities would maintain separate accounts of expenditures under the project, which would be audited annually by the government auditors according to standard practice. The Project Director would maintain accounts of his own expenditures under the project together with statements of project expenditures by participating entities. Copies of audited accounts of project expenditures would be forwarded to the Bank by the Project Director within four months of the end of each fiscal year. During negotiations the Government has given assurances that these procedures would be followed.

Table 1: EXPENDITURE BY CATEGORIES

	Indonesian Rupiah (Million)			US Dollars (Thousand)			FE%	Base Costs%
	Local	Foreign	Total	Local	Foreign	Total		
1. <u>Civil Works</u>	1,550	905	2,455	3,735	2,180	5,915	36.9	31.5
2. <u>Vehicles & Equipment</u>								
1. Vehicles	39	177	216	95	425	520	81.7	2.8
2. Equipment	129	920	1,049	310	2,218	2,528	87.7	13.4
Sub-Total 2.	168	1,097	1,265	405	2,643	3,048	86.7	16.2
3. <u>Technical Assistance</u>								
1. Advisors	115	489	604	278	1,178	1,456	80.9	7.7
2. Fellowships	337	305	642	813	735	1,548	47.5	8.3
Sub-Total 3.	452	794	1,246	1,091	1,913	3,004	63.7	16.0
4. <u>Incremental Operating Costs</u>								
1. Salaries	900	-	900	2,169	-	2,169	-	11.5
2. Health Activities	15	56	71	37	135	172	78.5	0.9
3. Education Materials	174	21	195	420	50	470	10.6	2.5
4. Books and Journals	31	94	125	75	225	300	75.0	1.6
5. Travel	126	7	133	304	17	321	5.3	1.7
6. Mass Media	37	5	42	90	10	100	10.0	0.5
7. Food Supplement	127	-	127	307	-	307	-	1.6
8. Other	652	58	710	1,571	139	1,710	8.1	9.1
Sub-Total 4.	2,062	241	2,303	4,973	576	5,549	10.4	29.4
5. <u>Agricultural Activities</u>	282	8	290	680	20	700	2.9	3.7
6. <u>Evaluation</u>	217	29	246	522	70	592	11.8	3.2
Base Cost	4,731	3,074	7,805	11,406	7,402	18,808	39.4	100.0
Physical Contingency	306	202	508	738	487	1,225	39.7	6.5
Price Contingency	1,521	959	2,480	3,666	2,311	5,977	38.7	31.8
Total Project Cost	6,560	4,233	10,793	15,810	10,200	26,010	39.2	138.3

Table 2: SUMMARY OF COSTS BY COMPONENTS

Component	Indonesian Rupiah (Million)			US Dollars (Thousand)			FE%
	Local	Foreign	Total	Local	Foreign	Total	
Center for Research and Development in Nutrition	1,402	1,030	2,432	3,380	2,481	5,861	42
Food Technology Development Center	1,013	1,280	2,293	2,441	3,084	5,525	56
Direct Nutrition Action Programs:							
(a) NIPP	826	248	1,074	1,990	597	2,587	23
(b) Action Program for Home/Village Gardens	207	-	207	500	-	500	-
(c) Action Program for On-Farm and Village Level Storage	75	8	83	180	20	200	10
(d) Anemia Prevention and Control Pilot Project	60	12	72	144	30	174	17
Nutrition Communication and Behavioral Change	337	90	427	811	217	1,028	21
Nutritional Manpower Training:							
Nutrition Academy	425	175	600	1,025	420	1,445	29
Assistance to Agricultural Extension Training	103	4	107	248	11	259	4
Organization and Management	235	196	431	567	472	1,039	45
Assistance for Formulation of a National Food and Nutrition Program	50	29	79	120	70	190	37
Total Base Costs	<u>4,733</u>	<u>3,072</u>	<u>7,805</u>	<u>11,406</u>	<u>7,402</u>	<u>18,808</u>	<u>39</u>
Physical Contingency	306	202	508	738	487	1,225	40
Price Contingency	<u>1,521</u>	<u>959</u>	<u>2,480</u>	<u>3,666</u>	<u>2,311</u>	<u>5,977</u>	<u>39</u>
Total Project Cost	<u>6,560</u>	<u>4,233</u>	<u>10,793</u>	<u>15,810</u>	<u>10,200</u>	<u>26,010</u>	<u>39</u>

V. ORGANIZATION AND MANAGEMENT

A. Project Organization (See Annex 8a)

5.01 Each of the components of the project would be implemented within the existing organizational structure of the Government. The table below shows the various ministries concerned with the different components. While they involve different facets of the Government, they comprise of activities which can proceed in parallel for the most part and are not dependent on one another. The project is, therefore, relatively simple to implement once the specific roles of different agencies are clearly defined, as has been done by the Government. The primary responsibilities are as follows:

<u>PROJECT COMPONENT</u>	<u>ADMINISTRATIVE MINISTRY</u>
Center for Research and Development in Nutrition	Health
Food Technology and Development Center	Education
Nutrition Intervention Pilot Project	Health/Home Affairs
Home/Village Gardens	Agriculture
Storage	Agriculture/Education (FTDC)
Anemia Prevention	Transmigration, and Manpower Cooperatives/ Agriculture/Health
Nutrition Education	Health
Nutrition Academy	Health
Assistance to AETE	Agriculture
Organization & Management	Health/Home Affairs/ Agriculture/Education
Formulation of a National Food and Nutrition Program	Health/Agriculture/BAPPENAS

5.02 The project will be implemented over a 4 year period, April 1, 1977 to March 31, 1981. The closing date will be March 31, 1982. Annex 14 contains a schedule of key implementation actions.

5.03 The overall management of the project would rest with the Director General of Community Health in the Ministry of Health, the designated Project Director. The Project Director would be assisted by a full-time project manager, designated as Executive Secretary, a Deputy Executive Secretary and special staff for finance and procurement. Their job description and terms of reference are given in Annex 8a. A separate Monitoring and Evaluation Unit consisting of two planning officers would also report to the Executive Secretary. Utilizing technical assistance funds under this project, the Project Director and his staff would set up a part-time panel of experts. In addition, the project provides a full-time management expert to assist the Project Director in the first two years of the project. To ensure the full cooperation of the Ministries of Home Affairs, Education and Agriculture, a part-time Co-director will be nominated from each of these ministries to work in close cooperation with the Project Director in identifying and solving problems of interministerial coordination.

5.04 The Project Director would be responsible for (i) monitoring the progress of the project, (ii) ensuring interministerial and agency coordination, and (iii) coordinating the activities of the different components. He would ensure also the provision of adequate appropriations under the different ministerial budgetary requests and coordinate the flow of funds to various project entities. The Project Director would have the responsibility for making withdrawal requests to the Bank.

5.05 The Project Director, the three Co-Directors, the Executive Secretary and the Coordinator of NIPP would be appointed in consultation with the Bank. Assurances to this effect were obtained. The current Director General of Community Health, a person with excellent managerial capabilities and the administrator of the successful rural health program, will be the first Project Director. Subsequent to negotiations and in preparation for project implementation, the Government has also appointed the Co-Directors of the Ministries of Home Affairs, Education and Agriculture, the Executive Secretary and the NIPP Coordinator.

5.06 The CRDN in the Ministry of Health, and the FTDC in the Ministry of Education, would be administered by their respective directors, assisted by financial and procurement staff. Both institutes would liaise closely and would coordinate their work with the Agency for (Agricultural) Research and Development (ARD), the Directorate General of Food Crops and the Agency for (Agricultural) Education, Training and Extension (AETE). To this end, a Research Coordinating Committee of Directors would be established. It would report annually through the Project Director to the Ministerial Committee (para. 2.23). The Directors of CRDN and FTDC would assume chairmanship in rotation. Membership of the Committee would include a representative of BAPPENAS, of the Ministries of Agriculture, Health and Industry; a sociologist from IPB; and a representative from the Directorate General of Food Crops and the AETE so that problems of implementation and extension which could not be solved through normal day to day communications would be brought to the

notice of the research institutes. Provision has been made under technical assistance for internationally recruited experts to assist the Committee. The Government has given assurances during negotiations that the Board would be set up no later than August 1, 1977 on terms and conditions satisfactory to the Bank and that annual progress reports of research activities be sent to the Bank.

5.07 The NIPP component would be administered at the national level by a Coordinator stationed in the Ministry of Health, whose staff would include three assistant nutrition program officers. The Coordinator would report directly to the Director General of Community Health, Ministry of Health. In each province where NIPP would operate, the Governor of the Province would ensure the coordination and implementation of the nutrition program. At the Kabupaten level, the Bupatis (who are under the overall supervision of the Ministry of Home Affairs) would be responsible for management and control of NIPP activities. Within the provincial government services the implementation of the program would be the responsibility of the Inspector of Health. To ensure feedback and adequate beneficiary interaction consultations with the village communities will take place through the mechanism of the nutrition advisory committees.

5.08 The Anemia Prevention and Control Project for plantations would be administered in the field by NILHOH through delegation to RILHOHs under the Ministry of Transmigration, Manpower and Cooperatives. Each would work in close collaboration with the NIPP Coordinator and the Directorate General of Plantations, Ministry of Agriculture who would assign appropriate staff to handle the program. The training and nutrition education component would be the responsibility of the Chairman for the Center of Manpower Training in the Ministry of Health.

B. Monitoring and Evaluation (See Annex 8a)

Progress of Components-Monitoring

5.09 To ensure that implementation of the project meets the prescribed goals, data on key indicators of progress would be reported monthly to the Project Director by each Project Officer. These reports would be reviewed by the Monitoring and Evaluation Unit and recommendations would be made to the Executive Secretary who would initiate remedial action. The formats of the reports would be designed in such a manner as to help analyse the extent of progress in critical areas of work and act as early warning signals of delay. Each Project Officer would indicate in his report to the Project Director the types of action taken at his level to anticipate, correct and avoid slippages. Once a quarter, the Project Director would conduct a meeting of Project Officers and other agencies concerned with implementation, with a view to removing bottlenecks and ensuring coordination. The Project Director would be responsible for the preparation of semi-annual reports to the BAPPENAS, the Ministries of Health, Agriculture and People's Welfare, and to the Bank.

These reports would cover particularly the progress of civil works, procurement, recruitment and training of key personnel, research on village-level storage and processing and implementation of field-level activities on the NIPP and the plantation components.

Technical Evaluation

5.10 Important aspects of the project are the effectiveness of evaluation of different combinations of activities in NIPP areas in improving the nutritional status and of the delivery system for iron supplementation on plantations in order to raise labor productivity. This evaluation would be carried out by experts of CRDN, particularly by the Divisions of Community Nutrition and Socioeconomics. CRDN would design the initial baseline, intermediate and final sample surveys of nutritional status and supervise the data collection. Similarly, CRDN and sociological experts of the Agricultural University would assist in designing and carrying out surveys of nutritional behavioral responses to the nutrition education tests proposed in the project.

5.11 The Research Coordinating Committee would evaluate the research programs of the CRDN and FTDC and advise on redirection of resources, where necessary, to high priority problem areas.

Program Evaluation

5.12 Program evaluation would be undertaken directly by the Monitoring and Evaluation Unit under the Project Director, with assistance from consultants, both local and foreign. ^{1/} The resources of CRDN and FTDC would also be available for this purpose. Studies to be undertaken would include:

- (a) Review and analysis of project results, based on actual costs, with a view to formulate nationally replicable food and nutrition activities.
- (b) Review of the operational significance and costs of research programs initiated and carried out by CRDN and FTDC, with special emphasis on replicability of findings.
- (c) Relationships between nutrition and productivity.
- (d) Development of improved methods of food processing and its effect on employment.

^{1/} An advisory panel of experts is provided for under the project, to advise the Project Director.

VI. BENEFITS AND JUSTIFICATION

6.01 By the end of the project period, the CRDN and FTDC would be fully established and oriented towards their primary role of problem solving. The CRDN would have a professional staff of 44, and the FTDC would have 23 professionals. Both institutions would have teaching functions in addition to their applied research duties. The Nutrition Academy would be training students at the rate of 60 graduates per year to the Bachelor of Science level for service in institutions including CRDN as well as in community nutrition activities.

6.02 It is also expected that theoretical and practical training in program management would have been given by the CRDN and the Academy of Nutrition to about 65 nutrition program officers and assistant nutrition program officers. Also, 183 village assistant program officers and about 4,800 members of cadres for nutrition extension services would have been trained.

6.03 By the end of the three-year operational NIPP period in each selected village, the incidence of PCM would be sought to be reduced by 60 percent of the initial rate and infant mortality reduced by 20 percent. In the plantations the incidence of nutritional anemia is expected to be reduced by 60 percent. ^{1/} Coverage would also be offered to combat vitamin A and iodine deficiencies.

6.04 The Food and Nutrition Unit to be set up in the Ministry of Agriculture is expected to be fully operational and staffed by the end of the project period. It is anticipated that this unit will have become instrumental in introducing and assessing nutritional considerations in agricultural research, planning and extension.

6.05 A program for improved village-level food storage and village-level food processing would also have been designed, implemented and evaluated with a view to replication on a national scale within a year after the end of the project period. In addition, arrangements would have been set up for coordination of research programs in agricultural food technology and nutrition research institutions with other agricultural research institutes. Among the research output would be improved crop varieties with nutritionally desirable qualities, more efficient techniques for food processing and storage, and methods for food fortification with necessary micro-nutrients. Also, techniques of nutrition education using traditional and new media would have been tested in the field and the national nutrition education campaign would have better tools to work with.

^{1/} The attainment of these targets will be monitored with reference to the results of the baseline surveys.

About 65 nutritionists trained in the Academy would be available to extend community nutrition activities. Agricultural extension staff would have been trained in the areas of nutrition and home gardening which would broaden the scope of the extension system. This would particularly benefit the rural poor.

6.06 In the NIPP areas, production and effective availability of nutritious foods would have been increased through home gardens, better storage and processing. A simplified nutrition surveillance system together with improved health care would have been established in these villages. In the selected plantations an effective delivery system for iron supplementation would be established.

6.07 In the short run, the proposed project would strengthen Indonesia's institutional capacity to determine and analyze the nature and dimensions of the national nutrition problem and to develop means of optimizing the use of national food resources as prerequisites to preparing and implementing a national nutrition program. Bank support would help in institutionalizing an effective approach to coordination, execution and evaluation of this effort and the subsequent nationwide nutrition program.

6.08 In the long-run, the implementation of the project-developed nutrition strategy would bring benefits by optimizing the use of food resources and by increasing labor productivity. This in turn would improve the income of those whose malnutrition is a direct result of their poverty. Food availability would be raised through coordination with programs intended to expand production of staple foods for local consumption, and through improved means of village-level food storage and processing. To ensure that this food availability benefits the poorest, requires not only that appropriate agricultural distribution arrangements be adopted but also that the poor are educated as to their nutritional needs and how most economically to meet them. This is a major objective of the project. A major thrust of the Government's Development Plan is the creation of additional employment opportunities. Part of the problem of employment in Indonesian circumstances arises from the limitations on the productive capacity of the work force associated with the generally poor nutritional status. This problem would be addressed under the proposed project.

6.09 The proposed project is intended to reach the poorest segment of the population, and within that group to concentrate on those most vulnerable to malnutrition. Benefits accrued to infants, pre-school children, pregnant and lactating women, while having the longest lead-time and being the most difficult to measure, nonetheless have the greatest impact in improving the quality of human capital formation (see para. 2.03). The returns to these preventive measures would derive from:

- (a) the improved quality and productivity of Indonesia's work force;

- (b) the better utilization of Indonesia's education system by a healthier group of students; and
- (c) a lesser burden on the health system.

The higher rate of survival of children also leads to a more suitable atmosphere for effective family planning campaigns and may, in the long run, reduce desired family size.

6.10 In addition to the national project benefits, other immediate side-benefits can be expected in NIPP areas. The NIPP operations build on existing nutrition information and activities, but differ from ongoing programs in respect to the magnitude of population covered, the range of inputs and baseline and final surveys. Benefits of these operations would include:

- (i) rehabilitation of over 30,000 children affected by PCM in 180 villages;
- (ii) nutrition education for about 110,000 families and 45,000 pregnant women and lactating mothers (of these 17,000 would receive food supplements);
- (iii) immunization of 100,000 children from infectious diseases;
- (iv) establishment of village storage and processing units;
- (v) establishment of 18,000 home and village gardens in 180 villages; and
- (vi) control of anemia through dietary supplementation to 3,000 plantation workers.

6.11 The project reflects the importance of women in development, both as beneficiaries of services provided and as staff of those project components providing the services. The majority of the village cadre personnel in the NIPP component would be women.

6.12 Specific benefits would also accrue from coordination of the proposed project with ongoing projects.

6.13 The proposed project carries an inherent risk because it involves investments in an area of relatively new activity. A risk specific to this project arises from the fact that its implementation involves many ministries and their coordinated actions. The Government, however, is now convinced of the need to strengthen interministerial coordination and for this purpose has decided to set up a flexible organizational structure to meet the demands of such a project. The components are being handled within the existing administrative structure which also provides interministerial coordinating

committees. The risks of the project are acceptable in view of the substantial short and long-term benefits expected of this project.

VII. AGREEMENTS REACHED

7.01 During negotiations, agreement was reached with the Government on the following principal points:

- (a) with respect to the NIPP program, (i) the plans of operations for the initial two Kabupatens would be submitted to the Bank for approval prior to implementation and not later than August 1, 1977; (ii) the selection of new Kabupatens would be in accordance with criteria established in consultation with the Bank. The third and fourth Kabupatens would be selected not later than October 1, 1977. The remaining three Kabupatens would be selected not later than August 1, 1978; and (iii) a review of the NIPP would be conducted at the end of the second year of project operation with a view to determining program effectiveness and any necessary changes in program direction and content (see para 3.22);
- (b) the Government and the Bank would review the results of the home/village garden program after the end of the third year of NIPP operations and determine whether this program should be prepared for more general replication (see para. 3.23);
- (c) with respect to the action program for home/village gardens, the Directorate General of Food Crops, Ministry of Agriculture, would allocate the ten necessary additional extension staff to the selected NIPP areas (see para. 3.24);
- (d) vehicles imported under the project would be exempt from existing import restrictions (see para. 4.04);
- (e) appropriate accounting and auditing procedures would be followed and copies of audited accounts of project expenditures would be forwarded to the Bank by the Project Director within four months of the end of each fiscal year (see para. 4.06);
- (f) the Project Director, the three Co-Directors, the Project Manager and the Coordinator of NIPP would be appointed in consultation with the Bank (see para. 5.05); and
- (g) the Research Coordinating Committee would be set up no later than August 1, 1977 on terms and conditions satisfactory to the Bank (see para. 5.06);

- (h) project results would be utilized for formulation and execution of the national nutrition program (see para. 3.36); and
- (i) the details of the technical assistance schedule (see para 3.38).

7.03 Subsequent to negotiations and in preparation for project implementation, the Government has appointed the Project Director, the Executive Secretary, the Co-Directors of the Ministries of Home Affairs, Education and Agriculture and the NIPP Coordinator (see para. 5.03).

7.04 The proposed project would be suitable for a Bank loan of US\$13 million, with a 20-year maturity including a grace period of 4 1/2 years. The borrower would be the Republic of Indonesia.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutritional Status and Food Habits

1. Indonesia, with the fifth highest population in the world, has a land area of 575,000 square miles, consisting of thousands of inhabited islands covering one eighth of the world's circumference. While major cultural and ecological differences exist between the various regions, there are common nutritional problems: protein-calorie malnutrition (PCM), vitamin A deficiency, iodine deficiency and nutritional anemia.

Protein-Calorie Malnutrition

2. Based on the available data on nutritional status, food consumption and food production, widespread protein-calorie malnutrition is manifest. Close to one-third of all children under the age of five are estimated to suffer from moderate to severe PCM. The severe form, affecting 2-5 percent of young children, ranges across the spectrum of protein-calorie malnutrition from kwashiorkor 1/ at one extreme to marasmus 2/ at the other. Kwashiorkor is due to a quantitative or qualitative deficiency of protein, but calorie intake may be adequate (e.g. where cassava is the staple). Marasmus is due to a continued restriction of both calories and protein, as well as other nutrients. In Indonesia, the majority of the PCM cases are of the marasmic type. In all manifestations of PCM, failure of growth is the first and most important sign. The severe cases require hospitalization and, despite skilled treatment, the mortality rate is significant.

3. For every severe case of PCM, there are many more cases which are mild or moderate, in which individuals are underweight or undersized due to dietary deficiency. Apart from delayed physical development, such children are at great risk as they are liable to develop severe forms of PCM if they

1/ In 1933, Dr. Cecily Williams first described this form of PCM. She called it by its local Ghanaian name - Kwashiorkor, which means "the sickness the deposed child gets when the new baby is born", indicating the result of sudden weaning. The name has been accepted in medicine. In kwashiorkor there is a failure to thrive, loss of appetite, diarrhoea, edema and a generalized unhappiness or apathy; a characteristic dermatitis called "flakey-paint" is usually present and the hair is often sparse, thin and reddish.

2/ Marasmus means to waste away and is the childhood equivalent of starvation in adults. Marasmus is characterized by muscle wasting, loss of subcutaneous fat, and very low body weight.

suffer gastro-intestinal or respiratory disease or infections such as measles, tuberculosis or malaria. PCM increases morbidity and mortality rates of young children, retards the physical growth of survivors and impairs mental development. In Indonesia, the infant mortality rate ranges between 110-150 per thousand, compared to a rate of 38 in neighboring Malaysia and 68 in the Philippines. Indonesia's high infant mortality rate is, to a great extent, the result of the heavy incidence of PCM.

Vitamin A Deficiency

4. The incidence of vitamin A deficiency in Indonesia, is among the highest in the world, particularly among children. Xerophthalmia, 1/ which competes with trachoma as a cause of blindness, is due to prolonged vitamin A deficiency. A xerophthalmia percentage of 3.1 was recorded for 375,000 eye patients reporting to health clinics throughout Indonesia during 1972. A study conducted in the 1960s 2/ shows that blindness caused by vitamin A deficiency in East Java is 250 per 100,000. The incidence of xerophthalmia among children has been found to be 4-5 percent in rural Java with rates of up to 22 percent in urban squatter areas.

5. The serious incidence of vitamin A deficiency led to the implementation during 1973/74 of a pilot project to distribute high dosage vitamin A capsules in selected areas of Java to children between 12 and 48 months of age. However, a nationwide program for vitamin A capsule distribution was decided against because of high recurrent costs. As intake of vitamin A capsules is only a short term solution, efforts are needed to increase the consumption of foods naturally rich in vitamin A.

Iodine Deficiency

6. The prevalence of goiter, caused by iodine deficiency, has long been recognized. In the early stages, goiter may cause no symptoms, but untreated goiter causes difficulty in breathing, coughing and voice changes. Surveys undertaken in 1972 3/ in the provinces of North and West Sumatra, East

1/ Xerosis means abnormal dryness of the eye or skin. Xerophthalmia covers the whole range of ocular changes, from mild local or generalized xerosis of the conjunctiva to the most severe type involving the cornea.

2/ T.D. Johanna, "Causes of Blindness in and Around Surabaya, East Java." Thesis, University of Indonesia, Jakarta, 1968.

3/ "The Prevalence of Endemic Goiter Among School Children in Some Parts of Sumatra, Java and Bali, Indonesia." Djumadios et al Pen. Gizi, pp. 24-30, 1972.

Java and Bali, indicated a high incidence of goiter (60 to 80 percent) among the children surveyed. Based on the results of 35 studies of endemic goiter, it has been estimated 1/ that at least 10 million people are affected by goiter, 100,000 by cretinism and 500,000 by the early stages of cretinism. Cretinism, as a result of severe iodine deficiency, manifests itself through a wide range of symptoms: mental retardation, impaired physical development (short stature), deafness, deaf-mutism and neurological abnormalities.

Nutritional Anemia

7. The widespread existence of nutritional anemia, mostly due to iron deficiency, has been recognized in Indonesia only recently. Prior to 1970, investigations on nutritional anemia had been confined to pregnant women in hospitals. Joint studies by the Bank and the Indonesian Nutrition Research Institute undertaken in 1973 2/ revealed that Indonesia has the highest country incidence (28-52 percent) of nutritional anemia ever recorded in a male population except during famine conditions. The study concluded that a major factor that affects labor productivity is anemia caused by iron deficiency.

8. A 1974 study 3/, attempting to correct nutritional anemia, revealed that the productivity of anemic workers was 20 percent less than the productivity of non-anemic workers. Treatment of the anemic workers by oral iron therapy for a period of 60 days raised their productivity to the same level as the non-anemic workers.

Food Patterns and Habits 4/

9. Unmixed white rice is the preferred basic food in Indonesia. Where rice is not available in sufficient quantities or is too costly, the basic food becomes a mixture of rice and corn, cassava or sweet potatoes. The main source of animal protein is salted and dried fish. In most parts of Indonesia, meat

1/ A. Querido, "A Proposal for the Eradication of Goiter and Cretinism in Indonesia", University of Leiden, 1973.

2/ D. Karyadi, and S. S. Basta, "Nutrition and Health of Indonesian Construction Workers", IBRD Staff Paper No. 152 (1973).

3/ S.S. Basta and A. Churchill, "Iron Deficiency and the Productivity of Adult Males in Indonesia", IBRD Staff Paper No. 175 (1974).

4/ "Social and Cultural Aspects of Food Patterns and Food Habits in Five Rural Areas in Indonesia"; Mely G. Tan et al, National Institute of Economic and Social Research, Jakarta. Mimeograph, 1970.

and eggs are not consumed daily; consumption of animal protein is lowest in Central and East Java. Pulses are the most readily available source of protein. However, they and other sources of vegetable protein are infrequently consumed. Leaves of cassava, sweet potato and papaya occasionally form part of the menu. Fruits are consumed in season, provided there remains a surplus after selling.

10. Food consumption patterns, besides being affected by income, are influenced by sex, age, festivals, customs, taboos, attitudes and external influences. Ritual meals relate to the life cycle of the individual, to Moslem and Hindu-Dharma religious festivals and to events related to the agricultural cycle. Such occasions call for elaborate meals, during which the men are accorded priority in consumption. Women's food habits are restricted by custom, taboos and beliefs. Few taboos related to males.

11. Breastfeeding is still widely practised. Weaning occurs between the first and second year but may be later. In addition to their own milk, mothers normally provide a supplement consisting of soft mashed rice or banana. After the second year no special food is prepared for the child, who then shares the family meal.

12. High status foods are white rice, meat, chicken, eggs, spinach, cabbage, longbeans, big fish and bean sprouts, but they are regarded as being suitable only for special guests or special occasions. Low status foods such as, bulgur, cassava, salted/dried fish, corn, mixed rice, and sweet potato leaves are eaten on a daily basis.

INDONESIA NUTRITION DEVELOPMENT PROJECTCenter for Research and Development of NutritionGeneral Objectives

1. In 1975, the Nutrition Research Institute became the Center for Research and Development of Nutrition (CRDN). It had been established under the Ministry of Health as a national organization responsible for meeting national nutrition policy and planning needs, providing baseline data for the evaluation of intervention programs and meeting technical training and educational requirements. The CRDN is supervised by the National Institute of Health, Research and Development. Presently, the CRDN is ill-equipped and understaffed and cannot undertake the needed operational research. Specifically, the project component would:

- (a) expand the physical structure of the Center by constructing and/or enlarging laboratories, the auditorium, library and staff housing (see Annex 10);
- (b) strengthen the administrative and scientific capabilities of the Center by expanding the professional staff from the present 12 to a total of 44; through recruitment of consultants and new staff, and training of existing staff (see Appendices 2 and 3);
- (c) improve and widen the types of research already undertaken through the acquisition of the necessary equipment;
- (d) arrange for monitoring and evaluation of nutrition intervention programs;
- (e) initiate studies and conduct research on the economic and social aspects of food and nutrition needed to support policy formulation and planning by BAPPENAS and other related ministries and agencies; and
- (f) provide technical support and facilities for practical experience - both in laboratories and in the field - to students allied to different academic nutrition programs.

2. The Nutrition Research Institute (NRI) was attached until 1975 to the Directorate of Nutrition, under the Director General of Medical Care in the Ministry of Health. Its objectives had been to identify nutritional problems in communities, conduct research studies for improved nutritional status and serve as a research and information center.

3. In 1974 the total budget for the Institute was about Rp 48,870,000 (US\$118,000) of which one third was for routine administration and two thirds for research and development. The funds are allocated by the Ministry of Health and in the last four years there has been a steady and significant increase in the research and development budget. The 1975 budget was Rp 77,057,000 (US\$185,679), an increase of 58 percent over the previous year.

4. The Institute has made a very substantial contribution to research and much of the effort has been directed at important nutritional problems of the country but limited in scope and largely biomedically oriented. Part of the research has been done in collaboration or consultation with other leading Indonesian and international institutions.

The Need and Rationale

5. There is a lack of basic nutritional data on the causes and extent of malnutrition and of efficient means for controlling various forms of malnutrition. The Government has recognized the need for increased research for a variety of interventions to improve nutritional status and for collection of baseline data relating to nutrition. The CRDN can play an important role in this coordinated effort only if its present resources are strengthened and expanded.

6. The proposed project would expand the role of the Center through an increase of its staff, buildings and equipment. With the expansion and strengthening of the Center, it would become a national organization with a diversified research program which would be relevant to the needs of planners as well as those responsible for implementing the proposed nutrition development project. The Center would be responsible and have competence for:

- (a) diagnosing and monitoring the nutritional status of the population of the country;
- (b) determining the causative factors of Indonesia's nutritional problems and their relative significance;
- (c) identifying possible solutions, preparing action programs and advising and cooperating with responsible agencies in their implications;
- (d) cooperating in the training of specialists and non-specialists dealing with nutrition related activities;
- (e) providing advice on content of nutritional curricula development and cooperating in nutrition education activities; and
- (f) providing the technical information required for nutritional planning and program development at national level.

Proposed Structural Organizational Structure

7. The reorganization of the Center coincides with the Government's interest in developing a national nutrition plan and the simultaneous formulation of action programs. To be useful for planning, research has to deal initially with symptoms and causes of malnutrition which require a broad combination of capabilities in different disciplines and an organization to facilitate integrated operations. These elements have been taken into consideration in the preparation of the proposals.

8. The Center for Research and Development of Nutrition would be reorganized into four divisions: The Division of Food Science, Division of Biochemical Nutrition, Division of Community Nutrition and the Division of Nutritional Socio-Economics.

The Work Programs of the Center

9. The work program of the Center would be oriented toward applied research, with participation in most cases of more than one division. The following briefly indicates the primary responsibilities of each division.

(a) Division of Food Sciences

- (i) Prepare up-to-date Food Composition Tables for Indonesia and determine the nutritive value of foods now available.
- (ii) Study possible ways of improving the nutritional value of presently available and commonly consumed foods, by fortification, adequate combinations and special processing (including fermentation).
- (iii) Study possible ways of increasing the consumption and/or utilization of available but not commonly consumed food resources.
- (iv) Explore the development of new foods on the basis of available or potentially available sources.
- (v) Study factors limiting or interfering with nutrient utilization in commonly consumed foods and ways of eliminating such factors.
- (vi) Study the nutritional value of new or modified foods.

(b) Division of Biochemical Nutrition

- (i) Study ways of satisfying nutritional requirements, particularly of vulnerable groups, with locally available foods.
- (ii) Develop and/or test methods for the diagnosis of the nutritional status of individuals.

- (iii) Study the effects of physiological or clinical conditions on food and nutrient utilization.

(c) Division of Community Nutrition

- (i) Assess the nutritional status of population groups (surveys and surveillance).
- (ii) Study the epidemiology of nutritional problems.
- (iii) Develop and/or test nutrition interventions at the local level.
- (iv) Study the effects and methods of prevention, treatment and rehabilitation of common nutritional deficiencies (PCM, nutritional anemias, vitamin A deficiency and endemic goiter).
- (v) Develop the content and methodology of nutrition education messages and test their effectiveness.

(d) Division of Nutritional Socio-Economics

- (i) Study national (or regional) food availability in relation to recommended allowances and establish desirable goals for food availability and consumption.
- (ii) Study economic and social factors affecting food consumption.
- (iii) Analyse the relative value of different national policies and programs to improve nutrition, assess their possible constraints and recommend alternative solutions.
- (iv) Evaluate the nutritional effects of different intervention programs at the community level.

Supporting Services

10. Supporting services would include a statistical unit, a library and an audio-visual unit which would have document reproduction facilities. The statistical unit would be headed by a statistician, with sufficient experience of computer programming in order to carry out the design and analysis of baseline data and other surveys. An improved library with a competent librarian and information retrieval system would be provided. A service for production of audio-visual aids and document reproduction would have necessary equipment and one technician.

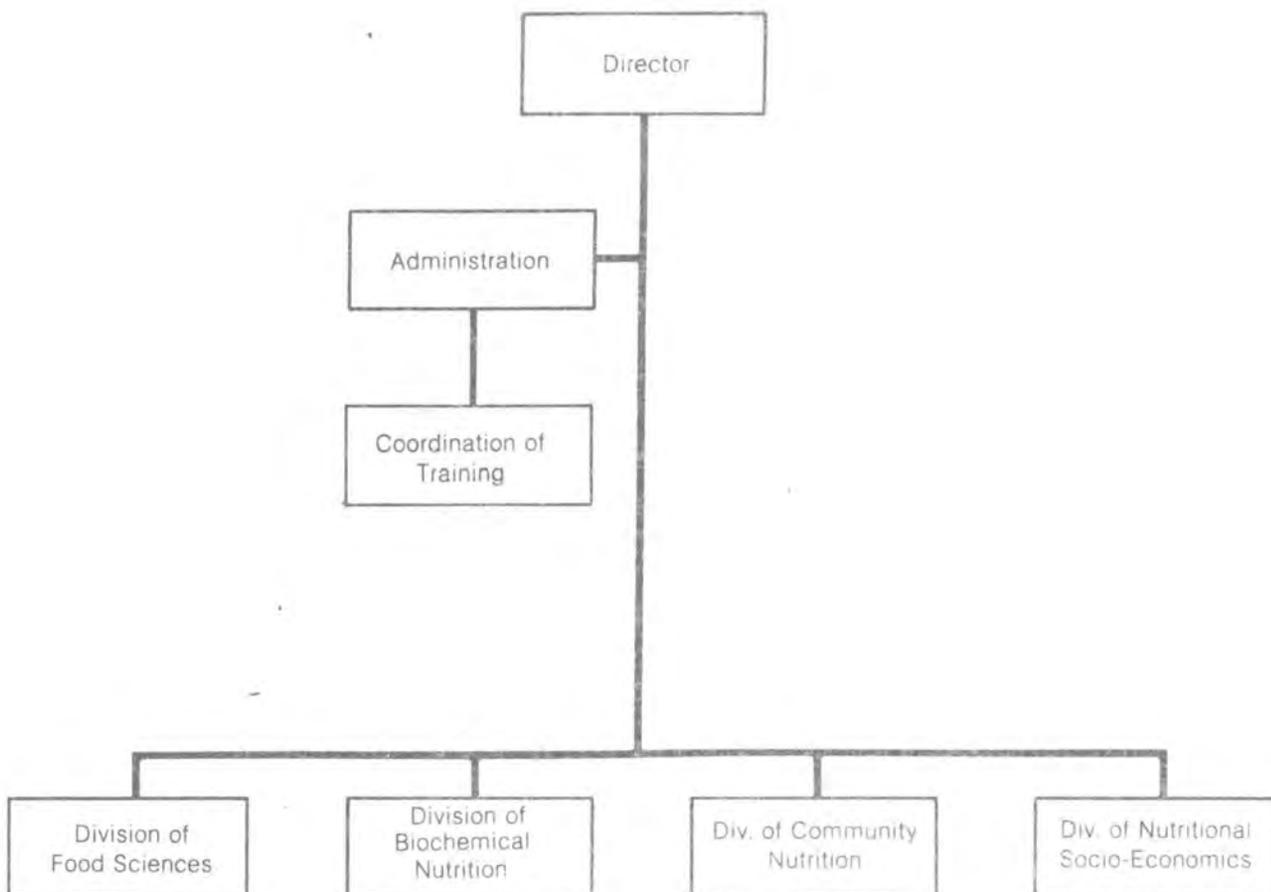
Training Services

11. In addition to its main research functions, the Center would serve as an important training center, providing facilities for practical work both in the laboratories and in the field to students in different academic programs. All four divisions of the Center would be involved in this training. Through this the Center's work would be strengthened by stimulating the academic interests of all staff members. Collaboration with the Agricultural University, Bogor (IPB) and the Agency for (Agricultural) Research and Development to undertake joint research is contemplated. In addition, use of the facilities of the Center for national and international seminars and conferences would be encouraged. The Center would continue to provide facilities on an individual basis to Indonesians and others who wish to engage in nutrition research leading to advanced degrees. The Director would be in charge of training coordination, assisted by the Administrative Division.

Administrative Services

12. For an efficient operation, the Center would require well-organized administrative services staffed by qualified personnel to deal with budgeting, accounting, personnel, maintenance and general services, purchases, supplies, and transportation. The Center would have a competent and experienced administrative officer and at least one officer in charge of purchases and supplies. The organizational structure of the Center is shown in the following chart.

**INDONESIA NUTRITION DEVELOPMENT PROJECT
ORGANIZATIONAL STRUCTURE OF CRDN**



Staff Requirements and their Training Needs

13. Professional staff which would work full-time at the Center, with adequate remuneration, benefits and working conditions would be needed to expand the size and scope of the Center's activities. (Terms of references, see Appendix 3.) A four-year plan for recruitment and training of additional staff, and advanced training for existing staff has been formulated. This is summarized in Appendices 1 and 2.

14. Further needs for training can be determined only when the past training and experience of the new personnel, still to be recruited is evaluated. The project component includes fellowships for special training in research at suitable institutions abroad. The tables indicating the need for training of new staff are estimates based on present information of likely manpower availabilities.

15. The additional training for existing technical staff also depends to some extent on the training and experience of the new personnel recruited. Efforts should be made to ensure that staff training is in institutions which deal with development problems similar to those in Indonesia. Centers in developing countries should be used, as far as possible, for staff training.

Consultants

16. Consultant time of 24 man-months has been included. Job descriptions are in Appendix 4.

Costs

17. The total base costs of the component would be US\$5,861,000 of which 42 percent would involve foreign exchange. Details of civil works costs are given in Annex 10, an analysis of the total costs is in Annex 11 and details of training costs in Appendix 3.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Center for Research and Development in Nutrition

Staffing Requirements

Year	0	1	2	3	4
Professional (M.S. or higher)	12 <u>1/</u>	13	20	34	44
Technical	<u>16</u>	<u>22</u>	<u>40</u>	<u>68</u>	<u>88</u>
Total	28	35	60	102	132

1/ Of these, 2 M.D.'s and 1 Ph.D. are part-time.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Center for Research and Development in Nutrition

Education and Training Requirements

	<u>Abroad</u>	<u>Indonesia</u>
	<u>Total Number</u>	
<u>Ph.D. Program</u>		
Food/Agriculture Economist	1	-
Program Analyst/Planner	1	-
Sociologist	1	-
Nutritional Epidemiologist	1	-
Medical Doctor/Public Health	1	-
Physiologist	-	1
Food Scientist	-	1
Nutritional Sociologist	-	1
Social Anthropologist	-	1
	<u>5</u>	<u>4</u>
<u>M.S./MPH</u>		
Physiologist	1	-
Public Health Nutritionist	1	2
Nutritional Biochemist	1	-
Hematologist	1	-
Veterinarian	1	-
Nutritionist	1	-
Food Scientist	2	-
Assistant Epidemiologist	1	-
Communication Technologist	1	-
Food Toxicologist	1	-
	<u>11</u>	<u>2</u>
<u>B.S.</u>		
Food Chemist	-	1
TOTAL PROFESSIONALS TRAINED	<u>16</u>	<u>7</u>
<u>Short-term Training and Visits (in man-months)</u>		
	<u>Man-Months</u>	
Director	3	-
Administrator	3	-
Heads of Divisions	12	-
Food Analyst	3	-
B.S. and Technicians	-	6
TOTAL MAN-MONTHS OF SHORT-TERM TRAINING AND VISITS	<u>21</u>	<u>6</u>

NOTE: The period of time required for Ph.D. and B.S. programs is 36 months and for M.S./MPH 24 months. The Ph.D. candidates would be selected from M.S. graduates.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Center for Research and Development in Nutrition

Qualifications of the Senior Staff Members - CRDN

1. Senior staff members should not only be professionally competent in their field, but should also have leadership capabilities and a wide understanding of problems outside their own discipline. Special care should be placed in the selection and training of the senior staff members, who would require to have the following qualifications:

Division of Food Sciences

2. Food scientist, agricultural chemist or food technologist; with training at the level of Ph.D. or equivalent. Must have basic knowledge of nutrition, understanding of the local conditions and with previous post-graduate research experience of at least 3-4 years.

Division of Biochemical Nutrition

3. M.D. or biochemist with an additional specialization in basic nutrition, a sound knowledge of physiology and metabolism and a previous post-graduate research experience of at least 3-4 years.

Division of Community Nutrition

4. M.D. or nutritionist with specialization in public health nutrition and solid basis in epidemiology. Adequate field experience and research capabilities.

Division of Nutrition Socio-Economics

5. Economist or nutritionist, with training at the level of Ph.D. or equivalent. Must have training and previous research experience in food and nutrition of at least 3-4 years.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Center for Research and Development in Nutrition

Qualifications of Consultants

Senior Nutrition Researcher With Experience in Nutrition Policy Planning (12 months)

1. Four to six visits totaling 12 months are foreseen for a senior advisor to advise the Director and to assist with the implementation of this component. This consultant must have experience in nutrition policy and planning in developing countries and in research programs of the type to be conducted by the Center. This consultant would provide continuing advice over the whole five-year period of the project.

Economist With Experience in Food Policy (6 months)

2. Two visits totaling six months are foreseen for an economist familiar with food policy of developing countries. It would be advantageous to have the same consultant on the two occasions. The first visit would be after the establishment of the new Division of Nutrition Socio-Economics and would entail work with the Director of the Center, the new Division Head and the staff to develop a detailed program of research and work for the Division. The second visit, 12-18 months later, would be to follow up on the activities, to provide advice on the research program and other activities, and to provide any other help called for by the Director and Division Head.

Community Nutrition Consultant (4 months)

3. This consultant would need to have special training and experience in nutrition survey methodology and in the evaluation of nutrition projects. He would advise the Division of Community Nutrition concerning its work program, paying particular attention to the methodology for collecting baseline data and for evaluation of programs. The same consultant might be used for survey and evaluation aspects for the NIPP section of the proposal, and guidance and advice on staffing training, research activities, etc. Two separate visits by this consultant might be needed.

Other Consultants (2 months)

4. Two months consultant time is left open to be filled according to ad hoc work needs of the Center. This period might be divided for short consultancies by persons with very special expertise, such as the assistance of a biochemist to establish a new analytic procedure or of a food scientist to help the Division of Food Sciences with some special aspect of their work.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Food Technology Development Center

1. Food self-sufficiency is one of Indonesia's national objectives, but the efforts to increase food production have not yet matched the food demand resulting from both income and population growth. The problem is intensified by food wastage, estimates of which range up to 25 percent, and by the constraint on arable land, especially on Java. While increasing food production is the role of agricultural programs, the responsibility of food technology is to optimize food utilization and nutritional value of a given level of agricultural production. The introduction of food technology geared at preserving perishables, reducing food wastage during storage, processing, marketing and improving the nutritional quality of foods would have a beneficial impact on food utilization and on nutritional quality of food.

2. Over 80 percent of the population of Indonesia live in the rural areas dispersed in about 60,000 villages. In the current development plan, emphasis is given to rural development programs. The application of food technology in the rural areas should concentrate on methods which use local resources and require very low cost equipment. Modern food technology would have to be adapted in scale and in sophistication to the Indonesia context and this is presently constrained by the shortage of professional staff and adequate facilities.

Present Status of Training, Research and Development in Food Technology

3. Research activity in food science and food technology which is currently in progress is limited in Indonesia. The centers of research in this field are primarily:

- (a) The Chemical Research Institute of the Department of Industry at Bogor, whose functions include service to agriculturally based processing industries. The only ongoing investigation of direct relevance to the project is concerned with the fermentation of soybeans.
- (b) The Gajah Mada University at Yogyakarta, where problems relating to processing of food cash crops and to the utilization of food waste products are being studied. On a limited scale, attempts are being made to identify problems in rural communities.
- (c) The Faculty of Agricultural Mechanization and Produce Technology at the Agricultural University, Bogor (IPB) is undertaking the following investigations:
 - (i) evaluation of small scale rice milling equipment;

- (ii) production of jam from local fruits;
- (iii) production of vinegar from coconut milk and fruit juices;
- (iv) improvement in the quality of smoked fish, dry salted and quick salted fish cakes;
- (v) egg preservation using traditional preservatives;
- (vi) chemical and mechanical methods for decorticating beans;
- (vii) extraction of oil from soybeans, groundnuts, kapok and sunflower seeds; and
- (viii) development of bottled soybean-based drinks, soybean curd and soybean paste.

These are all small-scale pilot studies. Further research as well as additional laboratory equipment, pilot plant, and research staff would be required to arrive at practical solutions for implementation in rural areas or by the food industry.

- (d) The Center for Research and Development of Nutrition, Bogor, is carrying out studies on the production of a weaning food based on soybeans, cereals and legumes and studies on the production of tempeh, a local product derived from soybean fermentation.
- (e) The Institute of Technology, Bandung, is investigating the production of weaning foods based on soybeans, using small-scale extruder equipment.

4. At none of the centers discussed above are the facilities, the range of equipment and current staff sufficiently oriented to develop practical solutions for problems of food technology, nor is there coordination of research work. Since 1970, IPB has produced 51 graduates specializing in food technology; Gajah Mada has been training approximately 30 students per year. At both centers the facilities for practical training in food technology are still inadequate and training is geared toward industrial processing of cash crops, with little emphasis on improving the nutritional value of food.

5. The Government's Agricultural Research and Extension Project, supported by a Bank Loan, includes aspects of food technology relating to rice, fruits and vegetables. The focus of this project relates to the production and marketing of commercial crops, but the results of the project could have great impact on the quality and quantity of food available for consumption. The proposed FTDC component, oriented towards nutritional benefits through the application of food technology, would be complementary to the Government's Agricultural Research and Extension Project. There would be subjects of

mutual interest such as rice milling, which would require collaboration to avoid duplication. The pilot plant of the FTDC should be able to provide facilities for testing techniques developed in agricultural research and other institutions for industrial application.

Component Description and Objectives

6. The general objective of the proposed food technology component is to build up an institution in order to mobilize scientific and technical knowledge from international as well as domestic institutions to improve the use of food resources, particularly in rural areas. A Food Technology Development Center at Bogor, associated with the Agricultural University, would be established and staffed through the proposed component. It is anticipated that the Center would become the focal point of food technology research. The proposed component provides research laboratories, a library and facilities including food processing equipment, experimental rural food storage and processing units, and pilot plants to demonstrate food processing. The project would also finance the establishment of a 10 man extension unit in the FTDC.

7. The Center's primary emphasis would be on improving the level of applied technology and ensuring its transfer to food industries and agriculture. The Center's work would focus on reducing food losses in processing and storage as well as on developing improved methods of processing staple foods in order to raise nutritive values and on exploring opportunities for food fortification. Additional research and development work would be geared towards reducing food losses through packaging, standardization and quality control, storage trials, new product development, and handling and transportation of foods from farms to markets. The specific functions of FTDC would be:

- (a) to act as the focal point for the provision of information and advice on food technology;
- (b) to provide training for food technologists and extensionists both for simple rural and large scale industrial requirements;
- (c) to identify problems and opportunities associated with food preservation and processing and to initiate studies for their solution;
- (d) to collaborate with CRDN, NIPP, the Nutrition Academy, agricultural research and extension agencies and other institutions dealing with food and agriculture; and
- (e) to advise the Government on matters pertaining to food and nutrition legislation (i.e. storage, processing, distribution and quality control).

8. While the CRDN would be responsible for the nutritional evaluation of existing foods and would develop new foods on a laboratory scale, the FTDC would be responsible for developing the necessary processing methods both for small-scale, rural and industrial entities.

9. In Indonesia, with its wide variety of cultures, food storage and preparation methods differ considerably from region to region. These methods should be appraised for their effectiveness to determine what methods could be feasible for wider application.

10. The production of food supplements for remedial feeding in NIPP areas would be undertaken locally but their quality would be monitored by the FTDC. Field staff in the NIPP areas would inform the FTDC of any problems relating to transport, storage, processing, preparation, preservation, marketing and quality control of foods. FTDC's extension staff would investigate these problems, work out solutions in simulated rural conditions at the Center, and then transfer this knowledge to the field.

Research Program

11. The proposed research program (detailed in Appendix 1), which the appraisal mission reviewed and found satisfactory, would be concerned primarily with methods to improve the utilization of food in the rural areas. In addition, it would also focus on work relating to the food manufacturing industry. The main research focus would be on:

- (a) Assessing traditional processing and storage technology to form the basis for developing and testing more efficient methods to reduce wastage in storage and processing and thereby increase availability of food products. Evaluation for technical and cost effectiveness would precede the development of a national storage program (see para. 3.25-3.26).
- (b) Developing efficient means of rice drying methods to prevent deterioration during storage and of packing methods to minimize transport and storage losses.
- (c) Improving food processing with a view to increase the nutritive value and yield of processed products. (For example, it would explore rice parboiling presently not practiced in Indonesia. Parboiling would reduce the vitamin losses which occur when rice is polished, improve its value as a source of protein both in quantity and quality and prolong its storage life.)
- (d) Assessing opportunities for food fortification; preservation of perishable crops; increasing the nutritional value of processed foods; utilization of waste products such as rice bran; the processing of foods for urban markets and for export; and methods of quality control.

12. Following the initial laboratory studies of the various food technology problems, experimental designs of equipment would be developed and tested on a larger scale in the experimental rural food processing units of the FTDC. Satisfactory prototypes would subsequently be tested in the rural areas by members of the Center's extension service.

The Extension Services

13. The FTDC would have a pilot extension unit of ten staff members who would be associated with the Agricultural University of Bogor (IPB) extension service. The members of the unit would collect information from the diverse cultural regions of Indonesia on traditional methods for storage, preservation, processing and preparation of foods and would identify associated problems. Both FTDC and CRDN would systematically analyse this information in order to select methods suitable for general application and to solve the problems of storage and processing identified by the extension staff. Simultaneously, the centers would select technical improvements, drawing as much as possible on existing know how from both developing and developed countries. Recommended technical improvements, having been verified in the prototype units at FTDC, would be tested in selected villages by the extension staff. Methods demonstrated to be suitable would be made known to the agricultural extension service and other organizations involved in rural development.

14. The FTDC extension staff would assist the Nutrition Intervention Pilot Project (NIPP) to set up production units in rural areas in order to provide sufficient quantities of foods suitable for supplementary feeding. In addition, the unit would assist small and medium scale food industries, in both urban and rural areas, to increase the efficiency of their operation and improve the quality of their products.

15. FTDC would prepare reports on the successful application of food technology in the rural areas. These reports would be distributed to those concerned with rural development in Indonesia and would be included in the curricula of courses in food technology, nutrition, agricultural extension and rural development.

Training Responsibilities

16. The staff of the FTDC will also serve as faculty members of IPB with teaching responsibilities. Both the research and food processing laboratories of the FTDC would be used for practical training in conjunction with B.S. and M.S. programs in food technology offered at IPB. Ph.D. candidates would also have access to these facilities.

17. Also, the Center would offer short courses for: personnel in the rural food industry and food industry technicians; teachers from technical institutions and vocational colleges; agricultural extension officers; and nutritionists.

18. To ensure adequate training in food technology, laboratory equipment for the science laboratories of IPB would be provided.

Organization and Management

19. The Director of the FTDC would be responsible for the administration of the Center, for the direction of the research and development programs and for the extension activities. Overall budgetary control of the Center would be the responsibility of the Rector of IPB, who would be assisted by the IPB Director of Administration and Finance.

Staffing

20. The Director of the Center, an Indonesian food technologist of sufficient stature and administrative ability, would be appointed immediately after project effectiveness. A section head for food processing would be appointed beginning with the second project year to assist in the installation of the processing equipment. The Technical and Procurement Officer, the Processing Plant Manager and the Chief Librarian will also be appointed at that time.

21. At present there are six Ph.D. candidates studying food science or technology abroad. They have been sponsored by IPB and USAID and are due to return in 1978. IPB has agreed that three of them will join the Center.

22. By 1978, M.S. graduates in food technology, under ongoing government programs, would be available for the posts of Research Officers and Senior Extension Officers. Research Assistants and Extension Officers would be recruited from the current B.S. candidates at IPB and Gajah Mada. Technical Officers and Technicians would be recruited from engineering graduates from the Bandung Institute of Technology.

23. In all, there would be 23 senior positions and 50 junior positions by the end of the fourth year (see Appendix 2, Table 1).

Staff Development

24. The project provides 28 fellowships to candidates for the position of research assistant and extension officer and 7 fellowships to those working towards an M.S. degree at IPB (see Appendix 3, Table 1 and 2).

25. The project would also finance in-service training in the use of food processing equipment for B.S. and M.S. candidates. Eighteen man-years of long-term fellowships abroad are provided to give the faculty adequate training in modern food technology work.

26. To gain specialized knowledge in the fields of food storage and general food technology, three M.S. candidates would need training abroad. Fellowships also include provision for specialized Ph.D. training abroad in

food engineering, food biochemistry and nutrition, quality control and food microbiology and hygiene. Phasing of training abroad is given in Appendix 3.

27. Short-term training and visits abroad for Center staff are also provided under the project. The Director would have a period of two months of training in administration at a center abroad and would have a total period of three months visiting food research and training centers. The processing plant manager and research officers who receive M.S. training in Indonesia would visit food research and information centers in South and Southeast Asia.

Technical Assistance

28. The project provides for about 96 man-months of short-term technical assistance to help establish the facilities of the Center and to assist with the program of work. Terms of reference for these specialists are given in Appendix 4.

Physical Facilities

29. The buildings of the FTDC would be located on the campus of the Agricultural University at Bogor. They would consist of two blocks, one for research laboratories, the library, lecture and seminar rooms, and one for food processing equipment and facilities for an experimental food processing pilot plant. The experimental rural food storage and processing units would be located adjacent to these facilities.

30. With a view to improving the training in the science subjects essential to food technology, laboratory equipment for the science laboratories at IPB would be provided from project funds.

Costs

31. The total base costs of the component would be US\$5,525,000 of which 56 percent would involve foreign exchange. Details of civil works are given in Annex 10 and an analysis of the total costs in Annex 11. Costs of training and consultants/advisors are given in Appendix 3.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Food Technology Development Center

Research Studies

Prevention of Losses During Storage

1. Drying - In many areas of the country crop drying is a problem because of the high relative humidity and frequent rainfall. Sun driers would be designed and tested to meet the conditions encountered in the different regions of Indonesia. Supplementary air drying methods would be studied.
2. Storage - The general specifications for buildings to minimize losses during storage are well known. Investigations are needed to find ways of meeting these general specifications using, wherever possible, local materials and methods of construction. Experimental designs would be evaluated on the site of the FTDC and successful prototypes tested in rural areas.

Processing of Foods for Local Needs

3. Preservation of Perishable Crops for Out of Season Use - Drying is the simplest and most effective method of food preservation. Methods of preserving and retaining the vitamins in Indonesia food crops would be studied, not neglecting traditional methods such as salting, smoking and fermentation.
4. Increasing the Nutritional Value of Harvested Crops - In collaboration with the CRDN, the main aspects studied would be, in collaboration with the CRDN, on methods of producing quantities of optimum protein mixtures made up of the locally available cereals and legumes in a given region. Model production units designed to ensure efficiency of manufacture, together with high standards of hygiene, would be developed and tested in the FTDC site before field trials. Parboiling of rice is an important process for study since it reduces the losses of protein and vitamins which occur when rice is polished. The milling ratio and quality of grain is also increased by the process. Unfortunately the standard parboiling process gives a product not readily acceptable to most Indonesians. The development of acceptable food products from parboiled rice would produce considerable nutritional benefit to both urban and rural populations.

Processing of Foods for Transfer From Rural to Urban Areas

5. The processing of produce gains increasing importance in order to retain their nutritional value and produce a more stable food product for

marketing in urban areas. The production of cereal/legume protein weaning food mixtures is one such example. In addition to improving the nutritional value of the diet in urban areas, the setting up of small manufacturing units in the rural areas would increase the monetary value of the marketed products - inter alia increase rural incomes - and reduce transport and storage costs since the bulk of processed food is less than that of the raw materials.

Processing of Food Crops for Export from Indonesia

6. There are a number of cash crops such as coffee, tea and spices which do not have nutritional significance but are valuable export commodities. Processing technology associated with these commodities is well advanced and research is continually being undertaken at various international centers throughout the world. Therefore, the Center should devote only a limited amount of research on these commodities.

Quality Control

7. In the preparation of all food products, it is essential that tests should be made during the processing stage and particularly of the final product to ensure that:

- (a) nutritional standards are maintained;
- (b) no harmful substances are present;
- (c) standards of hygiene are maintained and the product is free from contamination by harmful micro-organisms which would cause rapid deterioration during storage; and
- (d) the product is of the required standard regarding flavor, color and appearance. Standard methods of quality control will need to be applied to all manufacturing processes and may need to be adapted to Indonesian food and conditions. Advice on quality control aspects will be given to the larger manufacturing units who will, however, have their own staff and facilities for maintaining control.

8. The small processing units sited in the rural areas will have neither the facilities nor the staff to maintain quality standards. Therefore, the FTDC will need to monitor these rural food processing units. In addition to the more comprehensive quality control tests, to be carried out periodically on samples of products from rural processing units, new rapid screening tests will need to be developed which can be carried out in the field to ensure that the output is safe to eat. This system of testing is particularly important in the case of the production of weaning foods since children are more susceptible to harmful micro-organisms in foods.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Food Technology Development Center

Staff List at Full Development in Year 4

	<u>Professional</u>	<u>Senior Technical</u>	<u>Junior Technical</u>	<u>Clerical and General</u>	<u>Others</u>
<u>Administration</u>					
Director	1				
Executive Secretary	1			6	
Finance Officer	1				
General Manager	1			4	6
<u>Technical Services</u>					
Technical Officers	1	2	10		
Processing Plant Manager	1				4
Librarian	1		2		
<u>Sections</u>					
Microbiology		1			
Biochemistry		1			
Quality Control		1	12		
Food Processing		1			
Research Officers		6			
<u>Extension Services</u>					
	1	3	6		
Sub-Total	8	15	30	10	10
<u>Agricultural University, Bojor, Administration</u>					
		2	2	2	
TOTAL	8	17	32	12	10

INDONESIA NUTRITION DEVELOPMENT PROJECT

Food Technology Development Center

Schedule of Establishment Costs (Constant 1976 US\$'000)

	<u>Yr. 1</u>	<u>Yr. 2</u>	<u>Yr. 3</u>	<u>Yr. 4</u>
<u>FTDC</u>				
Strength of Establishment of which	11	20	59	79
Senior Staff	6	10	23	25
Support Staff	5	10	36	54
Total Establishment Cost	25	46	133	176

INDONESIA NUTRITION DEVELOPMENT PROJECT

Food Technology Development Center

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Phasing of Technical Assistance

	<u>Number of Man-Months</u>			
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
<u>1. Consultant/Advisors</u>				
Program Advisor (2 years)		6	12	6
Research Specialists (6 months ea.)	6	6	12	12
Research Specialists (3 months ea.)	6	6	12	12
TOTAL	12	18	36	30

	<u>Number of Fellowships</u>			
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
<u>2. Fellowships</u>				
Shortterm fellowships	2	2	1	-
M.Sc. Abroad - Starting	2	1	-	-
- Ongoing	2	3	1	-
Ph.D. Abroad - Starting	2	2	-	-
- Ongoing	2	4	4	2
B.Sc. in Indonesia - Starting	28	-	-	-
- Ongoing	28	26	20	12
M. Sc. in Indonesia- Starting	3	2	2	-
- Ongoing	3	5	4	2

1/ Based on tentative estimates made by the Appraisal Mission.

INDONESIA NUTRITION DEVELOPMENT

Food Technology Development Center

Cost of the Technical Assistance Program

Technical Assistance

	<u>Number</u>	<u>Unit Cost (Constant 1976 US\$)</u>	<u>Total Cost</u>
(a) <u>Consultants/Advisors</u>			
Program Advisor/Specialist for 2 years	1	70,000	140,000
Equipment Specialists for 6 months each.	6	30,000	180,000
Research Specialists for 3 months each.	12	9,500 <u>1/</u>	<u>114,000</u>
Sub-total (consultants)			<u>434,000</u>
(b) <u>Fellowships</u>			
<u>Fellowships short-term</u> (27 manmonths)	5	3,500	17,500
<u>Fellowships long-term</u>			
B.S. in Indonesia	28	3,250	91,000
M.S. in Indonesia	7	6,500	45,500
M.S. abroad	3	15,000	45,000
Ph.D. abroad	4	22,000	<u>88,000</u>
Sub-total			<u>287,000</u>
TOTAL			<u>721,000</u>

1/ Annual cost of US\$16,000 for expatriates and US\$4,000 for local consultants.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Food Technology Development Center

Terms of Reference for Research Program Advisors/Specialists

1. The Food Technology Development Center to be supported under the project would require the services of a research program advisor and research specialists to assist Indonesian scientists in establishing and implementing an effective work program. These specialists/advisors would be recruited directly or through international or bilateral assistance, under terms and conditions acceptable to the Bank with the following terms of reference.

Program Advisor

2. An experienced food technologist with administrative competence and with awareness of food technology to improve nutrition in a rural setting, will be required to advise the FTDC. He would have established and/or managed a food technology center with a nutritional emphasis in a developing country and with a bias towards solution of rural agricultural problems.

3. The Program Advisor would:

- (a) cooperate with the Director of the Food Technology Development Center and his colleagues in formulating, designing and supervising research and action projects for improvement of food processing for storage;
- (b) assist the Director in developing and implementing a pilot village storage program;
- (c) assist the Director in the selection of heads of divisions and research specialists for the Center;
- (d) assist the Center in the selection and placement overseas of professional personnel for fellowship training for graduate degree or study; and
- (e) assist the Director in the selection of equipment to be procured under the project and in the completion of the proposed civil works.

Research Specialists

4. Specialists are expected to be needed in the fields of storage, drying processing, packaging, quality control, processing equipment, rice

processing, food preservation marketing and library services. They are to be engaged for periods ranging from 3 to 6 months.

Each specialist would:

- (a) assist the staff of the Center to develop the program of work in the area of his specialisation;
- (b) arrange on-the-job training for local staff; and
- (c) develop manuals, where necessary, for future guidance of the FTDC staff.

5. The specific qualifications desirable for specialists in the respective areas of interest to FTDC are listed below.

<u>Category of Operation</u>	<u>Experience Desirable</u>
1. Storage	Knowledge and experience in research and construction of food stores, methods of pest control, latest techniques of reduction of storage losses in village conditions. At least 3 years experience essential.
2. Packaging	Research in methods of packaging suitable to tropical village conditions. 3 to 5 years experience in field application of results of research desirable.
3. Quality Control	Experience for 3 to 5 years in monitoring the quality of output of small-scale food conditions, particularly of protein foods for child feeding.
4. Rice Processing	Research in improved methods of rice processing including milling, the nutritional consequences of different methods, their costs and other economic impact. At least 3 years experience desirable. Person with actual field experience in extension of improved rice processing techniques preferable.

<u>Category of Operation</u>	<u>Experience Desirable</u>
5. Food Preservation	Research and extension in methods of preservation of perishable foods, particularly fruits, vegetables and fish in tropical climates. Experience of 5 years desirable.
6. Laboratory Equipment	Experience of 5 years in a food technology laboratory, preferably in a developing country. He has to assist in the selection of items of laboratory equipment. Experience in preparation and completion of procurement documents for internationally aided projects would be a desirable qualification. 5 years of experience in receipt and installation of modern equipment and in ensuring arrangements for satisfactory maintenance of equipment is essential.
7. Pilot Plant Equipment	An experienced engineer with knowledge of pilot plants used in a Food Technology Institute or in a Food Research Center. Should have experience in procurement, installation, operation and maintenance of equipment in food technology labs or food processing laboratories.
8. Library Services	Experience for 5 years in library management in a well-equipped food science and technology laboratory. Should be able to set up a system of procurement of books and journals, classification and library stock control.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Intervention Pilot Project

1. The Applied Nutrition Program (ANP) operated from the early 1960s as the main intervention measure to combat malnutrition. In 1973, an evaluation study of ANP indicated that the program concentrated too heavily on only one aspect of nutrition -- the production and consumption of protein-rich foods. It failed to provide for effective diffusion of nutrition information and practices beyond the individual innovators and demonstration villages. The program also failed to establish target population groups. While the Nutrition Intervention Pilot Project (NIPP) would build on the awareness created by ANP, it would be specifically directed at the nutritionally most vulnerable population in rural areas.

2. The proposed component was prepared by a Task Force of BAPPENAS with the assistance of Bank staff and consultants and with close involvement of all regional and local authorities concerned. In designing the contemplated comprehensive nutrition activities of NIPP, the success and shortcomings of the ANP experience have been taken fully into account. ^{1/} The proposed activities combine supplemental feeding with associated health, education and agricultural measures.

3. The NIPP component would develop effective measures which would bring about improvement in the nutritional status of target populations. Priority would be given to tackling the problem of PCM, after identifying those in need of assistance, through (i) the provision of locally produced supplementary food where required; (ii) the control of closely related diseases through immunization and health care and (iii) a nutrition education

^{1/} The main differences between the proposed NIPP and ANP would be:

- (a) size of administrative unit covered -- NIPP administrative unit would be a Kabupaten with a population ranging between one half and one million, whereas ANP focussed on individual villages;
- (b) NIPP emphasis is on both calorie and protein deficiencies -- ANP tended to focus attention on production of protective and protein-rich foods;
- (c) NIPP nutrition education emphasis is on bringing about behavioral change rather than on learning about various food groups;
- (d) supportive health activities proposed in NIPP have not been available in ANP;
- (e) NIPP food supplementation for malnourished children below the age of three, pregnant and lactating women;
- (f) proposed baseline survey of nutritional status in NIPP was not a feature of ANP and handicapped evaluation of ANP; and
- (g) attempt to focus NIPP action on the nutritionally needy, particularly those in the low-income sector.

campaign. The locally produced supplementary foods will be delivered through alternative systems such as health, village officials and volunteers. There would be integrated actions with extension services to stimulate increased food production for home consumption, reduction in food wastage, better utilization of available food through nutrition education and encouragement of other income-earning activities.

Program Objectives

4. NIPP has both nutritional and managerial objectives. Nutritional objectives are:

- (a) to reduce morbidity and mortality resulting from protein-calorie malnutrition (PCM), particularly among young children; and
- (b) to reduce the incidence of iodine and iron deficiencies.

Among the means adopted to achieve these objectives would be:

- (a) improvement of food habits and related behavior through nutrition education;
- (b) increase in food production, particularly in home gardens;
- (c) improvement of food processing and storage to prevent wastage of food and nutrients;
- (d) immunization; and
- (e) water supply and health insurance scheme in selected villages.

The managerial objectives are:

- (a) to demonstrate the feasibility and replicability on a national scale of specific nutrition activities to improve nutritional status based on principles of community self-help;
- (b) to develop a system or systems for delivery of food supplements;
- (c) to study the feasibility of administering a multi-disciplinary project within the normal machinery of Government; and
- (d) to develop means of measuring the effectiveness of activities aimed at improving nutritional status.

5. The NIPP component would improve the nutritional status of children under the age of three, pregnant women and lactating mothers in about 180 villages distributed in 7 Kabupatens. The component would finance: the

nutrition education of about 100,000 families; the immunization of 100,000 children against infectious diseases; supplementary feeding of 30,000 potentially severe and moderately malnourished children under the age of 3, pregnant and lactating women; salaries of staff to train village volunteers (village cadres) and supervise them; evaluation of the effectiveness of the combined package of these measures and technical assistance to plan and implement these activities. This component would also benefit from programs for establishing home/village gardens in these villages and improvement of storage and processing (see paras 27 to 40).

Base-Line Data

6. A sample survey of baseline data would be carried out by the Center for Research and Development (CRDN) during the preliminary phase of operations in all NIPP areas so that the achievements of the program could be measured in light of the above stated objectives. Anthropometric measurements (weight, height, arm circumference) ^{1/} and clinical examination for anemia would be used as indicators of improvement in nutritional status. CRDN would be responsible for collecting, analyzing and interpreting the data.

Choice of Project Areas

7. The Government decided that NIPP should begin in the Kapubatens of Bojonegoro in the Province of East Java and in West Lombok in the Province of Nusa Tenggara Barat. In selecting the Kabupatens in these provinces the following criteria were adopted: the presence of a malnutrition problem; administrative support; likely positive response from the people; an area typical of Indonesian conditions; and where the Applied Nutrition Program has been functioning.

8. The NIPP would be carried out in the two Kabupatens initially, extending to two additional Kabupatens in the second year. Subject to a review by the Government and the Bank, it will be extended to three additional Kabupatens in the last two years of the project. In the second year, Kabupatens would be selected in Central Java and South Sumatra and, subject to the review, selection in West Java, Yogyakarta and Bali would take place for the third year.

9. In the Kabupatens of Bojonegoro and West Lombok, the initial three sub-districts selected in each are within easy reach of Kabupaten headquarters so as to facilitate close supervision during the first operational year. Most of the villages chosen in these sub-districts are aware of the need for nutritional improvements from previous ANP activities. The sub-districts selected for the second year of operations would be those which according

^{1/} In recent years, emphasis has been given to anthropometric measurements that are truly age-independent, provided the children can be broadly grouped as of, say, pre-school age. Measurements of arm circumference/height, weight/height are found to be highly correlated to malnutrition in young children, as judged by a low-weight/age ratio or by the presence of clinical signs.

to the base-line data surveys, have the most widespread nutritional problems in the Kabupaten.

The Initial NIPP Areas

10. The Bojonegoro Kabupaten is situated in the northwest of the province of East Java. It can be divided into three main areas according to the food availability: in 55 percent of the area, food production is in surplus; in 25 percent of the area, production is just adequate; whereas in the remaining area, it is in deficit. The total population in 1974 was about 876,000, of whom 76,000 lived in the capital Bojonegoro, a typical rural township. The rest of the Kabupaten is divided into 19 sub-districts and just over 400 villages. The village population is about 2,000 on average which is below the normal for Java. The total area is 2,375 sq. km., giving a population density of about 370 per sq. km. The total area devoted to agriculture is about 104,000 ha and the majority of farmers have holdings under 0.5 ha. The annual gross calories and protein values of agricultural production in Bojonegoro were calculated to yield 1,964 calories and 39.9 g protein per capita a day. There are 18 polyclinics, 32 health centers and 31 sub-clinics, with 7 medical officers, 84 paramedical staff and 51 midwives. Average daily attendance at the polyclinics is 293, at the health centers 161 and at the sub-clinics only 14.

11. For the first year of operations the following sub-districts and villages have been selected:

<u>Sub-District</u>	<u>Village</u>
Sumberrejo	Sumberrejo Prayungan Tlogoaji
Dander	Dander Ngumut Mojoranu
Kalitidu	Ngujo Pumpangari Leran

12. Sumberrejo and Dander have health clinics, all others have MCH centers except Ngumut, which has one nearby. Sumberrejo and Dander have also been selected as sub-districts for the INPRES for Community Development. All villages have schools and some are covered by the Government's programs for water supplies and provision of latrines. In each sub-district there is a grain cooperative (BUUD). Supplementary feeding and the local processing of supplementary food would be carried out at the BUUD depots.

13. Lombok is the western island of the province of Nusa Tenggara Barat and it is divided into three Kabupatens. West Lombok Kabupaten, which includes the provincial capital Mataram, has been selected as an area for the proposed NIPP component. The area of West Lombok is 1,728 sq. km., with a population of about 556,000 in 1974 and 310 persons per sq. km. The total area under cultivation in 1974 was around 96,000 ha. It is divided into 9 sub-districts and 83 villages. The villages vary in size from nearly 16,000 to just under 2,000 population. On average, the village population is about 6,500 or double that of Java. The gross calorie and protein values of agricultural production on West Lombok were calculated to yield 1,690 calories and 31.6 g of protein per capita per day. In eight of the nine sub-districts there are polyclinics, three of which have a doctor in charge. In addition there are 23 sub-clinics. The attendance at all the 31 health outlets is about 9,000 per month, about 10 patients per clinic per day.

14. The following sub-districts and villages have been selected for the first operational year:

<u>Sub-District</u>	<u>Village</u>
Narmada	Bt. Kumbung Selat Sembung
Cakranegara	Telagawaru Sayang-2 Kekeri
Ampenan	Gunungsari Meninting Kekait

Each of these villages has a school and most have health facilities.

Phasing of NIPP

15. In each NIPP area activities undertaken in the first year would include: procurement of vehicles and equipment; selection and training of NPO and ANPO and Training Officers; collection, analysis and interpretation of baseline data; formulation, testing and production of one or more food supplements; design of a nutrition education campaign and preparation of teaching aids; training of VANPO, village cadres and food supplement production staff; familiarizing officials, and potential beneficiaries with the project objectives; and development of a plan of operations. Appendix 5 represents preliminary activities and their phasing.

16. The second year would be the initial year for operational activities in each selected Kabupaten. Activities would take place in three villages in each of three sub-districts of the Kabupaten. In the third year, operations would be extended to three more villages in each of these sub-districts and three villages in three additional sub-districts. Appendix 6 shows the project implementation schedule.

17. The base-line survey would provide the basis for preparing the plan of operations for each Kabupaten. The plan would reflect decisions relating to the specific activities to be undertaken in each village, how and when they would be carried out and who would be responsible for each activity. These plans of operation would be ready well before the first operational year in each NIPP Kabupaten.

Food Supplementation

18. Free food supplementation would be arranged for children with existing and/or potential signs of moderate/severe PCM (indicated by anthropometric measures) and for malnourished, pregnant and lactating mothers. The eligibility of mothers for food supplementation would be on the basis of agreed criteria, chief among them would be low family income levels. The food supplementation would also be a teaching aid for nutrition education emphasizing the importance of adequate feeding, since in the long-run the teaching of better feeding is far more important than the curative aspect of supplementary feeding programs.

19. The food supplements, consisting of a cereal and legume mixture, would make use of locally available materials and would be processed at the sub-district level. Selection would be made from the various supplements already developed by the CRDN, including the simple processing and blending techniques suitable for local use.

20. Raw materials would be purchased and stored by the local cooperatives (BUUD/KUD) and processing would be carried out at cooperative depots which would be available in each sub-district. After processing, the food would be packed in plastic bags with capacities of either a one-week supply for a child or a one-week supply for a mother. The village distribution point would hold up to one month's supply of food. Distribution of the weekly food supplements would be made against vouchers presented by the beneficiaries. Replenishment of the month's supply of food at the distribution point would be made against vouchers collected from the beneficiaries. The FTDC would be responsible for monitoring the quality of the food supplement and the Provincial NIPP Audit Unit would check production and delivery of the supplements (see Appendix 1).

Health Services

21. Existing health services aimed at controlling infectious and parasitic diseases and at educating the population in personal and environmental hygiene would be intensified in NIPP areas. Special provision would be made in all NIPP villages for treating diarrhea and for immunization of children

against the common infectious diseases 1/ of smallpox, tuberculosis, diphtheria, whooping cough, and tetanus. Over 100,000 children are expected to be immunized as a result of the project.

22. A Presidential Instruction has made provision for improved water supplies and for family latrines. Within the NIPP component there is financial provision for strengthening ongoing government programs for rural water supply in seven selected villages by providing one pumpset for 25 houses.

23. In a few selected villages, health services under NIPP would include promotion of village health improvement schemes, based on monthly premium payments by families into a joint community fund. Successful models have been developed in the Solo area of Central Java and in Kampung of Jakarta. Each family pays a small monthly sum to a community fund; such payments vary according to the means of the family. The fund is administered by a committee appointed by the community. When there is sickness in a member's family, the patient reports to the health center for treatment; the normal fees are charged to and paid by the community fund. In some cases the community has used the fund for local commercial loans and the interest earned has been often sufficient to meet the health costs on a self-sustaining basis.

24. It is expected when NIPP becomes a national program the costs of selective food supplementation and immunization in a typical village (population 3,000) would be around US\$700 annually, amounting to annual per capita costs of US\$0.23. The Government expects that local communities would ultimately share in the costs of food supplement. Ultimate annual recurrent costs of NIPP for a typical village with a population of 3,000 would be:

	Total Beneficiaries	Number Ultimately Supplemented	Units	Costs US\$	Total Costs Per Annum US\$
A. <u>Cost of Food Supplementation</u>					
Children under 3	337	19	4.2		80
Pregnant women	137	27	6.3		170
Lactating mothers	120	25	10.7		268
Sub-Total					518
B. <u>Cost of Immunization</u>					120
Sub-Total (A +B)					638
C. Overheads @ 10 percent					64
Total ultimate recurrent costs					702
Cost per capita				US\$	<u>0.23</u>

1/ Measles is recognized to be prevalent, but because of cost considerations immunization is not proposed in the project.

Nutrition Education

25. Using primarily female village cadres as the principal teaching agents, special attention would be given to mothers of malnourished children who would receive nutrition information along with food supplementation for their children. Nutrition education material would be produced and tested for use on a national scale. The material adapted to the nutritional conditions of each village would convey initially four main messages: (a) the promotion and maintenance of breast feeding; (b) the use of supplementary and more nutritious homemade weaning foods; (c) the use of locally available, cheap foods to supplement the cereal-based diet; and (d) the impact of adequate nutrition on child development. The program would also emphasize hygienic food handling and the special feeding of children with diarrhea and other diseases. The detailed content and methodology for nutrition education would be determined on the basis of the recommendations made by the nutrition education consultant, who would be engaged during the first year of the project. Each village nutrition center would hold two practical demonstrations each week of preparing and cooking food supplements and locally available foods. Provision has been made for the purchase of raw materials. The prepared and cooked food would be distributed to the families of those attending the demonstration.

26. The nutrition education model being developed under another component of the project (see Annex 5) would be tested in the Kabupaten selected for NIPP in Central Java in the second operational year. A comparison would be made of the effectiveness of this model (which depends upon a series of workshops, meetings and seminars at various administrative levels) with and without collaboration with other NIPP activities. Each Kabupaten selected for NIPP would be provided with communication equipment for use in motivation of key personnel, training of staff and for nutrition education.

Action Program for Improved Home and Village-Gardens

27. BIMAS has a vegetable production program covering 20,000 ha in the Province of East Java, including 2,000 ha allocated for Bojonegoro. This program is aimed at vegetable production for the commercial market and not for home consumption. The Government of Indonesia proposes that the home-garden sub-component in the NIPP areas should be separate from the BIMAS program.

28. The Agricultural University, Bogor (IPB), in co-operation with the Ministry of Agriculture, is currently developing a model home-garden package, on the basis of what is nutritionally desirable and acceptable to the local population, horticulturally feasible and economically justifiable. A survey is being undertaken of fruits, vegetables, legumes and tubers which can provide a well-balanced supply of vitamins and minerals. Basic management and cultivation methods for home gardens will be developed, and an instruction manual and a training curriculum for home-garden extension workers will be prepared. The lack of improved vegetable seeds and agriculture extension staff trained in horticulture constitutes a severe

constraint to production. This component would provide salaries for 10 agricultural extension staff, seeds, fertilizer and other production oriented services. The annual costs for this program per farm family are expected to be in the order of US\$4.5.

29. In the province of East Java the land occupied by homeyards amounts to 17.4 percent of the total agricultural land. The greatest constraint for its productive use would be water supplies and, although much of the homeyard land could not be used for the production of vegetables and fruits, a marked increase should be possible and action, based on the home-garden package, would be stimulated in NIPP villages.

30. In order to establish the necessary demonstration effect, the program would be provided, for a 3 year period, on a grant basis. Prior to project completion, the Government and the Bank would review the results and, in light of their findings, determine whether this sub-component should be converted to a credit program to be administered under BIMAS. A total of 18,000 farmers in the NIPP villages would receive an initial supply of seeds and other inputs needed for home-gardens. In addition, community efforts would be mobilized through the Lurah and village nutrition cadres in setting up village gardens - for each village - on communally owned land. One extension worker would be available to about 1,800 farm families within his area, but he would focus his efforts on groups of 10-15 progressive farmers, headed by a control farmer. Each progressive farmer in turn would transmit the advice received from the extension worker to a group of 7-10 neighboring farmers. Each extension worker would be assigned to 16 farmer groups, visiting each group once a fortnight on a fixed day and time. He would motivate farmers to rapidly adopt improved methods so that their gardens would serve as models to their neighbors. A part of the output of these gardens would be marketed locally or purchased by NIPP management to be used for food supplementation of the nutritionally vulnerable groups. At the time of full project implementation the additional production of vegetables from these home/village gardens would reach a value of about US\$500,000 annually.

31. The training of 10 new agricultural extension workers for the promotion of home-gardens would be undertaken during the first year of the project. By the beginning of the first operational year, supplies of seeds and cuttings, fertilizer and insecticides would be available and promotion of home-gardens would become an integral part of the NIPP activities right from their commencement. In addition to tested seed varieties available in Indonesia, the required vegetable seed would be imported under the proposed project (from institutes such as the Asia Vegetable Research and Development Center in Taiwan) and tested during the first project year at the Bogor Agricultural University before being used in NIPP areas. UNICEF is supporting a program to develop demonstration seed gardens that could be replicated at Kabupaten or sub-district levels. It would assist in the preparation of a curriculum for seed garden managers and of an instruction manual for management of seed gardens. The Government is discussing a possible project, financed bilaterally, for the establishment of large-scale seed production facilities.

Action Program for On-Farm and Village Level Storage

32. Information regarding village level storage of food is sparse. While there are reports that losses may be as much as 25 percent, estimates of losses are unreliable. Much of the grain crop is sold immediately after harvest; storage of grain is normally "over the stove" in the houses and would be for a short to medium period of time. Improved storage facilities would not only reduce losses, but would also enable the farmer (debt permitting) to retain the crop for sale at a higher price than at post-harvest time.

33. The proposed action within the project would include:

- (a) a study by the FTDC of storage losses under farm and village conditions;
- (b) the design of prototypes to be developed in simulated village conditions at FTDC;
- (c) the trial of selected prototypes in village conditions for technical effectiveness and response by the farmers;
- (d) the review of results by a national seminar to give recommendations on the policy and program for storage at farm and village levels; and
- (e) the training of extension workers in promotion of the recommended program.

34. The project provides financing for the establishment of small-scale storage facilities, varying in size from 1 to 10 tons and comprising a total capacity of about 300 tons.

35. The IPB Food Technology group would carry out a baseline study in the NIPP areas of the prevailing storage practices. This would include the determination of losses incurred during storage by weight, volume and nutrient content; the reaction of farmers to losses; and marketing practices. Since most of the production is presently sold at harvest, the study would find out the immediate cash requirements of farmers at harvest time to pay debts; whether damaged grain is sold with or without price differentials; and the price fluctuations during the year.

36. In designing prototypes, the group would consider whether modification of traditional methods would be more effective than the introduction of new methods. The aim would be to develop a low-cost storage facility, using local materials as far as possible, and capable of being built by local labor. The methods for testing effectiveness would be devised so as to ensure that they could provide a basis for monitoring. It is expected that FTDC will have completed both the baseline study and the prototype design at the end of the first project year.

37. The third stage would be the construction of five selected units in NIPP villages. After these units have been tested for technical effectiveness as well as evaluated on grounds of costs/benefits, additional units will be constructed in other NIPP areas. The storage would be provided to the BUUD (local village cooperative) on a loan basis according with the existing credit terms under the Food Storage Program. BUUD would also manage the storage units. Following the development of a successful design, the Ministry of Agriculture in consultation with the FTDC would prepare a storage credit program to be provided through Bank Rakyat for financing its wider adoption. Promotion of better storage methods would involve training of agricultural extension staff in the technical aspects of construction and in communication techniques to facilitate acceptance and participation by the farmers.

38. After completion of studies and trials, a seminar would be held involving those responsible both at national and local levels to formulate a policy and program for farm or village level storage. Bulk storage by BULOG and intermediate storage at BUUD/KUD depots could be affected by the storage methods used at farm or village levels. Close coordination of the total storage system would be considered by the seminar. The recommendations of the seminar, as approved by the Government of Indonesia and the Bank, would be applied in selected villages of the NIPP areas. Details of the estimated costs are given in Appendix 9.

Food Processing

39. Although there have been a few isolated studies, little is known about food processing and food handling in villages. In parallel with the studies and trials for village level storage, work would be undertaken on improvements in village level processing by the FTDC. In the NIPP areas, a survey would be carried out to determine the current practices of food handling, processing and preservation of the major food crops with particular attention to the nutrient content and hygienic quality of the foods at various stages. The commodities to be studied would include cereals such as rice, maize and sorghum, legumes such as soybean, mung bean and groundnuts, and root crops such as cassava and sweet potato. Attention would also be paid to dark green leafy vegetables, fruits and other vegetables.

40. It is expected that the survey would reveal many possibilities for bringing about improvements in the methods of handling, processing and preservation of foods. Short-term experiments would be carried out by the FTDC under simulated village conditions at Bogor. The results of the experiments and trials would be presented to a seminar consisting of representatives from the NIPP areas and from other components of the Nutrition Development Project. Recommendations from the seminar would be converted into teaching aids which would assist extension staff in promoting the adoption of improved methods in the NIPP areas.

Village Operations

41. Villages are already divided into blocks of about 50 households each. Each village would have one or more simple village nutrition centers each serving approximately 600 households or 3-4,000 people. The village nutrition center would be located in a village hall, school or other building that could be suitably adapted and staffed by the village cadres. The project provides for the cost of adaptation of, or of improvements to the buildings selected and for the recruitment and training of part-time village cadres. The village cadres, mostly women, would be recruited from among home economic workers of the agricultural extension service, community development workers and members of the women's organization PKK. The village cadre would be responsible for compiling a register of all children below the age of three years, for carrying out and recording the results of monthly weighing of these children and, on the basis of lack of or low weight gain, identifying children in need of food supplement, which would be obtained from the local authority (see also Annex 9 for details of information to be gathered). The village cadre would visit the homes to demonstrate preparation of the food and to assist in the child's acceptance of the supplement and to provide information on improved nutrition practices. Such visits would be repeated until the feeding practice is established. The daily supplement would consist of 60 g of the approved cereal-legume mixture and would be provided to a child until an adequate weight gain is reached, normally a period of 45 and 90 days. Based on experience of rehabilitation centers in other countries, the expectation is that the mother would feed the child properly thereafter.

42. The monthly weighing would be used as an educational tool. Most mothers do not recognize that there is anything wrong with a child suffering from mild or moderate PCM, since that is the norm. Monthly weighing provides the opportunity to demonstrate that the child may not be doing well. Similarly, the food supplement would be used as an educational tool to demonstrate that locally available foods can bring about the desired change in well-being. Once mothers recognize the need for change in the feeding of their children, it would be expected that they adopt nutritional behavior change. However, not all would be able to do so. Perhaps about 20 percent of those who have been rehabilitated through supplementary feeding and health care may relapse and require a second period of supplementation. In addition, there would be those who would never be able to feed their children satisfactorily because of handicaps or economic circumstances. This group represents a separate social problem, which cannot be solved through this project.

43. It is proposed that initially there would be one village cadre per 50 households. After a year's activity, it is believed that the intensity of supervision may be reduced to one village cadre per 100 households. Thereafter the numbers could be reduced further, but as the cadres receive no

honoraria, the number maintained does not affect the cost of continuation. The provision of uniforms, certificates and inter-village competitions would be used as incentives for village cadres.

44. Pregnant women represent a different problem. Although many are affected by PCM, the most prevalent problem is nutritional anemia. In diets lacking in animal protein, it would be unlikely that pregnant women would be able to acquire sufficient iron from their normal diet. Every effort would be made to encourage pregnant women to make use of the existing MCH services, where iron tablets, provided by UNICEF, are readily available. The most economically deprived section of the community may require supplementary feeding. Provision has been made to supply food supplements to pregnant mothers at risk. (These women will be identified from among low income families, as mothers with at least one child having PCM). Roughly 10 percent of pregnant women would receive a food supplement consisting of 120 g per day, for the last trimester of pregnancy. Those who receive supplements when pregnant would continue to receive supplements during the first 150 days of lactation; in addition, mothers of underweight babies (below 2,500 g at birth) would be provided with a supplement.

Organization and Management

45. The Director-General of Community Health, Ministry of Health, would have overall responsibility for the NIPP component. For the management of NIPP, he would be assisted by a National Coordinator, whose staff would include three Assistant Nutrition Program Officers (ANPO), one would be specifically responsible for training; there would be three administrative officers to assist.

46. In each province where NIPP would operate, the Governor of the Province would be responsible for the coordination and implementation of the nutrition program. For planning purposes, the Governor would be advised by the provincial planning authority (BAPPEDA); for coordination and implementation he would be advised by the Nutrition Improvement Coordinating Committee (BPDG) established at provincial and Kabupaten levels under the Applied Nutrition Program. The BPDG Executive Board is generally chaired by the Inspector of Health of the Province. Members consist of senior governmental representatives of agriculture, community development education, cooperatives, water supply, fisheries, religious affairs, etc. and of non-governmental organizations such as scouts and the Community Development Board (PMD). The Governor would be assisted by a Nutrition Program Officer (NPO) who, in addition to general duties, would have specific responsibility for monitoring and evaluation.

47. At the Kabupaten level, the Bupati, the chief executive of the Kabupaten, would be responsible for NIPP activities. He would be advised by the BPDG and would be assisted by two ANPOs, one of whom would have specific responsibility for training.

48. At the sub-district level, the Unit for Community Development (UDKP) would be responsible for advising the Camat (the executive head of the sub-district) on NIPP activities. He would be assisted by one ANPO and three supporting staff; one would be the Training Officer, one would be responsible for production and distribution of the food supplement and the third would deal with routine finance, returns and reports.

49. The Village Organization for Social Development under the chairmanship of the Lurah (village headman) would be responsible for village operations. There would be a Village Assistant Nutrition Program Officer (VANPO). Where possible, this would be initially a BUTSI volunteer 1/ working full-time, but failing that, VANPO, i.e. teacher, would be employed part-time. The VANPO would provide the local supervision for the village cadres, of whom there would be one per 25 families during the first year of operations. Appendix 2 shows the organizational structure of NIPP, Appendix 3 provides details of the staff requirements by years and Appendix 10 provides job descriptions for the National Coordinator, NPO, ANPO and others.

Linkages with Other Project Components

50. CRDN would be responsible for collecting and analyzing baseline data and mid-term and final surveys, for providing scientific and technical information for local production of food supplements and for advising on plans of operation. CRDN would be involved in the scientific evaluation of the NIPP component.

51. Pending the establishment of FTDC, the IPB Food Technology Group would develop improvements in storage and processing at the village level. Later, FTDC's pilot extension service would operate in the NIPP areas, identifying problems relating to local transport, storage preparation, processing, preservation, packaging and distribution of food. Identified problems would be studied by the FTDC and proposed solutions tested in the NIPP areas. The FTDC would advise on and monitor the quality of the food supplements.

52. One of the two sub-districts selected for trial of the nutrition education model proposed in the nutrition communication component, would be in a NIPP area. The proposed simulation of mass media communications for nutrition messages would also be used to reinforce nutrition educational activities of village cadres in NIPP areas.

1/ BUTSI is an Indonesian volunteer agency using graduates who work in rural areas on approved projects.

Training

53. The ANPO at the Ministry would be an officer with experience in training and extension and would be responsible for organizing staff training at national and provincial levels. Each Kabupaten would have an ANPO responsible for organizing the courses for VANPO and village cadres. The latter would be the specific responsibility of the Training Officers at sub-district level. Appendix 7 outlines the training proposals. The ANPO would be assisted by a training consultant.

54. NPOs and ANPOs would be trained at the Nutrition Academy, Jakarta, with the exception of those required for the first year, who may be trained abroad. A two month training course would be planned and carried out by the ANPO at the Ministry, assisted by the consultant and staff members of the Academy, CRDN and FTDC.

55. Training Officers would attend two month courses at provincial headquarters, probably at Surabaya. These courses would be planned and carried out by the ANPO at the Ministry, assisted by the consultant and provincial staff of the Unit for Family Health and Nutrition (UPGK).

56. VANPO would be trained at Kabupaten level. Their one month courses would be organized by the ANPO at the Kabupaten headquarters, but the curriculum would be planned by the Ministry staff, assisted by the consultant. Kabupaten staff of the Committee for Improvement of Family Nutrition would be involved in the training.

57. The way in which the component has been planned to expand would ensure that there would be normally two training courses per year for village cadres in each sub-district. The exception would be where villages are abnormally large and in such circumstances extra training officers have been included. The courses would be held at Health Centers or Agricultural Extension Centers in the sub-districts. Even allowing for preparation, the Training Officers would have ample time to conduct refresher courses and in-service in each sub-district annually.

Technical Assistance

58. Provision has been made for 7 man-years of consultancy. Six man-months would be required for a consultant on nutrition education to advise on the program for NIPP areas and to prepare a simple manual. Ten man-months would be required for a consultant on the training of Nutrition Program Officers and Assistant Program Officers. The balance would be available, if required, for problem solving resulting from operational experience.

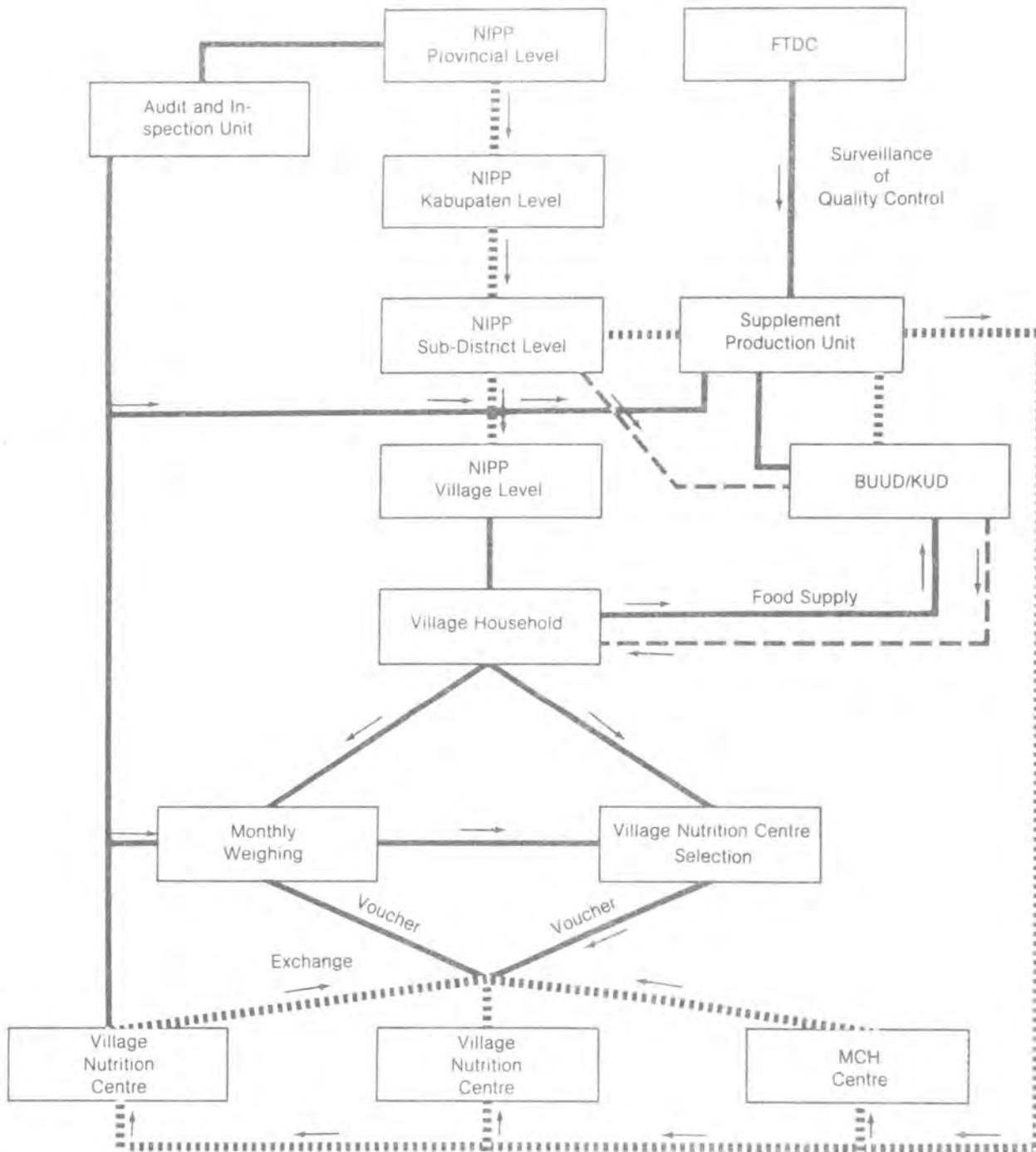
Costs

59. The costs of the project component are detailed in Appendix 8. They are subject to modification based on the results of the mid-term review.

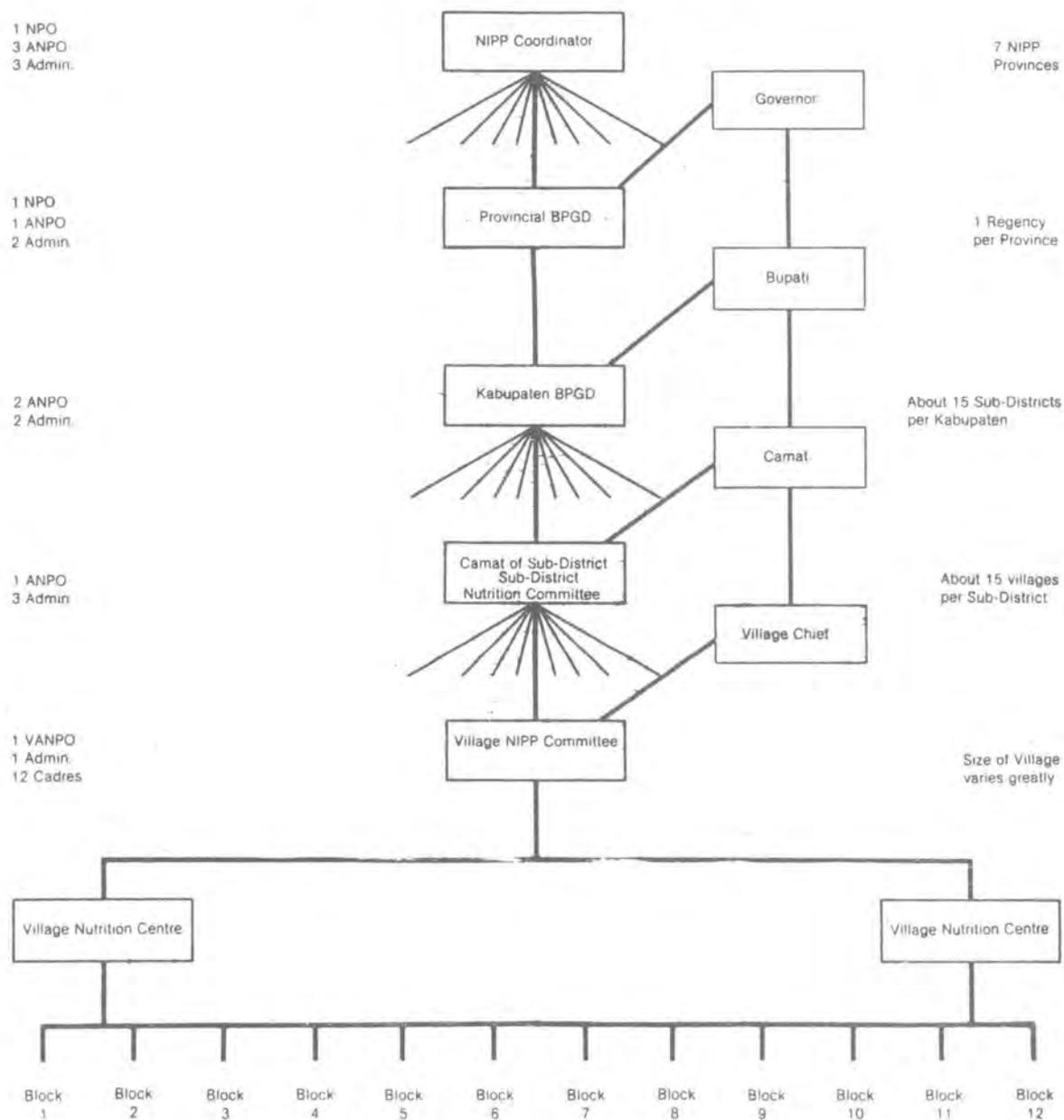
Monitoring and Evaluation

60. Base-line data collection, mid-term and final evaluation will be carried out by CRDN. The monitoring and evaluation unit, Ministry of Health, will request collection of data by management according to specific criteria and indicators. The unit will be responsible for designing the methodology and the format for data collection, the frequency of reporting by field staff and the subsequent analysis of the data. The unit will convey the results of analysis to project and component management and to CRDN. Effective evaluation is the most crucial factor in this component (see Annex 9). Evaluation would focus on issues of operational efficiency of the distribution system, intra-family consumption patterns and the effectiveness of the identification scheme of target PCM cases.

**INDONESIA NUTRITION DEVELOPMENT PROJECT
PRODUCTION AND DISTRIBUTION OF FOOD SUPPLEMENT**



**INDONESIA NUTRITION DEVELOPMENT PROJECT
ORGANIZATIONAL STRUCTURE OF NIPP**



ANNEX 1
Appendix 2

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Intervention Pilot Project

Staff by Category and Year

<u>National</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Nutrition Program Officer	1	1	1	1
Assistant NPO	1	3	3	3
Administrative Officer	2	3	3	3
<u>Provincial</u>				
NPO	2	4	7	7
Assistant NPO	2	4	7	7
Administrative Officer	4	8	14	14
<u>Kabupaten</u>				
ANPO	4	8	14	14
Administrative Officer	4	8	14	14
<u>Sub-District</u>				
ANPO		6	18	37
Administrative Officer		18	54	111
<u>Village</u>				
VANPO		18	72	183
Administrative Officer		18	72	183
Cadre		580	1,900	2,320

INDONESIA NUTRITION DEVELOPMENT PROJECT

NIPP - Number of Beneficiaries

Area		Number of Villages	Population	Number of Children Under 3	Number of PCM Cases Under 3	Number of Children Given Food Supplement	Pregnant Women	Number of Pregnant Women Supplemented	Number of Lactating Women Supplemented
Bojonegoro	Year 2	9	27,360	3,033	855	855	1,233	243	231
	Year 3	27	82,080	9,099	2,565	2,132	3,699	729	693
	Year 4	57	173,280	19,209	5,415	3,873	7,809	1,458	1,386
West Lombok	Year 2	9	42,903	6,192	1,737	1,737	1,935	387	368
	Year 3	27	160,947	12,438	6,507	5,639	6,705	1,161	1,104
	Year 4	54	329,400	36,738	13,311	9,284	14,292	2,322	2,208
Central Java ^{1/}	Year 3	9	26,199	3,123	873	873	1,179	234	222
	Year 4	27	78,597	9,369	2,619	2,183	3,537	702	666
South Sumatra ^{1/}	Year 3	9	21,042	2,745	765	765	945	189	180
	Year 4	27	63,126	8,235	2,295	1,922	2,835	567	540
West Java ^{1/}	Year 4	6	38,160	4,998	1,398	1,398	1,716	342	325
Yogyakarta ^{1/}	Year 4	6	30,918	3,018	846	846	1,392	276	262
Bali ^{1/}	Year 4	6	27,000	3,594	1,008	1,008	1,218	246	234
Total ^{1/}	Year 2	18	70,263	9,225	2,592	2,592	3,168	630	599
	Year 3	72	290,268	27,405	10,710	9,409	12,528	2,313	2,199
	Year 4	183	740,481	85,161	26,892	20,514	32,799	5,913	5,621
Cumulative Total				100,000 ^{2/}	40,194	32,515	48,495	8,856	8,419

^{1/} Villages to be chosen. Estimates based on average size of villages in the province.

^{2/} The cumulative total of children under the age of three benefitted is around 100,000, taking into account the children of ages below two in the year (2) and (3).

INDONESIA NUTRITION DEVELOPMENT PROJECT

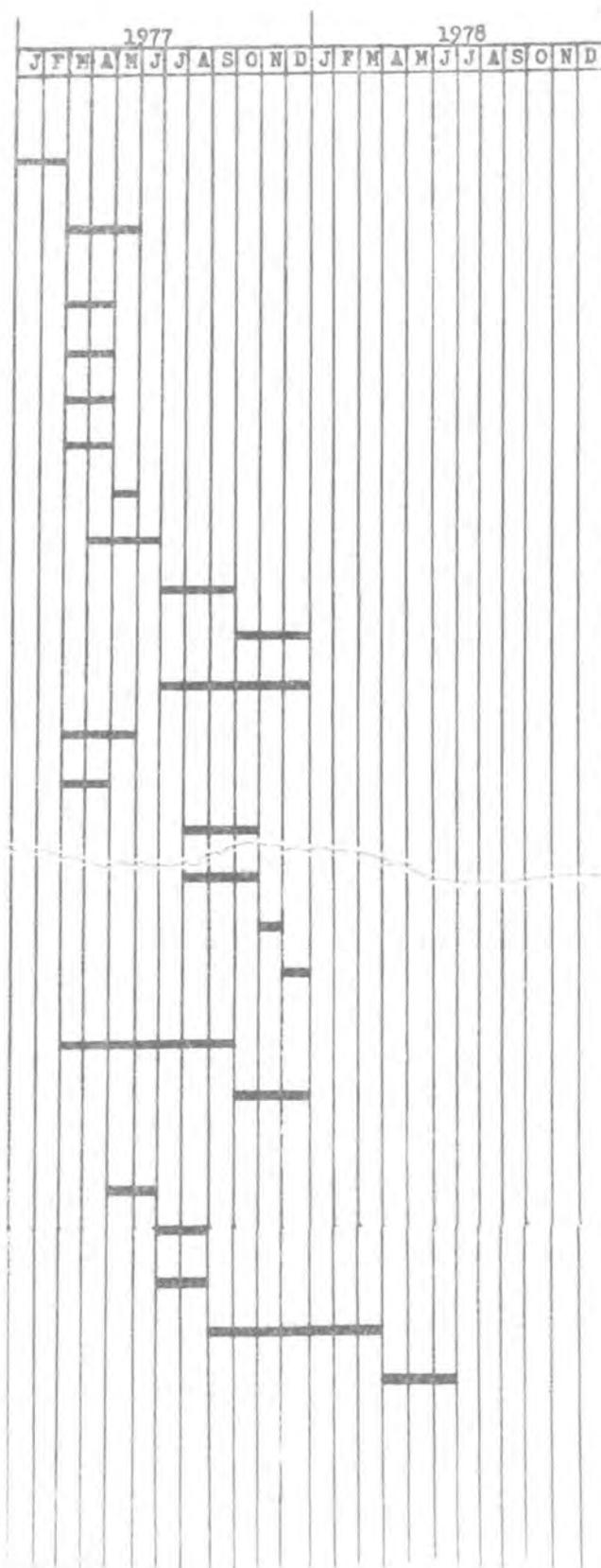
ANNEX 4
Appendix 5

NIPP Initial Activities

Action

- Appointment of National Coordinator of NIPP
- Recruitment of Nutrition Program Officers (NPOs and ANPOs)
- Establishment of Working Group on:
 - (a) Teaching Aids
 - (b) Baseline Data
 - (c) Training
 - (d) Food Supplements
- Procurement of Vehicles
- Recruitment of Nutrition Education Consultant
- Preparation of Manuals on Nutrition Education
- Testing of Manuals
- Preparation and Testing of Teaching Aids
- Preparation of Course for NPO/ANPO's
- Consultant on Training
- Training of NPO/ANPO's
- Workshops for Provincial EPGD
- Testing of Food Supplement
- Production Equipment Ordered
- Draw up Plans of Operations for NIPP for the two Kabupatens
- Approval of Plans of Operation by Government

- Discussion on Baseline Data
- Identification of Sample for Baseline Data
- Procure Equipment for Baseline Survey
- Baseline Data Collection
- Baseline Data Analysis



INDONESIA NUTRITION DEVELOPMENT PROJECT
Nutrition Intervention Pilot Project
Project Implementation Schedule

Action	1977					1978					1979					1980					1981				
	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M	J	F	M	A	M
1. Preparation of plan of operation for initial 2 Kabupatens. (For preliminary activities see Annex 4, Appendix 5.)	████████████████████																								
2. Approval of plan of operations by Government.																									
3. Baseline survey of initial Kabupatens																									
4. Midterm survey of initial Kabupatens																									
5. Final survey and evaluation of initial Kabupatens.																									
6. Selection of Kabupatens for Year 2.																									
7. Preparation of plans of operations of the second set of Kabupatens.																									
8. Approval of plans of operations (7) above.																									
9. Review of NIPP.																									
10. Discussion and decision on future direction of NIPP																									
11. Selection of new Kabupatens for Year three.																									
12. Preparation of plans of operations for third set of Kabupatens																									
13. Approval of (12) above.																									
14. Monitoring and Evaluation																									
15. Consultancies Nutrition Education } See Consultants } Annex 4 Nutrition Training } Appx. 6 Specialists }																									
Short-term consultants on monitoring and evaluation.																									

INDONESIA NUTRITION DEVELOPMENT PROJECT

NIPP Training Courses

Trainees	Year	Number to be Trained	Number of Classes	Where Held	Who Responsible	Duration
NPO and ANPO	1	16	1	Jakarta	ANPO(Training)MOH HQ.	2 months
	2	18	1	Nutrition	Assisted by Consultant	
	3	33	1	Academy		
Training Officers	1	9	1	Provincial HQ	ANPO(Training)MOH HQ.	1 month
	2	18	1	Probably		
	3	23	1	Surabaya		
VANPO	1	18	2	Kabupaten HQ.	ANPO(Training)Kabupaten	1 month
	2	54	4			
	3	111	7			
Village Cadres	1	580	18	Sub-District	Training Officers	1 month
	2	1,900	54	HQ.		
	3	2,320	100			

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Intervention Pilot Project (NIPP), Including Agricultural Support
Detailed Table of Costs
US\$ '000

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Total</u>
1. <u>Installation</u>					
a. Construction of village nutrition centers <u>1/</u>	-	2	4	7	13
b. Equipment <u>2/</u>					
(i) Village nutrition centers		4	9	18	31
(ii) Food supplementation	2	3	6	10	21
(iii) Anthropometric measurements	7	23	42		72
(iv) Nutrition education	18	18	27		63
c. Vehicles <u>3/</u>	57	58	90		205
Sub-Total 1.	84	108	178	35	405
2. <u>Training</u> <u>4/</u>	41	123	174	43	381
3. <u>Food Supplementation</u> <u>5/</u>		26	85	196	307
4. <u>Nutrition Education</u>					
a. Teaching aids	32	38	75	75	220
b. Workshops and seminars	21	22	32		75
Sub-Total 4.	53	60	107	75	295
5. <u>Health Support</u> <u>6/</u>					
Immunization		13	36	66	115
6. <u>Agricultural Support</u>					
a. Home Gardens Extension	50	60	130	260	500
b. Improved local storage and processing	20	42	60	78	200
Sub-Total 6.	70	102	190	338	700
7. <u>Administration</u>					
a. Salary support	11	35	87	170	303
b. Travel and per diem	20	23	46	81	170
c. Other	15	25	46	105	191
Sub-Total 7.	46	83	179	356	664
8. <u>Technical Assistance</u>	50	75	75		200

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Intervention Pilot Project (NIPP)

Detailed Table of Costs

US\$ '000

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Total</u>
Surveys and Evaluation 8/					
a. Surveys	18	28	37	47	130
b. Evaluation		20	30	40	90
Sub-Total 9	18	48	67	87	220
 TOTAL BASE COSTS	 362	 638	 1,091	 1,196	 3,287

- / The cost per village nutrition center is expected to be US\$50. One village nutrition center would be set up for a population of 3,000-4,000 on an average.
- / Cost of furniture and equipment per village nutrition center is expected to be US\$125. Anthropometric measurement equipment (US\$286) per village. Food supplementation equipment estimated to cost \$550 per sub-district. Nutrition education requires \$9,000 per Kabupaten for overhead projectors, screens, tape recorders, video camera and generator.
- / 1 sedan for headquarters
- 2 fourwheel drive per Kabupaten) @ US\$10,000
- 1 motorcycle per sub-district @ US\$ 900
- 1 cycle per village @ US\$ 100
- 1 motorcycle per province for audit @ US\$ 900
- / See Annex 4 Appendix 8 Page 4.
- / Raw materials @ 120 Rps. per kilo
- Processing @ 120 Rps. per kilo
- Cost per child for 90 days US\$ 4.20
- Cost per lactating mother 10.70
- Cost per pregnant woman 6.30
- Audit cost per regency 15.00
- Quality control per regency 12.00
- / Cost of immunization vaccines @ \$1 per child
- / Details of salary support in Annex 4, App. 8, Page 3.
- / Cost of sample survey based on \$3.60 per sample

INDONESIA NUTRITION DEVELOPMENT PROJECT

NIPP Staff Development: Pattern and Cost

US\$ '000

Staff Member	Cost Per Month US\$	Number of Man/Months				Total Cost US\$
		Year 1	Year 2	Year 3	Year 4	
<u>National Level</u>						
NIPP Co-ordinator	100	12	12	12	12	4,800
ANPO 3 (Training; Finance & Procurement; Admin.)	75	30	36	36	36	10,350
Admin. Staff 2 (Finance & Procurement; Admin.)	50	24	24	24	24	4,800
<u>Provincial Level</u>						
NPO	75	12	36	66	84	14,850
ANPO (Training, Finance and Audit)	50	12	36	66	84	9,900
Administrative 2 (Finance and Audit; Admin.)	35	24	72	132	168	13,860
<u>Kabupaten Level</u>						
ANPO 2 (Management; Training)	50	24	72	132	168	19,800
Admin. 3 (Training; Fin. & Procurement; Admin.)	30	36	108	198	252	17,820
<u>Sub-District Level</u>						
ANPO	30	36	72	216	444	23,040
Training Officer	30	36	72	216	444	23,040
Admin 2 (Food Supplement; Admin.)	20		144	432	888	29,280
<u>Village Level</u>						
VANPO	15		216	864	2,196	49,140
Administrative	10		216	864	2,196	32,760
Village Cadres (Non-monetary inducements) ^{1/}	-					50,000
						\$303,440

^{1/} Includes uniforms, certificates, inter-village competitions.

INDONESIA NUTRITION DEVELOPMENT PROJECT

NIPP Costs of Training
US\$ '000

Trainee	Where Held	Cost Per Person Per Course	Year 1		Year 2		Year 3		Year 4		Total
			No.	Cost	No.	Cost	No.	Cost	No.	Cost	
a. <u>Overseas</u> NPO/ANPO	Overseas	5,500	4	10,000	Cont'd	12,000					22,000
b. <u>Internal</u> NPO/ANPO	Nut. Acad.	350	12	4,200	18	6,300	33	11,550			22,050
Training Officers	Prov. H.Q.	125	9	1,125	18	2,250	23	2,875			6,250
VANPO	Sub-Dist.	50	18	900	54	2,700	111	5,550			9,150
Village Cadres	Sub-Dist.	40-50	580	25,200	1,900	92,880	2,320	128,000			246,080
				31,425		104,130		147,975			283,530
<u>Refresher Training</u> NPO/ANPO	Nut. Acad.	100			16	1,600	34	3,400	67	6,700	11,700
Training Officers	Prov. H.Q.	40			9	360	27	1,080	60	2,400	3,840
ANPO	Sub. Dist.	15			18	270	72	1,080	183	2,785	4,135
Village Cadres	Sub. Dist.	10			500	5,000	2,000	20,000	3,120	31,200	56,200
						7,230		25,560		43,085	75,875
Total Costs				41,425		123,360		173,535		43,085	381,405

INDONESIA NUTRITION DEVELOPMENT PROJECT

NIPP Motivation Workshops

	No. of Days	Cost per Person per day	YEAR 1			YEAR 2			YEAR 3			Total Costs US\$
			No. of Areas	No. of People	Cost US\$	No. of Areas	No. of People	Cost US\$	No. of Areas	No. of People	Cost US\$	
National	5	\$48.20	1	20	4,820	-	-	-	-	-	-	
Provincial	7	25.80	2	40	7,224	2	40	7,224	3	60	10,836	
Kabupaten	7	17.20	2	40	4,816	2	40	4,816	3	60	7,224	
Sub-District	7	5.20	6	120	<u>4,368</u>	12	240	<u>8,736</u>	19	380	<u>13,832</u>	
					21,228			20,776			31,892	<u>73,896</u>

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Intervention Pilot Project

Improved Local Storage and Processing: Cost Estimates
(US\$)

	Year				<u>Total</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
<u>Storage</u>					
Field study by food technology group	5,000				5,000
Development of prototypes	5,000				5,000
Trial of selected prototypes		20,000			20,000
Seminar and policy decisions		2,000			2,000
Extension program			50,000	68,000	118,000
Sub-Total	10,000	22,000	50,000	68,000	150,000
<u>Processing</u>					
Survey and preparation field work	10,000				10,000
Laboratory experiments and trials		12,500			12,500
Seminar and policy/program		2,000			2,000
Extension program		5,500	10,000	10,000	25,500
Sub-Total	10,000	20,000	10,000	10,000	50,000
Total	20,000	42,000	60,000	78,000	200,000

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Intervention Pilot Project

Job Description and Qualifications

National Coordinator for NIPP

Job Description

1. The National Coordinator would be responsible to the Project Director for:

- (a) coordinating all sub-components of NIPP and being the normal channel of communication between the Executive Secretary and field staff;
- (b) administering the NIPP, including office and personnel management, accounting and procurement;
- (c) transferring funds on a timely basis for the sub-components activities;
- (d) arranging for the physical control and checking of project stores;
- (e) arranging for the control of transport;
- (f) arranging for staff training through the ANPO in charge of training;
- (g) supervising the establishment of village nutrition centers;
- (h) arranging for the processing, packaging, distribution and accounting for supplementary foods;
- (i) liaison with CRDN on base-line data collection; and
- (j) reporting progress through regular written reports.

Qualifications

2. Experience in successful management would be the main criterion; proven administrative ability at least at provincial level and experience in dealing with government departments and procedures would be essential; a sound basic knowledge of nutrition would be desirable.

Nutrition Program Officer (Provincial)

Job Description

3. The NPO would be responsible to the Governor of the Province for:
- (a) coordinating NIPP activities within the province;
 - (b) being the channel of communication between the National Coordinator for NIPP and field staff;
 - (c) being the project representative on the UPKG provincial committee;
 - (d) arranging for the monitoring of progress, as agreed with CRDN and the monitoring and evaluation unit in the Ministry of Health and for evaluating the data to assess results achieved by the differences between actual and planned action, unanticipated problems, and for instigating immediate action to deal with them;
 - (e) supervising the work of the audit unit in checking on supplementary food production, distribution and utilization and on accounting for the food at all stages; and
 - (f) reporting to the Governor and to the NPO Headquarters as required.

Qualifications

4. Experience in management and supervision would be the main requirement, proven administrative ability and experience at provincial level of dealing with government departments and procedures would be essential. Ability to collaborate harmoniously with colleagues and facility in presenting proposals to those in authority or to committees would be important. A basic knowledge of nutrition would be desired.

Assistant Nutrition Program Officer (Training) Headquarters

5. ANPO (Training) would be responsible to the National Coordinator for:

- (a) coordinating all training activities within the component;
- (b) preparing with assistance from a training consultant: the curricula for national courses for NPO and ANPO, provincial courses for Training Officers, and Kabupaten courses for VANPO;
- (c) organizing and running courses, with assistance from a training consultant, for NPO and ANPO and for Training Officers;
- (d) arranging for the production of teaching aids for training courses; and
- (e) reporting progress on training as required.

6. High level experience in training and extension would be the main criterion, with experience of organizing and running courses at national level. A sound knowledge of applied nutrition would be essential.

Assistant Nutrition Program Officer (Kabupaten)

Job Description

7. The ANPO (Kabupaten) would report to the Bupati (Chief Executive) of the Kabupaten and be responsible for:

- (a) administration of the sub-component within the Kabupaten;
- (b) control of component expenditure;
- (c) control and security of project stores;
- (d) control of transport;
- (e) arrangements for adaptation or construction of village nutrition centers;
- (f) direction of ANPO (sub-district), VANPO and village cadres;
- (g) organization of the processing, packaging, distributing and accounting systems for the supplementary foods;
- (h) representing the NIPP component on the Kabupaten BPDG;
- (i) liaison with health, agriculture, cooperatives and marketing, education and water authorities; and
- (j) reporting on progress as required.

Qualifications

8. Experience of successful management at Kabupaten level would be the main criterion, with proven ability in handling a large staff and in collaborating with colleagues. A basic knowledge of nutrition would be desired.

Assistant Nutrition Program Officer (Kabupaten/Training)

Job Description

9. The ANPO (Kabupaten/Training) would be responsible to the Bupati for:

- (a) coordinating all nutrition training within the Kabupaten, as directed by the ANPO (training headquarters);
- (b) organizing and running the courses for VANPO;
- (c) supervising the courses run by training officers for the village cadres;
- (d) organizing in-service and refresher courses as required;
- (e) collaborating with the ANPO (Kabupaten) in running seminars and workshops for key personnel at Kabupaten and sub-district levels; and
- (f) reporting on progress in training as required.

Qualifications

10. Experience in training and extension would be essential and a sound knowledge of nutrition desired.

Nutrition Education Consultant

Job Description

11. The nutrition education consultant would advise the Project Director and assist the National and Provincial NPO in:

- (a) identifying the content or topics for appropriate nutrition education;

- (b) formulating the messages relevant to the content or topics;
- (c) designing a nutrition education program based on these messages;
- (d) preparing teaching aids to support the program;
- (e) selecting equipment suitable for the program;
- (f) preparing (i) a simple manual on nutrition education suitable for contact personnel and (ii) a manual suitable for supervisory personnel;
- (g) developing the organization of nutrition education using all available media and methods;
- (h) coordination with the Center for Manpower and Training, Ministry of Health;
- (i) developing an evaluation system for nutrition education;
- (j) integrating the program of the NIPP areas with the other nutrition education programs of the Government of Indonesia; and
- (k) other appropriate tasks as required by the Director General of Community Health.

Qualifications

12. The nutrition education consultant would be familiar with the techniques and content of nutrition education suitable for a program in a developing country, where a proportion of the adults are illiterate, the socio-economic level is low and the available, low-priced foods are limited. The specialist would have experience in how to identify motivating factors in the community and be able to use this knowledge in defining a nutrition education program. The specialist should have the ability to communicate effectively with others at a variety of educational levels.

Nutrition Training Specialist

13. The Nutrition Training Specialist would advise the Project Director and assist the ANPO (Training) to:

- (a) prepare the curriculum for a training course for NPO and ANPO based on two major aspects: (i) planning and management and (ii) basic nutritional knowledge;

- (b) prepare or arrange for the necessary teaching aids for the course;
- (c) assist the Ministry of Health in the preparatory arrangements for the course;
- (d) establish good working arrangements with all involved in the nutrition project; especially in the NIPP component;
- (e) prepare detailed notes for the course as a guide to counterparts;
- (f) conduct the first three month course;
- (g) review the achievement of the course and adjust the curriculum and subject matter as necessary;
- (h) conduct the second three-month course;
- (i) advise on the training of Village Assistant Program Officers (VANPOs) and village cadres;
- (j) review the achievement of the VANPO and village cadre courses and advise on adjustments required; and
- (k) undertake other appropriate tasks as required by the Director General of Community Health.

Qualifications

14. The nutrition training specialist would be familiar with planning and implementing successful nutrition programs in developing countries, and with the techniques of teaching such planning and implementation. The specialist would have experience of instructing and guiding counterparts so that those engaged on the NIPP senior training program would be capable of running the NPO/ANPO course in the third year.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Anemia Prevention and Control Pilot Project - Plantations

Introduction

1. The adult human body contains 3-4 g of iron, of which more than two-thirds is in haemoglobin, the pigment of the red blood cells. The daily iron loss of an adult man weighing 65 kg is about 0.9 mg. Absorption of iron takes place in the stomach and through the small intestine. While about 30 percent of iron in meat is absorbed, only about 10 percent of the iron present in cereals, vegetables and pulses is absorbed. (Intake of vitamin C could facilitate a higher absorption of ingested iron.)

2. Iron deficiency anemia occurs when losses of iron from the body are not balanced by absorption of sufficient iron to compensate for both normal and abnormal losses. Lack of iron is reflected by a deficiency of haemoglobin. This affects physical capacity by reducing the availability of oxygen to the tissues. The combination of a poor dietary intake of iron and bleeding from hookworm infestation are the most common causes of iron-deficiency anemia in Indonesia.

Research on Nutritional Anemia and Productivity

3. A 1973 study 1/ of a sample of male construction workers found anemia in 52 percent of workers in Rentang, 45 percent in Dalardarma and 28 percent in Halim. The level of anemia in adult males in Indonesia is the highest ever recorded under non-famine conditions for this disease. Hookworm infestation was found in 85 percent of samples at all sites. It was concluded that there was a high incidence of nutritional anemia due to poor utilization of iron in the diet and iron loss from hookworm infestation. There was also sufficient evidence that anemia interferes significantly with workers' physical endurance.

4. A follow-up study 2/ was undertaken in 1974, to compare productivity levels of anemic and non-anemic workers. A sample of 300 workers were given

1/ D. Karyadi and S. S. Basta, Nutrition and Health of Indonesian Construction Workers: Endurance and Anemia. IBRD Staff Working Paper No. 152, 1973.

2/ S. S. Basta and A. Churchill, Iron Deficiency Anemia and the Productivity of Adult Males in Indonesia, IBRD Staff Working Paper No. 175, 1974.

a pill daily; some received a pill containing 100 mg elemental iron and others a placebo. Productivity before and after treatment was measured by the weight of latex tapped per day by workmen or the total area excavated by weeders in a five-hour day. The output of anemic tappers before treatment was 19 percent below that of non-anemic tappers. After iron treatment, output of anemic workers reached the level of the non-anemic tappers. Those anemic tappers who received a placebo remained about 15 percent below the productivity of their counterparts treated with iron. Among weeders, the productivity of anemic workers was about 25 percent below that of non-anemic workers. The former anemics whose haemoglobin levels rose as a result of treatment also cultivated a significantly (up to 25 percent) larger area than the anemic groups whose haemoglobin levels did not rise. Treatment of anemic workers with daily pills containing iron brought about an increase in productivity of about 20 percent.

5. The two studies concluded that attempts to correct iron deficiency of anemic workers would lead to substantial increases in productivity. The costs of iron supplementation per man-year were less than a dollar, which indicates best the very high benefit-cost ratio.

6. If ferrous sulphate pills could be continually given, the anemia could be cured. In actual practice, however, a problem occurs after about 60 days of treatment, when nausea appears as a side-effect and the Indonesian experts have therefore been searching for alternative solutions. One solution suggested has been the fortification of salt with iron.

Fortification of Salt

7. Unlike the addition of vitamins, the fortification of salt with iron presents certain technical difficulties. Chief among these difficulties are that iron compounds, which are even slightly soluble in water, affect fortified foods by causing changes in color, odor, and cooking quality. Insoluble iron compounds are absorbed much less readily than soluble iron compounds. One of the successful methods ^{1/} has been to fortify salt with ferric orthophosphate, a stable iron compound, and to use sodium bisulphate to promote absorption. So far, this has been found to be satisfactory although costs are higher than for ferrous sulphate. Pilot tests are underway in field conditions in India utilizing iron-fortified salt. At a level of 1,000 parts per million, fortification of salt with iron orthophosphate would provide 1 mg iron per gram of salt. Estimates of salt intake range between 2 kgs per capita per year and 4 kgs per

1/ Fortification of Common Salt with Iron: Effect of Chemical Additives on Stability and Bioavailability. Narasinhga Rao, B.S. and Vijayasaratthy. "The American Journal of Clinical Nutrition", December 1975.

capita per year -- a mean of about 8 grams per capita per day 1/. Given an absorption rate of 4 percent, salt fortified with about 1,500 ppm would provide about 0.5 mg of additional absorbed iron per day, which would be over half the recommended iron allowance for adult males 2/.

Component Description and Objectives

8. Since the relationship between treatment of nutritional anemia and productivity has been revealed (see paras. 3 to 5 above), the main objective of this component is to test:

- (a) the logistical feasibility of establishing a delivery system for iron supplementation, and
- (b) the economic implications on output and employment.

9. Three pilot areas would be selected: one in East Java consisting of two government owned plantations, each with about 500 workers, one plantation with health services and the other without such services; one government plantation in North Sumatra, with about 1,000 workers and health services. The inclusion of 10 small, privately owned plantations each employing about 100 workers in South Sulawesi and West Sumatra is planned at a later stage, provided the Directorate General of Manpower Protection and Care of the Ministry of Manpower, Transmigration and Cooperatives can establish a delivery and health system in these localities.

10. The project provides financing for:

- (a) the supply of iron pills to cure nutritional anemia among plantation workers;
- (b) medication and provision of shoes for tackling the problem of hookworm infection;
- (c) imports of iron fortified salt in the initial stage, to be followed by local salt fortification as needed for the project;
- (d) arrangements for delivery of iron fortified salt to workers to ensure that an adequate iron level is maintained; and
- (e) monitoring and evaluation.

1/ Estimates of salt consumption derived.

2/ Handbook of Human Nutrition Requirements. FAO Nutrition Studies No. 28: WHO Monograph Series No. 61, 1974.

11. The anemic laborers would be provided with a daily pill containing 70 mg iron in the form of ferrous sulphate. These pills would be distributed by paramedical staff where there are health facilities and by junior staff of the management or owners in other instances. The distribution staff would be required to observe the taking of the pill. The therapy would be given for about 60 days after which haemoglobin levels should become normal. The hypothesis is that once haemoglobin levels are normal they can be maintained at a normal level through adequate iron intake in the diet. The Ministry of Health would procure internationally iron fortified salt while the National Institute of Industrial Hygiene and Occupational Health (NILHOH) will make arrangements for its distribution to the selected estate laborers and their families. The absorbable iron available in fortified salt (0.5 mg per person per day) is believed to be a sufficient addition to the present diet to maintain the required iron intake.

12. The daily loss of blood due to hookworms may amount to 3 millimeters per 100 worms. Where infestation is heavy the loss can be a major factor in nutritional anemia. At the beginning of the period of iron therapy, anti-helminthics would be used to deal with the hookworm infestation. Simultaneously, action would be taken to prevent reinfestation by the provision of boots, latrines and education in personal hygiene.

13. Through nutrition education, efforts would be made to improve the iron content of diets and the intake of vitamin C which ensures a better iron absorption. The best food sources of iron are meat, fish, poultry and eggs, all consumed in small quantities because of cost. The second best sources are green leafy vegetables, soybeans, other legumes, potatoes and whole grain cereals (polished rice has a low iron content). Since most plantation workers are landless, green leafy vegetables are not consumed in sufficient quantities. Plantation management would, therefore, provide small plots of plantation land for laborers to enable them to grow their own vegetables.

14. The scientific and technical design of the project would be the responsibility of the CRDN and the NILHOH, while the field work would be carried out by the Regional Institution of Industrial Hygiene and Occupational Health (RILHOH). The latter two institutes are under the Directorate General of Manpower Protection and Care of the Ministry of Manpower, Transmigration and Cooperatives. Preliminary visits to plantation areas would be undertaken by CRDN and NILHOH to brief management and workers, and to finalize plans of operation. These visits would be followed by a base-line data survey, which would include determination of haemoglobin in the blood and infection. Simultaneously, data would be collected on the productivity levels of the workers according to specified objective criteria.

Evaluation

15. The final evaluation, which will be undertaken by NILHOH in cooperation with CRDN, would include medical tests (haemoglobin and hookworm infection) which are essential for determining the effectiveness of the action

taken. Initially, the iron supplementation would be given on a grant basis, with an average annual cost of less than US\$1 per person. If, as is expected, the increased productivity of anemic workers would be significantly greater in value than the cost of iron supplementation and helminthic suppression, then a general application of the measures would be initiated by government regulations with the individual estates bearing the cost. Should this situation arise, NILHOH would have to be strengthened in order to initiate, implement and monitor a national program. Provision has been made for such possible action.

Management

16. The coordinator for NIPP, in the Ministry of Health, would have administrative responsibility for the component. CRDN would be responsible for the sound scientific basis for action. NILHOH would be responsible for the operational action, through delegation to RILHOHs, each of which would work in close collaboration with the Directorate General of Plantations, Ministry of Agriculture.

Costs

17. The estimated cost of the component would be \$174,000. Details of cost are given in Appendix 1.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Costs of Anemia Prevention and Control Pilot Project - Plantations

US\$ '000

	Year 1	Year 2	Year 3	Year 4	Local	Foreign	Total
<u>Non-Construction</u>							
1. <u>Equipment</u>							
a. Vehicles	15				9	6	15
b. Equipment for biochemical Determinations	10				3	7	10
2. <u>Operating Costs</u>							
a. Project Preparation	2.8				2.8		2.8
b. Base-line Data	4	22			26		26
c. Iron Therapy		10			5	5	10
d. Iron Salt Supplementation		6	6		6	6	12
e. Anti-helminthic Treatment		7	3		5	5	10
f. Provision of Protective Boots		22.5			22.5		22.5
g. Construction of Latrines		6	6		12		12
h. Other	2.2	0.5	1		3.7		3.7
3. <u>Evaluation</u>			12	8	20		20
4. <u>Extension to Other Plantations</u>				30	30		30
	34.0	74.0	28.0	38.0	145.0	29.0	174.0

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Communication and Behavioral Change

1. The Presidential Instruction (INPRES) of September 1974 requires improvement in the variety, quantity and nutritional quality of foods consumed by all levels of society in all regions of Indonesia, but this will depend on changing food behavior in order to optimize the use of available food supplies. The ANP Evaluation Study 1973 1/ found that even in the better off families 41 percent were deficient in both protein and calorie intake. This finding gives an indication of the lack of knowledge about the use of available food. Food habits relating to choice of foods, methods of preparing and cooking foods, distribution of foods within the family, weaning practices and feeding the sick child are likely to be responsible for the gap between food availability and consumption.

2. Earlier attempts to improve utilization of available foods through nutrition education concentrated on five food groups: (a) carbohydrates; (b) vegetables; (c) fruits; (d) animal protein and (e) dairy products. These education efforts were not directed to the poor who in any case would have found animal protein or dairy products well beyond their means. In the absence of baseline data and systematic evaluation methods, the possible impact of the education programs could never be determined. A detailed study of food habits in Indonesia has shown how cultural taboos affect food consumption patterns and lead to adverse nutritional results. Apart from income considerations, behavioral constraints are some of the critical factors in bringing about improvement in nutritional status.

3. The proposed component on nutrition communication would determine the degree to which behavioral constraints can be modified and what methods would be most effective, taking into account the costs. Knowledge of existing food habits, patterns and beliefs would form an essential base from which to plan and measure desirable change. Such data would be used, in conjunction with information on attitudes and knowledge as a baseline for the proposed action. In three selected sub-districts, data would be collected on quality of food consumption as well as on behavioral aspects. Following an assessment of the nutritional problems and their likely causes, suitable educational methods would be devised and available media and agency activities would be coordinated to launch a practical and integrated approach to nutrition education. The experience gained in these three selected areas would assist the Government in the preparation of a national nutrition education campaign to be part of the national nutrition program which is expected to be implemented during the Third Development Plan.

1/ An evaluation study of the results of the Applied Nutrition Program 1963-73, was carried out by Prof. Sayogyo. The study included a food consumption survey of 920 households from villages where the ANP program has been applied intensively.

Component Objective and Activities

4. The general objective would be to develop measures to bring about desirable changes in nutrition behavior in three selected areas for replication on a national scale, by identifying the most critical behavioral constraints. Among the specific activities to be undertaken to achieve this objective would be to:

- (a) decide on the know-how and skills required to overcome behavioral problems and implement remedial measures;
- (b) select the content of nutritional messages, to design their form, select the appropriate media mix to be used and the methods of operation;
- (c) train village cadres as the contact personnel, sub-district staff to supervise them and technicians to handle the communications equipment;
- (d) hold seminars at national and provincial levels to make decision makers aware of the education program;
- (e) hold workshops at Kabupaten, sub-district and village levels to explain the knowledge and skills required and the methods to be used;
- (f) carry out the planned program in each selected village, with continuous monitoring, feedback and adaptation, if required;
- (g) evaluate the changes in behavior relating to food and nutrition;
- (h) identify the contribution of mass media and prepare and test material potentially useful for wider application; and
- (i) develop feasible and replicable techniques in nutrition education and communication, for subsequent inclusion in the national nutrition plan.

5. The national strategy for regional development involves concentration of inputs from various sectors in the same community. During the first year of the Second Five-Year Development Plan, 148 sub-districts were selected as Units for Community Development (UDKP), three of which would be chosen as the operational areas for this component, one of which would be in a NIPP area. The designated component director, in collaboration with the local authorities, selected three UDKP sub-districts. In Central Java, the selected area is situated on a fertile area of the Merapi volcano, where the leadership is strongly influenced by the local Islamic Training Center. The sub-district in Yogyakarta

is in a densely populated area, whereas the site in South Sumatra has a population, scattered in clusters over a wide geographic area. The three areas comprise 36 villages with about 110,000 direct beneficiaries.

6. Baseline information would be established from a random sample of 300 families in each area, describing food habits of the population before the beginning of the education program to be used for planning the education program and later for the evaluation of its effectiveness. The CRDN would be responsible for the baseline survey and evaluation, using the same parameters as for evaluation of other components. A consultant 1/ would assist CRDN to design the content and methodology for the collection of information on food habits.

7. A communications expert would decide on the basis of available information (food habits and nutritional problems), the form of the message, the media mix to be used, the timing of the communication and the preparation of any teaching aids to support or reinforce the message impact. All messages would be tested with a sample from the selected communities, to ensure that the message would be interpreted and understood as intended.

8. The messages would be communicated through village cadres, the utilization of audio-visual equipment and seminars. The messages would be simple and would be based on the research findings at CRDN, FTDC, and other research centers. Working manuals and suitable teaching materials would be developed, pretested and produced. These materials would be in accordance with the particular food and nutrition problems, cultural conditions, educational standards, and resources of the specific areas where they would be used.

9. Village cadres would engage in inter-personal communication with members of the communities. They would be individuals, mostly women, selected by the village people from among members of voluntary organizations (PKK), or community development workers, paramedical personnel or informal leaders. One cadre would be responsible for 50 households, so that on an average each village would have 12 cadres. Sub-district supervisors would be appointed on the basis of one supervisor for three villages. Since the effectiveness of the cadres would depend on the on-job training and the quality of supervision received, sub-district supervisors would be trained to provide the necessary supervision. The supervisor would be responsible for training and supervising the village cadres, who would receive one month's initial training at the sub-district health center. The training of all cadres in a sub-district would require four months, with one course at a time using the facilities.

1/ See Appendix 4 for job description.

10. After the initial training of cadres is completed, the supervisors would be responsible for organizing periodic meetings of cadres as a means to feedback information and as an opportunity to provide advice and encouragement to the cadres.

11. Interpersonal communication would be supplemented and complemented in the villages by various methods and media. Each sub-district would be provided with communications equipment: projectors, screens, tape-recorders, camera and video-tape. Two technicians for each sub-district would be trained to use and maintain the equipment. In particular they would be trained in using the video-tape and tape recorders to simulate television and radio broadcasting. Through feedback from the use of this equipment, "soft-ware" would be developed for mass media use in the national nutrition program.

12. Technical assistance would be provided for training technicians in the use and maintenance of equipment and in planning the development of mass media communications. It is important that development of "soft-ware" for mass media should be undertaken as part of this component so as to prepare for the expected expansion of community based television and radio broadcasting being carried out currently and to be enhanced by the communication satellite already launched. 1/ Close liaison with the Office of Educational Development, Ministry of Education, would ensure that the nutrition "soft-ware" would be incorporated in the overall program of mass communication.

13. The component includes a series of seminars for key personnel and working level staff in the ministries and agencies involved in the nutrition development project. At national and provincial levels, seminars of one day's duration would be held for high level key staff to create awareness of the project and to solicit their support for the project activities. Short seminars would also be held at the end of the project period to report on results and to seek expansion to a national program. At Kabupaten and sub-district levels, workshops of longer duration would deal with details of the various activities.

1/ There is a main TV station in Jakarta, and two regional transmitters catering to 360,000 TV viewers, and three regional stations. The Government has provided 600 TV sets at district level, and in 1976, is expected to distribute another 6,000. Radio sets are owned by 35 percent but listened to by 70 percent of the population. An expansion of all main media services with TV and radio covering the whole of Indonesia is planned for 1976. There is a Government Film Production Center, which produces weekly national newsreels, and around twelve half-hour films a year. The Ministry of Information has a number of mobile cinemas that show films to the villages every three months.

Organization and Administration

14. The Director in charge of the component would be the Chairman of the Center for Manpower Training, Ministry of Health, who would work on a part-time basis. The Director would be assisted by four full-time staff, two of whom would be nutritionists and the others a health educator and an administrator. One would be responsible for data collection, analysis and interpretation, and development and evaluation of nutrition messages. The second would undertake selection of field staff, their training and supervision. The third would organize seminars and workshops and be responsible for feedback and reports. As and when required, the Director of this component would seek consultant assistance from the Project Director.

15. A member of the Provincial Committee for Better Family Nutrition would be appointed as the provincial supervisor of this component. He would keep the committee informed of component activities and would receive advice from the committee. There will also be part-time supervisors at Kabupaten and village levels. The Kabupaten supervisor would be assisted by two part-time officers, one of whom would have special responsibility for training and the other for personnel, finance and procurement. The organization chart is in Appendix 1.

Technical Assistance

16. The component would provide 12 man-months of technical assistance for expatriate advisors and 35 man-months for local advisors and consultants. The experts would be required for the baseline data collection and evaluation of behavioral change; the form and design of the messages, the selection of media, the testing of material and evaluation of impact; the development of nutrition components in the curricula for schools, colleges and courses; and the planning of the educational and communications component for a national nutrition program. Fellowships would be provided to train specialists in communication techniques for nutrition education.

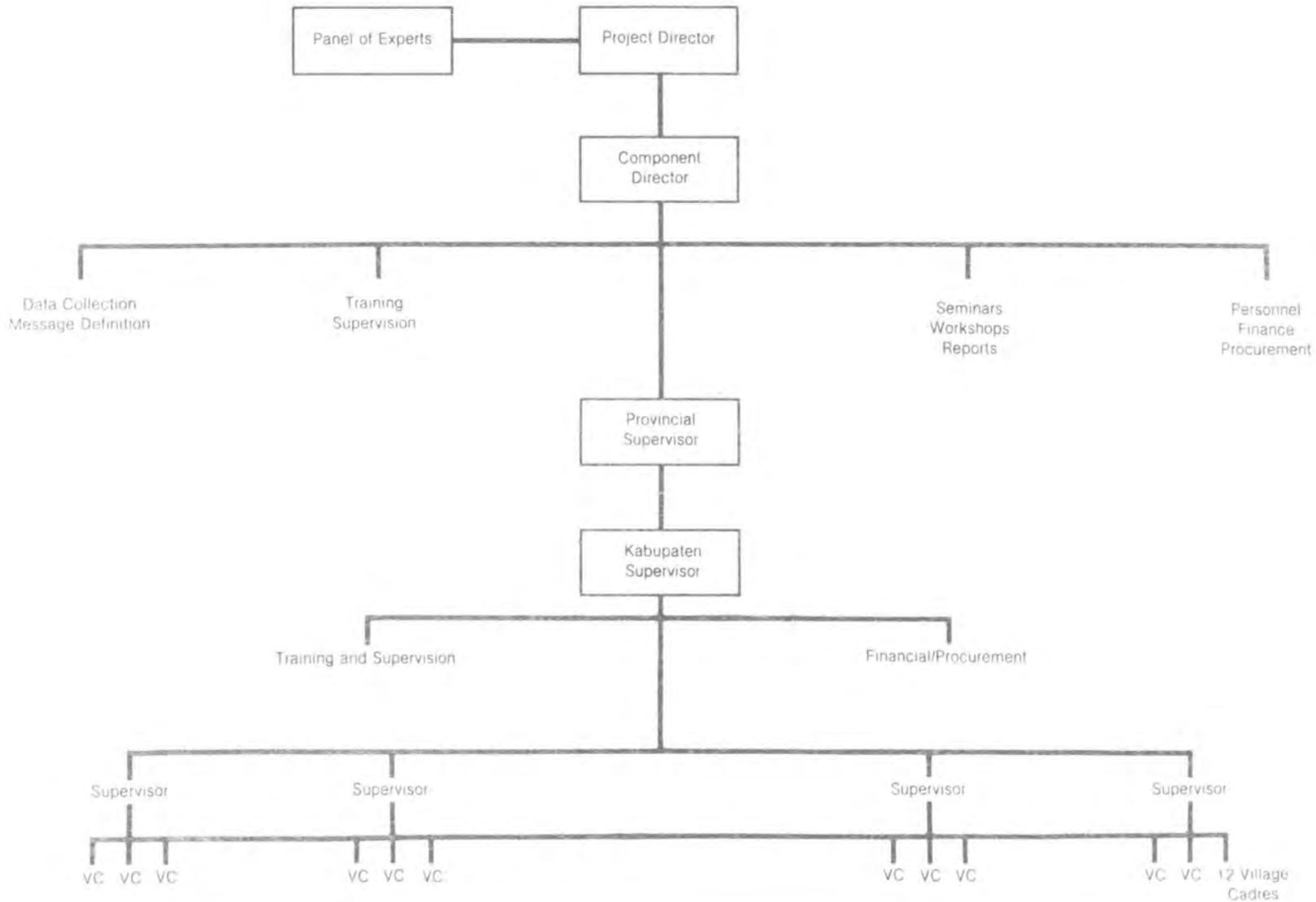
Costs

17. The total costs amount to \$1,028,000 over a four-year period. Appendix 2 provides a statement of the expenditure; Appendix 3 provides details of salary support.

Monitoring and Evaluation

18. The Director of the component would be responsible for monitoring project progress and would be advised of requirements by the Monitoring and Evaluation Unit at the Project headquarters. Evaluation is the essence of the component. CRDN would be responsible for baseline data and for subsequent surveys to evaluate changes in nutrition behavior.

**INDONESIA NUTRITION DEVELOPMENT PROJECT
ORGANIZATION OF NUTRITION COMMUNICATION AND BEHAVIORAL CHANGE**



ANNEX 6
Appendix 1

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Communication and Behavioral Change - Expenditures

US\$ '000

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
1. <u>Equipment</u>							
(a) Vehicles	10	40			20	30	50
(b) Special Equipment	15	20			8	27	35
Sub-Total 1	25	60			28	57	85
2. <u>Technical Assistance</u>							
(a) Advisors	6	41	47	12	36	70	106
(b) Fellowships	10	10				20	20
Sub-Total 2	16	51	47	12	36	90	126
3. <u>Incremental Operating Costs</u>							
(a) Salaries	25	35	45	45	150		150
(b) Mass Media	20	25	25	30	80	20	100
(c) Educational Material	50	50	50	50	150	50	200
(d) Baseline Survey/Evaluation	5	5	5	7	22		22
(e) Training	15	30	30	20	95		95
(f) Travel and Per Diem	20	20	30	30	100		100
(g) Other Expenses	20	30	50	50	150		150
Sub-Total 3	155	195	235	232	747	70	817
Total Base Costs	196	306	282	244	811	217	1,028

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Communication and Behavioral Change-Salary Support
US\$

	Part-time or Full-time	Rate Per Month	Year				Total
			1	2	3	4	
Project Director	P.T.	75	900	900	900	900	3,600
HQ Staff 4 Officers	F.T.	250	12,000	12,000	12,000	12,000	48,000
Provincial Agent 3	P.T.	48	1,152	1,728	1,728	1,728	6,336
Kabupaten Agent 3	P.T.	30	720	1,080	1,080	1,080	3,960
Kabupaten Staff; 3x2	P.T.	25	1,200	1,800	1,800	1,800	6,600
Sub-District; 3 x 5	F.T.	30	3,600	5,400	5,400	5,400	19,800
<u>Ancillary Staff</u>							
National 2	P.T.	20	480	480	480	480	1,920
Provincial 1	P.T.	15	120	180	180	180	660
Kabupaten 1	P.T.	10	80	120	120	120	440
Sub-District 2	P.T.	8	64	96	96	96	352
Technicians 3 x 2	F.T.	200		14,400	14,400	14,400	43,200
Total			20,316	38,184	38,184	38,184	134,868

INDONESIA NUTRITION DEVELOPMENT PROJECT

Consultant Job Description

1. Behavioral Scientist/Nutrition Education Consultant

To provide advice to and assist the Director of the component on the following:

- a. define the data to be collected relating to food habits, patterns and beliefs;
- b. prepare the questionnaires in a form which facilitates analysis;
- c. train the field staff in data collection;
- d. analyze and interpret the results;
- e. advise on the approaches to be used in educational process and in conveying nutrition messages; and
- f. advise on the methods for evaluation of the component.

2. Communications Specialist

To provide advice to and assist the Director of the component in the following:

- a. development of an overall strategy of communications in nutrition information and education, using both existing and innovative techniques and materials;
- b. preparation of an operational plan for the communications component of the project;
- c. coordination of communications program in nutrition between the Ministry of Health, Ministry of Education, Information, Agriculture, etc.;
- d. integration of communications techniques in the training of nutritionists, assistant nutritionists and others involved in nutrition activities;
- e. design of training programs in nutrition education in collaboration with behavioral scientists/educators;

- f. preparation and execution of studies designed to test the effectiveness of some innovative mass media techniques and materials; and
- g. evaluation of the communications component of the project.

INDONESIA NUTRITION DEVELOPMENT PROJECTManpower TrainingTraining for Nutritionists

1. The Academy of Nutrition is the main institution engaged in training nutritionists and dieticians 1/. Students start the course after 12 years basic education and graduate with a B.S. at the end of 3 years. Most of the graduates are employed by the Ministry of Health as community nutritionists in provinces and Kabupatens or as dietitians in the larger hospitals. Other institutions that offer nutrition courses as a major subject are the Teachers Colleges, but the output from these colleges is low due to limited teaching facilities. The Agricultural University of Bogor also offers courses in nutrition, but with emphasis on food technology rather than community nutrition.

2. The Second Five Year Development Plan (1974-79) makes provision for expansion of the nutrition staff in the Ministry of Health, to allow for five nutritionist in each of the country's 26 provinces and one for each of the 286 Kabupatens and urban districts. As far as possible, a dietitian would be posted to each of the 588 government hospitals. More of the additional manpower requirement would have to be trained by the Academy of Nutrition. With its present enrollment of 100 students a year and an average annual rate of 25 graduates, it would take the Academy, however, more than 25 years to meet the demand.

The Nutrition Manpower Component

3. Unless the output of nutritionists can be accelerated over the next 10 years, the Government's nutrition interventions would be severely constrained. Upgrading and expanding the Academy would permit doubling the present enrollment to 200 students by 1980 and an average yearly output of 60 graduates. This objective can be achieved by providing financing for:

- (a) increasing the full-time faculty to 24 2/ by providing fellowships;

1/ Since 1951, it has produced 352 nutritionists, 198 females and 154 males. According to 1973 records, 77 percent of all graduates were employed. Lower level training of nutritionists is part of the training of health personnel in the provinces.

2/ The Academy has currently 39 teaching personnel, of whom only 14 are full-time faculty members, six with Master's degrees and eight with Bachelor's degrees, mainly from the Academy.

- (b) providing two additional teaching laboratories, an audio-visual room and a library together with appropriate facilities and equipment;
- (c) modifying the curriculum to make it relevant to the needs of Indonesia and the national nutrition program; and
- (d) providing annual scholarships to 24 outstanding students.

Staff Development

4. There is need to upgrade the existing staff while it continues to provide the ongoing training programs. The full development to a faculty of 24 ^{1/} would require about ten years, but recruitment would start in the first year and a total staff of fourteen would be recruited during the four year period. For this purpose, fellowships would be provided for one staff member to take an M.S. in Indonesia, five staff members to take an M.S. abroad, and two staff members would be candidates for Ph.D. In addition, during years 2, 3 and 4, two persons per year would undergo training abroad on 6 month fellowships. In-service training would be provided to 12 teachers a year to keep them up to date with new developments.

5. The Academy would establish a recruitment and selection committee which would draw up criteria for selection and evaluation of prospective faculty members. Policies to ensure retention of faculty, especially those sent for training, would be formulated and enforced.

Curriculum

6. The implementation of Government's nutrition policy would require not only increased manpower for nutrition but also a reorientation of the job description of community nutritionists and consequential changes in the training curriculum. The job description of a community nutritionist would be to:

- (a) conduct nutrition counselling;
- (b) organize institutional feeding, where appropriate;
- (c) assist in planning nutrition action programs for groups and communities; and

^{1/} One in Biochemistry; five in Food Science; six in Community Nutrition; six in Dietetics; three in Behavioural Sciences; and three in Management.

- (d) assist in collecting, analysing and interpreting data about nutritional status of communities; related agricultural and health activities; and sociological and economic factors of the population.

7. The Academy's curriculum is currently being re-examined and revised. Contacts since 1973, by the Academy with the Food Institute, East-West Center, Hawaii led to a technical assistance program in 1975. Continuing assistance will be provided to gear the curriculum to the changing job functions.

8. Under the new curriculum, first and second year students would be required to undertake annually two weeks of field work in villages. During the first year of study the emphasis could be on rural family life; the second year's work would be devoted to food production, marketing and processing. Third year students would undergo intensive field training for four months in institutions, village hospitals and health centers to gain experience in institutional feeding, nutrition surveys, and nutritional health and agricultural intervention programs aimed at improved nutritional status of communities. Towards the end of the field training period, students would receive intensive guidance to prepare them for work in the communities.

Scholarships

9. During 1950-1965 the Ministry of Health provided a subsidy for every student admitted to the Academy, which covered board, lodging and tuition. In 1965, when the Academy was moved from Bogor to Jakarta the Government discontinued this subsidy. As a result, recruitment became restricted to students who lived in the city and whose parents could afford to provide the necessary financial support. This brought a marked drop in student recruitment, since students from Jakarta were not attracted to work in the rural areas. It would be advantageous if recruitment could focus on those who have worked for two or three years in community development, agriculture, health or education in rural areas and who have shown talent and aptitude for work in rural communities. To encourage this, 24 scholarships would be offered each year so as to broaden and improve recruitment. On completion of the course there would be an obligation to work as a community nutritionist for a certain period.

Physical Facilities

10. The Nutrition Academy is part of a bigger complex for health training; lecture rooms are shared. The Academy's building is comparatively small in size and modestly equipped. The present teaching laboratories can accommodate groups of 24 students. Doubling the enrollment would require the provision of two further teaching laboratories. The library facilities are inadequate and a new library would be constructed with facilities attached for the preparation of audio-visual aids. Detailed equipment lists have been prepared and appear to be appropriate for the needs of the Academy.

11. Salaries for full-time staff at the Academy are according to the standards for educational institutions. In general, salaries are low and there are fewer fringe benefits compared with equivalent positions in ministries. To attract higher level staff there is need to provide greater rewards. In Jakarta, housing is a major problem, and a strong inducement to attract good staff would be a housing provision. Six modest houses would be built for this purpose.

Organization and Management

12. The Chairman, Center for Manpower Training, Ministry of Health, would have responsibility for the component. The Nutrition Academy would be under the administrative direction of the Director of the Academy, assisted by a Secretariat and the heads of three administrative departments - Instruction, Community Service and Research and Evaluation. In addition there would be five academic departments, each under a coordinator. The organization chart is in Appendix 1. Technical assistance will be provided for instruction in the preparation of simple teaching aids and in the use and maintenance of communications equipment to be used in the Nutrition Academy.

Training of Nutritionists of Other Levels

13. Assistant nutritionists and dieticians are trained at the Nutrition High School. Entry is after 9 years of basic education and the course last for three years.

14. The training of graduate and post-graduate levels of nutrition is the responsibility of the Ministry of Education. In that capacity, the School of Public Health, University of Indonesia, is developing an area of study on organization and administration of Community Nutrition. Key personnel in nutrition would be trained in this school. Eight of the eleven medical schools in Indonesia offer courses in nutrition. Coordination among these institutions would be established so that they could strengthen and complement each other and avoid duplication.

15. The training of higher level nutritionists necessary to staff the Center for Research and Development in Nutrition and the Food Technology Development Center would be the responsibility of the Ministry of Education (see Annexes 2 and 3 for detail).

Training for Agriculture Extension Staff

16. In order to improve the effectiveness of the agriculture extension staff in the field of nutrition, a provision would be made to provide for inclusion of nutrition and home gardens into the curricula of the agricultural high schools and the agricultural training and extension centers. Agreement has been reached with the Agency for Education, Training and Extension of the Ministry of Agriculture (supported through the Agricultural Research and Extension Project, Loan 1179-IND) to work out detailed

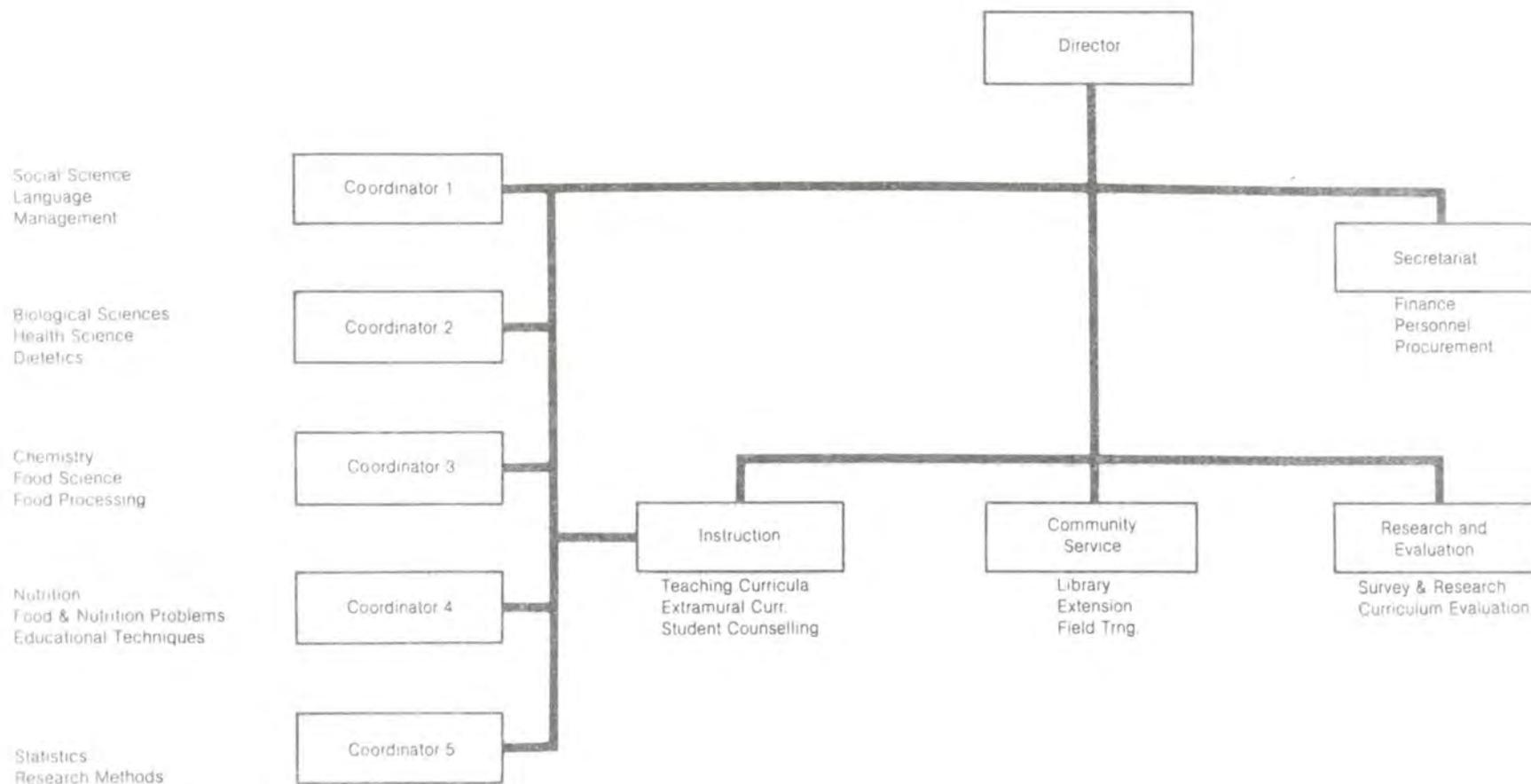
curricula. Also, agreement has been reached that training of extension workers specializing in home gardens in the NIPP areas will be undertaken through the Rural Extension Centers under the Directorate General for Food Crops Agriculture (assisted through the National Food Crops Extension Project, Loan 1267-IND).

Costs

17. With respect to the training for nutritionists the component would finance the costs of construction of additional physical facilities, furniture, equipment, fellowships for teachers and scholarships for students besides the incremental operating costs of the Academy of Nutrition. The total costs amount to US\$1,445,000. Costs of civil works are given in Annex 10 and a summary of all costs is given in Annex 11.

18. With respect to the training for agriculture extension staff, the component would finance only the incremental cost of the Agency for Education, Training and Extension and of the rural extension centers in order to expand their curricula to nutrition and home-garden training. The total costs amount to US\$259,000 essentially for curriculum development, equipment and recruitment of instructors.

**INDONESIA NUTRITION DEVELOPMENT PROJECT
ORGANIZATION OF NUTRITION ACADEMY**



INDONESIA NUTRITION DEVELOPMENT PROJECTProject OrganizationNational Organization for Nutrition

1. Presidential Instruction No. 14 of 1974 established a Ministerial Committee of 10 Ministers, chaired by the Minister of State for People's Welfare and with the following Ministers as members: Economics, Health, Agriculture, Home Affairs, Information, Education, Religion, Industry and Finance. The Committee is responsible for coordinating and implementing a nutrition program on a national scale. A Technical Commission, chaired by the Deputy Chairman of BAPPENAS, has been established by decree to provide technical support to the Committee. Appendixes 1 and 2 includes the decrees and Appendix 3 provides a diagram of the national organization for nutrition.

Project Organization

2. The management of each project component would be carried out through existing organizational channels of the Government of Indonesia. The project as a whole would be coordinated by the Director General of Community Health in the Ministry of Health who would be Project Director (part-time). Three co-directors from the Ministries of Home Affairs, Education and Agriculture would work with the Project Director who would be primus inter pares. The organizational arrangements for implementation of each project component are discussed in detail in the respective Annexes. A Chart indicating the arrangements for coordination of the project is given in Appendix 4. The Project Director would be responsible for the coordination of all project components and for providing professional and administrative support to those directly responsible for implementation: the Directors of FTDC and CRDN, the National Coordinator for NIPP and the Chairman of the Bureau for the Center of Manpower and Training in the Ministry of Health. The Project Director would have responsibilities for making withdrawal requests to the Bank. The Project Director would review the project quarterly and ensure timely disbursements of local and foreign funds to implementing agencies. A chronogram for the project is presented in Annex 14.

3. The Project Director would also be responsible for providing semi-annual reports on the program progress to BAPPENAS, the Ministers of Health, Agriculture and People's Welfare, as well as to the Bank. Mid-term and final project evaluation reports would be provided by the Project Director to the planning groups in the Ministry of Health and in BAPPENAS, to the Technical Commission and to the Bank. He would maintain liaison at the national level with governmental and non-governmental agencies associated with the project and with BAPPENAS.

4. An Executive Secretary who would be a full-time project manager would assist the Project Director with the coordination and execution of the project. The Executive Secretary would be an Indonesian administrator, senior in status and experience. Assistance to the Executive Secretary would come from a Deputy Executive Secretary, a Finance and Procurement Officer, and an Administrator. Detailed job descriptions of these officers are in Appendix 5.
5. A Monitoring and Evaluation Unit to be located with the Project Director would consist of two full-time professionals who would be responsible for defining the criteria and indicators to be monitored, the methodology for data collection, the format for reporting data, and for the analysis and interpretation of the data. The results of the analysis would be reported through the Executive Secretary to the part-time Panel of Experts consisting of 5-7 persons, to be recruited from universities or other private or governmental institutions. These experts would assist the Project Director on evaluation of the project and coordination of the different components.
6. The Center for Research and Development in Nutrition (CRDN) and the components for nutrition education and nutritional manpower training fall under the Ministry of Health and would continue to be managed by the respective Directorates. The Food Technology Development Center (FTDC) which is part of the Agricultural University, Bogor (IPB) would be under the jurisdiction of the Ministry of Education. The NIPP component, which would be managed by a national coordinator in the Ministry of Health, would, at the Kabupaten level, be under the management of the Bupati (the chief executive of the Kabupaten) assisted by an Assistant Nutrition Program Officer. The Ministry of Interior has issued instructions directing all Governors of Provinces, Bupati and Walikota (chief executive of sub-districts) to be responsible for coordinating the nutritional activities in their areas of jurisdiction.
7. It is essential that there should be close collaboration between CRDN and FTDC, but it is equally important that there should be coordination between the work of the two Centers and other research institutions in order that research programs can be more operational and have nutritional significance. The Agricultural Research and Development Organization (ARD) has been established to coordinate an integrated research program for agriculture. A Research Coordinating Committee would be established to facilitate this collaboration and coordination. The Directors of CRDN and FTDC would assume chairmanship of the Board in rotation. Membership would further consist of a professional representative from each of the organizations; a representative from ARD, BAPPENAS and a professionally qualified representative from each of the Ministries of Health, Agriculture and Industry; and a sociologist from IPB. In addition the Board would include a representative of the Directorate of Food Crops Extension so that the problems of implementation and extension would be brought to the notice of the research personnel.

8. During the first year of the project, the Committee would meet each quarter, but the number of meetings could be reduced to twice a year, when the Centers have become fully operational. The Committee's objectives would be:

- (a) to review the overall research programs of the Centers;
- (b) to review individual research proposals in order to ensure the setting of priorities, adequacy of research methodologies, the operational relevance and any need for collaboration with other Indonesian or foreign research institutions; and
- (c) to review the evaluation methodology for each research project.

Technical Assistance

9. The project provides US\$436,000 for consultants/advisors, both local and foreign, and for support to the Project Director. Included would be 84 man-months for a project management advisor, a planning consultant and procurement/financial management expert. Besides, 120 man-months of short-term local and foreign consultancies have been provided for assistance in drawing up the national food and nutrition program. Draft terms of reference for the long-term consultants have been attached (Appendix 7). Detailed terms of reference for the short-term consultants will be drawn up by the Project Director with respect to the needs of the project from time to time.

10. The project also provides US\$52,000 for fellowships to key personnel of the Project Director's Office and the Nutrition Unit in the Ministry of Agriculture. This is expected to cover the costs of travel and subsistence to neighboring countries as well as to international institutions of relevance, like INCAP in Guatemala, for five persons.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Project Organization

"UNOFFICIAL TRANSLATION"

PRESIDENT
REPUBLIC OF INDONESIA
PRESIDENTIAL INSTRUCTION OF REPUBLIC OF INDONESIA (INPRES)
No. 14 of 1974
CONCERNING THE
IMPROVEMENT OF PEOPLE'S FOOD MENU

THE PRESIDENT OF REPUBLIC OF INDONESIA

- Considering:
- a. That in the context of promoting people's welfare, various efforts have to be taken toward the improvement of the people's menu by diversifying the kinds of the people's foods and by improving its nutritional quality as well as quantity;
 - b. that to implement these efforts, continuous coordination of activities is needed on national scale.

- Noting:
1. Article 4 para(1) 1945 Constitution.
 2. No. IV/MPR/1973 The People's Consultative Assembly-Decree concerning The Basic Guidelines for State Policy.
 3. Law No. 9 of 1960 concerning Basic Health.
 4. Presidential Decree No. 9 of 1973.
 5. Presidential Decree No. 43 of 1973 concerning the main duty of the State Minister of People's Welfare.

I N S T R U C T S

1. The Minister of State for People's Welfare;
2. The Minister of State for Economics, Finance and Industry/
Chairman of BAPPENAS;
3. The Minister of Health;
4. The Minister of Agriculture;
5. The Minister of Home Affairs;
6. The Minister of Information;
7. The Minister of Education;
8. The Minister of Religion;
9. The Minister of Industry;
10. The Minister of Finance.

First To execute the activities for the improvement of the people's menu on a national scale, within the framework of cooperation among departments/institutions, using the implementation guidance attached to this presidential instruction.

- Second
- A. Especially for the Minister of State for People's Welfare: To coordinate the execution of activities for the improvement of the people's menu in line with Government policy.
 - B. Especially for the Minister of Home Affairs: To charge Governors, Bupatis and Walikota, as heads of their respective regions, with the responsibility of coordinating the execution of activities aimed at the improvement of the people's menu in their respective regions, and to give technical guidance in line with Government policy.
- Third
- This instruction takes effect as of the date on which it is issued and shall be executed in the best possible way.

Decree in Jakarta
on 13 September 1974

PRESIDENT OF REPUBLIC OF INDONESIA

(signed)

SOEHARTO

ATTACHMENT TO THE
PRESIDENTIAL INSTRUCTION OF REPUBLIC OF INDONESIA
No. 14 of 1974
13 SEPTEMBER 1974

GUIDANCE FOR EXECUTING ACTIVITIES AIMED AT THE
IMPROVEMENT OF PEOPLE'S MENU

1. Definition

The improvement of the people's menu means to diversify the kinds of people's food and to improve its nutritional quality as well as quantity, as an important effort in the national development to promote people's welfare, materially and spiritually.

2. Target

The national and comprehensive efforts for the improvement of the People's menu aims at all levels of society and at all regions.

3. Time

In the context of the execution of REPELITA II, the efforts for the improvement of the people's menu will be conducted continuously and are to be executed in the best possible way.

4. Execution

To make the efforts successful, there is a need for a variety of coordinated and nation-wide activities, followed by various departments. Institutions in the Economic and Social Sectors which functionally will organize and take part in the efforts to improve the people's menu by using their own structure and apparatus. The executive unit for the efforts to improve the people's menu is comprised as follows:

- a. Departments/Government institutions which will organize the activities and take part in the execution of the national programme for the improvement of people's menu.
- b. Associations/community organizations which voluntarily and independently will organize and take part in the execution of the national programme of improvement of the people's menu.

5. Task of the Executive Unit

1. To manage, adapt and develop the efforts for the improvement of the people's menu in line with government policy in their context and their function.

2. To present a periodic report of their activities to the Minister of State of People's Welfare through their Head of the Departments/Institutions, as a compulsory requirement.

6. Coordinating Meeting

Problems arising from the execution of activities for the improvement of the people's menu will be solved in the coordinating meeting, chaired by the Minister of State of People's Welfare and attended by Heads of the Departments/Government Institutions in the Economic and Social Sectors dealing with these problems.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Project Organization

Minister of State for People's Welfare

Decree of the Minister of State of People's Welfare
No. 03/KEP/M/KESRA/II/1975
concerning

Institution of a Technical Commission
for People's Menu Improvement

The Minister of State for People's Welfare

- Considering:
1. That, as a realization of the Presidential Instruction No. 14, 1974, on Improvement of the People's Menu, it is considered necessary to develop and strengthen an effective co-operation with the various Departments concerned.
 2. That such co-operation calls for the existence of a complementary set of machinery in the form of an Inter-departmental Technical Commission;
- Noting:
1. The Presidential Instruction to the Limited Cabinet Session on 26 November 1974;
 2. Minutes of the National Working Conference on People's Menu Improvement on 22 July 1974;
 3. Minutes of the Meeting on Co-ordinated Implementation of the Presidential Instruction (INPRES) No. 14, 1974, on 20 November 1974;
 4. The appointment of a representative of each Department concerned, regarding membership in the Technical Commission;

Decides

To establish the Decree of the Minister of State for People's Welfare on the Institution of a Technical Commission for People's Menu Improvement.

Article I

1. The composition and the names of the appointed members of the Technical Commission for People's Menu Improvement, hereinafter referred to as Technical Commission, are indicated in the attachment to this Decree.
2. In case it is deemed necessary, membership in the Technical Commission could be expanded according to need.

Article II

The Technical Commission basically functions as follows:

- (a) To define various materials for the government policy formulation on people's menu improvement.
- (b) To prepare technical/operational guidelines on menu improvement required by various operational units/agencies in implementing their menu improvement programmes.
- (c) To develop and strengthen co-ordination in the technical sector among the various departments/agencies concerned with the implementation of the menu improvement programmes.
- (d) To make a technical evaluation of how the various menu improvement programmes are being implemented, and to prepare what favourable prospects could be presented to the meeting on co-ordination of ameliorative activities, as may be found necessary.
- (e) To study various technical suggestions/instructions/reports from different sources, national as well as international, for eventual submission as discussion material to the meeting on co-ordination of the people's menu improvement programmes.
- (f) To design basic guidelines for survey and education/training programme in the menu improvement sector.
- (g) To get in touch with agencies/officials in the context of data collection.

Article III

1. The Technical Commission Chairman could set up ad hoc committees to deal with specific problems, in line with the existing needs.
2. These sub-committees could seek assistance from experts of various departments/agencies.

Article IV

To ensure continuance in action as well as the menu improvement programme activities, periodic meetings would be convened at regular intervals or at any time, as may be found necessary, by the Technical Commission. This will be further arranged by the Chairman of the Technical Commission.

Article V

The Technical Commission shall be responsible to the Minister of State for People's Welfare in the fulfillment of its mission.

Article VI

This decree takes effect as of the date on which it is established. Should an error appear in this decree, an amendment shall be effected accordingly.

Established at: Jakarta
Date: 12 February 1975

(Signed)

Soenawar Soekowati
Minister of State for People's
Welfare

Copies of this decree are
forwarded to:

1. H.E. the President of the Republic of Indonesia
2. H.E. Vice-President of the Republic of Indonesia
3. All Ministers of the Development Cabinet

Minister of State for People's Welfare

Attachment to:

Decree of the Minister of State for People's Welfare
No. 03/KEP/M/KESRA/II/1975

on

Composition of Membership of the Technical Commission for
People's Menu Improvement

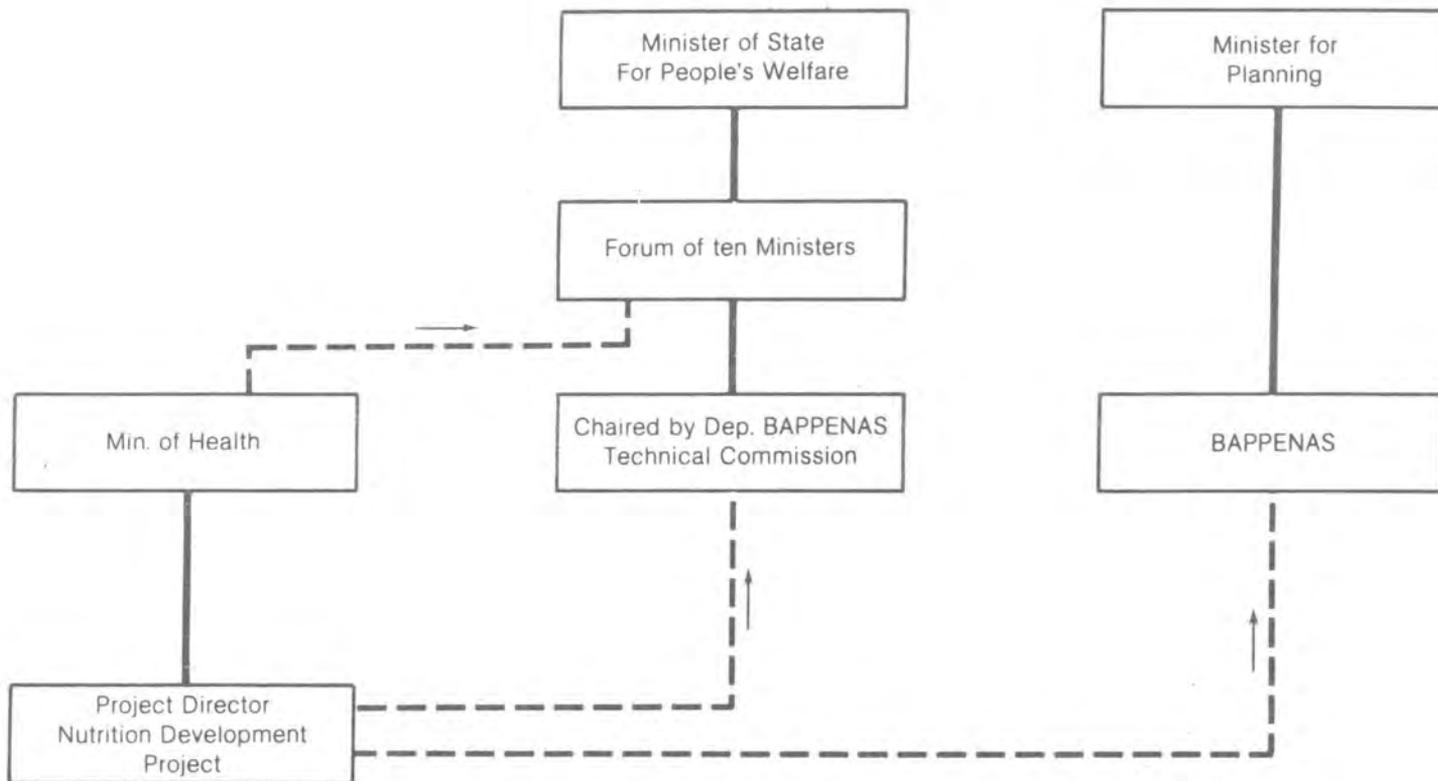
- | | | | |
|-----|--|---|----------------------------|
| 1. | <u>Soejoto, S.H.</u>
Deputy Chairman BAPPENAS | - | Chairman cum Member |
| 2. | <u>Dr. Soepardan</u>
Staff to Minister of State
for People's Welfare | - | Deputy Chairmen cum Member |
| 3. | <u>Hartono, B.Sc.</u> | - | Secretary cum Member |
| 4. | <u>Dr. Soedarso</u>
Department of Health | - | Member |
| 5. | <u>Dr. Malasan</u>
Department of Health | - | Member |
| 6. | <u>Dr. Gatot Hadisantoso</u>
Department of Social Affairs | - | Member |
| 7. | <u>Dr. O. Djojohusodo</u>
Dept. of Social Affairs | - | Member |
| 8. | <u>Dr. Dardjo Somaatmadja, Ph.D.</u>
Department of Industries | - | Member |
| 9. | <u>Dr. Suwadi Sinduredjo</u>
Department of Agriculture | - | Member |
| 10. | <u>Dr. H. Bachroen Dipo</u>
Department of Religious Affairs | - | Member |
| 11. | <u>Dr. H.A.R. Tilaar</u>
BAPPENAS | - | Member |
| 12. | <u>Dr. Suma'mur</u>
Department of Manpower,
Transmigration & Cooperatives | - | Member |
| 13. | <u>Dr. Asril Aini</u>
Department of Manpower
Transmigration & Cooperatives | - | Member |
| 14. | <u>Djoko Noeljono</u>
Department of Trade | - | Member |
| 15. | <u>Dr. Yunus A. Hamzah, M.A.</u>
Staff to Minister of State
for People's Welfare | - | Member |
| 16. | <u>Subagio</u>
Department of Information | - | Member |
| 17. | <u>Prof. Dr. Achjani Atmakusuma</u>
Department of Education & Culture | - | Member |
| 18. | <u>Soetrisno Poerwodiredjo, S.H.</u>
Department of Home Affairs | - | Member |

(Signed)

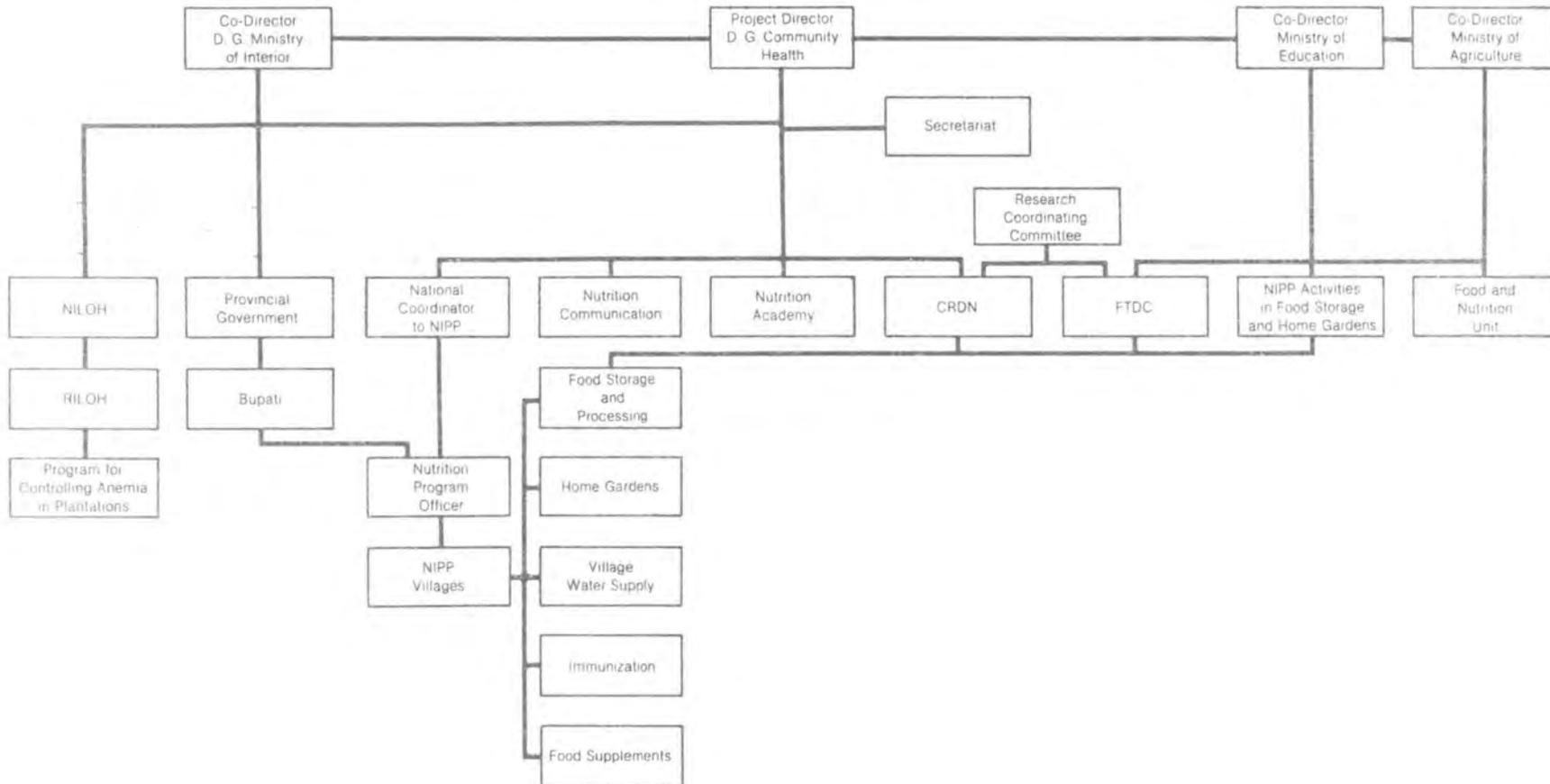
Soenawar Soekowati
Minister of State for People's Welfare



**INDONESIA NUTRITION DEVELOPMENT PROJECT
NATIONAL ORGANIZATION FOR NUTRITION**



**INDONESIA NUTRITION DEVELOPMENT PROJECT
PROJECT ORGANIZATION**



INDONESIA NUTRITION DEVELOPMENT PROJECT

Project Organization

Draft Terms of Reference for Staff of the Project Director

The Executive Secretary

Job Description

1. The Executive Secretary would be responsible to the Project Director for:

- (a) the coordination of the various components and being the normal channel of communication for conveying instructions from the Project Director;
- (b) the administration of the project, including office and personnel management, accounting and procurement;
- (c) the timely disbursement of funds to the implementing agencies;
- (d) convening monthly meetings of project officers to facilitate cooperation and communication between those responsible for components;
- (e) the consolidation of progress reports from project officers, the preparation of issues papers for referral to the Expert Advisory Committee and for drafting the semi-annual reports required by the Minister of Health, BAPPENAS, The Minister of State for People's Welfare and by the Bank.

Qualifications

2. The Executive Secretary would be a senior administrator, with at least 4 years previous experience in management and with a positive attitude towards the need for action to assist the nutritionally deprived. The coordinating role demands qualities of leadership and tact. The managerial functions would require meticulous attention to detail, while retaining understanding of the overall concept.

The Deputy Executive Secretary

Job Description

3. The Deputy Executive Secretary would be responsible to the Executive Secretary for:

- (a) continuing liaison with component project officers and their staffs; and with other relevant agencies;
- (b) identifying problems in any of the project components, arranging for speedy consideration of alternative solutions and the reaching of decisions on remedial measures;
- (c) identifying gaps in knowledge which hinder or inhibit implementation and referring such gaps in knowledge for further study or research.

4. In the absence of the Executive Secretary, the Deputy Executive Secretary would be responsible to the Project Director for the functions of the Executive Secretary. The Deputy Executive Secretary would travel, as necessary, to keep in touch with all aspects of the project.

Qualifications

5. The Deputy Executive Secretary would be a university graduate, of medium level seniority, with 2-3 years previous experience in management or administration. The Deputy Secretary should have facility for collaborating with others, an inquiring mind with quick perception and sound judgement and familiarity with potential resources for problem solving. The Deputy Secretary would require to be physically fit for extensive and arduous travel.

The Finance Officer

Job Description

6. The Finance Officer would be responsible to the Executive Secretary for:

- (a) ensuring that the Government's and Bank's requirements in regard to financial and procurement matters are met;
- (b) ensuring that appropriate accounting and auditing procedures are introduced, and adhered to, in consultation with the Bank;
- (c) coordinating the preparation of financial budgets of individual components;

- (d) preparing cash flows and estimates of expenditure for the project;
- (e) ensuring correct application for project funds;
- (f) reviewing the disbursement requests from the project officers of the components;
- (g) establishing a cost analysis and record keeping system for meaningful evaluation of cost effectiveness of individual or groups of intervention measures;
- (h) reporting to the Government and to the Bank on the financial outlays under the project.

Qualifications

7. A professionally qualified accountant with 4 years' experience at ministerial or departmental level in directing the accounting of sub-units; experience in the framing of estimates, control of expenditure, disbursement of funds and in working with high level government officials.

The Procurement Officer

Job Description

8. The Procurement Officer would be responsible to the Executive Secretary for:

- (a) ensuring correct procedures for inviting tenders, evaluating tenders and awarding contracts for civil works, vehicles, project stores and requisites;
- (b) arranging with each component for the physical control and checking of project stores;
- (c) arranging the general security for transport and warehousing.

Qualifications

9. The Procurement Officer should be qualified as a Stores Officer, with previous experience in evaluating tenders, procuring and controlling stores and equipment at least at departmental level, preferably with experience in the procurement procedures laid down by the Bank. If inexperienced in these procedures, there should be the aptitude to acquire knowledge of them.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Project Organization

Draft Terms of Reference for Advisors/Consultants to
Assist the Project Director and the Nutrition Unit

Project Management Advisor

1. Indonesia's Nutrition Development Project would require the services of a Project Management Advisor for a period of two years to assist the Project Director and his staff in the organization and management of the project.
2. The Project Management Advisor would be a nutritionist with management experience or a development planner/economist with experience in planning and organizing multidisciplinary programs in the social sector, preferably with an orientation towards nutritional programs or a health planner with experience in nutrition project management. We would look for a person with integrative skills and a capacity to relate the project to the national program of development. Desirable qualifications would include experience in managing relationships with international organizations, as well as handling problems of interdisciplinary and multisectoral coordination.
3. The Project Management Advisor would assist the Project Director in:
 - (a) setting up the organizational structure and defining the roles in the Project Directorate vis-a-vis the project entities;
 - (b) developing the monitoring and evaluation unit, recruiting suitable local and foreign consultants for the unit and establishing the scope of the unit's work in relation to the project activities;
 - (c) assisting the Project Director and his executive secretary to plan, implement and monitor the development of the various components;
 - (d) formulating procedures to select consultants for the various project components,
 - (e) assisting in the work of preparation of budgets for and coordinating the allocation of funds for different project components, and
 - (f) assisting in the work of making withdrawal requests from the Bank.

TERMS OF REFERENCE FOR:

(a) Procurement Advisor

1. The Indonesia nutrition development project requires the services of an expert in managing the procurement of equipment for the various research facilities to be strengthened under the project.
2. The Procurement Advisor would have had three to five years experience in management of procurement of equipment and of evaluation of tenders for civil works in large-scale organizations. He would preferably have had experience in working with or in an international organization. Desirable qualifications would be that the person selected is by training an engineer or accountant with experience of managing work and accounting in research-oriented projects.
3. The Procurement Advisor would be recruited directly or through international or bilateral assistance under terms and conditions acceptable to the Bank to assist the Project Director and his staff in:

- (a) ensuring, in consultation with the Resident Mission of the Bank, that procedures for the procurement of equipment and award of contracts under the project are compatible with those laid down in Bank guidelines and agreed to as part of the Project;
- (b) establishing detailed operating procedures in such a way as to ensure that; (i) the best possible equipment is purchased and installed at the lowest possible cost to the borrower, (ii) enforceable maintenance arrangements are adequately spelled out in contracts with suppliers and (iii) adequate training is given to the local personnel in necessary maintenance procedures;
- (c) assisting the Project Director and staff in ensuring that the necessary financial procedures are followed so that the Bank can disburse its loan amount to the Government against the category expeditiously; and
- (d) laying out appropriate and feasible review procedures.

(b) Planning Consultants

1. The Indonesia Nutrition Development Project would require planning consultants to assist the Project Director. This is related to the requirement that the various tests, studies and evaluations in the project be utilized to help prepare a national food and nutrition program. Planning consultants would be required to work both in the Project Director's staff and in the Nutrition Unit of the Ministry of Agriculture.

2. The planning consultants would be drawn from among economists trained in analysis of food policy and nutrition-related issues and would have had experience in preparing plans and programs for developing countries or nutritionists with specific training in economic analysis and project/program evaluation.
3. The planning consultants in the Project Directorate would assist the Project Director and his staff in:
 - (a) drawing up the time phasing and nature of data and analysis for the project objective of drawing up a national food and nutrition program to be incorporated in the Third Development Plan;
 - (b) organizing and, where necessary, conducting studies in the specific areas necessary to develop the policy framework and program content for the plan; and
 - (c) drawing up periodic reports to the Monitoring and Evaluation Unit on the progress of the work.
4. The planning consultant in the Nutrition Unit of the Ministry of Agriculture will assist the Director of the Unit in:
 - (a) drawing up a program of work;
 - (b) organizing, in consultation with the Project Director's staff, studies in regard to the nutritional consequences of agricultural policies; and
 - (c) evolving a food and nutrition policy for consideration of the head of the unit and for transmission to the Project Director.

INDONESIA NUTRITION DEVELOPMENT PROJECTFood and Nutrition Unit: Ministry of Agriculture

1. Decree No. 270 of the Ministry of Agriculture, dated March 27, 1969, established a Food and Nutrition Unit (FNU) in the Ministry under the supervision of the Bureau of Planning, Secretary-General's office but directly responsible to the Minister. The objectives of the decree were that: the FNU would advise the Ministry on actions to increase the production of foods, improvement in the quality of diets for all people, but especially for farmers and on the implementation of a policy for food production and utilization. The FNU would be the Ministry's agency for coordinating its nutritional activities with those of other ministries. In particular, the FNU would study the effects of economic and social factors on human food consumption.
2. Under Decree No. 169, dated April 21, 1975, a team was appointed to carry out the work of the FNU. It consists of 12 senior part-time officers of various departments of the Ministry of Agriculture. However, the Unit lacks the basic prerequisites of trained manpower to carry out its task effectively.
3. Recognizing the important role which the Ministry of Agriculture could assume in Indonesia's nutrition program, the Government wishes to strengthen the FNU, so that it would become an important factor in introducing nutritional aspects into agricultural policies and planning. To ensure this, the FNU would require not only additional allocation of resources in terms of manpower and funds, but also proper integration within the administrative structure of the Ministry of Agriculture. This integration will be required to ensure proper coordination of FNU's nutrition actions vis-a-vis the production oriented Directorates General of food crops, estates, livestock and fisheries, and agencies such as the FTDC and CRDN.
4. The primary objective of this component would be to strengthen the FNU and to establish the organizational structure and links, both within and outside the Ministry of Agriculture, required to enable the FNU to advise the Ministry on the nutritional consequences of current and future agricultural policies and programs.
5. The project provides for about 24 man-months of short-term technical assistance to help in strengthening the FNU and to assist it in in-service training and work implementation. The terms of reference for a nutritional planner, food economist and data analyst are given in Appendix 1. To build up the staff of the FNU, the project also provides 72 man-months of fellowships for specialized M.S. training abroad in economics/nutrition, community nutrition and agricultural economics/nutrition. These fellowships will be allocated by the Project Director in consultation with the Co-director of the Ministry of Agriculture.
6. The total base costs of this component would be US\$180,000.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Terms of Reference for Consultants

Nutrition Planner

1. Needed qualifications are a University degree in agricultural economics and experience in the analysis of nutritional problems and the formulation and implementation of nutritional policies and programs. The nutritional planner will be responsible, in close association with the Chief of the FNU, for supervising the total work program and its implementation. Specifically he will assist the FNU in:

- (a) assessing administrative, financial and manpower requirements for an operational FNU and in formulating a concrete proposal for implementation;
- (b) assessing and strengthening the links between the FNU and the various Directorates General of the Ministry of Agriculture, ARD and AETE.
- (c) evaluating the food and nutritional aspects of ongoing or planned agricultural policies and projects; and
- (d) formulating and implementing in-service training.

Nutritional Economist

2. Needed qualifications are a University degree in economics with experience in analysing and evaluating economic/agricultural data relevant to nutritional planning. The nutritional economist in close association with the Chief of the FNU will be responsible for developing a methodology to collect agricultural and economic data relevant to nutritional aspects of agricultural project and policy formulation.

Data Analyst

3. Extensive knowledge and experience in assessing and analyzing nutritional statistics (food production, food availability, nutritional status) and in the formulation of analytical systems for collection, interpretation and evaluation.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Monitoring and Evaluation

Purposes

1. There are three aspects to monitoring and evaluation of the Indonesia Nutrition Development Project. The first is the monitoring function that provides timely information to the project management concerning the progress of the project and the relative effectiveness with which project inputs are utilized. This function would include an ongoing evaluation of project impact with reference to specific project goals. Second is the evaluation comprised in the test components of the project. This would, for instance, include the study of the effectiveness of different combinations of interventions and the efficiency of delivery systems in the NIPP area, the cost effectiveness of improved storage methods and processing, and the impact of various methods of nutrition education for behavioral change. Third is nutrition program evaluation, involving policy-oriented studies that utilize results of the project and specially designed research efforts to assess the direction in which the project and the nutrition program are going and to suggest ways of improvement. It will also be aimed at determining measures or groups of measures best suited for bringing about improvement in the nutritional status of the population, leading to development of the national nutrition program.

Information to be Collected

2. The Monitoring Function - Monitoring of the project progress has to be done through carefully designed reports on physical progress, expenditure and effects in relation to goals. The manager of each component activity will be responsible for monitoring the progress of the components and submitting reports at quarterly intervals to the Project Director through the Executive Secretary. The reporting system will be so designed as to provide information on the following key-indicators:

- (a) the degree to which professional and administrative staffing levels meet project schedules;
- (b) detail of fellowships and in-service training programs, giving numbers of staff participating and the quality and appropriateness of the educational and training programs;
- (c) the provision of technical services such as long-term and short-term consultants;

- (d) the progress of civil works construction at CRDN, FTDC and the Nutrition Academy in accordance with projected implementation timetables;
- (e) equipping of laboratories and field facilities to ensure that they become operational within projected time-limits; and
- (f) progress of nutrition and nutrition-related activities in NIPP villages and plantations in accordance with plans of operation.

3. The evaluation of research programs would be designed to provide the information on which future program emphasis would be determined. In research projects key indicators cannot easily be pre-determined, but would be chosen for each research project as it develops. Basic areas for choice of indicators would reflect: the goals of the particular research project; methods of analysis; the interpretation of experimental data; the presentations of meaningful progress reports; the testing and demonstration of results; and the degree of success achieved in the dissemination and adoption of new techniques. The Research Coordinating Committee would review the research programs. Before giving approval to a proposed research project, the Committee would review the choice of indicators for evaluation. The progress reports on research projects, submitted to the Research Coordinating Committee of Directors for its consideration, would include information on all designated evaluation criteria. Ongoing evaluation as part of monitoring reports will be carried out, with the assistance of consultants where necessary, under the direction of the monitoring and evaluation staff of the Executive Secretary.

4. Evaluation of Tests - A few components of the project seek to evaluate the effectiveness of different methods of nutrition interventions, separately and in combination. In the NIPP component, the objective is to determine the effectiveness, together with costs, of the proposed program of nutrition, health and other activities for achieving a reduction in morbidity and mortality and improving nutritional status. NIPP would also help determine the relative cost-effectiveness of these activities in combination as compared to when they are taken up separately. The CRDN would be responsible for this evaluation. This would involve a carefully designed base-line survey of a sample population in the selected Kabupatens prior to operational action. The survey would cover such parameters as morbidity, infant mortality, anthropometric measurements and biochemical determinations. After NIPP has been in operation for 18 months, a survey using the same parameters would be repeated and again at the end of the project period. For each of the NIPP villages as well as in the control villages the mid-term and final results would be compared with the base-line data. The findings would be analysed according to the different combinations of interventions. The CRDN would be responsible for the technical design of the survey,

including the statistical frame, the methodology for data collection, the questionnaire design and the analysis of results. Data collection would be carried out by the village cadres or other trained staff, under the technical supervision of a team from CRDN. Provision has been made under technical assistance for design of the survey and analysis of results. Results from the nutrition education component would be evaluated by a team of experts under the direction of the Chairman for Manpower Training, with assistance from CRDN on the nutritional aspects and from sociologists from IPB on the Knowledge-Attitude-Practice tests. ^{1/} The Food Technology Development Center would be in charge of evaluating the cost-effectiveness of different methods of improved food storage and processing.

5. In the Anemia Control and Prevention Program on Plantations, the project would seek to evaluate the effectiveness of delivery systems for iron supplementation on large and small plantations. CRDN and the NILHOH would work on the scientific and technical strength of the component, but CRDN would be in charge of the baseline survey and final evaluation of the labor productivity and effectiveness of delivery systems.

6. Program Evaluation - Various program oriented studies would be carried out as part of the project, by consultants drawn from a part-time panel of experts from universities, the CRDN and the FTDC. These studies will be funded as part of the project and organized by the Monitoring and Evaluation Unit under the Project Director. Studies with respect to NIPP would focus on:

- (a) the operational efficiency of the delivery system with reference to the extent to which the delivered food reaches the target groups;
- (b) the degree of reliability of the proposed system of identification of target beneficiaries;
- (c) the effectiveness of the administrative checks and balances to reduce abuses; and
- (d) the extent to which costs can be reduced by appropriate choice of foods, delivery system and community participation.

The primary focus of these studies would be on:

- (a) nutritional effects of agricultural and general economic policy changes;

^{1/} Standard K.A.P. tests, as used in sociological studies, would be adapted for evaluating behavioural changes relating to nutritional knowledge and practice.

- (b) nutritional norms and levels of poverty in different regions and urban/rural groups;
- (c) relationships between nutrition and productivity in organized industry, farm labor, and small farms;
- (d) effect of nutrition education through mass media such as films, radio and the press;
- (e) cost-effectiveness and nutritional relevance of policies encouraging increased production of cereals vs. tubers such as cassava/sweet potatoes in certain areas of Indonesia; and
- (f) relationship between better health and nutrition, reduction in infant mortality and fertility.

These studies would be utilized by the planning staff of the Directorate of Nutrition of the Ministry of Health as well as the Food and Nutrition Unit of the Ministry of Agriculture in the preparation of the national food and nutrition program for inclusion in the Third Development Plan.

Organization and Staffing for Monitoring and Evaluation

7. The Monitoring and Evaluation Unit which would consist of two professionals with support staff would also draw on the services of consultants. The unit would report through the Executive Secretary to the Project Director. The unit would be responsible for:

- (a) designing the format of and reviewing the monitoring reports and returns;
- (b) organizing special studies through consultants;
- (c) arranging for verification, on a sample basis, of data reported; and
- (d) advising the Project Director on the state of progress and effectiveness of the project.

The staff for monitoring and evaluation functions performed by CRDN and FTDC are detailed in the respective Annexes.

The Costs of Monitoring and Evaluation

8. The project provides for US\$250,000 for studies in addition to the cost of the Monitoring and Evaluation Unit and the related staff in various research components. The total cost of monitoring and evaluation in the project is estimated to be around US\$592,000.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Flow of Data and Analysis for Monitoring and Evaluation

	<u>Monitoring of Project Progress</u>	<u>Nutritional Status</u>	<u>Effectiveness of Nutritional Interventions</u>
<u>Examples of Data</u>	Progress of construction, procurement of equipment, staffing, training arrangements	Height, weight, arm circumference, vitamin A levels, hemoglobin levels	Gain of weight by children, reduction in morbidity, infant mortality, number needing supplementation.
<u>Frequency of Collection</u>	Quarterly/monthly for some items	Baseline Data Midterm Final	Monthly
<u>Responsibility for Design of Sample Questionnaire, if any</u>		CRDN	CRDN/National Coordinator of NIPP.
<u>Staff Collecting Data</u>	Civil works staff/staff of the research entity(CRDN, FTDC)/field staff of NIPP.	Specially trained enumerators.	NIPP's field staff.
<u>To Whom Data to be Reported</u>	Director of the Component/National Coordinator NIPP	CRDN	CRDN through National Coordinator for NIPP
<u>Responsibility for Analysis and Evaluation</u>			
<u>First Level</u>	Director of Component/National Coordinator of NIPP	CRDN/NPO	CRDN
<u>Second Level</u>	M&E Unit	MEU/Project Director	Project Director
<u>Third Level</u>	Project Director		

INDONESIA NUTRITION DEVELOPMENT PROJECT

Civil Works

Planning

1. The building designs are well advanced and all preliminary plans have been completed. The drawings were prepared by local architectural consultants engaged by the Government and under the guidance of a small task force, headed by the Chief Engineer, Ministry of Health and representatives from other client agencies. This task force has worked well and should be retained during the preparation of detailed drawings and construction to ensure uniformity in standards.

Estimates

2. All estimates of costs quoted in the Appendices are based on costs in Indonesia as of June 1976. These estimates allow for adequate standards of finish for research laboratories and food processing buildings. The equipment for the buildings has been included under the category of scientific equipment and, therefore, is excluded from these estimates.

Control

3. The civil works component of the project will be implemented by the works section of the Ministry of Health.

Sites

4. All sites for buildings have been selected and appear to be suitable. Surveys and site engineering tests on each site would be undertaken before designs are finalized.

Professional Services

5. The works section of the Ministry of Health will require assistance for architectural services. The Government has retained consultants, who have prepared preliminary drawings for all buildings. They would continue to be retained for the preparation of detailed drawings, specifications and to oversee the work to final completion.

6. Particular importance is attached to achieve standards of finish suitable for research laboratory work and adequate accommodation for the equipment and plant. The specifications reflect this requirement and the site supervision must ensure that these standard of finish are met. It has been agreed that a resident engineer of the Ministry of Works would be stationed at Bogor to supervise the work on CRDN and assist in supervision of civil works of FTDC.

Construction

7. The civil works component would be implemented through normal government channels using established government procedures and documentation, in respect of the following:

- (a) works procedures through bidding, construction, supervision to final acceptance of completed building, including contract control and responsibility for supervision, both general and on-site supervision. In particular the method of pre-qualifying bidders and the systems for bidding, bid evaluation and award would follow standard Ministry of Work procedures;
- (b) general conditions of contract;
- (c) standard bidding documents; and
- (d) standard form of contract agreement.

8. All contracts for construction in excess of US\$1 million would be awarded on the basis of international competitive bidding in accordance with the Bank's guidelines.

Procurement of Furniture

9. Contracts for the procurement of furniture below US\$50,000 would be in accordance with local competitive bidding procedures.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Schedule of Civil Works - Locations and Accommodation

- A. Center for Research and Development in Nutrition: Jalan Samboja, Bogor
- (a) Wing I - Food Sciences Laboratories - Total Area 820 m²
Includes: Animal Rooms & Laboratory; Instrument Center;
Food Toxicology and Food Micro-Biology
Laboratories.
 - (b) Wing II - Biochemistry Laboratories - Total Area 1,100 m²
Includes: Biochemical, Haematology and Anthropometric
Laboratories; and Cafeteria
 - (c) Wing III - Library and Auditorium - Total Area 1,330 m²
Includes: Book Stack, Reading and Printing Rooms;
Workshop; Auditorium with Stage; and
Administrative Offices.
 - (d) Renovations to Existing Buildings - Total Area 2,200 m²
Includes: Laboratories for Community Nutrition.
 - (e) Dormitories for 32 persons - Total Area 575 m²
 - (f) 14 Staff Houses
Includes: 12 houses each with an area of 120 m²
2 houses each with an area of 250 m²
 - (g) Site Infrastructure Work
Includes: Power House and Emergency Power; Fencing;
Roads and Parking Areas; 4.50 meter Bridge
over the river.

B. Food Technology Development Center: Agricultural University, Bogor

- (a) Administrative Building - Total Area 582 m²
Includes: Administrative Offices; Seminar Room;
Conference Room and Library.
- (b) Food Research Laboratories - Total Area 1,224 m²
Includes: Microbiology, Chemical/Biochemical and
Physical Laboratories; Experimental
Cookery; Culture Collection, Chromatography;
Incubation; Workshops and Storerooms.
- (c) Pilot Plant - Total Area 1,294 m²
Includes: Food Processing Plant and Machinery;
Packaging Room; Boiler House; Laboratory;
Smokehouse, Storerooms; Workshops; and
Administration.
- (d) Utility Building - Total Area 270 m²
Includes: Quality Control; Generator; Transformer;
Bicycle Shed; Store and Garage.
- (e) Site Infrastructure Work
Includes: Guard House; Fencing; Roads and Parking
Areas; Transformer and Generator; Water
Tower and Covered Ways.
- (f) Staff Housing
Includes: 10 houses each with an area of 120 m²
2 Houses each with an area of 250 m²

C. Nutrition Academy - Blok F, Kebayoran Baru, Jakarta

- (a) Food Laboratories - Total Area 284 m²
Includes: Food Technology and Food Chemistry Laboratories; Balance Room; Workshop and Store.
- (b) Library and Audio Visual Room - Total Area 362 m²
Includes: Library; Audio Visual Room; Display Hall; Store and Toilets.
- (c) Site Infrastructure Work
Includes: Roads and Paths; Standby Generator and Power House; Water Supply Pump.
- (d) Staff Housing
Includes: 6 Houses each with an area of 120 m²
Roads and Power Supply.

INDONESIA NUTRITION DEVELOPMENT PROJECT
(Rps '000)

Civil Works-Construction^{1/}

Center for Research and Development in Nutrition

Food Laboratories	82,000
Biochemistry Laboratories	110,000
Library and Auditorium	119,700
Renovation of Existing Buildings	91,000
Dormitory	46,000
Installations	208,500
Staff Housing (14 houses)	126,100
Site Infrastructure	194,800
Professional Fees	87,800
Contingencies Including Price Escalation	<u>126,395</u>
Total	<u>1,192,295</u>

Food Technology Development Center

Food Research Laboratories	122,400
Pilot Plant	122,930
Utility Buildings	13,500
Administration Buildings	46,560
Installations	148,500
Staff Housing	155,850
Site Infrastructure	85,000
Professional Fees	70,000
Contingencies Including Price Escalation	<u>108,835</u>
Total	<u>873,575</u>

Nutrition Academy

Food Laboratories	25,560
Library and Audio Visual Room	32,580
Installations	11,900
Staff Housing and Site Infrastructure	63,500
Professional Fees	13,350
Contingencies Including Price Escalation	<u>30,730</u>
Total	<u>177,620</u>

1/ Unit Costs

Costs per m²

Laboratories	Rps 90,000 to 100,000
Utility Buildings	50,000
Other Buildings - Administrative	80,000

INDONESIA NUTRITION DEVELOPMENT PROJECT

Project Cost Estimates

Center for Research and Development in Nutrition

US\$ '000

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
A. <u>Civil Works</u>							
1 Construction	386	1,150	1,337		1,724	1,149	2,873
2 Furniture and Equipment		121	151		272		272
Sub-Total A	386	1,271	1,488		1,996	1,149	3,145
B. <u>Non-Construction</u>							
1 <u>Equipment</u>							
a. Vehicles	20	75	70		15	150	165
b. Special Equipment		100	305	208	62	551	613
Sub-Total B1	20	175	375	208	77	701	778
2 <u>Technical Assistance</u>							
a. Advisors/Consultants	35	35	35	35		140	140
b. Fellowships	86	95	93	74	57	291	348
Sub-Total B2	121	130	128	109	57	431	488
3 <u>Incremental Operating Costs</u>							
a. Salaries	100	200	250	250	800	-	800
b. Books and Journals	50	50	50	50	25	175	200
c. Other Costs	50	50	150	200	425	25	450
Sub-Total B3	200	300	450	500	1,250	200	1,450
Sub-Total B	341	605	953	817	1,384	1,332	2,716
TOTAL BASE COSTS (A+B)	727	1,876	2,441	817	3,380	2,481	5,861

INDONESIA NUTRITION DEVELOPMENT PROJECT

Project Cost Estimates

Food Technology Development Center

US\$ '000

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
A. <u>Civil Works</u>							
1 <u>Construction</u>	210	700	1,195		1,263	842	2,105
2 <u>Furniture</u>		30	43		73		73
Sub-Total A	210	730	1,238		1,336	842	2,178
B. <u>Non-Construction</u>							
1 <u>Equipment</u>							
a. <u>Vehicles</u>		20	26		4	42	46
b. <u>Special Equipment</u>	100	300	1,000	200	160	1,440	1,600
Sub-Total B1	100	320	1,026	200	164	1,482	1,646
2 <u>Technical Assistance</u>							
a. <u>Advisors/Consultants</u>	49	108	166	111	26	408	434
b. <u>Fellowships</u>	75	101	71	40	135	152	287
Sub-Total B2	124	209	237	151	161	560	721
3 <u>Incremental Operating Costs</u>							
a. <u>Salaries</u>	25	46	133	176	380	-	380
b. <u>Books and Journals</u>	10	40	50			100	100
c. <u>Other Costs</u>	25	125	150	200	400	100	500
Sub-Total B3	60	211	333	376	780	200	980
Sub-Total B	284	740	1,596	727	1,105	2,242	3,347
TOTAL BASE-COSTS (A+B)	<u>494</u>	<u>1,470</u>	<u>2,834</u>	<u>727</u>	<u>2,441</u>	<u>3,084</u>	<u>5,525</u>

INDONESIA NUTRITION DEVELOPMENT PROJECT

Project Cost Estimates

Nutrition Intervention Pilot Project in Rural Areas

US\$ '000

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
A. <u>Civil Works</u>							
1. Construction of village } nutrition centers }		11	23	54	70	18	88
B. <u>Non-Construction</u>							
1. <u>Equipment</u>							
a. Vehicles	57	58	90		40	165	205
b. Special equipment	31	47	78		56	100	156
Sub-Total B(1)	88	105	168		96	265	361
2. <u>Technical Assistance</u>							
a. Consultants	50	75	75		60	140	200
b. Fellowships	10	12				22	22
Sub-Total B(2)	60	87	75		60	162	222
3. <u>Food Supplement</u>		26	85	196	307		307
4. <u>Operating Costs</u>							
a. Salary support	11	35	87	170	303	-	303
b. Nutrition education	32	38	75	75	220	-	220
c. Health activities		18	52	102	37	135	172
d. Workshops/seminar	15	20	25	15	75	-	75
e. Transport/travel	18	20	60	72	153	17	170
f. Evaluation	20	30	85	85	220	-	220
g. Training	30	87	185	57	359	-	359
h. Other expenses	15	15	20	40	90	-	90
Sub-Total B(4)	141	263	589	616	1,457	152	1,609
Sub-Total B	289	481	917	812	1,920	579	2,499
<u>Total Base Costs (A+B)</u>	289	492	940	866	1,990	597	2,587

Project Cost Estimates
Organization and Management
US\$ '000

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
A. <u>Project Directorate</u>							
1. <u>Technical Assistance</u> ^{1/}							
a. Consultants/Advisors	21	80	175	160	156	280	436
b. Fellowships	8	22	22	-	-	52	52
Sub-Total A 1.	29	102	197	160	156	332	488
2. <u>Operating Costs</u>							
a. Salary Support	38	38	38	42	156	-	156
b. Travel and Per Diem	6	7	8	10	31	-	31
c. Evaluation	50	80	80	140	280	70	350
d. Other Costs	6	6	6	6	24	-	24
Sub-Total A 2.	100	131	132	198	491	70	561
Base Costs for A.	129	233	329	358	647	402	1,049
B. <u>Nutrition Unit in Agriculture Ministry</u>							
1. <u>Technical Assistance</u>							
a. Consultants	-	35	70	35	-	140	140
2. <u>Operating Costs</u>							
a. Travel	4	5	6	6	21	-	21
b. Other Operating Costs	5	5	5	5	20	-	20
Sub-Total B.	9	10	11	11	41	-	41
Base Costs for B.	9	45	81	46	41	140	181
TOTAL BASE COSTS (A and B)	138	278	410	404	688	542	1,230

^{1/} This includes assistance for the formulation of a National Food and Nutrition Program estimated at US\$190,000 (US\$120,000 local cost plus US\$70,000 foreign expenditures).

INDONESIA NUTRITION DEVELOPMENT PROJECT

Details of Salary Support for Project Director and Staff

	Monthly Rate	Number	US\$ '000				Total
			Year 1	Year 2	Year 3	Year 4	
<u>Project Director/Co-Directors</u> ^{1/}		4	2.7	2.7	2.7	2.7	10.8
<u>Secretariat</u>							
Executive Secretary	\$350	1	4.2	4.2	4.2	4.2	16.8
Deputy Executive Secretary	\$250	1	3.0	3.0	3.0	3.0	12.0
Finance Officer	\$250	1	3.0	3.0	3.0	3.0	12.0
Procurement Officer	\$250	1	3.0	3.0	3.0	3.0	12.0
Staff Support			2.2	2.2	2.2	2.2	8.8
Sub-Total (Secretariat)			15.4	15.4	15.4	15.4	61.6
<u>Monitoring and Evaluation</u>							
Senior Analyst/Planner	\$300	2	7.2	7.2	7.2	10.8 ^{2/}	32.4
Research Assistants	\$200	4	9.6	9.6	9.6	9.6	38.4
Support Staff			3.1	3.1	3.1	3.5	12.8
Sub-Total (Monitoring and Evaluation)			19.9	19.9	19.9	23.9	83.6
<u>Total for Project Director and Staff</u>			38.0	38.0	38.0	42.0	156.0

1/ Part-time work payment

2/ Staff increases to 3 during 4th year

INDONESIA NUTRITION DEVELOPMENT PROJECTDisbursement Schedule
US\$ '000

	<u>Quarter Ending</u>		<u>Disbursements</u> <u>During Quarter</u>	<u>Cumulative</u> <u>Disbursements</u>
1977	June	30	-	-
	Sept.	30	48	48
	Dec.	31	96	144
1978	March	31	192	336
	June	30	148	484
	Sept.	30	250	734
	Dec.	31	350	1084
1979	March	31	800	1884
	June	30	508	2392
	Sept.	30	1100	3492
	Dec.	31	1100	4592
1980	March	31	1100	5692
	June	30	873	6565
	Sept.	30	1200	7765
	Dec.	31	1200	8965
1981	March	31	1200	10165
	June	30	607	10772
	Sept.	30	800	11572
	Dec.	31	1100	12672
1982	March	31	328	13000

INDONESIA NUTRITION DEVELOPMENT PROJECT

Schedule of Technical Assistance
(In Man-Months)

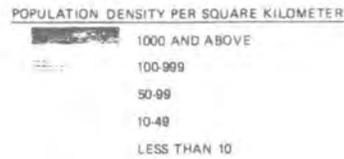
	<u>Short-term</u>	<u>Long-term</u>	<u>Total</u>
I. <u>CRIN</u>			
Research Specialist	12	-	12
Economist	6	-	6
Community Nutritionists	<u>6</u>	-	<u>6</u>
SUB-TOTAL CRIN	<u>24</u>		<u>24</u>
II. <u>FTDC</u>			
Program Advisor	-	24	24
Equipment Specialists	36	-	36
Research Specialists	<u>36</u>	-	<u>36</u>
SUB-TOTAL FTDC	<u>72</u>	<u>24</u>	<u>96</u>
III. <u>NIPP</u>			
Advisor on Nutrition			
Education Manual	6	-	6
Training Consultant	-	10	10
Data Analyst	8	-	8
Local Advisory Services	<u>60</u>	-	<u>60</u>
SUB-TOTAL NIPP	<u>74</u>	<u>10</u>	<u>84</u>
IV. <u>Nutrition Communication</u>			
Communication Specialist	-	12	12
Nutrition Education Advisor	35	-	35
Planning Consultant	-	-	-
SUB-TOTAL Nutrition Communication	<u>35</u>	<u>12</u>	<u>47</u>
V. <u>Organization and Management</u>			
Project Management Advisor	-	24	24
Procurement Advisor	-	12	12
Planning Advisor	-	24	24
Monitoring and Evaluation	84	-	84
Research Coordinating Committee	30	-	30
Part-time Advisory Panel	34	-	34
Assistance to Nutrition Unit in Ministry of Agriculture	<u>12</u>	<u>12</u>	<u>24</u>
SUB-TOTAL Organization and Management	<u>156</u>	<u>72</u>	<u>228</u>
TOTAL (I+II+III+IV+V)	<u>361</u>	<u>118</u>	<u>479</u>

Around 201 months are for internationally recruited advisors.

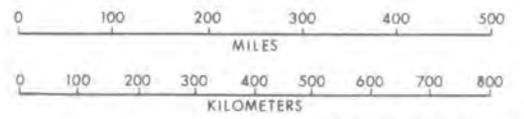


INDONESIA
NUTRITION DEVELOPMENT PROJECT
NUTRITION INTERVENTION PILOT PROJECT AREAS

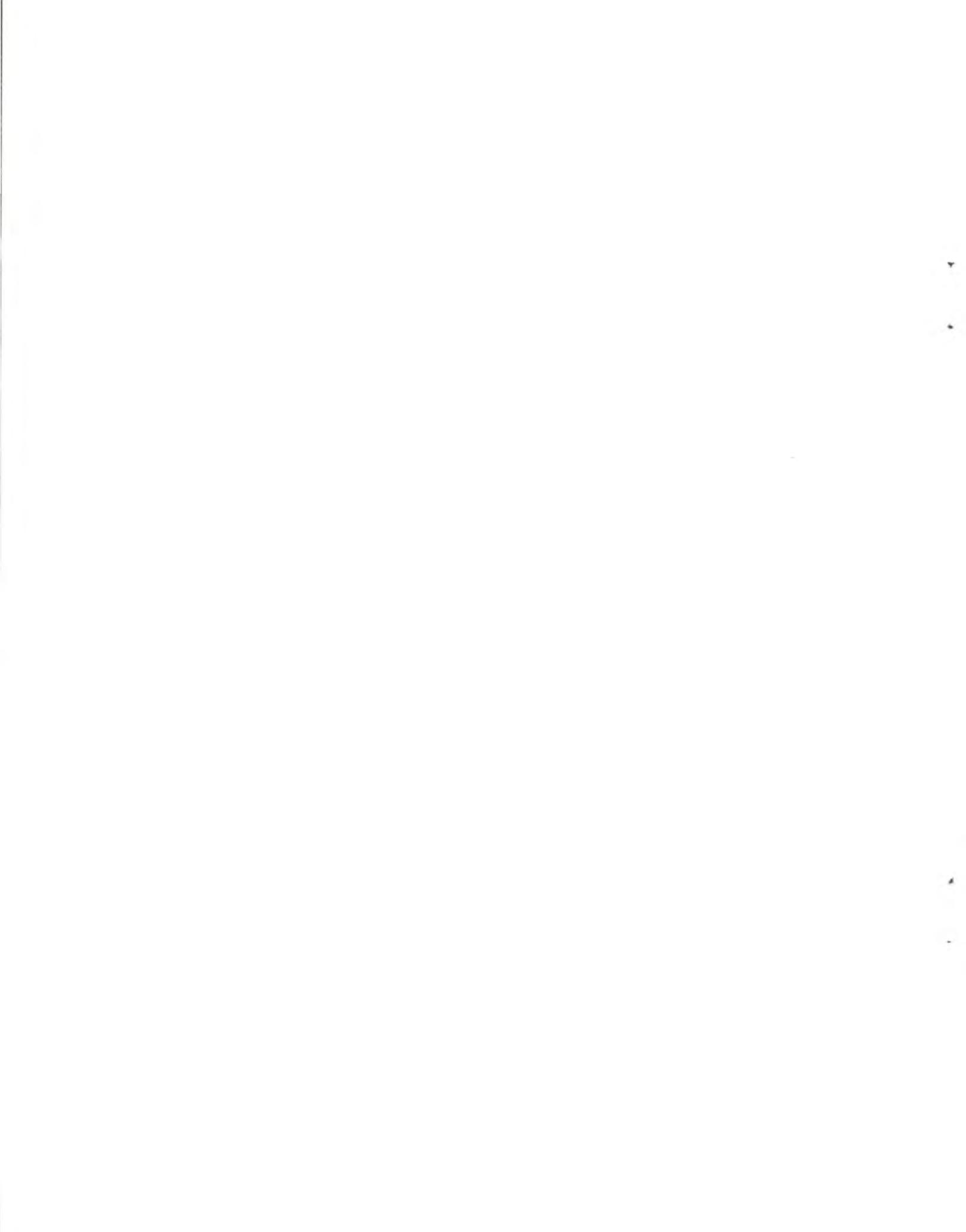
- SITE OF CRDN AND FTDC
- INITIAL NIPP PILOT REGENCIES
- PROPOSED PROVINCES FOR SUBSEQUENT NIPP PILOT REGENCIES
- PROVINCIAL BOUNDARIES
- INTERNATIONAL BOUNDARIES



- PROVINCES:**
- | | |
|--------------------------------------|-----------------------|
| 1 EAST JAVA | WEST KALIMANTAN |
| 2 CENTRAL JAVA | EAST KALIMANTAN |
| 3 WEST JAVA | SOUTH KALIMANTAN |
| SPECIAL CAPITAL TERRITORY
JAKARTA | CENTRAL KALIMANTAN |
| 5 SPECIAL TERRITORY
JOGJAKARTA | SOUTH SULAWESI |
| NORTH SUMATERA | CENTRAL SULAWESI |
| JAMBI | SOUTH-EAST SULAWESI |
| RIAU | NORTH SULAWESI |
| WEST SUMATERA | MALUKU |
| SOUTH SUMATERA | 23 BALI |
| LAMPUNG | 24 WEST NUSA TENGGARA |
| SPECIAL TERRITORY
ACER | EAST NUSA TENGGARA |
| BENGKULU | IRIAN JAYA |



The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.



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PROJECT NAME: INDONESIA	PROJECT CODE:	<input checked="" type="checkbox"/> Loan	<input type="checkbox"/> Credit	No: 1373-IND
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SECTION <i>(See reverse side)</i>	DOCUMENT DESCRIPTION <i>(Title, Type, ^{1/} Author)</i>	DOCUMENT DATE	DATE SENT TO INFO. CENTER
	Nutrition Development Project-E.M. Schebeck (form 590)	3/15/77	
	Nut. Develop. Proj. Supervision Rpt.-C. Hamann	10/10/78	
	" " " " -E.M. Schebeck	4/2/79	
	" " " " - C.Hamann	7/26/79	
	" " " " - C. Hamann	11/7/79	
	" " " - C. Hamann (form 590)	2/25/80	
	Nutr. Dev. Proj. Superv. Rpt.- R.C. Carriere	10/27/80	
	" " "-R.C. Carriere	1/19/81	
	" " "-R.C. Carriere	7/17/81	
	Nut. Deve. Proj. Suprv. Rpt.-J. Kisa	3/19/82	
	" " " " " - J. Kisa	7/28/82	

^{1/} Memorandum, report, study, etc.

PROJECT IMPLEMENTATION INDEX FILE LOG SHEET

Organization and Contents

<u>Section</u>	<u>Contents</u>
I.	SUPERVISION MISSION (supervision reports, historical/planned schedules, key people met).
II.	EXECUTION OF THE PROJECT (reports on the progress of all project components, including physical works, implementing schedules, changes in cost estimates, studies undertaken as part of the project, technical assistance, training, etc.).
III.	OPERATING RESULTS AND FORECASTS (operations of the project organization or entity; financial position of revenue-earning enterprises with latest operating, financial and cashflow statements if relevant; traffic volumes; project output; maintenance operations; etc., past and present).
IV.	ORGANIZATION MANAGEMENT AND PERFORMANCE OF THE BORROWER (significant developments affecting project management and the accomplishment of the project's institutional development objectives; structural reorganization, streamlining of administrative procedures, progress in staff and training, borrower's procurement performance and supervision arrangements, status of fulfillment of all important covenants, drawing attention to any violations).
V.	PERFORMANCE OF CONSULTANTS (quality of the work being carried out by consultants retained by the borrowers).
VI.	POLICIES AND INVESTMENT PLANS (knowledge of the borrower's macro-economic, sector and sub-sector policies is important both for the supervision of present projects and in considering prospective ones. The execution of the project is often influenced by related investments; also, information regarding the borrower's investment plans is important in formulating Bank lending programs for the future. Flag specific problems and issues which have an immediate bearing on identification, preparation and appraisal of prospective projects).
VII.	OTHER (general correspondence, etc.).

PROJECT IMPLEMENTATION INDEX FILE LOG SHEET

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VII.	<p>OTHER (general correspondence, etc.).</p>

OFFICE MEMORANDUM

TO: Ms. Ishrat Z. Husain, Chief, PHND2

DATE: July 28, 1982

FROM: Jack J. Kisa, PHND2 *JK*SUBJECT: INDONESIA: Nutrition Development Project, Ln. 1373-IND--Supervision Report

Attached is the Supervision Report on the above project.

Attachment

cc: Mr. Rajagopalan, PAS (3)
 Mr. Barker, EDC
 Mr. Ruddy, AENVF
 Mr. Jaycox, AEA
 Mr. Stern, AEA (2)
 Mr. Kirmani, AEP
 Mr. Golan, AEP
 Mr. Blaxall, AEP
 Mr. Colletta, AEA
 Ms. Duer, AEA
 Mr. Kapur, OED
 Mr. Ve-Cheng Chang, LOA
 Mr. Phung, LOA
 Mr. Mead, LEG
 Mr. Hawkins, AEA
 Mr. Bussink, AEA
 Mr. Robless, PAB
 Mr. Amla, AGR
 Mr. Rao, RSI, Jakarta (2)
 Dr. Evans, PHNDR
 Mr. North, PHNDR
 Dr. Kanagaratnam, PHNDR
 Mr. Berg, PHNDR
 Ms. Fullerton, PHNDR
 Mr. Warford, PHNPR
 Mr. Messenger, PHND1
 Mr. Denning, PHND3
 Dr. Liese, PHND2
 Dr. Park, PHND2
 Mr. Radel, PHND2
 Mr. Furst, PHND2
 Ms. Domingo, PHND2
 Ms. Fogle, PHND2
 Ms. Pishock, PHNPR
 Division Files
 Central Files

INDONESIA - Ln. 1373

JJKisa:jb

THE WORLD BANK
IBRD AND IDA - SUPERVISION SUMMARY

This summary is the initial summary
 part of a mission report
 an annual update

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.
THIS FORM IS A STOCKROOM ITEM.

Field Office: AEP	Project Name: Nutrition Development Project	Project Code: 7INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.:	L/C Amount (\$xx.xm): US\$13.0 million
Country: Indonesia	Borrower/Beneficiary: Government of Indonesia	Board Date: 03/01/77	Signing Date: 03/15/77	Effective Date: 04/01/77
Projects Dept./Div. Name: PHND2	Org. Code No.: 306/20	Projects Officer: Jack J. Kisa	Loan Officer: Nat J. Colletta	

SECTION 1: SUMMARY PROJECT DESCRIPTION The project provides: (a) staff, training, technical assistance, equipment and physical facilities for the Center for Research and Development in Nutrition (CRDN), the Food Technology Development Center (FTDC), and the Nutrition Academy; (b) staff, training, technical assistance and equipment for the Nutrition Intervention Pilot Project (NIPP) and the Home and Village Garden (HVG) Program, a Nutrition Education (NE) Program, an on-farm and village storage pilot program, and a Nutritional Anemia Pilot Project (NAPP); and (c) technical assistance and training to prepare a National Food and Nutrition Program (NFNP).

SECTION 2: PERFORMANCE RATING

	This Summary	Last Summary
STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems	1	2
TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating	1	1
TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.) If more than one type of problem, enter most critical factor first.	M	M
IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Disbursements	2	2
Estimated Cost	1	1
Anticipated Completion	1	1
Compliance with Loan Conditions	1	1
Project Finances	2	2
Management Performance	2	2
Procurement Progress	2	2
Performance of Consultants	1	1
Reporting	1	1
DEVELOPMENT IMPACT: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Expected Benefits	1	1
Rate of Return	-	-
Institution-Building	1	1

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total of which:			Cumulative Disbursements through most recent Quarter ended (6 / 30/ 82) (\$xx.xm)
			Project Cost (\$xx.xm)	Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	03, 81	03, 31, 82	26 .0	10 .2	15 .8	13 .0 (Est.)
Last Summary (07 / 17 / 81)	09, 82	03, 31, 83	21 .6	8 .5	13 .1	
Current	12, 82	03, 31, 83	21 .6	8 .5	13 .1	7 .0 (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	3	12	02, 10, 82	7, 28, 82 (F.S.)
Previous Mission	5	19	06, 15, 81	03, 18, 82 (F.S.)
Next Mission Departure (Mo./Yr.)	12, 82	Recommended interval between missions (Months)	6	End of period covered by latest progress report (Mo./Day/Yr.)

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members	Mission Members' Specializations	Number of members on both present and previous mission:
Ishrat Z. Husain	Division Chief	None <input type="checkbox"/>
Jack J. Kisa ^{2/}	Economics (Mission Leader)	One <input checked="" type="checkbox"/>
Michael J. Furst	Rural Development Specialist	Two or More <input type="checkbox"/>

SECTION 5: COMMENTS (Explain "Other" in Section 2 and clarify, if necessary, data in Sections 3 and 4.)

- 1/ The mission supervised concurrently the second population project (LN 1472-IND), the third population project (LN 1869-IND) and the nutrition development project (LN 1373-IND). The mission devoted 2 days to the nutrition project. In all, four full staff days were spent on the supervision of the project.
- 2/ Ms. Husain and Mr. Kisa supervised the project on June 2 and June 8 for half days, and Mr. Furst on June 2 and June 3, 1982.

Project implementation is in final stages and has proceeded according to the schedule agreed upon in February 1982. The construction of the laboratory at the Nutrition Academy is 95% completed, and finishing touches currently underway are expected to be completed by end July. Tendering for the construction of the Nutrition Training Center has been done; construction began in June 1982, and should be completed by late October 1982. Contracts for unprocured equipment have been awarded and delivery is expected to be completed in early 1983. More than 80% of project fellowships and over 60% of consultancy months have either been utilized or committed. Data for the evaluation of nutrition education are being analyzed. A workshop will be convened in the second half of 1982 to discuss the results and to agree on needed changes. The nutrition intervention pilot project and the home village gardens have already been evaluated and the reports of these evaluations will provide inputs into the overall evaluation to be conducted by an independent team in July/August 1982.

Physical progress during the past six months has been faster than ever before. This rapid progress is reflected in a sharp increase in the level of cumulative disbursement from \$4.9 million as of December 31, 1981 to \$7.0 million by end of June 1982. However, a large balance of \$6.0 million remains undisbursed. Of this, about 4.3 million has been committed which is expected to be disbursed by the current closing date of March 31, 1983. The Ministry of Health estimates that there will be savings of about \$1.7 million for which it intends to request reallocation of about \$0.8 million for existing project activities. The remaining \$0.9 million is expected to be cancelled. Since the reallocation request will only cover existing project activities, the Project Director believes that its processing within the Government can be expedited, and no extension of the closing date is expected to occur.

The mission was informed by the Director of the Food Technology Development Center (FTDC) that a Government decree was imminent that would reorganize the FTDC, changing its present status as a semi-autonomous institution to an integral part of the various faculties of Bogor Agricultural University. This change was found to inhibit the practical orientation of the FTDC program and render it more of a teaching department. The Bank has expressed concern over this development in the letter to the Project Director in Annex 1.

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

1. The mission recommends that the letter in Annex 1 be sent to the Project Director.
2. On receipt of proposals for reallocation of the \$0.8 million saving, the Bank should review them carefully, having regard to the need to avoid a further extension of the loan closing date.

NAME OF PREPARING OFFICER:

J.Kisa

INITIALS:

DATE:

July 28, 1982

INDONESIA

Nutrition Development Project, LN 1373-IND

List of Annexes

- Annex 1: Letter to Dr. Soebekti, Director-General of Community Health and Project Director
- Annex 2: Compliance with Loan Conditions
- Annex 3: Project Indicators
- Annex 4: Schedule of Disbursements

DRAFT
July 23, 1982

Dr. R. Soebekti
Director-General of Community Health and
Project Director, Nutrition Development Project
Ministry of Health
Jalan Prapatan No. 10
Jakarta, Indonesia

Dear Dr. Soebekti:

Re: Indonesia - Nutrition Development Project, LN 1373-IND

We are pleased to see that notable progress has been made in project implementation during the past months. During the January - February 1982 mission, we discussed several key areas of project concern with you and your staff and agreed upon a schedule by which needed activities would be carried out. The recent mission review of implementation status with members of your staff and yourself indicated that most project components are nearing completion in accordance with the February schedule. We understand that you discussed with the recent mission your intention of requesting reallocation for existing project activities of about \$800,000 of the projected project savings of \$1.7 million. As suggested by the mission, you had agreed that these activities should be such which can be completed by December 1982. This request should be formally submitted to the Bank from the Ministry of Finance as soon as possible in view of the upcoming March 31, 1983 loan closing date.

The mission was informed by the Director of the Food Technology Development Center (FTDC) that a Government degree was imminent which would reorganize the FTDC, by changing its present status as a semiautonomous institution to an integral part of the various facilities of the Bogor Agricultural University. We share the concern that this shift may inhibit the practical orientation of the FTDC program as it assumes the qualities of a teaching department, and thus prevent the useful experience gained to date by the FTDC from being fully utilized.

Again, we should like to commend you and your staff on the project's very good progress of recent months.

With warm regards and best wishes,

Yours sincerely,

Ishrat Z. Husain
Chief, Operations Division II
Population, Health and Nutrition
Department

To be cleared with & cc: Ms. Duer, AEA

Dr. R. Soebekti

-2-

July 23, 1982

cc: Mr. Colletta, AEA
Mr. Phung, LOA
Mr. Berg, PHN
Mr. Radel, PHND2
Division Files
Central Files

IZHusain/CFogle:br/jb
INDONESIA - LN 1373 (Nutrition)

INDONESIA

Nutrition Development Project, LN 1373-IND

Compliance with Loan Conditions

Conditions	Remarks
<p>A. <u>Conditions not Complied with:</u></p> <p><u>Section 3.07(ii)</u> The Borrower shall submit to the Bank annual progress reports on research programs.</p>	<p>The research program has not yet been formulated. Project Director has been urged to ensure that the program is prepared by end of 1982.</p>
<p>B. <u>Conditions upon which Action Pending</u></p> <p><u>Section 3.05(d)</u> The accounts of all project implementing agencies shall be audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies.</p>	<p>Audit reports for the three fiscal years ending March 31, 1980 were received at the end of May 1981. The audit report for fiscal 1980/81 has not yet been received.</p>
<p>C. <u>Conditions Met</u></p> <p><u>Section 3.02</u> The borrower shall employ consultants whose qualifications, experience and terms and conditions of employment shall be satisfactory to the Bank.</p>	<p>Consultants satisfactory to the Bank have been employed.</p>
<p><u>Section 3.03</u> The Borrower shall afford the Bank a reasonable opportunity to comment on the qualifications and experience of any person proposed to be appointed to the positions of Project Director, Project Co-Director and Project Manager and NIPP Coordinator prior to the making of such appointment.</p>	<p>The Bank's approval was sought prior to the appointment of the incumbents of these positions.</p>

INDONESIA

Nutrition Development Project, LN 1373-IND

Compliance with Loan Conditions

Conditions	Remarks
<p><u>Section 3.04(c)</u> The Project Director shall be required to prepare and furnish to Bank semi-annual reports on project progress.</p>	<p>Semi-annual reports are submitted regularly to the Bank.</p>
<p><u>Section 3.07(i)</u> The Borrower shall maintain a Research Coordinating Committee to facilitate coordination of the nutrition-related research programs.</p>	<p>The Research Coordinating Committee meets regularly.</p>
<p><u>Section 3.08</u> The Borrower shall carry out a review of the NIPP program at the end of the second year.</p>	<p>Completed.</p>
<p>The Borrower shall carry out a review of the home/village garden component at the end of the third year of the NIPP program.</p>	<p>Completed and report available.</p>

INDONESIA

Nutrition Development Project, LN 1373-IND

Project Indicators

<u>Component Activities</u>	<u>Appraisal Estimate by September 1982</u>	<u>Achievement as of June 1982</u>	<u>Achievement as % of Appraisal Estimate</u>
<u>Nutrition Academy</u>			
Civil works:			
- site infrastructure etc.	Completion	40%	40
- construction of four story laboratory	Completion	95%	95
Procurement:			
Phase II	Completion	Contracted	10
Staffing	24 full timer	25	104
Fellowships			
Long-term (PhD & M.S.)	8	11	137
Short-term	6	8	133
Scholarships	48 students	122	254
Student enrollment	200	197	99
Nutrition Education			
No. of cadre trained	n/a	2,000	
Consultants			
Local	35 staff months	0	0
Foreign	12 staff months	18 staff	150
Surveys			
Evaluation	Completion	75%	75
Procurement	Completion	90%	90
Anemia Control			
No. of workers reached	3,000	3,096	103
No. of base-line surveys	6	4	150

Component Activities	Appraisal Estimate by September 1982	Achievement as of June 1982	Achievement as % of Appraisal Estimate
<u>Centre for Research and Development in Nutrition</u>			
Civil works			
Additional works	Completion	60%	100
Staffing			
Professional	44	34	77
Technical	88	86	98
Others	n/a	42	
Fellowships			
Long-term (PhD & M.S.)	23	10	44
Short-term	13	15	115
Consultants			
No. of visits	19	16	84
Procurement			
Phase II + III	Completion	50%	50
<u>Food Technology Development Center</u>			
Civil Works			
- Installations	Completion	90%	90
- Rat pen	Completion	75%	75
- Warehouse	Completion	56%	56
Fellowships			
Long-term (Ph.D & M.S.)	42	24	57
Short-term	27 staff months	16	59
Consultants	96 staff months	58 staff months	60
Staffing			
Professional and Sen. Technical	25	25	108
Junior Technical	32	22	69
Others	22	18	82
Procurement			
ICB (Total tender)	delivered	42 packages	80
PIS I			
- Lab. equipment	78 items	71 items	91

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN 1373-IND

Schedule of Disbursements
(As of June 30, 1982)

Fiscal Year and Quarter Ending	Cumulative Disbursements (US\$ Million)				Actual or latest estimated disburse- ments as percent of appraisal estimate
	Actual Total	Appraisal Estimate	Last Revised Estimate	New Estimate	
FY78					
March 31, 1978	0	0.3			0
FY79					
March 31, 1979	0.1	1.9			5
FY80					
March 31, 1980	1.2	5.7			21
June 30, 1980	1.5	6.6			23
FY81					
Sept. 30, 1980	1.8	7.8			23
Dec. 31, 1980	2.3	9.0			26
March 31, 1981	2.8	10.2			27
June 30, 1981	3.9	10.8			36
FY82					
Sept. 30, 1981	4.5	11.6			39
Dec. 31, 1981	4.9	12.7			39
March 31, 1982	6.0	13.0	6.3		48
June 30, 1982	7.0		8.0		62
FY83					
Sept. 30, 1982			9.7	8.0	62
Dec. 31, 1982			11.7	10.3	79
March 31, 1983			13.0	11.3 ^{1/}	87
Closing date		03/31/82	03/31/83	03/31/83	100

^{1/} It is estimated that there will be an unspent balance of approximately \$1.7 million by the loan closing date if the Government does not submit a reallocation request of \$0.8 million.

OFFICE MEMORANDUM

TO: Ms. Ishrat Z. Husain, Chief, PHND2

DATE: March 19, 1982

FROM: Jack J. Kisa, PHND2 *JKisa*

SUBJECT: INDONESIA - Nutrition Development Project, LN 1373-IND--Supervision Report

Attached is the Supervision Report on the above project.

Attachment

cc: Mr. Rajagopalan, PAS (3)
 Mr. van der Tak, PAS
 Mr. Lethem, PAS
 Mr. Lee, PAS
 Mr. Ruddy, AENVP
 Mr. Jaycox, AEA
 Mr. Hawkins, AEA
 Mr. Kirmani, AEP
 Mr. Golan, AEP
 Mr. Blaxall, AEP
 Mr. Barker, EDC
 Mr. Stern, AEA
 Mr. Adams, AEA
 Mr. Colletta, AEA
 Mr. Cheetham, RSI, Jakarta
 Mr. Mullan, RSI, Jakarta
 Mr. Zincir, RSI, Jakarta
 Mr. Mead, LEG
 Mrs. Hwang, LOA
 Mr. Robless, PAB
 Mr. Amla, AGR
 Dr. Evans, PHNDR
 Mr. North, PHNDR
 Dr. Kanagaratnam, PHNDR
 Mr. Berg, PHNDR
 Mr. Warford, PHNPR
 Mr. Messenger, PHND1
 Mr. Pearce, PHND3
 Dr. Liese, PHND2
 Mr. Radel, PHND2
 Ms. Domingo, PHND2
 Ms. Fogle, PHND2
 Ms. Pishock, PHN
 Central Files

JKisa:br
 INDONESIA-LN 1373

IBRD AND IDA - SUPERVISION SUMMARY

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.

part of a mission report
 an annual update

THIS FORM IS A STOCKROOM ITEM.

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.: 1373-IND	L/C Amount (\$xx.xm): US\$13.0 million
Country: INDONESIA	Borrower/Beneficiary: Government of Indonesia	Board Date: 03/01/77	Signing Date: 03/15/77	Effective Date: 04/01/77
Projects Dept./Div. Name: PHND2	Org. Code No.: 306/20	Projects Officer: Jack J. Kisa	Loan Officer: Nat J. Colletta	

SECTION 1: SUMMARY PROJECT DESCRIPTION The project provides: (a) staff, training, technical assistance and equipment and physical facilities for the Center for Research and Development in Nutrition (CRD), the Food Technology Development Center (FTDC), and the Nutrition Academy; (b) staff, training, technical assistance and equipment for the Nutrition Intervention Pilot Project (NIPP) and the Home and Village Garden (HVG) Program, a Nutrition Education (NE) Program, an on-farm and village storage pilot program, and a Nutritional Anemia Pilot Project (NAPP); and (c) technical assistance and training to prepare a National Food and Nutrition Program (NFNP).

SECTION 2: PERFORMANCE RATING	This Summary	Last Summary
STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems	2	2
TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating	1	1
TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.) If more than one type of problem, enter most critical factor first.	M	M F
IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Disbursements	2	2
Estimated Cost	1	1
Anticipated Completion	1	1
Compliance with Loan Conditions	1	1
Project Finances	2	2
Management Performance	2	2
Procurement Progress	2	2
Performance of Consultants	1	1
Reporting	1	1
DEVELOPMENT IMPACT: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Expected Benefits	1	1
Rate of Return	-	-
Institution-Building	2	2

SECTION 3: PROJECT DATA		Total			of which:		Cumulative Disbursements
Estimated/Actual:	Project Completion	Loan/Credit Closing	Project Cost	Foreign Currency	Local Currency	through most recent Quarter ended (12/31/81)	
	(Mo./Yr.)	(Mo./Day/Yr.)	(\$xx.xm)	(\$xx.xm)	(\$xx.xm)	(\$xx.xm)	
Appraisal Est.	03, 81	03, 31, 82	26.0	10.2	15.8	12.7 (Est.)	
Last Summary (07/17/81)	09, 82	03, 31, 83	21.6	8.5	13.1		
Current	12, 82	03, 31, 83	21.6	8.5	13.1	4.9 (Actual)	

SECTION 4: MISSION SCHEDULE		Return to HQ		Final Report Date
Latest/Present Mission	No. of Staff on Mission	No. of Days in Country	(Mo./Day/Yr.)	(Mo./Day/Yr.)
Previous Mission	5	19 1/2	02, 10, 82	3, 16, 82 FS
	3	21	06, 15, 81	7, 17, 81 FS
Next Mission Departure (Mo./Yr.)	5, 82	Recommended interval between missions (Months)	3	End of period covered by latest progress report (Mo./Day/Yr.)
				01, 31, 82

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members

Mission Members' Specializations

Jack J. Kisa ^{2/}
 David Mills ^{2/}
 David J. Radel ^{2/}
 Ewen Thomson ^{2/}
 Alan Berg ^{2/}

Economics (Mission Leader)
 Architect (Civil Works)
 Communication (Nutr. Education)
 Nutritionist (Consultant)
 Senior Nutrition Advisor
 (Research and Evaluation)

Number of members on both present and previous mission:

None
 One
 Two or More

Section 6: (Cont'd)

targets partly because of difficulties in releasing staff, delays in submitting candidates and terms of reference for consultancies, and the fact that these activities were considerably expanded during the reallocation of savings.

Trend: Project implementation has improved considerably as executing agencies have gained experience and management has become more effective. This trend is expected to continue and, except for some fellowships, ongoing activities should be completed by March 31, 1983--the loan closing date.

Problems: A large number of consultancy assignments have not yet been made by the Center for Research and Development in Nutrition and the Food Technology Development Center. The mission urged the Secretariat to ensure that steps are taken to prepare terms of reference and submit them to the Bank together with prospective incumbents for approval. A sizeable number of the staff have yet to be trained under the fellowship program. We received recently the final list of candidates for the remaining fellowships and have already conveyed our approval to the Ministry of Health. This should speed up the process of fellowship training. The procurement of the remaining equipment is in process and the construction of the laboratory at the Nutrition Academy and the Nutrition Training Center is expected to be completed in August and December 1982, respectively. A sizeable amount of loan funds is tied up in these ongoing activities, with the result that disbursement as of February 28, 1982 was only \$5.8 million (or 45% of the loan amount). This leaves a balance of \$7.2 million to be disbursed by March 31, 1983. With the final list of fellowship candidates approved, the terms of reference for consultants expected to be received soon, the ongoing civil works well underway and the remaining equipment in the process of procurement, physical progress should be faster in the coming months. This will be reflected in accelerated disbursement. The disbursement schedule at Annex 4 is based on this assumption. Details on the execution of individual components are noted at Annex 5.

SECTION 5: COMMENTS (Clarify, if necessary, data in Sections 3 and 4.)

1/. The mission supervised concurrently the second population project (LN 1472-IND), the third population project (LN 1869-IND) and the nutrition development project (LN 1373-IND) and devoted 4 days, 5 days and 10 days to the second and third population projects and the nutrition project, respectively.

Messrs. Kisa and Thomson supervised the project from January 19 to 31, Mr. Mills from January 19 to 31, Mr. Radel from January 25 to 31 and Mr. Berg from January 18 to 22, 1982.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS

National Food and Nutrition Program: The mission discussed with the concerned officials project evaluation, design and timing and it was agreed that such evaluation be conducted in July/August 1982. A report on the evaluation is expected to be available in September 1982. A committee will then be set up by the government to draw up a national food and nutrition program to be incorporated into the Fourth National Development Plan. The exercise is to be completed in December 1982.

Status of Project Implementation: As shown in Annex 3, most of the civil works are completed, except for the following: the construction of the laboratory at the Nutrition Academy (45% completed), the Nutrition Training Center, and minor works at the Center for Research and Development in Nutrition (CRDN) and the Food Technology Development Center (FTDC). Most of the project equipment has been procured except a few items for the buildings under construction, the FTDC and for nutrition education activities. Procurement action has commenced in regard to these items. Apart from the CRDN, which does not yet have a full complement of staff, the agreed staffing under the project has been completed. Outside of Bali, nutrition intervention pilot project (NIPP) activities have been very successful in terms of appraisal target achievement and impact on the nutritional status of the groups involved. In Bali (one of the provinces in which nine villages are covered by the program), in contrast, progress is slow largely because of lack of sufficient support from the local leadership. Nutrition education activities are currently being evaluated and the results will feed into the extension of nutrition education to NIPP areas. The use of fellowships and consultants is lagging behind appraisal

(Continued)

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

1. The letter in Annex 1 has been sent to Dr. Suwardjono Surjaningrat, Minister of Health, drawing his attention to the above issues.
2. The mission urged the Project Director to expedite the implementation of on-going activities and to speed up disbursement. A letter on this subject is being addressed separately to the Project Director (Annex 1A).
3. A follow-up supervision mission is scheduled to visit Indonesia in May 1982 to review progress and to help resolve problems.

NAME OF PREPARING OFFICER:

Jack J. Kisa

INITIALS:

JJK

DATE:

March 18, 1982

INDONESIA

Nutrition Development Project, LN 1373-IND

List of Annexes

- Annex 1: Letter to Dr. Swardjono Surjaningrat, Minister of Health
- Annex 2: Compliance with Loan Conditions
- Annex 3: Project Indicators
- Annex 4: Schedule of Disbursements
- Annex 5: Execution of Project

February 24, 1982

Dr. Swardjono Surjaningrat
Minister of Health and Chairman
National Family Planning Coordinating Board
Jalan Prapatan No. 10
Jakarta
Indonesia

Dear Dr. Swardjono:

Re: Implementation of Population and Nutrition Projects
Loans 1472-IND, 1869-IND and 1373-IND

It was very kind of you to spare time out of your busy schedule to meet with the recent World Bank review mission for briefing on the status of the nutrition development project. The mission was most appreciative of your interest in its work and of the support and cooperation it received from your staff both at DEPKES and at EKKBN. We wish to inform you about the status of the above-mentioned projects as well as the key issues which require urgent action.

Progress on the implementation of the second population project has improved, although intensive efforts are needed to complete the project and to disburse the full loan amount within the current closing date of April 30, 1983. Pending matters include the procurement of vehicles and equipment and the completion of the contraceptive raw materials study and the community incentive scheme. Delays in the implementation of the two studies, coupled with the reallocation of loan savings account for delays in disbursement. By January 31, 1982 only \$10.1 million out of the total loan of \$24.5 million had been disbursed, leaving a balance of \$14.4 million to be disbursed by the loan closing date. Attached to this letter is a table showing the new allocation by category, the disbursement as of January 31, 1982 and the undisbursed balances.

Physical progress on the implementation of the nutrition project is improving and we hope that disbursement will be completed by the extended loan closing date of March 31, 1983. By January 31, 1982 \$5.3 million had been disbursed, leaving a balance of \$7.7 million. A large proportion of the balance is tied up in the construction of the laboratory currently in progress at the Nutrition Academy, equipment not yet procured, and consultants and fellowship funds which have not yet been utilized. These activities need to be executed with expedition in order to accelerate disbursement.

Dr. Suwardjono Surjaningrat

February 24, 1982

The implementation of the third population project is experiencing long delays and is causing serious concern within the Bank. While some progress has been made on health components and on the non-construction aspects of population components, civil works have been delayed considerably. You may recall that the Bank review missions which visited Indonesia in September 1980 and in May 1981 expressed grave concern over the inadequate staff entrusted with the responsibility of handling civil works. The staff dealing with civil works under the second project had been absorbed into the regular establishment of BKKBN. The two missions cautioned that unless the staff was increased to at least the staff strength of the second project, delays were bound to be encountered. The January/February 1982 mission found that the situation remained basically unchanged and that, consequently, none of the 54 contracts planned to be awarded by June 30, 1981 had been awarded. This means a delay of about eight months. Furthermore, optimistic forecasts by BKKBN now show that construction will not start until July 1982 at the earliest. The delay has been due in part to the protracted process of hiring consultants and the shortage of staff. Budgetary problems have been a contributory factor.

Before leaving Jakarta, the Bank mission indicated the specific actions needed to be taken to expedite the implementation of civil works, including the clarification of procedures for tendering and supervision at provincial and Kabupaten levels, individual staff responsibilities at different levels and the appointment of additional staff at BKKBN. We trust that the necessary actions will now be taken and that tendering will go ahead in May as planned. It was encouraging to hear subsequently in a telephone conversation with Dr. Sumbung that four engineers had been detached from the Public Works Department to assist with the organization of civil works at BKKBN.

The delay in project implementation is reflected in the status of disbursement. According to the appraisal estimate, \$4.4 million should have been disbursed from the loan by December 31, 1981. As of that date, only \$62,000 had been disbursed. This suggests that the loan may not be disbursed within the scheduled time. Clearly, greater efforts are needed to accelerate project implementation and loan disbursement.

Finally, we are very much interested in the preliminary proposals submitted to the Bank mission by BKKBN for a possible fourth population project. I understand that you personally attach great importance to them. However, before a dialogue between the Government and the Bank can be initiated regarding the proposals, there will have to be ample evidence of improved performance on the implementation of the ongoing projects.

Dr. Suwardjono Surjaningrat

February 24, 1982

Your personal attention to the implementation of the second project helped immensely to get it started, with the result that civil works were executed very quickly. We are aware of your busy schedule. However, in view of your past interest in Bank-assisted projects within your portfolio, we are taking the liberty of bringing to your attention some of the above-mentioned problems. We shall be grateful for your personal attention to these problems to help expedite the implementation of the three projects.

Yours sincerely,

Ishrat Z. Husain
Chief, Operations Div. 2
Population, Health and Nutrition Department

cc: Dr. Soejoto, BAPPENAS
Dr. Soebekti, DEPKES
Dr. Hasibuan, BAPPENAS
Dr. Sarnanto, EKKB
Dr. Sumbung, EKKB

Cleared with and cc: Ms. Duer, AEA
Ms. Hwang, LOA

cc: Mr. Mullan, RSI, Jakarta
Dr. Liese, PHND2 (o/r)
Mr. Radel, PHND2 (o/r)
Dr. Park, PHND2 (o/r)
Regional Files

JKisa:br
INDONESIA - LNs 1869/1472/1373-PHN

SECOND POPULATION PROJECT: - LOAN 1472-INDLoan Allocation and Disbursement as of January 31, 1982

Category	Allocation \$	Disbursement \$	Balance \$
1. Civil Works	4,573,000	4,369,000	204,000
2. Furniture and Equipment	7,085,000	1,361,000	5,724,000
3. Vehicles	7,132,000	3,005,000	4,127,000
4. Consultants, Experts' Services and Fellowships	1,821,000	787,000	1,034,000
5. Research, Seminars and Workshops	2,883,000	134,000	2,749,000
6. Training Aids	899,000	480,000	419,000
7. Unallocated	107,000	-	107,000
	24,500,000	10,136,000	14,364,000

March 19, 1982

Dr. Soebekti
Director-General of Community Health and
Project Director, Nutrition Development Project
Ministry of Health
Jalan Prapatan No. 10
Jakarta
Indonesia

Dear Dr. Soebekti:

Re: NUTRITION DEVELOPMENT PROJECT, LN 1373-IND

You will by now have received your copy of the letter we wrote to the Minister of Health, Dr. Suwardjono, drawing his attention to the matters which require urgent action regarding the two ongoing population projects and the nutrition project following the visit to Indonesia of the recent Bank review mission. The main issue that we highlighted with respect to the nutrition project was the intensive effort that must be made in order to complete the remaining activities so as to permit the disbursement of the loan balance within the next twelve months. The purpose of this letter is to indicate the specific actions that need to be taken to accomplish this task, make suggestions regarding nutrition manpower development and training, and set out the agreements reached regarding the evaluation of the project.

Based on the information obtained by the Bank mission concerning the status of project implementation, it seems to us that actions are required in regard to the following activities:

- (a) completion of physical facilities;
- (b) procurement of the remaining equipment; and
- (c) completion of consultancy assignments and staff training.

Civil Works

With regard to the construction of the laboratory at the Nutrition Academy, 45% of the work had been completed by the end of January 1982, and the remainder was expected to be completed by August. The Bank mission approved plans for the Nutrition Training Center building to be constructed at Pasar Minggu in Jakarta and the work was scheduled to start in May 1982 and to be completed in December. This schedule appears tight but it has to be adhered to if expenditures are to be reimbursed before the loan closing date. Close monitoring and supervision of these works by the Nutrition Academy Management, the Director of the Center for Education and Training and the Project Secretariat are needed if the target dates are to be met.

Procurement of Equipment

The mission obtained from the Secretariat an itemized list of pending equipment procurement on which it is shown that the items involved will be procured at various times between April and September 1982. It is important to ensure that this schedule is adhered to.

Consultancy Assignments and Staff Training

A large number of consultancy assignments have not yet been made by the Center for Research and Development in Nutrition and the Food Technology Development Center. The mission urged the Secretariat to ensure that steps are taken to prepare terms of reference and submit them to the Bank together with prospective incumbents for approval. A sizeable number of the staff have yet to be trained under the fellowship program. We received recently the final list of candidates for the remaining fellowships and have already conveyed to Mr. Adinugroho our concurrence. This should speed up the process of fellowship training. The Project Secretariat will have to ensure that the candidates enroll for their respective courses as indicated on the list. It has been suggested that for those fellowships that will stretch beyond the loan closing date, payment of maintenance costs to the relevant institutions should be made in advance so that disbursement can be effected before March 31, 1983.

Disbursement

The outstanding civil works, pending equipment procurement and the balance of consultants and fellowships account for the undisbursed loan balance of \$7.2 million. Actual accumulated disbursement as of February 28, 1982 was \$5.8 million or 45% of the loan amount. One of the important indicators of progress on project implementation is, of course, the level of disbursement. The large outstanding balance has to be disbursed by the loan closing date of March 31, 1983. It is critical that the implementation schedule for the ongoing activities be adhered to if this target is to be met. It would be much appreciated if you could pay special attention to these activities in an endeavor to help expedite their implementation and disbursement.

Nutrition Manpower Development and Training

One important matter that emerged out of the mission's discussions at the Nutrition Academy but which the mission did not have an opportunity to raise with you relates to the assessment of future nutrition manpower requirements. The mission gained the impression that these requirements were being viewed exclusively within the context of the Ministry of Health. While the Ministry of Health will continue to account for a large share of the employment of nutrition workers, other government agencies such as Agriculture, Education, the National Family Planning Coordinating Board as well as the private sector will also require nutrition workers. It appeared to the mission therefore that the scope of the assessment of manpower requirements exercise should be broadened to include these other agencies. We would be grateful to receive your views on this suggestion.

March 19, 1982

Project Evaluation

We were pleased to note that agreement was reached between the Government and the mission regarding the evaluation of the nutrition project in July/August this year. The ultimate objective of the evaluation is to provide a basis for preparing a chapter on food and nutrition for the Fourth Five-Year Development Plan.

As agreed, the preparation of the chapter will be the responsibility of an inter-ministerial committee. A working group comprising four people will prepare the working paper that will serve as a basis for the deliberations of the inter-ministerial committee. The working group's paper will draw on the evaluation report as well as a food policy analysis paper to be prepared by a team of technical experts.

The evaluation report will be prepared by an independent team. It will examine policy, program and nutrition impacts of Bank-assisted project activities as well as other Government nutrition intervention programs along the lines of the terms of reference agreed upon in January. The scope of this examination will include the extent to which the original objectives of the project have been attained, the operational components that should be continued, the costs and benefits of replicating them on a large scale and how these compare with alternative activities aimed at achieving the same objectives, the management of these activities, and an assessment of the institution-building components of the project in light of the original objectives.

Agreement was reached on the composition of the evaluation team and cables and letters were to be sent out in February inviting prospective members to join the team. The team would assemble in Jakarta by July 25th in time to start work on July 26th and would complete its work by August 20th. Briefing papers would be mailed to team members by June 10th. They would consist of the evaluation reports on the Nutrition Intervention Pilot Project (NIPP) activities, anemia control, home and village gardens, nutrition education, the semi-annual progress reports, and the appraisal report. It was further agreed that the evaluation would be financed out of the loan. The Project Secretariat would service the team.

This exercise is one to which, we know, you personally attach considerable importance, as indeed we also do. It will contribute not only to the realization of one of the major objectives of the Bank-assisted project--the formulation of a national food and nutrition program--but also facilitate the Government's preparation of the chapter on food and nutrition for the next Plan. The successful accomplishment of the task will require close and sustained follow through by the Project Secretariat to ensure that the necessary actions are taken in time. We will be glad to assist in any way deemed appropriate. We shall be grateful if you will keep us posted on developments.

Dr. Soebekti

-4-

March 19, 1982

Next Visit

We are planning a short two-week mission to Indonesia starting in mid-May to review progress on the second and third population projects. I plan to join the mission and will be working with Mr. Kisa on the review. We would like to take advantage of our presence in Jakarta to discuss with you and your staff progress on the nutrition project as well. This will not require elaborate arrangements on the part of the Project Secretariat. We will focus primarily on the issues raised in this letter. We trust that the timing will be convenient to you and your colleagues.

With warm regards and best wishes,

Yours sincerely,



Ishrat Z. Husain
Chief, Operations Div. 2
Population, Health and Nutrition Department

Cleared with and cc: Ms. Duer, AEA
Mr. Mead, LEG
Mrs. Hwang, LOA
cc: Mr. Mullan, RSI, Jakarta
Mr. Berg, PHNDR
Dr. Liese, PHND2 (o/r)
Ms. Domingo, PHND2 (o/r)
Mr. Radel, PHND2

JKISA:br
INDONESIA - LN 1373-IND/PHN

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Nutrition Development Project, LN 1373-IND

Compliance with Loan Conditions

Conditions	Remarks
<p>A. <u>Conditions not Complied with:</u></p> <p><u>Section 3.07(ii)</u> The Borrower shall submit to the Bank annual progress reports on research programs.</p> <p>B. <u>Conditions upon which Action Pending</u></p> <p><u>Section 3.05(d)</u> The accounts of all project implementing agencies shall be audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies.</p> <p>C. <u>Conditions Met</u></p> <p><u>Section 3.02</u> The borrower shall employ consultants whose qualifications, experience and terms and conditions of employment shall be satisfactory to the Bank.</p> <p><u>Section 3.03</u> The Borrower shall afford the Bank a reasonable opportunity to comment on the qualifications and experience of any person proposed to be appointed to the positions of Project Director, Project Co-Director and Project Manager and NIPP Coordinator prior to the making of such appointment.</p>	<p>The research program has not yet been formulated. Project Director has been urged to ensure that the program is prepared by end of 1982.</p> <p>Audit reports for the three fiscal years ending March 31, 1980 were received at the end of May 1981. The audit report for fiscal 1980/81 has not yet been received.</p> <p>Consultants satisfactory to the Bank have been employed.</p> <p>The Bank's approval was sought prior to the appointment of the incumbents of these positions.</p>

INDONESIA

Nutrition Development Project, LN 1373-IND

Compliance with Loan Conditions

Conditions	Remarks
<p><u>Section 3.04(c)</u> The Project Director shall be required to prepare and furnish to Bank semi-annual reports on project progress.</p>	<p>Semi-annual reports are submitted regularly to the Bank.</p>
<p><u>Section 3.07(i)</u> The Borrower shall maintain a Research Coordinating Committee to facilitate coordination of the nutrition-related research programs.</p>	<p>The Research Coordinating Committee met 3 times in 1979-1980 and 3 times in 1980-1981.</p>
<p><u>Section 3.08</u> The Borrower shall carry out a review of the NIPP program at the end of the second year.</p>	<p>With consultants' assistance, the process evaluation has been completed. Impact evaluation using experimental and non-experimental designs is underway.</p>
<p><u>Section 3.09</u> The Borrower shall carry out a review of the home/village garden component at the end of the third year of the NIPP program.</p>	<p>Completed and report available.</p>

INDONESIA

Nutrition Development Project, LN 1373-IND

Project Indicators

	Appraisal Estimate by September 1982	Achievement as of January 1982	Achievement as % of Appraisal Estimate
<u>CENTER FOR RESEARCH AND DEVELOPMENT IN NUTRITION:</u>			
<u>Civil Works:</u>			
Laboratories I and II	Completion	Completed	100%
Staff housing, 10	Completion	Completed	100%
Library, auditorium & dormitories	Completion	Completed	100%
Additional works	Completion	Contracts awarded	20%
<u>Staffing:</u>			
Professional	44	32	73%
Technical	88	77	86%
Others	n.a.	39	n.a.
<u>Fellowships:</u>			
Long-term (PhD & MS)	23	12	52%
Short-term	13	18	138%
<u>Consultants:</u>			
No. of visits	19	15	79%
<u>Procurement:</u>	All equipment delivered	All original equip- ment delivered	100%
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER:</u>			
<u>Civil works:</u>			
Food research laboratories	Completion	Completed	100%
Administrative building	Completion	Completed	100%

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN 1373-IND

Project Indicators

	Appraisal Estimate by September 1982	Achievement as of January 1982	Achievement as % of Appraisal Estimate
<u>Civil Works: (Cont'd)</u>			
Staff housing, 12	Completion	Completed	100%
Pilot plant	Completion	Completed	100%
Additional works		Contract awarded	
<u>Fellowships:</u>			
Long-term (PhD & MS)	42	24 manmonths	57%
Short-term	27 manmonths	16 manmonths	59%
<u>Consultants:</u>	96 manmonths	58 manmonths	60%
<u>Staffing:</u>			
Professional and senior technical	25	27	108%
Junior technical	32	22	69%
Other	22	18	82%
<u>Procurement:</u>			
ICB (total procurement)	42 Packages	Delivered	80%
PIB Lab equipment	78 Items	71 Items Quoted	91%
PIB pilot plant	80 Items	77 Items Quoted	96%
Special chemicals	1317 Items	371 Items Quoted	28%
<u>NUTRITION INTERVENTION PILOT PROJECT:</u>			
Villages involved	183	258	141%
<u>Training:</u>			
No. of village cadres	2840	4,000	141%
No. of VANPOS	183	258	141%

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN 1373-IND

Project Indicators

	Appraisal Estimate by September 1982	Achievement as of January 1982	Achievement as % of Appraisal Estimate
<u>Training: (Cont'd)</u>			
No. of training officers	46	66	143%
No. of NPO/ANPOs	69	83	120%
<u>Surveys:</u>			
Base-line data surveys:	7	6	86%
Resurveys for evaluation	7	2	29%
<u>NUTRITION EDUCATION:</u>			
No. of villages	60	60	100%
No. of cadres trained	n.a.	2,000	-
<u>Consultants:</u>			
Foreign	12 manmonths	18 manmonths	150%
<u>Surveys:</u>			
Formative evaluation	Completion	Completed	100%
Pre-testing	Completion	Completed	100%
Evaluation	Completion	Report under pre- paration	75%
<u>Procurement:</u>			
	Completion	Delivered	80%
<u>NUTRITION ACADEMY:</u>			
<u>Civil Works:</u>			
Laboratories and library	Completion	Completed	100%
Housing, 6	Completion	Completed	100%
Laboratory block	Completion (addi- tional works)	Under construction	45%

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN 1373-IND

Project Indicators

	Appraisal Estimate by September 1982	Achievement as of January 1982	Achievement as % of Appraisal Estimate
<u>Procurement:</u>	Completion	Completed	100%
<u>Staffing:</u>	24 Full-time staff	24 Full-time staff	100%
<u>Fellowships:</u>			
Long-term (PhD & MS)	8	9	113%
Short-term	6	4	67%
Scholarships	For 48 students	For 53 students	110%
Student enrollment	200	160	80%
<u>HOME GARDENS:</u>	N.A.	N.A.	-
<u>ANEMIA CONTROL:</u>			
No. of workers reached	3,000	3,096	103%
No. of base-line surveys	4	6	150%
No. of resurveys for evaluation	4	4	100%

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN 1373-IND

Schedule of Disbursements
(As of March 16, 1982)

Fiscal Year and Quarter Ending	Cumulative Disbursements (US\$ Million)				Actual or latest estimated disburse- ments as percent of appraisal estimate
	Actual Total	Appraisal Estimate	Last Revised Estimate	New Estimate	
FY78					
March 31, 1978	0	0.3	-	-	0
FY79					
March 31, 1979	0.1	1.9	-	-	5
FY80					
March 31, 1980	1.2	5.7	-	-	21
June 30, 1980	1.5	6.6	-	-	23
FY81					
Sept. 30, 1980	1.8	7.8	-	-	23
Dec. 31, 1980	2.3	9.0	-	-	26
March 31, 1981	2.8	10.2	-	-	27
June 30, 1981	3.9	10.8	-	-	36
FY82					
Sept. 30, 1981	4.5	11.6	-	-	39
Dec. 31, 1981	4.9	12.7	-	-	39
March 31, 1982	-	13.0	7.0	6.3	48
June 30, 1982	-	-	10.5	8.0	62
FY83					
Sept. 30, 1982	-	-	11.6	9.7	75
Dec. 31, 1982	-	-	-	11.7	90
March 31, 1983	-	-	13.0	13.0	100
Closing date		03/31/82	03/31/83	03/31/83	

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN1373-INDExecution of Project

Component	Status
<p><u>Center for Research and Development in Nutrition</u></p> <p>Civil Works</p> <p>Staffing and training</p> <p>Fellowships</p> <p>Use of consultants</p> <p>Procurement of equipment</p>	<p>All civil works are completed except (a) air conditioning which is expected to be completed in April 1982; (b) installation of telephone system due to be completed in March 1982; (c) installation of sound system in the auditorium scheduled to be completed in March 1982; (d) construction of a power house for a standby electric generator; and (e) use, storage and disposal of radio isotope; consultancy provided by the Bandung Institute of Technology made inadequate arrangements; the matter has been brought to the attention of the Project Director.</p> <p>Number of professional staff reduced from 44 estimated at appraisal to 40. Thirty-one are in post while nine are undergoing training. Out of a total of 88 technical staff required, 77 have been recruited, the rest are expected to be recruited in the course of 1982.</p> <p>Of the 36 fellowships provided, 30 have been utilized and six are on-going.</p> <p>Ten consultants have already been hired and plans are in hand to engage 13 more. This will bring the total consultancy man-months utilized thus far to about 22 compared with a total provision of 24.</p> <p>The third and last phase of procurement equipment expected to be completed in July 1982.</p>
<p><u>Food Technology Development Center</u></p> <p>Civil Works</p>	<p>Construction of all buildings completed except the following minor works:(a) electrical installations, 85% of which is completed and the rest scheduled for completion in March 1982; (b) construction of gantry and decking to pilot plant;</p>

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN1373-IND

Execution of Project

Component	Status
<p>Procurement of equipment</p> <p>Staffing</p> <p>Fellowships</p> <p>Consultants</p>	<p>(c) fitting of sinks for laboratory kitchens; (d) construction of rat pen has only just started; and (e) construction of a model warehouse, approximately 40% completed.</p> <p>Over 80% of the equipment has been delivered, the remaining 20% is in the process of being procured and expected to be delivered by September 1982.</p> <p>The present staff strength is 67 compared with the appraisal target of 79. The remaining 12 are undergoing training.</p> <p>The appraisal estimate of 14 graduate fellowships has been exceeded by the actual of 26 largely as a result of the reallocation of loan savings. On the whole 40 manmonths out of a total of 69 manmonths have been utilized.</p> <p>By December 31, 1981 58 manmonths had been utilized out of 96 appraisal manmonths for program design, preparation of specifications for equipment, determination of research priorities, food chemistry and food processing. Plans are in hand to utilize another 38 manmonths.</p>
<p><u>Nutrition Academy</u></p> <p>Civil Works</p> <p>Procurement of equipment</p> <p>Fellowships</p>	<p>Forty-five percent of the construction of the laboratory completed; remaining work expected to be completed in August 1982.</p> <p>Contracts have been awarded and delivery is scheduled for July 1982.</p> <p>Eight staff members are currently on fellowship training and another eight are planned.</p>

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN1373-IND

Execution of Project

Component	Status
Training	As a result of expanded facilities and staff, the annual intake has increased from 45 students to 60. Since there is an attrition rate of about 30%, the intake will have to be raised to at least 90 if the Academy is to meet the output target of 60 graduates per annum. The high attrition rate is due to the fact that after admission, some students are offered places at universities and prefer to take advantage of these opportunities. When the new laboratory is completed, the Academy will be able to admit between 100 and 120 students and thus make sufficient allowance for attrition.
<u>Nutrition Training Center Pasar Minggu, Jakarta</u>	Plans approved by the Bank and construction expected to start in April and to be completed by December 1982. The center is designed to train middle level nutrition workers for subsequent assignment to health centers to fill a void that is hampering the supervision of nutrition activities.
<u>Nutrition Intervention Pilot Project</u>	Covers 258 villages involving 76,900 children, 11,000 pregnant women and 15,900 lactating mothers. The package of interventions consists of weighing children under the age of three years, supplementary feeding, nutrition education for pregnant and lactating women, and immunization of children. It is estimated that protein/energy malnutrition among children, pregnant women and lactating mothers has declined 44%, 20% and 30% respectively.
<u>Home and Village Gardens</u>	These activities now cover 531 villages involving 53,100 participants. Funds available under the project are used for operating demonstration gardens, supplying seeds, providing tools, preparing manuals, operating and maintaining vehicles, water supplies and evaluation surveys and reports.

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN1373-IND

Execution of Project

Component	Status
Equipment	In process of procurement and expected to be delivered in July 1982.
Evaluation	Survey completed and report under preparation.
<u>Anemia Prevention and Control</u>	Continues to show impressive results. Workers and their families on plantations benefiting from prevention and control measures (salt fortification, deworming and supply of boots) have shown higher haemoglobin levels than those not covered. Parasitic infection has dropped from 54% to 9%. Consequently, worker productivity has increased by 19%. Among the workers not covered by the scheme, productivity has declined during the same period. Increased productivity has in turn led to higher worker incomes due to bonus payments and higher per caput calorie intake. On one plantation, the intake has increased from 1950 calories per day to 2,500 calories per day.
<u>Nutrition Education (NE)</u>	The NE component is being carried out in 60 villages. The core of the activity is weight monitoring and face-to-face education of mothers by some 2,000 nutrition volunteers, who are supervised by inter-sectoral teams of officials from the Department of Health, Education, Information, Agriculture, and Religion. Various educational materials are being supplied to support the work of these volunteers. The core messages and materials are based on the results of a formative evaluation. The educational approach underlying the NE component has been to build on what people are already doing that is nutritionally sound and to develop feasible, behavioral-oriented messages.

INDONESIA

NUTRITION DEVELOPMENT PROJECT, LN1373-IND

Execution of Project

<u>Component</u>	<u>Status</u>
<u>Materials</u>	<p>Attempts to use mass media, largely radio, have not been successful due to inadequate coverage and inability to obtain appropriate time for the 8 spots developed. Instead, they have been placed on audio cassettes and 1,250 of each distributed to villages along with some blank tapes. In mid-1981 10,000 posters were produced and another 2.3 million in early 1982 for distribution to NE and NIPP areas. The majority of these are "action posters" designed to engage the audience's attention and to remind them of specific actions to be taken. A manual on using the action posters has been distributed to the volunteers and 9 other manuals giving background information on each basic message are under preparation. Also under various stages of preparation are 6 TV/cinema spots and 6 slide/sound sets. Educational kits containing a flipchart, an educational skills manual, and a new overall manual developed for the national nutrition program will be prepared for the volunteer in NE and NIPP areas using savings.</p>
<u>Equipment</u>	<p>643 radio/tape recorders have been distributed to health centers, administrative offices, and the sub-village level in NE areas. A tape duplicator has been procured for the Directorate of Health Education and video tape equipment is under procurement.</p>
<u>Training</u>	<p>Two MOH staff are slated to attend an 8-week course in production of audio-visual aids.</p>
<u>Evaluation</u>	<p>An evaluation of the impact of the action posters and their messages is underway with data being processed and analyzed by a consultant. In April or May 1982 a workshop will be held to review the evaluation results and to discuss ways to build the lessons of the NE component into the national nutrition program.</p>

OFFICE MEMORANDUM

TO: Ms. Ishrat Z. Husain, Chief, PHND2

FROM: Rolf C. Carriere, PHND2 *rolf c carriere*

SUBJECT: INDONESIA: Nutrition Development Project
Loan 1373-IND - Supervision Report

DATE: July 17, 1981

Attached is the Supervision Report for the above project.

Attachment

Distribution:

Cleared with & cc: Mr. Kisa (PHND2)

cc: Messrs. Rajagopalan (3)	(PAS)
van der Tak	(PAS)
Lethem	(PAS)
Lee	(PAS)
Ruddy	(AENVP)
Jaycox	(AEA)
Hawkins	(AEA)
Kirmani	(AEA)
Adams (AEA)	(AEA)
Ms. Hadler	(AEA)
Messrs. Stern	(AEA)
Golan	(AEP)
Blaxall	(AEP)
Barker	(EDC)
Cheetham	(Jakarta)
Mullan	(Jakarta)
Zincir	(Jakarta)
Ping-Cheung Loh	(Jakarta)
Mead	(LEG)
Fernando	(CTR)
Robless	(PAB)
Amla	(AGR)
Evans	(PHN)
North	(PHN)
Kanagaratnam	(PHN)
Berg	(PHN)
Warford	(PHN)
Kang	(PHN)
Mills	(PHND2)
Ms. Domingo	(PHND2)
Mrs. Pishock	(PHN)
Central Files	
Division Files	

RCCARRIERE:chb:eqr
LN.1373-IND/BASIC CORRES/PHN

THE WORLD BANK
IBRD AND IDA - SUPERVISION SUMMARY

This summary is the initial summary
 part of a mission report
 an annual update

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.

THIS FORM IS A STOCKROOM ITEM.

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.: 1373-IND	L/C Amount (\$xx.xm): US\$13.0 million
Country: INDONESIA	Borrower/Beneficiary: Government of Indonesia	Board Date: 03/01/77	Signing Date: 03/15/77	Effective Date: 04/01/77
Projects Dept./Div. Name: PHND2	Org. Code No.: 306/20	Projects Officer: Rolf C. Carriere (PHN)	Loan Officer: Nat J. Colletta (AEA)	

SECTION 1: SUMMARY PROJECT DESCRIPTION

The project provides: (a) staff, training, technical assistance, equipment and physical facilities for the Center for Research and Development in Nutrition (CRDN), the Food Technology Development Center (FTDC), and the Nutrition Academy; (b) staff, training, technical assistance and equipment for the Nutrition Intervention Pilot Project (NIPP) and the Home and Village Garden (HVG) Program, a Nutrition Education (NE) Program, an on-farm and village storage pilot program, and a Nutritional Anemia Pilot Project (NAPP); and (c) technical assistance and training to prepare a National Food and Nutrition Program (NFNP).

SECTION 2: PERFORMANCE RATING

STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating

TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.)

If more than one type of problem, enter most critical factor first.

IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

Disbursements

Estimated Cost

Anticipated Completion

Compliance with Loan Conditions

Project Finances

Management Performance

Procurement Progress

Performance of Consultants

Reporting

DEVELOPMENT IMPACT: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

Expected Benefits

Rate of Return

Institution-Building

	This Summary	Last Summary
STATUS	2	2
TREND	1	1
TYPES OF PROBLEMS	M F	M F
IMPLEMENTATION STATUS	2	2
Disbursements	1	1
Estimated Cost	1	2
Anticipated Completion	1	2
Compliance with Loan Conditions	2	2
Project Finances	2	2
Management Performance	2	2
Procurement Progress	2	2
Performance of Consultants	1	1
Reporting	1	2
DEVELOPMENT IMPACT	1	1
Expected Benefits	-	-
Rate of Return	2	2
Institution-Building	2	2

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total Project Cost (\$xx.xm)	of which:		Cumulative Disbursements through most recent Quarter ended (6 /30 /81) (\$xx.xm)
				Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	<u>03, 81</u>	<u>03, 31, 82</u>	<u>26.0</u>	<u>10.2</u>	<u>15.8</u>	<u>10.8</u> (Est.)
Last Summary (1 / 19 / 81)	<u>09, 82</u>	<u>03, 31, 83</u>	<u>26.0</u>	<u>10.2</u>	<u>15.8</u>	
Current	<u>09, 82</u>	<u>03, 31, 83 / 1</u>	<u>21.6</u>	<u>8.5</u>	<u>13.1</u>	<u>3.9</u> (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	<u>3</u>	<u>21</u>	<u>6, 15, 81</u>	<u>7, 17, 81 (FS)</u>
Previous Mission	<u>4</u>	<u>15</u>	<u>11, 29, 80</u>	<u>1, 14, 81 (FS)</u>
Next Mission Departure (Mo./Yr.) <u>12, 81</u>	Recommended interval between missions (Months) <u>six</u>	End of period covered by latest progress report (Mo./Day/Yr.) <u>06, 05, 81</u>		

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members

Mission Members' Specializations

Jack Kisa

Mission leader

Rolf Carriere

Project Officer

David Mills /2

Architect (Consultant)

Alan Berg /2

Senior Nutrition Adviser

Number of members on both present and previous mission:

None
One
Two or More

SECTION 5: COMMENTS (Clarify, if necessary, data in Sections 3 and 4.)

- 1/ Before September 1981 GOI will request postponement of the present closing date by one year (to March 31, 1983).
- 2/ Mr. Carriere worked full-time on supervision of this project. Messrs. Kisa and Mills intermittently assisted in supervision, while Mr. Berg joined the four-day field trip to Central Java. All participated in the wrap-up meeting.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS

Project implementation is not significantly behind the schedules agreed upon in November 1980, and completion is still expected in September 1982. Disbursement rate is increasing and procurement of goods and services is satisfactory. Including q-funds, cumulative disbursement as of June 30 stood at US\$4.4 million (or 34% of total loan funds). GOI sent to the Bank the audit reports for the three fiscal years ending March 31, 1980, thus meeting the Bank's condition for formal approval of the proposed reallocation of loan savings and revision of Schedule 1 of the Loan Agreement as described in the last supervision report dated January 19, 1981. Revised cost estimates indicate that there will be a further unused balance of about \$600,000 on the loan amount. In addition, there is unallocated amount of \$500,000, giving a total unused balance of \$1.1 million. The GOI proposes to utilize these funds for equipment, fellowships and consultancies at the FTDC and for manpower planning and training. A formal proposal to this effect is expected to be submitted by the GOI to the Bank for approval. The proposal will be reviewed to determine whether or not the proposed activities are essential to the project and can be completed within the currently scheduled project completion date of September 1982. Completion on schedule of the ongoing and the new activities will require considerable strengthening of the management capacity of the units responsible for implementing the various components. Indicators of project status as of March 31, 1981 are shown at Annex 3, and further details of project execution and topics discussed at the wrap-up meeting are on PHN files.

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

The mission recommends that:

- (1) The Bank formally notify GOI of the Bank's approval of the revised Schedule I (see Supervision Report of 19 January 1981); and
- (2) The Bank approve GOI's request for a one-year postponement of the loan closing date (GOI is expected to submit the request to the Bank toward the end of August 1981).

NAME OF PREPARING OFFICER:

Rolf C. Carriere

INITIALS:

hcc

DATE:

July 17, 1981

INDONESIA

Nutrition Development Project

Loan 1373-IND

LIST OF ANNEXES

1. Letter to Project Director
2. Compliance With Covenants
3. Key Project Indicators
4. Schedule of Disbursements
5. Officials Met and Places Visited

ANNEX 1

July 24, 1981.

Loan 1373-IND

Dr. R. Soebekti, M.P.H.
Project Director
Nutrition Development Project
Departmen Kesehatan
Jl. Prapatan, 10
Jakarta, INDONESIA

Dear Dr. Soebekti:

I wish to thank you and your staff for the courtesy and cooperation extended to the combined Bank Population and Nutrition mission which visited Indonesia during May - June 1981. The mission greatly valued the opportunity of meeting jointly with the Minister of Health, Dr. Swardjono Surjaningrat, and yourself. Noted below are the most important issues that need resolution in order to accelerate the commendable progress made on project implementation during the past ten months. The mission discussed most of these issues with you and your colleagues during the wrap-up meeting.

Loan Disbursement

Actual disbursement as a percentage of the appraisal estimate has increased from 26% as of December 31, 1980 to 36% as of June 30, 1981. Cumulative disbursements have now reached US\$4.4 million (including QARs), or one-third of the loan. Further acceleration of the rate of loan withdrawal is needed in order to achieve the targets agreed upon. This will require close adherence to the project implementation schedules, prompt resolution of problems encountered, and immediate submission of reimbursement applications.

Reallocation of Loan Funds

Now that we have received the audit report covering the three fiscal years ending March 31, 1980, we are considering the proposed reallocation of loan funds and the consequential revision of Schedule I of the Loan Agreement. We will be communicating with you further on this matter very shortly. A related issue is the proposals presented to the Bank mission in May for utilization of an anticipated saving of \$1.5 million for consultancies and manpower training at the Food Technology Development Center (FTDC). To enable us to give further consideration to the proposals, we would like to hear from you if BAPPENAS has approved them.

Dr. Soebekti

-2-

July 24, 1981.

Civil Works

The mission expressed concern over the exclusion of price and physical contingencies in the civil works estimates and budget for the Center for Research and Development in Nutrition (CRDN), the Food Technology Development Center (FTDC) and the Nutrition Academy. The implementation of the civil works could be delayed if budgetary provisions based on present estimates proved to be inadequate. This is a matter which, we suggest, deserves your attention. Another issue which needs attention is the inadequate safeguards for the storage and disposal of radio-active materials in CRDN's radio-isotope laboratory. We would appreciate hearing from you how you propose to resolve the issue. We would also be grateful if you could send us information on the progress being made in respect of tendering for additional CRDN construction and renovation work, installation of service facilities, preparation of tender documents for new construction, the siting of the warehouse, the removal of the incinerator, and construction of the gantry at the FTDC.

Procurement

Procurement of equipment for FTDC's phase II is lagging behind schedule. Budgetary and procedural delays seem to be largely responsible for the slow progress. We would appreciate learning from you what solutions, if any, have been found. We have now received tender documents for nutrition education and Nutrition Academy supplies and equipment and our concurrence has been communicated in our telex of July 22. We would appreciate it if you could send us information on the status of procurement of equipment for the Nutrition Intervention Pilot Project (NIPP).

Staffing

It seemed to the Bank mission that more efforts need to be made at CRDN and FTDC to attract economists. Serious staff shortages also exist with respect to the Nutrition Academy, Nutrition Education and NIPP. The mission was pleased with the Minister's undertaking to provide additional staff, on a temporary or permanent basis, to cope with the greatly increased workload. We would be grateful to hear from you what action has been taken in this regard.

Fellowships

Provided that BAPPENAS agrees to the FTDC request for an

Dr. Soebekti

-3-

July 24, 1981.

additional allocation of project funds for fellowships, as mentioned in paragraph 3 above, the Bank has no objection. We have communicated this to you in our telex of July 20, but we have also cautioned against embarking upon an expanded fellowship program that would extend well beyond the loan closing date. We feel that serious consideration needs to be given to limiting the fellowship program at this stage.

Consultancies

Intensive efforts will be required to achieve the ambitious CRDN and FTDC targets for the recruitment of consultants. NIPP and the Project Executive Secretariat are also planning additional use of local and expatriate technical assistance. Here again, the need and justification of the use of consultants' services to the extent envisaged should be reviewed very carefully.

Finally, may I thank you for the way in which you facilitated the work of the mission, and ask you to convey our thanks to your staff for all the efforts they made on behalf of the mission. We are looking forward to the opportunity of a further exchange of ideas during your upcoming visit to Washington in August. On that occasion, we would like to discuss the dates of the next review mission.

In view of their interest in the project, I am sending copies of this letter to the Minister of Health, the Deputy Chairman for Social and Cultural Affairs in BAPPENAS, and the Director-General for International Monetary Affairs in the Ministry of Finance.

With best regards.

Sincerely yours,

Ishrat Husain
Chief, Division II
Population, Health & Nutrition
Department

cc: Dr. Suwardjono Surjaningrat
Minister of Health
Jakarta, INDONESIA

Mr. S.H. Soejoto
Deputy Chairman for Social & Cultural Affairs
BAPPENAS
Jakarta, INDONESIA

Drs. Soegito Sastromidjojo
Director-General for Intl. Monetary Affairs
Ministry of Finance
Jakarta, INDONESIA

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

CONDITION	REMARKS
A. <u>Conditions Not Complied With:</u>	
<u>Section 3.07(ii)</u>	
The Borrower shall submit to the Bank annual progress reports on research programs.	Progress reports cannot be submitted until overall research programs are designed.
B. <u>Conditions Met:</u>	
<u>Section 3.05(d)</u>	
The accounts of all project implementing agencies shall be audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies.	Audit reports for the three fiscal years ending March 31, 1980 were received at the end of May 1981. Project management has been reminded that the audit report for fiscal 1980-81 is due in September 1981.
<u>Section 3.07(i)</u>	
The Borrower shall maintain a Research Coordinating Committee to facilitate coordination of the nutrition-related research programs;	The Research Coordinating Committee met 3 times in 1979 - 1980 and 3 times in 1980 - 1981. Each meeting dealt with a specific research proposal. The overall research program is being formulated with help from a consultant, but has not yet been finalized.
<u>Section 3.08</u>	
The Borrower shall carry out a review of the NIPP program at the end of the second year.	With consultants' assistance, the process evaluation has been completed; findings and recommendations are under discussion. Impact evaluation using experimental and non-experimental designs is underway.
<u>Section 3.09</u>	
The Borrower shall carry out a review of the home/village garden component at the end of the third year of the NIPP program.	Consultants are currently undertaking the review; draft interim report on file.
<u>Section 4.02(b)</u>	
The Borrower shall: (i) require that all implementing agencies maintain separate accounts; and (ii) establish and maintain within MOH a Project accounting unit.	NIPP accounts have been maintained together with Unit for Family Health and Nutrition (UPGK A and B).

NUTRITION DEVELOPMENT PROJECT

KEY PROJECT INDICATORS

	Achievement as of March 31, 1981	Appraisal Estimate by Sept., 1982	Percentage of Appraisal Estimate
<u>CENTER FOR RESEARCH AND DEVELOPMENT IN NUTRITION:</u>			
<u>Civil Works:</u>			
Laboratories I and II	Completed	Completion	100%
Staff Housing, 10	Virtually Completed	Completion	98%
Library, Auditorium & Dormitories	Virtually Completed	Completion	98%
Additional works	Tender documents to be prepared in June 1981.	Completion	0%
<u>Staffing:</u>			
Professional	32	44	73%
Technical	76	88	86%
Others	36	n.a.	n.a.
<u>Fellowships:</u>			
Long-Term (PhD & MS)	11	23	65%
Short-Term	18	13	138%
<u>Consultants:</u>			
No. of Visits	15	19	79%
<u>Procurement:</u>	All Equipment Delivered or Tenders Awarded	All Equipment Delivered	40%
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER:</u>			
<u>Civil Works:</u>			
Food Research Laboratories	Completed Except for Services	Completion	95%
Administrative Building	Completed Except for Services	Completion	95%
Staff Housing, 12	Completed Except for Services	Completion	98%
Pilot Plant	Completed Except for Gantry and Services	Completion	92%
Additional Works	Tender Documents to be Prepared in June 1981.		
<u>Fellowships:</u>			
Long-Term (PhD & MS)	4 (Oct. 30, 1980)	42 (expanded program target)	10%
Short-Term	15 manmonths (Oct. 30, 1980)	27 manmonths	56%
<u>Consultants:</u>	45 manmonths	96 manmonths	47%

INDONESIA

NUTRITION DEVELOPMENT PROJECT

KEY PROJECT INDICATORS

	<u>Achievement as of</u> <u>March 31, 1981</u>	<u>Appraisal Estimate</u> <u>by Sept., 1982</u>	<u>Percentage of</u> <u>Appraisal Estimate</u>
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER (Continued):</u>			
<u>Staffing:</u>			
Professional and Senior Technical	27	25	108%
Junior Technical	28	32	88%
Other	21	22	95%
	76 in Position, Plus 7 Posts Agreed	79 in Position	
<u>Procurement:</u>			
ICB (Total Procurement)	15 Packages (delivery 30%)	42 Packages	36%
PIB Lab Equipment	71 Items Quoted	78 Items	91%
PIB Pilot Plant	77 Items Quoted	80 Items	96%
Special Chemicals	371 Items Quoted	1317 Items	28%
<u>NUTRITION INTERVENTION PILOT PROJECT:</u>			
Villages Involved	192	183	105%
<u>Training:</u>			
No. of Village Cadres	2980	2840	105%
No. of VANPOs	192	183	105%
No. of Training Officers	46	46	100%
No. of NPO/ANPOs	69 (Plus replacements)	69	100%
<u>Surveys:</u>			
Base-Line Data Surveys:	4	7	57%
Resurveys for Evaluation:	0	7	0%
<u>NUTRITION EDUCATION:</u>			
No. of Villages	60	60	100%
No. of Cadres Trained	2,000	N.A.	-
<u>Consultants:</u>			
Local	0	35 man-months	0%
Foreign	17 man-months	12 man-months	142%
<u>Surveys:</u>			
Formative Evaluation	Completed	Completion	100%
Pre-testing	Completed	Completion	100%
Evaluation	Preparation started in June 1981	Completion	10%
<u>Procurement:</u>			
	Tender Documents Prepared	Completion	20%

INDONESIA
 NUTRITION DEVELOPMENT PROJECT
 KEY PROJECT INDICATORS

	<u>Achievement as of</u> <u>March 31, 1981</u>	<u>Appraisal Estimate</u> <u>by Sept., 1982</u>	<u>Percentage of</u> <u>Appraisal Estimate</u>
<u>NUTRITION ACADEMY:</u>			
<u>Civil Works:</u>			
Laboratories and Library	Completed	Completion	100%
Housing, 6	Completed	Completion	100%
Laboratory Block	Demolition old building completed; tendering begun.	Completion (additional works)	10%
<u>Procurement:</u>	Completed	Completion	100%
<u>Staffing:</u>	24 Full-Time Staff	24 Full-Time Staff	100%
<u>Fellowships:</u>			
Long-Term (PhD & MS)	8 (June 1981)	8	100%
Short-Term	4	6	67%
Scholarships	For 53 Students	For 48 Students	110%
Student Enrollment	160	200	80%
<u>HOME GARDENS:</u>			
	N.A.	N.A.	-
<u>ANEMIA CONTROL:</u>			
No. of Workers Reached	3,096	3,000	103%
No. of Base-Line Surveys	6	4	150%
No. of Resurveys for Evaluation	4	4	100%

INDONESIA
NUTRITION DEVELOPMENT PROJECT

Loan 1373-IND

Schedule of Disbursements
(as of June 30, 1981)

Fiscal Year and Quarter	Cumulative Disbursements (US\$ m)				Actual and Forecast Estimates of Disburse- ment as Percent of Appraisal Estimates
	Actual Total	Appraisal Estimate	Last Revised Estimate	New Estimate	
March 31, 1978	0	0.3	-	-	0
March 31, 1979	0.1	1.9	-	-	5
March 31, 1980	1.2	5.7	1.6	-	21
June 30, 1980	1.5	6.6	2.2	-	23
Sept. 30, 1980	1.8	7.8	2.8	-	23
Dec. 31, 1980	2.3	9.0	3.4	-	26
March 31, 1981	2.8	10.2	4.0	-	27
June 30, 1981	3.9	10.8	4.7	-	36
Sept. 30, 1981	-	11.6	5.4	-	-
Dec. 31, 1981	-	12.7	6.2	-	-
March 31, 1982	-	13.0	7.0	-	-
June 30, 1982	-	-	7.7	10.5	81
Sept. 30, 1982	-	-	8.5	11.6	89
March 31, 1983	-	-	10.0	13.0	100

Closing date 03/31/82 03/31/83 03/31/83

INDONESIA
Nutrition Development Project
Loan 1373-IND

Supervision Mission Report

May 15 - June 6, 1981

OFFICIALS MET AND PLACES VISITED

Ministry of Health -- Jakarta

Dr. Swardjono, Minister of Health
Dr. R. Soebekti, Director-General of Community Health and Project Director

A. Executive Secretariat

Mr. Adinugroho Asrarudin, Project Executive Secretary
Mr. Slamet Adikoesoemo, Finance Officer
Mr. Hartoyo Dhanutirto, Administrative Officer
Mr. R. Pendjaitan, Procurement Officer
Mr. Carl Fritz, INDP Finance and Procurement Adviser

B. Nutrition Academy/Manpower Planning

Dr. Isa, Director, Pusdiklat
Miss S. Almatsier, Director, Nutrition Academy
Dr. Wattimena, Pusdiklat
Mrs. Myriarti Sihombing, Teaching Staff
Ms. Sri Hartini, Teaching Staff
Mr. A. Ginting, Finance Officer
Mr. Soemartono, Administrative Officer
Professor Cecilia Florencio, Consultant on manpower planning and curriculum development

C. Nutrition Directorate

Mr. I. Tarwotjo, Director
Mr. Hartono, Staff
Dra. Asmira, Nutrition Training Specialist for NIPP
Dr. Salihudin, Project Officer for NIPP
Dr. B. Tilden, HKI Consultant

D. CRDN (Center for Research and Development in Nutrition)

Dr. Darwin Karyadi, Director
Dr. Muhilal, Biochemist
Dra. Sukartiah, Deputy Director
Mr. Hermana, Food Technologist

E. Health Education Directorate

Dr. I. Mantra, Sub-Director of Health Education
Mr. T. Marku, Staff
Ms. Dunanty, Nutritionist

Ministry of Agriculture -- Jakarta

A. FNU (Food Nutrition Unit)

Dr. Suyono Suropati, Deputy Head

B. Directorate of Food Crops Production

Ir. Mohamed Suwarno, Staff

Ministry of Education -- Bogor

FTDC (Food Technology Development Center)

Dr. F. G. Winarno, Director
Prof. Suwarno, Staff
Dr. Hadi, Staff
Dr. B. Bushan, INDP Consultant

Ministry of Manpower, Transmigration, and Cooperatives -- Jakarta

A. National Institute for Industrial Hygiene and Occupational Health

Dr. Sum'amur, Director
Ir. Sobari, Staff

B. Anemia Control Project (Central Java) (PTP XXVII)

Ir. Soemadi, Director
Mr. Soenarto, Inspector

BAPPENAS

Mr. Soejoto, S.H., Deputy for Social Development Planning
Dr. H.A.R. Tilaar, Bureau Chief for Social Welfare Peoples Housing and Health
Mrs. Siti Hasnah Soetedja, Nutrition Coordinator

YIS Consultants

Dr. Lukas Hendrata, Director, YIS, Jakarta
Drs. Sofyandi, Staff
Ms. Sri Djuarini, Staff
Ms. Iris Kapil, OECD Consultant on population assistance
Drs. Bianti, Consultant

NUSA Consultant

Ir. Mahfud, Investigator, Homegarden Study

Others

Mr. Peter Berman, PHC researcher, Jogjakarta
Dr. Ludui, Provincial Nutritionist, Central Java
Drs. Soekanto, Bupati Wonosobo
Drs. Soebandi, Dokabu Wonosobo
- Dokabu, Karanganyar
Dr. Wiyatnaya, Deputy Kakanwilkes, Bali

UNICEF

Mr. Victor Soler-Sala, Representative
Dr. Terrel Hill, Nutrition Project Officer
Mr. Alan Court, Project Officer for Agriculture and Nutrition
Ms. Cynthia de Windt, Nutrition Education Officer
Ms. Nancy Terreri, Project Officer, Primary Health Care
Mr. Sunawang, Nutritionist
Mr. Siddharta, Community Development Specialist

WHO

Dr. Alberto Pradilla, Regional Nutrition Officer, Searo, New Delhi
Dr. Vitoon Osathandndh, Consultant on research and development, Jakarta

OFFICE MEMORANDUM

3100
book

TO: Ms. Ishrat Z. Husain, Chief, PHND2

FROM: Rolf C. Carriere, PHND2 *Rolf C. Carriere*

SUBJECT: INDONESIA: Nutrition Development Project
Loan 1373-IND - Supervision Report

DATE: January 19, 1981

Attached is the full Supervision Report for the above project.

Attachments

Distribution:

Cleared with & cc: Miss Kaplan (AEA)

cc: Messrs. Rajagopalan (3) (PAS)
van der Tak (PAS)
Lethem (PAS)
Lee (PAS)
Ruddy (AENVF)
Jaycox (AEA)
Hawkins (AEA)
Kirmani (AEA)
Adams (AEA)
Ms. Hadler (AEA)
Messrs. Stern (AEA)
Golan (AEP)
Blaxall (AEP)
Barker (EDC)
Cheethan (Jakarta)
Mullan (Jakarta)
Zincir (Jakarta)
Ping-Cheung Loh (Jakarta)
Mead (LEG)
Fernando (CTR)
Robless (PAB)
Amla (AGR)
Evans (PHN)
North (PHN)
Kanagaratnam (PHN)
Berg (PHN)
Warford (PHN)
Kang (PHN)
Liese (PHND2)
Kisa (PHND2)
Cooper (PHND2)
Mills (PHND2)
Mrs. Domingo (PHND2)
Mrs. Pishock (PHN)
Central Files
Division Files ✓

RCCARRIERE:chb
LOAN 1373-IND/BASIC CORRES./PHN

THE WORLD BANK
IBRD AND IDA - SUPERVISION SUMMARY

This summary is

the initial summary
 part of a mission report
 an annual update

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.

THIS FORM IS A STOCKROOM ITEM.

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7INSNFO1	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.: 1373-IND	L/C Amount (\$xx.xm): US\$13.0 m
Country: Indonesia	Borrower/Beneficiary: Health/Education/Agriculture	Board Date: 03/01/77	Signing Date: 03/15/77	Effective Date: 04/01/77
Projects Dept./Div. Name: PHND2	Org. Code No.: 306/20	Projects Officer: Rolf C. Carriere, PHN	Loan Officer: Miss Gillian R. Kaplan, AEA	

SECTION 1: SUMMARY PROJECT DESCRIPTION

The project provides: (a) staff, training, technical assistance, equipment and physical facilities for the Center for Research and Development in Nutrition (CRDN), the Food Technology Development Center (FTDC), and the Nutrition Academy; (b) staff, training, technical assistance and equipment for the Nutrition Intervention Pilot Project (NIPP) and the Home and Village Garden (HVG) Program, a Nutrition Education (NE) Program, an on-farm and village storage pilot program, and a Nutritional Anemia Pilot Project (NAPP); and (c) technical assistance and training to prepare a National Food and Nutrition Program (NFNP).

SECTION 2: PERFORMANCE RATING

STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating

TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.)

If more than one type of problem, enter most critical factor first.

IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

	This Summary	Last Summary
STATUS	2	2
TREND	1	2
TYPES OF PROBLEMS	M F	F M
IMPLEMENTATION STATUS	2	2
Disbursements	1	2
Estimated Cost	2	2
Anticipated Completion	2	2
Compliance with Loan Conditions	2	2
Project Finances	2	2
Management Performance	2	2
Procurement Progress	2	2
Performance of Consultants	1	1
Reporting	2	2
DEVELOPMENT IMPACT	1	2
Expected Benefits	-	-
Rate of Return	2	2
Institution-Building		

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total of which:			Cumulative Disbursements through most recent Quarter ended (12/ 31/ 80) (\$xx.xm)
			Project Cost (\$xx.xm)	Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	03 81	03 31 82	26.0	10.2	15.8	9.0 (Est.)
Last Summary (10/ 27/ 80)	03 83	03 31 83	26.0	10.2	15.8	
Current	09 82	03 31 82 1/	21.6 2/	8.5	13.1	2.3 (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	4	15	11 29 80	1 14 81 (FS)
Previous Mission	4	20	07 20 80	09 12 80 (FS)

Next Mission Departure
(Mo./Yr.) 05 81

Recommended interval
between missions (Months) six

End of period covered by latest
progress report (Mo./Day/Yr.) 3 31 80

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members

Mission Members' Specializations

Mr. Rolf C. Carriere 3/

Leader/Project Officer

Mr. David Mills

Architect

Mr. Ewen Thomson

Nutrition Consultant

Number of members on both
present and previous mission:

None

One

Two or More

SECTION 5: COMMENTS (Clarify, if necessary, data in Sections 3 and 4.)

- 1/ As mentioned in the previous supervision report, the present closing date will probably need to be postponed to March 31, 1983; this will be reviewed in June 1981.
- 2/ The US\$4.4 million decrease in total project cost resulted from savings in civil works, furniture/vehicles, consultancy/fellowships, salaries and other operating costs (see Section 6 and Annex 9, Table 2).
- 3/ Mr. Carriere was present in Indonesia from November 8 - 25, and Mr. Thomson from November 8-22. Mr. Mills assisted the mission on the afternoon of November 19. Miss Kaplan participated intermittently between November 14 - 22.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS

STATUS: Project implementation is about 1-1/2 years behind schedule and the level of disbursement continues to be low. The project's civil works are 95% complete; however, the FTDC pilot plant cannot be used for lack of a gantry, and utility services still remain to be installed at the FTDC campus. Contract adjustments are belatedly being made to compensate for Rupiah devaluation. Equipment procurement is progressing well. Contract awards have been recommended for most of FTDC special equipment (LIT) and CRDN equipment (ICB Phase II). All other equipment is being delivered or is on order, except vehicles (Phase II), NE supplies and specialized FTDC goods. Institutional staffing is 1 to 2 years behind schedule, but due to delays in completion of the physical facilities and arrival of equipment, this has not hampered operations. Consultants have submitted reports on project monitoring, financial administration, food storage and anemia control. HVG and NIPP evaluation consultancies were delayed due to disagreements about TORs and fees, respectively. Fellowship utilization has been slow and requires more management attention.

TREND: The rate of project implementation and disbursements is increasing as a result of the project management's improved understanding of procurement and withdrawal procedures. Expenditures during FY1980-81 will reach about US\$6 million (or 150% of the first three-years total). Loan withdrawals increased from US\$1.2 million on March 31, 1980 to US\$3.2 million (including "q" funds) on December 31, 1980--a 166% increase. We expect this trend to continue due to recent improvements in project coordination and monitoring; the provision of technical assistance in management and financial administration; increased use of planning and evaluation studies; gradual return of fellows; and continued strong GOI commitment to large-scale nutrition improvement. (PROBLEMS is covered on the attached page.)

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

- (a) The Letter to the Project Director (Annex 1) contains several recommendations relating to current operational and managerial issues.
- (b) The mission recommends that a telex be sent to the Minister of Finance requesting that audit reports or all components for total project period be furnished to the Bank without delay.
- (c) The mission recommends that, conditional upon the receipt of the audit reports, the Bank approve the reallocation proposal as finalized in cooperation with the supervision mission (sent to the Bank under cover of a letter from the Project Director dated November 27, 1980).
- (d) The next supervision mission is tentatively scheduled for May 18 - June 6, 1981.

NAME OF PREPARING OFFICER:

Rolf C. Carriere

INITIALS:

RCC

DATE:

January 19, 1981

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS (Continued):

PROBLEMS: The project faces two problems: (1) reallocation of loan proceeds, and (2) audit of project accounts.

(1) Total project cost decreased by approximately US\$9.3 million (US\$4.9 million out of the loan amount) due mainly to: (a) 50 percent devaluation of the Rupiah; (b) use of lower construction standards; and (c) lower utilization of technical assistance and manpower. The price increases that followed devaluation were more than offset by the increased availability of local currency. It is proposed that, out of these savings, US\$4.9 million be used from loan funds for additional project activities, thus leaving net savings in project cost of US\$4.4 million. Additional activities would include expansion of: (a) manpower training facilities; (b) Nutritional Anemia Pilot Project; (c) Nutrition Intervention Pilot Project; and (d) Nutrition Communications component (see Annexes 8 and 9). Objectives and scope of the project would essentially remain unchanged. No change in project description would be required, only a partial reallocation of amounts in Schedule I (see Annex 9, page 4), and the addition of a new disbursement subcategory for supplies (as agreed upon in January 1980). The loan amount would remain the same in absolute terms, but as a percentage of total project cost it would go up from 50 percent at appraisal to 60 percent. All additional activities would be completed before 9/30/82. The mission updated all component cost and disbursement estimates and rephased implementation schedules (available in project file).

(2) Despite repeated requests, no audit reports have been submitted. The mission was informed that the audit exercise was virtually completed. It was therefore agreed that Bank approval of the proposed reallocation of loan proceeds would be conditional upon receipt of these reports.

INDONESIA

Nutrition Development Project

Loan 1373-IND

LIST OF ANNEXES

1. Letter to Project Director
2. Compliance With Covenants
3. Key Project Indicators
4. Schedule of Disbursement
5. Draft Paragraph for President's Report
6. Officials Met and Places Visited
7. Project Execution
8. Reallocation of Loan Proceeds
9. Project Cost and Disbursement Tables

The World Bank / 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. • Telephone: (202) 477-1234 • Cables: INTBAFRAD

January 14, 1981

(Loan 1373-IND)

Dr. R. Soebekti, M.P.H.
Project Director
Nutrition Development Project
Departmen Kesehatan
Jl. Prapatan, 10
Jakarta, Indonesia

Dear Dr. Soebekti:

1. We wish to thank you for the courtesy and cooperation extended to the Bank mission which visited Indonesia during November 1980.
2. The general acceleration in the pace of project implementation and the resolution of several long-standing problems are heartening indeed. However, the following observations are intended to draw your attention to the management issues yet to be resolved. The mission discussed most of these issues with you and your colleagues during the wrap-up meeting.

Finance

3. We wish to draw your attention once again to the fact that, as laid down in Section 3.05(d) of the Loan Agreement, accounts of all agencies participating in the project are to be audited each fiscal year and certified copies of these accounts, together with the auditor's reports, should be furnished to the Bank not later than six months after the end of each fiscal year. To date, we have received no copies of any such accounts, although we understand the audit is underway and nearing completion. As discussed at the wrap-up meeting, formal Bank approval of the reallocation of loan proceeds will be conditional upon receipt of the aforementioned audited accounts and related reports, and we would urge you to forward these to us as soon as possible.
4. At this writing, actual disbursement of this loan is only 26% of the appraisal estimate for December 31, 1980. We have noted the improved rate of disbursement in the past 9 months--an increase from \$1.2 million as of March 31, 1980 to \$3.3 million (including QARs) as of December 31, 1980. However, further acceleration of that improved rate will be required to complete disbursements, even by a postponed closing date. Project staff are now familiar with the procedures, and the initial difficulties which caused delays should no longer form a constraint. It is of vital importance that component heads promptly submit to the Executive Secretariat the documentation for the withdrawal applications as soon as expenditures have been incurred.

5. As agreed with the mission, in order to reduce the number of withdrawal applications, these requests will be consolidated and sent to the Bank on a quarterly basis or when the total exceeds US\$100,000, whichever occurs earlier. As regards salaries for consultants and Executive Secretariat staff, we would suggest that, in order to overcome the problems of late payments, a consolidated withdrawal application (with the relevant supporting documentation attached) be submitted to the Bank at least six weeks before the date on which payments to the consultants and staff are due. In other words, the withdrawal application covering, for example, all salaries for the month of March should be sent to the Bank by the middle of February.

6. May we ask you to remind relevant staff in the Executive Secretariat that if they need advice or assistance relating to disbursement, procurement or other project matters they should contact our Resident Mission in Jakarta, in particular, Mr. J.P. Mullan, the Loan Officer dealing with this nutrition project.

Civil Works

7. We are pleased to learn that the contract for the installation of services at FTDC* has finally been awarded, that the work has started and is estimated to be completed before the end of January 1981. In view of the obvious advantages to getting the pilot plant operational as soon as possible, we know that you wish to expedite completion of the construction of the gantry. We understand that--as has been done in several other Bank-assisted projects, for instance, in the irrigation sector--it will be possible for you to obtain permission to invite and process bids prior to formal DIP approval. We would like to suggest that you take these steps in order to expedite construction.

8. We gather that all necessary payments for connection of the electricity supply for CRDN* were made over three months ago. Please confirm whether this work has now been completed.

Procurement

9. We were interested to learn of the meticulous work undertaken by the Tender Committee of FTDC in their prudent international shopping, and pleased that some of the remaining procurement problems could be resolved during the mission. Clearly, the initial difficulties regarding procurement procedures have been overcome and component staff are now familiar with the requirements. We would appreciate to learn what the current status is with regard to FTDC procurement action.

10. Posters and manuals for nutrition education have been ready for printing for some time. Delay seems to have been caused by the need to revise the DIP. May we suggest that the component head prepare all tender documents, if he has not already done so, in order to avoid further delay once DIP revision has been completed.

*FTDC: Food Technology Development Center

CRDN: Center for Research and Development in Nutrition

11. We understand that Phase I of vehicle procurement will be completed before February 1981 when the 29 vehicles will be delivered. We would urge that tender documents for the purchase of the remaining 19 vehicles be prepared without delay, and procurement action initiated.

Staffing

12. In my letter of October 24, 1980 and your reply of November 11, 1980, we discussed the question of staffing. When one bears in mind that in 1977 CRDN had nine full-time and three part-time professional staff members, the present complement of 28 is a substantial increase, although falling short of the target at appraisal. CRDN's revised plan of 33 by 1981/82, 39 by 1982/83 and 45 by 1983/84 appears to be realistic. The recruitment of technical staff members has been very satisfactory, increasing from 16 in 1977 to 73 at present; and the appraisal target of 88 should be reached in time without difficulty. We wish to suggest that you make every effort to ensure that these targets are met.

13. We note that IPB has approved 14 additional professional posts for FTDC and that seven persons have already been recruited. We ask in this regard that you kindly see that recruitment is maintained at the rate of 14 per year in order to achieve the appraisal target of 79 before 1983.

14. Full-time teaching staff at the Nutrition Academy has increased from 14 in 1977 to 21 in 1980, which is only 3 short of the appraisal target of 24. However, expanded enrollment of students will require a proportionate increase in teaching staff beyond the appraisal target. This need is obviously appreciated by the Academy Director. We hope that you will be able to secure the necessary funds and positions that would allow this increase to be achieved.

NIPP

15. As you are aware, the Yayasan Indonesia Sejahtera consultants have made recommendations that "(a) the primary focus for NIPP should be the well-baby, involved in a positive, promotive program that picks up the child before it becomes malnourished and (b) that the overall strategy should be one of permanent behavior change within the family." Therefore, achieving adequate body weight gain each month in children under five years of age would be the central objective and a prime indicator of NIPP success. In view of the consultants' suggestion that processed food be used solely for rehabilitation, we wish to note that the readily available supplies of milk powder would be appropriate for use in rehabilitation.

Fellowships

16. Progress in the utilization of agreed fellowships in all components has been relatively slow, although the pace has recently picked up. Given (i) the long lead-time it takes to get candidates properly selected, prepared and placed, and (ii) the substantial number of fellowships yet to be awarded,

you will want to impress upon the component heads and staff of the Executive Secretariat the need for early action, lest the funds earmarked for this important purpose remain underutilized.

17. Due to their continued interest in this project, copies of this letter are being sent to the Minister of Health, the Deputy Chairman for Social and Cultural Affairs in BAPPENAS, and the Director-General for International Monetary Affairs.

18. May we thank you for the way in which you facilitated the work of the mission, and ask you to convey our thanks to your staff for all the efforts they made on behalf of the mission.

With best regards.

Sincerely yours,

Ishrat Husain
Chief, Division II
Population, Health & Nutrition
Department

cc: Dr. Suwardjono Surjaningrat
Minister of Health
Jakarta, Indonesia

Mr. Soejoto, S.H.
Deputy Chairman for Social & Cultural Affairs
BAPPENAS
Jakarta, Indonesia

Drs. Soegito Sastramidjojo
Director-General for Intl. Monetary Affairs
Ministry of Finance
Jakarta, Indonesia

Cleared with and cc: Miss G. R. Kaplan, AEA
Mr. V. Fernando, CTR

cc: Mr. R. Cheetham (Jakarta)
Mr. I. Zincir (Jakarta)
Mr. J. Mullan (Jakarta)
Division Files

RCCARRIERE:chb

LOAN 1373-IND/BASIC CORRES, CIVIL WORKS/PHN

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
Article III			
3.05 (a)	The BORROWER shall furnish to the Bank, promptly upon their preparation, the plans, specifications, reports, contract documents and work and procurement schedules for the Project.	Being Complied With	Interval between signing of contracts and their receipt by Bank has been longer than necessary. Agreement has been reached on shortening it. Work and procurement schedules have been prepared.
(d)	The accounts of all project implementing agencies shall be audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies.	Being Complied With	State auditors have audited expenditures under DIP MURNI. The Audit team has completed Anemia Control, the Nutrition Academy and Nutrition Education. Audit of CRDN and FTDC was nearing completion in November, 1980. The audit of NIPP is likely to take longer as NIPP expenditures are combined with UPGK (A) and (B). Certificates are expected in January, 1981.
3.07	<p>The BORROWER shall: (i) maintain a Research Coordinating Committee to facilitate coordination of the nutrition-related research programs; and</p> <p>(ii) submit to the Bank annual progress reports on such programs.</p>	<p>Complied With</p> <p>Not Complied With</p>	<p>The Research Coordinating Committee met 3 times in 1979 - 1980 and 3 times in 1980 - 1981. Each meeting dealt with a specific research proposal. The overall research program is being formulated with help from a consultant.</p> <p>Progress reports cannot be submitted until overall research programs are designed.</p>

INDONESIA
NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
3.08	<p>The BORROWER shall, with respect to the NIPP program:</p> <p>(i) submit to the Bank not later than August 1, 1977, the plans of operations for the first two Kabupatens for approval;</p> <p>(ii) carry out a review of the NIPP program at the end of the second year of the NIPP program; and</p> <p>(iii) select new Kabupatens to be served by NIPP program not later than October 1, 1977, and the remaining three Kabupatens not later than August 1, 1978.</p>	<p>Complied With</p> <p>Being Complied With</p> <p>Complied With</p>	<p>With consultants' assistance the process and impact evaluations will be completed by February, 1981.</p>
3.09	<p>The BORROWER shall carry out a review of the home/village garden component at the end of the third year of the NIPP program.</p>	<p>Being Complied With</p>	<p>Consultants are currently undertaking the review.</p>
4.02 (b)	<p>The BORROWER shall:</p> <p>(i) require that all implementing agencies maintain separate accounts; and</p> <p>(ii) establish and maintain within MOH a Project accounting unit.</p>	<p>Being Complied With</p> <p>Complied With</p>	<p>NIPP accounts have been maintained together with UPCK (A) and UPCK (B).</p>

INDONESIA

NUTRITION DEVELOPMENT PROJECT

KEY PROJECT INDICATORS

	<u>Achievement as of October 30, 1980</u>	<u>Appraisal Estimate by Completion Date</u>	<u>Percentage of Appraisal Estimate</u>
<u>CENTER FOR RESEARCH AND DEVELOPMENT IN NUTRITION:</u>			
<u>Civil Works:</u>			
Laboratories I and II	Completed	Completion	100%
Staff Housing, 10	Completed Except Electricity Connection	Completion	98%
Library, Auditorium & Dormitories	Completed Except Electricity Connection	Completion	98%
<u>Staffing:</u>			
Professional	28	44	67%
Technical	73	88	83%
<u>Fellowships:</u>			
Long-Term (PhD & MS)	15	23	65%
Short-Term	18	13	138%
<u>Consultants:</u>			
No. of Visits	12	19	63%
<u>Procurement:</u>	All Equipment Delivered or Tenders Awarded	All Equipment Delivered	40%
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER:</u>			
<u>Civil Works:</u>			
Food Research Laboratories	Completed Except for Services	Completion	95%
Administrative Building	Completed Except for Services	Completion	95%
Staff Housing, 12	Completed Except for Services	Completion	98%
Pilot Plant	Completed Except for Gantry and Services	Completion	92%
<u>Fellowships:</u>			
Long-term (PhD & MS)	4	7	57%
Short-Term	15 man-months	15 man-months	100%
<u>Consultants:</u>	30 man-months	96 man-months	31%

INDONESIA
NUTRITION DEVELOPMENT PROJECT

KEY PROJECT INDICATORS

	<u>Achievement as of October 30, 1980</u>	<u>Appraisal Estimate by Completion Date</u>	<u>Percentage of Appraisal Estimate</u>
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER (Continued):</u>			
<u>Staffing:</u>			
Professional and Senior Technical] 61 in Position, Plus 7 Posts Agreed	25] 77%
Junior Technical		32	
Other		22	
<u>Procurement:</u>			
ICB (Total Procurement)	15 Packages	42 Packages	36%
PIB Lab Equipment	71 Items Quoted	78 Items	91%
PIB Pilot Plant	77 Items Quoted	80 Items	96%
Special Chemicals	371 Items Quoted	1317 Items	28%
<u>NUTRITION INTERVENTION PILOT PROJECT:</u>			
Villages Involved	192	183	105%
<u>Training:</u>			
No. of Village Cadres	2980	2840	105%
No. of VANPOs	192	183	105%
No. of Training Officers	46	46	100%
No. of NPO/ANPOs	69 (Plus replacements)	69	100%
<u>Surveys:</u>			
Base-Line Data Surveys:	4	7	57%
Resurveys for Evaluation:	0	7	0%
<u>NUTRITION EDUCATION:</u>			
No. of Villages	60	60	100%
No. of Cadres Trained	2,000	N.A.	-
<u>Consultants:</u>			
Local	0	35 man-months	0%
Foreign	17 man-months	12 man-months	142%
<u>Surveys:</u>			
Formative Evaluation	Completed	Completion	100%
Pre-testing	Completed	Completion	100%
Evaluation	Planned for June 1981	Completion	0%
<u>Procurement:</u>			
	Tender Documents Under Preparation	Completion	5%

INDONESIA
NUTRITION DEVELOPMENT PROJECT
KEY PROJECT INDICATORS

	<u>Achievement as of October 30, 1980</u>	<u>Appraisal Estimate by Completion Date</u>	<u>Percentage of Appraisal Estimate</u>
<u>NUTRITION ACADEMY:</u>			
<u>Civil Works:</u>			
Laboratories and Library	Completed	Completion	100%
Housing, 6	4 Complete; 2 Half-Built	Completion of 6	83%
<u>Procurement:</u>			
	Completed	Completion	100%
<u>Staffing:</u>			
	21 Full-Time Staff	24 Full-Time Staff	88%
<u>Fellowships:</u>			
Long-Term (PhD & MS)	5	8	63%
Short-Term	0	6	0%
Scholarships	For 53 Students	For 48 Students	110%
Student Enrollment	160	200	80%
<u>HOME GARDENS:</u>			
	N.A.	N.A.	-
<u>ANEMIA CONTROL:</u>			
No. of Workers Reached	3,096	3,000	103%
No. of Base-Line Surveys	6	4	150%
No. of Resurveys for Evaluation	4	4	100%

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Loan 1373-IND

Schedule of Disbursement
(as of December 31, 1980)

Fiscal Year and Quarter	Cumulative Disbursements (US\$ m)				Actual and Forecast Estimates of Disburse- ment as Percent of Appraisal Estimates
	Actual Total	Appraisal Estimate	Last Revised Estimate	New Estimate	
1978 March 31	0	0.3	-	-	0
1979 March 31	0.1	1.9	-	-	5
1980 March 31	1.2	5.7	1.6	-	21
1980 June 30	1.5	6.6	2.2	-	23
1980 Sept 30	1.8	7.8	2.8	-	23
1980 Dec 31	2.3	9.0	3.4	-	26
1981 March 31	-	10.2	4.0	4.7	46
1981 June 30	3.5	10.8	4.7	5.6	52
1981 Sept 30	-	11.6	5.4	6.7	58
1981 Dec 31	-	12.7	6.2	7.9	62
1982 March 31	-	13.0	7.0	9.2	71
1982 June 30	-	-	7.7	10.5	81
1982 Sept 30	-	-	8.5	11.6	89
1982 Dec 31	-	-	9.3	12.4	95
1983 March 31	-	-	10.0	13.0	100

INDONESIANutrition Development Project

Loan 1373-IND

Draft Paragraph for President's Report

Despite initial difficulties which resulted in an overall delay of about 1-1/2 years, project implementation is being improved and sustained. Due mainly to the devaluation of the Rupiah and revised construction standards, project cost is considerably less than anticipated at appraisal. A partial reallocation of funds between components and categories has thus been proposed. This measure, along with 18 months postponement of the completion date, would allow virtually all appraisal targets to be achieved as well as a modest expansion (beyond those targets) of existing activities of the more successful components, and would not alter project concept, objectives or content. With regard to present project status, the Center for Research and Development of Nutrition (CRDN) is now operational and a long-term research program is under preparation. Food Technology Development Center (FTDC) staff have moved to the new campus; installation of utility services will be completed before February 1981. The pilot plant is still unfinished, but should be functioning by the end of 1981. Village food storage is fast becoming an important area for further trials and development. Nutrition Academy enrollment will be increased to 270, with consequential staffing and space requirements. Consultants on the Nutrition Improvement Pilot Project (NIPP) have produced an interim report, reintroducing a positive, promotive program which accords with the views expressed by previous Bank missions. Nutrition Education consultants have submitted two reports on communication and behavioral change; pre-tested materials are ready for reproduction. All NIPP villages will be covered. Arrangements have been made for radio and television air-time. The Nutrition Anemia Pilot Project (NAPP) has continued on schedule and shows favorable returns on investment. No advance has been made in the preparation of a master plan for home garden improvement.

INDONESIA

Nutrition Development Project

Loan 1373-IND

Supervision Mission Report

November 10 - November 25, 1980

OFFICIALS MET AND PLACES VISITED

Ministry of Health -- Jakarta

Dr. R. Soebekti, Director-General of Community Health and Project Director

A. Executive Secretariat

Mr. Adinugroho Arasrudin, Project Executive Secretary
Mr. Slamet Adikoesoemo, Finance Officer
Mr. Hartoyo Dhanutirto, Administrative Officer
Mr. R. Pendjaitan, Procurement Officer
Dr. Balasubramanian, INDP Management Adviser to Project Director
Mr. Srinivasan Gopalan, INDP Financial Analyst - Consultant
Mr. Carl Fritz, INDP Finance and Procurement Adviser

B. Nutrition Academy

Miss S. Almatsier, Director
Dr. Wattimena, Pusdiklat
Mrs. Myriarti Sihombing, Teaching Staff
Ms. Sri Hartini, Teaching Staff
Mr. A. Ginting, Finance Officer
Mr. Soemartono, Administrative Officer
Ir. Soediman, Instalkes
Ir. Samsul, Hari Murthi

C. Nutrition Directorate

Mr. I. Tarwotjo, Director
Mr. Hartono, Staff
 Dra. Asmira, Nutrition Training Specialist for NIPP
Dr. Salihudin, Project Officer for NIPP
Dr. B. Tilden, HKI Consultant

D. CRDN (Center for Research and Development in Nutrition)

Dr. Darwin Karyadi, Director
Dr. Muhilal, Biochemist
Dra. Sukartiah, Deputy Director
Mr. Hermana, Food Technologist
Mr. Machmoed, Administrative Officer
Dr. Mark Brooks, USAID Consultant (Cornell)
Dr. J. P. Habicht, INDP Consultant on Research and Evaluation

E. Health Education Directorate

Dr. I. Mantra, Sub-Director of Health Education
Mr. T. Marku, staff

BKKBN -- Jakarta

Dr. Haryono Suyono, Deputy, Program Implementation
Dr. Peter Sumbang, Deputy, Administration and Management

Ministry of Agriculture -- Jakarta

- A. FNU (Food Nutrition Unit)
Dr. Suwadi Sindoredjo, Head
Dr. Suyono Suropati, Deputy Head
Mr. Ardi Prawoto, Secretary to PMMR
Mr. A. Hamid Husein, FNU staff
Mr. Lukman Hakim, FNU staff
Mr. Hidayat, Bureau of Planning

B. Directorate of Food Crops Production

Ir. Hasan Sudibya, Head, Sub-Directorate of Horticulture
Ir. Mohamed Suwarno, staff

Ministry of Education -- Bogor

FTDC (Food Technology Development Center)

Dr. F. G. Winarno, Director
Dr. Suwarno, staff
Dr. Hadi, staff
Dr. B. Bushan, INDP Consultant

Ministry of Manpower, Transmigration, and Cooperatives -- Jakarta:

A. National Institute for Industrial Hygiene and Occupational Health

Dr. Sumamur, Director
Ir. Sobari, staff
Dr. Wahyuti Sahati, Regional Head, West Java, Bandung

B. Anemia Control Project (Pengalengan) (PTP XIII)

Dr. Erfi Nurhadi
Dr. Sukarman
Dr. Dedi Supardi

} plantation medical staff

BAPPENAS:

Mr. Soejoto, S.H., Deputy for Social Development Planning
Dr. H.A.R. Tilaar, Bureau Chief for Social Welfare Peoples Housing and Health
Mrs. Siti Hasnah Soetedja, Nutrition Coordinator

UN Agencies and Other Donors:

UNICEF

Mr. Victor Soler-Sala, Representative
Dr. Terrel Hill, Nutrition Project Officer
Mr. Alan Court, Project Officer for Agriculture and Nutrition
Ms. Cynthia de Windt, Nutrition Education Officer
Ms. Nancy Terreri, Project Officer, Primary Health Care
Mr. Sunawang, Nutritionist
Mr. Siddharta, Community Development Specialist

FAO:

Mr. Waliul Islam Khan, Project Officer

WFP:

Mr. Dewan, Senior Adviser

USAID:

Mr. Robert Pratt, Nutrition and Health Office
Mr. Michael Philley, Nutrition and Family Planning Project

Japanese International Cooperation Agency/FTDC:

Dr. Akira Matsuyama, Team Leader, Agricultural Products Processing
Pilot Plant Project

Dr. Kiyooki Katoh, Senior Expert, National Food Research Institute

YIS Consultants:

Dr. Lucas Hendrata, Director, YIS, Jakarta

Dr. Benny Soegianto, KaKanWilKes, Surabaya, East Java

Dr. Sri Karjati, Airlangga University, East Java

Dr. Satoto, Diponegoro University, Semarang, Central Java

Drs. Sofyandi, staff

Mrs. Barbara Levine, Consultant

Ms. Sri Djuarini, staff

Nutrition Development Project

Loan 1373-IND

PROJECT EXECUTION

PROJECT COMPONENT

STATUS

Institution Building:

1. Strengthening of CRDN through provision of additional staff, training, technical assistance, equipment and expansion of physical facilities.

1. Professional staff increased from 24 to 28 in the third quarter of 1980. Current plans call for 16% annual increase in staff to reach the appraisal target of 44 one year after new project completion date. Preparation for the 8 remaining long-term fellowships has been initiated. Overseas Ph.D. fellowships have been converted into MS fellowships. Four long-term fellowships have been completed; another two did not make the grade. With consultants' assistance, good progress has been made in the development of a long-term research program. Phase I items of equipment are being delivered; tender committee has made recommendations for awarding phase II contracts. Civil works virtually completed; electricity connection should by now have been made. Contract adjustments are under preparation to cover price increases after Rupiah devaluation.

2. Strengthening of FTDC through provision of staff, training, technical assistance, equipment and physical facilities.

2. Three-quarters of the appraisal target staff is in position. Staffing progress could be hampered by possible establishment of Dutch-assisted LIPI Food Technology Center in Bandung which would compete for scarce manpower. Four of the 7 long-term fellowships (and all short-term fellowships) have been awarded. Use of consultants (31%) is deliberately behind schedule, awaiting arrival of equipment. ICB procurements (15 out of 42 packages) is underway, but some contractors unwilling to sign contract or deliver due to delays in contracting procedure and price increases. Quotations received under limited international tendering for procurement of lab equipment (91%), pilot plant (96%) and special chemicals (28%), and award recommendations made. Administrative block and laboratories occupied despite lack of essential services. Contracts for installation of all utility services recently awarded and completion expected before February 1981. Pilot plant still incomplete and unused due to budgetary problems. Contract adjustments are being made to cover price escalations following Rupiah devaluation.

Institution Building:

(Continued)

3. Strengthening of planning, coordination and evaluation of nutrition activities through provision of technical assistance to MOH, MOE and MOA.

3. Consultants are currently advising on establishment of monitoring and surveillance systems; evaluation of NIPP, NAPP, storage trials and nutrition education experiments; and on preparation of a master plan for home/garden improvements. Renewed efforts are underway to recruit long-term food/nutrition planner for MOA (FNU).

Manpower Training:

1. Upgrading and expanding the training of nutritionists in the Academy by provision of staff, training, technical assistance, equipment and physical facilities.

1. Full-time teaching staff increased from 14 in 1977 to 21 in 1980--three short of appraisal target. Six short-term staff fellowships are planned for 1981-83; four overseas fellowships are currently being utilized. Current enrollment is 160 (80% of target). Fifty-three scholarships have been awarded. Attrition rate is 22%, largely due to lack of affordable housing for students from outside Jakarta. Long-term nutrition manpower requirements have been projected by a consultant; its implications are being analyzed. Civil works will be completed when the two remaining staff houses are finalized (before February 1981). The old laboratory is so dilapidated and beyond rehabilitation that it serves no more useful purpose.

2. Incorporating nutrition in the training of agricultural extensionists through provision of

2. No status report received. UNICEF is expanding its assistance in curriculum design, printing of materials and staff training, and plans provincial workshop.

PROJECT COMPONENT

STATUS

Direct Action Programs:

1. Testing of Nutrition Intervention Pilot Project (NIPP) which integrates nutritional, educational, agricultural and health activities and selective food supplementation to vulnerable target groups in each of seven kabupatens (about 180 villages) through provision of staff, training, technical assistance, vehicles, supplies and equipment.

2. Development program to increase home/village garden produce through provision of technical assistance and supplies in NIPP villages.

3. Testing of pilot program to improve on-farm and small-scale, village-level storage in NIPP villages through provision of technical assistance, equipment and supplies.

4. Testing of feasibility of iron supplementation program in selected plantations with a view to developing a national program; technical assistance, equipment and supplies would be provided.

1. All NIPP field staff in position. Staff Nutrition Directorate (which is NIPP headquarters) needs management support to cope with rapidly expanding field programs. Short-term fellowships being utilized. Consultants recommend reintroduction of concept of positive and promotive program that (i) identifies child before it becomes malnourished and (ii) encourages behavioral change within family. New monitoring and surveillance system being tested. Monitoring data for June - September 1980 indicates that PCM and anemia prevalence in initial NIPP areas has significantly dropped since March 1979; component objectives may well be exceeded within time-scale. CRDN will conduct resurvey in early 1981 for descriptive evaluation, but difficulties are encountered in hiring expatriate consultant. All NIPP equipment and most vehicles expected before February 1981; this will then make 192 villages fully operational.

2. NUSA consultants, engaged to prepare feasibility study for expansion of HVG program, got a late start (October 1980) and progress reports are not yet available. It is reported that project continues according to original model and is expanding to villages outside designated NIPP areas. More scientific preparation and backstopping seems necessary. Development and innovative work for home/garden improvement in dry and urban areas continues with UNICEF assistance.

3. FTDC has produced an interim report on the development of prototypes of grain storage systems and structures for the village level. Larger field trials are now indicated before recommendations can be made about a storage credit program.

4. On schedule. Various surveys have been undertaken. Consultant reported on highly favorable returns on investment for both simple and comprehensive NAPP packages. Fortified salt will be produced with a longer shelf-life than formula used hitherto. This component has won the interest of the adviser with special responsibility to the MOA for plantations. The Plantations Education Institute will be informed of the significant findings regarding the measured productivity increases among non-anemic workers.

PROJECT COMPONENT

STATUS

Direct Action Programs:

(Continued)

5. Testing the efficiency of alternative nutrition communication methods to bring about desirable change in nutrition behavior through provision of training, technical assistance, vehicles, equipment and supplies.

5. Several study visits have been completed. First-round training completed in 60 villages. Consultants have submitted two reports. Action sheets, posters, manuals are being reviewed for printing. Tender documents under preparation and DIP 1980-81 being revised to allow government prefinancing. Hiring of a communications agency is planned to improve quality of radio and message cassettes. Adequate access to air time no longer a major problem. Television spots reduced to one or two aimed at policy makers. Existing materials will be pretested in NIPP areas to ensure effectiveness. Evaluation planned for mid-1981.

National Food and Nutrition Program (NFNP):

Preparation of a NFNP based on evaluation findings of pilot activities; manpower availability; managerial skills; and institutional development, through provision of technical assistance.

Major issues have been identified and recommendations made, especially in health care sector; nutrition work in agricultural sector lags behind. Need exists for all findings and recommendations to be further analyzed and used in design of nutrition policy, plans and programs.

INDONESIA

Nutrition Development Project

Loan 1373-IND

REALLOCATION OF LOAN PROCEEDS

1. This annex proposes several changes in the Nutrition Development Project and some minor revisions in the corresponding legal documents (a) to permit a partial reallocation of funds between components and categories of the project; (b) to postpone the project completion date by 18 months; and (c) to utilize accrued savings (about US\$4.9 million) to finance a modest expansion of existing project activities. The project has cost considerably less than estimated at appraisal, and expansion of successful activities and essential new services seems justified. The proposed changes affect the scale and duration of ongoing activities. They do not alter project concept, objectives or content, all of which remain valid and appropriate. Neither do they involve proposals for supplementary financing. The number of components would remain the same.

2. Since the original Loan Agreement was signed on March 17, 1977, eleven supervision missions have reported on the progress and problems of this project. An Interim Progress Report summarizing achievements as well as delays and operational constraints 1/ was reviewed by the Board in June 1980. The present proposals for reallocation and extension are the result of GOI/Bank dialogue initiated in January 1980 which aimed at reviewing the additional project requirements. These proposals take into account past performance experience. They would allow the project to achieve virtually all its objectives and targets as envisaged at the time of appraisal, and, in several instances, to go well beyond those appraisal targets. It is recommended that the Bank formally agree to the request made by GOI regarding reallocation of loan proceeds.

1/ The main difficulties stemmed from:

- (a) slow start-up of project activities, because Bank Indonesia's pre-financing requirements invalidated all DIP supplements until revised around January, 1978;
- (b) the insistence by BAPPENAS on using GOI building standards, which are lower than the standards used when estimating at appraisal;
- (c) the Rupiah devaluation of November, 1978;
- (d) delays in mastering procurement procedures;
- (e) price and physical contingencies have not been included in any DIPs; and
- (f) recruitment of inexperienced staff for the Executive Secretariat and problems in hiring of expatriate advisors.

3. Annex 9, page 1, gives the total project cost by component at appraisal and reallocation. It shows absolute increases in costs of some components (NAPP: US\$1.3 million; Manpower Training: US\$1.1 million; NIPP: US\$0.5 million; NE: US\$0.1 million) and reductions in others (CRDN: US\$4.4 million; FTDC: US\$2.2 million; O & M: US\$0.5 million and HVG/NFNP: US\$0.4 million). A breakdown by category is shown in Annex 9, page 2. Major new component activities beyond those foreseen at appraisal are summarized and justified below. Further details are available in the project file.

Nutritional Anemia Pilot Project (NAPP):

4. The new proposals (about US\$1.3 million) include expansion of current operations from 3,100 to 75,000 plantation workers in the three project areas. In addition, a trial will be undertaken among a group of 10,000 transmigrants. This represents a 27-fold increase in coverage at a 5-fold increased cost, mainly for medical supplies, equipment, consultancies and incremental operating costs.

5. Justification. Productivity measurements on project plantations show highly favorable returns on investment in anemia control. While pilot-scale results are satisfactory, operational-scale feasibility still needs to be demonstrated in terms of delivery and utilization of medication and fortified salt. The expanded project, which is strongly supported by MOA, would cover all workers in the project plantations, and thus provide insight in capabilities, requirements and limitations of staff and delivery systems. Once proven successful, the National Institute of Industrial Hygiene and Occupational Health (NIIHOH) and MOH intend to introduce regulations requiring all plantations to implement such measures and to bear the cost. Since the NIIHOH, as part of the Ministry of Manpower, Transmigration and Cooperatives, would have direct control over transmigrant workers, testing the NAPP in a transmigration area holds the promise of rapid expansion once its logistical feasibility has been ascertained.

Manpower Training:

6. The new proposals (approximately US\$2 million) call for the construction of a four-story building on the site of the old Nutrition Academy laboratory. It will contain laboratories for food technology and microbiology, food preparation and dietetics and for kitchen layout. The Academy offices and ancillary rooms for staff canteen, off-set and binding, and storage will occupy one floor. The auditorium will occupy the top floor. A tentative provision of US\$2,000 per pupil has been included for laboratory equipment. Additional funds are made available for consultancies.

7. Justification: Without the refurbished laboratories, it would be impossible to have 200 students. Even if it were feasible to refurbish (which is is not), the facilities would be totally inadequate for an enrollment of 270, the number now estimated as required to produce an output of 60 graduates per year, which is the appraisal target.^{1/} Sketch plans have been examined and it was found that the civil works could be completed by August 1982. (See memorandum from Mr. Mills to Mr. Carriere of December 29, 1980.) Consultants will be required: (a) to review the laboratory equipment list in the context of the

^{1/} The actual attrition rate (22%) is much higher than anticipated at appraisal.

Academy's curriculum, functions and goals; (b) to advise the architect on interim storage requirements for equipment; (c) to make an inventory of current training facilities at national, regional and provincial levels; and (d) to analyze manpower training requirements. All these additional activities are in support of GOI's rapidly expanding nutrition field programs which aim at reaching 41,000 villages by the end of Repelita III.

Nutrition Intervention Pilot Project (NIPP):

8. The proposal (approximately US\$1 million) is to cover an extra 372 villages. Increased expenditure is to provide additional nutrition centers, motorcycles and bicycles, equipment, food supplements, fellowships and staff at national level.

9. Justification: During 1980-81 NIPP activities will cover 192 villages in 38 subdistricts in 7 regencies. This exceeds the appraisal report by 9 villages. One of the managerial objectives of NIPP is to study the feasibility of administering a multi-disciplinary project within the normal machinery of Government. The scattered coverage has not enabled this to be tested. Therefore, in addition to the normal annual expansion, 200 new villages in Bojonegoro and 100 new villages in Karang Anyar should be included, thus involving complete subdistricts and a complete regency. This management testing is of particular significance in view of GOI's determination to reach 41,000 villages with nutrition services during Repelita III. In addition, the number of children likely to be rehabilitated will increase from 30,000 to nearly 100,000. The need to strengthen supervision and coordination has been accepted and due provision is made in the estimates. Fellowships are provided to train field and headquarters personnel for short periods in Indonesia and abroad; this is needed for the greatly expanded national program.

Nutrition Communication and Behavioral Change (NE):

10. The proposal for additional activities (approximately US\$0.6 million) includes the supply of newly designed communications materials to the original 60 NE villages and the 564 NIPP villages, some equipment, technical assistance and fellowships.

11. Justification: Design and pretesting of communications materials has been completed and the component is ready to bulk-print and disseminate these on a large scale. Further pretesting will be required in NIPP areas where nutrition behavior differs from that in NE areas. Impact evaluation will be made. To provide a sound basis for expanded communications activities and to meet the increasing needs of GOI's nutrition programs, provincial and headquarters staff will attend short-term courses.

12. Some additional activities are also foreseen at CRDN and FTDC, but these are relatively minor. For CRDN these include minor civil works (improvement of facilities in the auditorium and renovation of existing dormitories), and additional consultancies to support the evolving research program and to demonstrate the use and maintenance of the more sophisticated equipment. For FTDC this includes new civil works (a model warehouse, a rattery, a yard for testing storage structures, and landscaping for soil erosion control), and some

equipment for special studies. Although total expenditure on equipment approved at appraisal is estimated to reach US\$2.8 million (or US\$0.6 million more than the appraisal estimate), it was agreed to reduce this sum by US\$0.3 million, which would be available from unallocated funds if FTDC procurement turned out to be completely successful. Activities under HVG, NFNP and O&M remain essentially the same.

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Loan 1373 - IND

PROJECT COST AND DISBURSEMENT TABLES

PROJECT COST BY COMPONENT
APPRAISAL AND REALLOCATION ESTIMATES
(US\$1,000)

COST COMPONENT	<u>1/</u> APPRAISAL	% OF TOTAL COSTS	REALLOCATION	% OF TOTAL COSTS
CRDN	8,106	31%	3,685	17% <u>2/</u>
FTDC	7,641	29%	5,476	25% <u>2/</u>
NIPP	3,578	14%	4,045	19%
NE	1,421	5%	1,529	7%
MANPOWER TRAINING	1,998	8%	3,110	14%
HVG	1,326	5%	1,218	6%
NAPP	241	1%	1,563	7%
O & M	1,451	6%	998	5%
NATIONAL F & N PROGRAMME	248	1%	-	(Under HVG)
T O T A L	26,010	100%	21,624	100%

1/ Including 38.3% contingencies

2/ Reduction mainly due to Rupiah devaluation and savings in civil works.

INDONESIA

NUTRITION DEVELOPMENT PROJECT
PROJECT COST BY CATEGORY AND COMPONENT
APPRAISAL AND REALLOCATION ESTIMATES

COMPONENT COST CATEGORY	CRDN		FTDC		NIPP		NE		MANPOWER		HVG		NAPP		O&M		NFNP		TOTAL			
	1)		APPR	REALL	APPR	REALL	APPR	REALL	APPR	REALL	APPR	REALL	APPR	REALL	APPR	REALL	APPR	REALL	APPR	REALL	APPR	REALL
	APPR	REALL																				
CIVIL WORKS	3,973	1,340	2,911	1,854	122	264	---	---	592	1,246	---	31	---	---	---	---	---	---	---	7,598	4,735	
FURNITURE	376	121	101	69	---	---	---	---	105	166	---	---	---	---	---	---	---	---	---	582	356	
VEHICLES	228	96	64	52	284	244	69	28	64	34	---	15	21	66	---	21	---	---	730	556		
EQUIPMENT	848	628	2,213	2,453	216	287	48	242	152	656	246	136	14	300	---	---	---	---	3,737	4,702		
SUPPLIES	277	130	138	211	425	938	---	428	---	20	277	140	91	742	---	---	---	---	1,208	2,609		
CONSULTANCIES	194	201	600	233	277	140	147	312	---	276	194	70	69	201	1,087	595	249	---	2,817	2,028		
FELLOWSHIPS	481	283	397	144	30	80	28	58	636	430	---	20	---	32	72	107	---	---	1,644	1,154		
SALARIES	1,106	567	526	97	419	176	207	69	360	156	610	806	47	222	216	150	---	---	2,834	1,215		
OTHER COSTS	622	319	692	363	1,806	1,916	922	392	90	126					76	125	---	---	---	---	---	4,208
TOTAL	8,106	3,685	7,641	5,476	3,578	4,045	1,421	1,529	1,998	3,110	1,326	1,218	241	1,563	1,451	998	249	---	26,010	21,624		

1) All appraisal estimates include 38.3% contingencies

REALLOCATION: DISBURSEMENT PHASING BY CATEGORY AND COMPONENT

<u>Year</u> <u>Category</u> <u>and Component</u>	Up to 31/3/80	1980- 1981	1981- 1982	1982- 1983	<u>TOTAL</u>
<u>CIVIL WORKS:</u>					
CRDN	559	174	260	60	1,053
FTDC	595	355	380	152	1,482
MT	57	76	510	353	996
<u>Total:</u>	1,211	605	1,150	565	3,531
<u>EQUIPMENT, VEHICLES AND SUPPLIES:</u>					
CRDN	-	219	518	105	842
FTDC	6	1,137	1,264	270	2,677
NIPP	26	205	156	-	387
NE	13	345	328	-	686
MT	35	63	300	300	698
HVG	-	-	38	-	38
NAPP	-	7	933	-	943
O & M	-	21	-	-	21
<u>Total:</u>	80	1,997	3,537	675	6,289
<u>CONSULTANCIES, FELLOWSHIPS AND SALARIES:</u>					
CRDN	150	160	149	25	484
FTDC	100	121	207	-	428
NIPP	-	10	205	5	220
NE	123	99	139	9	370
MT	34	124	331	23	512
HVG	-	-	90	-	90
NAPP	-	46	171	-	217
O & M	114	383	290	65	852
<u>Total:</u>	521	943	1,582	127	3,173
<u>GRAND TOTAL:</u>	<u>1,812</u>	<u>3,545</u>	<u>6,269</u>	<u>1,367</u>	<u>12,993</u>

ORIGINAL SCHEDULE I AND PROPOSED AMENDMENT

<u>Category</u>	<u>Original Amount of the Loan Allocated (Expressed in Dollar Equivalent)</u>	<u>Proposed Amendment In Amount of the Loan Allocated (Expressed in Dollar Equivalent)</u>	<u>% of Expenditures to be Financed ^{2/}</u>
1. Civil Works	6,000,000	3,500,000	80%
2. Vehicles, equipment and supplies ^{1/}	3,000,000	6,000,000	
(a) directly imported			100% of foreign expenditures
(b) imported equipment procured locally			65%
(c) locally manufactured equipment procured following international competitive bidding			95% (ex factory)
(d) locally assembled vehicles procured following prudent shopping			40%
3. Consultants' services and fellowships, and salaries of local experts for staff of Project Director	3,000,000	3,000,000	100%
4. Unallocated	1,000,000	500,000	
<u>TOTALS:</u>	<u>13,000,000</u>	<u>13,000,000</u>	

^{1/} Supplies form a new disbursement sub-category in the reallocation proposal and were not included in the original Schedule I. Cost of Furniture is also included in this category.

^{2/} No changes are proposed in the percentage of expenditures to be financed.

OFFICE MEMORANDUM

TO: Ms. Ishrat Z. Husain, Chief, PHND2

DATE: October 27, 1980

FROM: Rolf C. Carriere, PHND1 *hol - Carriere*SUBJECT: INDONESIA: Nutrition Development Project
Loan 1373-IND - Supervision Report

Attached is the full Supervision Report for the above project.

Attachments

Distribution

Cleared with & cc: Miss Kaplan (AEA)

cc: Messrs. Rajagopalan (3)	(PAS)
van der Tak	(PAS)
Lee	(PAS)
Ruddy	(AENVF)
Jaycox	(AEA)
Hawkins	(AEA)
Kirmani	(AEA)
Ms. Hadler	(AEA)
Messrs. Stern	(AEP)
Golan	(AEP)
Chittleburgh	(EDC)
Mullan	(Jakarta)
Zincir	(Jakarta)
Ping-Cheung Loh	(Jakarta)
Mead	(LEG)
Fernando	(CTR)
Robless	(PAB)
Amla	(AGR)
Evans	(PHN)
North	(PHN)
Kanagaratnam	(PHN)
Berg	(PHN)
Schebeck	(PHND1)
Liese	(PHND2)
Cooper	(PHND2)
Kang	(PHN)
Mills	(PHN)
Ms. Domingo	(PHND2)
Pishock	(PHN)
Central Files	
Division Files	

RCCARRIERE:chb
LOAN 1373-IND/BASIC CORRESP/PHN

THE WORLD BANK
IBRD AND IDA - SUPERVISION SUMMARY

This summary is the initial summary
 part of a mission report
 an annual update

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.
THIS FORM IS A STOCKROOM ITEM.

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7 INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.:	L/C Amount (\$xx.xm): US\$13.0 million
Country: Indonesia	Borrower/Beneficiary: Health Education/Agriculture	Board Date: 3-1-77	Signing Date: 3-15-77	Effective Date: 4-1-77
Projects Dept./Div. Name: PHN	Org. Code No.:	Projects Officer: Rolf C. Carriere, PHN	Loan Officer: Miss Gillian R. Kaplan, AEA	

SECTION 1: SUMMARY PROJECT DESCRIPTION

SECTION 2: PERFORMANCE RATING

	This Summary	Last Summary
STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems	2	2
TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating	2	2
TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.) If more than one type of problem, enter most critical factor first.	M F . . .	F M . . .
IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Disbursements	2	2
Estimated Cost	2	2
Anticipated Completion	2	2
Compliance with Loan Conditions	2	2
Project Finances	2	2
Management Performance	2	2
Procurement Progress	2	2
Performance of Consultants	1	1
Reporting	2	2
DEVELOPMENT IMPACT: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Expected Benefits	2	1
Rate of Return	-	-
Institution-Building	2	2

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total Project Cost (\$xx.xm)	of which:		Cumulative Disbursements through most recent quarter ended (06 / 30 / 80) (\$xx.xm)
				Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	03,81	03,31,82	26.0	10.2	15.8	6.6 (Est.)
Last Summary (/ /)	03,82	03,31,83	26.0	10.2	15.8	
Current	03,83	03,31,83	26.0	10.2	15.8	**/ 1.5 (Actual) 23%

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	4	20	07,20,80	09,12,80 (FS)*
Previous Mission	5	24	02,04,80	02,25,80 (FS)*
Next Mission Departure (Mo./Yr.)	1J,80	Recommended interval between missions (Months)	End of period covered by latest progress report (Mo./Day/Yr.)	
		3*/	07,20,80	

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members

Mission Members' Specializations

Mr. Emmerich M. Schebeck
Mr. Rolf C. Carriere
Mr. David Mills
Mr. Ewen Thomson

Leader
Project Officer
Architect
Nutrition Consultant

Number of members on both present and previous mission:

None
One
Two or More

*/ Thereafter 6 month intervals **/ Total project expenditures as of 3/31/80: US\$4 million

SECTION 5: COMMENTS (Clarify, if necessary, data in Sections 3 and 4.)

Mr. Schebeck was present in Indonesia June 29-July 16; Mr. Thomson from June 30-July 16; Mr. Mills from July 7-9; and Mr. Carriere from June 29-July 19. Project management displays an undue dependency on visiting Bank supervision mission. While this is not uncommon with first-time borrowing agencies, deliberate efforts should now be made to stimulate greater managerial responsibility and independence and thus revert the trend toward over-reliance on the Bank's on-the-spot problem solving and technical assistance during missions.

(See also Section 7.)

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS

In most components the pace of activities is picking up. Recent changes of some key project staff and the arrival of the Management Adviser to the Project Director both augur well for sustaining and accelerating this newly-gained momentum. Much project management attention and two supervision missions were devoted to the issues of reallocation. As a result of (1) fast-moving developments in the nutrition arena; (2) recent key personnel changes; and (3) a balance of US\$8.8 million left unprogrammed after the January 1980 mission, a new package of proposals for the reallocation of project funds was placed before the July mission, but the uneven state of preparation of these proposals made it impossible for the mission to complete the exercise. Meanwhile, GOI formally submitted to the Bank for its review the completed draft proposals. Both the reallocation exercise, the proposed extension of the project, and GOI's expression of interest in Bank financing for a second nutrition project have reconfirmed the Government's commitment both to its nutrition action programs in general as well as to the present project's success.

Good progress was made in construction of the CRDN complex, and utility services are being installed. Procurement action of the first package of CRDN equipment has almost been completed, while bid evaluation for the second (and last) package is currently underway. Library procurement is delayed but does not hamper research activities. The new FTDC complex, however, remains unoccupied since one year due to lack of utility services. After contract abrogation with the previous contractor, the FTDC is now ready to retender for the remainder of the works; this is expected to be completed before the end of this year. Seven orders were placed for FTDC lab equipment, while another eight contracts still need to be awarded to complete procurement of
(Continued)

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

1. The Action Letter (Annex 1) and the Project Execution Report (Annex 6) contain several recommendations which are not repeated here.
2. Now that GOI's proposal for reallocation has been received, a desk review of these proposals should be undertaken and the necessary clearances obtained and briefings given to enable the next mission to complete the field work involved in the reallocation exercise.
3. The mission further recommends that RSI staff actively assist the project authorities in problem-solving, particularly as it relates to reviewing draft tender documents, contracts, procurement issues and terms of reference for consultants. It is also recommended that RSI staff participate in the monthly coordinating meetings of nutrition donors.

NAME OF PREPARING OFFICER:

Rolf C. Carriere

INITIALS:

RC

DATE:

October 27, 1980

Section 6 (Continued): Summary of Project Status, Trend and Major Problems

the 16 packages with three or more bids. No decision was yet obtained from the Minister of Education regarding the recommendation (i) to award contracts for the 17 equipment packages which had received one or two bids, and (ii) to permit prudent international shopping for the 9 no-bid packages. This problem now urgently requires a solution. General delay in procurement of FTDC and NIPP equipment--and consequent low loan disbursement rates--are in fact attributable to internal dissension about personal shares in the peculiar payment practices. The Deputy Chairman of BAPPENAS and the Project Director assured the Mission that they would investigate this matter. CRDN and FTDC performance in staffing, consultant recruitment and fellowship awards largely remains below appraisal targets. These targets and their phasing need re-examination in the light of current and proposed research activities, delivery of specialized equipment, presence of qualified staff in Bogor to work together with consultants, and availability of suitable fellowship candidates. Some NIPP equipment has been procured but large requirements remain unmet. No delivery to the field has taken place and this has frustrated village operations. Uncertainty also exists as to whether vehicle procurement action has been completed and when staff can take possession of the vehicles. A consultant agency is making a review of NIPP process at all administrative levels with a view to design and test an appropriate monitoring system. (This agency also assists in establishing a management information system for the project-as-a-whole.) The results, to be available in November, will determine the need for NIPP modification and NIPP's place in Indonesian's overall nutrition program given GOI's current commitment for a massive extension of a set of simpler nutrition interventions to cover 41,000 villages by early 1984 with financial and technical assistance from UNICEF and USAID. Anemia control measures in plantations in East Java, North Sumatra and South Sulawesi are progressing as scheduled; productivity resurveys are planned for September/October 1980--twelve months after baseline data was collected. The successful home and village garden program will be expanded on the basis of findings and recommendations of a feasibility study currently underway. Nutrition communication materials for mass media and interpersonal use are ready for reproduction and distribution; their effectiveness will be evaluated in mid-1981. Problems are encountered in acquiring adequate access to sufficient airtime for the radio and television spots. In the manpower development component two consultancy reports (on lower and middle level manpower requirements) were completed; they are expected to form the basis for a sharp increase in funding.

INDONESIA

Nutrition Development Project

Loan 1373-IND

Supervision Mission Report

June 30 - July 19, 1980

1. Action Letter
2. Compliance With Covenants
3. Schedule of Disbursement
4. Draft Paragraph for President's Report
5. Project Execution
6. Officials Met and Places Visited

RCCarriere:chb

The World Bank / 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. • Telephone: (202) 477-1234 • Cables: INTBAFRAD

October 24, 1980

Dr. R. Soebekti, M.P.H.
Project Director INDP and
Direktur Jendral
Direktorat-Jendral Pembinaan
Kesehatan Masyarakat
Departmen Kesehatan R.I.
Jln. Prapatan 10
Jakarta
Indonesia

Re: Indonesia Nutrition Development Project:
Loan 1373-IND

Dear Dr. Soebekti:

We are grateful for the courtesy, cooperation and hospitality extended to the mission which visited Indonesia in July 1980. In particular, we appreciate the time you were able to devote to accompanying the mission on its field visits in spite of your heavy workload and other commitments. We also congratulate you on your appointment as Chairman of the Inter-Ministerial Coordinating Committee for Nutrition Improvement; this appointment is indeed a tribute to your leadership role in the nutrition field. The mission is impressed with your Government's commitment to the cause of malnutrition prevention and control, and with the scale of its innovative multi-sectoral intervention programs.

Turning now to the Nutrition Development Project, we would like to emphasize that good progress has been made in many aspects. Therefore our comments, which, as always, concentrate on the issues that have yet to be resolved, should be read in that context.

Reallocation

Although the reallocation exercise could not be completed in July, good progress was nevertheless made during the mission and we are glad now to have received the package of draft reallocation proposals. These proposals are currently under study. When this review is completed, we propose to have a small mission visit Indonesia in early November to discuss our findings with you.

Advisers

Your decision regarding the revised role of the Project Management Adviser (Mr. Balasubramanian) should have had time to take effect by now, and we trust that with his wide experience in the field of nutrition as well as in dealing with the Bank he has been of assistance to you in preparing the reallocation proposals. A number of financial and procurement issues still require urgent action and we expect that the Finance and Procurement Adviser

(Mr. Carl Fritz) has been used--and will continue to be used to the fullest--in helping to resolve the outstanding problems.

Finance

Certified copies of the audited accounts of all agencies have not yet been received by the Bank. This requirement of the Loan Agreement (Section 3.05(d)) has been raised by previous missions. Will you please let us know when we may expect certified copies of the audited consolidated accounts to which you referred in your letter of May 28, 1980 (points 3 and 4).

Low disbursement has become a concern of the Government as well as the Bank, and we shall be interested to learn how effective the measures taken by BAPPENAS and the various Ministries have been. Your intention to retain the services of a Financial Analyst should also help the project in eliminating the backlog of withdrawal applications. As agreed during the mission, we would appreciate receiving the pertinent Petunjuk Operasional for the various component activities. This would facilitate the processing of withdrawal applications at the Bank.

Civil Works

Mr. David Mills (Bank Architect) inspected all civil works construction. He reported that FTDC's* pilot plant, laboratories and offices were at the same stage of construction as on his last visit in August, 1979. All implementation under the contracts for the installation of services had been stopped, but until these works can be resumed and completed, the Center continues to be inoperable. This delay must have become more confounding if the staff from IPB have meanwhile carried out their planned transfer to the new site during August. We hope that by now action has been taken to resume the installation of services.

Good progress has been made in the civil works at CRDN* and it is gratifying to note that there is every likelihood that the new facilities will become fully operational by the end of this year.

Procurement

The whole matter of procurement under all Bank-assisted projects in Indonesia is currently under review in Washington. We intend to discuss with you during the forthcoming mission the implications KEPRES 14A (1980) has for procurement of supplies and equipment under the nutrition project. At that time we hope to be able to resolve the issues that still appear to stand in the way of completing some vital procurement action.

No vehicles from the ICB order for 32 vehicles had been delivered by the time of the mission's departure in July. Since then, Letters of Credit have been opened and delivery was expected by the end of September. Please confirm when the vehicles were delivered.

* FTDC: Food Technology Development Center

CRDN: Center for Research and Development in Nutrition

You will recall the concern expressed that virtually no progress had been made on the procurement of anthropometric equipment and food supplement plant for the field operations of NIPP. As a result of your urgent investigations, action has no doubt followed and we shall be glad to learn of the present position. Quite apart from the need to ensure that all existing NIPP areas are fully operational, the solution to this procurement problem will definitely have a bearing on the capacity of the Nutrition Directorate to extend NIPP operations in the future.

In recent FTDC procurement action, project management has failed to comply with the legal requirement under the Loan Agreement (Schedule 4 E2(b)) to notify the Bank, prior to contract award, about its intention to award and send to Washington the bid evaluation report and related documentation for the Bank's pre-award review. We would like to reiterate the need for compliance with this stipulation in order to avoid possible problems with subsequent disbursement. It would be useful in this connection for the Executive Secretariat, in consultation with the component heads, to draw up schedules for the procurement of the remaining supplies and equipment to be undertaken; this would be in line with Section 3.05 of the Loan Agreement.

Given the existing problems affecting CRDN's procurement of books and journals, the mission would recommend that CRDN consider an alternative way of procurement, for instance, by using the services of the Community System Foundation's Nutrition Planning Information Service (NPIS) which provides specialized nutrition libraries on a turn-key basis.

We hope that by now progress had been made in completing the nutrition education action posters, radio spots and manuals, and that tender documents have been prepared. As explained in July, there is a need for two separate contracts: one with a consultancy agency to finalize the remaining design work, and another one with suppliers to reproduce these materials following ICB or LCB procedures (depending on the value of the contracts). The Bank agrees to disburse against expenditures relating to the consultancy services. However, since the Loan Agreement does not now contain provisions for disbursements against expendable supplies, a new category first needs to be created as part of the reallocation exercise. Since not all communication materials are now ready (or, for that matter, needed at the same time), a phased production schedule was agreed upon. Payments would be made from the available budget which needs to be revised to reflect the change from Direct Payment to DIP Murni. Bank reimbursement might follow at a later stage, assuming that a new disbursement category would be established and that procurement action would be carried out in accordance with the Bank guidelines.

Dr. Mantra reported that he foresees problems in the use of radio and TV spots due to inadequate access to sufficient airtime. Use of mass media for nutrition education is an important area of innovation. We would therefore be grateful if you would personally give guidance in resolving these problems and we suggest that BKKBN's approach to--and experience with--the use of mass media be looked into.

Monitoring, Evaluation and Research

The mission was glad to have had the opportunity to meet the Consultant Group on monitoring, and to learn about the methodology they propose to follow. The results of the planned NIPP process evaluation should have considerable relevance to the reallocation exercise; therefore, the earlier their conclusions and recommendations are available, the better it will be. Meanwhile, in line with Section 3.08(ii) of the Loan Agreement, CRDN is preparing for the NIPP impact survey and it is our understanding that the report will be ready by February 1981. It is also satisfying that productivity measurements in the anemia control areas will be repeated on schedule.

We welcome the suggestion by the Director-General of Health Research to contract out to universities and institutes part of the project research and evaluation work. We understand that the Lembaga Kesehatan Nasional (LKN), Airlangga University and the Health Ecology Institute are under consideration. Other institutions of higher learning, such as Gadjah Mada or Diponegoro Universities, would also appear to have the component staff to carry out field program evaluation in Yogyakarta and Central Java, and may therefore also be included.

It was gratifying to learn that the Director-General of Health Research intends personally to guide the exercise to prepare a long-term research program for CRDN. However, there remains considerable concern over the fate of the Nutrition Research Coordinating Committee which was established under Covenant Section 3.07 of the Loan Agreement to facilitate coordination of the nutrition-related research programs being carried out by various institutes. The membership of this Committee includes representatives of BAPPENAS and the Ministries of Agriculture, Health and Industry (as described in Schedule 5, para. 6 of the Loan Agreement). The Committee, which is chaired in rotation by FTDC and CRDN, is now largely defunct and this appreciably weakens the process of systematic review and screening of new research proposals. We would like to hear from you what measures you plan to take to reactivate this Committee.

Staffing

The expansion of nutrition programs in Indonesia during the past 3 to 4 years as well as the massive interventions planned during Repelita III are a clear indication of the Government's strong commitment to address the problem of malnutrition in a forthright manner. This rapidly expanding program has undoubtedly placed increasing demands on the staff of the Nutrition Directorate, CRDN and FTDC. In order not to lose this momentum and in the interest of efficient management of the various nutrition programs, urgent attention needs to be given to finding ways and means of overcoming the critical shortage of professional staff.

While management of the Nutrition Directorate has recently been strengthened, the professional staffing of the Directorate has not kept pace with the manyfold and increasing responsibilities resulting from the rapidly expanding programs of UPGK A, B, and C. We are concerned that unless the

Directorate staff is increased, it will face mounting difficulties in carrying out its tasks of program planning, supervision and monitoring. While we are pleased with the consultancy arrangement for the strengthening of the monitoring system, the Monitoring and Evaluation Unit remains to be integrated into the Nutrition Directorate. The rationale for this organizational location is that it would provide the Nutrition Directorate the much needed management tool to track progress in all nutrition programs, not only in the Bank-assisted project. We therefore recommend that this matter be dealt with as soon as possible.

The CRDN staffing issue was discussed with the Director-General of Health Research and the Director of CRDN. Although CRDN's professional staffing was increased by four positions since January 1980, its total professional staff of 24 is still 20 positions short of the target set at appraisal. This short-fall presents a serious problem. In the absence of a clearly prioritized research program, and with an increasing demand for its services, CRDN's staff has spread itself too thinly over too many activities. The result is that important research, baseline surveys and impact evaluations which CRDN is supposed to carry out in support of the Bank-assisted nutrition project have not been completed on schedule. This evaluation work was from the outset conceived as an integral part of the project. Establishing clear research priorities for CRDN will therefore be an essential first step to deal with the issue of staff allocation. At the same time, additional CRDN professional staff will be required lest the newly constructed laboratory facilities and newly ordered equipment remain under-utilized and fellowships unawarded. The Director-General of Health Research assured the mission that he will attach high priority to the resolution of his question. We would appreciate hearing from you what actions have been taken in this regard.

At appraisal it was estimated that FTDC would require a total staff of 79 in the fourth project year to carry out the agreed work program. At present FTDC has only 43 permanent staff members, and 14 of these have to devote 20 percent of their time to teaching at IPB. FTDC will need 29 technicians to operate the newly constructed pilot plant, which is part of the Bank-assisted project. Yet, only 21 technicians are available. This staff shortage is a serious constraint on FTDC's operations. FTDC has requested IPB to make 12 additional positions available for FY 1980/81. The mission discussed this issue with the Director of FTDC and the Rector of IPB, but a solution to this problem still remains to be found. We would like to hear from you what remedial action has been proposed or taken.

A major step forward is CRDN's decision to hire Indonesian or foreign junior consultants to provide bench-level advice on the use and operation of the new equipment and instruments. We welcome this development, which follows the pattern set earlier by FTDC.

Action Plan for West Lombok

We would appreciate it if you could let us know what progress has been made regarding the revision in the action plan for NIPP in West Lombok.

Dr. R. Soebekti

- 6 -

October 24, 1980

Mid-Term Review

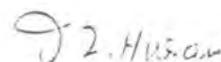
Last, but not least, we would like to mention that a Mid-Term Review Report was presented to the Bank's Board of Executive Directors in June. For your information I attach a copy of the Report.*

Due to their continued interest in this project, copies of this letter are being sent to the Minister of Health, the Deputy Chairman for Social and Cultural Affairs in BAPPENAS, and the Director-General for International Monetary Affairs.

May we thank you for the way in which you facilitated the work of the mission, and ask you to convey our thanks to your staff for all the efforts they made on behalf of the mission.

With best regards.

Sincerely yours,



Ishrat Husain
Chief, Division II
Population, Health & Nutrition
Department

cc: Dr. Swardjono Surjaningrat
Minister of Health
Jakarta, Indonesia

Mr. Soejoto, S. H.
Deputy Chairman for Social & Cultural Affairs
BAPPENAS
Jakarta, Indonesia

Drs. Soegito Sastromidjojo
Director-General for Intl. Monetary Affairs
Ministry of Finance
Jakarta, Indonesia

* This will be mailed under separate cover.

Cleared with and cc: Miss G.R. Kaplan, AEA
cc: Mr. R. Cheetham (Jakarta)
Mr. I. Zincir (Jakarta)
Mr. J. Mullan (Jakarta)
Division Files

RCCARRIERE:chb
LOAN 1373-IND/BASIC CORRESP. & CIVIL WORKS/PHN

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Ln. 1373-IND

Compliance with Covenants

All loan conditions are generally complied with.

Section 3.05(a)

There have been delays of up to 7 months in sending contract documents to the Bank, especially concerning FTDC contracts. Procurement schedules need to be prepared.

Section 3.05(d)

The State Auditor will prepare reports on project expenditures under DIP Supplement covering the period 1977/78 - 1979/80. No deadline has been set for their receipt, however.

Section 3.06

CRDN faces problems in acquiring rights in respect of land needed for improvement of the access road to the housing complex. Local government action is now awaited.

Section 3.07

The Research Coordinating Committee is not being maintained in accordance with this covenant. The Project Director has been requested to undertake remedial action.

Section 3.08(ii)

CRDN will carry out the NIPP impact survey in November/December 1980; this activity is more than one year behind schedule. The report with findings and recommendations will be ready by February 1981.

Section 3.08(iii)

The last three NIPP districts were selected in March 1980 (Tasikmalaya, Gunung Kidul and Gianyar), a year-and-a-half later than envisaged at the time of negotiations.

Section 3.09

A consultant agency has been selected to undertake a study regarding the feasibility of expanding the home and village garden program.

Section 4.02(b)(ii)

Based on recommendations made by the January mission, the Project Director has made improvements in the financial management information system. The project will hire a financial analyst as a consultant in October 1980 to refine the system and to train Secretariat and Component staff in its operation. A consolidated account of all project expenditures, including DIP Murni and DIP Supplement (prefinancing and direct payments) is under preparation.

INDONESIA
NUTRITION DEVELOPMENT PROJECT
Loan 1373-IND
Schedule of Disbursement

Fiscal Year and Quarter	Cumulative Disbursements (US\$ m)			Actual and Forecast Estimates of Disburse- ment as % of Appraisal Estimates
	Actual Total	Appraisal Estimate	Forecast */ (as of Jan. 80)	
1977 Dec 31	-	144		0
1978 Dec 31	90	1,084		8
1979 Dec 31	1,160	4,592		24
1980 March 31	1,208	5,692		21
1980 Jun 30	1,511	6,565		23
1980 Sep 30	1,831	7,765		24
1980 Dec 31		8,965	3,400	(38)
1981 March 31		10,165	4,000	(39)
1981 Jun 30		10,772	4,700	(46)
1981 Sep 30		11,572	5,400	(47)
1981 Dec 31		12,672	6,200	(49)
1982 March 31		13,000	7,000	(54)
1982 June 30			7,700	
1982 Sep 30			8,500	
1982 Dec 31			9,300	
1983 March 31			10,000	

*/ This forecast was made by the January supervision mission. A meaningful new disbursement forecast will be made upon completion of the reallocation exercise.

INDONESIA

Nutrition Development Project

Loan 1373-IND

Supervision Mission Report

June 30 - July 19, 1980

DRAFT PARAGRAPH FOR PRESIDENT'S REPORT

As a result of recently strengthened management, the pace of implementation is beginning to pick up in most components. The new campuses of the Food Technology Development Center (FTDC) and the Center for Research and Development in Nutrition (CRDN) are expected to be completed and formally opened in December 1980. Consultants and equipment for these centers are arriving, but further FTDC procurement has been held up due to procedural complications in the Ministry of Education. New staff posts have been created and fellowships awarded, although both at a slower rate than foreseen at appraisal. Research projects are underway, but for CRDN a long-term research program remains to be formulated. Field activities of the Nutrition Intervention Pilot Project (NIPP) are underway in some 90 villages, but operations are hampered by lack of special equipment. Evaluations of NIPP process and impact are planned for late 1980. Their results will largely determine the extent of NIPP modification needed and the scope for (and pace of) NIPP expansion given the Government's current commitment for a massive extension of a simpler community nutrition program delivered through BKKBN and the Ministries of Health, Religion and Agriculture to cover 41,000 villages by early 1984 with assistance from UNICEF and USAID. Anemia Control activities in East Java, North Sumatra and South Sulawesi are progressing as scheduled,

and productivity resurveys are planned for September/October 1980. The home and village garden program exceeded the target coverage (by 72) of 108 villages, and will be expanded on the basis of a master plan currently under preparation. Nutrition communication materials are ready for reproduction and distribution; their effectiveness will be evaluated in mid-1981.

Considerable savings of undisbursed loan funds need to be reallocated. These accrued principally from the Rupiah devaluation in 1978 and lowered civil works standards. GOI has prepared a package of proposals in line with existing component objectives and activities. The forthcoming mission will assess these proposals.

RCCARRIERE:chb

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Loan 1373-IND

Supervision Mission Report

June 30 - July 19, 1980

Project Execution

General

1. In discussion with the Project Director, Project Secretariat staff and component heads, the mission followed up on (a) the mid-term review findings and reallocation recommendations of the January 1980 supervision mission, and (b) pertinent supervision issues that surfaced during the first half of 1980. As a result of (i) the fast-moving developments in the Indonesian nutrition arena, (ii) recent key personnel changes, and (iii) the balance of US\$8,829,000 total project costs (including contingencies) left unprogrammed after the January mission, the Project Director placed before the mission a new package of proposals for the reallocation of project funds. Some of the January proposals had been amended (e.g., CRDN's fellowship program) or dropped altogether (e.g., the National Training Center and the Monitoring and Evaluation Center in Pasar Minggu). The new proposals were discussed with component heads, Project Director, BAPPENAS and the Minister of Health. Since several of the new proposals (especially the Nutrition Education, NIPP and Anemia Control activities) were still at an early stage of development, the mission spent most of its time assisting component heads in the further preparation and refinement of these proposals. Extensive discussions were held on the proposal to expand the manpower development activities under the project. Although considerable progress was made, it was not possible to complete the reallocation exercise while the mission was in Indonesia, and to see how these proposals would fit in with the existing project. However, the Project Director assured the mission that by the middle of September the Project Director would submit to IBRD for its review a complete package covering draft reallocation proposals after BAPPENAS approval has been obtained. This package, which also contains a series of new proposals that go beyond the original project, was received at the end of September and an issues memo is now under preparation.

A. Center for Research and Development in Nutrition (CRDN)

Civil Works

2. Good progress was made. Construction of Wings I and II has been completed, while the building of Wing III (auditorium, offices and library) as well as dormitory construction and rehabilitation was virtually complete. Contracts were awarded for the provision of public utilities services for Wings I and II; water supply work has been completed and gas and electricity services were being installed. Kitchen sinks which had erroneously been installed in place of laboratory sinks have been replaced. The project Director's approval is awaited for the award of contracts to install an air conditioning system in Wings I and II and for the construction of an access road to the staff housing complex. The Minister of Health is expected to officially open the building in December, and every effort is being made to complete the work well before this date.

Procurement

3. Delivery of the first package of laboratory equipment (US\$100,766.45) was nearing completion at the end of July 1980. Bids for the second package (laboratory equipment for about US\$130,000 and audio-visual equipment for approximately US\$180,000) were invited in April and opened on August 25, 1980; the bid evaluation report is expected shortly. Procurement of books and journals is delayed due to incompleteness of specifications and the new requirements under KEPRES 14a (1980) to invite bids from local or regional suppliers. Delivery of the first portion is now expected in October 1980. To help overcome this procurement problem, it was recommended that CRDN consider using the services of the Community Systems Foundation, which provides specialized nutrition libraries on a turn-key basis. Inadequate bidders' response due to limited advertisement, combined with the need for retender seriously delayed vehicle procurement, but delivery of seven ICB vehicles was expected before the end of September 1980.

Consultants

4. Three short-term consultants were hired in the fields of biochemistry, community nutrition and library science. In the second half of 1980, repeat consultancies are planned in the areas of research design and evaluation, nutrition economics and community nutrition. Plans for this year also call for first-time consultancies in food science, nutrition epidemiology, science editing and administration. Furthermore, negotiations are underway with a consultant in nutrition research planning. A revised schedule of consultancies for 1981 and 1982 has been submitted to the Project Director.

Fellowships

5. One new fellowship for study overseas was awarded, and five for study in Indonesia. Study areas included maintenance of laboratory equipment, statistics, meals planning, public health nutrition and radioisotope techniques. The agreement reached in January 1980 to cut back the PhD fellowship program

for study abroad and to replace it with an expanded MSc fellowship program was partially revoked by CRDN in March 1980. The January mission had agreed to this because of CRDN's inability to find suitable candidates. Meanwhile, it appears that this problem has been overcome. Since only staff with post-graduate training will be able to develop CRDN into a first-class research institution as envisaged at appraisal, the original PhD fellowship was reinstated. However, the expanded MSc fellowship program was retained. The revised fellowship program for the next two years has been submitted to the Project Director for inclusion in the reallocation proposals. More brief study-visits and short-term fellowships are proposed in order to minimize staff absence from Bogor and to insure their availability for implementation of the research program. The three long-term PhD fellowships (in biochemistry, sociology and food science) are currently used for study at the Agricultural University in Bogor (IPB); these fellows are available for research work at CRDN.

Staffing

6. Since January 1980 staff in the technical category increased by 13 (to 67), only one short of the appraisal estimate), while staff in the professional category increased by four (to 24). Although the appraisal report calls for 44 professionals by the end of the fourth project year, this latter shortfall presents a serious problem. For fiscal 1980-81 GOI has approved a total of 35 new professional posts to be divided among six national health research institutes. However, because CRDN's professional staff had doubled since the start of the project, the mission was informed that no further staff increases were foreseen for the current fiscal year. The mission raised this issue with both the Director-General of Health Research and the Minister of Health and requested that a high priority be given to allocate to CRDN the requisite number of professional staff, lest the newly constructed laboratory facilities and the newly ordered equipment remain under-utilized and fellowships unawarded. It was agreed that a realistic estimate of actual staff requirements would be made based on the multi-year research program.

7. A major step forward is CRDN's acceptance to hire Indonesian or foreign junior consultants--young PhD candidates who would impart practical skills to counterpart Indonesian staff, while at the same time pursuing their own research interest in line with priorities laid down by CRDN. This arrangement would somewhat ease the heavy work load that CRDN's senior management has had to carry since the start of this project. Budgetary provisions have been made for four expert years. Recruitment action will be initiated toward the end of this year.

Research Program

8. At present CRDN's portfolio of research projects includes the development of a national nutrition surveillance scheme; the role of nutrition in primary health care; breast-feeding patterns, prevalence and determinants; infection/malnutrition interactions in pre-school children; protein requirements in under-five children; development and testing of alternative food mixtures for use in supplementary feeding programs; and vitamin A deficiency research. Most of these studies are funded by outside agencies such as WHO and USAID. An important new topic emerging as an area of GOI concern is urban malnutrition and its control, and in due time CRDN is expected to address this issue. Funds are also

becoming available from other donor agencies to undertake new research ventures. However, given the current staffing constraint, a real danger exists (i) that research priorities will be distorted, and (ii) that in the short run CRDN will take on more research projects than it can handle. This would have serious consequences for research relevance, quality and timeliness. There are already some signs that this is happening. For example, CRDN is considering getting involved in research on problems of over-nutrition. Also, the slow progress with the NIPP evaluation and CRDN's lukewarm participation in the anemia control research activities may be indicative that CRDN staff is spreading itself too thin. This points up the need (i) to develop a long-term national nutrition research program; (ii) to involve other existing institutions with proven research capability; and (iii) to carefully screen newly proposed research and coordinate existing research efforts.

9. Two years ago a beginning was made in developing a multi-year nutrition research program based on explicit priorities and keeping in view GOI's long-term policy objectives. Since CRDN never finalized this work, the mission raised this issue with the Director-General of Health Research who pledged his full support to complete this exercise and instructed the Director of CRDN to prepare a draft program before the end of the year. The Director-General of Health Research also agreed to give favorable consideration to the mission's recommendation of involving also the National Health Institute (LKN) and Airlangga University (both in Surabaya) to complement CRDN's nutrition research and to decentralize evaluation activities, especially those relating to community nutrition activities. However, he was skeptical about the usefulness of the Research Coordinating Committee which was established under Covenant 3.07.

B. Food Technology Development Center (FTDC)

Civil Works

10. Although virtually all civil works for FTDC had been completed in mid-1979, no discernable progress has since been made to install the essential public utility services and to complete the supporting work. Consequently, no offices have been occupied and the laboratory remains unused. Electrical, mechanical and telephone services are not available, and gas and water supplies have yet to be provided. There is no pump to the water tower and no reticulation. Sanitary and laboratory fittings have not been installed. The gantry and the platform in the pilot plant remain incompleated. Since most of these items are imported or have a high foreign-exchange content, the devaluation increased their Rupiah prices substantially. The post-devaluation adjustment which BAPPENAS allowed made it unattractive for the contractor to continue and complete the work.

11. The Project Director initially encountered legal difficulties in terminating the contract under which these works were to be carried out. However, it is understood that these problems have now been resolved and that new tender documents were under preparation for the remainder of the services extension. Invitations to bid were to be sent out in August, but to date no tender documents were referred to the Bank for review. The project Secretariat has been advised that under Loan Agreement Schedule 4, bidding documents should be referred to the Bank for prior review.

Procurement

12. No equipment arrived as yet, but between December 12, 1979 and May 16, 1980 nine supply contracts were signed; five for laboratory equipment with a total CIF value of US\$457,960; two for vehicles in the amount of Rupiah 9,120,000, and another two for laboratory equipment on which information is still awaited. Although four contracts exceeded the US\$50,000 limit, bid evaluation reports were not referred to the Bank for review prior to contract award. The Project Director has been requested henceforth to comply with this stipulation in the loan agreement. The laboratory equipment contracts cover part of the items from the original 16 packages for which three or more bids were received. By disassembling these packages, and by creating new packages composed of items with the lowest bid, substantial savings were realized, but considerable delays were incurred in the process. In fact, another eight contracts have yet to be awarded to complete procurement action for these 16 packages.

13. For the remaining 26 packages (with an estimated CIF price of US\$800,000) no orders have yet been placed; 6 of them received two bids; 11 only one; and 9 none. It has repeatedly been stressed that under ICB the Bank does not require three or more bids, and although three or more bids are generally required by the Indonesian Government, this does not, according to KEPRES 14(1979), apply to equipment acquired through foreign assistance programs. Furthermore, in September 1979 the Bank authorized prudent international shopping of items for which no bids were received. The mission was given to understand that peculiar procedures and practices by the extra-structural unit in the Ministry of Education dealing with foreign assistance are responsible for the hold-up in procurement action. A number of high-level representations to the Ministry of Education was made by the Rector of IPB, the Ministry of Health and BAPPENAS, but failed to bring the desired result. This issue was raised with the Minister of Health who assured the mission that he would bring this long-standing issue up with the Minister of Education in the forthcoming monthly coordinating ministerial meetings. The Bank is currently looking to the implications of KEPRES 14A (1980) for all Bank-financed procurement.

Consultants

14. FTDC extended the contract of the food processing and storage consultant, and recruited three new short-term consultants in research management and technology transfer, in grain storage and pest control, and in pilot plant construction. Negotiations are underway with the first of four junior consultants to assist FTDC in passing on skills in handling the newly ordered sophisticated instruments and in mastering modern techniques. The impending delivery of equipment makes it now all the more urgent to recruit the required consultants and junior consultant staff.

Fellowships

15. Progress under the fellowship program included the placement of one MSc candidate for a two-year period in Mysore, participation in a two-month nutrition planning course by two FTDC staff members, and a study trip to India and Thailand by three staff members to look into recent experiences with salt fortification. Program implementation will have to be speeded up if the appraisal targets are to be met.

Staffing

16. At appraisal it was estimated that FTDC will require during the fourth year of this project a total staff of 79 to carry out its work program. At present FTDC has only 43 permanent staff members and 14 of these have to devote 20 percent of their time to teaching obligations at IPB, Bogor. The shortage of staff is crucial and impairs FTDC's operation, since staff is spread too thinly over too many operations. FTDC will need 29 technicians to operate the pilot plant which is part of the Bank-assisted project. Yet only 21 technicians are available. FTDC has made a request to IPB for 12 additional positions for FY 1980/81. The mission discussed this staffing problem with the Rector of IPB and stressed the need to find urgently a solution to this obstacle which prevents FTDC from carrying out its agreed work program.

Research Program

17. FTDC's research and development program has been evaluated in detail in the last Supervision Report. FTDC's research follows largely the lines of a work program developed in consultation with the Bank three years ago, and places heavy emphasis on supporting the NIPP operations. Yet, a number of politically motivated research projects have recently been forced upon FTDC and distracted the already limited staff from FTDC's research priorities. The mission raised this issue with both the Rector of IPB and the Director of FTDC, but neither foresaw a solution to this problem.

C. Nutrition Intervention Pilot Project (NIPP)

Procurement

18. Component staff reported that only limited progress had been made regarding the procurement and delivery of anthropometric equipment and food supplement production units for field operations. This was confirmed during a field visit to Bojonegoro. This issue had been raised with the Minister of Health by the last two supervision missions, which had pointed out that, at that time, the delivery of equipment to the field staff was already overdue by more than twelve months. Two contracts for the supply of a first portion of anthropometric equipment were awarded--one on June 5, 1980 for US\$40,612 and another on April 5, 1980 for US\$16,000, but no equipment had arrived in the field. The mission was informed that the Tender Committee of the Ministry of Health would meet on July 17, 1980 to consider prequalification of firms for the supply of additional anthropometric equipment covering the vital NIPP requirements.

19. The Ministry of Health decided that the fabrication of the food processing units should be undertaken by a private manufacturer rather than by the FTDC (which had offered to complete the order within two weeks of receipt of instructions to undertake the work). A suitable company was identified and a quotation obtained. By early July, 1980, the Minister of Health had written to the Ministry of Finance seeking permission to negotiate a contract with this company. A reply was expected within two months. The manufacturer has forecast completion of the order three months after the signing of the contract. FTDC will be involved in the design and quality control of the 18 custom-built food processing units. Meanwhile, in early August the Bank has in principle approved the proposal to negotiate this contract, but specifications and cost breakdown have been requested to permit Bank review prior to contract award. No reply has been received to date. Assuming that the Bank receive the required information within the next month, delivery to the field will not take place until 1981 at the earliest.

20. The failure to procure the food processing and anthropometric equipment in time has frustrated action in the field. Information received indicated that the delay in procurement resulted from internal dissension regarding shares in the peculiar payment practices prevailing in Indonesia. The Project Director has undertaken to have the issue investigated as a matter of urgency by the Office of the Auditor General. The fifteen vehicles for NIPP (which are part of the ICB order for 31 vehicles that should have been ordered during the first three years of the project) were expected to be delivered by the end of September, but no confirmation has been obtained.

Consultants

21. In early August, a seven-month contract of US\$143,176 was signed with the Yayasan Indonesia Sejahtera (YIS) to advise the Project Director on the improvement of a management information system for the project as a whole. Special attention will be paid to the monitoring of NIPP which has been found to be inadequate. Staff training and field testing will also be undertaken; monthly progress reports will be issued and discussed with the Project Director.

Fellowships

22. Four short-term fellowships for study overseas were awarded during the period under review.

Field Activities

23. Since January no progress was made in revising the plan of action for NIPP in West Lombok. The mission was advised that the Project Director and the Director-General of Food Crops has not yet discussed the situation with the Governor of West Nusatenggara. No new target date has been set to complete this reformulation exercise. The mission was further advised that the Ministry of Agriculture has proposed to include West Lombok under a special INPRES program for distressed areas. If this is carried out, it is not clear how this would affect NIPP. This will require further discussions.

24. A field trip to Bojonegoro--the most advanced NIPP district where operations started in 1978 -- confirmed that a number of NIPP activities, such as water supply and sanitation activities, and the development of food storage facilities, have yet to be initiated. This raises questions about the definition of NIPP which have implications for the evaluation exercise. Implementation delays resulting from slow procurement or delivery have been repeatedly cited in previous supervision reports. Where available, food processing units remain under-utilized and are plagued by frequent breakdowns for which neither repair services nor budgets are locally available. Although the processed supplementary food (BMC, a rice/soybean mixture) is said to be quite popular, doubts were expressed about its nutritional superiority and cost-effectiveness compared with traditional weaning foods such as fermented soybean (tempe or tahu) and mashed rice. Furthermore, since it is made available only for children identified as malnourished, this limits BMC's usefulness as a means of nutrition education and malnutrition prevention, and thus defeats one of the purposes of supplementary feeding.

25. Unresponsiveness on the part of project management to change NIPP's design in light of experience gained in its implementation has exacerbated the problems of executing this pilot project. The need for such changes were perceived and expressed early on by NIPP field staff, but although supervision missions repeatedly recommended to adapt and modify NIPP, no remedial action was undertaken. This, in turn, has put a damper on the enthusiasm of those involved in implementation at the field level.

26. The lack of responsiveness may be explained by the fact that GOI, with assistance from UNICEF and USAID, has launched a massive nutrition program (UPGK-A and UPGK-B). This program, begun on a small scale in 1974-1975, consists of fewer interventions than NIPP and is currently delivered through field staff of BKKBN and the Ministries of Health, Religion and Agriculture. Unlike NIPP, which is relatively well-planned and closely supervised, monitored and evaluated, UPGK-A and UPGK-B largely provide inputs (supplies, equipment and funds). To put NIPP's reduced role in proper perspective it is important to note that by the end of 1979 (after two years) only 36 NIPP villages had become partially operational. The target total for the end of FY80-81 is 192 NIPP villages. On the other hand, by the end of 1979,

UPGK-A was being implemented in approximately 2,600 villages and current plans call for program expansion to no less than 41,000 villages before the end of 1983. Clearly, these developments have overshadowed NIPP, and their administrative managerial and budgetary demands explain in large part why not more attention has been paid to NIPP.

Inclusion of Bali as a NIPP Area

27. Although at appraisal GOI had tentatively included Bali as a potential NIPP area, this question remained unresolved during the January 1980 mission. Subsequently, the Governor of Bali decided that NIPP should be extended to two subdistricts (kecamatan) of the Gianyar district (kabupaten).

28. During FY79-80, the Nutrition Directorate funded UPGK-A operations in 57 villages on Bali, followed by a further 84 villages during FY80-81. BKKBN, supported by USAID funding, will provide UPGK-A service in all eight districts of Bali, initially covering 231 villages. Youth and women's organizations, especially PKK, will assist in the provision of these services. The intention is to cover all 564 villages in Bali, but this will require three years or more.

29. The subdistricts in Gianyar district which are earmarked for NIPP are Gianyar and Blahbatuh. The former consists of twelve villages and the latter of seven. Of the twelve villages in Gianyar subdistrict, five already undertake UPGK-A activities. Consideration will also be given to the possibility of including Nusa Penida subdistrict (on the coral-based island to the south) and the northeastern arid areas; malnutrition prevalence is known to be relatively high in both these areas.

30. Recent surveys indicate that the prevalence of malnutrition in Bali is below the national average. The following table summarizes the results:

	<u>Bali</u>	<u>National Average</u>
Protein-Calorie Malnutrition (PCM)	24.2%	33%
Serious PCM	< 1%	approx. 3%
Nutritional Anemia:		
Pregnant Women	55%	70%
Adult Males	36%	40%
Vit. A (Ocular signs)	0.9% ^{1/}	N.A. ^{2/}

1/ Ranks 9th in recent prevalence study of 15 provinces

2/ 60,000 children under five years of age develop gross corneal involvement each year, with at least one-third blinded

31. So far good progress has been made in preparing for NIPP operations in Bali. NPO and ANPO have been trained. The workshop for provincial level leaders was to be held immediately after the fasting month and the district (kabupaten) workshop was planned to follow in late August. Anthropometric equipment will be required for the training of nutrition cadres.

NIPP Monitoring and Evaluation

32. As mentioned before, the YIS consultants' group will make recommendations on an improved monitoring system for NIPP. These recommendations will also be applicable to other nutrition programs, particularly UPGK-A and UPGK-B. YIS will also make a review of project process in NIPP in the first four districts; findings should be available in November 1980. This should help GOI to get a realistic perspective on the advisability and feasibility of a major NIPP expansion in the coming years.

33. A draft of the NIPP base-line data report covering the districts of Bojonegoro, West Lombok, Ogan Komeriing Ilir and Karang Anyar was prepared by CRDN and handed to the mission. Data collection took place in December 1977 through January 1978 and in January/February 1979. Results of these surveys were not shared with the project staff in the districts and hence were never used in making design adjustments in NIPP. Re-surveys are now planned in the first two districts for November/December 1980. The Director of CRDN has promised to make the new findings available before February 1981.

34. NIPP evaluation in the afore-mentioned districts will be descriptive and will not yield the information needed to definitively attribute health and nutrition improvements to the project. Neither will this evaluation permit an insight into the relative effectiveness of the various NIPP interventions, singly or in combination with one another. Had an experimental study design been used from the start, and had implementation been planned in a phased and modular fashion, then specific effects could have been isolated and a sound policy of project expansion formulated. As it is, this will take more time than was foreseen at appraisal stage.

35. Meanwhile, preparations have begun to apply a scientific evaluation model in West Java, using proper controls to factor out the influences of non-project activities. The new Director of Nutrition in MOH, in his capacity of NIPP coordinator, plays an active role in this exercise.

36. GOI had decided to carry out a similar scientific evaluation for NIPP in Bali and Yogyakarta. Details of selecting matching pairs are given "Identifikasi Pasangan Desa" (in project file). While in West Java such an evaluation should be feasible, in Bali and Yogyakarta control villages are bound to be affected by nutritional activities resulting from other already ongoing programs. Unless one properly randomizes and pairs villages, these compromising factors would invalidate such an impact evaluation in Bali and Yogyakarta. The mission recommended therefore that careful consideration be given to the feasibility of a scientific impact evaluation based on control groups in these areas.

D. Nutritional Anemia Prevention and Control Pilot Project

Field Implementation

37. Progress in this component is steady. The mission visited the rural plantations in Takalar, Ujung Pandang, South Sulawesi. These tobacco plantations are owned and operated by the farm families, with technical advice and fertilizer supplies being provided by PT Garuda Mas Indonesian Tobacco, which processes and markets the tobacco produced. The factory staff have no administrative control over the farmers. This lack of an administrative structure contrasts with the situation in the plantations in North Sumatra and East Java where earlier anemia control was undertaken. Consequently, distribution of iron pills, vermox and fortified salt have imposed a greater burden on the Regional Centre for Industrial Hygiene, Occupational Health and Safety. The local representative has promoted the project energetically.

38. The base-line data collected covered 500 farmers and their families and included demographic details, haemoglobin examination, worm egg estimation, clinical examination and food consumption measurements. Productivity levels of workers were determined. The farmers were divided randomly into two groups. One group was treated for nutritional anemia and worms; the other was provided with a placebo instead of the ferrous sulphate pill. Productivity measurements will be repeated during September-October 1980, twelve months after the BLD survey. In this way, seasonal variations may be avoided. An external consultant will assist in the exercise.

39. The farms in Sulawesi are much larger than in Java and each family lives on its own farm. Consequently, the community is widely dispersed, and this adds greatly to the difficulties of distribution of supplies. Lack of transport has not prevented the medical officer from covering the area, but he indicated the inconveniences involved.

Fellowships

40. In June, a group of five persons (representatives of FTDC, the anemia control project, the Ministry of Industry and the State Salt Company) visited India and Thailand to study salt fortification with iron.

E. Home and Village Gardens

41. After 11 months of discussions between the Bank, project staff and a consultant, the Bank approved in early August the proposal by Nusa Consultants to examine the feasibility and requirements of an expanded program for home and village garden improvement in four districts in four provinces and establish within MOA a system for planning and monitoring future home garden programs. This revised proposal incorporates all of the suggestions made earlier by Bank staff. The cost of the proposal is Rupiah 39,292,500; Bank approval was given subject to BAPPENAS's clearance of the proposal. It is anticipated that Nusa Consultants will complete the field investigation by October 1980. Thereafter, the consultants will work in close collaboration with the staff of the Directorate-General of Food Crops to draw up a master plan for home and village garden programs. This plan shall be completed prior to the start of

the FY81/82 budget process. (A brief description of the proposed work for home garden development was given in the last Supervision Report.)

F. Nutrition Education and Behavioral Change

42. Formative evaluation and pretests of nutrition education materials were carried out with assistance from Manoff consultants, and final reports submitted to the Project Director in July and May, respectively. The component head is confident that his staff will now be able to apply the methodology elsewhere in Indonesia without further assistance from the consultant. However, since the departure of the consultant in February, little progress was made in refining the design work for the ten action posters and in finalizing the six radio spots, and no orders were placed for poster printing or audio cassette reproduction. Complementary and reinforcing materials remain to be developed and tested; consequently, village nutrition cadres continue to work without benefit of these support materials. This affects not only the specially selected 60 test villages, but also NIPP operations. BKKBN has expressed strong interest in the printed materials for use in its integrated family planning/nutrition program in Java and Bali, and UNICEF and other donor agencies and NGO's also seem eager to make these materials available as part of the nutrition education packages they fund. Once their effectiveness and appropriateness has been demonstrated in the planned evaluation exercise (now expected to be completed in May 1981), the Project Director intends to disseminate these materials widely.

43. In April, project management requested (1) Bank approval to contract one local consultant agency for both final design work and material reproduction, and (2) to allow direct payment for the estimated US\$210,000 package since available DIP funds were insufficient. The Bank's response was that given the excessively high unit cost of several items (films, posters, TV spots and manuals) there would be a need for two separate contracts: one for a consultancy agency to finalize design work, and another for suppliers to reproduce the materials following ICB procedures. The Bank agreed to reimburse or make direct payments for the consultancy services. However, since the loan agreement does not now contain provision for disbursement against expendable supplies, a new category would first need to be created, and this was considered to form part of the reallocation exercise. Furthermore, since not all materials were ready for reproduction or needed at one and the same time, a phased production schedule was agreed upon. Payment would come from the available government budget, which would have to be revised by the Project Director to reflect the change from direct payment to DIP Murni. It was agreed that reimbursements might follow at a later stage, assuming that a new disbursement category would be established and that procurement action would have been carried out in accordance with the Bank guidelines.

44. The component head reported that he foresees considerable problems in the actual use of radio and TV spots due to inadequate access to sufficient air-time. It was stated that BAPPENAS does not permit departments to purchase air-time. The recent experience with the UNICEF-assisted breast-feeding promotion campaign, which relied on unpaid, voluntary participation of government-owned

and private radio stations and TVRI, has not been encouraging, and well-designed audio and audio-visual materials remain largely unused. On the other hand, however, the example of BKKBN's media program shows that it is feasible for a government agency to use radio and TV on a large scale (at least for family planning promotion). The mission recommended, therefore, that before further investments are made in the design and production of radio and TV spots, the component head consult with BKKBN and BAPPENAS to resolve this problem. Pending these investigations, negotiations with radio and TV stations about frequency and duration of use of campaign spots have been postponed.

45. The mission dissuaded the component head from purchasing 30 televisions for use in the test villages. A budgetary provision of US\$14,400 equivalent had been made, for which Bank reimbursement was expected. However, given the slim chances for a nutrition education TV campaign and doubts about the replicability of the proposal to make televisions available, television sets were considered to be an inappropriate input for this nutrition project.

G. Project Secretariat and Directorate of Nutrition

46. The arrival in March of the Project Management Adviser, Mr. Subramanian, considerably strengthened the Secretariat. This post has been vacant for three years. However, until the supervision mission's arrival the Project Director had not fully utilized his services. The mission recommended that the role of the adviser be in accordance with earlier agreed terms of reference, and that he work directly with the Project Director as foreseen in the Loan Document. The mission further urged that the Finance and Procurement Adviser, Mr. Fritz, be properly deployed in line with his terms of reference in order to help resolve the outstanding procurement problems and eliminate the backlog of requests for Bank reimbursement. The Project Director accepted these suggestions. He furthermore announced that in an effort to accelerate the submission of withdrawal applications, responsibility for the preparation of the required documentation would be transferred to the component heads. An in-service training program would be prepared to provide relevant component staff with the necessary skills.

47. While management of the Nutrition Directorate has recently been strengthened, the professional staffing of the Directorate has not kept pace with the manifold responsibilities placed upon them by expanding programs of UPGK A, B and C. Budgetary limitations have prevented staff expansion. Yet the increasing involvement in planning the ambitious program expansion foreseen under Repelita III have diverted the Directorate's staff from the much-needed supervision of ongoing activities. The Nutrition Directorate provides little or no support or planning assistance to BKKBN. Yet, the UPGK A and B nutrition programs that are implemented by BKKBN are expanding rapidly.

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INDONESIA

Nutrition Development Project .

Loan 1373-IND

Supervision Mission Report

June 30 - July 19, 1980

OFFICIALS MET AND PLACES VISITED

Ministry of Health -- Jakarta:

Dr. Soewardjono Surjadiningrat, Minister of Health
Dr. R. Soebekti, Director-General of Community Health and Project Director
Mr. Adinugroho Arasrudin, Project Executive Secretary
Mr. I. Tarwotjo, Director of Nutrition and NIPP Coordinator
Mr. Hartono, Nutrition Directorate
Dr. Salihudin, Project Officer for NIPP
Dra. Asmira, Nutrition Training Specialist for NIPP
Dr. I. Mantra, Sub-Director of Health Education and Head of Nutrition
Education Component
Dr. Djoko, Monitoring and Evaluation Unit, Project Executive Secretariat
Mr. Carl Fritz, Financial and Procurement Adviser, Project Executive
Secretariat
Dr. Balasubramanian, Management Adviser to Project Director
Miss S. Almatsier, Director Akademi Gizi
Dr. Isa Wattimena, Director Pusdiklat and Head, Manpower Development
Component
Ms. S. Sundari, Pusdiklat
Mr. Tjep Marku, Nutrition Education Component

Ministry of Health -- Ujung Pandang:

KaKanWilKes and staff

Ministry of Health -- Denpasar:

Governor of Bali
Dr. Wiadnyana, Acting Kakanwilkes
Mr. Witanaya, Nutrition Program Officer

Ministry of Health -- Bogor:

Dr. Karyadi, Director of CRDN
Professional group at CRDN

Ministry of Health -- Bojonegoro:

Bupati of Bojonegoro
Dr. Haryoko, ANPO
Miss Cucu, Kabupaten Nutritionist

BAPPENAS -- Jakarta:

Mr. Soejoto, S.H., Deputy for Social Development Planning
Dr. H.A.R. Tilaar, Bureau Chief for Social Welfare Peoples Housing
and Health
Mrs. Hasnah Soetedja, Nutrition Coordinator

Ministry of Education -- Bogor:

Dr. Winarno, Director of FTDC
Consultant and Professional Groups at FTDC
Rector, IPB

Ministry of Agriculture -- Jakarta:

Ir. Wardoyo, Director-General of Food Crops
Ir. Jafar Jamaludin, Director, Food Crops Production Directorate
Ir. Harsan Sudibya, Chief Sub-Directorate of Horticulture
Dr. Subianto, Chief Horticultural Research Service (AARD)

National Institute of Industrial Health, Hygiene and Occupational
Health -- Jakarta:

Dr. Suma'mur, Director-General and Head of Anemia Control Component
and his staff

OFFICE MEMORANDUM

TO: Mrs. Ishrat Z. Husain, PHN

DATE: March 20, 1980

FROM: Carmen Hamann, AGR *CH/PP/PP*SUBJECT: INDONESIA: Nutrition Development Project
Loan 1373-IND - Supervision Report

Attached is the Supervision Report for the above project.

Distribution:

Ms. Kaplan	(AEA)
Ms. Hadler	(AEA)
Messrs. Husain	(AENVVP)
Ruddy	(AENVVP)
Jaycox	(AEA)
Kirmani	(AEP)
Stern	(AEP)
Golan	(AEP)
Wadsworth	(AEP)
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Yudelman	(AGR)
Kapur	(OED)
Christoffersen	(AGR)
Hattori	(CTR)
Fernando	(CTR)
Drake	(CTR)
Chittleburgh	(EDC)
Forget	(LEG)
Evans	(PHN)
Berg	(PHN)
Squire	(AEA)
Messenger	(PHN)
Carrière	(PHN)
Kisa	(PHN)
Ping-Cheung Loh	(Indonesia)
Bumgarner	(Indonesia)
Leeuwrik	(AGR)
Schebeck	(PHN)

Attachments

CHamann/ETHomson: caa

BKKBN -- Jakarta:

Dr. Haryono Suyono, Deputy, Program Implementation

UNICEF -- Jakarta:

Mr. Victor Soler-Sala, Representative
Mr. Dan Brooks, Senior Program Coordinator
Mr. Sunawang, Assistant Nutrition Program Officer
Mr. Siddharta, Assistant Rural Development Program Officer

USAID -- Jakarta:

Mr. Michael Filley, Project Officer, Population and Nutrition Project

WHO -- Jakarta:

Dr. Hlaing, Deputy WHO Representative

OTHERS:

Dr. Lukas Hendrata, Director, YIS, Jakarta
NUSA Consultants
Hari Murthi Consultants
HKI Consultant
RSI Staff

THE WORLD BANK
IBRD AND IDA - SUPERVISION SUMMARY

This summary is the initial summary
 part of a mission report
 an annual update

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.
THIS FORM IS A STOCKROOM ITEM.

Office: AEE	Project Name: Nutrition Development Project	Project Code: 7INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.:	L/C Amount (\$xx.xm): US\$13.0 million
Country: INDONESIA	Borrower/Beneficiary: Health/Education/Agriculture	Board Date: 3.1.77	Signing Date: 3.15.77	Effective Date: 4.1.77
Projects Dept./Div. Name: Population, Health & Nutrition	Org. Code No.:	Projects Officer: Ms. Carmen Hamann, AGR/NU	Loan Officer: Miss Gillian R. Kaplan, AEA	

SECTION 1: SUMMARY PROJECT DESCRIPTION

The Project will: (1) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation; (2) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and (3) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

SECTION 2: PERFORMANCE RATING

	This Summary	Last Summary
STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems	2	2
TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating	2	2
TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.) If more than one type of problem, enter most critical factor first.	F M	F M
IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Disbursements	2	2
Estimated Cost	2	2
Anticipated Completion	2	2
Compliance with Loan Conditions	2	2
Project Finances	2	2
Management Performance	2	2
Procurement Progress	2	2
Performance of Consultants	1	1
Reporting	2	2
DEVELOPMENT IMPACT: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Expected Benefits	1	1
Rate of Return	-	-
Institution-Building	2	2

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total of which:			Cumulative Disbursements through most recent Quarter ended (12/31 /79) (\$xx.xm)
			Project Cost (\$xx.xm)	Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	03 , 81	03 , 31 82	26 , 0	10 , 2	15 , 8	4 , 59 (Est.)
Last Summary (/ /)	03 , 82	03 , 31 83	26 , 0	10 , 2	15 , 8	
Current	03 , 82	03 , 31 83	26 , 0	10 , 2	15 , 8	1 , 16 (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	5	24	02 04 80	02 25 80 FS
Previous Mission	1	6	09 11 79	11 02 79 FS
Next Mission Departure (Mo./Yr.)		Recommended interval between missions (Months) 6	End of period covered by latest progress report (Mo./Day/Yr.)	01 29 80

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members

Mission Members' Specializations

Ms. Carmen Hamann
Mr. Ewen Thomson
Mr. Srinivasan Gopalan
Mr. Boyce Thrower
Ms. Gillian R. Kaplan

Leader
Nutrition Consultant
Financial Analyst Consultant
Horticultural Consultant
Loan Officer

Number of members on both present and previous mission:

None
One
Two or More

SECTION 5: COMMENTS (Clarify, if necessary, data in Sections 3 and 4.)

Ms. Hamman and Messrs. Thomson and Gopalan were present January 6 to 29.
Ms. Kaplan was present January 6 to 26.
Mr. Thrower was present January 8 to February 2.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS PTDC civil works construction is virtually complete and services are being installed. Out of 42 packages of equipment, 16 have been ordered. The remainder had less than three bids. Representations have been made to MOE to permit prudent international shopping instead of retendering. Wings I, II and staff housing of CRDN have been constructed, services are being installed, and Wing III proceeds according to plan. The first batch of equipment is due for delivery beginning April 1980; the second equipment list has been approved. The Nutrition Academy has been completed and equipped; it is in full use. The formal opening of all buildings is being planned to take place before August 17, 1980 (Indonesia's Independence Day). Vehicles purchased through ICB are due for delivery April 1980. Failure by the NIPP Coordinator to procure equipment has frustrated action in the new NIPP villages. Such action should have begun in September 1979. This failure was drawn to the attention of the Minister. Despite neglect by the central level, encouraging results are being obtained in some NIPP areas. The number of NIPP villages will increase from 183 to 334 as a result of extension of the Project. In addition, the Bupati of Bojonegoro has started 85 villages on the NIPP model, financed from local government funds. Anemia prevention and control, based on revised procedure, has been undertaken in S. Sulawesi and W. Java. During 1980-81 similar activities will be undertaken in private plantations in W. Sumatra and C. Java. Major expansion is planned for N. Sumatra in 1981-82; approximately 50,000 workers and their families will be covered. A study of the socio-economic results of the activities will be mounted in W. Java and S. Sulawesi. With a view to improving the iron fortified salt, a team will visit Tamil Nadu. Collaboration now exists between the Nutrition Directorate and Health Education Directorate in producing nutrition education material. The consultants, Manoff International Inc., have completed the formative evaluation, prepared sample messages for radio and have advanced the component into a new phase of operations. Despite staffing problems, the Nutrition

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

- 1) Schedule 1 of the Loan Agreement should be amended to add a new category: "(4) preparation and production of educational materials, training, workshops/seminars and studies: % of expenditure to be financed, 100%. (5) Unallocated 1,000,000."
- 2) Other recommendations are given in detail in Annex 10.
- 3) These recommendations should be communicated by letter to the Project Director.

NAME OF PREPARING OFFICER:

Carmen Hamann

INITIALS:

CH

DATE:

February 25, 1980

(continued)

Section 6: Summary of Project Status, Trend and Major Problems

Academy continues with an enrollment of 160 students, compared with around 100 formerly. The Head has become Director of Nutrition, and the Deputy Head is a PhD candidate at Cornell. The Task Force on Nutrition Manpower Development has studied the reports of consultants and proposes village and community level personnel to be funded by UNICEF and USAID, and supervisory personnel to have their training funded by the project. This will involve training 6,600 supervisors and over 3,000 Puskesmas doctors. Village gardens are spreading fast. The Bupatis of W. Lombok and Bojonegoro have ordered all households to have a home garden. Meanwhile, a consultant has prepared a pilot project to develop better planned home gardens as models for the future. For the first time, a consolidated statement of expenditure has been prepared and a reporting system established. Changes in Schedule 1 of the Loan Agreement have been proposed to allow disbursement for training, workshops/seminars, studies, preparation and production of educational material. A formal exchange of letters will be required. Project management continues to be a major constraint. The Project Management Advisor is due to assume duty at the beginning of March, provided the Project Manager initiates formal recruitment immediately.

ANNEXES:

1. Draft Letter to Dr. R. Soebekti
2. Compliance with Loan Conditions
3. Key Project Indicators
4. Schedule of Disbursement
5. Places Visited and Officials Met on the Mission
7. Project Execution
 - General
 - Center for Research and Development in Nutrition
 - Construction and Equipment
 - Consultants, Fellowship, Staffing
 - Food Technology Development Center
 - Construction and Equipment
 - Consultants, Fellowship, Staffing
 - Surveys, Operational Research and Design Activities
 - Direct Nutrition Action Programs
 - A. Nutrition Intervention Pilot Project
 - B. Home and Village Gardens
 - C. Anemia Prevention and Control Pilot Project
 - D. Nutrition Communication and Behavioral Change
 - E. Manpower Training
 - F. Food and Nutrition Unit
 - G. Monitoring and Evaluation
8. Financial Aspects
9. Organization and Management and Performance of the Borrower
10. Mission's Recommendations

No. 56

Dr. R. Soebekti, M.P.H.
Direktur Jeneral
Direktorat Jenderal Pembinaan Kesehatan
Masyarakat
Departemen Kesehatan
J. I. Prapatan 10
Jakarta, Indonesia

Dear Dr. Soebekti:

Indonesia Nutrition Development Project - Loan 1373-IND

1. We wish to thank you for the cooperation extended to the Bank mission which visited Indonesia recently to complete the mid-term review and consider proposals for reallocation of funds. Good progress has been made in many components, whereas others have been held up by delays in procurement. Disbursements continue to be low and it is now obvious that all the funds available would not be disbursed by the loan closing date. We have studied the proposals which have been made for the reallocation of funds and we comment on them in relation to the components.
2. The formal assumption of office by Mr. Tarwotjo as Director of Nutrition is welcomed. While we appreciate the manifold responsibilities resulting from the rapidly expanding nutrition program for Indonesia, we are confident that Mr. Tarwotjo can regenerate the early momentum of NIPP, provide technical orientation to the M and E Unit pending its absorption in the Directorate and develop the plans for nutrition manpower training.
3. Mr. S. Gopalan, Consultant Financial Analyst has made recommendations for improving the accounting system, so that each component maintains complete records for both DIP murni and DIP supplement, including direct payments. For the consolidation of the accounts in the Ministry of Health (See Section 4.02(b) (i) and (ii) of the Loan Agreement), Mr. Gopalan has suggested that if the accounting position does not improve you may have to engage a short-term financial consultant to provide the necessary guidance

and support. We have presumed that such guidance and support would come within the terms of reference of Mr. Karl Fritz, Finance and Procurement Advisor.

4. The Loan Agreement (Section 3.05(d)) requires that the accounts of all agencies participating shall be audited by independent auditors each year and that certified copies of the accounts be submitted to the Bank. Although the project started in 1977, no audited statements of accounts have been received by the Bank. We understand that the expenditures under DIP murni have all been audited by the State Auditor, but no instruction has been issued to extend the audit to expenditures under the DIP supplement. Will you please let us know when we may expect certified copies of the audited accounts.

5. We trust that timely action has been taken to complete the formalities for the recruitment of Mr. Balasubramanian as Project Management Advisor. We suggest that his attention should be drawn to the covenants relating to accounting and audit so that these outstanding matters can be dealt with expeditiously.

Monitoring and Evaluation

6. You are aware of the situation regarding the Monitoring and Evaluation Unit and we are pleased to learn that a Consultant Group has been identified to assist in the setting up of a monitoring system for each component and the executive secretariat. We assume that the terms of reference, consultants' proposal and the draft contract will be submitted to BAPPENAS at an early date and, if agreed by BAPPENAS, forwarded to the Bank for approval.

FTDC

7. The recognition by the U. N. University of FTDC as the "Center in Asia for Research on Fermented Foods" is a tribute to what has been

achieved. The research program concentrates mainly on fermented and weaning foods, which are topics closely related to the objectives of the project.

8. Mr. David Mills, Bank Architect, has reported on the plans prepared by Hari Murthi, Consulting Architects and on his discussions with them. They are not fully aware of the functions of the ecological pen and the pilot scale model warehouse. The ecological pen is intended to test the effectiveness of storage bins or structures in preventing rats reaching the store commodities. For both items a detailed brief in writing is essential for the architects to complete detailed drawings and costings. The same need for a brief by the client applies to the landscaping required to prevent erosion.

9. Delivery of equipment and chemicals to FTDC should begin during April/May 1980, but, as you are aware, the majority of packages of equipment put out to tender received insufficient bids according to GOI regulations. We understand that the Minister of Education insisted on the packages being retendered, but, following on the discussions at the 'wrap up' meeting, the Director General of Higher Education undertook to reopen the subject and press for prudent international shopping with regard to these packages.

10. The studies to be undertaken will require the use of complex instruments and sophisticated techniques, which involve skills usually acquired during M.S. training. The Director FTDC has proposed recruitment of junior consultants, who may be candidates for Ph.D. preparing their dissertation. They would be familiar with the techniques and equipment and could pass on these practical skills both to professional and technical staff at the Center. We support this proposal and believe the argument applies equally to the circumstances prevailing in CRDN.

CRDN

11. The CRDN has a series of ad hoc research projects, but as yet does not have a long-term research program, which would define the role of the Center

and justify its existence. Such a research program would form the basis for the recruitment of staff, award of fellowships and selection of equipment.

12. The professional staff of CRDN equates with the number expected at appraisal by the end of Year 2. However, the 24 further professionals to be recruited by the end of the project is unlikely to be reached. We understand that the Director CRDN is not in favour of engaging junior consultants, but we would suggest that their employment as an interim measure would assist in the realization of the work program.

13. The inability to place six candidates for fellowships in 1979/80 must be a disappointment for all concerned. In the circumstances the replacement of four Ph.D. fellowships by M.S. fellowships appears to be appropriate.

14. A written brief on the landscaping and boundary wall should be provided to Hari Murthi, to enable the consulting architects to prepare drawings, documentation and estimates.

NIPP

15. NIPP has now been operational for seventeen months. May we draw your attention to the Loan Agreement requirement that GOI will arrange for an evaluation of NIPP after it has been operational for two years.

16. We understand that the training of new nutrition cadets and preparatory work in the 54 new NIPP villages had been completed by September, 1979. However, operational action in most of these villages has not begun because the Nutrition Directorate did not procure both equipment for the cadets and processing units for the manufacture of food supplements. Furthermore, no NIPP staff from either the central or the provincial levels appear to have visited any of the NIPP areas since June 1979. We are confident the new Director of Nutrition will rectify the situation and shall be grateful if you will let us know when the equipment has been provided and when the villages become operational.

17. In our letter of November 5, 1979, reference was made to the dearth of data available on NIPP. No further data were available in the M and E Unit during January 1980. The original reporting system has been too complex and a much simpler system requires to be devised. This will be the priority task of the Consultant Group, who are about to be engaged.

18. Extension of the project period by one year would result in an increase in the number of villages reached from 183 to 324, if the model agreed at appraisal is followed. Before undertaking a major expansion you will want to be assured that the procurement problems, referred to in paragraph 16, have been overcome. We understand that you intend arranging for the procurement of all equipment required up to the end of the project period in complete packages.

19. Training, and the workshops at various levels, have been carried out on schedule in the first four kabupatens. Your proposal to reduce the period of preparation to six months would be justified, thus allowing nine new villages in 1980-81 and 18 new villages in 1981-82 in each of West Java and Yogyakarta. As the situation in Bali was left open, will you please let us know the final decision of the Governor of Bali regarding the expansion of NIPP into his Province?

20. We welcomed your proposal to join with the Director-General of Food Crops in preparing a revised food and nutrition scheme for West Lombok and look forward to receiving the revised proposals shortly.

21. Alternative food formulae have been tried out in Bojonegoro and we understand that four of the formulae were acceptable. If the results are considered as being satisfactory to the Director of Nutrition, arrangements will have to be made to teach the field staff how to process the new formula.

Anemia Control

22. We hope that the experimental design now being employed in South Sulawesi and West Java will provide definitive results on productivity. The

indicative results from North Sumatra and East Java encourage us to expect that the results will be satisfactory. We note that similar activities will be undertaken in private plantations in West Sumatra and Central Java during 1980-81, financed by DIP Murni.

23. The proposed study of the socio-economic results of anemia control in South Sulawesi and West Java should yield valuable information on the indirect results of the anemia control activities. The study is warmly welcomed.

24. The major expansion of anemia control to nine plantations in North Sumatra during 1981-82 will change the activities from a pilot operation into a large-scale demonstration covering 50,000 workers. Monitoring the demonstration will provide the information required to enable plantation staffs and officials to judge the value of anemia control as a worthwhile undertaking on a general basis.

25. The requirement of iron fortified salt would be much greater than hitherto. A plant with a greater capacity and a more stable product would be required. The proposal to send a small team to study the work already carried out in Tamil Nadu during the last 10 years would be beneficial. We understand that the Directors of NCIHOHS and FTDC have discussed the increased requirement of fortified salt.

Nutrition Education and Behavioral Change

26. Now the formative evaluation has been completed in Central Java and Yogyakarta and is currently being conducted in South Sumatra, the component is ready to advance into a new operational phase, field testing the sample messages which have been prepared. In September 1980, six months after the start of educational activities, an interim evaluation is due to be carried out. The period is much too short to expect profound changes in behavior; we shall be interested to learn of any measurable changes in knowledge and attitudes and an indication of the trial of new practices.

27. The findings of the consultants and the material prepared should be available for all nutrition projects in Indonesia, irrespective of the source of funding. Joint action by the Directors of Health, Education and Nutrition should ensure that, where possible, a unified approach will be taken to Nutrition Communication and Education. Particular needs of individual areas can be catered for, without affecting the general principle of a combined approach.

Nutrition Manpower Training

28. The importance which you and the Minister of Health attach to nutrition manpower training has been noted. The proposed Nutrition Training Center would be a key factor in realizing the rapid expansion of field personnel trained in nutrition. The Nutrition High School at Pasar Minggu is under the control of the Center for Health Training. If the new Nutrition Center is to be built on that site the formal agreement of the Health Training Center will be required. We understand that the area has been scheduled as a housing area, but that an exception was granted to the agricultural research station, which could be a precedent for an exception for the training center. Before becoming involved with architectural costs, clearance regarding site availability would be desirable. A detailed written brief is needed by your consulting architects whose sketch plans may require substantial redesign to meet both the training requirements and accommodation for the M and E Unit.

29. The two reports from Messrs. Simmersbach and da Silva should be helpful in preparing your manpower development program. The Task Force on Nutrition Manpower Training is well aware of the early need for selection and training of the trainers, the job description for assistant nutritionists and curricula to provide the skills and knowledge. We hope that the Task Force will maintain the momentum it has generated.

30. May we thank you and ask you to convey our thanks to your staff for the courtesy and cooperation extended to the mission.

With best regards,

Sincerely yours,

Harold W. Messenger
Acting Assistant Director
Population, Health and Nutrition Department

cc: His Excellency
Dr. Suwardjono Surjaningrat
Minister of Health

Dr. Soejoto SH
Deputy Chairman for Social and Cultural Affairs
BAPPENAS

Mr. Ping Cheung Loh, Deputy Director
World Bank Resident Staff, Indonesia

To be cleared with and cc: Miss G. R. Kaplan, AEA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
Article III			
3.02	The BORROWER shall employ consultants whose qualifications and experience and terms and conditions of employment shall be satisfactory to the Bank.	Operative	
3.03	The BORROWER shall afford the Bank a reasonable opportunity to comment on the qualifications and experiences of any person proposed to be appointed to the position of Project Director, Project Co-Director, Project Manager and NIPP Coordinator.	Operative	
3.04 (a)	The BORROWER undertakes to ensure, or make adequate provision for the insurance of the imported goods to be financed out of the proceeds of the Loan against hazards incident to the acquisition, transportation and delivery thereof to the place of use or installation, and for such insurance any indemnity shall be payable in a currency freely usable by the BORROWER to replace or repair such goods.	Operative	
(b)	The BORROWER shall cause all goods and services financed out of the proceeds of the Loan to be used exclusively for the Project.	Operative	
3.05 (a)	The BORROWER shall furnish to the Bank, promptly upon their preparation, the plans, specifications, reports, contract documents and work and procurement schedules for the Project.		

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
(b)	<p>The BORROWER:</p> <p>(i) shall maintain records adequate to record the progress of the Project (including the cost thereof) and to identify the goods and services financed out of proceeds of the Loan, and to disclose the use thereof in the Project;</p> <p>(ii) shall enable the Bank's accredited representatives to visit the facilities and construction sites included in the Project; and</p> <p>(iii) shall furnish to the Bank all such information as the Bank shall request concerning the Project, the expenditure of the proceeds of the Loan and the goods and services financed.</p>	<p>Operative. Financial records are inadequate.</p> <p>Operative</p> <p>Operative</p>	<p>An improved financial recording system has been suggested during this mission. The Project Director has been advised to engage a competent accountant to implement a sound accounting system for the Project.</p> <p>See comment above.</p>
(c)	<p>The Project Director shall be required to prepare and furnish to the Bank semi-annual reports regarding the progress of the Project.</p>	<p>Operative</p>	<p>The standard of reporting needs to be improved. The Project Director has been informed.</p>
(d)	<p>The accounts of all agencies of the BORROWER participating in the implementation of the Project shall be audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies of scope and detail as the Bank shall have requested.</p>	<p>Non-Operative</p>	<p>State auditors have audited expenditures under DIP MURNI. Action still needs to be taken regarding auditing of DIP Supplement.</p>

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
3.06	The BORROWER shall take or cause to be taken all such action as shall be necessary to acquire as and when needed all such land and rights in respect of land as shall be required for the construction and operation of the facilities included in the Project and shall furnish to the Bank, promptly after such acquisition, evidence satisfactory to the Bank that such land and rights in respect of land are available for purposes related to the project.		Land for FTDC already belonged to the Agriculture Ministry of Bogor; land for CRDN already belonged to the Ministry of Health. The same holds for the Nutrition Academy.
3.07	The BORROWER shall establish and maintain a Research Coordinating Committee (i) to facilitate coordination of the nutrition-related research programs being carried out by various institutes, and	Operative	
	(ii) submit to the Bank annual progress reports on such programs	Non-Operative	Report has been requested to the Project Director and should be part of the semi-annual report (3.05 item C).
3.08	The BORROWER shall, with respect to the NIPP program:		
	(i) submit to the Bank not later than August 1, 1977, the plans of operations for the first two Kabupatens for approval, prior to commencing implementation of such plans;	Completed	
	(ii) carry out a review of the NIPP program at the end of the second year of the NIPP program; and	Completed	
	(iii) select new Kabupatens to be served by NIPP program not later than October 1, 1977, and the remaining three Kabupatens not later than August 1, 1978.	Operative	The last 3 Kabupatens are under discussion. This delay was mutually agreed upon by GOI and the Bank. Final selection will take place in the first semester of 1980.

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
3.09	The BORROWER shall in consultation with the Bank carry out a review of the home/village garden component of the NIPP program at the end of the third year of the NIPP program with a view to determining whether this component should be prepared for more general replication.	Operative	The program has been extended geographically and is being improved technically.
3.10	The BORROWER should provide, as and when required, no less than 10 additional Extension Staff for the home/village gardens of the NIPP program.	Operative	More than 10 Extension Staff are involved in home/village gardens, but are not working full-time on home gardens. The mission considers this arrangement satisfactory.

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Key Project Indicators

	<u>Achievement</u>	<u>Appraisal Estimates for First Two Years</u>	<u>Percentage of Appraisal Estimates</u>
<u>CENTER FOR RESEARCH AND DEVELOPMENT IN NUTRITION - CRDN</u>			
<u>Civil Works - Construction</u>			
Laboratories (Wings I and II)	100%	100%	100
Staff Housing	100%	100%	100
Library, auditorium and dormitories	n.a.	n.a.	n.a.
<u>Fellowships</u>			
Ph.D.	2	7	29
M.Sc.	11	7	157
B.Sc.	2	1	200
Short-term fellowships	3 man/months	4 man/months	75
<u>Staff</u>			
Professionals	20	20	100
Technicians	54	40	135
Consultants	2.5 man/months	18 man/months	14
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER - FTDC</u>			
<u>Civil Works - Construction</u>			
Administration Building; Food Research Laboratory and Pilot Plant	100%	100%	100
Staff Housing	99%	100%	99
<u>Fellowships</u>			
Ph.D.	0	2	0
M.Sc.	4	5	80
Short-term	13.5 man/months	15 man/months	90
<u>Staff</u>			
Consultants	25 12 man/months	20 30 man/months	125 40
<u>Storage</u>			
Construction of storage units in NIPP villages for field testing	36 units ^{/1}	-	-

/1 These units were distributed to farm families in Bojonegoro and West Lambok.

	<u>Achievement</u>	<u>Appraisal Estimates for First Two Years</u>	<u>Percentage of Appraisal Estimates</u>
<u>NUTRITION INTERVENTION PILOT PROJECT - NIPP</u>			
Villages in operation	36		50
Villages ready to operate awaiting equipment	36	72	50
Persons reached with supplementary feeding:/ <u>1</u>			
Children	2,310	2,132	108
Pregnant and lactating women	616	729	85
Cadres trained	1,188	1,200	100
Food Processing Units installed	6	18	33
Village Nutrition Centers	n.a.	n.a.	n.a.
Village and home gardens in operation/ <u>2</u>	n.a.	n.a.	n.a.
<u>NUTRITION EDUCATION AND BEHAVIOURAL CHANGES</u>			
Number of villages	60	36	166
Number of families reached	56,000	22,000	254
Number of cadres trained	2,000	432	463
<u>ANEMIA CONTROL</u>			
Number of workers reached	3,096	3,000	100
Number of anemic workers diagnosed/ <u>3</u>	688	not estimated	-
Number of anemic workers back to normal/ <u>3</u>	578	not estimated	-
<u>NUTRITION ACADEMY</u>			
<u>Civil Works - Construction</u>			
Library, laboratories and audio- visual rooms	100%	100%	100
Housing	16%	100%	16
<u>Fellowships</u>			
Ph.D.	1	2	50
M.Sc.	1	6	16
Scholarships	53	48	110
Students enrollment	160	150	107

/1 Figures only from 9 villages of Bojonegoro.

/2 Numbers far exceed estimates at appraisal. Bupatis of Bojonegoro and West Lambok have ordered all households to have home gardens.

/3 Figures only from North Sumatra.

INDONESIA
NUTRITION DEVELOPMENT PROJECT

Loan 1373-IND

Schedule of Disbursement
(as of January 1980)

Fiscal Year and Quarter	Cumulative Disbursements (US\$ m)			Actual or Latest Estimate Disburse- ment as % of Appraisal Estimates
	Actual Total	Appraisal Estimate	Forecast as of Jan. 80	
1977 Dec 31	-	144		0
1978 Dec 31	90	1,084		8
1979 Dec 31	1,160 ^{*/}	4,592		24
1980 March 31		5,692	1,600	28
1980 Jun 30		6,565	2,200	33
1980 Sep 30		7,765	2,800	36
1980 Dec 31		8,965	3,400	38
1981 March 31		10,165	4,000	39
1981 Jun 30		10,772	4,700	46
1981 Sep 30		11,572	5,400	47
1981 Dec 31		12,672	6,200	49
1982 March 31		13,000	7,000	54
1982 June 30			7,700	
1982 Sep 30			8,500	
1982 Dec 31			9,300	
1983 March 31			10,000	

^{*/} Discrepancy with the figure in Section 3: Project Data of Supervision Summary is due to the pipeline effect.

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Places Visited and Officials Met on the Mission

MINISTRY OF HEALTH - Jakarta

Dr. Soewardjono Surjaningrat, Minister of Health
Dr. R. Soebekti, Project Director
Mr. Adinugroho Arasrudin, Project Executive Secretary
Mr. I. Tarwojo, Director of Nutrition and NIPP Coordinator
Dr. Salihudin, Project Officer for NIPP
Dra. Asmira, Nutrition Training Specialist for NIPP
Dr. Mantra, Sub-Director of Health Education and Head of Nutrition
Education Component
Dr. Djoco, Monitoring and Evaluation Unit, Project Executive Secretariat
Mr. Carl Fritz, Financial and Procurement Advisor, Project Executive Secretariat

MINISTRY OF HEALTH - Bogor

Dr. Karyadi, Director of CRDN Professional Group

BAPPENAS - Jakarta

Dr. H.A.R. Tilaar, Bureau Chief for Social Welfare Peoples Housing and Health
Mrs. Hasnan Soeteja, Nutrition Coordinator

MINISTRY OF FINANCE - Jakarta

Mr. G. Hutagilung, Director General of International Monetary Affairs

MINISTRY OF EDUCATION - Bogor

Dr. Winarno, Director of FTDC
, Professional Groups and Consultant

MINISTRY OF AGRICULTURE - Jakarta

Ir. Nusjirwan Zen, Secretary General, Directorate General of Food Crops
Ir. Jafar Jamaludin, Director Food Crops
Ir. Harsan Sudibya, Chief Sub-Directorate of Horticulture
Vet. Suwadi, Food and Nutrition Unit
Dr. Subianto, Chief Horticultural Research Service (AARD)
Dr. Surachmat Kusumo, Horticultural Research Institute (Lembang)

NATIONAL INSTITUTE OF INDUSTRIAL HEALTH - Jakarta
HYGIENE AND OCCUPATIONAL HEALTH

Dr. Suma'mur, Director-General and Head of Anemia Control Component

UNICEF - Jakarta

Mr. Victor Soler-Sala, Representation and Nutrition Staff

USAID - Jakarta

Mr. Robert Pratt, Nutrition Programs Coordinator

Mr. Michael Finley, Project Officer in charge of the Population and Nutrition
Project

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Loan 1373-IND

Mid-Term Review Mission January 6 - 29, 1980

PROJECT EXECUTION

General

1. The mission followed up the findings of the supervision mission of May/June, 1979, and the later reports from specialists, in close collaboration with the Project Director, Project Secretariat and Component Heads. Proposals made by GOI on restructuring the Project were discussed initially with component heads and their staffs; agreed decisions were placed in written form before a general meeting; and the final conclusions were presented to the Minister of Health, who gave them his support. An Aide Memoire on the main points was left by the mission with the Project Director.

Center for Research and Development in Nutrition (CRDN)

Construction and Equipment

2. The construction of Wings I and II is virtually complete, and the provision of gas, electricity, water and telephones is currently being undertaken. Staff housing construction has been completed and, despite lack of electricity and water, some of the houses are already occupied. The bureaucratic difficulties holding up installation of these services were solved following discussions between Miss Kaplan (Loan Officer) and the D.G. of Public Works. Construction of Wing III proceeds according to schedule. Landscaping of the campus will be essential to prevent erosion. The consulting architects have submitted estimates of costs for landscaping and these estimates have been referred to a Bank architect for comment. Items omitted in the originally approved plans included a wall around the campus, furniture and furnishings for the Auditorium and venetian blinds for offices and laboratories. These necessary items have now been included in the revised proposals.

3. The tenders for the first package of equipment were opened on September 3, 1979, and orders placed. Deliveries should begin by April, 1980. The list of items for the second invitation to tender has been approved. Amendments to the tender document were suggested and, based on the revised document, invitations to tender will be sought shortly. Some of the vehicles required are due to be delivered in March, 1980; in addition, two minibuses are needed to assist in field activities and teaching.

Consultants, Fellowships, Staffing

4. Consultants on research design and on the economic aspects of food and nutrition have been engaged. One of the problems faced by the consultants has been occasional unavailability of senior local counterparts to work with them. The presence of highly skilled consultants is an opportunity

to learn new skills, and any consultants normally consider the informal teaching role as an automatic part of the consultancy. Another problem is that CRDN has not been able to apply the recommendations put forward by these consultants. This is mainly due to CRDN's management style, coupled with the lack of any clearly-defined institutional objectives and research program, despite former assurances. This conclusion was reported to the Minister, and early remedial action should result. Currently, contracts to engage a consultant for Community Medicine and a consultant for Nutritional Biochemistry have been submitted to and approved by the Bank. A consultant for Food Science has yet to be identified. In addition, CRDN is planning to hire the following consultants: a librarian; a science editor; an administrative specialist; and a statistician.

5. Regarding fellowships, the Appraisal Report envisaged that, by the end of Year 2, ten staff members were to have begun fellowships in Indonesia (3 PhDs, 5 MScs and 2 BScs) and ten abroad (4 PhDs and 6 MScs). While the awarding of fellowships in Indonesia is ahead of schedule, only six candidates have been sent abroad for MSc degrees. Experience over the first two years has emphasized the need for adequate lead time in applying for fellowships (at least six months before the start of the academic year). More care is required in the selection of candidates, evidenced by the fact that the candidate studying food science at Glasgow failed, and the candidate studying international nutrition and agricultural economics at Cornell has not made the grade and requires a six-month extension.

6. Many difficulties have been encountered in the award of fellowships abroad, especially for PhD candidates. Of the six candidates intended for placement in FY79-80, none was placed. Universities require candidates' completion of MSc before proceeding with a PhD, thus extending study overseas to a minimum of five years, which is not feasible, given current staffing demands and research programs. The requirement of at least three years service with Government before an award can be made has been amended, but the regulation affected 1979-80 candidates. Adequate knowledge of English proved to be another major constraint. CRDN proposes, therefore, to eliminate the four PhD fellowships for the program analyst/planner, sociologist, nutritional epidemiologist, and medical doctor/public health. The fellowships for food/agriculture economists will be awarded in 1981 if CRDN can find suitable candidates. Additional fellowships for MSc are being proposed in nutrition planning, nutrition epidemiology, food chemistry, and computer science. The delay in the award of fellowships will affect the rate of staffing of CRDN. The number of PhD candidates proposed at appraisal appears to have been over-optimistic in view of the qualified manpower available.

7. The project included 2 man/month training visits for the CRDN Director, food analyst and the four Division Heads. During the first two years of the Project the following short-term fellowships were awarded:

- i) Director of CRDN - one month to INCAP Guatemala and Central Food Technology Research Institute in Mysore, India.
- ii) Division heads of (a) Community Nutrition and (b) Nutritional Biochemistry to institutions in the Philippines and Thailand; of (c) Food Sciences to India, Sri Lanka and Thailand; and (d) Nutritional Socio-Econometrics to the Philippines.

8. Additional training has been proposed (1 to 6 months) for various staff members in computer science, laboratory techniques, maintenance of laboratory instruments, research methodology, nutrition education, management, food consumption analysis and librarianship.

Award of Fellowships

	<u>Indonesia</u>		<u>Abroad</u>		<u>Total</u>	
	<u>Achieved</u>	<u>Planned</u>	<u>Achieved</u>	<u>Planned</u>	<u>Achieved</u>	<u>Planned</u>
PhD	2	3	-	4	2	7
MSc	5	1	6	6	11	7
BSc	<u>2</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>2</u>	<u>1</u>
	9	5	6	10	15	15

9. At appraisal, professional staff at the end of Year 2 were estimated to be 20; currently there are 20 professional staff. An additional 24 are due by the end of the project period, but no likelihood exists of reaching this level of staffing because of fellowship difficulties, as well as existing salary scales which are too low to attract qualified personnel. There has also been a failure of focus in recruiting efforts, perhaps because the needs of the CRDN are as yet not entirely clear, and therefore the staff members who have been hired to date have not all been those meeting the most urgent needs. Staffing of technicians has been better than planned; 54 have been appointed, of whom 23 are BSc graduates, compared with a total of 40 expected at the end of Year 2.

10. Management of CRDN continues on the basis of consensus by a "happy family", which is incompatible with the needs of a national institute. Change in the style of management is difficult, partly because no one on the staff has the management experience to direct change and partly because of reluctance on the part of senior staff to face up to changing from the old pattern. The mission raised this issue at all levels, pointing out that a change in attitude would be required before any guidance from a management consultant could prove effective.

11. The Division of Nutritional Socio-Economics has failed to recruit an economist with the training and experience necessary to administer the three important project activities under the Division's jurisdiction: the Bandung Study, the NIPP evaluation, and nutritional surveillance. These studies require direction from someone with strong analytical, economic skills and a broad grasp of nutrition problems viewed from a policy perspective. A major constraint to the recruitment of a candidate with the necessary attributes is that he/she could, in the private sector, command five times the salary offered by GOI. This problem remains unresolved.

12. The following alternative actions have been proposed by consultants:
(a) contracting university professors or researchers from Indonesian or foreign

universities, who could take a year of sabbatical leave, and give them the opportunity to develop research in the areas of mutual interest. CRDN could provide housing and staff facilities for such visiting researchers;

(b) contracting PhD candidates from Indonesia or abroad to work as "junior consultants" for a period of 1 to 2 years, while developing their own research in areas where CRDN needs highly qualified personnel; (c) reassigning personnel within CRDN. As mentioned above, CRDN's management seems reluctant to accept any help which would change the present management arrangement.

13. CRDN cannot be expected to deal with the whole spectrum of research in nutrition. Some area or areas of research must be identified as the primary role of CRDN, and a research program developed to attain these objectives. Recruitment of staff, procurement of equipment, engagement of consultants would all be channelled towards these objectives. A list of ad hoc research projects has been produced, limited to the interests and skills of existing staff, but the list does not represent a coherent research program. The need for such a research program has been drawn to the attention of all senior personnel involved in the Project, including BAPPENAS and the Minister of Health, since implementation of the project began.

14. An acceptable number of students, both Indonesian and foreign, have used the Center for training in nutrition. Various students at the University of Indonesia, including those at the Faculty of Medicine and the ASEAN Regional Graduate Applied Nutrition Course, were given practical training at the nutrition clinic^{1/} and laboratories, as well as supervised field work. Students majoring in nutrition at Bogor Agricultural University, as well as students at the Nutrition Academy, were given lectures by CRDN staff members and did practical work in the laboratories. In addition, WHO and USAID fellows from India, Thailand, the Philippines, Malaysia and Singapore underwent training at the Center.

15. In accordance with Section 3.07 of the Loan Agreement, a Research Coordinating Committee has been established and includes representatives from the Ministries of Health, Agriculture and Industry, Research Institutes relating to agriculture, horticulture, chemistry, husbandry and socio-economy, the Bureau of Statistics and the BAPPENAS. The Committee meets about every four months and has commented on the research projects submitted to it by FTDC, CRDN and the National Center for Occupational Health, Industrial Hygiene and Safety.

16. The mission has been critical of the management of CRDN but recognizes that the senior staff may be carrying more responsibilities than they are able to handle. The major civil works, procurement, recruitment of staff, placement of fellows and engagement of consultants has resulted in an unprecedented work load for the staff. In particular, the divisional heads appear to be overloaded with administration, meetings, special courses, teaching and visiting missions. So far no attempt has been made to plan the allocation of time of each individual, in relation to the activities to be undertaken.

^{1/} A daytime nutrition rehabilitation center.

Food Technology Development Center (FTDC)

Construction and Equipment

17. The construction of the civil works, consisting of an administrative block, a laboratory block, pilot plant building, utility building and staff housing, is virtually complete. Installation of services (water, gas, electricity, steam, air-conditioning and telephones) has been delayed, but should be completed by April 1980. The Director of FTDC is working towards having the formal opening ceremony of the complex take place before August 17, 1980 (Indonesia's Independence Day).

18. Procurement of equipment has been seriously held up. In response to the original invitations to tender, 16 packages had three or more bids, and orders have been placed. The remaining 26 packages had less than three bids and the Minister of Education has insisted that, under the rules set out in Presidential Decree 14/79, these packages must once again go out to tender. Food technology equipment is highly specialized, and there are few suppliers with agencies in Indonesia capable of providing follow-up services. Accordingly, an increase in the number of bids would be highly unlikely. In addition, since the above-mentioned Decree does not apply to equipment procured through aid programs and, with one exception, the value of the packages is below \$50,000 each, prudent international shopping would be appropriate. The Director General of Higher Education has agreed to discuss this matter with the Minister of Education, and hopefully have the original decision on retendering reversed. The Bank has sent a Telex to FTDC on this matter.

19. The construction of an ecological pen, a pilot scale model warehouse, and landscaping of the area, have been proposed for inclusion in the revised project. The consulting architects have produced sketch plans and estimates, which have been referred to a Bank architect for comment.

20. Tender documents for the purchase of furniture have been prepared, and invitations to tender will be advertised about three months before the buildings are due to be completed. Standard furniture is readily available.

Consultants, Fellowships, Staffing

21. The FTDC has a staff of 25 permanent members, including 5 PhDs. In addition, 15 temporary staff members await absorption. At appraisal, it was estimated that at the end of Year 2, the total staff would be 20, then rising rapidly to 59 in Year 3 and 79 in Year 4. For FY80, the Agricultural University of Bogor has approved the creation of only 16 new posts. Expansion of the staff at the rate envisaged is thwarted by this restriction, but it may relate realistically to available manpower.

22. Fellowships have been utilized slowly because of difficulties in finding suitable candidates, language problems, Government restriction and also because, prior to the start of the project, candidates for PhD had already been placed using funds available from other sources. Instead of two MSc abroad and three MSc in Indonesia, four MSc placed in Indonesia are planned. For 1981, it is hoped to have six local and three overseas candidates for PhD.

23. Initial difficulties were experienced in recruiting consultants, but the Director of FTDC was not unduly concerned because their presence would only be useful when FTDC staff had been recruited and the necessary equipment procured.

24. Consultancy arrangements have been finalized for S. K. Majumder, January-March 1980, on grain storage and pest control; P. K. Ramanathan, February-April 1980, on grain processing and pilot plants; and H. A. B. Parpia, January 1980 on transfer of technology.

25. Approaches have been made to the following specialists: V. B. Dalal on post-harvest technology of fruits and vegetables; M. N. Moorjani on fish technology; A. V. Raju on food packaging; C. P. Natarajan on flavor technology and spices; and H. A. B. Parpia and C. P. Natarajan on research management and transfer of technology. Specialists on baseline survey, weaning foods, and documentation have not yet been identified. As most of the consultants are from CFTRI, Mysore, the Director of FTDC, will approach CSIR, New Delhi (through the Indian Embassy in Jakarta) with regard to their availability.

26. This program will provide FTDC with most of the long-term and short-term experts required, but another need has become apparent. All the studies will require sophisticated techniques, which are skills normally acquired during MSc training. Junior consultants, who are familiar with modern techniques, instruments and equipment, could work alongside FTDC staff on actual problems and pass on practical knowledge at bench level. Four junior consultants (PhD candidates from Indonesia and abroad) would be engaged in 1980 and eight (four Indonesians) in 1981. They would work on fermented food, weaning food, fish flour and iron fortification. Some of the studies could lead to their PhD dissertations.

Surveys, Operational Research, and Design Activities

27. Surveys on food handling and storage of agricultural products have been carried out in the NIPP areas of Bojonegoro, West Lombok, Kurang Anyar and Ogong Komering Ilir. The data for the first two areas have been evaluated and a report prepared; data for the latter two areas are still being analyzed.

28. The Center has designed and constructed six different types of storage structures and, following the recommendations of a workshop on handling and storage of foods, two types of metal storage structures are being tested in the NIPP areas, the smaller for household use and the other for on-farm storage requirements.

29. The Center has also developed prototype equipment for small-scale production of food supplement. The original required major redesign, using a rotary roaster and a hammer mill in place of boiling, drying and grinding. The "Gasingray" roaster has become popular with peanut vendors and can also be used for coffee roasting. A manually operated cassava chipper capable of making chips at the rate of 200 kg per hour has been designed and several units are being fabricated for field testing. A grain cleaner and destoner unit has been developed to separate stones, sand and clay from paddy and soybeans. Field testing in Bojonegoro indicates modifications are required.

30. The FTDC has been designated by the United Nations University as the Fermentation Food Research Center for Asia. Fermented and weaning foods will form the core of the research program, for which a number of studies are planned.

31. First, in the fermentation of cassava to "tape", increase in the protein content from 1.2% to 5%-6% has been reported as taking place during this fermentation process. A study will be undertaken to confirm these findings and, if the results are positive, to determine the mechanism for protein increase and the nature of the protein. A study is also planned to test the possibility of producing a small-scale prepackaged "tempeh" by carrying out fermentation of prepackaged cooked soya.

32. A third proposed study would deal with the possibility of producing edible fish flour from trash fish and fish wastes, with emphasis on the processing steps and the development of controls to ensure quality. The study aims to develop suitable processing equipment and the fabrication of prototype plants. Edible fish flour has been produced successfully in a number of countries, and problems of undesirable factors have been overcome. The study would concentrate on the local application and possible improvement of the knowledge available about processing fish flour.

33. Other studies being proposed would cover: (a) development and evaluation of weaning foods based on germinated indigenous grains, including processing steps (e.g. germination, dehulling, drying, etc.), and the design and construction of prototype equipment with a view to small-scale manufacture of weaning foods; (b) improvements in, and standardization of, conditions relating to parboiling of locally grown and imported rice varieties (including freshly harvested rice), and the design, construction and operation of a pilot plant leading to the eventual fabrication of a prototype plant; (c) development of suitable equipment for the fortification of common salt with iron salts, using various materials (including fibre glass); and (d) identification of existing processing techniques for soybean and high protein grain legumes, and development of these techniques for use in a more diversified diet.

34. Finally, FTDC would carry out the laboratory examination of NIPP food supplement samples as a means of ensuring quality control; responsibility for the delivery of the samples to the laboratory would rest with the NIPP Coordinator.

Direct Nutrition Action Programs

A. Nutrition Intervention Pilot Project (NIPP)

35. Baseline Data Survey (BLDs): Baseline Data Surveys were carried out on the prevalence of PCM and of Vitamin A deficiency in four NIPP areas. A team comprised of staff from CRDN, the Nutrition Directorate and Provincial Assistant Nutrition Program Officers (ANPOs) decided on the data to be collected, and the sample was designed by the Central Bureau of Statistics. Five enumerators were trained for each survey area. Surveys were undertaken in Bojonegoro (December 1977), West Lombok (January 1978), Karang Anyar (January 1979) and Ogang Komering Ilir (February 1979). Processing was carried out over a seven-month period using the Central Bureau of Statistics computer system.

36. Using weight for height ratio compared with Indonesia standards, the incidence of PCM among children under the age of five was 50.1% in Bojonegoro and 44.7% in West Lombok. The former was much higher than expected at appraisal. Using lissamine green as the indicator, the number of children with a positive conjunctival reaction (Vitamin A deficiency) was 40.2% in West Lombok and 4.95% in Bojonegoro. The survey/1 of Vitamin A deficiency found the prevalence of corneal xerosis, corneal ulceration and keratomalacia to be 33 per 10,000 in West Lombok, the highest rate in Indonesia. Data from Karang Anyar and Ogang Komerang Ilir are being processed.

37. During the BLDs of Bojonegoro, endemic goiter was found in an area previously unknown to have this deficiency disease. A study identified the extent of the area, and all inhabitants were treated with lipiodol injections, which provide a sufficient store of iodine to cover an individual's needs for five years.

38. Although field work for the BLDs proceeded according to schedule, a problem arose with regard to its processing. The Central Bureau of Statistics was unable to analyze the data collected in time for it to be used for planning. Two technical problems arose in regard to the design of the BLDs. One was that sample sizes adopted were too small to compare incidence of serious PCM according to 12-month age groups. The second was that, although change in nutritional status before and after project implementation could be measured, no comparison with control villages had been arranged. However, at the time of appraisal, GOI made it clear that control villages could not be included.

39. A revised design involves randomly selected matched pairs of villages, with one randomly selected village in the pair becoming a NIPP village and the other becoming a control point. The revised design will be tried on an experimental basis in West Java. Technical assistance in mounting the survey is likely to be required.

40. Bojonegoro in East Java, West Lombok in Nusa Tenggara Barat, Ogong Kaming Ilir in Central Java and Karang Anyar in South Sumatra were adopted as Regencies where NIPP would operate. They comply with the criteria specified in the Appraisal Report. In Bojonegoro, Pungpungan village was substituted for Pumpungari, but all other villages listed at appraisal became operational. In West Lombok, six of the villages were changed because of district boundary revision. As agreed at appraisal, the villages selected for the second year provide formidable logistical problems to test out management capacity. Some villages can be reached only by horse or boat.

41. The plan in the appraisal report, subject to review, was to expand the project in the third year to West Java, Yogyakarta and Bali. Although only six villages per kabupaten were included in the plan, the normal pattern of nine would seem preferable. Operation in West Java presents no problem. Parts of Yogyakarta Special District have been saturated by local nutrition activity, so that the kecamatan should be selected with a view to avoiding overlap.

1 Characterization of Vitamin A Deficiency and Design of Intervention Program: Tarwotjo, I.; Susanto, I. J.; Sommer, A., 1978.

42. On the other hand, the proposed expansion to Bali presents an, as yet unresolved, problem. During the June 1979 supervision mission, the Bank was advised that USAID, with the concurrence of GOI, was proposing to fund a nutrition program which, over a period of about three years, would cover the entire Province. The AID program would operate on the basis of a gradual expansion during the three year period, and the introduction of NIPP could be feasible in villages, which would be covered only in the last stage of the AID program. The Project Director negotiated a compromise with the Governor of Bali, whereby six villages in one sub-district would be included in the NIPP component of the Bank-assisted project.

43. During the period between the June 1979 visit and the present mission, it became clear that the Bank's insistence on the expansion into Bali would not only be a waste of scarce resources, but was becoming a cause of embarrassment to the GOI project authorities. Accordingly, prior to the mission's departure from headquarters, the issue was discussed at length within the Bank, as well as with the RSI, and the general consensus was to drop plans for inclusion of Bali in the NIPP component in favor of the comprehensive AID program. These sentiments were conveyed by the mission to the Project Director and the Minister, who informed the mission that the Project Director will reopen the matter.

44. By mutual agreement between GOI and the Bank, the third year of the project became a period for consolidation and no expansion to new Provinces took place. However, expansion within the first four Regencies went ahead according to the appraised model. The extension of the project by one year (i.e. from 4 to 5 years) would increase the number of villages included in the component and, consequently, increase expenditures. During the supervision mission of June 1979, defects in management, supervision, supplementary food production and monitoring were noted and these defects would have to be corrected before expanding further. BAPPENAS suggested mounting an evaluation of NIPP and the existing UPGK program, with a view to finding an effective and replicable compromise between the two models. Such an exercise would have been most welcome, but as yet it has not taken place. We should not try to maintain the higher cost features of NIPP, but should retain supervision of the cadres and the basic elements: systematic and regular weighing of children, nutrition education for parents, deworming, food supplementation, provision of vitamin A capsules, iron and folic acid tablets, oral rehydration, iodine when required and immunization against common infections. Provided the defects in NIPP are corrected, expansion should take place according to the details provided in the following table.

Expansion of NIPP Villages; Year 5

	<u>West Lombok</u>	<u>Bojo- negoro</u>	<u>Ogong Komerling Iilir</u>	<u>Karang Anyar</u>	<u>West Java</u>	<u>Yog- yakarta</u>	<u>Total</u>
Year 1	Prep.	Prep.					
Year 2	9	9	Prep.	Prep.			18
Year 3	27	27	9	9			72
Year 4	54	57	27	27	Prep. 9	Prep. 9	183
Year 5	83(total)	90	54	54	27	27	335

The increase would be $335 - 183 = 152$, or 161 if nine villages are included for Bali. The figures allow for a reduction in the preparation period to six months.

During the first two years of the project, the preparatory work of training and holding workshops for provincial, regency, subdistrict and village officials and leaders was completed successfully in the six-month period prior to the start of operations. The constraint has been procurement of equipment. The Project Director has agreed to complete the procurement of equipment for all other NIPP villages in one operation. If the equipment is purchased and delivered on time, the preparation can be carried out in 6 months.

45. In South Sumatra expansion as envisaged at appraisal would result in overlap with the departmental UPGK program. The mission agreed that NIPP would be restricted to two kecamatan, but that all villages in the two kecamatan would be covered.

46. In Bojonegoro, the Bupati has extended the NIPP program to 85 other villages, on a strong basis of self-reliance but with some budgetary support from the local government. Although such a spin-off from the component is welcome, the rapid expansion places a heavy burden on the available NIPP staff, and additional staff would need to be appointed to assist the Kabupaten ANPO.

47. The CRDN formulated a food supplement consisting of 70% rice flour and 30% soybean flour, yielding 20.8% protein and 397 cal per 100 g. IPB's Community Nutrition Program tested the mixture and found it acceptable. A NIPP Workshop has recommended a daily ration of 60 g per child; 120 g per pregnant woman; and 240 g per lactating woman. Field staff, however, reported that children could not consume 60 g of the supplement cooked as porridge at one meal; it was too bulky. The provision of 240 g (953 cal) per day to lactating women was also a grossly excessive ration and was subsequently reduced to 150 g (600 cal) per day.

48. Another problem has been the failure of CRDN to take into account the foods available in different areas. On Lombok Island soybean is not locally available; importation from East Java soybean costs Rp 275 per kg, making the cost of supplement unduly high. Recently several other formulae have been tested in Bojonegoro and four of them have been well accepted by the infants and young children. No information was available regarding the calorie density of the formulae found acceptable.

49. A major problem has been lack of capacity to produce the food supplement in adequate quantities. This in turn has stemmed from inadequacies in the original equipment designed by FTDC to process raw rice and soybean. The revised equipment consists of a "Gasingray" unit, which is a rotary roaster, powered by a hand-driven bicycle chain and a small hammer mill to replace the grinder. Food supplement units of the revised design will be fabricated by a private manufacturer. Serious delays in the procurement of these units has frustrated much field action. Immediate delivery of units for both old and new areas is of the highest priority. Doubts have been expressed regarding the roasting and milling process. While satisfactory for older children, the inclusion of the soybean pericarp may result in too great a fibre content for infants. This technical problem is being followed up.

50. Good advance public relations, supported by senior government officials, has resulted in full cooperation and good participation in nutrition activities from villagers. Each NIPP village in Bojonegoro has established at least one Nutrition Center, generally in accommodation donated by one of the house owners. In many villages, additional subcenters have opened in response to complaints from mothers about the distance to be walked to reach the nutrition center. In the poorer areas of Lombok, however, accommodation was often unavailable on a voluntary basis, and the amount provided (\$50) for adapting the village nutrition center (VNC) was found to be insufficient. As a result, fewer centers than planned were opened in

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	<u>Jan/Feb/Mar</u>		<u>Apr/May/June</u>		<u>Jul/Aug/Sep</u>		<u>Oct/Nov/Dec</u>	
	<u>Preg.</u>	<u>Lac.</u>	<u>Preg.</u>	<u>Lac.</u>	<u>Preg.</u>	<u>Lac.</u>	<u>Preg.</u>	<u>Lac.</u>
No. anemic	228	645	109	147	61	127	47	101
No. returned to normal	126	227	71	115	37	95	39	77
	55%	36%	65%	78%	61%	74%	83%	77%

57. At first sight, the high cost of providing supplementary food to mothers is daunting, but the reduction in the numbers requiring assistance during a period of 12 months is striking. However, the figures quoted should be regarded as no more than indicative.

58. Expansion of the NIPP villages has been unsatisfactory due primarily to the failure of the NIPP Coordinator to procure equipment in time. Cadres for the new villages were trained and ready to operate in September 1979, but no equipment has been ordered to date. The mission raised this defect with the Project Director and Minister. Orders will be placed for all equipment required up to the completion of the project.

59. Another problem area relates to the recording and reporting system, which has been found to be too complex for the village cadres. For the information to pass from the village level through the subdistrict, the regency and the Province to the headquarters takes up to eight months--much too long to be of any value as a management tool. WHO has provided a consultant for a period of three months to advise the new Director 1/on a system which would be within the capacity of the village cadres. A more direct transmittal system will be introduced.

60. The measure of success in the field has been achieved despite the lack of supervision and direction by the NIPP HQ, both at central and provincial levels. Neither the (then) Coordinator of NIPP nor any of his staff visited the field in the six-month period between the June 1979 supervision mission's field trip and the January 1980 mission. The Nutrition Directorate was probably overwhelmed by the demands made by resident staffs of UNICEF and USAID in promoting their own programs.

61. At the provincial level, four workshops were held for 120 participants. Each workshop lasted four days, and the results have been written up as guidelines for the regencies. Four regency workshops were held for 120 participants lasting a week each. Twelve subdistrict workshops had 25 participants each and each lasted for three or four days. In each NIPP village a four-day workshop was undertaken. These workshops took a great deal of work and effort, but they enabled officials and leading citizens to learn about the project and to be in a position to assist when it started. The good response from the community is in no small measure due to the effectiveness of the workshops, which helped provincial and regency staff feel they had contributed to the project.

1 The new Director formally assumed office on January 26, 1980.

Lombok. The provision of VNCs at a rate, on average, of two per village and at an average cost of \$100 each, was agreed on. However, wherever possible free accommodation will continue to be used, so that savings may be applied for the provision of VNCs in very poor villages. Such allocations would be at the discretion of the NIPP Coordinator.

51. In Bojonegoro, where the project is fully under way, each village has been divided into six equal parts, each looked after by two cadres. Each part is allocated one day of a week, and on that day mothers and children attend the center. The cadres demonstrate preparation of the food supplement and ways of improving it by the addition of locally available vegetables. The food cooked for demonstration is fed to the children, and the mothers take home packets of supplement for the rest of the week.

52. The cadres register all children under the age of three years, and they are weighed monthly. No difficulties have arisen regarding willingness to be weighed; however, the selection of children has digressed from the proposals agreed upon at appraisal. As a seminar on anthropometric measurements to detect malnutrition held in Indonesia in 1977, it was decided to adopt weight for height compared with an Indonesian standard, as a classification of PCM. This finding was applied in NIPP villages instead of criteria based on weight gain, which had been discussed during appraisal. Children classified as moderately or severely malnourished according to weight for height are included in the supplementation program.

53. The children are fed for 90 days, after which those who have returned to normal weight for height are no longer given supplementary food. Those children who did not return to normal continue on the program for another 90 days, together with other children identified as malnourished during the monthly weighing. The intention is to supply six packets of food supplement to each child in the program, each week. Inadequate production has reduced the quantity to four packets per week, for the reasons mentioned in paragraph 49. Despite the shortfall in production, the results have been encouraging.

54. In nine villages in Bojonegoro the total number of children under three in October 1978 was 2,224, of whom 1,187 (53.4%) were classified as Gd II (moderate) or Gd III (severe) protein energy malnutrition (PEM) on a basis of weight for height. In October 1979, 590 (29.2%) were classified as Gd II or Gd III indicating that 597 had been rehabilitated and a further 168 recovered in the last quarter of 1979. These results require more careful analysis but indicate that the number of malnourished children has dropped by over 50% in 15 months, a result which is better than expected at appraisal.

55. Pregnant and lactating women were selected for the food supplement program based on their haemoglobin levels, instead of from families of low-income levels with at least one child having PEM as was envisaged in the original design. This change was made because the baseline study showed higher anemia prevalence than expected at the time of appraisal. In addition to the supplement, they received iron and folic acid tablets.

56. The number of pregnant and lactating mothers diagnosed as anemic in nine villages during 1979 are shown below:

B. Home and Village Gardens

62. Under the aegis of the Director General of Food Crops, home gardens were started in all established NIPP villages. They varied greatly in size and character, but aroused considerable interest both in Jakarta and in the villages. Recently the kapupaten executive heads (Bupati) of Bojonegoro and W. Lombok have issued orders requiring every household to have a home garden. This rapid expansion has been enthusiastic rather than scientific. No effective system of reporting has been introduced.

63. During the supervision mission of June, 1979, the Ministry of Agriculture was asked to collect data which would be essential for detailed planning for improved home gardens. No data were collected because the very small horticultural section had no spare capacity. The Horticultural Consultant proposed, therefore, to include a survey by local consultants as part of the improved home garden scheme. Other suitably qualified consultants had been identified, and he prepared their terms of reference and discussed survey procedures. The proposal consists of the establishment of one seed garden of 1,000-2,000 m² in each of four kabupaten; the establishment of one demonstration garden of 1,000-2,000 m² in each of 18 kecamatan; the establishment of 90 model gardens as an example to the villagers; and the establishment of 60 gardens per village in 54 villages--a total of 3,240 gardens.

64. A demonstration will be made of a low-cost and expandable organization for the intensification of home and village gardens based on: (a) the householders and farmers own efforts, assisted with materials and equipment from the project; (b) supervision and advice from existing extension staff plus a modest input of temporary field staff (garden supervisors); (c) technical back-stopping and research from existing institutions; and (d) staff training for the above duties. Farmers will be assisted in vegetable production as rotation crops in rice fields.

65. A valuable impact on improved nutrition should occur, due to increased consumption of leaf vegetables and of crops containing vitamins A and C, iron and protein.

C. Anemia Prevention and Control Pilot Project - Plantations

66. During 1979-80 operations, based on revised procedures, were undertaken in South Sulawesi and West Java. In the Takalar Plantation in Ujung Pandang (South Sulawesi), 500 workers and their families (1,500 persons) were chosen and baseline data recorded. 80.8% were found to be anemic, and helminthic infections were: ascariasis 33.3%; hookworm 5.3%; and mixed type 59.5%. The workers were selected randomly, 300 to form an experimental group, and the remaining 200 as a control group. The experimental group were treated with ferrous sulphate, followed by the provision of iron fortified salt; the control group were provided with a sugar placebo and pure table salt. Initial measurements of productivity were taken in September 1979 and will be repeated during September 1980, according to the recommendations of the Economics Consultant (Dapice), which were approved by the Research Coordinating Committee. Sickness and absenteeism among workers are being recorded, together with a record of payments for medical treatment. The equivalent of \$37,600 has been provided in DIP Murni 1979-80 (GOI budget) to cover these activities. During 1980-81, similar activities will be undertaken in private plantations in West Sumatra and Central Java. The provision in DIP Murni will amount to Rp 50,000,000 (US\$81,300).

67. The Director NCIHOHS, proposes that pilot action should be undertaken in plantations in N. Kalamantan, N. Sulawesi, S. Sumatra and Yogyakarta. These pilot schemes would be financed departmentally. The long term objective would be the general application of the measures by government regulations, with the individual estates bearing the cost. The mission endorsed the Director's belief that pilot action is needed to pave the way for general application.

68. The revised methodology used in West Java and South Sulawesi is expected to produce valid results. GOI wishes to analyse and report on the results as soon as possible, and then prepare written material for distribution to all plantation management staff and Government officers involved in the component.

69. If the results of the current trials are satisfactory, major expansion of the component is proposed. One problem related to such expansion is the production and distribution of fortified salt. Contrary to earlier understandings by the Bank, CRDN decided from project start to use locally produced fortified salt rather than importing it from India, as recommended in the appraisal report. Severe problems of corrosion of the equipment used initially to produce the salt have been corrected through the introduction of more serviceable machinery. The fortified salt was distributed to the estates, where it was packed in 250 g plastic bags, each of which was sufficient for two persons for two weeks. Provision of small amounts solved to some degree the problem of short shelf-life of this product, which reportedly turns yellow or even black after lengthy storage, with an increasingly bitter taste the longer it is stored. Distribution of salt every two weeks, while feasible for a small pilot project, would not be possible on a broad scale. The larger scale production is clearly a matter of food technology.

70. To reach 50,000 workers and their families at the rate of 8 g salt per head per day, the required daily production would be about 2 tons, viz 50,000 x 5 family members x 8 g. The available equipment produces only about 800 kg per day. During 1980-81 a team including the Director of NCIHOHS and the Director of FTDC, will visit Tamil Nadu, where studies relating to and production of salts have been undertaken over some ten years and most of the problems have been solved. The team would consider the procurement of appropriate equipment or arrange for manufacturing in Indonesia.

71. Major expansion of anemia control is planned for N. Sumatra in 1981-82 and for E. Java in 1982-83. In preparation, regional workshops will be held in these areas during 1980-81. The expansion of North Sumatra will cover the three estates used in the pilot stage, plus five other plantations. Approximately 50,000 workers and their families will be covered. In East Java a similar program would cover 50,000 workers and their families, but as the timing would be after the completion of the ongoing Bank-assisted project, it would have to be included in another project. Estimates of the cost of vehicles, equipment, medicines and salt have been worked out and are included in the revised base costs. The Component head, Dr. Sumamur, expressed need for a study of the socio-economic results of the activities in West Java and South Sulawesi. The spin-off benefits may be considerable. Increased productivity has resulted in higher incomes, improved health has resulted in less expenditure on health services, and home gardens have made a contribution estimated on average as worth 6% of income. The way in which the increased assets are used may affect living conditions. The proposed study should be able to determine any changes.

D. Nutrition Communication and Behavioral Change

73. After two years of operation, all 60 villages involved in the component have become operative to some degree. Regular weighing has been implemented, preparation of the community and training of cadres has been completed. Previous supervision reports have commented on the lack of collaboration between the Nutrition Directorate and the Health Education Directorate, resulting in no decisions being taken on the content of nutrition communication.

74. Fortunately, the situation has changed. The appointment of a new Director of Nutrition has facilitated effective collaboration with the Health Education Directorate. The work of the consultants, Manoff International Inc., has advanced the component into a new phase of operation. The formative evaluation has been completed in Central Java and Yogyakarta, and is currently being undertaken in South Sumatra.

75. The consultants report that "preliminary findings indicate numerous opportunities for pregnant women and mothers of young children to improve their own diets and those of their children while remaining within their limited financial constraints and cultural boundaries". The formative evaluation also uncovered some important resistance points.

76. The consultants have dealt with attitude and knowledge objectives, together with specific behavioral objectives for various categories of children, pregnant and lactating mothers, and in dealing with diarrhea, vitamin A deficiency and goiter. Sample messages for radio and TV have been prepared, as have action posters. Distribution of materials and the promotion of the program have been set out in detail.

77. The objectives and activities of this component have developed well beyond the expectations at appraisal. The scope of the activities will be greatly extended and the budget has been revised to meet the needs. To ensure continued development of this component, the MOH should make greater use of the transfer of skills from the consultants by allocating well qualified counterparts to work with them. The same principles which hold for nutrition communication apply for health communication: UNICEF and USAID both wish to make use of the results and findings of the consultants.

E. Manpower Training

78. The new construction at the Nutrition Academy was completed in 1978. During 1979 the various services were installed and furniture and equipment procured. The laboratories are currently being fully utilized, while the old laboratories are being refurbished.

79. Expansion of full-time staff is proving to be an intransigent problem. Senior professional personnel are in very short supply, and more lucrative opportunities attract them elsewhere. The functional reward

system/1 used in research institutions does not apply to staff of the Nutrition Academy. To date, only one extra member of staff has been recruited. As an expedient, outstanding junior personnel have been selected for in-service training, with a view to becoming candidates for higher degrees in due course.

80. Student enrollment has increased from about 100 to 160. During 1978-79, the first year students were engaged in field work in the NIPP villages of Bojonegoro; the second year students went to the Nutrition Education areas in Central Java; and the third year students were divided between the IPB field program in nutrition, institutional feeding in hospitals, the CRDN and the Community Health Center, Jakarta.

81. A Task Force on manpower requirements at community and supervisory level has been formed. To meet the demands of Repelita III, an extensive program has been proposed by the Manpower Development Task Force, set up by the Project Director following on the last supervision mission. The community and village level staff would be trained under the separate programs for UPGK (A); UPGK (B) and UPGK (C). UPGK (A) is the basic package of activities: monthly weighing of the child, nutrition education, food supplementation, nutrition first aid and home gardens. UPGK (B) includes, in addition, immunization, improved water supply, environmental sanitation, primary health care, health education, rehabilitation from severe PEM. UPGK (C) (NIPP) includes, in addition, simple food technology, small food industry, health insurance, cooperatives and food storage. The following table gives the total number of staff to be trained for the Kecamatan, Kabupaten and Provincial levels:

Type of Training	Nutrition I			Nutrition II				Total
	1980-1981	1981-1982	Sub-Total	1982-1983	1983-1984	1984-1985	Sub Total	
Instructors	36	7	43					43
Prov. Inter-Sec. Workshop	52	52	104					104
Dokabu Workshop	80	80	160	120	120		240	400
Puskesmas Doctors	600	900	1,500	900	900		1,800	3,300
Assistant Nutritionists	780	1,200	1,980	1,590	1,590	1,500	4,680	6,600

82. The immediate need would be to train the Instructors, but first a clear understanding would be required regarding the job description relating to the nutrition work of the Puskesmas doctors and assistant nutritionists, so that curricula can be prepared and the training of the instructors can relate directly to these curricula. The assistant nutritionists would be established civil servants in health, social welfare, agriculture or family planning, who would be given a 2 month in-service course in supervision of village and community level nutrition workers.

83. The establishment of a Nutrition Training Center at Pasar Minggu in the southern part of Jakarta would be essential to the training program. The Nutrition High School there is still in operation, located on

1 A system under which payments are made for "extra" function work.

land belonging to MOH and extending to between 0.6 and 0.7 hectares. The area is scheduled for housing, but continuation of the agricultural center has been approved and the same attitude is expected with regard to the MOH site. However, formal approval of the city of Jakarta Planning Authority will have to be obtained. The buildings vary in age from 15 to 30 years. A two story building with 720 sqm on each floor could replace the old laboratory, classrooms and auditorium; the dormitories could be renovated and six staff houses built. A new access road and parking area would be required, together with landscaping and a perimeter fence. Improved water supply and electricity would be necessary. The consulting architects, Hari Murthi, have prepared sketch plans and preliminary cost estimates, which will be referred to a Bank architect for comment.

84. The bulk of the training would have to be undertaken in existing institutions in the Provinces. Assistant Nutritionist would undergo an eight-week training course; the following table gives details of the number of courses involved:

Assistant Nutritionist Course: 30 per Course

	Nutrition I			Nutrition II				Total
	1980-1981	1981-1982	Sub-Total	1982-1983	1983-1984	1984-1985	Sub-Total	
No. of course	26	40	66	53	53	50	156	222
Passar Minggu	-	10	10	10	10	10	30	40
Provincial Institutions	26	30	56	43	43	40	126	182

85. Since Puskesmas doctors cannot be absent from their posts for long periods, their course has been reduced to 10 days, which is regarded as the shortest effective period. Such short courses could be fitted in between the longer courses at available institutions. A total of 110 courses would be required.

86. Estimates of cost have been worked out for civil works (subject to Bank architect's comments), furniture, equipment, vehicles and training.

F. Food and Nutrition Unit (FNU)

87. The primary objective of this component foreseen at appraisal was to strengthen the FNU and to establish the organizational structure and links, both within and outside the Ministry of Agriculture, required to enable the FNU to advise the Ministry on the nutritional consequences of current and future agricultural policies and programs. Although a consultant was hired by FNU in December 1978 to develop a work program of policy-oriented food and nutrition studies, no work as yet has been initiated. At present, FNU is coordinating (within the Ministry of Agriculture) home garden and fish pond activities carried out by nutrition programs financed by UNICEF, the Bank and GOI. FNU has a staff of nine full time professionals, most of

them inexperienced veterinarians and fishery engineers. It has a budget of Rp 25 million, which covers mainly staff salary, travel expenses and production of educational material.

88. The problem of FNU's standing in the organizational structure of the Ministry of Agriculture still remains unsolved, although GOI has allocated budget funds for FNU since FY78/79 (which was not possible during 1977). Previous missions suggested that FNU's status should be upgraded, and that proposed working program be carried out directly by the Planning Bureau, or under the Directorate-General of Food Crops. This would enable the Ministry of Agriculture to address the broad food/nutrition policy issues as they relate to overall agriculture planning. Although assurances were given that BAPPENAS and the Ministry of Agriculture would pay full attention to this proposal, the status of FNU remains unchanged. It appears that much of the problem of FNU's inactivity in addressing the food/nutrition issues relates to the lack of effective leadership. The Head of FNU is a veterinarian (beyond GOI retirement age) and does not appear to understand the nature of the food and nutrition linkages envisioned by GOI, FAO and the Bank.

89. Working on the assumption that, to achieve its objectives, technical assistance provided under the nutrition project would be more effective if channeled directly to the Planning Bureau instead of to FNU, the mission again requested the Project Director to discuss this issue with the Director of the Planning Bureau and BAPPENAS. No action was, however, taken by the Project Director before the mission's departure.

G. Monitoring and Evaluation (M&E)

90. Following on a Bank mission in August 1977 these comments were made: "Early action will be required to identify the criteria and indicators for monitoring, developing the methodology, designing the reporting system and teaching the field staff about the importance of, and their responsibility for, monitoring and evaluation". The subject of monitoring and evaluation has been raised by every visiting mission, who have repeatedly pointed out its importance to the project as well as the covenant in the Loan Agreement relating to the establishment of a separate M&E unit (Schedule 5, Section 3).

91. Finding qualified personnel, with experience in evaluation, either for recruitment as staff or engagement as consultants, has proven to be difficult. A possible group has now been identified and was interviewed by the mission, and terms of reference should be drawn up, inviting the group to submit a proposal, which should hopefully lead to a contract being entered into. An important ingredient of the contract would be the involvement of the existing personnel of the Monitoring and Evaluation Unit in the study and systems design, and their training by the consultant group.

92. Monitoring should cover all components of the project, and Component Heads were urged to provide all the assistance needed by the consultant group in the development of a system, which should become a tool to aid their management. The consultants should be involved in monitoring and progress evaluation of each of the components. However, the overall

evaluation of the Nutrition Development Project, including the impact evaluation of NIPP, should be undertaken by a different expert group and would include evaluation of the monitoring and evaluation system used during Project implementation.

93. The Appraisal Report states that "A few components of the Project seek to evaluate the effectiveness of different methods of nutrition interventions, separately and in combination. In the NIPP component, the objective is to determine the effectiveness, together with costs, of the proposed program of nutrition, health and other activities for achieving a reduction in morbidity and mortality and improving nutritional status. The CRDN would be responsible for this evaluation". To carry out the above evaluation, a series of decisions have to be made concerning NIPP evaluation. One immediate concern is the process for selecting villages in new areas where NIPP is about to set up. Procedures are required to avoid bias which would invalidate results (e.g. the village should be the unit of observation, neither individual children or Kecamatan are relevant for comparison; randomization of villages is crucial to avoid bias see Habicht report).^{/1} Others are desirable in that they increase the probability that an actual NIPP success will be measured and prove significant (e.g. by creating matched pairs of villages, the probability of finding significant results is increased). Habicht's report discusses in length the various options available for matching villages. The second concern relates to CRDN's capability of designing and carrying out this type of evaluation. In view of the delay in properly organizing the socio-economic division of CRDN, the best solution would be to contract a research group of one of the local universities to carry out the evaluation, using Habicht as consultant. CRDN would still be involved in the original baseline studies. This was discussed with the Director of Nutrition and the Executive Secretary, who agreed with this proposal. During the mid-term review, funds were allocated under the monitoring and evaluation category for this purpose.

^{/1} Report on the Indonesian Nutrition Development Project on Activities at CRDN. May 9-22, 1979. Jean-Pierre Habicht, M.D.

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Financial Aspects

Compilation of Project Accounts

1. Section 4.02(b) of the Loan Agreement requires the Government to:
 - (i) ensure that all of its agencies participating in the implementation of any part of the Project maintain separate accounts in respect thereof; and
 - (ii) establish and maintain within MOH a project accounting unit responsible, inter alia, for consolidating the accounts maintained by the implementing agencies.
2. Accounts are being maintained by the Executive Secretariat and the units, but they are not complete. The Financial Officers handling the various project components were under the impression that they need concern themselves only with such expenditures as are covered by DIP Murni and DIP Supplement, and that it is the responsibility of the Project Director to keep track of the expenditures under the category of "Direct Payments". The Executive Secretariat shares this view. Because of this dichotomy, it has not been possible to date for the Bank to have a composite picture of the progress of expenditure under the Project with any detailed break-up of Government and Bank expenditures.
3. With a view to obtaining details of the provision made in the Budget, the expenditures incurred and the amounts remaining unspent under the categories DIP Murni, and DIP Supplement and of direct payments due and realized, a format was drawn up by the mission's financial consultant and given to each of the component heads and to the Executive Secretariat. Unfortunately, the component unit officers could furnish details only of expenditures under DIP Murni and DIP Supplement; the Executive Secretariat filled out details relating to direct payments. Despite the appreciable amount of time (2 weeks) taken to complete this exercise, the quality of the reporting was far from adequate.
4. One common feature is confusion between the figures in dollars with those in rupiahs. Hence every time a figure is presented, the question has to be asked whether the amount is meant to be in rupiahs or dollars. It would perhaps help if the Executive Secretariat and the component units were required to report all figures either in rupiahs or dollars. (They may find it easier to report in rupiahs.)
5. The need for improving the accounting system was stressed in the discussions which the mission had with the Project Director as well as in the "wrap-up" meeting. The Minister of Health was also apprised of the position when the mission met with him. The Project Director has undertaken to reorient the reporting system on the basis of the format suggested, and this matter will again be carefully reviewed during the next mission. If the position does not improve, the Government will need to engage a short-term financial consultant to provide the necessary guidance and support.

6. Section 305(d) of the Loan Agreement requires that the accounts of all agencies participating shall be audited by independent auditors each year and that certified copies of the accounts be submitted to the Bank. Although it is over two and one-half years since the Project started, no audited statements of accounts have yet been received by the Bank. It was found during visits to the components that, although the expenditures under DIP Murni have all been audited by the State Auditor, ^{/1} no instruction has been issued to extend the audit to expenditures under DIP Supplement. As it is this expenditure that the Bank is primarily concerned with, the need for expediting a decision in the matter has been emphasized to both the Minister and the Project Director.

Review of Expenditures

7. Appendix 1 summarizes the position in respect of all the components put together; the detail by components is given in Appendix 2. The table reveals that expenditure has been low compared with the budget allocation. In Appendix 3 a fund position statement as at December 31, 1979, demonstrates that allocated funds are amply available for the project.

8. The first constraint was the nomination of Bank Indonesia as the prefinancing Agency for the Supplemental DIP. This Bank was insisting that the percentages of the total allocated to the DIP and to the Supplemental DIP should match at every point of time with the disbursement percentages, as detailed in the Loan Agreement. Prefinancing by Bank Indonesia has now been dispensed with and is now arranged from Government funds through a third party Bill.

9. The second constraint was that carry-over funds could be used only after an SKO (letter of authority of carry-over funds) was issued and this could not be issued until the DIPs for the current year were issued. SKOs have been abolished and the SPP (Request for payment) is proposed on the basis of the DIP or comparable document. With these constraints removed, expending of funds may show improvement in the coming months.

Contracts for Civil Works, Equipment and Vehicles

10. Statements furnished by the component heads giving details of civil works contracts awarded, present stage of execution of work, payment made to date, and the balance to be paid, are summarized in the following table.

^{/1} The State Auditor is recognized by the Bank as an "independent" auditor.

Contracts for Civil Works

Component	Original Estimate as per Appraisal Report (Rp million)	Contract awarded (Rp million)	Payment made (Rp million)	Balance (Rp million)
CRDN	1,192.29	692.22	244.90	447.32
FTDC	1,083.83	803.76 +279.35 (escalation)	455.67	348.09
Nutrition Academy	177.62	57.17	52.96	4.21

11. In the case of the CRDN, all items except renovation of buildings have progressed well, the progress varying from 40% to 100%. The low costs of tender are due to the fact that, while the estimates were framed with international building standards in view, the standards adopted are those fixed by BAPPENAS, which are less expensive. All the current works in FTDC, except for the pilot plant and installations, have been completed 90 to 100%.

12. The escalation costs have yet to be paid. These costs have to be approved by the local officer of the Department of Public Works. Application was made to the Director of Public Works, Bogor, but he did not have the authority to approve this. The Mission took up the matter with the Director General of Public Works who agreed to expedite processing of the application and to speed up the provision of water supply installation.

13. Problems are faced by FTDC in the matter of procurement of equipment. There were 42 packages, of which there were 16 with three quotations, six with two bids, 11 with one bid and others without bids. The tender for the 16 packages was processed and orders placed, but the supplier, who represents a German firm, has asked for the opening of a Letter of Credit in DM at the exchange rate prevailing at the time of opening of the tender, which, according to him, was 1.93 DM per dollar. As this would mean an escalation in costs of over 5%, the Mission examined the issue and has advised the Director of FTDC regarding the course of action to be followed. The position has been complicated by the fact that the validity of the tender had already expired. If a retender is ordered now, the chances are that there would be a further escalation in costs beside the time lag involved. Taking all these factors into consideration, the Director FTDC has been advised by the Mission to negotiate with the tenderer to see whether he could be made to agree to absorb the difference due to revaluation of the D.M. in relation to US \$ and if not, to examine whether the next lowest tender could be accepted.

14. In respect of packages for which two quotations had been received, they were processed and the lower tender got approved by IBRD. But when the case went up to the Education Ministry for approval, the Minister for Education ordered retender on the ground that under the Indonesian Government regulations there should at least be three quotations for a tender to be considered. Under the Agreement, the IBRD approval will prevail notwithstanding any Government regulation to the contrary. The Mission has hence taken up the matter with GOI and Bappenas.

15. Purchase of the four start-up vehicles has been held up on the assumption that, in terms of GOI's orders, vehicles should be purchased at the approved price and only from an authorized supplier. It has been clarified by both Director General of Public Works and BAPPENAS that the Project Director has to obtain three quotations and then purchase at a rate not higher than the authorized rate. The Mission has suggested the immediate purchasing of these vehicles from a local supplier, by solicitation of three price quotations. The Mission has also agreed to GOI's request to buy three additional vehicles through ICB (for which the necessary Ministry of Trade exemption has already been obtained.)

Budget Allocations 1980-81

16. Appendix 4 compares the budget allocation for FY 79-80 and 80-81 for the various components. Except in regard to FTDC, there has been an increase in the allocations for 1980-81 as compared to 1979-80. In the case of FTDC as against Rp250 million asked for in the DUP, only Rp 152 million have been provided for in the DIP, probably because of a large carry-over of funds. Under the Indonesia budget procedures, funds can be carried forward for a period of three years. It should be noted, however, that the allocation in the 1980-81 budget would not be adequate to meet the expected expenditure in that period if the Mission's proposal to accelerate selected project activities would be accepted. (See Appendix 5.) This matter was highlighted in discussions with Dr. Soebekti. The Mission was informed by BAPPENAS that modifications to the 1980-81 budget could be taken into consideration up to the end of February 1980.

Revised Disbursement Schedule

17. Appendix 6 shows a revised disbursement schedule. It has been drawn up on the assumption that all proposals made by the Mission to reallocate funds in order to accelerate the programme of those components that have performed well would be implemented. However, further appraisal and approval of these new proposals will be needed before they may be implemented.

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Organization and Management and Performance of the Borrower

1. At the time of Appraisal, the BAPPENAS Task Force recognized that, because of its intersectoral nature, project management would be the most difficult problem. Placing project management in a coordinating Ministry such as Peoples Welfare or in BAPPENAS would have been impossible, because neither has an executive function nor any field staff. The Ministry of Agriculture was not interested at that time. Project Management, therefore, devolved on the Ministry of Health and, within the Ministry, Community Health was the appropriate choice. The Director General of Community Health had manifold other responsibilities and was most reluctant to undertake the task of Project Director. His role was envisaged as policy direction, in collaboration with three co-directors from the Ministries of Home Affairs, Education and Agriculture. An Executive Secretary, who would be full-time project manager, would assist the Project Director with the coordination and execution of the project.
2. Mr. Burhanidin (Government Officer) was appointed as Executive Secretary, but he only regarded this as a "part-time" job and was more occupied with other activities than with the project. The first supervision mission made representations to BAPPENAS and to the Project Director, who took the matter up with the Secretary-General of Health. Mr. Burhanidin was then appointed full-time Executive Secretary, responsible to the Project Director for management of the project. The change from part-time to full-time had no practical effect.
3. The third supervision mission repeated the need for a well-functioning project secretariat, whose staff would work as a team, be fully familiar with all project aspects, devote full-time activity to the project, and work closely with component officers, both in Jakarta and the Provinces. In July 1978, the Project Director recommended replacement of the Executive Secretary, but the (then) Minister did not agree. The fifth supervision mission met the new Minister of Health (Dr. Suwardjono) and Dr. Suyoto, Deputy Chairman of BAPPENAS and, as a result, inter alia, Mr. Burhanidin was transferred and Mr. Adinugroho was appointed as Acting Executive Secretary. Significant improvements took place, but management remained far short of being effective.
4. At appraisal, the appointment of a Project Management Advisor had been regarded as essential, and ample provision was included in the budget. Shortly after the Loan became effective Mr. George Brady was a candidate, acceptable to both the Government and Bank, but turned down the offer at the last moment due to the initial unwillingness of GOI to engage him for a continuous period of two years. The next prospective candidate Mr. Robert Pratt would have been available mid-1978. However, the revised USA tax laws, under which there was liability for tax on all benefits received by persons working overseas, inflated unduly the terms of service required by Mr. Pratt.

The Government then stated its wish to offer the position to Mr. Rolf Carriere, and the Minister of Health approached UNICEF Headquarters, New York, to ask for a secondment. UNICEF did not agree, but offered a list of five candidates believed to be suitable. GOI took no action on this list.

5. The sixth supervision mission made representations to the Minister of Health regarding covenants in the Loan Agreement relating to employment of a management adviser, procurement adviser and planning consultants. Many of the weaknesses relating to management, disbursement and procurement were due to the failure to engage these advisers. In September 1979, Mr. Carl Fritz took office as Financial and Procurement Adviser. The Executive Secretary has used him as Office Manager, and improvement in the functioning of the Secretariat has resulted. However, little improvement in finance or procurement could be noted. The work of Mr. Gopalan, consultant financial analyst on the latest supervision mission, has provided a sound basis for maintaining required financial records and reporting.

6. A prospective Project Management Adviser, Mr. Balasubramanian, could be available from March 1980, but no action has as yet been taken to complete his contract. The mission pointed out to the Minister of Health and the Project Director that immediate completion of contract formalities is essential if Mr. Balasubramanian is to assume his duties in March. (Government of India procedures to release him would require some time.) The mission was assured that action would be taken.

7. The supervision report of September 1979 referred to the findings of the Project Director on his visit to Lombok, August/September 1979. The mission learned that neither the NIPP Coordinator nor any of his staff has visited any of the NIPP areas since accompanying the previous mission in June 1979. Work goes ahead despite the complete neglect by headquarters staff.

8. Comment on the NIPP component mentions that by September 1979 all village cadres had been trained and the villages prepared for action. Failure by the NIPP Coordinator and his staff to order any equipment for the new villages has, and continues to, frustrate action in the new villages.

9. In February 1979 the Minister of Health agreed to replace the then Director of Nutrition. By September 1979, the pending change was public knowledge. Formal transfer of office to the new Director took place on January 26, 1980; only then could the new Director authorize expenditure from the DIPs. It would appear that during the lengthy transition period the superceded Director deliberately ignored the NIPP component and his actions were not held in check.

10. Fortunately, future outlook is brighter. Mr. Tarworjo, the new Director, created a very good impression on the mission. His effective work as head of the Nutrition Academy and on the vitamin A program has been well recognized. He proposes retaining only two of the former professional staff of the Directorate. In building up his staff and reorganizing the Directorate, he will allow for the absorption of the M&E Unit and the eventual transfer of the Secretariat. All indications are that he will be the most suitable Project Director of any future nutrition project in which the Bank would be involved.

11. The staff of the Secretariat has been increasingly staffed with non-civil servants. The mission pointed out the difficulties which may arise in the absorption of the Secretariat within the Nutrition Directorate, if the present trend continues, since non-civil servants could not be taken into the Directorate.

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Mission's Recommendations

CRDN

1. The Director of CRDN should prepare an overall research program for CRDN, which reflects its long-term role and forms the basis for recruitment of staff, award of fellowships, procurement of equipment and engagement of consultants.
2. An administrative and management consultant, with practical experience in managing a non-academic research institution, should be engaged to work with the Director CRDN and his staff in evolving a management structure befitting a national institution.
3. Five M.S. fellowships should be substituted for five Ph.D. fellowships.
4. The following additional civil works should be undertaken: landscaping campus to prevent erosion, construction of a wall to secure campus, provision of venetian blinds for laboratories and offices, procurement of furniture and furnishings for the auditorium.
5. The amended tender document for the approved second equipment list should be approved by BAPPENAS and referred to the Bank.

FTDC

6. Proposals for the following studies should be agreed on: fermented cassava (tape); fermentation of prepackaged soyabean; production of plant for edible fish flour; development of weaning foods; parboiling rice; iron fortification of salt; and studies on soyabean and legumes.
7. The engagement of junior consultants, who are familiar with modern techniques, instruments and equipment, should be undertaken so that they may work alongside FTDC staff.
8. The following additional civil works should be undertaken: landscaping the campus to prevent erosion, an ecological pen, and a pilot scale model warehouse.
9. The issue of procurement of the remaining packages of equipment through prudent international shopping should be settled expeditiously by the D-G of Higher Education.

NIPP

10. The project period should be extended by one year, resulting in an increase in the number of NIPP villages from 180 to 324. West Java and Yogyakarta would be the new regions; Bali would be dropped, because of complete coverage by the USAID program, if GOI so agrees.
11. As a matter of urgency, units for processing food supplements should be procured from private manufactures as soon as possible, both for the kecamatans overdue to receive them and also for other kecamatans which will be included in the future.
12. Anthropometric and demonstration equipment, whose delivery is long overdue in NIPP villages, should be procured immediately.
13. Alternative food supplement formulae, which have been field tested satisfactorily, should be authorized for use and appropriate directions given.
14. The period for preparation in new areas should be reduced from one year to six months.
15. Senior officials of the Ministries of Health and Agriculture should prepare a revised plan for West Lombok during March 1980, based on the need for food as well as nutrition inputs.
16. In West Java, the Habicht model for evaluation should be followed. In other NIPP kabupaten, follow-up studies should be carried out as a basis for descriptive evaluation.
17. Assistance should be provided to the ANPO Bojonegoro so that he can help with the extension of NIPP activities to 85 villages, financed from kabupaten funds.
18. Consultants should be engaged to prepare a system of monitoring to replace the reporting system which has been found to be too complex.
19. The NIPP Coordinator should be responsible for arranging regular fortnightly collection of samples of food supplement produced at each food unit, and delivery to FTDC for laboratory testing.

Anemia Prevention and Control

20. During 1980-81, the revised plan should be applied to plantations in West Sumatra and Central Java and, if financing is available from GOI sources, extension should be made to plantations in Kalimantan, N. Sulawesi, S. Sumatra and Yogyakarta.
21. Major expansion of anemia control should be undertaken in N. Sumatra during 1981/82 and in East Java in 1982/83 (outside time of Nutrition I), reaching in each case about 50,000 workers and their families.

22. During 1980-81, a team should visit Tamil Nadu to benefit from the lengthy experience available there on the production of iron fortified salt. The team should advise on the method, equipment and scale of production.
23. A consultant should be engaged to study the socio-economic results of anemia control activities in West Java and South Sulawesi.
24. A consultant should be engaged to assist in the analysis and write-up of results from West Java and South Sulawesi.

Manpower Training

25. Based on the Consultant Reports from Simmersbach and da Silva, the Task Force on Manpower Planning identify the target personnel to be trained under the project to be: 6,640 Assistant Nutritionists; 3,300 puskesmas doctors; 400 Dokabu plus staff; 104 inter-sectoral provincial personnel, and 43 Instructors. (The training of community level and village level workers would be financed by UNICEF and USAID.)

26. Because of limitation of funds in DIP Murni, the construction of the Nutrition Training Center and the Monitoring and Evaluation Center at Pasar Minggu should be in two phases, Phase I consisting of the main block and caretakers house, and Phase 2 the remainder. The estimates of cost and sketch plans should be referred to a Bank architect.

27. The Director of Nutrition should obtain clearance from the Health Training Center for the proposed construction, and from the City Planning Authorities for the construction of the Center in an area scheduled for housing.

28. Each Province should examine the spare capacity it has for training.

Nutrition Education and Behavioral Change

29. Preparation, production and distribution of education materials should be the responsibility of the Health Education Directorate.

30. Responsibility for the technical validity of the nutrition messages should be the responsibility of the Nutrition Directorate. The messages developed by the communication consultants should be adequate for the immediate future.

31. Sources for funding education material are varied and plentiful. The Directorate of Health Education should plan the allocation of these resources.

Monitoring and Evaluation

32. Consultants have been invited to prepare a proposal on improved systems of monitoring all components, including the Executive Secretariat. The staff of the Monitoring and Evaluation Unit should take part in the consultants' work and their terms of reference should include the requirement to train the M&E staff and report on their performance.

33. Pending the reorganization of MOH and the absorption of the M&E Unit in the Nutrition Directorate, the Director of Nutrition should be responsible for the technical orientation of the unit.

Home Gardens

34. The revised proposal from the Consultants should be cleared with BAPPENAS before submission to the Bank.

35. Proposals have been prepared for a pilot stage project for improved home gardens in a form suitable for replication in future years. Formal approval of the Director General of Food Crops should be obtained.

Financial

36. The reporting system worked out by the financial analyst consultant should be put into effect immediately. The Project Director should hire a competent accountant to implement the project's accounting system. The financial and procurement adviser (Mr. Fritz) should spend more time in assisting the financial and procurement officers (both component and Executive Secretariat), in performing efficiently their task. Office management should not be the responsibility of the financial and procurement adviser.

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Summary of Expenditure Incurred up to 31.12.1979

	Budget Allocation					Actual Expenditure					Disbursement by Bank		
	DIP Murni (Rp million)	DIP Supplement (Rp million)	Direct Payment (US \$'000)	Total (Rp million)	Total (US \$'000)	DIP Murni (Rp million)	DIP Supplement (Rp million)	Direct Payment (US \$'000)	Total (Rp million)	Total (US \$'000)	Partly Reim- burs- able	Fully Reim- burs- able	Total
											-----	(US\$'000)	-----
All Components	2134.81	1944.34	2650.16	4079.15	2650.16	1064.87	729.82	200.88	1794.69	200.88	775.96	316.49	1092.45

INDONESIAN NUTRITION DEVELOPMENT PROJECT
 REVIEW OF EXPENDITURE INCURRED UPTO 31.12.1979

COMPONENT C ATEGORY	BUDGET ALLOCATION					ACTUAL EXPENDITURE				DISBURSEMENT BY BANK			
	DIP Murni Rps. Mln.	DIP Suppl I Rps. Mln.	Direct Payment US \$ 000	Total in Rps Million	Total in US \$ 000	DIP Murni	DIP Suppl.	Direct Payment US \$ 000	Total in Rps. Mln.	Total in US \$ 000	Partly reim- bursa- ble US \$ 000	Fully reim- bursa- ble US \$ 000	Total US \$ 000
FTDC	671.58	920.44	1551.44	1592.02	1551.44	172.93	362.71	67.80	535.64	67.80	425.99	59.27	485.26
CRDN	392.11	705.95	507.31	1098.06	507.31	158.22	245.54	21.04	403.76	21.04	259.04	106.64	365.68
MANPOWER TRAINING	279.99	126.12	106.55	406.11	106.55	179.33	57.58	+16.88	236.91	+16.88	50.27	15.41	65.68
NIPP	518.53	182.18	328.86	700.71	328.86	269.98	56.29	57.72	326.27	57.72	33.36	97.73	131.09
NUTRITION EDUCATION	185.31	9.65	156.00	194.96	156.00	204.70	7.70	37.44	212.40	37.44	7.30	37.44	44.74
ANAEMIA CONTROL	87.29	-	-	87.29	-	79.71	-	-	79.71				
TOTAL	2134.81	1944.34	2650.16	4079.15	2650.16	1064.87	729.82	200.88	1794.69	200.88	775.96	316.49	1092.45

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Loan 1373-IND

Fund Position Statement as at December 31, 1979

Component	(a) Balance Available DIP Murni Rp million	(b) Budget Provision 1980-81 DIP Murni Rp million	(a) + (b) Total Rp million	(d) Balance Available DIP Supplement Rp million	(e) Budget Provision 1980-81 DIP Supplement Rp million	(f) Provision in US\$'000	(d) + (e) Total Rp million	(f) Total US\$'000
FTDC	498.65	152.00	650.65	557.73	20	450.00	577.73	450.00
CRDN	233.89	15.87	249.76	450.82	69.68	276.00	520.50	276.00
Manpower Training	101.86	120.00	221.86	68.54		139.20	68.54	139.20
NIPP	247.59	519.70	767.29	157.12	484.41		641.53	
Nutrition Education		130.00	130.00	1.95	38.92	50.00	40.64	50.00
Anemia Control	<u>7.58</u>	<u>50.00</u>	<u>57.58</u>			<u>127.64</u>		<u>127.64</u>
Total	1,089.57	987.67	2,077.14	1,238.16	612.81	1,042.84	1,848.97	1,042.84

	<u>Total in Rp million</u>	<u>Total in US\$</u>
DIP Murni	2,077.14	33,234.24
DIP Supplement	1,848.97	29,583.52
Direct Payment		<u>10,428.40</u>
Total		<u>73,246.16</u>

COMPARISON OF BUDGET ALLOCATIONS FOR
1979-80 AND 1980-81

Component	BUDGET ALLOCATION 1979-80					BUDGET ALLOCATION 1980-81				
	Dip Murni	Dip Supplt.	Direct Payment	Rps MILLION	Total US \$	Dip Murni	DiP Supplt.	Direct Payment	Rps. MILLION	Total US \$
CRDN	101.91	141.80	77.99 ^{Rp}	243.71	20,000 ^{77.99}	157.00	69.68	\$ 276,000	226.68	276,000
			+\$20,000							
FTDC	251.57	257.68	1,007,430	509.25	1,007,430	152.00	20.00	450,000	172.00	450,000
MAN POWER TRG	100.00	20.56	97,414	120.56	97,414	120.00	-	139,200	120.00	139,200
NUT EDU.	59.98	3.20	10,000	63.18	10,000	130.00	38.72	50,000	168.72	50,000
NiPP	280.50	88.00	169,320	368.50	1,69,320	519.70	484.40	-	1004.10	
Anaemic Control	31.37	-	-	31.37		50.00	-	127,640	50.00	127,640
TOTAL	825.33	511.24	1,304,164 ^{77.99}	1336.57	1,304,164 ^{77.99}	1128.70	612.80	1,042,840	1741.50	1,042,840

COMPARISON OF BUDGET ALLOCATIONS FOR 1980-81
WITH ANTICIPATED EXPENDITURE FOR 1980-81 & 1981-82

	BUDGET ALLOCATION 1980-81				ANTICIPATED EXPENDITURE TAKING INTO ACCOUNT MISSIONS PROPOSALS		
	Dip Murni	DIP Supplt.	Direct Payment	TOTAL Rps.	\$	Rps. Million 1980-81	Rps. Million 1981-82
CRDN	157.00	69.68	\$ 276,000	226.68	276,000	574.15	306.22
FTDC	152.00	20.00	450,000	172.00	450,000	1680.75	292.77
MAN POWER TRG.	120.00	-	139,200	120.00	139,200	700.64	787.22
NUT EDU.	130.00	38.72	50,000	168.72	50,000	230.31	184.36
NIPP	519.70	484.40	-	1004.10	-	1463.44	642.91
ANAGHIA CONTROL	50.00	-	127,640	50.00	127,640	436.54	413.02
TOTAL	1128.70	612.80	1,042,840	1741.50	1,042,840	5085.83	2626.50

INDONESIA
NUTRITION DEVELOPMENT PROJECT

Loan 1373-IND

Schedule of Disbursement
 (as of January 1980)

Fiscal Year and Quarter	Cumulative Disbursements (US\$ m)			Actual or Latest Estimate Disburse- ment as % of Appraisal Estimates
	Actual Total	Appraisal Estimate	Forecast as of Jan. 80	
1977 Dec 31	-	144		0
1978 Dec 31	90	1,084		8
1979 Dec 31	1,160 ^{*/}	4,592		24
1980 March 31		5,692	1,600	28
1980 Jun 30		6,565	2,200	33
1980 Sep 30		7,765	2,800	36
1980 Dec 31		8,965	3,400	38
1981 March 31		10,165	4,000	39
1981 Jun 30		10,772	4,700	46
1981 Sep 30		11,572	5,400	47
1981 Dec 31		12,672	6,200	49
1982 March 31		13,000	7,000	54
1982 June 30			7,700	
1982 Sep 30			8,500	
1982 Dec 31			9,300	
1983 March 31			10,000	

^{*/} Discrepancy with the figure in Section 3: Project Data of Supervision Summary is due to the pipeline effect.

TOTAL DISBURSEMENTS

US \$ 000

	UPTO 1979-80	1980-81	1981-82	1982-83	TOTAL
CRDN	580	356	413	351	1700
FTDC	600	796	886	471	2753
MANPOWER TRAINING	125	395	748	920	2188
NUTRITION EDUCATION	124	211	271	125	731
ANAEMIA CONTROL	-	312	495	377	1184
NIPP	67	300	382	193	942
EXECUTIVE DIRECTORATE	125	200	200	61	586
	1621	2570	3395	2498	10084

CRDN
CENTRE FOR RESEARCH AND DEVELOPMENT OF
NUTRITION

ESTIMATES OF EXPENDITURE

US \$ 000

	UPTO 1979-80	1980-81	1981-82	TOTAL
CIVIL WORKS	622	480	100	1202
FURNITURE	37	17		54
VEHICLES (40)	13	112	20	145
EQUIPMENT (65%)	6	113	58	177
CONSULTANTS	31	42	39	112
FELLOWSHIPS	177	58	175	410
BOOKS	-	-	-	-
SALARIES	88	42	45	175
OTHERS	142	54	53	249
TOTAL	1116	918	490	2524

DISBURSEMENT SCHEDULE

DISBURSEMENT	UPTO 1979-80	1980-81	1981-82	1982-83	TOTAL
CIVIL WORKS	384	114	144	96	962
		48	96	80	
FURNITURE	29	14			43
VEHICLES 40%	5	30	15	8	58
EQUIPMENT	4	50	23	20	115
CONSULTANTS	31	42	39	18	112
FELLOWSHIPS	127	50	50	129	410
		8	46		
SALARIES					
TOTAL	580	356	413	351	1700

FTDC

FOOD TECHNOLOGY DEVELOPMENT CENTRE

US \$ 000

ESTIMATE OF EXPENDITURE

	1979-80	1980-81	1981-82	TOTAL
CIVIL WORKS	773	1004	159	1936
FURNITURE	5	14		19
VEHICLES		31		31
SPL EQUIPMENT		1210		1210
		130 (Handling)		130
CONSULTANTS	52	27	46	125
FELLOWSHIPS	16	43	57	116
SPECIAL STUDIES 100% (NEW ITEM?)		87	63	150
SALARIES	33	30	30	93
OTHERS	132	113	113	358
TOTAL	1011	2689	468	4168

DISBURSEMENT SCHEDULE

	1979-80	1980-81	1981-82	1982-83	TOTAL
CIVIL WORKS	528	90	132	190	
		270	275	63	1548
FURNITURE	4	11			15
VEHICLES		12			12
SPL EQUIPMENT		300	300	187	787
CONSULTANTS	52	27	46		125
FELLOWSHIPS	16	43	57		116
SPL STUDIES		43	44	31	150
			32		
SALARIES	-	-	-		
TOTAL	600	796	886	471	2753

MANPOWER TRAINING

US \$ 000

ESTIMATES OF EXPENDITURE

	UPTO 1979-80	1980-81	1981-82	TOTAL
CIVIL WORKS	108	328	692	1128
FURNITURE	44 (14) DiP	71 (8 DiP)		115
VEHICLES 40%	24	28		52
SPL EQUIPMENT	69	88		157
CONSULTANTS				
STAFF FELLOWSHIP *23 DiP Murni *60		39		99
STUDENT FELLOWSHIP 1977-78		55		55
FEASIBILITY STUDY (NEW PROPOSAL)		26	24	50
STUDENT TRAINING	219			219
NUTRITION COURSE (NEW PROPOSAL)		385	523	908
SALARIES	7	2	2	11
OTHER COSTS	25	19	19	63
PREPARATORY NUTRI- TION PLAN (INCLUD- ING TRG)		80		80
TOTAL	556	1121	1260	2937

DISBURSEMENTS SCHEDULE

	1979-80	1980-81	1981-82	1982-83	TOTAL
CIVIL WORKS	50	36 31	100 131 54	100 400	902
FURNITURE	18	6 10	15 10	15	74
VEHICLES	9	12			21
EQUIPMENT	18	5 50	7 15	7	102
CONSULTANTS					
STAFF FELLOWSHIP	30	7 32	7		76
STUDENT FELLOWSHIP		30	25		55
FEASIBILITY STUDY		26	24		50
STUDENT TRG		-	-		-
NUTRITION COURSES		150	160 200	323 75	908
SALARIES	-	-	-	-	-
TOTAL	125	395	748	920	2188

NUTRITION EDUCATION
ESTIMATE OF EXPENDITURE

US \$ 000

	UPTO 1979-80	1980-81	1981-82	TOTAL
VEHICLES (60:40)	10			
ICB	8			18
EQUIPMENT	20	40	40	100
CONSULTANTS	113	75		188
FELLOWSHIPS	12	24	10	46
MASS MEDIA	236	100	50	386
EDL MATERIALS	31	50	100	181
BASELINE SURVEY	40	17	25	82
TRAINING	47	26	30	103
SALARIES	57	17	20	94
TRAVEL	13	17	16	46
OTHERS	10	3	4	17
TOTAL	597	369	295	1261

DISBURSEMENTS SCHEDULE

	1979-80	1980-81	1981-82	1982-83	TOTAL
VEHICLES	11				11
EQUIPMENT	13	26	26		65
CONSULTANTS	65	48	60		188
		15			
FELLOWSHIPS	12	24	10		46
MASS MEDIA		30	30	30	150
			40	20	
EDL MATERIALS	-	25	25	25	150
			25	50	
BASELINE SURVEY	20	17	25		62
TRAINING	3	26	30		59
SALARIES	-	-	-		
TRAVEL	-				
TOTAL	124	211	271	125	731

ANAEMIA CONTROL
ESTIMATES OF EXPENDITURE

US \$ 000

	UPTO 1979-80	1980-81	1981-82	TOTAL
EQUIPMENT 35:65	17	30	31	
(From 80-81)5:95		12	12	102
VEHICLES		79	31	110
<u>OPERATING COSTS</u>				
PROJECT PREPARATION	4	1	1	6
BASELINE DATA	25	6	6	37
IRON THERAPY	14	3	3	20
IRON SALT	15	4	4	23
<u>SUPPLEMENTATION</u>				
ANTI HELMINTHIC TREATMENT	7	2	2	11
PROVISION OF BOOTS	17	5*	5*	27
CONSTRUCTION OF LATRINE	12	4*	4*	20
OTHERS	27	13	13	53
EVALUATION	21	6	6	33
EXTENSION TO OTHER PLANTATION	80			80
DRUG SALT		484	493	977
TECHNICAL ASSISTANCE		49	51	100
TOTAL	239	698	662	1599

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Disbursement Schedule

	1979-80	1980-81	1981-82	1982-83	TOTAL
EQUIPMENT (35:65)	-	20	20		40
(5:95)		11	12		23
VEHICLES		32	12		44
DRUG SALT		200	100	184	
			300	193	977
TECHNICAL ASSISTANCE		49	51		100
OPERATING COST		-			
TOTAL		312	495	377	1184

NUTRITION INTERVENTION PILOT
PROJECT (NIPP)

ESTIMATE OF EXPENDITURE

US \$ 000

	1979-80	1980-81	1981-82	TOTAL
CIVIL WORKS	4	248	-	252
VEHICLES (GOI 42 ICB 38)	80	GOI 32 49 New Project 17		129
EQUIPMENT 35:65:1.9(3) 5:95:5.9(6)	71	110		181
<u>TECHNICAL ASST.</u>				
CONSULTANTS	47	408**		455
FELLOWSHIPS	10	80**		90
FOOD SUPPLEMENT	63	213	399	276
<u>OPERATING COSTS</u>				
SALARY SUPPORT	74	(DiP 64) 112 New Pro- ject 48)	(DiP45 New46) 91	172 277
NUTRITION EDU.	39	198	198	435
HEALTH ACTIVITIES	18	-	-	18
WORKSHIP & SEMINAR	42	(New pro- posal 28)	62	34 138
TRANSPORT & TRAVEL	57	(" 9)	63	(New 8) 62 182
EVALUATION	62	(" 62)	116	(New) 48 226
TRAINING	58	(" 11)	64	(New 8) 61 183
OTHER EXPENSES	113	55	55	223
EXTENSION TO NEW AREA		561	480	1041
TOTAL	738	2339	1029	4106

DISBURSEMENT SCHEDULE

	1979-80	1980-81	1981-82	1982-83	TOTAL
CIVIL WORKS	-	-	-		
VEHICLES	24	16			52
EQUIPMENT	8				8
CONSULTANTS	25	22** 28	45** 35	45	200
FELLOWSHIPS	10	12*			22
FOOD SUPPLT.	-	-			
SALARY SUPPORT		30	18 28	18	94
WORKSHOP & SEMINAR		28			28
TRANSPORT & TRAVEL		9	8		17
EVALUATION		32	30 18	30	110
TRAINING		11	8		19
EXTENSION TO NEWAREAS		100	100 92	100	392
TOTAL	67	300	382	193	942

The figures represent provision made in BE 80-81. The enhanced provisions are not covered by any specific proposals. Nor were they discussed with the Mission. Hence the figures under "disbursement" have been limited to those provided in the Appraisal Report "Grey Book".

EXECUTIVE SECRETARIAT

US \$ 000

ESTIMATE OF EXPENDITURE / DISBURSEMENT

	UPTO 1979-80	1980-81	1981-82	1982-83	TOTAL
EQUIPMENT		19			13
<u>TECHL. ASSISTANCE</u>					
A. CONSULTANTS/ ADVISORS	116	210	70 *		396
B. FELLOWSHIPS'	20	26	6 *		52*
2. SALARY SUPPORT	57	34	34		125
TOTAL	193	289	110		586
<u>DISBURSEMENT</u>					
REVISED	125	200	200	61	586
 VALUE OF EQUIPMENT PROPOSED FOR PURCHASE AS APPD BY MISSION					
				Rs. 12,025,000	
			OR	19,240 \$	
			DISBURSEMENT @ 65%	12,500 \$	

* FOLLOWS ESTIMATES IN APPRAISAL REPORT (GREY BOOK)

OFFICE MEMORANDUM *W*

TO: Mr. Emmerich M. Schebeck, Chief, AGRNU

DATE: November 7, 1979

FROM: Carmen Hamann, AGRNU

SUBJECT: INDONESIA: Nutrition Development Project -
Loan 1373-IND - Supervision Report

Attached is the Supervision Report for the above project.

Distribution

Ms. Kaplan	(AEA)
Messrs. Jaycox	(AEA)
Kirmani	(AEP)
Stern	(AEA)
Golan	(AEP)
Ruddy	(AENVP)
Wadsworth	(AEP)
Walden	(AEP)
Rajagopalan	(PAS) 3
Yudelman	(AGR) 2
Kapur	(OED)
Christoffersen	(AGR)
Hattori	(CTR)
Fernando	(CTR)
Elliott	(CTR)
Chittleburgh	(EDC)
Forget	(LEG)
Evans	(PHN)
Berg	(PHN)
Messenger	(PHN)
Please	(Indonesia)
Bumgarner	(Indonesia) 2

Attachments

CHamann:wb

THE WORLD BANK
IBRD AND IDA - SUPERVISION SUMMARY

This summary is

the initial summary
 part of a mission report
 an annual update

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.

THIS FORM IS A STOCKROOM ITEM.

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7 INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> 1373-IND	No.:	L/C Amount (\$xx.xm): US\$13.0 Million
Country: Indonesia	Borrower/Beneficiary: Health, Education and Agriculture	Board Date: 3-1-77	Signing Date: 3-15-77	Effective Date: 4-1-77	
Projects Dept./Div. Name: Nutrition	Org. Code No.:	Projects Officer: Ms. Carmen Hamann, AGRNU	Loan Officer: Miss Gillian R. Kaplan, AEA		

SECTION 1: SUMMARY PROJECT DESCRIPTION

The Project will: (1) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation; (2) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and (3) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

SECTION 2: PERFORMANCE RATING

STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating

TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.)

If more than one type of problem, enter most critical factor first.

IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

	This Summary	Last Summary
STATUS	2	2
TREND	2	1
TYPES OF PROBLEMS	F M	F M
IMPLEMENTATION STATUS	2	3
Disbursements	2	2
Estimated Cost	2	2
Anticipated Completion	2	2
Compliance with Loan Conditions	2	2
Project Finances	2	2
Management Performance	2	2
Procurement Progress	2	2
Performance of Consultants	1	1
Reporting	2	2
DEVELOPMENT IMPACT	1	1
Expected Benefits	-	-
Rate of Return	2	2
Institution-Building		

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total Project Cost (\$xx.xm)	of which:		Cumulative Disbursements through most recent Quarter ended (07 / 30/ 79) (\$xx.xm)
				Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	03, 81	03, 31, 82	26.0	10.2	15.8	3.5 (Est.)
Last Summary (/ /)	03, 82	03, 31, 83	26.0	10.2	15.8	
Current	03, 82	03, 31, 83	26.0	10.2	15.8	1.0 (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	1	6	09, 11, 79	11, 02, 79 (FS)
Previous Mission	5	33	06, 25, 79	07, 26, 79 (FC)
Next Mission Departure (Mo./Yr.)	01, 80	Recommended interval between missions (Months)	4	End of period covered by latest progress report (Mo./Day/Yr.)

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members	Mission Members' Specializations
Ewen Thomson	Nutrition Specialist
Bansi Amla	Food Technologist
David Mills	Architect

Number of members on both present and previous mission:

None
One
Two or More

SECTION 5: COMMENTS (Clarify, if necessary, data in Sections 3 and 4.)

Dr. Amla reviewed the development of the FTDC and its activities during the period July 3-15, 1979. Mr. Mills reviewed the progress of civil works under the project during his population mission in July, 1979. Mr. Thomson concentrated mainly on manpower development; but he dealt with other aspects as opportunity afforded from September 1-7, 1979.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS

The discussions of the February 1979 mission with the Minister regarding the weak management structure of the project have finally born fruit. A new Director of Nutrition and NIPP Coordinator (Mr. Tarwotojo) has been appointed; the Acting Executive Secretary has been promoted to Executive Secretary; and expatriates have been hired for position of Project Management Advisor and Finance and Procurement Advisor. A new budgetary problem has come to notice: carry-over funds from previous fiscal years can only be used after an SKO-SIAP has been issued, yet such SKO-SIAP can only be issued after the DIP's for the current year have been issued. This has severely delayed field operations of NIPP. IPB appears to treat the FTDC as a department, whereas at appraisal the FTDC was regarded as an independent R&D institution, associated with IPB for administrative convenience. So far 25 permanent staff are in position, and 15 temporary staff require to be made permanent. IPB has agreed to fill only 16 posts out of 39 vacancies. The Program Advisor joined FTDC in July 1979. Although progress: the structures of all component buildings is well advanced, no gas, water or electricity supplies have been provided. All contracts have been affected by the devaluation of the rupiah and the substantial increase in petrol price. The increased costs of imported materials greatly affect the service contracts. GOI approved increases are less than increased costs, resulting in contractors going slow or stopping work. The Nutrition Academy remains unused awaiting the provision of services. The nutrition program, supported by UNICEF and USAID, proposes to train 820,000 village cadres during the next 4 1/2 years. This extremely ambitious program will affect manpower training requirements and cause grave concern regarding management capacity and coordination of nutrition programs in Indonesia. The Task Force (designate) for Manpower Training has drafted terms of reference and has prepared a schedule of data required for a nutrition manpower review. A consultant is being hired. The consulting architects have been asked to prepare preliminary proposals, plans and estimates for a nutrition training center.

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

1. The extent of control exerted by IPB over FTDC and the autonomy necessary for FTDC to plan its programs and staff requirements should be discussed with the Minister of Education.
2. The progress in completing all buildings and making them fully operational should be monitored by the Project Director and a monthly report cabled to the Bank.
3. The Project Management should compile a comprehensive list of civil works and services still necessary to complete the project and make the buildings completely operational including statement of financial availability of funds in each case.
4. Following the appointment of a new Director of Nutrition, the Project Director should keep to his undertaking to reorganize the Nutrition Directorate.
5. A meeting with UNICEF and USAID should be set up to consider manpower training requirements management capacity and program coordination in Indonesia.

NAME OF PREPARING OFFICER:

Carmen Hamann, AGRNU

INITIALS:

DATE:

November 2, 1979

No. 380

Dr. R. Soebekti, M.P.H.
Direktur Jeneral
Direktorat Jenderal Pembinaan Kesehatan
Department Kesehatan
Jl. Prapatan 10
Jakarta
Indonesia

Dear Dr. Soebekti:

Indonesia - Loan 1373-IND

Nutrition Development Project

1. Thank you for the kind assistance provided to three one-man Bank missions: on civil works in July 1979; on FTDC in July 1979; and on manpower development in September 1979. We have studied the mission reports and wish to follow up a number of important matters raised in them.

Organization and Management

2. We are pleased to learn about Mr. Tarwotojo's appointment as the new Director of Nutrition and NIPP Coordinator and about Mr. Adinugroho's promotion to Executive Secretary. These appointments in conjunction with the recruitment of Mr. Fritz, Finance and Procurement Advisor, and of Mr. Balasubramanian, Project Management Advisor, should provide the project with the much needed management strength. You have pointed out the difficulties regarding the absorption of the Project Secretariat and M&E Unit within the Ministry, because they are mainly staffed by non-civil service personnel. Since one of the objectives of the project is institution building, it is important that the M&E Unit should continue to function after the end of the project. We believe, therefore, that a resolution to the organizational status of the M&E Unit as well as the Project Secretariat should be considered as high priority. As you will recall this issue was discussed in our February meeting with Minister Dr. Swardjono, where the Minister reached the decision that the M&E Unit should be established in the Nutrition Directorate, so that it will function after completion of the project.

Monitoring and Evaluation

3. The cessation of NIPP activities, which you found in Lombok, raises a doubt regarding the effectiveness of the M&E Unit. The inaction should have been high-lighted through monitoring, long before your visit in August. The mission reported that the M&E Unit had no information on NIPP later than the first quarter of 1979. While the Project Appraisal had placed emphasis on monitoring as a management tool, the M&E Unit, as well as its reporting system, still remains to be organized to perform efficiently. The staff has to be strenghtened, and consultancy arrangements still have to be entered into in a manner satisfactory to GOI and to the Bank.

4. We fully sympathize with the difficulties you have faced in recent months in finding a qualified and experienced consultant group for monitoring and evaluation. Following your request during our June mission, we suggested to you consultant firms from India, Singapore and Australia who would be well qualified to assist you in the task of monitoring and evaluation and of reviewing the financial management of the project. We suggested these firms to you because of their past experience in this field which certainly is critical for this work to succeed. We would appreciate your careful review of all consultant firms with respect to their qualifications and past experience before you propose their hiring to the Bank. We firmly believe that the qualification and experience of the consultant group to be engaged should be the overriding principle for selection. Although we understand that financial restrictions on fee limits do exist, we understand from other Bank-financed projects in the agricultural sector that BAPPENAS is prepared to make exceptions when the proposal is properly justified by the executing agency.

Civil Works

5. In order to facilitate your follow-up on the many outstanding civil works issues, I attach a copy of the architect's report. There are several important issues in this report which I would like to bring to

your attention. First, the splitting up of civil works contracts, in order to overcome budgetary problems, has given a false illusion of progress. The structures of all component buildings are well advanced, but no gas, water or electricity supplies have been provided. For example, the laboratory of the Nutrition Academy has been an empty shell for over nine months. Second, contractual problems, attributable to the sharp rise in prices of building materials, require to be resolved. We suggest that the project management should compile a comprehensive list of all civil works and services still necessary to be undertaken in order to make all buildings completely operational. A statement of the availability of funds should also be made in each case. We would suggest that on the basis of this information the Project Secretariat monitors closely the weekly progress of civil works and informs the Bank regularly on the progress status.

Procurement

6. We understand that the total cost of the FTDC machinery, equipment, chemicals, glassware and books, for which quotations have been received, results in an overrun of US\$700,000 mainly due to price rises since appraisal. You have sought our views on using part of the unallocated amount of US\$1.00 million to meet this cost overrun. In order to assess your request, particularly since the overrun on this component would absorb 70% of the unallocated amount, we would require a detailed budget proposal on the funding requirements for each component for the remaining years of the Project. Before sending the budget proposal to the Bank we would suggest its clearance with BAPPENAS.

Disbursement

7. The issue of DIPs for 1979/80 appears to have been greatly delayed.

The mission reported that DIPs for FTDC and NIPP had not been issued by August 1979. We understand that the use of carry-over funds is

authorized by a letter of authority (SKO-SIAP), which can only be provided after the current DIP has been issued. We are most concerned that these budgetary and financial procedures brought NIPP operations in Lombok to a halt, because of lack of authority to spend. The start of operations in Central Java and South Sumatra may have been held up because of inability to procure equipment. We would appreciate it if you could investigate the reasons for delay in the issue of DIPs and consider how such delays may be avoided in future. I would appreciate it if you could send us information on the current status of DIPs for 1979/80.

Fellowships and Consultants

8. Both FTDC and CRDN are handicapped by the regulations restricting the award of fellowships to government officers, who have been in^{an} established post for a minimum of three years. Although these restrictions are enforced by the Government, we understand from other Bank-financed projects that the Government is prepared to make exceptions when properly justified by the executing agencies. The award of fellowships has become a matter of urgency. We trust that you will find a solution for this problem and take the necessary action to implement the fellowships program.

9. The last mission was informed that funds allocated for fellowship cannot be used for scholarships. As far as the Bank is concerned, the funds under "Technical Assistance" can be used for both scholarships for BS and fellowships for MS and PhD in Indonesia and abroad. Will you please take up this issue with the implementing agencies and BAPPENAS.

10. The Director of FTDC has experienced difficulties in getting consultants and suggested a reduction in consultant time from 96 man-months as provided in the Appraisal Report to 60 man-months. We feel that such reduction may adversely affect the research and development activities to be carried out by FTDC. An uneven development of certain disciplines

would take place which may not be conducive to meeting FTDC's objectives. We would be prepared to assist FTDC in identifying the needed experts, as long as we receive such requests well in advance.

CRDN and FTDC Staffing Problems

11. Both CRDN and FTDC are facing severe staffing problems due to an overall restriction by the Ministry of Health and IPB in hiring new staff. A solution to this obstacle needs to be found because the shortage of CRDN and FTDC staff prevents these institutions from carrying out their agreed work program. Would you please inform us what actions will be taken by the Ministry of Health and IPB to overcome this problem.

Human Resources Development

12. We are encouraged about the progress made so far in developing a program for nutrition manpower training in light of the requirements of Repelita III. In order to assess this plan for possible Bank funding under this project it's work would have to be completed prior to our proposed January 1980 mission in order to assure adequate DIP provisions.

Loan Agreement Covenants

13. As you are aware, Section 4.02(b) of the Loan Agreement states that the Borrower shall require that all of the agencies participating in the implementation of any part of the Project, maintain separate accounts. Although financial officers have been placed within each participating agency the quality of financial reporting of all project entities is still inadequate. The inadequacy of financial accounting is best demonstrated by the fact that previous Bank missions could not obtain a fully consolidated account of actual project expenditures of past years which would also provide the detailed breakdown between Government and Bank-funded expenditures. Nearly all expenditure information we have received so far contain a mixture of commitments and actual expenditures and are as such, not in conformity with acceptable financial accounting practices. This matter requires

urgent attention, particularly in light of your request for possible reallocation of expenditures towards an expended NIPP program and the human resource development. Also, Section 3.05(d) of the Loan Agreement requires that the accounts of all agencies participating shall be audited each year, and certified copies of the accounts shall be submitted to the Bank. For this purpose GOI or State auditors would be recognized as independent auditors. So far we have received no certified financial statements. Because of the importance of these covenants we would appreciate it if you could personally follow-up on these issues with the parties concerned and inform us by end of November on the decisions taken.

14. May we thank you and ask you to convey our thanks to your staff for the courtesy and cooperation extended to the missions.

With best regards

Sincerely yours,

Emmerich M. Schebeck
Chief

Nutrition Division
Agr. & Rural Development Department

Attachment.

cc: His Excellency
Dr. Suwardjono Surjaningrat
Minister of Health

Dr. Soejoto SH
Deputy Chairman for Social and Cultural Affairs
BAPPENAS

Mr. Ping Cheung Loh, Deputy Director
World Bank Resident Staff in Indonesia

Clearance with and cc: Miss G. R. Kaplan, AEA

OFFICE MEMORANDUM

TO: Miss N. Carmen Hamann, AGRNU

FROM: DAVID B. MILLS, POP
DM

SUBJECT: INDONESIA: Nutrition Project No. Ln.1373-IND: Civil Works

DATE: August 20, 1979

1. As requested in your letter of July 3, 1979, I made a brief review of the civil works of the Nutrition project No. Ln. 1373-IND during my mission on population projects in Indonesia in July 1979 and this report comments thereon and incorporates answers to the specific queries made in your letter.
2. The main problem so far as the completion of civil works is concerned, is still a budgetary and managerial problem. By splitting up the work into numerous parcels, allegedly to overcome budgetary problems, the Department has created the illusion of progress whilst in fact delaying the work. Superficially and visually progress is impressive, most of the structures are completed or well advanced but--gas and power supplies have not been arranged, and the air conditioning has not been ordered--many of which are dependent on further contracts which have not been let because of budgetary or other problems.
3. Indeed the civil works could still be completed within the project period but, to do so, all contracts to complete the works and services must be awarded without further delay. It is suggested that to achieve this a careful assessment be made of all work still necessary and the progress on all such works be monitored weekly by the Project Director personally.

Work Progress

4. To crystallize the situation I asked project management in conjunction with the consultants to prepare schedules of work already in hand and work still to be started. The resultant schedules appear in Annex 1 and in Annex 3; I have summarized these and shown progress percentages and anticipated completion dates, where applicable. More importantly, however, is listed the work still to be done before the buildings can be brought into use.
5. I think it is necessary to emphasize the need to budget for and complete these works at once, otherwise there will be empty shells of buildings standing idle for months, if not years. Already the Nutrition Academy buildings have been standing idle for 6 months, the structure was completed in January. Indicators are that it will be another 12 months before funds will be available to solve the power and other problems.

Inspection of Buildings

6. I took the opportunity of briefly inspecting the project buildings during a visit to Bogor and later to Kabayoran, and make the following comments:

(a) CRDN Buildings

- (i) Domestic wash basins and kitchen sinks with domestic faucets have been installed instead of proper laboratory sinks. These are unacceptable.

- (ii) There seems to be a superfluity of wash basins sometimes two to an office.
- (iii) There are no gas, water or electricity supplies.
- (iv) The Isotope room will require special drainage which has been designed but for which funds are not available.
- (v) It is understood that air conditioning will be provided in next year's DIP.

(b) FTDC Buildings

- (i) The contractor installing the Electrical and Mechanical services has stopped work and wishes to withdraw from the contract because of inadequacy of post-devaluation prices which GOI allows.
- (ii) The gantry and platform in the Pilot Plant are uncompleted.
- (iii) No arrangements have been made for steam supply in the Pilot Plant.
- (iv) There is also a problem regarding the hoist and platforms in the Pilot Plant which need strengthening and a railing provided. Again provision is in the project, but the DIP is inadequate. If funds are not found, the building will be unused until next year's DIP. The cost of extra work is US\$12,000 (Rp 7,000,000).

(c) Nutrition Academy

- (i) There is no power supply to the new buildings. Apparently the sub-station is overloaded, and a new supply with a new transformer for the whole campus is needed, but no money is available. Power company also wants to convert from 110V to 230V. Emergency power supply was provided in the project, but no counterpart money has been provided in DIP Murni and cannot be until next year; meanwhile the buildings have been idle 6 months already and will wait another year unless urgent action is taken.
- (ii) There is no water or drainage to the laboratory sinks which are free standing.

Contractual Problems

7. All contracts have been affected by the devaluation of November 1978 and the more recent increase of 37% in petrol prices. The price increases agreed by GOI have seemingly not been sufficient to meet contractors' extra costs as a result of which all contract work has slowed down and is now behind schedule.

Construction Cost

8. Building prices in Indonesia are by no means stable yet following devaluation in November 1978 and then a 37% increase in petrol in April 1979. Nevertheless at my request the project management and consultants tried to estimate the total revised cost of the work when they submitted the schedules referred to in paragraph 3 and which are copied at Annex 3 hereto.

9. These figures I have summarized in Annex 2 and added a contingency element, comparing them with appraisal estimates from Annex 10, Appendix 2 of the Appraisal Report. This gives an indication of the amount of saving which may expected, however I would certainly not guarantee that all items still needed have been included in the schedules supplied by the project management at Annex 3 and plenty of room for further adjustment should be allowed.

10. A summary of the totals is reproduced in the following table:

Facility	Revised Estimated Cost		Appraisal Estimate
	Rp	US\$	(Annex 10) US\$
Construction	1,743,649,756	2,812,339	4,352,722
Professional Fees	133,182,024	214,810	412,411
Contingencies	51,067,220	82,366	640,867
GRAND TOTAL Rp	<u>1,927,899,000</u>	<u>US\$3,109,515</u>	<u>US\$5,406,000</u>

11. Whilst this estimate is by no means final it will form a useful basis for a more penetrating check into both the full amount of extra work needed and the cost of such work. This can be undertaken during the next mission after a detailed assessment has been made by project management.

Furniture and Equipment

12. Tenders have not yet been invited for furniture but it is understood that funds are available in the DIP. It would be advisable to proceed with contracts for the supply of furniture as quickly as possible.

13. The processing of tender documents for some of the CRDN and Nutrition Academy equipment is in hand and tender clarification was scheduled for July 18, 1979. Even so it is estimated that the equipment will not be received before July 1980. In the case of the Nutrition Academy it is understood that tenders have been received three times and each time had to be reduced because of price increases raising the cost above the provision.

New Storage for FTDC

14. I discussed with Dr. Winarno his proposals for additional work. It seems that he has three proposals:

- (a) Outdoor Testing Area. In fact such was provided in the original plan; consequently, this does not now apply.

- (b) Ecological Pen. Dr. Winarno was somewhat vague about his requirements for this, but it will be an open pen about 90 m² and costing around Rp4.5 million (US\$7,500). He was leaving for India just after our meeting and intended to obtain details of the pen whilst in that country. It was agreed that the architectural consultant, who was at the meeting, would then prepare plans and estimates.
- (c) Warehousing for Testing. Again Dr. Winarno could give no details but would obtain them during his visit to India. Roughly an area of 260 m² would be required at an approximate cost of Rp13 million (US\$21,000). The building would have to be isolated and rat proofed. The Architectural Consultant will prepare plans and an estimate as soon as the details are obtained.

15. On receipt of the plans and estimates Dr. Winarno will submit a packaged proposal to BAPPENAS to include this new work and the extra work required in the Pilot Plant to gantry and platforms, and he will try and get BAPPENAS to agree to the work going ahead in this financial year.

Nutrition Center

16. I inspected the site and the existing buildings at Pasar Minggu accompanied by the Project Manager and the Architectural Consultants. It seems to me that the buildings, with suitable renovations, could well form the basis of a new Nutrition Training Center.

17. The buildings are at present in use as a Nutrition High School for students who would be employed by MOH in the Provinces as Nutrition Assistants. The school is closing down and only 2 classes are now operating, it being the intention that GOI is changing to a Provincial Training system. The accommodation as it exists provides for 90 to 100 students both residential and tuition together with 6 staff houses. The buildings were constructed in 1950 and need renovations though some units were built as late as 1961. There is room on the site to accommodate a Nutrition headquarters and a monitoring and evaluation unit if needed.

18. I suggested that the Architectural Consultants be asked to make a detailed survey of the buildings and their suitability and draft proposals for their conversion to a Nutrition Training Center. I also suggested that the consultants should be asked to prepare draft proposals and estimates for the alternative site proposed near Bogor Mental Hospital so that the feasibility of both proposals could be assessed and economically compared. This was agreed.

19. The training will be for sub-professional staff to produce new middle level nutrition workers, and it is estimated that 2,650 will need to be trained over a 4-year period. The training periods will vary from 2 weeks to 6 weeks. After the main bulk has been trained the center will be used for refresher courses.

20. Bearing in mind the limited use of the center after the initial training was over, it was thought that accommodation for 50 students would be the optimum assuming 10 to 12 courses per year. Allowances could be made for expansion if this proved too restrictive. The sexes will be mixed at the courses so that flexibility in the design of the center is essential.

21. The center would provide all facilities approximately as follows:

- (a) Residential accommodation for 50 with sleeping and dining facilities for mixed sexes.
- (b) Tuition accommodation to include General Assembly, one large classroom for 60, three discussion rooms for 15-20 each, one demonstration room for 20-30 students.
- (c) Staff accommodation to include for three resident lecturers (120 m² each), two administrative staff (70 m² each), and one housekeeper (50 m²).

22. The alternative site to Pasar Minggu is at the Bogor Mental Hospital which would be near to CRDN and FTDC and therefore convenient to them for lecturing. However, it would not be so close to the Nutrition Academy, and there appeared little enthusiasm for this site. It was suggested that the Architectural Consultants should give an appraisal and cost estimate of providing the center at each site to assist the decision-making.

Nutrition Headquarters incorporating a Monitoring and Evaluation Center

23. The area originally suggested was 1,500 m², but this would have to be increased to accommodate headquarters staff, and the proposal needs some careful thought by the Nutrition staff. Additionally, staff quarters are required.

24. The site has not yet been selected, but it could probably be combined with the proposed Nutrition Training Center. It is possible that it could be accommodated at the Pasar Minggu site if this is finally chosen for the Training Center.

25. Again it was suggested that accommodation needs should be finalized and the consultants asked to provide preliminary proposals and estimates.

Summary and Recommendations

26. Although progress on the structures of buildings is well advanced, completion and occupation are being delayed because the essential services and supporting work have not been started in many cases. This has led to the Nutrition Academy building being completed but unusable for six months already, and other buildings could likewise remain completed but idle unless urgent action is taken at once.

27. The civil works can still be completed and brought into use within the project period but only if immediate action is taken to let contracts for the balance of work necessary to make them functional.

28. It is furthermore recommended that the project management in conjunction with the consultants should draw up a comprehensive list of work still necessary to complete the project and make the buildings completely operational. The list should include a statement of the financial availability of funds in each case.

29. A further recommendation is that the progress in completing all buildings and making them fully operational should be monitored weekly by the Project Director personally and a monthly report cabled to the Bank.

30. The contractor for the Mechanical and Electrical Installations for the FTDC buildings has stopped work with only 15% of this contract completed. It is understood that the problem is a dispute over the extra cost of work due to devaluation. If this problem is not resolved quickly, all FTDC buildings will stand idle. Urgent negotiations between the University, the PWD, BAPPENAS and the Contractor are recommended.

31. - A revised estimated cost of civil works was prepared by the project management in conjunction with the consultants, and this shows appreciable potential savings against the project provision. The comparative figures are:

Facility	Revised Estimate Cost		Appraised Estimate (Annex 10)
	Rp	US\$	US\$
Construction	1,743,649,756	2,812,339	4,352,722
Professional Fees	133,182,024	214,810	412,411
Contingencies	51,067,220	82,366	640,867
GRAND TOTAL	Rp 1,927,899,000	US\$3,109,515	US\$5,406,000

32. Tenders have not yet been invited for the manufacture of furniture but the processing of tenders documents for some of the equipment is in hand.

New civil works proposed by the project management include:

- (a) Outdoor testing area for FTDC - Already included in project.
- (b) Ecological pen for FTDC, Dr. Winarno to obtain details during his visit to India. Approximate cost US\$7,500.
- (c) Warehousing and testing facilities for FTDC - Again Dr. Winarno is to obtain details during his visit to India. Approximate cost US\$21,000.

- (d) Nutrition Training Center on site at either Pasar Minggu or Bogor Mental Hospital. Approximate cost US\$514,000.
- (e) Nutrition Headquarters incorporating a Monitoring and Evaluation Center. Probably to be sited with the New Nutrition Training Center. Details to be prepared by Project Secretariat.

33. It was agreed that the consultants would be asked to prepare preliminary schemes and estimates for the above and in the case of the Nutrition Training Center, alternative estimates for the two sites would be prepared. The savings against the project should be adequate to cover the cost of these extra costs

INDONESIA: NUTRITION PROJECT No. Ln.1373-IND: CIVIL WORKSPROGRESS OF WORK AS AT JULY 1979

P R O G R E S S

<u>Facility</u>	<u>% complete</u>	<u>Estimated Completion Date</u>	<u>Notes</u>
<u>CENTER FOR RESEARCH AND DEVELOPMENT IN NUTRITION (CRDN)</u>			
<u>Laboratory Wing I</u>			
Structure	95%	8.31.79	
Laboratory benches	36%	9.30.79	
Services	-		No Tenders invited. See under Infrastructure.
<u>Laboratory Wing II</u>			
Structure	89%	8.31.79	
Laborary benches	36%	9.30.79	
Services	-		No Tenders invited. See under Infrastructure.
Air Conditioning			No Tenders invited.
Radio Isotope Lab.			
Special Equipment)
Special glazing) No Tenders invited.
Special waste disposal)
<u>Auditorium Wing III</u>			
Structure	0%	3.31.80	Instructions to contractor being issued.
Services			No Tenders invited. See under Infrastructure.
<u>Dormitories</u>			
Structure	0%	3.31.80	Instructions to contractor being issued.
Services			See under infrastructure.
<u>Renovations</u>			
	85%	9.30.79	
<u>Housing</u>			
Structure	99%	7.31.79	
Services	-		See infrastructure
Access Road	-		No Tenders invited.
Street lighting	-		No Tenders invited.
<u>Infrastructure</u>			
Electrical Power)
Water Installation)
Gas Installation) No Tenders invited.
Transformer House)
Water disposal)
Fire alarm and lightning prevention)

INDONESIA: NUTRITION PROJECT N. Ln.1373-IND: CIVIL WORKSPROGRESS OF WORK AS AT JULY 1979

P R O G R E S S

<u>Facility</u>	<u>% complete</u>	<u>Estimated Completion Date</u>	<u>Notes</u>
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER (FTDC)</u>			
<u>Administration Building</u>			
Structure	89%	9.30.79	
Services	15%		See Infrastructure
Air Conditioning	-		No Tenders invited
<u>Food Research Laboratories</u>			
Structure	88%	9.30.79	
Services	15%		See Infrastructure
Air Conditioning	-		No Tender invited
<u>Pilot Plant and Utility Building</u>			
Structure	95%	7.31.79	
Services	15%		See Infrastructure
Steam Supply	-		No Tenders invited
Gantry and Platforms			Further finance needed
<u>Housing</u>			
Structure	79%	9.30.79	
Services			See Infrastructure
<u>Infrastructure</u>			
Electrical and Mechanical installations to all buildings	15%	?	The contractor has stopped work and wishes to withdraw.
Power connections	0%		Contract being awarded
Water Supply	15%	4.30.80	
Telephone, air conditioning and Fire Protection	-		No Tenders invited
Standby Generator	-		No Tenders invited

INDONESIA: NUTRITION PROJECT No. Ln.1373-IND: CIVIL WORKS

PROGRESS OF WORK AS AT JULY 1979

P R O G R E S S

<u>Facility</u>	<u>% complete</u>	<u>Estimated Completion Date</u>	<u>Notes</u>
<u>NUTRITION ACADEMY</u>			
<u>Food Laboratories</u>			
Structure	100%	Jan.1979	
Electric Power connections	-		No Tenders
<u>Library and A.V.Room</u>			
Structure	100%	Jan.1979	
Electric Power connections			No Tenders
<u>Housing</u>			
Structure	-	-	No Tenders
<u>Infrastructure</u>			
Power House)
Standby Generator)
Roads and Paths)
Fencing)
			No Tenders

INDONESIA: NUTRITION PROJECT NO. Ln.1373-IND: CIVIL WORKS

REVISED COSTS AS AT JULY 1979

Facility	Revised Estimated Cost		Appraisal Estimate
	Rp	US\$	(Annex 10) US\$
<u>CRDN</u>			
Construction			
Contracts awarded	461,908,608		
Claims	49,706,000		
Further work	115,807,800		
TOTAL CONSTRUCTION	627,422,408	1,011,972	2,356,867
Professional fees	55,563,743	89,619	211,567
Contingencies	16,551,849	26,696	304,566
TOTAL CRDN	Rp 699,538,000	US\$1,128,287	US\$2,873,000
<u>FTDC</u>			
Construction			
Contracts awarded	729,955,900		
Claims	160,369,464		
Further work	89,692,884		
TOTAL CONSTRUCTION	Rp 980,018,248	US\$1,580,675	US\$1,674,072
Professional fees	71,892,769	115,956	168,675
Contingencies	25,006,983	40,334	262,253
TOTAL FTDC	Rp1,076,918,000	US\$1,736,965	US\$2,105,000
<u>NUTRITION ACADEMY</u>			
Construction			
Contracts awarded	41,125,500		
Claims	7,563,100		
Further work	87,520,500		
TOTAL CONSTRUCTION	Rp 136,209,100	US\$ 219,692	US\$ 321,783
Professional fees	5,725,512	9,235	32,169
Contingencies	9,508,388	15,336	74,048
TOTAL N.A.	Rp 151,443,000	US\$ 244,263	US\$ 428,000
<u>TOTALS</u>			
CONSTRUCTION	1,743,649,756	2,812,339	4,352,722
PROFESSIONAL FEES	133,182,024	214,810	412,411
CONTINGENCIES	51,067,220	82,366	640,867
GRAND TOTAL	Rp1,927,899,000	US\$3,109,515	US\$5,406,000

- NOTES:
1. Data used is that supplied by MOH (see detail sheets) to which has been added contingencies calculated at approximately 10% of claims and extra work.
 2. The accuracy of the further work still to be done has not been checked but it is known that the total number of houses allowed in the project for the Nutrition Academy has not been allowed for so the full cost could be higher than shown herein.
 3. The details of the further work for the Nutrition Academy are not clear and seem to include equipment and furniture. This may mean fixtures such as laboratory benches etc., but needs checking.

CONSTRUCTION AND FINANCING SCHEDULE
DEVELOPMENT IN NUTRITION PROJECT - WORLD BANK AID

No.	NAME OF PROJECT	NAME OF CONTRACTOR	CONTRACT AMOUNT	COMMENCING DATE	ESTIMATED DATE OF COMPLETION	PERCENTAGE COMPLETED AS PER JUNE 30, 1979	INSTALMENT PAID AS PER JUNE 30, 1979	REMAINING INSTALMENT	APPROXIMATE CLAIM
1	2	3	4	5	6	7	8	9	10
I.	Centre for Research and Development in Nutrition (CRDN)								
A.							Rp.	Rp.	Rp.
1.	Design		Rp.						
	1. Laboratory/Wing I	Fa. Hari Murthi	8,198,028.41	1977	Febr., 1978	100 %	7,788,126.99	409,901.42	----
	2. Laboratory/Wing II	Fa. Hari Murthi	7,333,720.93	1977	Febr., 1978	100 %	6,967,034.08	366,686.05	----
	3. Housing	Fa. Hari Murthi	3,519,631.77	1977	Febr., 1978	100 %	3,343,650.18	175,981.59	----
	4. Wing III (auditorium)	Fa. Hari Murthi	9,636,871.88	1977	Febr., 1978	100 %	----	9,636,871.88	----
	5. Dormitories	Fa. Hari Murthi	3,577,488.37	1977	Febr., 1978	100 %	----	3,577,488.37	----
		Sub. Total.	32,265,741.36				18,098,812.05	14,166,929.31	
2.	Site Supervision								
	1. Laboratory/Wing I	Fa. Hari Murthi	5,756,062.50	August, 1979	August, 1979	95 %	3,453,637.50	2,302,425	----
	2. Laboratory/Wing II	Fa. Hari Murthi	4,745,348.84	August, 1978	August, 1979	89 %	2,847,209.31	1,898,139.53	----
	3. Housing	Fa. Hari Murthi	4,604,651.16	August, 1978	July, 1979	99 %	3,683,720.92	920,930.24	----
	4. Wing III (auditorium)	Fa. Hari Murthi	6,147,659.65	letter of order	March, 1980	0 %	----	6,147,659.65	----
	5. Dormitories	Fa. Hari Murthi	2,044,279.07	still in progress.	March, 1980	0 %	----	2,044,279.07	----
		Sub. Total.	23,298,001.22				9,984,567.73	13,313,433.49	
3.	Construction								
	1. Laboratory/Wing I	CV. Budi Agung Corp	102,330,000.	August, 1978	August, 1979	95 %	61,398,000.	40,932,000	20,466,000.
	2. Laboratory/Wing II	PT. Dimenel Eng. Contractors.	74,200,000.	August, 1978	August, 1979	89 %	44,520,000.	29,680,000	14,840,000.
	3. Housing	CV. Waskita Jaya.	72,000,000.	August, 1978	July, 1979	99 %	57,600,000	14,400,000	14,400,000
	4. Wing III (auditorium)	CV. Budi Agung Corp	146,214,607.84	letter of instruction to	March, 1980	0 %	----	146,214,607.84	----
	5. Dormitories	CV. Budi Agung Corp	43,952,000	contractors still in progress.	March, 1980	0 %	----	43,952,000	----
	6. Laboratory Benches for Wing I and Wing II.	CV. Waskita Jaya	23,212,000.	April, 1979	Sept., 1979	36 %	----	23,212,000	----
		Sub. Total	461,908,607.84				163,518,000	298,390,607.84	49,706,000
		Grand Total	517,472,350.42				191,601,379.78	325,870,970.64	49,706,000

CONSTRUCTION AND FINANCING SCHEDULE
DEVELOPMENT IN NUTRITION PROJECT - WORLD BANK AID

No.	NAME OF PROJECT	NAME OF CONTRACTOR	CONTRACT AMOUNT	COMMENCING DATE	ESTIMATED DATE OF COMPLETION	PERCENTAGE COMPLETED AS PER JUNE 30, 1979	INSTALMENT PAID AS PER JUNE 30, 1979	REMAINING INSTALMENT	APPROXIMATE CLAIM
I.	Centre for Research and Development in Nutrition (CRDN)								
A.									
1.	Design :		Rp.				Rp.	Rp.	Rp.
	1. Laboratory/Wing I	Fa.Hari Murthi	8,198,028.41	1977	Febr., 1978	100 %	7,788,126.99	409,901.42	----
	2. Laboratory/Wing II	Fa.Hari Murthi	7,333,720.53	1977	Febr., 1978	100 %	6,967,034.88	366,686.05	----
	3. Housing.	Fa.Hari Murthi	3,519,631.77	1977	Febr., 1978	100 %	3,343,650.18	175,981.59	----
	4. Wing III (auditorium)	Fa.Hari Murthi	9,636,871.88	1977	Febr., 1978	100 %	-----	9,636,871.88	-----
	5. Dormitories.	Fa.Hari Murthi	3,577,488.37	1977	Febr., 1978	100 %	-----	3,577,488.37	-----
		Sub. Total.	32,265,741.36				18,098,812.05	14,166,929.31	
2.	Site supervision :								
	1. Laboratory/Wing I	Fa.Hari Murthi	5,756,062.50	August, 1979	August, 1979	95 %	3,453,637.50	2,302,425	----
	2. Laboratory/Wing II	Fa.Hari Murthi	4,745,348.84	August, 1978	August, 1979	89 %	2,847,209.31	1,898,139.53	----
	3. Housing	Fa.Hari Murthi	4,604,651.16	August, 1978	July, 1979	99 %	3,683,720.92	920,930.24	----
	4. Wing III (auditorium)	Fa.Hari Murthi	6,147,659.65	letter of order	March, 1980	0 %	-----	6,147,659.65	----
	5. Dormitories	Fa.Hari Murthi	2,044,279.07	still in progress.	March, 1980	0 %	-----	2,044,279.07	----
		Sub.Total.	23,298,001.22				9,984,567.73	13,313,433.49	
3.	Construction :								
	1. Laboratory/Wing I	CV.Budi Agung Corp	102,330,000.	August, 1978	August, 1979	95 %	81,398,000.	40,932,000	20,446,000.
	2. Laboratory/Wing II	PT.Dimensi Eng.	74,200,000.	August, 1978	August, 1979	89 %	44,520,000.	29,680,000	14,840,000.
		Contractors.							
	3. Housing	CV.Maskita Jaya.	72,000,000.	August, 1978	July, 1979	99 %	57,600,000	14,400,000	14,400,000
	4. Wing III (auditorium)	CV.Budi Agung Corp	146,214,607.84	letter of instruction to	March, 1980	0 %	-----	146,214,607.84	----
	5. Dormitories	CV.Budi Agung Corp	43,952,000	construction to	March, 1980	0 %		43,952,000	
				contractors					
				still in progress.					
	6. Laboratory Benches for Wing I and Wing II.	CV.Maskita Jaya	23,212,000.	April, 1979	Sept., 1979	36 %	-----	23,212,000	----
		Sub. Total	461,908,607.84				163,518,000	298,390,607.84	49,706,000
		Grand Total	517,472,350.42				191,601,379.78	325,870,970.64	49,706,000

LIST OF WORKS TO BE TENDERED
DEVELOPMENT IN NUTRITION PROJECT - WORLD BANK AID
CENTRE FOR RESEARCH AND DEVELOPMENT IN NUTRITION

No.	NAME OF WORK	BUDGET ALREADY ALLOCATED IN DIP
1.	Electrical, water, and gas installation for Wing I	Rp. 6,092,800.
2.	Electrical, Water, and gas installation for Wing II - 1 st floor	3,725,000.
	- 2 nd floor	4,400,000.
3.	Electrical, water and gas installation	5,115,000.
4.	Street lighting for Housing	1,975,000.
5.	Access road to Housing	21,000,000.
6.	AC installation for Wing I and Wing II	45,000,000.
7.	Transformer House	7,500,000.
8.	Special Equipments for, Radio isotope lab. Wing II	4,000,000.
9.	Special Radio Isotope glass Wing II	4,000,000.
10.	Radio active waste Disposal, Wing II	2,000,000.
11.	Water Disposal	2,000,000.
12.	Fire Alarm and lightning preventor for office and lab.	5,000,000.
13.	Lightning Preventor for Buildings	4,000,000.
	Sub. Total.	115,807,800.

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1	2	3	4	5	6	7	8	9	10
11.	<u>Food Technology Development Centre (PTDC).</u>								
A.	<u>Consultant's fee</u>								
1.	<u>Design :</u>		Rp.				Rp.	Rp.	Rp.
1.	Housing	Fa. Hari Murthi	5,926,048.05	1977	Febr., 1978	100 %	5,829,745.65	296,302.40	----
2.	Administration Building	Fa. Hari Murthi	7,946,000.	1977	Febr., 1978	100 %	7,548,700.	397,300.	----
3.	Laboratory	Fa. Hari Murthi	11,851,772.72	1977	Febr., 1978	100 %	11,259,184.08	592,588.64	----
4.	Pilot Plant & Utility	Fa. Hari Murthi	16,443,195.98	1977	Febr., 1978	100 %	15,621,036.18	822,159.80	----
	Sub. Total		42,167,016.75				40,058,665.91	2,108,350.84	
2.	<u>Site Supervision :</u>								
1.	Housing	Fa. Hari Murthi	4,851,204.55	May, 1978	Sept., 1979	79 %	1,201,250.65	3,649,953.90	----
2.	Administration Building	Fa. Hari Murthi	5,069,000	May, 1978	Sept., 1979	88 %	1,013,800	4,055,200.	----
3.	Laboratory	Fa. Hari Murthi	7,560,613.64	May, 1978	Sept., 1979	89 %	1,512,122.73	6,048,440.91	----
4.	Pilot Plant & Utility	Fa. Hari Murthi	12,244,933.18	May, 1978	July, 1979	95 %	2,448,986.64	9,795,946.54	----
	Sub. Total.		29,725,751.37				6,176,160.02	23,549,591.35	
B.	<u>Construction, Civil Works only</u>								
1.	Housing.	PT. Yunawati.	115,383,000.	May, 1978	Sept., 1979	79 %	69,229,800	46,153,200	8,152,588.92
2.	Laboratory	PT. Tjahja Rinda Kencana.	104,014,000.	May, 1978	Sept., 1979	88 %	62,408,400	31,920,000	8,144,074.86
3.	Administration Building	PT. Kotindo Karya	79,800,000.	May, 1978	Sept., 1979	89 %	47,880,000	41,605,600	8,919,813.98
4.	Pilot Plant & Utility	PT. Bangun Cipta Sarana.	137,135,000.	May, 1978	July, 1979	95 %	82,281,000	54,854,000	19,703,985.74
	Sub. Total.		436,332,000.				261,799,200	174,532,800	42,920,463.50
C.	<u>Electrical & Mechanical Installation.</u>								
1.	Administration Building	PT. Teknik Umum	40,767,500	Febr., 1979	Pending due to dis	15 %	----	40,767,500	16,307,000
2.	Laboratory.	PT. Teknik Umum	44,400,700	Febr., 1979	continuation of	15 %	----	44,400,700	17,740,000
3.	Pilot Plant & Utility.	PT. Teknik Umum	49,957,700.	Febr., 1979	work by contractor	15 %	----	49,957,700	19,983,000
	Sub. Total.		135,125,900.					135,125,900	54,050,000
D.	<u>Water Supply</u>								
1.	Laboratory.	PT. Mega Eltra.	31,412,500.	Febr., 1979	April, 1980.	15 %	----	31,412,500	12,565,000
2.	Pilot Plant & Utility.	PT. Mega Eltra.	127,085,500.	Febr., 1979	April, 1980	15 %	----	127,085,500	50,834,000
	Sub. Total.		158,498,000					158,498,000	63,399,000
	Grand Total.		601,848,668.12				308,034,025.93	403,814,642.19	160,369,463.50

Be An

The Cost of Electricity connection
 For Food Technology Development Center.
 Indonesia Nutrition Development Project
 Loan No. 1373 - I:ID

<u>No.</u>	<u>Cost Specification</u>	<u>Name of Contractor</u>	<u>Contract amount Rp.</u>	<u>Comencing Date</u>
1.	The cost of additional power of electricity with a capacity of 43.450 VA for water treatment.	PLN. Perusahaan Listrik Negara.	4.380.500,-	21 - 3 - 1979
2.	The cost of electricity Power with a capacity of 233 KVA for administration Building Laboratory, Pilot Plant, and Utility.	- " -	15.260.500,-	21 - 3 - 1979
3.	The cost of electricity Power for FTDC Staff Housing with a capacity of 30 - 40 KVA.	- " -	6.449.000,- ^{*)}	----
4.	The cost of electricity Power with a capacity of 24.000 VA for water Pump Building.	- " -	2.910.000,-	21 - 3 - 1979
5.	A.C. Instalation; electricity Telephon and Fire protection.		60.692.883,40 ^{*)}	----
			89.692.883,40	

*) Estimate Cost.

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1	2	3	4	5	6	7	8	9	10
III.	Nutrition Academy :								
A.	Consultant's fee								
1.	Dessin	Rp.							
	1. Laboratory.	Fa. Hari Murthi	1,617,694.77	1977	Febr., 1978	100 %	-----	1,617,694.77	----
	2. Library.	Fa. Hari Murthi	1,846,883.72	1977	Febr., 1978	100 %	-----	1,846,883.72	----
		Sub. Total	3,464,578.49					3,464,578.49	
2.	Site Supervision :								
	1. Laboratory.	Fa. Hari Murthi	1,053,537.79	July, 1978	Jan., 1979	100 %	----	1,053,537.79	----
	2. Library.	Fa. Hari Murthi	1,207,395.35	July, 1978	Jan., 1979	100 %	----	1,207,395.35	----
		Sub. Total.	2,260,933.14					2,260,933.14	
B.	Construction :								
	1. Laboratory.	PT. Berkat Bumi Sari	16,473,500.	July, 1978	Jan., 1979	100 %	16,849,825.	823,675	3,294,700
	2. Library	PT. Berkat Bumi Sari	21,342,000.	July, 1978	Jan., 1979	100 %	20,274,900.	1,067,100	4,268,400
	3. Housing.	PT. Berkat Bumi Sari	3,310,000.	Oct., 1977	Oct., 1978	100 %	3,310,000.	----	-----
		Sub. Total.	41,125,500				39,234,725.	1,890,775	7,563,100
		Grand Total.	46,851,011.63				39,234,725	7,616,286.63	7,563,100

List of works/Equipment to be tendered
Nutrition Academy - Indonesia Nutrition
Development Project Loan No. 1573 - IND.

No.	Name of work/activity	Budget already allocated in DIP	
		78/79 Rp.	79/80 Rp.
1.	Special Equipment	35.519.000	9.172.000
2.	Furniture.	14.289.000	-
3.	Housing (3 Units).	-	19.540.500
4.	Electricity power connection for Laboratory and Library with a capacity of 55.000 watt.	-	9.000.000
Total		49.808.000	37.712.500

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INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
Article III			
3.02	The BORROWER shall employ consultants whose qualifications and experience and terms and conditions of employment shall be satisfactory to the Bank.	Operative	
3.03	The BORROWER shall afford the Bank a reasonable opportunity to comment on the qualifications and experiences of any person proposed to be appointed to the position of Project Director, Project Co-Director, Project Manager and NIPP Coordinator.	Operative	
3.04 (a)	The BORROWER undertakes to ensure, or make adequate provision for the insurance of the imported goods to be financed out of the proceeds of the Loan against hazards incident to the acquisition, transportation and delivery thereof to the place of use or installation, and for such insurance any indemnity shall be payable in a currency freely usable by the BORROWER to replace or repair such goods.		Not applicable up to date.
(b)	The BORROWER shall cause all goods and services financed out of the proceeds of the Loan to be used exclusively for the Project.	Operative	
3.05 (a)	The BORROWER shall furnish to the Bank, promptly upon their preparation, the plans, specifications, reports, contract documents and work and procurement schedules for the Project.	Operative	Contract documents have been delivered in Indonesian Bahasa which has resulted in delays in approval by the Bank.

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
(b)	<p>The BORROWER:</p> <p>(i) shall maintain records adequate to record the progress of the Project (including the cost thereof) and to identify the goods and services financed out of proceeds of the Loan, and to disclose the use thereof in the Project;</p> <p>(ii) shall enable the Bank's accredited representatives to visit the facilities and construction sites included in the Project; and</p> <p>(iii) shall furnish to the Bank all such information as the Bank shall request concerning the Project, the expenditure of the proceeds of the Loan and the goods and services financed.</p>	<p>Operative</p> <p>Operative</p> <p>Operative</p>	<p>The Finance Officer of the Secretariat does not maintain full records of expenditure. The Project Director has been advised to engage a competent consultant to set up an improved recording system.</p>
(c)	<p>The Project Director shall be required to prepare and furnish to the Bank semi-annual reports regarding the progress of the Project.</p>	<p>Operative</p>	<p>The standard of reporting needs to be improved. The Project Director has been informed.</p>
(d)	<p>The accounts of all agencies of the BORROWER participating in the implementation of the Project shall be audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies of scope and detail as the Bank shall have requested.</p>	<p>Non-Operative</p>	<p>Certified copies of the accounts have been requested.</p>

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
3.06	The BORROWER shall take or cause to be taken all such action as shall be necessary to acquire as and when needed all such land and rights in respect of land as shall be required for the construction and operation of the facilities included in the Project and shall furnish to the Bank, promptly after such acquisition, evidence satisfactory to the Bank that such land and rights in respect of land are available for purposes related to the project.		Land for FTDC already belonged to the Agriculture Ministry of Bogor; land for CRDN already belonged to the Ministry of Health. The same holds for the Nutrition Academy.
3.07	The BORROWER shall establish and maintain a Research Coordinating Committee (1) to facilitate coordination of the nutrition-related research programs being carried out by various institutes, and (ii) submit to the Bank annual progress reports on such programs.	Operative Non-Operative	Reports have been received from the institutions which provided the necessary information.
3.08	The BORROWER shall, with respect to the NIPP program: (i) submit to the Bank not later than August 1, 1977, the plans of operations for the first two Kabupatens for approval, prior to commencing implementation of such plans; (ii) carry out a review of the NIPP program at the end of the second year of the NIPP program; and (iii) select new Kabupatens to be served by NIPP program not later than October 1, 1977 and the remaining three Kabupatens not later than August 1, 1978.	Completed Completed Operative	The last 3 Kabupatens are under discussion.

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
3.09	Not applicable up to date.		
3.10	The BORROWER should provide, as and when required, no less than 10 additional Extension Staff for the home/village gardens of the NIPP program.	Operative	More than 10 Extension Staff are involved in home/village gardens, but are not working full-time on home gardens. The mission considers this arrangement satisfactory.

Indonesia

ANNEX 3

NUTRITION DEVELOPMENT PROJECT

KEY PROJECT INDICATORS

	Achievement	Appraisal Estimates for First Two Years	Percentage of Appraisal Estimates
NIPP			
Number of villages	18	18	100
Number of persons reached with supplementary feeding:			
- children	1,396	2,592	53
- pregnant women	153	630	24
- lactating women	354	599	59
Number of Cadres trained	252		
Number of village food storage units installed	18	5	360
Number of food processing units installed	9	18	50
Home gardens:			
Number of villages	63	72	87
Number of farmers reached	7,200	7,200	100
Nutrition Education:			
Number of villages	60	36	166
Number of families reached	56,000	22,000	254
Number of Cadres trained	2,000	432	463
Anemia Control			
Number of workers reached:	2,096	2,000	104
North Sumatra	1,098	1,000	109
East Java	998	1,000	99
CRDN			
Civil works - construction stage:			
Laboratories (Wings I and II)	83%	100%	83
Staff housing	96%	100%	96
Fellowships: MSc. degree			
BSc. degree	9	14	64
Short-term	2	2	100
man-month	4	9	44
	3	21	14
FTDC			
Civil works - construction stage:			
Administration Building	13%	100%	13
Food Research Laboratory	82%	100%	82
Pilot Plant	82%	100%	82
Staff Housing	57%	100%	57
Fellowships: MSc. degree			
Short-term	6	10	240
man-month	13	5	88
	24	27	
Nutrition Academy			
Civil works - construction stage:			
Library, laboratories and audio-visual rooms	100%	100%	100
Housing	16%	100%	16
Fellowships: MSc. degree			
Scholarships	1	6	16
	53	48	110

IndonesiaNUTRITION DEVELOPMENT PROJECTSCHEDULE OF DISBURSEMENT

(as of October, 1979)

Fiscal Year and Quarter	Cumulative Disbursement (US\$ m)			Actual or Latest Estimated Disbursement as % of Appraisal Estimates
	Actual Total	Appraisal Estimate (Aug. 1975)	New Estimate	
1977 - December 31	0.0	0.1	-	0
1978 - December 31	.09	1.1	-	8
1979 - March 31	.3	1.9	-	16
1979 - June 30	.6	2.4	-	25
1979 - September 30	1.0	3.5	-	28
1979 - December 31		4.6	1.5	32
1980 - December 31		9.0	4.6	51
1981 - December 31		12.7	7.6	59
1982 - March 31		13.0	7.7	59

CLOSING DATE

03.3.82

03.3.83

NOTE: The estimates presented are likely to be modified during the mid-term review which will include further related activities and the extension of the project by one year. The mid-term review will be completed by January 1980

INDONESIA

NUTRITION DEVELOPMENT PROJECT

Supplementary Supervision Mission July - September 1979

PROJECT EXECUTION

Budget Provisions

1. A new budgetary problem has come to notice. Carry-over funds can only be used after an SKO-SIAP (letter of authority for carry-over funds) has been issued. However, no SKO-SIAP can be issued until the DIPs for the current financial year have been issued. At the time of the mission visit, no DIPs had been issued for UPGK plus. Action in Lombok was reported to have stopped and the situation elsewhere was not known, but local initiative is likely to have maintained action in Bojonegoro and South Sumatra.

Food Technology Development Center (FTDC)

2. The two consultants engaged from October through December 1978 worked well, and the Program Advisor joined FTDC in July 1979. On June 30, 1979, LCB tenders for equipment, glassware, chemicals and library requirements were opened. The bidding position was as follows: total number of packages - 42; packages having three or more bids - 16; packages having 2 bids - 6; packages having 1 bid - 11; packages having no bids - 9.

3. GOI's procedure stipulates that there should be at least three bids per package, and in exceptional cases two bids may be acceptable provided the Tender Committee is satisfied and makes suitable recommendations. The packages having single bids or no bids are to be reprocessed for fresh international competitive bidding. This may cause a delay of 6-9 months. Keeping in view the specialized nature and the urgency to procure the pilot plant equipment at the earliest, the Government suggested that the second attempt on ICB may be replaced by inviting limited quotations or resort to internal shopping.

4. The total cost of the equipments, chemicals, glasswares and books for which the quotations have been received comes to US\$2.3 million. The provision for equipment purchase is US\$1.6 million. The overrun of US\$0.7 million is due to price rise and it's funding has been requested from contingencies. The provision of US\$1.6 million was arrived at in 1976 when prices of the equipment were half of what were seen in the bid offers.

5. Tender documents for furniture are under preparation with the intention of inviting tenders in October 1979. Delivery should coincide with the time the buildings are ready for occupation.

6. Non-procurement of vehicles is affecting the day-to-day activity of the staff and the consultants. Since the FTDC activities are spread out at three different locations about eight miles apart, and frequent discussions are required with the Project Director and his staff in Jakarta besides visits to NIPP areas, urgent action is called for to procure the vehicles.

7. Baseline survey fieldwork on food handling and storage practices in UPGK plus (NIPP) areas has been completed. Reports on Bojonegoro and West Lombok have been prepared but are not yet translated into English. Reports from the other areas are under preparation.
8. Trials of various types of storage structures are being carried out in Bojonegoro and West Lombok. The initial reaction of farmers has been encouraging, but their effectiveness must be studied over a period of at least two seasons.
9. FTDC designed prototypes for new equipment for the production of the food supplement. The new dryer, with a much greater capacity, has reduced processing costs from Rp 329.68/kg to Rp 23.48/kg. New milling equipment, to replace the grinder, has given much better performance under test; its field performance is under study. New equipment for cleaning soya beans and rice has also been sent for field trials.
10. Thirty technical booklets on how to start small-scale industries have been prepared in Indonesia, and their impact will be followed up. The FTDC has also designed a cassava chipper, a kiln for smoke-drying fish and a bottle cleaner for catsup manufacturers.
11. No steps have been taken to introduce quality control for ensuring the production of hygienic products with uniform quality. Until FTDC facilities are commissioned, CRDN has agreed to analyze samples of the food supplement, which will be collected from the field.
12. FTDC has so far utilized 9 man-months of short-term fellowships and have proposals at advance processing stage to send 8 more staff members for training, utilizing 13.5 more man-months. By the end of 1979, 83% of the short-term fellowships would be utilized. Long-term fellowships however remain almost unutilized essentially on account of government regulations which restrict the award of fellowships to civil servants who have been in an established post for at least three years. A new institution, such as the FTDC, depends mainly on recruiting new staff. Such staff would be barred from the further training, necessary for them to perform their task adequately, until after the project period. Some relaxation of the regulations appears to be warranted. Government holds the view that fellowships are meant for senior staff; temporary staff and students working towards B.Sc. degrees are entitled only to scholarships. Negotiations to include both categories (fellowships and scholarships) to be financed under the project should be followed up.
13. The Director of FTDC experienced difficulties in getting suitable consultants and suggested a reduction in consultant time from 96 man-months as provided in the appraisal report to 60 man-months. The mission felt this would greatly affect the development of research and development activity. An uneven development of certain discipline would take place which may not be conducive to meeting the objective. The Director of FTDC was assured that the Bank would assist in identifying the experts.
14. So far, 25 permanent staff members are in position together with 15 temporary staff members who should be made permanent. FTDC proposed 61 positions for FY80, but IPB agreed to the creation of only 16 positions. At the time of appraisal, a staff strength of 79 was envisaged for FY80. With

the limitation imposed this cannot be achieved. This situation gives rise to another important issue: the relationship between FTDC and IPB. With strong IPB control over FTDC, it is likely that the programs will be academically oriented, and performance emphasis will be on scholastic achievements rather than on solving the problems of farmers, consumers and the industry. This matter requires careful handling and discussion at the level of the Minister of Education.

15. The organization and management structure of FTDC is still to take shape. At present the tasks are performed essentially by the staff of IPB seconded to FTDC. The Director-designate is holding the position of a professor at IPB, and his salary is paid by the university. He therefore devotes considerable amounts of time on discharging teaching obligations. FTDC requirements are increasing day by day, and the Director is required to devote more time. It is therefore necessary that the Director-designate shed his other responsibilities and devote his full time on matters concerning FTDC.

16. According to Government Decree M 056/1/1978 issued on March 27, 1978, the FTDC will have four sections: (i) Administrative, (ii) Research, (iii) Transfer of Technology, and (iv) Installation. These sections would be manned by a staff of 108 who would be responsible to the Director and he in turn to the Rector of IPB. This indicates an overriding control by IPB. FTDC should enjoy autonomy to plan its programs and also in matters relating to personnel. This not being very well defined, IPB is exercising its control like any other teaching department. The requirements of a R&D institution are so very different from an academic department; that if no timely action is taken to define the degree of autonomy the Centre should have one is afraid it may become an enlarged department of Food Technology in IPB. This was not the intention of developing an applied food science and technology centre. The Director of FTDC should have freedom not only to plan its program but also to create positions, hire personnel of required qualifications, and train them.

Center for Research and Development of Nutrition (CRDN)

17. The civil works construction of Phase I nears completion, but the provision of services lags far behind as the contractors refuse to carry out the work under the revised rates offered by Government. The mission attended the meeting of the Tender Committee when bids were opened for the first package of equipment. Eight bids were submitted, but two were ruled as having arrived too late. Of the remainder, two were below the budgeted ceiling, and they will be evaluated within one week.

Nutrition Intervention Pilot Project (NIPP)

18. The approval of the DIP murni and DIP supplement for 1979-80 has not been received, and information regarding the delay was not available during the visit of the mission. On Lombok, because funds were not available to purchase raw materials, production of the food supplement had stopped; because no supplement was available, monthly weighing had also stopped. The Project Director returned from Lombok on September 4; he reported that normal working had resumed. The latest information submitted to the M and E Unit was for the first quarter of 1979. This delay is mainly due to the engagement of the Nutrition Directorate staff in a constant series of meetings regarding the UNICEF supported-UPGK program. GOI has agreed to Bali being one of the field areas in this Project. An issue still remains regarding the selection of villages to implement the project's activities.

Civil Works

19. By splitting up the civil works in order to overcome budgetary problems, the illusion of progress masks the actual delay which has resulted. Most of the structures are completed or well advanced, but neither gas nor power supply had been arranged, and the air conditioning had not been ordered.

20. At Appendix I the works progress has been summarized showing progress percentages, anticipated completion dates and the work still to be done before the building can be brought into use. Unless GOI takes early action to complete the works, empty shells of buildings may stand idle for many months. The Nutrition Academy has been idle for nine months.

21. The CRDN buildings have no gas, water or electricity services. Laboratory fittings, such as sinks, are poor; the sinks are being changed. The isotope room requires special drainage, which has been included in the design but not provided for in the budget.

22. At the FTDC site, the contractor installing electrical and mechanical services has stopped work and wishes to withdraw from the contract because of the inadequate increases allowed by GOI for post-devaluation costs. For the hoist and platforms in the Pilot Plant, \$12,000 additional work is required, but no provision has been made in the current budget, which may mean the building will remain unused for a year. The Nutrition Academy has neither water nor drainage to the laboratory sinks nor power supply to the new buildings.

23. All contracts have been affected by the Rupiah devaluation of November 1978 and by the more recent increase of 37% in the cost of petrol. Medium and small contractors cannot finance the extra costs and losses involved; a contributory factor is that suppliers of building materials will no longer supply materials on credit. All contract work has slowed down.

24. Teknik Umum who contracted for the installation of electrical and mechanical services for the FTDC has stated verbally that they cannot complete the contract. Price increases permitted by Government amounted to 38% whereas his overall costs had increased from 80% to 100%, some materials having increased by 200% to 300%. Only 15% of this contract has been completed, and the delay will affect the utilization of all the new FTDC buildings.

25. Revised figures of cost, to which a contingency element has been added, are compared in Appendix 2 with the estimates at appraisal. A summary of totals is given in the following table, but, as all items still needed may not have been included, the figures should be treated with caution.

<u>Faculty</u>	<u>Revised Estimated Cost</u>		(Annex 10) <u>Appraisal Estimate</u>
	Rp	US\$	US\$
Construction	1,743,649,756	2,812,339	4,352,722
Professional Fees	133,182,024	214,810	412,411
Contingencies	51,067,220	82,366	640,867
Grand Total	927,899,000	3,109,515	5,406,000

Nutrition Manpower Development

26. During the interim progress review mission a study was proposed by the Nutrition Academy to identify the manpower requirement to meet the various nutrition programs included in Repelita III. A Task Force (designate) had been formed and had held one meeting by the time of the mission's arrival. The Task Force (designate) consists of Dr. Tarwatjo, chairman, Messrs. Adinugroho, Soekirman and Suaspendi and two representatives from the Center for Health Training. At the first meeting, proposed Terms of Reference for the Task Force were drafted. (An unofficial translation is at Appendix 3; the original is on file.) No decree has yet been issued establishing the Task Force.

27. The mission met the Task Force (designate) on three occasions and prepared a schedule of the data which would be required for a nutrition manpower review. The schedule (see Appendix 4) includes the identification of existing training courses, with details of participants, entry levels, duration of course, sources of students, curricula and placement of the output; facilities available for training, with details of classrooms, laboratories, administrative offices, dormitories, entering facilities, services, staff housing, transport, equipment and field training areas; the available staff, with details of numbers full-time or part-time, qualifications, work loads, staff training programs and other supporting staff. Details of the budgets would provide expenditure by categories, income by sources, unit cost per student and remuneration per hour for teaching staff. Nutrition manpower requirements for Repelita III programs will be analyzed by categories--post graduate, graduate, undergraduate, auxiliary and cadre.

28. A seminar will shortly be held for the UPGK representatives from the field. Local consultants will be engaged to analyze the results of the seminar, follow up in the field, where necessary, and prepare a report for the next mission. This report should facilitate the work of the manpower consultant who should be hired in October.

29. UNICEF and USAID are providing funding for expansion of UPGK activities. The former will provide community nutrition volunteers in 36,000 villages at the rate of 20 volunteers per village, i.e., 680,000 volunteers by 1986. The basic package includes child-weighing, education in nutrition and home food production, nutritional first aid, primary health care with referral to the health centers for immunization and other services. The complete package will include a subsidy for supplementary feeding of malnourished children, provided by Government and administered by the community; it also provides for intensive efforts to promote home food production. The UNICEF commitment amounts to \$12,857,300 for the five-year period.

30. The program supported by USAID is similar in content and is reported to reach 7,000 villages during the project period. Both programs will be under the control of the Director of Nutrition.

31. While it is gratifying to note that the main interventions are those applied in UPGP (or NIPP as previously called) plus, it is somewhat alarming to find that no provision seems to have been made for adequate supervision of the community nutrition volunteers. In UPGK plus, the effectiveness

of the cadres has depended directly on the quality of supervision. No inducement of any kind will be provided for the community nutrition volunteers; if gratuitous enthusiasm can be maintained among the volunteers, it would be a unique demonstration of public spirit on such a large scale.

32. The forthcoming mission will have to determine the nutrition training required to mount and maintain these ambitious programs and the way in which this training would be connected with nutrition manpower establishments in Governmental departments.

33. During the last supervision mission, the possibility was raised of resuscitating the High School at Passer Minggu to produce nutrition assistants for posting to sub-Districts. Before entertaining such action the Government's assurance that it would establish the posts and provide a career structure for the nutrition assistants would be essential. The prognostication is that such an assurance would not be forthcoming. The alternative is to provide nutrition training for people who are already in established posts. Some members of the Task Force (designate) recommended that the Passer Minggu site should be used for a less grandiose edition of the Nutrition Center of the Philippines. At such a training center personnel from any department could receive short-term training. The Project Director and Task Force were both asked to prepare a brief for the consultant architects so that sketch plans could be prepared.

34. Mr. Mills, Bank's architect, inspected the site and buildings at Passer Minggu, accompanied by the Acting Project Manager and architect consultants. The buildings are currently used as a Nutrition High School, but the school is closing down as GOI is changing to a provincial training system. The buildings were constructed in 1950 and require some renovation. Space to accommodate a Nutrition Headquarter and a Monitoring and Evaluation Unit would be available on the site.

35. The proposed training would be provided in short courses to an estimated 2,650 personnel over a four-year period. Accommodation for 50 students would be optimal, allowing for both sexes on the courses. The center would provide residential accommodation with sleeping and dining facilities, tuition accommodation in an assembly hall, a classroom for 60, three discussion rooms for 15-20 each and one demonstration room for 20-30 students. Staff accommodation would include three houses for lecturers (120 m²) two for administrative staff (70 m²) and one for a housekeeper (50 m²).

INDONESIA

NUTRITION DEVELOPMENT PROJECT

CIVIL WORKS

Progress of Work as at July 1979

<u>Facility</u>	<u>% complete</u>	<u>P R O G R E S S</u>		<u>Notes</u>
		<u>Estimated Completion Date</u>		
<u>FOOD TECHNOLOGY DEVELOPMENT CENTER (FTDC)</u>				
<u>Administration Building</u>				
Structure	89%	9.30.79		
Services	15%			See Infrastructure
Air Conditioning	-			No Tenders invited
<u>Food Research Laboratories</u>				
Structure	88%	9.30.79		
Services	15%			See Infrastructure
Air Conditioning	-			No Tender invited
<u>Pilot Plant and Utility Building</u>				
Structure	95%	7.31.79		
Services	15%			See Infrastructure
Steam Supply	-			No Tenders invited
Gantry and Platforms				Further finance needed
<u>Housing</u>				
Structure	79%	9.30.79		
Services				See Infrastructure
<u>Infrastructure</u>				
Electrical and Mechanical installations to all buildings	15%	?		The contractor has stopped work and wishes to withdraw, Contract being awarded.
Power connections	0%			
Water Supply	15%	4.30.80		
Telephone, air conditioning and Fire Protection	-			No Tenders invited
Standby Generator	-			No Tenders invited

P R O G R E S S

<u>Facility</u>	<u>% complete</u>	<u>Estimated Completion Date</u>	<u>Notes</u>
<u>NUTRITION ACADEMY</u>			
<u>Food Laboratories</u>			
Structure	100%	Jan.1979	• No Tenders
Electric Power connections	-		
<u>Library and A.V.Room</u>			
Structure	100%	Jan.1979	No Tenders
Electric Power connections			
<u>Housing</u>			
Structure	-	-	No Tenders
<u>Infrastructure</u>			
Power House) No Tenders
Standby Generator			
Roads and Paths			
Fencing			

INDONESIA NUTRITION DEVELOPMENT PROJECT
CIVIL WORKS - REVISED COSTS AS AT JULY 1979

Facility	Revised Estimated Cost		Appraisal Estimate
	Rp	US\$	(Annex 10) US\$
<u>CRDN</u>			
Construction			
Contracts awarded	461,908,608		
Claims	49,706,000		
Further work	115,807,800		
TOTAL CONSTRUCTION	627,422,408	1,011,972	2,356,867
Professional fees	55,563,743	59,619	211,567
Contingencies	16,551,849	26,696	304,566
TOTAL CRDN	Rp 699,538,000	US\$1,128,287	US\$2,873,000
<u>FTDC</u>			
Construction			
Contracts awarded	729,955,900		
Claims	160,369,464		
Further work	89,692,884		
TOTAL CONSTRUCTION	Rp 980,018,248	US\$1,580,675	US\$1,674,072
Professional fees	71,892,769	115,956	168,675
Contingencies	25,006,983	40,334	262,253
TOTAL FTDC	Rp1,076,918,000	US\$1,736,965	US\$2,105,000
<u>NUTRITION ACADEMY</u>			
Construction			
Contracts awarded	41,125,500		
Claims	7,563,100		
Further work	87,520,500		
TOTAL CONSTRUCTION	Rp 136,209,100	US\$ 219,692	US\$ 321,783
Professional fees	5,725,512	9,235	32,169
Contingencies	9,508,388	15,336	74,048
TOTAL N.A.	Rp 151,443,000	US\$ 244,263	US\$ 428,000
<u>TOTALS</u>			
CONSTRUCTION	1,743,649,756	2,812,339	4,352,722
PROFESSIONAL FEES	133,182,024	214,810	412,411
CONTINGENCIES	51,067,220	82,366	640,867
GRAND TOTAL	Rp1,927,899,000	US\$3,109,515	US\$5,406,000

- NOTES:
1. Data used is that supplied by MOH (see detail sheets) to which has been added contingencies calculated at approximately 10% of claims and extra work.
 2. The accuracy of the further work still to be done has not been checked but it is known that the total number of houses allowed in the project for the Nutrition Academy has not been allowed for so the full cost could be higher than shown herein.
 3. The details of the further work for the Nutrition Academy are not clear and seem to include equipment and furniture. This may mean fixtures such as laboratory benches etc., but needs checking.

Nutrition Manpower Development
Task Force Terms of Reference and Working Plan
(Unofficial Translation)

I. Preface

During Repelita II, the GOI developed a food and nutrition improvement program aimed at increasing the people's livelihood, intelligence and prosperity. This program will be provided for and completed during Repelita III. One of the constraints to expanding the food and nutrition program is the lack of specially trained manpower to implement the program. Manpower Development in Nutrition is a goal of Repelita III.

A National Nutrition Development Project, assisted by IBRD, began in 1977. The project included a component on Nutrition Manpower Training with the general objective of improving and developing the quantity and quality of the student output from the Jakarta Nutrition Academy. The improvements in the Academy related to many sectors: curriculum, scholarships, educational equipment, staff housing, staff training, expansion of staff and laboratory facilities.

During the Review Mission in June 1979, GOI and the mission agreed to enlarge nutrition manpower resources at all levels in nutrition, not only for the Department of Health but also for other departments, e.g. agriculture, family planning, etc. For the above programs, GOI and IBRD will undertake the following studies: (a) to prepare a comprehensive Nutrition Manpower Plan, and (b) to develop a Nutrition Training Center.

II. General Objective

To develop the nutrition manpower required to implement proposed nutrition programs through the education and training of professional personnel at all levels.

III. Special Objectives

To compile a master plan for Nutrition Manpower Development through universities, the Academy, high school and cadres.

To improve the nutrition education curriculum at all levels.

To provide physical facilities for SKMA Gizi at Pasar Minggu (Nutrition High School) and to develop it as a National Nutrition Center.

To prepare an annual education and training program in nutrition for national and regional level manpower.

To train nutrition educators for national and regional levels.

IV. Plan of Activities

(a) Preparation Stage (3 months)

1. To collect information/data of formal education in nutrition in Indonesia, particularly with reference to universities and the Academy, both governmental and non-governmental, to include curricula, institutional capacity, and tutorial staff.

2. To collect information/data regarding spheres of activity, governmental status for post graduates, personnel system, and career planning.

3. To study the implementation of programs for nutrition manpower, the policies followed, etc., in departmental and non-departmental institutions.

4. To plan new civil works and/or rehabilitation of the physical facilities for a Nutrition Center at Pasar Minggu.

The Preparational Stage will be done by the IBRD consultant, assisted by INDP staff, Nutrition Academy, Nutrition Directorate and civil works sector of the Department of Health.

(b) Implementation Stage (3 years)

1. To formulate the Nutrition Manpower Master Plan on the data and information collected, including the curricula at all nutrition training levels.
2. To provide for civil works construction or rehabilitation of existing physical facilities.
3. To provide for the training of Nutrition Educators at the national level.
4. To adjust curricula at all levels.
5. To hold meetings/workshops/seminars for formal and informal sectors with a view to evaluation and better implementation.

V. Execution

(b)1. A Task Force, established by the Project Director INEP and the Head of Research and Development Center, will include representatives from :

(a) Department of Health (Pusdiklat, Nutrition Academy, Nutrition Directorate, SKMA, Directorate of Community Health Education, Central Hospital and INDP.

(b) Institute of Agriculture, Bogor; FTDC.

(c) Faculty of medicine & Faculty of Community Health, University of Indonesia.

(d) Department of Education.

(e) Department of Agriculture.

(f) Family Planning Program.

(g) Assisted by IBRD consultants.

(b)2. For Civil Works, the Installation Section of Dolt will be included.

INDONESIA NUTRITION DEVELOPMENT PROJECT

Nutrition Manpower Review

Data Required

1. Identification of available courses and training covering:

- Community Nutrition
- Institutional Nutrition
- Food Industry
- Catering
- Research on Nutrition, Food Science & Technology
- Armed Forces
- Schools and Training Institutions

All levels of training would be included:

- Cadres
- Auxiliaries
- Undergraduates
- Graduates
- Post Graduates

2. For each course the following data would be collected:

- (a) Number of students or trainees participating in the course during the last three years.
- (b) Number of students who completed the course successfully during the last three years
- (c) Educational level for entry to course
- (d) Length of the course
- (e) Proportion of students/trainees from urban and from rural areas
- (f) Proportion of students/trainees male or female
- (g) Curriculum and syllabus of course
- (h) Existing placement of successful students/trainees in Ministries of Health, Agriculture and Education, the armed forces, private sector and government

3. Facilities Available for Nutrition Training. For each training institution or for informal arrangements the following data would be collected:

- (a) Classrooms
- (b) Laboratory facilities for Chemistry, Biochemistry, Food preparation, Nutrition, Microbiology, Food science and Technology
- (c) Administrative offices

- (d) Dormitory accommodation, eating facilities and kitchen
- (e) Electricity, water and other services
- (f) Staff housing
- (g) Transport
- (h) Audio-Visual aids and equipment
- (i) Laboratory and teaching equipment
- (j) Field training areas
- (k) Other

4. Available Staff. For each training institution the following data on staff would be collected:

- (a) Number of staff members teaching full time with qualifications
- (b) Number of part-time instructors with qualifications
- (c) Number of hours per full-time or part-time instructor devoted to each course
- (d) Staff training program for upgrading or expansion
- (e) Library staff with qualifications
- (f) Administrative, personnel and supporting staff

5. Budgets. The following data would be collected for each the last three years:

- (a) The expenditure per year by categories-civil works, equipment, transport, salaries, travel allowances, running costs and maintenance of vehicles, stationary and other recurring costs
- (b) The income per year by sources, from government routine or developmental, donor, grants, student fees and funds for studies and research
- (c) Rate remuneration per hour or per month for teaching staff
- (d) Unit cost per student per annum or per course

Nutrition Manpower Requirements

6. Details of nutrition manpower requirements to meet the needs of Repelita III will be analyzed by categories-postgraduate, graduate, undergraduate, auxiliary and cadres.

INDONESIANUTRITION DEVELOPMENT PROJECTOrganization and Management

1. Mr. Tarwotjo has been appointed as the new Director of Nutrition and NIPP Coordinator and Mr. Adinugroho, the Acting Executive Secretary, was promoted to Executive Secretary. These appointments in conjunction with the recruitment of Mr. Fritz, Finance and Procurement Advisor, and Mr. Balasubramanian, Project Management Advisor, should finally, after more than two years of project effectiveness, provide the much needed management strength.
2. The Project Director has been devoting greater time to the project, and he expressed his determination to maintain closer association with field activities. On his return from Lombok he commented: "I regret to say that I have been very badly let down by my staff." Dr. Soebekti assured the mission that the reorganization of the Nutrition Directorate will take place, irrespective of whether or not the ministerial reorganization is initiated. Because the project secretariat and M&E unit are staffed mainly by non-civil servants, their absorption into the nutrition directorate poses many problems.

Nutrition Program

3. The nutrition program, supported by UNICEF and USAID, proposes to train 820,000 village cadres during the next 4 1/2 years. This extremely ambitious program will affect training requirements and cause grave concern regarding management capacity and interagencies coordination of nutrition programs in Indonesia. This will be followed up by the Nutrition Division, with representatives of UNICEF and USAID's Headquarters.

OFFICE MEMORANDUM

H. J. Blackwell
ABIA files

TO: Mr. Ben Thoolen, Acting Asst. Director,
Rural Development and Nutrition

FROM: Neil A. Wilkie, Acting Chief, AGRNU

SUBJECT: INDONESIA: Nutrition Development Project -
Loan 1373-IND - Supervision Report

DATE July 26, 1979

Attached is the Supervision Report for the above project.

Distribution:

Ms. Kaplan	(AEA)
Messrs. Please	(AEA)
Stern	(AEA) ✓
Kirmani	(AEP)
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van der Tak	(PAS) 3
Yudelman	(AGR)
Kapur	(AEP)
Christoffersen	(AGR)
Hattori	(CTR)
Fernando	(CTR)
Elliott	(CTR)
Chittleburgh	(EDC)
Forget	(LEG)
Berg	(AGR)
Baneth	Indonesia
Bumgarner	Indonesia
Richir	Indonesia
Hussain	Indonesia
Messenger	(POP)
Kapur	(OED)

is it?
ask G. K. Chan
- review?

Attachments

Chamann:rw

THE WORLD BANK
IBRD AND IDA - SUPERVISION SUMMARY

This summary is

<input type="checkbox"/>	the initial summary
<input checked="" type="checkbox"/>	part of a mission report
<input type="checkbox"/>	an annual update

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.

THIS FORM IS A STOCKROOM ITEM.

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7 INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.:	L/C Amount (\$xx.xm): US\$13.0 Million
Country: Indonesia	Borrower/Beneficiary: Health, Education and Agriculture	Board Date: 3-1-77	Signing Date: 3-15-77	Effective Date: 4-1-77
Projects Dept./Div. Name: Nutrition	Org. Code No.:	Projects Officers: Ms. Carmen Hamann, ACRNU	Loan Officers: Ms. Gillian R. Kaplan, AEA	

SECTION 1: SUMMARY PROJECT DESCRIPTION

The Project will: (1) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation; (2) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and (3) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

SECTION 2: PERFORMANCE RATING

STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating

TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.)

If more than one type of problem, enter most critical factor first.

IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

Disbursements

Estimated Cost

Anticipated Completion

Compliance with Loan Conditions

Project Finances

Management Performance

Procurement Progress

Performance of Consultants

Reporting

DEVELOPMENT IMPACT: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

Expected Benefits

Rate of Return

Institution-Building

	This Summary	Last Summary
STATUS	2	2
TREND	1	1
TYPES OF PROBLEMS	F M	F M
IMPLEMENTATION STATUS	3	
Disbursements	2	
Estimated Cost	2	
Anticipated Completion	2	
Compliance with Loan Conditions	2	
Project Finances	2	
Management Performance	2	
Procurement Progress	2	
Performance of Consultants	1	
Reporting	2	
DEVELOPMENT IMPACT	1	
Expected Benefits	-	
Rate of Return		
Institution-Building	2	

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total Project Cost (\$xx.xm)	of which:		Cumulative Disbursements through most recent Quarter ended (/ /) (\$xx.xm)
				Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	03,81	03,31,82	26.0	10.2	15.8	2.39 (Est.)
Last Summary (/ /)	03,81	03,31,82	26.0	10.2	15.8	
Current	03,82	03,31,83	26.0	10.2	15.8	0.6 (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	5	33	06,25,79	07,26,79
Previous Mission	3	24	02,14,79	03,30,79
Next Mission Departure (Mo./Yr.)	09,79	Recommended interval between missions (Months)	3	End of period covered by latest progress report (Mo./Day/Yr.)

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members

Mission Members' Specializations

E. M. Schebeck
Carmen Hamann
Ewen Thomson
B. Thrower
S. Venkitaramanan

Division Chief
Nutrition Specialist
Nutrition Specialist
Horticulturist
Nutrition Specialist

Number of members on both present and previous mission:

None
One
Two or More

SECTION 5: COMMENTS (Clarify, if necessary, data in Sections 3 and 4.)

Mission Members and Participation Period

- A. Hamann, Mission Leader, from May 20 to June 23
- B. Thomson, Consultant, from May 20 to June 11
- B. Thrower, Consultant, from May 23 to June 18
- E. M. Schebeck, Division Chief, from June 10 to June 21
- S. Venkitaramanan, Consultant, from June 14 to June 23

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS

Considering the innovative nature of the project and the relative newness of Bank procedures to the implementing agencies, significant progress has been achieved in spite of an initial delay of six to eight months due to the complexity of the Indonesian budgetary system. Good progress continues with civil construction: the Nutrition Academy has been built, the CRDN is between 80% to 96% completed and FTDC between 57% to 82%. Post devaluation increases in costs permitted by GOI, are below rates of increase in market prices, consequently, contractors delayed work on water and electricity installation. Encouraging initial results have come from supplementary feeding activities in NIPP. Seed and home gardens have been started on 12 kecamatans, and production is on technically adequate lines. Nutrition education activities have been implemented in 5 kecamatans reaching 60 villages and approximately 56,000 households. Two-thousand cadres and 200 village supervisors have been trained. The design of the anemia control trial has proven to be inadequate to evaluate the effectiveness of the delivery system of iron fortified salt. The design will be revised before extending trials to the other areas. The Nutrition Academy will initiate a study of manpower requirements to meet the staff needs foreseen in Repelita III for carrying out nutrition programs.

Project provision for fellowships are not being fully utilized. The MOH requirement that at least 3 years of service be completed before a candidate can qualify for a fellowship abroad is impeding training of staff in newly created posts. Furthermore, although fellowships candidates are also required to complete the P-4 Principles of Pancasila course, no such course is available this year at a suitable level for the prospective candidates.

(CONTINUED ON ATTACHMENT)

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

The mid-term review should continue to be the primary objective of the next supervision mission, so that the review report can be completed by December 1979.

The Project Director should engage one or more consultants, who are experienced in Bank and and GOI financial procedures to review and adjust the Secretariat's systems for accounting, disbursement and procurement.

The Project Director should continue to press for the reorganization of the Nutrition Directorate and incorporation of the Project Secretariat and Monitoring and Evaluation Unit into this Directorate. Meanwhile a Project Management Advisor should be recruited in addition to the Financial and Procurement Advisor.

The Project Director should recruit a Management Consultant to be posted for at least 3 months to an operational area of UPGK Plus (NIPP) to establish an efficient model for field management.

Arrangements should be made to recruit consultants satisfactory to the Bank, to organize the effective functioning of the Monitoring and Evaluation Unit.

The proposed study of nutrition manpower requirements to implement nutrition activities in Repelita III should be completed by December.

These recommendations should be communicated by letter to the Project Director.

NAME OF PREPARING OFFICER:

Corinne Hamann, Project Officer, AGRNU

INITIALS:

CH

DATE:

July 26, 1979

Section 6: Summary of Project Status, Trend and Major Problems (cont'd)

No progress has been made in reorganizing the Nutrition Directorate to absorb the Project Secretariat and the Monitoring and Evaluation Unit. The work of local management consultants engaged to carry out a management audit and design of the monitoring and evaluation system was considered unsatisfactory by GOI and the Bank. Selection of new consultants will delay implementation of the Monitoring and Evaluation system by at least six months. Tenders for procurement of equipment and vehicles through ICM are being processed. Delay in pre-financing of 1979/80 allocations prevents immediate procurement of equipment for NIPP. In South Sumatra NIPP has been able to meet the appraised schedule by borrowing the equipment from another project. Elsewhere NIPP has completed training and preparation, but the beginning of operations depends on delivery of equipment. To improve disbursement, BAPPENAS is chairing weekly meetings with Project Financial Officers, and a Financial Advisor will be hired in August. The disbursement slack is expected to be partially made up in the current fiscal year, but due to the impact of devaluation and lower cost and price escalation than anticipated, the full loan amount is unlikely to be absorbed.

Annexes

1. Draft Action Letter
2. Compliance with Loan Agreement
3. Key Project Indicators
4. Schedule of Disbursement
5. Officials Met and Places Visited
6. Project Execution
7. Organization and Management

Dr. R. Soebekti, M.D., M.P.H.
Direktur Jenderal
Direktorat Jenderal Pembinaan Kesehatan
Department Kesehatan
Jl. Prapatan 10,
JAKARTA
Indonesia

Dear Dr. Soebekti:

Indonesia - Loan 1373 IND
Nutrition Development Project

Thank you once again for the kind assistance provided by you and your staff to the mission which visited during May and June, 1979. The general trend of the project was encouraging, although certain issues remain to be resolved.

Component Heads are to be congratulated on the volume of the work undertaken in preparation of reports for the mid-term review. The task has turned out to be a much more complex undertaking than originally envisaged and the restructuring of the project, according to perceived needs, requires time for thorough consideration. We agree that a period of six months would be reasonable for completion of the task, and therefore suggest that we aim to have the review ready by the end of December, 1979.

I feel sure you will continue to provide the leadership required to maintain the momentum. On our part we shall be glad to provide any assistance from Bank staff that may be necessary.

Initial results from the UPGK (Plus) areas have been encouraging, but the extent of relapse after recovery has yet to be determined. In the future expansion of UPGK (Plus) you may wish to exclude some of the higher cost features and concentrate on the basic elements: systematic and regular weighing; food supplementation for prevention and care of PCM cases; oral rehydration; distribution of iron and folic acid tablets, vitamin A capsules and iodine if necessary; immunization; nutrition education and home gardens. The BAPPENAS proposal to carry out an evaluation of UPGK (Plus) and UPGK is welcomed; the evaluation would cover both cost-effectiveness and change in nutritional status.

The ad hoc committee, which considered the future expansion of UPGK (Plus) accepted the view of the Ikes of Bali that the Province had a surfeit of programs planned to incorporate nutrition. The committee believed that a similar situation prevailed in Yogyakarta. The committee recommended the inclusion of South Sulawesi and South East Timor instead of Bali and Yogyakarta.

Much may depend on conclusions reached on following the review. If a compromise is reached between UPGK (Plus) and UPGK, the nature of future expansion may be different. Before other outer islands are included many factors require consideration: locally available trained manpower must be assured; the increased time involved in supervision by HQ staff will exacerbate a task which is already difficult; effective support from the local authorities has to be assured and the opportunity costs of working in remote areas with low population densities require to be compared with other alternatives. For example, in the existing UPGK (Plus) areas if the planned pattern of expansion continues for the extra year of the project, the number of beneficiaries would be increased by 74% with a comparatively small increase in overhead costs. Please be assured, however, that we naturally regard the selection of areas for expansion as entirely an internal matter.

The mission reached agreement in principle with the Director-General of Food Crops regarding expansion of the home garden sub-component in UPGK (Plus). He undertook to prepare detailed proposals. I undertook to make the services of Mr. Thrower, Consultant, available. If preparation is sufficiently far advanced you may wish to make use of Mr. Thrower's assistance. Please inform me of your intentions as soon as convenient, so that I can make arrangements, if required, in order that his visit may coincide with the next mission.

The Nutrition Academy proposed initiating a study of the nutrition manpower required to meet the various nutrition programs included in Repelita III. The mission recommended that the expansion of nutrition manpower training at all levels should be considered as a matter of high priority during the project review. The mission was also impressed by the arguments supporting the posting of nutrition assistants as supervisory staff at sub-district level and was sympathetic to proposals for expansion and improvement of manpower training facilities for this purpose. Mr. David Mills, architect, has been asked to assist in this regard during his current mission to Indonesia. Should it be convenient to you and the Nutrition Academy staff, Mr. Ewen Thomson, Consultant, could visit during the first week of September (on his way back from India) to assist in the development of the proposal. Please let me know if such a visit would be acceptable to you at that time. As you are aware, a specialist in manpower development would be available as a consultant to GOI during October 1979, to assist in the formulation of a proposal.

The mission understood that personnel from the Nutrition Directorate and Nutrition Academy would work with the consultants on the implementation and evaluation of nutrition education. Such close collaboration would be an excellent opportunity for Indonesian staff to gain expertise in these fields.

The consultants engaged by CRDN and for the Nutrition Education component have been handicapped by the lack of counterparts. The consultants require collaboration with high calibre staff, capable of understanding their recommendations and of transforming these recommendations into practical options who are also in a position to ensure a good chance of decisions reached being implemented. The opportunity for professional staff to interact with highly skilled consultants should not be lost; they can contribute from their own experience and learn

from the others' speciality.

The fellowship program is not being fully utilized. We understand that the Ministry of Health requires government service of at least 3 years before a candidate can be approved for a fellowship abroad. In the case of newly created posts such a condition may be impracticable. Proficiency in English is required for candidates entering universities in the U.S.A. and the U.K.; some universities make provision for advanced language training. In addition all candidates for fellowships abroad are required to undergo the P4-Principles of Pancasila course, but, at present, such training is not available for the level of personnel most likely to be selected as candidates for fellowships under the project. Priorities in manpower development and the criteria and procedures for fellowships seem to require clearer definition. Where a candidate has to enroll as a "special student" for one semester, in order to meet the required standards, such upgrading training could be paid from project funds. We hope that these difficulties in the fellowship program will be resolved.

The mission noted that certain changes had taken place in the nutrition secretariat and we were pleased to learn that advisors for management and finance are in the process of being appointed. The appointment of Mr. C. Fritz to one of these posts is approved and we hope that early action may be taken with regard to the other.

The next mission will continue the discussions on the mid-term review. The most suitable time for us would be during the last week of September and the first week of October. Would you please let us know if this timing would be convenient to you?

May I repeat our thanks to you and your staff for the courtesy and cooperation extended to the mission. In view of its interest in the project, a copy of this letter is being sent to BAPPENAS.

With best regards,

Sincerely yours,

Emmerich M. Schebeck
Chief

Nutrition Division
Agriculture & Rural Development Department

cc and Cleared With: Ms. G. R. Kaplan, AEA

CHamann:tw

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
Article III			
3.02	The BORROWER shall employ consultants whose qualifications and experience and terms and conditions of employment shall be satisfactory to the Bank.	Operative	
3.03	The BORROWER shall afford the Bank a reasonable opportunity to comment on the qualifications and experiences of any person proposed to be appointed to the position of Project Director, Project Co-Director, Project Manager and NIPP Coordinator.	Operative	
3.04 (a)	The BORROWER undertakes to ensure, or make adequate provision for the insurance of the imported goods to be financed out of the proceeds of the Loan against hazards incident to the acquisition, transportation and delivery thereof to the place of use or installation, and for such insurance any indemnity shall be payable in a currency freely usable by the BORROWER to replace or repair such goods.		Not applicable up to date.
(b)	The BORROWER shall cause all goods and services financed out of the proceeds of the Loan to be used exclusively for the Project.	Operative	
3.05 (a)	The BORROWER shall furnish to the Bank, promptly upon their preparation, the plans, specifications, reports, contract documents and work and procurement schedules for the Project.	Operative	Contract documents have been delivered in Indonesian Bahasa which has resulted in delays in approval by the Bank.

INDONESIA

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
(b)	<p>The BORROWER:</p> <p>(i) shall maintain records adequate to record the progress of the Project (including the cost thereof) and to identify the goods and services financed out of proceeds of the Loan, and to disclose the use thereof in the Project;</p> <p>(ii) shall enable the Bank's accredited representatives to visit the facilities and construction sites included in the Project; and</p> <p>(iii) shall furnish to the Bank all such information as the Bank shall request concerning the Project, the expenditure of the proceeds of the Loan and the goods and services financed.</p>	<p>Operative</p> <p>Operative</p> <p>Operative</p>	<p>The Finance Officer of the Secretariat does not maintain full records of expenditure. The Project Director has been advised to engage a competent consultant to set up an improved recording system.</p>
(c)	<p>The Project Director shall be required to prepare and furnish to the Bank semi-annual reports regarding the progress of the Project.</p>	<p>Operative</p>	<p>The standard of reporting needs to be improved. The Project Director has been informed.</p>
(d)	<p>The accounts of all agencies of the BORROWER participating in the implementation of the Project shall be audited each fiscal year, not later than six months after the end of each such year. The Bank shall be furnished with certified copies of scope and detail as the Bank shall have requested.</p>	<p>Non-Operative</p>	<p>Certified copies of the accounts have been requested.</p>

NUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
3.06	The BORROWER shall take or cause to be taken all such action as shall be necessary to acquire as and when needed all such land and rights in respect of land as shall be required for the construction and operation of the facilities included in the Project and shall furnish to the Bank, promptly after such acquisition, evidence satisfactory to the Bank that such land and rights in respect of land are available for purposes related to the project.		Land for FTDC already belonged to the Agriculture Ministry of Bogor; land for CRDN already belonged to the Ministry of Health. The same holds for the Nutrition Academy.
3.07	The BORROWER shall establish and maintain a Research Coordinating Committee (i) to facilitate coordination of the nutrition-related research programs being carried out by various institutes, and (ii) submit to the Bank annual progress reports on such programs.	Operative Non-Operative	Reports have been received from the institutions which provided the necessary information.
3.08	The BORROWER shall, with respect to the NIPP program: (i) submit to the Bank not later than August 1, 1977, the plans of operations for the first two Kabupatens for approval, prior to commencing implementation of such plans; (ii) carry out a review of the NIPP program at the end of the second year of the NIPP program; and (iii) select new Kabupatens to be served by NIPP program not later than October 1, 1977 and the remaining three Kabupatens not later than August 1, 1978.	Completed Completed Operative	The last 3 Kabupatens are under discussion.

INDONESIANUTRITION DEVELOPMENT PROJECT
COMPLIANCE WITH LOAN CONDITIONS

Loan Agreement SECTION	DESCRIPTION	STATUS	COMMENTS
3.09	Not applicable up to date.		
3.10	The BORROWER should provide, as and when required, no less than 10 additional Extension Staff for the home/village gardens of the NIPP program.	Operative	More than 10 Extension Staff are involved in home/village gardens, but are not working full-time on home gardens. The mission considers this arrangement satisfactory.

NUTRITION DEVELOPMENT PROJECT

KEY PROJECT INDICATORS

	Achievement	Appraisal Estimates for First Two Years	Percentage of Appraisal Estimate
IPP			
Number of villages	18	18	100
Number of persons reached with supplementary feeding:			
- children	1,396	2,592	53
- pregnant women	153	630	24
- lactating women	354	599	59
Number of Cadres trained	252		
Number of village food storage units installed	18	5	360
Number of food processing units installed	9	18	50
Home gardens:			
Number of villages	63	72	87
Number of farmers reached	7,200	7,200	100
Extension Education:			
Number of villages	60	36	166
Number of families reached	56,000	22,000	254
Number of Cadres trained	2,000	432	463
Anemia Control			
Number of workers reached:	2,096	2,000	104
North Sumatra	1,098	1,000	109
East Java	998	1,000	99
Civil works - construction stage:			
Laboratories (Wings I and II)	83%	100%	83
Staff housing	96%	100%	96
Fellowships: MSc. degree	9	14	64
BSc. degree	2	2	100
Short-term	4	9	44
man-month	3	21	14
FTDC			
Civil works - construction stage:			
Administration Building	13%	100%	13
Food Research Laboratory	82%	100%	82
Pilot Plant	82%	100%	82
Staff Housing	57%	100%	57
Fellowships: MSc. degree	6	10	
Short-term	12	5	240
man-month	24	27	88
Nutrition Academy			
Civil works - construction stage:			
Library, laboratories and audio-visual rooms	100%	100%	100
Housing	16%	100%	16
Fellowships: MSc. degree	1	6	16
Scholarships	53	48	110

IndonesiaNUTRITION DEVELOPMENT PROJECTSUPERVISION MISSION - MAY-JUNE 1979SCHEDULE OF DISBURSEMENT

Fiscal Year and Quarter	Cumulative Disbursement (US\$million)			Latest Estimated Disbursement as % of Appraisal Estimates
	Actual Total	Appraisal Estimate (Aug. 1975)	New Estimate (June 1979)	
1977 - December 31		144	.02	13
1978 - December 31	.09	1084	.7	64
1979 - March 31	.3	1884	.8	42
1979 - June 30	.6	2392	1.0	41
1979 - September 30		3492	1.4	40
1979 - December 31		4592	2.0	43
1980 - December 31		8.965	4.6	51
1981 - December 31		12.672	7.6	59
1982 - March 31		13.000	7.7	59

CLOSING DATE

03.3.82

03.3.83

NOTE: The estimates presented are likely to be modified during the mid-term review which will include further related activities and the extension of the project by one year. The mid-term review will be completed by January 1980.

IndonesiaNUTRITION DEVELOPMENT PROJECTOFFICIALS MET AND PLACES VISITEDJakartaMinistry of Health

Dr. R. Soebekti	-	Project Director
Mr. Adinogroho	-	Project Executive Secretary
Dr. Tarwotjo	-	Director of Nutrition Academy
Dr. Karyadi	-	Director of CRDN
Dr. Malasan	-	Director of Nutrition Directorate and Head of NIPP
Dr. Salihudim	-	NIPP Manager
Dr. Asmira	-	NIPP Training Officer
Dr. Mantra	-	Head of Nutrition Education Component

BAPPENAS

Dr. Sukirman	-	Nutrition Planner
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Ministry of Education (Bogor)

Dr. Winarno	-	Director of FTDC
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Ministry of Agriculture

Jr. Wardoyo	-	Director General for Food Crops
Jr. Janaluddin	-	Director of Food Crops Production
Jr. Subagyo	-	Sub-Director of Farm Mechanization
Jr. Suwarno	-	Sub-Director of Horticulture
Jr. Djandra	-	Sub-Director of Programme Development

National Institute of Industrial
Hygiene and Occupational Health

Dr. Suma'mur	-	Director General of NILHO and Head of Anemia Control Component
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Yogyakarta

Dr. Subodro	-	Health Director
Dr. Ruslan	-	Nutrition Project Officer

South Sumatra

Dr. Azof	-	Health Director
Mr. Djunaidi	-	Nutrition Project Officer

Bojonegoro

Dr. Haryoko	-	Nutrition Project Officer
Representative of Agriculture Extension Service		

West Lombok

Health Director
Nutrition Project Officer
Representative of Agricultural Extension Service

Central Java

Health Director
Nutrition Project Officer
Representative of Agricultural Extension Service

North Sumatra (Plantation Area)

Jr. Tobing .. - Administrator
Commercial Director
Medical Doctors

Jember (Plantation Area)

Director General
Commercial Director
Administrator
Medical Doctors

Indonesia

NUTRITION DEVELOPMENT PROJECT

SUPERVISION MISSION - MAY-JUNE 1979
PROJECT EXECUTION

General

1. In addition to normal supervision functions, the mission began the mid-term review of the project, in close collaboration with the Project Director and Component Heads, each of whom had prepared a Mid-Term Report covering the period, April, 1977 to March, 1979. (Reports in the Division's files) All reports represented a great volume of detailed work, but the quality of the presentation was variable; those from Manpower Training (M.T.), Centre for Research and Development of Nutrition (CRDN) and Food Technology Development Centre (FTDC), provided sufficient information to compare actual achievement with the action scheduled at the time of appraisal. The reports contained recommendations for modification and the extension of the project execution by one year. The mission reached the conclusion that the mid-term review was complex, requiring adequate time for study and planning; both GOI and the mission agreed that the review should be completed during a six-month period. The supervision mission planned for September/October will continue the discussions on restructuring of the Project, according to the needs of the components as perceived by GOI.

Center for Research and Development
in Nutrition (CRDN)

2. The Civil Works have been supervised by a Committee for Supervision of Construction, with C.V. Hari Murthi as consultant architects. Laboratories for food microbiology, food toxicology, hematology, metabolic unit, animal experiment, instrument room and clinical nutrition were between 80% to 84% completed at the time of the mission's visit. Staff housing was 96.5% complete. The cost increases for Government works, permitted by GOI following the rupiah devaluation, are below market prices; contractors have, therefore, delayed work on the installation of water and electricity. Otherwise, civil works have made progress according to the planned schedule at appraisal. The Tender Committee has recommended awards for the construction of the library, offices, auditorium and dormitories; the awards awaited the approval of the Project Director. Invitations to tender for the access road to the staff complex and for installation of air conditioning, fire detection and lightning conductor were in the process of preparation. Mr. David Mills, consultant architect, will follow up on the execution of civil works during July 1979.

3. Procurement. Uncertainty regarding responsibility delayed the appointment of the Tender Committee for Procurement of equipment, furniture and literature. Since appointment in March 1979, it has awarded contracts for building equipment and invited tenders for Phase I special equipment. Tender documents for Phase II equipment are under preparation. Procurement of vehicles through ICB is in process.

4. Consultants. Dr. Jean-Pierre Habicht has been appointed as Senior Nutrition Research Advisor. He visited Indonesia in December 1978 and in May 1979. He has identified four categories of tasks which could benefit from consultants: (a) advice on overall research focus and on research needs within that focus; (b) scientific and technical advice on specific research projects; (c) on-the-job training; and (d) undertaking specific research activities for which CRDN does not have enough staff. The Director of CRDN has made proposals for hiring consultants, one for each of the Divisions of the Centre. Provided their terms of reference fall within categories (b), (c) and (d) the proposals would be satisfactory.

5. Fellowships. Six fellowships overseas and five fellowships in Indonesia have been awarded, representing about 50% of the total fellowship program. The lengthy process of placement and proficiency in English were two constraints which had to be overcome. The Director has recommended the cancellation of certain proposed fellowships because prospective candidates have gained alternative employment and because of the GOI ruling that candidates for graduate studies abroad must have a minimum of 3 years service with Government.

6. Manpower Development of CRDN. CRDN has been allocated seven new professional posts per year; in two years only 6 vacancies have been filled. Certain categories of specialism are not available and remuneration in the private sector is much higher than the Government rates, consequently well qualified staff have been hard to recruit. Intensive action to recruit has not taken place, possibly in the belief that Government rates may be revised if the posts remain unfilled. The consultant to CRDN suggested temporary expedients to fill these vacancies, but as yet the Director has not taken action. CRDN's manpower allocation as compared with the appraisal report is as follows:

Manpower	March 31, 1977		March 31, 1978		March 31, 1979	
	Appraisal	Actual	Appraisal	Actual	Appraisal	Actual
Professional	13	10	20	14	34	16
Technicians	22	34	40	41	68	56
Others	—	—	—	—	—	—
TOTAL	35	75	60	86	102	102

7. Research. Projects undertaken amounted to 8 in 1977-78 and 12 in 1978-79; these were financed by COI budget. Training has been given to undergraduate and graduate students, medical doctors specializing in nutrition, at the Regional Graduate Applied Nutrition Course, at the Bogor Agricultural University and the Nutrition Academy. CRDN has been involved with other components such as: Nutrition Intervention Pilot Project (UPCK Plus), Food Technology Development, Manpower Training, Nutrition Education and Anemia Control.

Nutrition Intervention Pilot Project (UPGK Plus)

8. Operational actions in Bojonegoro and West Lombok started five to eight months behind the schedule due to delay in the procurement of equipment. Preparatory work in Central Java and South Sumatra made up for lost time, but once again delays in procurement inhibit operations in Central Java; in South Sumatra equipment was borrowed from another project and operations are on schedule.
9. The baseline survey and processing have been completed for Bojonegoro and West Lombok; the data for the other two regencies were collected as planned but processing is proving to be inordinately slow. The consultant to CRDN has dealt at length with the methodology of the baseline survey and has made recommendations for a better approach. CRDN and the Nutrition Directorate have not followed up on these suggestions. The next mission will press for an early decision.
10. All operating UPGK Plus villages have at least one nutrition center; in Bojonegoro many sub-centers have been opened to facilitate the mother's attendance. In South Sumatra funds from the community development budget have been provided to construct a nutrition center and a seed garden in each operational village. These centers are the focal point for other activities such as: health, family planning, social welfare and youth groups. The nutrition center program proceeds on schedule.
11. The main activities undertaken include: monthly weighing of children, supplementary feeding for those in need, nutrition education of mothers, deworming of children, supply of retinal palmitate capsules (200,000 IU Vit. A), iron therapy for pregnant and lactating women and immunization against common infections.
12. The program digressed somewhat from the proposals agreed at appraisal. Selection of children has been based on weight for height compared with the Indonesian standard. Those children classified as 2nd and 3rd degree protein/calorie malnutrition (PCM) cases enter the food supplement program. The mothers attend the nutrition center, together with their children, on one fixed day per week. A demonstration is given of preparing the rice and soya food supplement and the children fed at the center on that day. The mother takes home, on average, three packets to provide to her child for the rest of the week. The intention is that six packets will be provided. Initial results after 90 days of supplementary feeding showed that about one-third of the PCM cases regained normal weight for height in Bojonegoro and in some villages in West Lombok. (Data in the Division's files) All children received a capsule of vitamin A and were dewormed. The next three months of operation should provide further information; the number of relapses among children who are fed only at home would indicate the effect of the nutrition education.
13. Pregnant and lactating women were selected for the program, based on their haemoglobin levels. They received iron and folic acid tablets in addition to supplementary food. After 90 days about 65% of the pregnant women and 70% of the lactating women regained normal haemoglobin levels. The results are probably due to the iron and folic acid.

14. GOI agreed to an earlier Bank recommendation for a year's delay in starting the new provinces, in order to consolidate the work started in the first four provinces. During the field visits defects in management, supervision, supplementary food production and monitoring were noted. These require to be improved before expanding further. A management consultant posted in one of the program areas for a period of three months, could greatly assist in achieving the required improvement.

15. BAPPENAS wishes to mount an evaluation of UPGK Plus and the existing UPGK program with a view to finding an effective and replicable compromise between the two models. Such an exercise would be most welcome; we should not try to maintain the higher cost features of UPGK Plus, but should concentrate on the basic elements: systematic and regular weighing of children, nutrition education for parents, deworming, food supplementation, provision of vitamin A capsules, iron and folic acid tablets, oral rehydration, iodine where required and immunization against common infections. These features have been accepted by Indonesia's nutrition planners and they are incorporated in the USAID and UNICEF proposed project.

16. Although GOI agreed to Bali being one of the field areas in this project, it is yielding to USAID pressure for the inclusion of Bali in its proposed project. The selection of Bali had originally been based on the good response to the Population Project and the likely success indicated by the response of provincial leaders.

17. The Nutrition Directorate has suggested that the provinces of South Sulawesi and Nusa Tenggara Timur should replace Bali and Yogyakarta. Lack of trained manpower, greater dispersion and much lower population densities as well as intensive management and supervision required of the initial stage of project operations, are unattractive factors from the point of view of opportunity costs. The next mission will bear these issues in mind when discussing the expansion of UPGK Plus.

Nutrition Education and Behavioral Change

18. This component operates in one sub-district of South Sumatra and in two sub-districts in each of West Java and Yogyakarta. Sixty villages and about 56,000 households are involved. Workshops were held at each level from central to village stimulating inter-sectoral cooperation among local staff of agriculture, health, education and social welfare. In most of the villages active inter-sectoral groups have been formed. Two thousand cadres and 200 supervisors have been selected and trained in the use of available teaching aids: manuals, visual aid kits, flipcharts, flannelboards, leaflets and slide sets. Other educational material is being prepared. Nutrition messages have been promoted on radio and through traditional folk drama.

19. Children under five are weighed regularly using equipment made available by the local authorities, but only a minority have growth records maintained on charts. The original component budget made no provision for the purchase of scales or growth charts. This issue will be tackled during review.

20. About half of the villages have spontaneously developed supplemental feeding programs. Health insurance programs, with premiums of Rp20-30 per month per family, have been started in most areas; part of these funds is used for supplementary feeding activities.

21. GOI has engaged a consultancy group which is developing educational material and a system to evaluate the impact of the component.

22. In the sub-district of Tanjung Bata in South Sumatra UPGK Plus and Nutrition Education operate in the same area. The way in which the two components reinforce each other is striking. In any future UPGK Plus areas the Nutrition Education methodology should be used to motivate support for the program.

23. The cadres require further training, especially in weighing techniques and recording on growth charts. Supervision of the cadres is inadequate; improved educational material and teaching aids should result from the work of the consultancy group.

Manpower Training

24. Civil Works. Funds for one house type 70D was included in the 1977-78 budget and was completed by January 1979. The budget of 1978-79 included two houses, but all tenders exceeded the allocated funds. A second tendering process was launched, but when tenders were opened in February 1979 once again the lowest tender exceeded the allocation. For the teaching laboratories and library separate bids were invited for each building, but all contractors almost failed, the lowest bids exceeded the allocated funds by a few rupiah. The consultant architect offered to reduce his fee to bring the total within the limit. Construction was completed in January 1979, but water and electricity installation is currently being undertaken.

25. Procurement. The Tender Committee of the MOH Education and Training Center has been responsible for procurement. Tenders were invited in October 1978, but only three bidders responded whereas the minimum acceptable to GOI is five bidders. The time was extended by three weeks, but not further bids resulted. The equipment list was modified so as to adjust to current market prices and retendering was initiated in March 1979. The lowest bid exceeded the budget allocation. The equipment list was modified again and invitations to tender have been issued. One reason for the GOI budget allocation being insufficient is the need to include taxes in the DIP Murni. No allowance was made for this in the budget requests. For example, locally manufactured equipment procured is entitled to 95% financing. In the budget requests (DUP) the division was 5% DIP Murni and 95% DIP Supplement, but DIP Murni must also include tax, thus the total available is reduced by $\frac{\text{Tax}}{5\% + \text{Tax}}$.

26. Staffing. In contrast to the Research Institutions, Training Institutions of the MOH are not eligible for the functional reward system, whereby individual remuneration can be enhanced by work on research projects. Salaries which the Nutrition Academy can offer are not attractive. Consequently only one new staff member has been recruited. Selection of outstanding junior personnel, for training while working, will be undertaken. English courses

have been given to 12 staff members. Fifteen staff members have made site visits to nutrition programs in seven provinces. To stimulate self learning 357 test books, 30 journals and 29,000 pages of photo-copied articles have been made available. Two staff members are undergoing post-graduate training and applications have been made for two others.

27. Student Intake. Student enrollment has increased from about 100 to 160. During the two years of the Project, 53 scholarships have been awarded. Students are all now directly involved in various nutrition program activities.

28. Curriculum Revision. During 1977-78 three workshops organized by the Nutrition Academy developed a revised curriculum. Those involved included senior nutritionists from various provinces, medical staff from hospitals, teaching staff from Bogor Agricultural University, staff from CRDN and FTDC and a curriculum consultant from the Department of Education. The new curriculum is considered to be a great improvement, but official approval of MOH is still awaited.

29. Expansion of Manpower Training. A study has been proposed by the Nutrition Academy, to identify the manpower requirement to meet the various nutrition programs included in Repelita III. A working group will be organized to elaborate a proposal on a manpower development program to be financed under the Project. Consultants will be hired to assist the working group on this task.

Anemia Prevention and Control

30. Under this program 2,096 workers and their families were screened for haemoglobin levels and worm infestation. Assuming 11g haemoglobin per 100ml blood as the cut off point indicating nutritional anemia among workers, in North Sumatra 68.8% and in East Java 60.7% were considered to suffer from nutritional anemia. Helminthic infestations were found in 84.5% of workers in North Sumatra and 70% in East Java. Deworming, iron pills for 60 days and the provision of iron fortified salt were provided for all. The cost of shoes to prevent worm re-infestation was regarded as being unacceptably high. Reductions of 75-85% of anemia cases and 65% reduction of parasitic infestation resulted. The medical part of the intervention was accomplished successfully.

31. The sample design did not include control groups; it is impossible, therefore, to say if the observed changes in productivity were due in part or in their entirety to the intervention measures. Evaluation of other benefits such as reduced absenteeism and reduced medical spending also suffered from the lack of a control group. While a strong probability exists that positive results were achieved, the methodology used provides no proof.

32. Sample design requires to be improved to allow for control groups and different packages of interventions. Cost-benefit calculations should then be possible. Even now it appears that a 1% increase in productivity would pay for iron pills and iron fortified salt.

33. Recommendations on a revised sample design have been made to the Director of the National Centre for Industrial Hygiene, Occupational Health and Safety, who is responsible for the component.

34. One of the original intentions was to test the delivery systems for distribution of iron tablets and fortified salt. So far this aspect has not been undertaken. During the visit of the mission it was agreed that a consultant with experience in setting up health or food delivery systems in plantations should be identified, in order to assist the Government to improve the design of the component.

Home Gardens

35. The mission inspected 12 seed gardens and numerous home gardens in each of the regencies where UPGK Plus operates. Although varying greatly in size and character, all the seed gardens were reasonably well kept; those at Sayang-Sayang and Samberrejo were particularly varied and productive. Detailed records of the home gardens were not seen; if they are not being kept, record keeping should be introduced. Considerable interest in the work was found, both in the villages and in the Ministry of Agriculture in Jakarta.

36. Proposals for the execution of home garden activities in the Project were worked out with the horticultural section of the Ministry, whose officials agreed that the extension workers involved should be exclusively assigned to garden development, initially on the basis of one per sub-district. Each would be responsible for the establishment of a seed garden and a demonstration garden. A "leading" farmer would be selected to cooperate in establishing a demonstration garden on his land, with assistance from GOI horticulturists and with inputs supplied by the Project. In each UPGK Plus village, five home gardens would be selected and developed as model gardens, with the help of pumps and inputs supplied by the Project. Seed, fertilizers and assistance would be provided for up to 100 volunteers per village.

37. At appraisal a total of 10 horticultural extensionists was envisaged, but now the Ministry of Agriculture wishes to increase the number to 18. Detailed budgetary proposals have been prepared on the basis of 10 or 18 extensionists. The next supervision mission will discuss the proposals with GOI and reach conclusions.

Disbursement

38. Disbursement problems of Bank funds has been addressed already in various supervision reports. It is not peculiar to this project and is a reflection of the complex requirements of prefinancing of that part of expenditure which is disburseable by the Bank. While it may be argued that Project authorities should be familiar with such requirements, it has to be accepted as a fact they are not. They perceive the problems of disbursement, not as arising from GOI's own requirements but from the procedures laid down by the Bank. Continuous attempts to orient the line officials about this have not met with success, therefore, it might be useful to engage the services of one or two persons in Indonesia or abroad who are experienced in the Bank procedures of disbursement with special emphasis on Indonesia's Projects in the Social Sector.

39. Disbursements as a whole have not kept pace with the appraisal schedule. The main reasons have been (a) the delays in start-up of many activities in the first year; (b) the effect of the recent devaluation from 415 Rp - US\$1 to 624 Rp - US\$1; (c) the adoption of standards of construction which have not been as strong as were visualized by the Bank consultant but are within RAPPENAS guidelines; and (d) the slower drawdown of moneys in relation to consultancy and fellowships. Overall, it is expected that even with the proposed extension of the project by one year (this has little effect on disbursement against civil works and equipment but could increase disbursements against fellowships and consultants) the total disbursements would amount to only US\$7.7 to US\$8.2 million against the planned US\$13 million. The bulk of the reduction of disbursements is accounted for by the reduction in anticipated construction expenditure superimposed on the effects of devaluation. If the inflation in the remaining period of the Project is higher than now seems likely (in view of concluded contracts), there may be higher disbursements. Here one has to take note of GOI's tendency to apply the budgetary axe in terms of rupiah allocations rather than in fixed dollar equivalents or real rupiah terms. In real terms, the rupiah may buy fewer foods and services, but the budget mechanism is not flexible enough to allow an upward revision. This would be a problem faced by the current project, together with many other projects aided by the Bank. It is understood that solutions are being examined at higher levels.

40. While it is not correct to view Project needs for mid-term correction exclusively in the light of unutilized funds being available, it is necessary to allow for the fact that such availability does tend to influence higher management perspectives. We have to arrive at a right sense of balance between the "compulsion" to absorb undisbursed funds aided by the inherent momentum of the Project to expand, and the genuine needs of the components perceived as a result of actual experience. It is clear that the former consideration is only an enabling feature; the latter is the essential ingredient for judging appropriateness.

41. One incidental aspect of the problem of GOI's special procedures relating to disbursements is that although there are a number of the components where GOI's expenditures are ahead, both GOI and mission members are chary of suggesting disbursements against such expenditures where such disbursements might lead to delays. For instance, it should be possible to disburse against GOI's expenditure on expansion of the Nutrition Pilot programs. But once Bank disbursement against field expenditures such as salaries are agreed on, the procedural problem arises immediately, and the person in the field who drew his salary by a single "acquittance" has now to draw it against two acquittances, one against the GOI funds and the other against Bank-disbursable funds. There is a rational fear and inevitable reluctance to let the Bank enter such expenditure into the disbursable category. This has to be overcome. It can be handled simply if Government of Indonesia decides to follow the experience of other similarly placed countries who do not however budget separately for the disbursable and undisbursable part of expenditures.

Indonesia

NUTRITION DEVELOPMENT PROJECT

Organization and Management

1. Management of the project has improved following the appointment of a new Executive Secretary, but ample scope remains for greater effectiveness and efficiency. At appraisal, the Project Director was regarded as being responsible for policy and the Executive Secretary would be responsible for management. Owing to deficiencies in the Project Secretariat, the Director became more and more burdened with project management and the management responsibility of the Executive Secretary was correspondingly reduced. This reduced authority continues to apply to the present incumbent.
2. In January 1979, the Minister of Health directed that the Project Director should devote additional time to the project, but, because of the heavy commitments as Director General of Community Health, he has not been able to allocate additional time. Both BAPPENAS and the Ministry of Health now recognize the need for improvement in management and financial aspects, and the Ministry has ended its reluctance to engage expatriate consultants. A consultant for finance and procurement is due to begin work in August; consideration continues to be given by GOI to the appointment of a Project Management Advisor.
3. No overt action has yet been taken to reorganize the Nutrition Directorate, with a new Director, nor to absorb the Project Secretariat and Monitoring and Evaluation unit within the Directorate. Such reorganization will be part of a complete reorganization of the Ministry, which will take time.
4. A tendency to leave problems for solution by visiting missions has prevailed throughout implementation; indeed, many problems have only been identified when a mission points them out. Despite this dependency, all Indonesians involved in the project regard it as a truly Indonesian project.
5. Meanwhile, more immediate action is required to ensure that the financial work is carried out efficiently, to strengthen the Monitoring and Evaluation unit of the Secretariat and to recruit the consultants agreed to at negotiations.
6. Management of the field work of UPGK Plus leaves much to be desired. The professional inputs are reasonably sound, but, both direction from headquarters and locally, with regard to food supplement production and distribution, control of equipment, regular reporting and control of costs, appears to be inadequate. The mission agreed that a management advisor, to work in one field area for some months, would establish the management methods to be adopted throughout.

7. The financial records kept by the Secretariat are inadequate to provide the information required by covenants of the Agreement. If the present Finance Officer is unable to set up what is required, the task must be done by someone who is capable of doing so.

8. The progress reports so far produced by the Executive Secretary, on behalf of the Project Director, have been quite inadequate. The Executive Secretary will be given a guide regarding the improvement required.

Monitoring and Evaluation

9. While the project appraisal had placed emphasis on monitoring and evaluation, the Executive Secretariat has done comparatively little so far on this. The Monitoring and Evaluation unit has been set up only recently. Consultancy arrangements have still to be entered into in a manner satisfactory to the Bank.

10. The one redeeming feature in the project, so far as impact monitoring is concerned, is the emphasis placed by various line agencies on baseline data. Baseline surveys have been completed on the basis of broad guidelines initially agreed with Bank experts in most cases. Similarly, monitoring systems of a nutritional status have been built into the NIPP, in terms of simple anthropometric measurements. The CRDN is actively involved in these. The issue is one of utilizing these and devising "monitoring" data from them.

11. Evaluation is one area to which the project authorities have devoted little attention so far. An Indonesian group, P.T. DUTA CITRA Design Consultant, was hired in March to conduct a management audit of the project and review the existing monitoring and evaluation system in the Project Secretariat. A preliminary report was submitted by the group to GOI and the Bank during the mission's stay in Jakarta; both the Project Director and the mission considered the work unsatisfactory. The Ministry of Health ended the engagement of the firm on June 28. The Consultant's Contract has never been approved by the Bank since the work proposal and the qualification of staff gave the impression that the group was not familiar with setting up management, monitoring and evaluation systems for social sector. Meanwhile, the contract was approved by BAPPENAS, and the Project Director decided to hire the firm. This issue is being solved between the parties concerned.

12. The need for establishing immediately a new consultative group on evaluation consisting of an economist, a social scientist, a nutritionist and a statistician, has been emphasized by the mission. Even if arrangements are made with expatriate groups, the GOI should ensure that counterparts in Indonesia are also in position so as to interact with the consultants.

OFFICE MEMORANDUM

TO: Mr. Leif C. Christoffersen, Asst. Director,
 Rural Development and Nutrition
 FROM: Emmerich M. Schebeck, Chief, AGRNU
 SUBJECT: INDONESIA - Nutrition Development Project -
 Loan 1373-IND - Supervision Report

DATE April 2, 1979

Attached is the Supervision Report for the above project.

Distribution:

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- Ms. Hamann (AGR)

Attachments: Appendices I and II

EMS:wb

IBRD AND IDA - SUPERVISION SUMMARY

For detailed instructions on completion of this form, please see Attachment A to the Annex of OMS 3.50.

THIS FORM IS A STOCKROOM ITEM.

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.: 1373 IND	L/C Amount (\$xx.xm): US\$13.0 million
Country: Indonesia	Borrower/Beneficiary: Health, Education and Agriculture	Board Date: 3.1.77	Signing Date: 3.15.77	Effective Date: 4.1.77
Projects Dept./Div. Name: Nutrition	Org. Code No.:	Projects Officer: Ms. Carmen Hamann	Loan Officer: C.R. de Silva	

SECTION 1: SUMMARY PROJECT DESCRIPTION The Project will: (1) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation; (2) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and (3) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

SECTION 2: PERFORMANCE RATING

	This Summary	Last Summary
STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems	2	2
TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating	1	2
TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 6.) If more than one type of problem, enter most critical factor first.	F M	F M
IMPLEMENTATION STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Disbursements	3	
Estimated Cost	1	
Anticipated Completion	2	
Compliance with Loan Conditions	2	
Project Finances	2	
Management Performance	2	
Procurement Progress	2	
Performance of Consultants	1	
Reporting	2	
DEVELOPMENT IMPACT: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems		
Expected Benefits	1	
Rate of Return	-	
Institution-Building	1	

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total of which:			Cumulative Disbursements through most recent Quarter ended (/ / 79) (\$xx.xm)
			Project Cost (\$x.xm)	Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	03 81	03 31 82	26.0	10.2	15.8	1.88 (Est.)
Last Summary (/ /)	03 81	03 31 82	26.0	10.2	15.8	
Current	03 82	03 31 83	26.0	10.2	15.8	0.3 (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	3	24	02, 14, 79	03 30 79 (C)
Previous Mission	2	28	08, 23, 78	10 10 78 (CS)
Next Mission Departure (Mo./Yr.)	Recommended interval between missions (Months)		End of period covered by latest progress report (Mo./Day/Yr.)	
(Mo./Yr.) 04 79	3		02 13 79	

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

Names of Mission Members

Mission Members' Specializations

E.M. Schebeck
E. Thomson
S. Venkitaraman

Division Chief
Nutrition Specialist
Nutrition Specialist

Number of members on both present and previous mission:
None
One
Two or More

Mr. E. M. Schebeck, mission leader, was present from January 26 to February 7; Mr. Venkitaramanan, consultant, was present from January 21-27; Mr. E. Thomson, consultant was present from January 26-February 13.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND AND MAJOR PROBLEMS

The implementation of this project was reviewed with the Minister of Health and senior BAPPENAS officials. These meetings yielded significant progress toward solving some of the most troubling implementation problems, including inadequate project management, engagement of consultants to execute the monitoring and evaluation unit, and institutional arrangements for integrating this project organizationally and functionally into overall administrative structure of the Ministry of Health. Following up on mission representations regarding project management, the Minister of Health transferred Mr. Burhannudin and appointed Mr. Adinogroho to act as project manager, with advice from a local consultant. The Nutrition Directorate will be reorganized to absorb the project secretariat and MEU; a new Director will combine the offices of director and project manager. Management consultants will carry out a management audit, design the monitoring and evaluation system and provide management advisory services. An economist has been engaged as a staff member of MEU and a social scientist is under recruitment. The disbursement target of US\$1.9 million as of March 31, 1979, sharply contrasts with the actual disbursement of US\$0.3 million as of March. Yet a review of the project's financial statements in February revealed that in the nearly two years of implementation the Government had spent US\$2.9 million for this project. Out of this expenditure, a total of US\$1.5 million is eligible for Bank disbursement. This issue was brought to the attention of the Resident Mission and BAPPENAS with a request to find a solution. BAPPENAS agreed to chair weekly meetings with the project's financial officers to assist in submitting US\$1.1 million for Bank reimbursement by April 1979. Civil works construction has proceeded remarkably well. The Nutrition Academy has been built; the FTDC is between 41% and 55% completed and CRDN between 19% and 63%. Second phase drawings are ready and tender committees have approved equipment procurement. Good progress in NIPP has taken place in Bojonegoro, with local initiative and community response. Lombok still lags behind. In the nutrition education component weighting and food supplementation has begun, involving 27,000 families. Progress on village seed gardens and home gardens exceeds expectations; the program will be extended departmentally to over 200 sub-districts as against 60 sub-districts under project. Anemia control, on four estates in East Java, involves 3,500 people; the workers are fed by employers and, in contrast to N. Sumatra, virtually no anemia nor m infestation has been found among workers. The FNU, while being established, is not yet operational, but FAO will assist in finding a consultant and provide the required technical back-up. An in-depth review mission will be undertaken in May, 1979.

SECTION 7: MISSION RECOMMENDATIONS AND MANAGEMENT ACTION REQUIRED

1. The unbelievable complexity of Indonesia's financial and budgetary provisions represent a major constraint to disbursement of this multi-sectoral project.
2. The limitations imposed by BAPPENAS on consultants' fees has delayed and/or prevented the placement of critically needed local and foreign consultants.
It is recommended that these more general issues, which go far beyond this project, be discussed by the Program Division and RSI with the concerned officials in the Ministry of Finance and BAPPENAS.
3. Because of the innovative nature of this project and the severe implementation delays encountered in the first year of operation caused largely by the complex Indonesian budgetary and financial procedures, the mission recommends that consideration should now be given to postpone the completion date by one year. This would assure that a more realistic work program of implementation could be achieved for the NIPP component. This in turn would permit NIPP staff to focus fully on implementation problems of existing Kabupaten before this is expanded to other regions as originally envisaged at time of appraisal.

NAME OF PREPARING OFFICER:

Emmerich M. Schebeck, Chief, AGRNU

INITIALS



DATE:

March 30, 1979

Note: The new supervision format was introduced only after the mission's return to Headquarters. It is for this reason that this supervision report does not fully cover all aspects of the new format.

Section 8: Actions Taken and Recommended

1. This project was reviewed with GOI in conjunction with the Project Implementation Review initiated by RSI on February 4, 1979. The meeting was attended by Dr. Sujoyo, Minister of Health; Dr. Sojoto, Deputy Chairman BAPPENAS; Dr. Soebekti, Project Director and Director General Community Health; and Messrs. Baneth, Schebeck and Thomson from the Bank. This review was based on a discussion paper, prepared by the mission, which addresses the current issues affecting the implementation of the project (see Appendix II). On February 5 this review continued with a meeting with BAPPENAS, chaired by Dr. Soekirman, which focused entirely on problems of disbursement.

Project Management

2. Covenants of the Loan Agreement relating to employment of a management advisor, procurement advisor and planning consultants (Schedule 5, Sec. 2 (a)) and establishing a monitoring and evaluation unit (Schedule 5, Section 3): The Bank's concern regarding the non-implementation of these covenants was brought to the attention of the Minister. Also, the mission made it known that if these covenants would have been met, as visualized in the appraisal report and in the loan agreement agreed to by Government, the areas of weakness relating to management, disbursement and procurement could have been identified earlier and corrective actions taken. Unfortunately, the Government of Indonesia had not taken these steps so far. The mission was informed about the strong political opposition regarding the employment of highly paid expatriate consultants and the Government's desire to employ local consultants.

3. In this context, the Minister stated that his ministry is considering the appointment of an Indonesian group of consultants (PT. INDULEXO) to conduct a management audit of the project and review the existing monitoring and evaluation system in the Project Secretariat and, if need be, assist in setting up an improved system. Following this initial involvement the consultant firm will continue to assist the Secretariat over the life of the project, paying special attention to management, budgeting and procurement matters and to make the monitoring and evaluation system fully operational. The mission supports the engagement of a local firm of management consultants and recommends that at this stage of project implementation no action should be taken to press for recruitment of an expatriate planning consultant.

4. The mission suggested that if the ministry finds the consultants suitable, it should expedite the finalization of their terms of reference and draft contract, which if approved by the Bank, could form the basis for an early start of the consultant work. The mission advised the consultant group and the Project Director that if the group undertakes the assignment, it would do well to include, among its team, persons with experience in government budgeting and procurement procedures who had been exposed to

Section 8 Continued

Bank projects. The mission stressed to both the Minister and the Project Director, that in the prevailing situation, it seems absolutely essential that the Ministry engages a suitable firm of consultants as soon as possible.

5. The mission was informed later that BAPPENAS objected to INDULEXO's proposed rates for fees, and revised rates were under negotiation when the mission departed. On March 23, RSI informed us that negotiations with INDULEXO were stranded upon BAPPENAS' objection to the proposed contract fee. There appears to be some inconsistency in the way BAPPENAS evaluates consultant contracts. In addition, the limitation imposed by BAPPENAS on consultants' fees has delayed and/or prevented the placement of critically needed local and foreign consultants. The case in point is BAPPENAS' refusal in the past of contracts for expatriate management advisors. Over the past two years the Project Secretariat identified three highly qualified expatriates for the post of management advisor. While all their contracts were in line with the cost estimates of the appraisal report as well as with contracts funded by other Bank assisted projects in Indonesia, BAPPENAS refused to sanction these contracts on the basis of excessive cost. Similarly is the case with INDULEXO. INDULEXO is employed through other Bank assisted projects and a mission's review of the firm's fee found them in line with the existing fee structure in Indonesia. Nevertheless, the contract was turned down by BAPPENAS. BAPPENAS procedures for approval of consultant contracts funded by Bank projects warrant special attention by the Region and RSI, since they are undoubtedly a major factor contributing to the negligence of not meeting loan covenants.

6. On March 23, we were also informed by the Project Secretariat that a contract under the same TOR has been negotiated with another consultant firm, P.T. Data Citra Design Consult for US\$53,132 (about half the fee requested by INDULEXO) which has been approved by BAPPENAS. The official request for Bank approval is presently being processed by GOI.

7. Monitoring and Evaluation: The importance of this activity and the staffing of the M&E unit was discussed with the Minister. Prior to these discussions, the Project Director informed the mission that several candidates were interviewed for the posts of M&E unit as late as October 1978. An economist and a social scientist were selected but their hiring was delayed pending the approval by the Minister. As a result of our meeting with the Minister, the Project Director was authorized to proceed with the hiring. The economist was hired prior to the mission's departure and recruitment of the social scientist continues. Since Dr. Suharno, a staff of the Ministry, will continue with the M&E unit, the unit will have three staff members (as against two envisaged at appraisal time). It is expected that the unit should be fully operational by about July 1979. A review of the unit's recent work revealed that exaggerated attention - costly in view of limited manpower resources - was being devoted to preparation of critical path networks, without any specification of time required by or actually spent on each activity. Several corrective actions were suggested. In light of the general unfamiliarity with the concept of M&E among Indonesian professionals, special attention should be devoted to this aspect during the next supervision mission.

8. Project Secretariat: The Project Secretary's lack of leadership and general incompetence have been a matter of serious concern to both Bank missions and the Project Director. Since many of the project's implementation problems are directly attributable to poor judgement and management by the Secretary, his replacement was suggested by the Project Director in July 1978. Yet, the request was not sanctioned by the Minister. Following up on the mission's representation, the Minister transferred Mr. Burkannudin, the Project Secretary, and appointed Mr. Adinugroho to act as Secretary. Furthermore, the Minister instructed the Project Director to devote more time and attention to the project. Towards the end, the Director would be relieved of some of his routine ministerial duties.
9. Organizational Status of the Project Secretariat: The Project Secretariat is not a structural part of the Ministry of Health as envisaged at time of appraisal. The staff is outside the civil service hierarchy, and the project manager controls no budget. Even for minor expenditures, such as postage, the approval of the Director of Nutrition must be obtained. The arrangement favors the ever-present opportunity to blame someone else for inaction and delay; it is thoroughly unsatisfactory and does not provide the structural capability to maintain continuity after the end of the project. The Minister of Health assured the mission that urgent action will be taken to absorb the Project Secretariat and M&E Unit within the Directorate of Nutrition. In addition to his duties of administering the directorate, the director would be responsible for managing the project. In conjunction with the forthcoming reorganization of the Ministry, a new director of nutrition will be appointed, but the Minister did not divulge the name of his choice for the post. As part of the institution building, this organizational change would be most welcome.
10. Disbursement: The unbelievable complexity of Indonesia's financial and budgetary provisions continues to be a major constraint to disbursement of Bank funds. The disbursement target of US\$1.9 million as of March 31, 1979, sharply contrasts with the actual disbursement of US\$0.3 million as of mid-March, and represents a short-fall of 84%. The review of the project's financial statements in February revealed that in nearly two years of implementation, the Government had spent US\$2.9 million for this project. Out of this expenditure, a total of US\$1.5 million is eligible for Bank disbursement. This issue was brought to the attention of the Resident Mission and BAPPENAS with a request to find a solution. BAPPENAS agreed to chair weekly meetings with the project's financial officers to assist in submitting US\$1.1 million for Bank reimbursement by end April, 1979.
11. Decree No. 387/KNK 012/1978 of the Minister of Finance simplifies pre-financing procedures. However, the mission could not obtain a clear answer from BAPPENAS whether this decree applies only to new projects, or whether it will also simplify the complexity of financial procedures which apply to this project. A possible alternative solution to the problem of pre-financing, at least for the NIPP operations, would be to adopt a similar budgetary procedure as it exists in various IMPRES programs.
12. Procurement: The following are a few specific aspects of the progress of procurement actions which go to demonstrate the particular weaknesses of the existing system.

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- (a) While the contractors had already gone ahead with construction of buildings in Bogor and Jakarta, the contract documents had not so far been approved by the appropriate authorities, although work orders had been issued. As a result, no payments had been made to the builders.
- (b) The procurement lists for equipment for CRDN, FTDC, etc. had been finalised, but no bids had gone out, because of delays in the appointment of relevant committees. These delays could have been avoided by energetic action on the part of the Project Secretariat.
- (c) The loan agreement included a specific provision of US\$50,000 towards retroactive financing of the consultant architects. Due to procedural delays, this amount had not been disbursed to the consultant architects, although nearly two years had passed since the work was completed. It was understood that the delay was due to the absence of an approved contract for which action was being expedited.

13. Action relating to procurement of vehicles has, after nearly 14 months of delay, at last taken place, and ICB for 28 vehicles will result in advertised invitations to tender appearing during February. At the time of mission departure the Nutrition Academy's tender committee was in the process of considering bids for furniture and equipment. The FTDC tender committee met on February 10 to decide on the immediate equipment list; it issued instructions to invite tenders. The NIPP coordinator has supplied a schedule (available on file) which relates to the purchase of 112 categories of equipment and details their distribution in the field.

14. Financial Arrangements: During discussions, it came to our notice that the Executive Secretariat did not have a clear idea of the FY79/80 budget requests of different component authorities. Nor did he or his staff have a picture of the progress of total expenditure so far against the allotted budgets. The slowness of reported expenditure would have snow-balling effects on the size of future appropriations which could slow down the progress of the project in 1979-80. This problem was discussed with Mr. Soejoto, BAPPENAS, as well as his experts. A meeting of all the financial officers was held during the mission's stay to ensure that budgetary provisions were correct and the budget for 1979-80 reflects, as accurately as possible, the need to speed up activities in different components, in an integrated fashion.

15. Civil Works: The progress of civil works was reviewed and a full report is available on file. Considerable progress has been made; the Nutrition Academy has been built; the construction of FTDC is between 41% and 55% completed; and CRDN between 19% and 63% completed. If the present momentum is maintained, the physical facilities could all be completed by the middle of 1980. Such satisfactory progress would depend on early awards of contracts for the second-phase construction. However, devaluation of the rupiah has had a disturbing effect on the suppliers and contractors, who have slowed down the rate of construction, particularly in work relating to electrical and mechanical installations. COI will have to agree to increased prices for building materials. Drawings and contracts have been prepared for the second phase of the construction. However, instructions to invite tenders have been delayed

Section 8 Continued

by budgetary procedures and prefinancing. The mission studied the cost discrepancies between the appraisal estimates and tender amounts and detailed information is provided in the separate report on civil works. Since building costs in Bogor have changed little in the past 2-3 years, cost savings on civil works will occur roughly equivalent to the price contingencies for civil works. However, we expect additional costs due to the devaluation of the Rupiah which may be as high as 20% to 25%. Price contingencies should be sufficient to absorb this increase.

16. Nutrition Intervention Pilot Project: Good progress has been made with NIPP in Bojonegoro. All children under three have been registered and data collected for their weight, height and arm circumference. Based on the weight/height ratio compared with Indonesian standards, a nutritional status classification determined those who would receive supplementary food. (The agreed method had been based on longitudinal gain in weight, and in the future, weight gain will be used instead of weight/height ratio.) Village maps have been prepared identifying each household having a mal-nourished child. Monthly weighing has been undertaken for the last three to five months. In each NIPP village, one or more nutrition centers (taman gizi) have been established with community support far exceeding the modest funds provided. Sumberrejo village is about to open its fourth nutrition center, so that a center will be within easy reach of every mother. Each NIPP village has been divided geographically into six areas, each of which has been allocated one day of the week at the nutrition center or subcenter, where demonstrations are given of various methods of cooking the food supplement. On the visits to the center, the food cooked is given to the children, who appear to enjoy it, and mothers are provided with sufficient of the mixture to supplement the children's food at home for the next six days. Health care provided at the centers includes immunization, deworming, iron therapy for nutritional anemia and the provision of Vitamin A capsules, if required. All ANPO stressed their need to receive instructions on the content of nutrition education.

17. In Punypungan, one of the NIPP villages, the headman has started a village health insurance scheme. At the time of the mission's visit, the fees due to the health center exceeded the family payments received, because of a heavy demand for initial treatment. The headman has guaranteed the payments, and is confident the scheme will be viable when demand settles down to normal. The headman will be given the opportunity to visit successful village health insurance operations in Central Java.

18. The Bupati, Bojonegoro, informed the mission that he intends expanding the NIPP activities to 38 other villages during FY79/80. This expansion will be funded from local sources, with the maximum involvement of women's organizations. The supervisory staff will have an increased responsibility, but this unexpected spin-off is very welcome. In 12 villages in Bojonegoro the FTDC has planned to establish 48 demonstration storage units. The work is due to start in the field during March.

19. In West Lombok, progress in the NIPP component has not been satisfactory. The recently appointed Governor and Bupati both required briefing about the NIPP component from the mission. Of the seven nutrition program officers trained, six had been transferred elsewhere, thus denuding the com-

Section 8 Continued

ponent of local leadership. As an immediate step, the NIPP project officer arranged for two of the new appointees to visit Bojonegoro during February, and the training officer at NIPP HQ will arrange for a training course for all new appointees to take place as soon as feasible, making use of the successful implementation in Bojonegoro for purposes of demonstration.

20. The CRDN developed a number of formulae for use as food supplements, but the only mixture used in the field consists of 70% rice flour and 30% soybean flour. Per 100 g this mixture yields 397 cal and 20.2 g protein. However, the mixture has defects. Cooked as a porridge, it is not sufficiently calorie dense. The volume of a child's supplement, 60 g raw flour, is more than a child can consume at one time. The supplement is too expensive; the cost of raw materials works out at Rp227 per kg in Bojonegoro and Rp 279 per kg in Lombok, where soya has to be imported. Taking into account costs of processing, the supplement costs about Rp 450 per kg in Bojonegoro and Rp 500 per kg in Lombok. The mission brought these defects to the attention of CRDN, NIPP HQ Staff and the Project Secretariat, requesting the use of cheaper, locally available foods to formulate appropriate mixtures.

21. The mission was astounded to discover that the food supplement being given to lactating women amounted to 240 g per day. Quite apart from the fact that no mother could consume at one meal this quantity of mixture when cooked, the calorie content is 950 calories, which greatly exceeds the total daily extra requirement for lactation. The annual cost would be over \$30 per beneficiary, nearly three times the appraisal estimate. CRDN had recommended 150 g yielding around 600 calories. The misunderstandings were traced and corrective instructions will be given by NIPP HQ. The mission raised the question as to whether it was necessary to provide adults with processed food; the supply of raw foods would be very much cheaper.

22. Equipment for processing rice and soybean had been delivered to the six initial NIPP Kecamatan and staff trained. At all units the dryer had been found to be impracticable and was no longer in use, because one load of wet crushed soybean required 48 hours to dry. The dryer was heated by a kerosene burner, but the fuel tank had a capacity for four hours burning. A nightshift had to be employed to refuel the tank. Currently the sun is doing a quicker and better job. Soybean contains an enzyme which must be destroyed. The recommended process involved boiling the soybeans for 15 minutes, but field staff misunderstood. The bag of crushed soybeans was placed in a pot of boiling water and left for 15 minutes, whether or not the water came to boiling point again in that time. In Bojonegoro, this method had been abandoned in favor of simple roasting, which involved lengthy manual stirring. FTDC is developing a new roaster, which is about to be tried in the field. Having seen it in operation, the mission advised that the roaster should not be produced in quantity until after thorough field trials.

23. A view was being expressed by some officials that NIPP was essentially a Bank Project and not replicable in Indonesia's circumstances. It is important to ensure that before further expansion of NIPP is taken up, these and other similar criticisms should be examined by the mid-term review required under the agreement. Steps should be taken to initiate action in respect of organizing an Indonesian Review Team immediately, which would critically review NIPP, taking into account the various developments in the Indonesian nutrition scene since the inception of the project.

Section 8 Continued

24. Baseline Data Survey: The results of the surveys of Bojonegoro and West Lombok are now available (tables are on file). Three results deserve special comment. Using weight/height ratio compared with Indonesian standards, the incidence of PCM in children under the age of five years was 44.7% in West Lombok and 50.1% in Bojonegoro. The latter is higher than 25-30% expected during appraisal time, and revised estimates of the numbers likely to require supplementary feeding have been requested. Using Lissamine green as the indicator, the number of children with positive corneal reaction (vitamin A deficiency) was 40.2% in West Lombok and 0.8% in Bojonegoro. Vitamin A deficiency is a much greater problem in West Lombok than expected. The average size of households was in West Lombok 5.20 and in Bojonegoro 4.95; average number of children under the age of five per household was: West Lombok 0.9, Bojonegoro 0.6. It appears that the family planning program is showing its first results. The Baseline Data Survey of the NIPP Kabupaten in Central Java was being processed by the computer at the time of the mission's visit; the data from South Sumatra should be processed by March.

25. A December 1978 report by Dr. Jean Pierre Habicht, consultant to CRDN, deals at length with the Baseline Data Survey and evaluation. This report states: "In conclusion the present NIPP evaluation, although it is good given present evaluation practice, cannot deliver either the inferential or statistical power necessary to evaluate NIPP." He goes on to make detailed recommendations on an improved methodology, involving comparison of randomly selected NIPP and non-NIPP villages. Unfortunately, the Report had not been passed on to CRDN staff, so reaction to the report was unobtainable. Dr. Habicht's comments relate only to Bojonegoro; West Lombok is very different, in that it has 83 villages compared with over 400 in Bojonegoro. If the project is extended for one year, as has been proposed, all villages in West Lombok will become NIPP villages by the end of the project. CRDN has been asked to consider Dr. Habicht's proposals as a matter of urgency, so that they may be considered during the mid-term review.

26. Nutrition Education and Behavioral Change: The mission did not visit the field areas of the nutrition education and behavioral change. Dr. Mantra reported that 1,409 trained cadres were reaching 27,000 families. Monthly weighing of young children had started, and the immediate aim was to create awareness among mothers of the need for their children to grow adequately. Manoff Inc. has been engaged by GOI as consultants on nutrition education. The mission met with the consultants and expressed the need by those involved in NIPP for guidance in nutrition education and the advantage of having a general approach and policy relating to nutrition education.

27. Anemia Control: The mission had hoped to visit the anemia control estates in East Java, but arrangements could not be completed in time. Dr. Samu'mar, the component manager, reported that the field work in North Sumatra was completed, but the results had not yet been analyzed. On four estates in East Java, 11 units had been selected, involving 3,500 people. The Baseline Data Survey had been completed, with the surprising result that no worker had a hemoglobin level of less than 11 g per 100 ml; among workers' families some cases were found. Worm infestation was only 14.4%, which scarcely justifies the distribution of boots. On all the East Java estates involved, workers are covered by industrial feeding which may be a key factor

Section 8 Continued

affecting the results. Other possibilities will be followed up, such as inaccuracy in the instrument used.

28. Food and Nutrition Unit (FNU) Ministry of Agriculture: Although a consultant was hired by FNU in December 1978 to develop a work program of policy oriented food and nutrition studies, no work has yet been initiated. Much of the problem of FNU's inactivity relates to the lack of an effective leadership. Since the Director General of Food Crops is most interested in the broad nutrition policy issues as they relate to overall agricultural planning, the mission suggested that the work originally proposed to be carried out by the FNU should in the absence of further interest by FNU, be undertaken by the Directorate of Food Crops. This issue will require further discussion during the next supervision mission.

29. The mission discussed possible collaborative action regarding this component, with Dr. John E. Mason, Nutrition Division, FAO, Rome. FAO would be interested to provide assistance with recruitment of suitable consultants, technical briefing and backing up in such aspects as methodology and technical supervision of the consultants work. The Project Director was informed of the discussion and of the need for FNU to initiate action.

30. Village Homegardens: The home gardens component has started extremely well, but agricultural staff in the field hope for even better results. In each NIPP village a community seed garden has been established on land belonging to the community or donated by a benefactor. Good quality seed has been supplied by the Department of Agriculture. The crops grown include amaranth (wild spinach), kangkung (swamp cabbage), Chinese cabbage, beans, chillies, tomatoes, aubergine and various indigenous vegetables. Most of the seed gardens visited are now self-sufficient. The size and quality of home gardens varies widely, but much new production has taken place. Most of the produce is being consumed by the families and the surplus is marketed locally. The response has been so encouraging that for FY1979/80 the Director-General of Food Crops plans to introduce home gardens, based on the NIPP model, in 240 sub-districts, as compared to the 60 sub-districts to be covered by the project. The take-off of the homegarden component is most encouraging, considering the fact that this component was still in an inactive stage as recently as August 1978.

31. Selection of Candidates for Fellowships: There were delays brought to our notice in respect of selection of candidates for fellowships and consultants. Lack of decision on the part of the Project Secretariat was urged to be the main cause for this. With the appointment of the new Project Secretary this problem should be overcome.

32. CRDN Staffing Problems: Apart from the fundamental weakness of the Project Secretariat, the project has certain difficulties looming ahead in regard to the staffing of CRDN. During discussions with the CRDN Officials, we understood that there is an overall restriction on the expansion of staff in the Ministry of Health. This would mean that there is a risk that the additional positions to be filled in CRDN according to the appraisal report would not be approved. This in turn would mean that training facilities, as planned, cannot be utilised, as only persons recruited against approved positions can be sent abroad for training. This is a major problem which has to be resolved immediately, as otherwise we may be left with buildings and some equipment but no staff.

Section 8 Continued

33. Reporting: Semi-annual reporting to the Bank by the Project Secretariat is still of relatively poor quality. The October 1978 progress report was far from complete and did not reveal an integrated picture of developments. Furthermore, the report was only focussing primarily on the progress of disbursement and not on progress of actual work of the various components. We hope that with the appointment of the new Project Secretary this problem can be overcome.

34. Progress Review Mission: The Project Director suggested that it would be more convenient if the progress review could take place the end of April or beginning of May in order to permit the Project Secretariat and the consultant firm to be hired to undertake the necessary preparatory studies.

Attachments: Appendix I - Letter to the Project Director
Appendix II - Background Paper prepared for the Project Implementation Review and submitted to Dr. Sujoyo, Minister of Health; Dr. Soejoto, BAPPENAS; and Dr. Soebekti.

Dr. R. Soebekti, M.D., M.P.H.
Direktur Jenderal
Direktorat Jenderal Pembinaan Kesehatan
Department Kesehatan
Jl. Prapatan 10
Jakarta
Indonesia

Dear Dr. Soebekti:

Indonesia - Loan 1373 IND
Nutrition Development Project

Thank you for the kind assistance provided to the Bank mission during its visit in January and February, 1979. As we discussed with you, we are gratified to note the progress made and the actions taken on the issues raised by the mission. The candid exchanges may have helped to resolve some of the more intransigent constraints. In particular, we are grateful for the lead given by Dr. Sujoyo, Minister of Health, in dealing with matters of organization and management.

We hope that early action can be taken now to absorb the project secretariat within the Nutrition Directorate, under a new director who will assume management of the project. Meanwhile, we are happy that Mr. Adinogroho will act as project manager.

We support fully the decision of the Minister that the monitoring and evaluation unit should be established in the Nutrition Directorate, so that it will continue to function after the completion of the project. As you are aware, such institution building is a primary objective of the project. The appointment of Mr. Marteno Soekotjo, economist, as a member of the M & E Unit has been noted and that a social scientist is under recruitment. We fully appreciate your desire to retain Dr. Djoko Suharno as the staff member of the Ministry on the unit. We are, however, concerned about the unexpected delay in the recruitment of a management consultant firm, since unless the work program of such firm will be substantially modified

from that agreed to during our last meeting, it may prove difficult to complete the much needed management review as well as the development of an improved monitoring and evaluation system by the time of the mid-term review.

Much of the mission time was taken up with problems involving withdrawal of loan funds. At December 31, 1978, total withdrawals amounted to only \$101,000 compared with an appraisal estimate of \$1,084,000 by that time. We are well aware of the effects of the initial set-back arising from the DIPs of FY77/78, but a review of current expenditure indicates that further withdrawals amounting to at least \$1.1 million should be possible by April 30, 1979. The weekly meetings convened by BAPPENAS for project and component finance officers should greatly facilitate these procedures and we appreciate BAPPENAS' initiation in this matter. Would you please verify that action goes ahead as planned.

Our architect, Mr. Mills, has reported on the good progress made with civil works and forecasts that if the momentum is maintained, the physical facilities could be completed by the middle of 1980. Drawings and contacts for the second phase of construction have been prepared, but early instructions to the consulting architects to invite tenders will be required, if a delay is to be avoided. There are certain matters which will require your attention. None of the three contractors for the CRDN work have yet received a contract and no payments have been made to them although substantial work has been completed. Moreover, the architectural consultants, who have been working on the project since 1975, have no contract and have received no payment. Urgent action appears to be necessary on these issues. The devaluation of the Rupiah will result in changes in construction costs, which should be collated and presented to the mid-term review mission. Also, clarification is required in connection with staff housing for the Nutrition

Academy; some houses were let under a group contract with other housing by the Ministry of Health. How many houses were involved and what will be the procedures for reimbursement? Many of the buildings are nearing completion or have been completed. Have adequate steps been initiated regarding procurement of furniture?

The mission was pleased to facilitate the procurement of motor vehicles through I.C.B. and we hope that invitations to tender have been issued. We understand that procurement of equipment has also been initiated; if any difficulties should arise, please seek the assistance from the resident mission.

As I mentioned to you, the progress of NIPP has been very satisfactory in Bojonegoro and this is sharply in contrast with the situation in West Lombok. In the latter, six out of the seven NPO/ANPO who were trained have been transferred, leaving the component devoid of trained leadership. Urgent action has been promised by the NIPP HQ staff; please ensure that a new training course will be undertaken forthwith. Difficulties regarding the composition and cost of the food supplement and its processing are of concern and these aspects were taken up by the mission with CRDN, FTD and the HQ staff. These technical issues require early resolution.

Progress with the home garden sub-component has been greatly appreciated and demonstrates the remarkable initiative taken by the Director General of Food Crops. Yet the inactivity on the part of the FNU to carry out its work program of policy oriented food and nutrition studies continues to be a matter of concern. As you will recall, both of us discussed this issue with the Minister of Agriculture last May and were assured at that time that the Planning Bureau of the Ministry of Agriculture will be entrusted to carry out the work originally designed for the FNU. Since, unfortunately, no action on FNU's work has been forthcoming we would appreciate if you could take up this matter, in your capacity as Project Director, with

senior staff of the Ministry of Agriculture. In our discussion with the Director General of Food Crops we were informed that in the absence of further interest by FNU or the Bureau of Planning, the Directorate would be most willing to undertake the policy related studies. We hope that some agreement could be worked out prior to the mid-term review. As mentioned to you already, we support the proposal of Dr. Mason, FAO, to assist in the recruitment of consultants for the FNU and the technical back-up offered from FAO's Nutrition Division.

The field activities of the nutrition education and behavioral change component and the anemia control component were not visited this time by the mission. Visits would be necessary at the time of the mid-term review. By that time the team from Manoff Inc. should be in a position to make interim recommendations.

The report from Jean Pierre Habicht raised a number of issues, especially regarding the NIPP base-line data survey and evaluation. Unfortunately, the CRDN staff at Bogor had not seen the report and could not respond to the proposals. At the mid-term review these proposals should be considered in depth.

There were delays brought to our notice in respect of selection of candidates for fellowships and consultants. We hope that with the appointment of the new Executive Secretary this problem can be overcome. We would also like to draw your attention to difficulties looming ahead in regard to the staffing of CRDN. During discussions with CRDN we understood that there is an overall restriction on expansion of staff in the Ministry of Health. This would mean that there is a risk that the additional positions to be filled by CRDN according to the appraisal report would not be approved. This in turn would mean that training facilities, as planned, cannot be utilized, as only persons recruited against approved positions can be sent

abroad for training. This is a major problem which would deserve your attention, as otherwise we may be left with buildings and some equipment, but no staff.

I would also like to draw your attention to the relatively poor quality of semi-annual reporting. The October report was far from complete and did not reveal an integrated picture of developments. More focus needs to be placed on progress of actual work of the various components instead of addressing exclusively the progress of disbursement.

We agree to your representation that the mid-term review should take place in May, 1979. The composition of the mission, the field work to be covered and suggestions regarding a joint approach by GOI and the Bank, will be the subject of a separate letter. In conjunction with this review, I would like to suggest that under your leadership an Indonesian Review Team be formed, which would critically review all project aspects, taking into account the various developments in the Indonesian nutrition scene since the inception of the project two years ago.

We are indebted to you and your staff for the characteristic courtesy and cooperation, which was greatly appreciated by all members of the mission.

With best regards.

Sincerely yours,

Emmerich M. Schebeck

To be cleared by: Mr. R. de Silva, AEA

NUTRITION DEVELOPMENT PROJECT (LOAN 1373 - IND)

Date of Loan Agreement: 3/15/77	Bank Financing: \$13 million
Date of Effectiveness: 4/1/77	Other Financing: Indonesian Government
Projected Closing Date: 3/31/82	Disbursements as of 12/31/78: US\$0.1 million
Total Project Cost: US\$26 million	Last Supervision Mission: 8/78 (Ms. Carrien Haman)
	Expected Next Supervision Mission: 1/79

Project Preparation: Indonesian Government/Bank

Project Implementation: Overall management rests with the Director General of Community Health within the Ministry of Health, the designated Project Director (Dr. R. Soebekti). He is supposed to be assisted by a full-time project manager, designated as Executive Secretary, a Deputy Executive Secretary and several staff for finance and procurement. A separate Monitoring and Evaluation unit is supposed to report to the Executive Secretary. In order to assist the Project Director to overcome anticipated management difficulties the project provides a full-time management Consultant. To ensure full cooperation of the Ministries of Home Affairs, Education and Agriculture, a part-time Co-director is nominated from each of these ministries to work in close cooperation with the Project Director.

PROJECT OBJECTIVES:

The project's major objectives are to: (i) strengthen and expand the existing nucleus personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation; (ii) develop rationally replicable measures to improve the nutritional status of malnourished target groups; and (iii) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

PROJECT DESCRIPTION:

The project is designed to assist the Government in:

Strengthening Institutional Capacities by -

- (a) Expanding the Center for Research and Development in Nutrition under the Ministry of Health through the provision of funds for additional staff, training, technical assistance, necessary equipment and a modest expansion of physical facilities.
- (b) Strengthening the Food Technology Development Center being set up at the Agricultural University, Bogor, with provision of funds for facilities, equipment, technical assistance and staff.

- (c) Improving the planning, coordination and evaluation of nutrition activities through technical assistance to the Ministries of Health, Education and Agriculture.

Direct Nutrition Action Programs covering the -

- (d) Initiation of a Nutrition Intervention Pilot Project through the provision of funds for additional staff, training, technical assistance, buildings, equipment and materials. These programs will integrate nutrition, education, agricultural and health activities and food supplementation to those people most affected by malnourishment in 180 villages of seven districts with a population of approximately 740,000.
- (e) Increased production of nutritious vegetables and fruits in about 18,000 home/village gardens by provision of improved seeds, development of model garden packages and intensification of extension efforts.
- (f) Improving food storage at village level through assistance to the Food Technology Development Center which would, in collaboration with the Ministry of Agriculture, develop an appropriate small-scale storage program.
- (g) Initiation of an iron supplementation program under the National Institute for Industrial Hygiene and Occupational Health to tackle nutritional anemia among 3,000 families in a selected number of plantations with a view to developing a national program to cover all government and privately owned plantations.

Education and Training by -

- (h) Instituting and testing the efficiency of alternative nutrition communication methods to bring about desirable changes in nutrition behaviour.
- (i) Upgrading and expanding the training of nutritionists in the Academy of Nutrition at Jakarta by provision of equipment, staff and necessary physical facilities.
- (j) Improving the training of agricultural extension staff by introducing nutrition in the curriculum of the basic training centers and the secondary agricultural schools of the Agency for Education, Training and Extension.

Developing a National Food and Nutrition Plan by -

- (k) Provision of technical services for the formulation of a national food and nutrition program incorporating the most effective elements of the nutrition activities initiated under the proposed project.

EXPECTED BENEFITS:

The proposed project would strengthen Indonesia's institutional and personnel capacity to analyze the nature of the national nutrition problem by research and development and by pilot operations to test the feasibility and effectiveness of various measures to deal with the problem, and to formulate and subsequently to execute a large-scale action program. In the longer run national program of action to improve nutrition, which this project would help to institute, would result in optimizing the use of food resources, in increasing the quality and productivity of Indonesia's work force and in better utilization of Indonesia's education system by a healthier group of students. The higher rate of survival of children would probably also lead to a more suitable atmosphere for effective family planning campaigns and may eventually reduce desired family size. In the long run, implementation of the nutrition strategy contained in the proposed project would bring benefits by optimizing the use of food resources and by increasing labor productivity. This in turn would improve the incomes of those whose malnutrition is a direct result of their poverty.

In addition to these potential long-term benefits, the pilot projects are also expected to generate the following direct benefits: nutritional rehabilitation for over 30,000 children; nutrition education for 100,000 families, and food supplements for the 17,000 pregnant women and lactating mothers among these; immunization of 100,000 children from infectious diseases; iron supplementation for 3,000 plantation workers; establishment of 18,000 home and village gardens, as well as small-scale storage units.

PROJECT IMPLEMENTATION

The technical aspects in connection with civil works has proceeded remarkably well. The construction of the Nutrition Academy has been finished, the FTDC is between 41% and 55% completed and CRDN between 19% and 63%. The second phase drawings for civil works have been prepared and instructions to invite tenders for the new construction and auxiliary works will be issued in FY 79/80. With the present momentum, physical facilities should all be completed by mid-1980. The consultant on CRDN research design, who was engaged under the project, reported that all the areas of research selected by CRDN are important for finding useful answers for those who must implement national nutrition policy and that the multi-disciplinary spirit of the centre offers great promise, if expansion of research into socio-cultural and economic areas can be fostered. Ministerial decree No.056/0/1978 has established the status and working procedure of the FTDC as an entity under the control of ICB. The research and development programs of FTDC have been revised, keeping in view the immediate needs of NIPP activities. The Nutrition Academy has increased its student enrollment from 102 to 160, the director expects 48 students to graduate this year compared with the former rate of about 25 per year. Although six months behind schedule good progress has been made in implementing the NIPP component in Bojonegoro. Activities in Lombok are far behind schedule mainly due to staff changes, lack of clear instructions from Jakarta and inadequate transport.

In Bojonegoro, through local initiative changes have been made in the food processing method to provide an interim supply of food supplement pending revision of the process. Registration of children under 3 years, with data on age, weight, height, and arm circumference, has been completed and an assessment made of nutritional status. Village maps, identifying each household with a malnourished child, have been prepared. Nutrition Centres and sub-centres have been established in each NIPP village with striking community support. For the last three months, monthly weighing at the centres has been carried out and growth charts issued to mothers, food supplementation is provided for those who need help. All children are undergoing a program of immunization and deworming. Nutrition education of a home economics type is being given to all mothers of young children weekly. The village and home garden program is progressing well both in Lombok and Bojonegoro. Each village has a community seed garden from which vegetable seed is being distributed to households. The third crop is currently growing and the best garden not only supplies the whole village, but sells sufficient seed in a neighbouring district to cover the cost of production. In Punypungan village a health insurance scheme has been started by the headman. The anemia control trials in North Sumatra have been completed, but results are not yet available. In the East Java estates, base-line data has been collected, deworming and therapy with ferrous sulphate has been completed and iron fortified salt distributed.

Weighing of children and supplementary feeding is reported to be under way in the kecamatan selected for the study in behavioral change. Despite previous assurances the FNU has still not become operational. To assist component heads with their greatest constraint, the secretariat has issued detailed instructions of the budgetary, pre-financing accounting and procurement procedures.

CURRENT ISSUES AND ACTIONS RECOMMENDED

1. Defaults of Covenants of the Loan Agreement

Despite repeated interventions during all past supervision missions the following covenants of the Loan Agreement have still to be met:

- (a) Hiring of a management advisor, a procurement advisor and planning consultants to assist the Project Director Schedule 5, Section 2 (a); and
- (b) Establishment of a monitoring and evaluation unit staffed with at least two appropriately qualified and experienced professionals to assist the Project Director in the monitoring and evaluation of the Project (Schedule 5, Section 3);

2. Project Management

At appraisal the Bank mission felt that management of this multi-sectoral project could become a potential problem. It was for this reason that the project included funding for the staffing of a project secretariat, a monitoring and evaluation unit, and consultants for management, procurement and planning.

- (a) Project Secretariat: A well functioning secretariat is crucial for successful project implementation and inter-ministerial coordination. Staffing of the secretariat with a fulltime and qualified senior administrator as the Executive Secretary was a matter of high priority. The complexity of the project demands that the staff of the secretariat function as a team, be fully familiar with all project aspects, devote full-time work to the project, and work closely with component officers in Jakarta and in the provinces. The Project Secretariat has not achieved these objectives. Local officials and components officers have so far received inadequate assistance in the difficult task of implementation. Problems with budgetary and procurement procedures have prevented an effective coordination of the project's components. In any civil service hierarchy, status affects relationship, but status may be a question of grading within the hierarchy or a reflection on the competence of the manager. It is pertinent, that the Executive Secretary should at least be "primus inter pares" with the component heads he influences. There is urgent need for the Executive Secretary and his staff to interact more fully and frequently with component staff and officers of Ministries and BAPPENAS.
- (b) Organizational Status of the Project Secretariat
The project secretariat is not an integral part of the organizational structure of the Ministry of Health. It, therefore, can only hire staff on fixed term contract and does not attract civil servants. Although the project provides 100% funding for

the staff, as a special entity it does not attract its own budgetary allocations nor can it draw funds specifically from the project. Serious delays in the payment of salaries, sometimes up to 4 months, have certainly contributed to low staff moral. The recognition of the project secretariat as an integral part of the Ministry of Health, with its own DIP, would facilitate its working.

(c) Monitoring and Evaluation Unit

As discussed above the monitoring and evaluation unit has not been established. Inputs of this Unit are important to assure effective project management but also to assess results achieved and failures. This issue has been emphasized in the past, action has been promised but was never implemented.

(d) Hiring of Consultants for the Project Secretariat

Non-recruitment of a management advisor, a procurement advisor and planning consultants has largely contributed to the existing management problem and its associated delays in project implementation as well as disbursements. While several attempts were made in the past, on behalf of the Project Director, to recruit a management advisor, no agreement was reached on salaries.

3. Financial/Budgetary Regulations

(a) The financial regulations of the Government relating to budgetary provision and expenditure procedures represent a major constraint on implementation of a multi-sectoral project. The budgetary regulations relating to IBRD loans require that each component manager prepares a component budget which is disaggregated according to the source of finance:

- (i) Expenditures financed out of Indonesian resources have to be provided for in the DIP Murni (or normal development budget).
- (ii) Expenditures financed in part out of the Bank loan have to be provided for in the Supplementary DIP.
- (iii) Expenditures financed fully out of the Bank loan and being directly disbursed by the Bank, as is the case with consultant fees and fellowships, have to be shown in the supplementary DIP as a separate category under "direct foreign payments".

A further complication is that the percentages of the total allocated to the normal Development DIP and to the Supplementary DIP must match

the disbursement percentages as detailed in the Loan Agreement. Failure to achieve such matching has resulted in time-consuming arguments between BAPPENAS, the Ministry of Finance, the Bank of Indonesia, the project management and component heads. The original DIPs for 1977-78 did not match and process of revision was not completed until February 1978, reflecting the complexity of the procedures and the lack of familiarity of the project management to master and communicate these procedures. Problems prevailed with the 1978-79 DIPs. Arrangements for pre-financing and issue of SKOs involved delays and inhibited timely procurement. For example in 1978, the SKO for the NIPP was not issued until June 1978 causing long delays in the procurement and training of staff.

The complexity of the budgetary provisions and expenditure procedures have been brought to the attention of BAPPENAS and the Project Director with the request to find a solution. A possible solution at least for the NIPP operations would be to adopt a similar budgetary procedure as it exists in various IMPRES programs.

4. Procurement

- (a) Because of the difficulties described in section 3; procurement has been frustrated. Lack of adequate pre-financing continues to stand in the way of flotation of equipment tenders, particularly for CRDN and Nutrition Academy. No payment has yet been made to the contractors for the civil works of CRDN, although the work has progressed far. While work orders were issued, no contracts have been approved. No withdrawal request has been made of the retroactive financing of US\$50,000 for architects fees associated with CRDN, FTDC and the Nutrition Academy. Several months of delays in payments for consultants are common. The project provides funding for 32 vehicles plus 10 start up vehicles to be purchased locally. Non of these vehicles has been procured and as a result many components suffer in their implementation. According to the Project Secretariat the delay in procurement of start-up vehicles was largely associated with vehicle price ceilings imposed by BAPPENAS. Now that nearly two years have passed, there is no further case for start-up vehicles. All vehicles should be purchased according to ICB and adequate DIP (Supplement) should be provided to allow for direct payment of the c.i.f. costs of the vehicles. The normal development DIP (Nurni) should provide for handling and

other costs. Vehicles are essential for the NIPP operations; they should be purchased forthwith. Many of the above procurement problems relate to the project secretariat's nonfamiliarity with Bank procedures. The hiring of the procurement advisor has now become essential.

An unfortunate mistake in the Loan Agreement has created obstacles to local procurement. The Bank suggested a revision of the Loan Agreement in November between Schedule 1, item 2 (e) and Schedule 4 item B 2. The proposed wording of Schedule 1, item 2 (c) reads "locally manufactured equipment ... 95%" and eliminates "procured following international competitive bidding". This change has not yet been accepted and as a result procurement of locally manufactured equipment is delayed.

5. Semi-Annual Reporting to Bank

- (a) This reporting is continuously delayed by several months and lacks the qualitative appraisal of project progress, including inter alia civil works, procurement, recruitment and training of key personnel.

6. Nutrition Intervention Pilot Project - NIPP

- (a) Budgetary procedure, time consuming revisions of DIPs and delayed procurement of materials and equipment have impeded the operational progress in NIPP and caused a 6 to 8 months delay in project implementation. The NIPP Coordinator within the Ministry of Health is responsible for the timely implementation of the NIPP program and the applications of the financial regulations. Based on information received in the field the NIPP Coordinator has never visited the kabupaten selected nor has he briefed the bupati or governors about the purpose of the project. A striking example was an April 1978 visit of a supervision mission to the kabupaten of Karang Anyar in Central Java where the bupati had to learn of the project for the first time from a Bank mission. This situation reflects, unfortunately, the lack of interaction by the NIPP Coordinator and Executive Secretary with component staff in the field, which explains much of the delays. The technical basis on which NIPP is carried out still requires improvement. A detailed discussion of these aspects is provided in Annex II. The lack of an operational monitoring and evaluation system for NIPP is becoming a serious management constraint. As a consequence, the NIPP Coordinator lacks a clear idea about the physical and financial progress of various activities. Because of the delays associated with implementation of NIPP we would suggest that for the next year no new kabupaten be added to the program but rather all emphasis be placed on making NIPP in the existing 4 kabupaten fully operational.

7. Food and Nutrition Unit (FNU) Ministry of Agriculture

- (a) The project provides assistance to the FNU with the objective to integrate nutritional considerations into agricultural policies and programs. The problem of FNU's standing in the organisational structure of the Ministry of Agriculture remains unresolved since the first implementation mission of April 1977. In January 1978 the Bank mission was informed that it is unlikely that the FNU will be formally established within the Government's organisational structure. Therefore, the Bank suggested that FNU's proposed work program should be carried out directly by the Planning Bureau. This proposed change was supposed to help to overcome the bureaucratic problem associated with FNU, while it would still enable the Ministry to carry out the nutrition/agriculture policy planning. In January and again in April 1978 the mission was assured that the Ministry of Agriculture and BAPPENAS will give full attention to this proposal. So far the Bank has not been informed of any action to make this component operational. We would suggest that the work originally proposed to be carried out by the FNU would either be carried out by the Directorate of Food Crops or that cancellation of this component be considered by the Government.

8. Center for Research and Development (CRDN)

- (a) Staffing for the CRDN is facing problems due to an overall ceiling on hiring of new staff for the Ministry of Health. Considering the commitments already entered into, a solution to this obstacle should be found. The staffing of economists for CRDN has posed a problem since nearly two years. Since the lack of qualified economists prevents CRDN from carrying out the nutrition surveys and evaluation of programs to satisfactory standards we would recommend that CRDN can hire local consultants to overcome this bottleneck.

9. Postponement of Project Completion Date

Because of the various problems in implementation we would suggest that consideration should be given to postpone the completion date by one year.

Supervision Mission
Jakarta
February 4, 1979.

OFFICE MEMORANDUM

TO: Mr. Emmerich M. Schebeck, Chief, AGRNU

DATE: October 10, 1978

FROM: Carmen Hamann, ^{CH} AGRNU

SUBJECT: INDONESIA - Nutrition Development Project -
Loan 1373-IND - Supervision Report

Attached is the Supervision Report for the above project.

<u>Distribution:</u>	Messrs. Please	(AEA)
	Kirmani	(AEP)
	Stérn	(AEA)
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	Ruddy	(AENVP)
	Messenger	(POP)
	van der Tak	(PAS) 3
	Yudelman	(AGR)
	Kapur	(EAP)
	Hattori	(CTR)
	Fernando	(CTR)
	Subramanian	(CTR)
	Christoffersen	(AGR)
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	Forget	(LEG)
	de Silva	(AEA)
	Berg	(AGR)
	Baneth	Indonesia (Jakarta)
	Bumgarner	Indonesia
	Richir	Indonesia
	Hussain	Indonesia
	Blaxall	(AEP)

Attachment: ANNEX

CH:ap

IBRD AND IDA - SUPERVISION SUMMARY

This summary is the initial summary
 part of a mission report
 a semi-annual update
 the completion summary

Regional Office: AEP	Project Name: Nutrition Development Project	Project Code: 7INSNF01	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.: 1373 IND	L/C Amount (\$xx.xm): US\$13.0 million
Country: Indonesia	Borrower/Beneficiary: Health, Education and Agriculture	Board Date: 3/1/77	Signing Date: 3/15/77	Effective Date: 4/1/77
Projects Dept./Div. Name: Nutrition	Org. Code No.:	Projects Officer: Ms. Carmen Hamann	Loan Officer: C. R. de Silva	

SECTION 1: SUMMARY PROJECT DESCRIPTION The Project will (1) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs operational research manpower training, monitoring and evaluation; (2) develop rationally replicable measures to improve the nutritional status of malnourished target groups; and (3) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

SECTION 2: PERFORMANCE RATING

STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems

TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating

TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 5)

If more than one type of problem, enter most critical factor first.

Designated a "problem project" in most recent SVP review? Y - Yes; N - No N

This Summary Last Summary

<input type="checkbox"/> 2	<input type="checkbox"/> 2
<input type="checkbox"/> 2	<input type="checkbox"/> 2

F	M				
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SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion (Mo./Yr.)	Loan/Credit Closing (Mo./Day/Yr.)	Total Project Cost (\$xx.xm)	of which:		Cumulative Disbursements through most recent Quarter ended (/ /) (\$xx.xm)
				Foreign Currency (\$xx.xm)	Local Currency (\$xx.xm)	
Appraisal Est.	<u>3.81</u>	<u>3, 31, 82</u>	<u>26.0</u>	<u>10.2</u>	<u>15.8</u>	<u>0.48 (Est.)</u>
Last Summary (/ /)	<u>3.81</u>	<u>3, 31, 82</u>	<u>26.0</u>	<u>10.2</u>	<u>15.8</u>	<u>0.05 (Actual)</u>
Current	<u>3.81</u>	<u>3, 31, 82</u>	<u>26.0</u>	<u>10.2</u>	<u>15.8</u>	<u>0.05 (Actual)</u>

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	<u>2</u>	<u>28</u>	<u>8, 23, 78</u>	<u>10, 10, 78 (CS)</u>
Previous Mission	<u>4</u>	<u>19</u>	<u>4, 27, 78</u>	<u>5, 25, 78 (FS)</u>
Next Mission Departure (Mo./Yr.)	<u>1, 79</u>	Recommended interval between missions (Months) <u>4</u>	End of period covered by latest progress report (Mo./Day/Yr.) <u>8, 16, 78</u>	

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

SECTION 5: COMMENTS (Explain "other" in Section 2 and clarify, if necessary, data in Sections 3 and 4)

C Hamann was present from July 23 to August 19; Mr. E. C. Thomson was present from August 2 - 20.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND, AND MAJOR PROBLEMS:

Most difficulties on project operations stem from weakness in management; coordination with heads of components, contact with BAPPENAS and M.O.F. has to improve. Financial regulations of budgetary provision and expenditures procedures of GOI represent a constraint to project implementation. For 4th quarter FY77/78 and 1st and 2nd quarters FY78/79, no authority for prefinancing has been issued. Only minor withdrawals have been requested but significant increase is expected for the 3rd quarter. Lack of transportation continues to impair NIPP implementation. 'Standard vehicle prices' have been increased to match market prices, but DIPs will have to be revised upwards. Procurement procedures for vehicles through ICB had to be reprocessed due to MOH unfamiliarity with Bank's procedures. Progress on civil work construction has been good. Effective monitoring for construction has been established. Contract prices are much lower than estimates, check on standards by Bank architect is needed. Consultant for the selection of laboratory and pilot plant equipment has been hired. Early procurement for large items of pilot plant equipment is essential to ensure timely installation. Fellowships have been awarded to six candidates. Agreement for fellowships administration by () is being processed. Little progress has been made on staffing monitoring and evaluation unit of Project Secretariat, engagement of consultants and technical assistance was recommended. Reportedly home gardens show progress and Ministry of Agriculture is interested in extending component. Consultant has made progress in defining responsibilities of FNU. Project Director supports BAPPENAS' desire to hold mid-term review in April '79 as January period of intense internal activity and results among beneficiaries unlikely before then. Preparatory mission would be welcome in January.

Preparing Officer: Carmen Hamann

Initials: *CH*

Date: 10/10/78

Section 7 - Actions Taken and Recommended

1. All important issues were discussed with Dr. Soebekti, Project Director, and Mr. Soejoto, Deputy Chairman of BAPPENAS. Relevant issues were discussed with each component head and the secretariat staff. From August 7 through 9 a workshop was held on monitoring and evaluation. Special meetings were convened on the anemia control component and on nutrition education. The follow-up letter from the previous supervision mission had been circulated to all component heads. Its contents and reports thereon formed the first agenda item at the round-up meeting on August 16. The items included in this section are referred to in the follow-up letter. (Annex)

The Fundamental Problem

2. Financial regulations of GOI relating to budgetary provision and expenditure procedures are so complex and rigid that they represent a major constraint on project implementation. The need to match DIP (murni) and DIP (supplement) with the disbursement schedule of the Agreement, frustrated the use of loan funds during the first year. The funds allocated for pre-financing the supplementary DIPs of 1977-78 have been used slightly: Rp5,000,000 spent out of Rp97,000,000 authorized for pre-financing. Although requested by the secretariat, no pre-financing has been authorized for the FY78-79 DIPs, in which there are items, such as equipment, which were not included in the 1977/78 DIPs.

3. The complexity of budgetary provision and expenditure procedures have been brought to the attention of the Resident Mission, BAPPENAS, and the Project Director with the request to find a solution within the context of existing procedures.

4. The system affects all Bank-financed projects. The mission suggests that the Region should discuss with GOI ways to improve the financial procedures to be used in Bank loans. If GOI would pre-finance the projects through its regular budget procedures instead of through the Bank of Indonesia, there need only be DIP (murni), and many of the time-consuming procedures would fall away.

5. The finance officer of the Ministry of Health with the Acting Project Director will convene a meeting to discuss problems with project staff, but more particularly, to determine if a way exists for the early purchase of village cadre equipment.

6. The equipment for village cadres in the next two kabupaten has not been included in the 1978/79 DIPs. In 1978, the DIP for NIPP was not approved until June; the same is likely next year and even if other procedures go smoothly, purchase of equipment would not be possible until August, far too late for the cadres who will be trained and ready to operate in April. The Project Director has been asked to revise 1978/79 DIPs to enable purchase of equipment during the current financial year. Action must not be delayed; the revision process takes about three months.

Procurement

7. Civil Works. The response to invitations to tender was very satisfactory, and the success tenders were below the estimates. The difference between contract price and estimates is substantial. Copies of all construction plans as tendered, including plant plans and total floor area, have been requested by the mission for further analysis by a Bank architect.
8. The rate of progress in FTDC construction has been good. As of August 15, the degree of completion was as follows: housing 18%, laboratory 13%, administrative block 13%, pilot plant 9%. When construction reaches 25%, payment of 20% to the contractor will be due, probably during September. About 3% of the Nutrition Academy's laboratory is completed; progress is less for the library. The CRDN buildings are still at the excavation stage. Building committees to monitor progress have been established.
9. Vehicles. The 'standard vehicle prices' set by BAPPENAS have been increased to match market prices. However, the DIPs reflect the former 'standard prices' and in most cases, the DIPs will have to be revised upwards before an order can be placed. Each component will have to apply for revision of its DIP, both murni and supplementary. Delivery by the end of 1978 is perhaps over-optimistic.
10. During 1977, the Department of Industries issued a waiver on import restrictions for 32 vehicles for the project, but most of the vehicles were described by brand name. The process of procurement of vehicles through ICB must be started again using general specifications. Examples of the format for invitations to tender have been given to the secretariat's procurement officer.
11. Equipment. Some items of special equipment for the pilot plant will be too large to pass through doorways. Installation should be carried out before the roof would be completed. A consultant on food processing equipment will arrive shortly, and he will be requested to take immediate action on these large items.
12. As a result of the supervision mission of March 1978, a request was made on March 10 to the Legal Department to change schedule 1 of the Loan Agreement for disbursement of items of equipment costing less than \$50,000, which may be procured in accordance with the government procedures. Since the Legal Department has not followed up on the March request by the Nutrition and Indonesia Programs Division, the present provisions in schedule 1 of the Loan Agreement do not yet allow disbursement for these items. We propose that category (2) (c) of this schedule be amended as follows: "(c) locally manufactured equipment 95%." The Legal Department is now taking action to effect the amendment.

Monitoring and Evaluation

13. A young doctor and a midwife have been recruited for the monitoring and evaluation unit (MEU). Neither has knowledge of or experience in the skills required for the task. The mission informed the Project Director that these appointments are unacceptable.

14. A seminar on monitoring and evaluation was held from August 7 through 9. As an immediate step, all components are being urged to set up their internal monitoring system according to the system presented at the workshop.

15. Plans of operation exist only for NIPP for FY78/79 but not for the other components. At the round-up meeting, the project director requested those in charge of components to prepare plans as a matter of urgency. The activities most affected are: nutrition education, anemia control and home gardens.

16. The MEU is urgently needed not only for the mid-term review of the project but for the long-term planning process. The urgency of staffing the MEU has been emphasized with the Project Director and BAPPENAS.

17. A note on monitoring and evaluation, available on file, was prepared for the Project Director and circulated to all component heads.

Nutrition Education

18. Training of cadres for the NE component has begun, despite no decision having as yet been reached on the 'messages' or 'topics' to be disseminated. Cadres are being instructed according to general guidelines given by local staff. The employment of communication consultants is under consideration, but it is vital to reach a decision on message content before applying communication techniques. BAPPENAS convened an 'ad hoc' meeting on August 14 to consider possible courses of action. The meeting concluded that the Project Director should seek the assistance of UNICEF to finance a seminar for nutrition educationists with the objective to define the basic messages. The recommendations of the workshop would be submitted to Dr. Soebekti, Director-General of Community Health, for decision as to the 'messages' approved for government use. On August 16, Dr. Soebekti informed the round-up meeting that the Minister of Health had directed him to ensure more effective actions regarding nutrition education. Dr. Mantra was asked to start immediate action on this subject.

Anemia Control

19. A report on the visit to the estates in North Sumatra is available on file. Although much effort and enthusiasm have been expended by almost all of those involved in field work, coordination between NILHON, Ministry of Agriculture and CRDN still remains a problem. Initial indications are that eradication of anemia resulted in an improved work output of 20 to 25%. The trial in North Sumatra will continue until September 1979, which should allow time for more scientific evaluation. On August 12, the Project Director convened a meeting to detail the action required within the component. Directions were given on the preparation of plans of operation and plans of action, with specific identification of unit responsibilities. Work for the second year has started on the estates in East Java, without CRDN involvement.

Home Gardens

20. In all initial NIPP villages, home garden activities have begun with one extensionist for each village and 1,170 participants. 47 groups have been established and the garden of each designated group leader is being used as a demonstration garden. Fruit tree nurseries have been established for mango, coconut, citrus, guava, breadfruit and jackfruit. Seeds, urea and phosphate have been distributed. Similar home garden programs are being financed by UNICEF and Directorate of Food Crops. Dr. Suhaidi, Director of Food Crops, hopes the programs will go ahead harmoniously. Towards that end he would like to mount a home garden tour with a member from the Bank, one from UNICEF and some of his own staff.

21. To increase available food supply and to provide further income generating activities, proposals have been made to extend the area of garden receiving assistance. Together with Mr. Dapice, consultant to GOI, a member of the mission discussed the proposals with Dr. Wardoyo, the new Director General Food Crops cum Head of BIMAS and Dr. Birowo, Director of Planning. Dr. Wardoyo is very conscious of the need to reach the more deprived small-holders and would be interested in a pilot project in NIPP areas to test the feasibility. Mr. Dapice will assist the Ministry in the preparation of proposals.

Mid-Term Review

22. The proposal to hold the mid-term review in January 1979 was strongly opposed by BAPPENAS on the grounds that they would be intensely busy with the Five-Year Plan at that time. The Project Director agreed with the BAPPENAS view and urged that the review should be held in March or April 1979. Mid-term for the project would be March 31, 1979, hence the mission recommends that the review should be held in April 1979. During January, a small mission would be welcome if it could assist in the preparation for the mid-term review and the 1979/80 budget preparation.

23. During this mission much of the information could only be gleaned from reports submitted by field staff. Quite apart from being out-of-date, second-hand reports are a poor substitute for examination of what is actually taking place.

Production of Written Material

24. A great volume of material has been produced, representing an immense amount of work: 8 manuals for NIPP, several for home gardens, 4 for agricultural extension training, 3 for anemia control, completely new curricula for the nutrition academy and numerous reports of seminars and workshops. Most of the material is in Indonesian; copies are available in the Division.

Attachment ANNEX - Letter to Project Director

DRAFT
ET/CH/EMS:ap
Oct. 11, 1978

Dr. R. Soebekti, M.D., M.P.H.
Direktur Jeneral
Direktorat Jenderal Pembinaan Kesehatan
Department Kesehatan
Jl Prapatan 10
Jakarta
INDONESIA

Dear Dr. Soebekti:

Indonesia - Loan 1373 IND
Nutrition Development Project

Thank you for the kind assistance provided to the Bank mission during its visit in July and August, 1978. We have reviewed the mission's report and while gratified to learn of the progress in some areas, we are concerned that problems relating to project management, monitoring and evaluation, and financial regulations continue to plague the project. We hope that authorization for pre-financing of the first and second quarters of FY1978/79 has been issued and that no procedural requirements will further delay the procurement of vehicles.

Sec. 3.08 of the Agreement item (ii) refers to a review of the NIPP program at the end of the second year of the program. The failure to procure the equipment for village cadres and the consequential delay in training the cadres in Bojonegoro has already reduced the period of operational action by half. Every further month of delay increases the probability that not even trends, far less results, may be identifiable.

The progress in the NIPP areas of Central Java and South Sumatra has been reported as going according to the plan of operations. Let us be sure that lack of equipment does not impede the operational action in the new NIPP areas, by ensuring revision of the DIPs and procurement of the equipment during FY1978/79.

The civil works for the FTDC appear to progress well and the first payments to the contractors were supposed to have been made in September. Please check that early requests are made for disbursement from the loan. We understand that all the civil works are in a position to go ahead.

The report on the workshop about monitoring and evaluation has stressed the recognition by all component representatives that a strong technical unit will be vital for success. Various suggestions have been made regarding possible sources of personnel qualified in development analysis statistics and evaluation study design. As you are aware, the establishment of the Monitoring and Evaluation Unit is stipulated in the Loan Agreement, schedule 5, item 3. Therefore, we would like to urge you to staff, as soon as possible, the M & E Unit with competent personnel and to engage local and/or expatriate consultants to start designing the evaluation system before very important steps on the project are going to be lost. Meanwhile, we understand that each component will set up its own plan of operation, according to the model and planning requirements established by you, which will form an essential part in both the evaluation process and the internal monitoring system.

The enthusiasm and energy with which NILHON has pressed ahead with the operational action in the anemia control component fills us with admiration. However, the validity of results are of fundamental importance in an issue which may result in a large government program. We have doubts about the study design, about the training given to the enumerators and about the interpretation of results. The indicative results of a 20% to 25% increase in productivity are encouraging, but these have to be turned into definitive results incorporating cost-benefits to the estate. It is important to stress the fact that this component has to test the logistical feasibility of establishing

a delivery system for iron supplementation. Your efforts, to get this across to the various organizations involved, are greatly appreciated. We would urge you to ensure that CRDN be actively involved in the design and supervision of the technical aspects of this component as stipulated in the Loan Agreement.

Our records show that during the last four years, continuing attempts have been made to identify the priority of 'messages' for nutrition education. The Nutrition Education Component is considering engaging consultants on communication, but there is as yet no decision on what could be communicated. We detect a lack of communication between the Nutrition Directorate and the Health Education Directorate. The mission attended an 'ad hoc' meeting in BAPPENAS on nutrition education and tried to discuss the objective and basic problems faced by nutrition education. Some action may have taken place, but if you judge it to be inadequate or inappropriate, may we suggest that you ask UNICEF to promote a workshop, with highly competent specialists to recommend to you the priorities and topics for nutrition education.

Since the start of the project, the management of the Project Secretariat has given us great concern and continues to do so. Apparently, relations are conducted between 'management level' of the secretariat and the 'junior administrative staff' of the components, instead of dealing directly with the component heads. In any civil service hierarchy, status affects relationship, but status may be a question of grading within the hierarchy or a reflection on the competence of the manager. You will have a much better appreciation of the situation than we can have, but it might be pertinent to comment, that, the manager of a project should at least be 'primus inter pares' with the component heads he influences.

The mission has reported the strong reaction of BAPPENAS, supported by yourself, that owing to internal pressure of work during January, it would be an inappropriate time for the in-depth review mission. We accept your representations for an April, 1979, review mission. We understand, however, that you would welcome a small, working level mission in January, 1979, to assist in the preparation for the mid-term review. We shall give this proposal careful consideration and be in touch with you about it in due course.

In closing, permit me to offer my best wishes on your being reconfirmed as Director General and, on behalf of the mission, to thank you, your staff and the other government officials involved for the assistance provided,

With best regards,

Sincerely yours,

Emmerich M. Schabeck
Chief
Nutrition Division
Agriculture and Rural Development Department

To be cleared and cc: Mr. C. R. de Silva, AEA

IBRD AND IDA - SUPERVISION SUMMARY

This summary is the initial summary
 part of a mission report
 a semi-annual update
 the completion summary

Regional Office:	Project Name: Nutrition Development Project	Project Code:	Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> No.:	L/C Amount (\$xx.xm): US\$ 13.0 million
Country: Indonesia	Borrower/Beneficiary: GOI - Ministries of Health, Education and Agriculture	Board Date: Mar 1, 1977	Signing Date: Mar 15, 1977	Effective Date: Apr 1, 1977
Projects Dept./Div. Name: AGRD Nutrition	Org. Code No.:	Projects Officer: E.M. Schebeck	Loan Officer: Ms N. Farmer	

SECTION 1: SUMMARY PROJECT DESCRIPTION The project will (1) strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation; (2) develop nationally replicable measures to improve the nutritional status of malnourished target groups; and (3) assist in the formulation of a more comprehensive food and nutrition program on a national scale.

SECTION 2: PERFORMANCE RATING

STATUS: 1 - Problem-free or Minor Problems; 2 - Moderate Problems; 3 - Major Problems	This Summary	Last Summary
TREND: 1 - Improving; 2 - Stationary; 3 - Deteriorating	<input type="checkbox"/> 1	<input type="checkbox"/>
TYPES OF PROBLEMS: F - Financial; M - Managerial; T - Technical; P - Political; O - Other (Explain in Section 5)	<input type="checkbox"/> 2	<input type="checkbox"/>
If more than one type of problem, enter most critical factor first.	<input type="checkbox"/>	<input type="checkbox"/>
Designated a "problem project" in most recent SVP review? <input type="checkbox"/> Y - Yes; N - No <input checked="" type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 3: PROJECT DATA

Estimated/Actual:	Project Completion	Loan/Credit Closing	Total Project Cost	of which:		Cumulative Disbursements through most recent Quarter ended (Jul/31/77)
				Foreign Currency	Local Currency	
Appraisal Est.	Mar 81	Mar 31, 82	26.0	10.2	15.8	0.0 (Est.)
Last Summary (/ /)	NA	NA	NA	NA	NA	
Current	Mar 81	Mar 31, 82	26.0	10.2	15.8	0.0 (Actual)

SECTION 4: MISSION SCHEDULE

	No. of Staff on Mission	No. of Days in Country	Return to HQ (Mo./Day/Yr.)	Final Report Date (Mo./Day/Yr.)
Latest/Present Mission	3	21	Aug. 25, 77	(CS)*
Previous Mission	-	-		()*
Next Mission Departure (Mo./Yr.)	Dec, 77	Recommended interval between missions (Months)	End of period covered by latest progress report (Mo./Day/Yr.)	Aug, 13, 77

* Type of Report: FS = Full Supervision; CS = Combined Full/B-T-O; C = Completion; A = Appraisal; O = Other (explain below)

SECTION 5: COMMENTS (Explain "other" in Section 2 and clarify, if necessary, data in Sections 3 and 4)
 Mr Venkitaramanan led mission Aug 3-13. Mr. Thomson and Dr. Donoso continued follow-up a on until Aug. 21. Report was finalized by Mr. Venkitaramanan in Madras.

SECTION 6: SUMMARY OF PROJECT STATUS, TREND, AND MAJOR PROBLEMS: The nutrition development project, which became effective on April 1, 1977, has been making fairly good progress in most of its components. The managers of the various components are in position and essential support staff has been recruited in most cases. The authorizations for release of funds have been issued and funds from the development budget have been made available. The difficulties initially experienced in allocating Indonesian rupiahs to match Bank disbursements have been overcome by a special decree of the Minister of Finance. Tender documents for the first phase of two out of three civil works have been finalized and approved by Mr. David Mills (Bank architect). Equipment lists for the research institutions have been reviewed by the Bank mission and the equipment for purchase in 1977-78 has been approved. Guidelines for selection of consultants have been drafted in consultation with the mission and issued. Candidates for various fellowships for 1978 have been selected and are undergoing training in proficiency in English. The project management staff, under the Project Director including a full-time Executive Secretary, has been established in suitable offices, but the monitoring and evaluation staff have not yet been recruited. The Research Coordinating Committee, as visualized in the Loan Agreement, has been set up. Plans of operation for the various components have been finalized. The methodology for the base-line data survey has been designed and will undergo field trials shortly.

IBRD - SUPERVISION SUMMARY

Section 7: Actions taken and recommended:

1. Certain important issues have to be resolved if the project is to gain its full momentum. They have been discussed with the Project Director and BAPPENAS and certain lines of action have been agreed. They are referred to in the draft follow-up letter (Annex 1).

2. Project Management Advisor
The appointment of a Project Management Advisor is crucial for the success of the project. Mr. George Brady was a candidate acceptable to both the Government and Bank, but turned down the offer at the last moment, due to the initial unwillingness of GOI to have him for a continuous period of two years. Government continues to search for a suitable person. It is recommended that the Bank should assist GOI if and when approached to locate such a person.

3. Full-time Executive Secretary
In the follow-up of the implementation mission, the Project Director was requested to appoint Mr. Burhanidin as full-time executive secretary. The Project Director wrote to the Secretary General of Health, but Mr. Burhanidin continued to work on a minor part-time basis. The mission urged Dr. Soebekti and Mr. Sujoto that either it should be made possible for Mr. Burhanidin to work full-time, in every sense of the word or to appoint another suitable person. At the round-up meeting Dr. Soebekti announced that Mr. Burhanidin would operate full-time and that the Secretary General of Health was seeking an officer to undertake Mr. Burhanidin's civil service duties. Although the decision has been taken, the executive secretary is still de facto part-time.

4. Responsibility for NIPP
Responsibility for the Nutrition Intervention Pilot Project (NIPP) rests with Dr. Malasan, Director of Nutrition. In balance, this arrangement is unsatisfactory. Dr. Malasan's responsibilities cover the whole national program for nutrition and NIPP requires full-time co-ordination and leadership. While the location of responsibility in the Director of Nutrition gives

prestige to the pilot project, it unduly dilutes the time available for leadership. The mission recommended to the Project Director and BAPPENAS that a full-time project officer for NIPP should be appointed, reporting to the Director of Nutrition, but, as project officer, he would be in control of the budget for NIPP and have full responsibility for the day to day management.

5. Monitoring and Evaluation

Great importance has been attributed to monitoring and evaluation, but staff for these functions has not as yet been located. Adequate funds for full-time staff and consultants have been provided. The part-time service of the Health Planning Bureau was under consideration and the mission submitted that this proposal would be totally inadequate. The mission recommended that competent staff for the monitoring and evaluation unit should be recruited as soon as possible.

6. The mission informed the GOI officials that the Nutrition Development Project was one of the initial two projects in this sector to be financed by IBRD. The Board of IBRD expects to have a full-scale evaluation of the project by the end of the second year. The monitoring and evaluation unit of the project should produce the basic reports. In addition, it would be responsible for generating the data which can assist in the formulation of policy and future nutrition planning.

7. Food and Nutrition Unit; Home Gardens; and Agriculture Extension Training

Despite repeated attempts, the mission was unsuccessful in having a meeting to discuss agricultural involvement. Two meetings were arranged, only to be cancelled at the last minute. Following representations from the mission, Dr. Soebekti and Mr. Sujoto both undertook to discuss the situation with the Secretary General of Agriculture.

List of Annexes

- Annex 1 Draft Letter to Project Director
- Annex 2 Reports on Individual Components
- Annex 3 Proposed Draft Paragraph for President's Report
- Annex 4 List of Actions to be taken

ANNEX 1

DRAFT LETTER TO PROJECT DIRECTOR

Dr. Soebekti
Director General of Community Health
Nutrition Development Project Director
Ministry of Health
Jakarta, Indonesia

Dear Dr. Soebekti:

Indonesia - Loan 1373-IND
Nutrition Development Project

Thank you for the assistance provided to the Bank mission team during their July/August visit to Indonesia. We have reviewed the mission's report and are pleased to learn of the progress made in almost all of the components. Mr. David Mills has reported separately on the status of the civil works, and it is gratifying to know that you are in a position to invite tenders for two out of the three components involved in construction, so soon after the date of loan effectiveness. We hope you will keep up this pace and achieve speedy implementation of the project.

We congratulate you on obtaining the decision that the Executive Secretary, Mr. Burhanidin, would be made available on a full-time basis. We are confident that he can provide, on your behalf, and with your guidance the day-to-day leadership and the direction to the project officers who are in charge of the various components. The inter-relationship between components demands that project officers should be moulded into a team, with each member understanding the project as a whole and providing mutually beneficial support to each other. This task would be a priority for the executive secretary.

We share your disappointment regarding the failure to recruit Mr. Brady as project management advisor and shall be glad to assist in every way we can to expedite the recruitment of an alternative.

We understand that the mission has discussed with you procedures for identifying and recruiting consultants both from abroad and within Indonesia. We consider it essential that your Directorate adopt and utilize these procedures immediately. Also, we would encourage you to seek Bappenas approval for removing the present low limit on emoluments to local consultants as none are available for the low remuneration now offered. We understand that the mission discussed this issue with you and you expected to resolve it in consultation with Bappenas. We would appreciate being informed at an early stage regarding the decision reached on this.

Dr. Soebekti

Regarding the recruitment of staff for the monitoring and evaluation unit, the mission reported your view that there may not be justification for recruiting the full complement immediately, as they may not have enough work in the start-up phase. However, early action will be required to identify the criteria and indicators for monitoring, developing the methodology, designing the reporting system, and teaching the field staff about the importance of and their responsibilities for monitoring and evaluation. We would urge, therefore, that at least part of the unit should be recruited forthwith to undertake these tasks and that, as soon as the volume of work should warrant it, other members of staff should be recruited.

Mr. David Mills has been pleased to receive copies of the various tender documents, but there are two which have not been included: (1) General Conditions of Contract, and (2) Administrative Provisions. The implementation time schedule for civil works will be expected to arrive shortly.

The blue print of the revised design of the FTDC pilot plan does not include details of the plant to be installed nor its arrangement within the building. Dr. Winarno, the Director of FTDC, will be aware of the need for these details as they were included in earlier plans, but he will have to brief the architect on what is required. No provision appears to have been made for a plant workshop, as distinct from the instrument workshop in the administrative and research block. We suggest that consideration should be given for the inclusion of a plant workshop.

We have attached to this letter a summary of our mission's observations of the progress of the various components of the project and the suggestions deemed the most important. I hope you will find it useful for follow-up.

1. Project Officer for NIPP

Of all the components, NIPP is the most innovative, the most complex and the most dependent on the enthusiasm, perseverance and drive of the project officer. The manifold duties of your present coordinator for NIPP, who is also the Director of Nutrition, prevent the required allocation of time, thought and energy for successful implementation. We recommend, therefore, that consideration should be given to the appointment of a full-time project officer for NIPP, reporting to the Director of the Nutrition Directorate. As project officer, the new person would be in control of the budget for NIPP and have full responsibility for the day-to-day management of the component.

As required by the agreement, you have provided a plan of operations for NIPP covering the whole project period and a detailed plan of operations for the first year covering two kabupatens. These plans of operation have been approved and we note that they will form the basis for the NPO/ANPO training courses/workshops which are scheduled to take place in the Nutrition Academy in October 1977.

Dr. Soebekti

2. Nutrition Education

As you are aware, the Government of Indonesia has undertaken a great deal of preparatory work regarding nutrition education for the UPGK program. Content has been identified, materials have been designed and tested and sources of supply arranged. The mission has reported that the content and materials would be suited for nutrition education in NIPP areas, and we suggest that this package of nutrition education should be adopted and used in the forthcoming staff training courses and later in the NIPP areas for the time being in order to avoid delays. When the Nutrition Education and Behavior Change component (NEBC) has produced the new educational packages, we suggest that the situation be reviewed as to the desirability of letting these packages replace the UPGK material. The mission reports that much work remains to be done in the NEBC component. Therefore, there is urgent need to recruit and place in position the consultants allotted to this component, one behavioral scientist/nutrition educator and one communications specialist.

3. Training

In regard to training abroad of your staff and fellowship holders, you have not so far taken a decision as to the agency to be in charge of placement and administrative arrangement. In this context, we understand that WHO has offered to assist in the placement of fellowships, either on a formal or informal basis. They may be useful for health related fellowships. Even though you will have to decide on the exact approach based on GOI's policy, we would appreciate an early decision.

4. Home Gardens

The home gardens component of the project has shown comparatively little progress and no meaningful discussion has yet been undertaken regarding home gardens within the project. We are particularly concerned to note that no decision has yet been reached in regard to the agricultural extensionists agreed to be deputed for NIPP areas. Again, we like to be informed about the outcome to your proposed discussions with the Directorate General of Food Crops.

5. Anemia Control Component

In regard to the anemia control component, we understand that the baseline surveys have been completed and the concerned project officials are moving ahead well. While we appreciate the desire to make use of locally fortified salt, it will speed up implementation if for the interim period you use iron-fortified salt from other sources wherever they are available. Otherwise, too great a time gap will result between collection of baseline data and the application of curative and preventive measures for anemia.

Dr. Soebekti

Finally, may I repeat our thanks to you and your staff for the courtesy and cooperation extended to the mission during its visit to Indonesia. In view of its interest in the project, a copy of this letter is being sent to BAPPENAS.

With best personal regards,

Sincerely yours,

Emmerich M. Schebeck
Acting Chief
Nutrition Division
Agriculture and Rural
Development Department

Enclosure

INDONESIA

LOAN 1373 - IND

NUTRITION DEVELOPMENT PROJECT

Detailed Report on Components

1. Center for Research and Development of Nutrition

The Director and senior staff are already in position. Selection of candidates for training is going on. Some of them are undergoing a much needed course to upgrade their proficiency in English. The mission felt that it would be necessary to finalize the decision on the procedure for placement for the trainees, especially those to be sent abroad. Of the 16 fellowships for training of CRDN personnel, 11 are related to health sciences and a specific suggestion has been made by the mission that WHO's expertise could be utilized in this regard. There are two alternatives. One would be to informally use WHO merely for the suggestion of names of Institute's training courses etc. For this, communication between the Director of CRDN and WHO South East Asia Regional offices through the WHO representative at Jakarta would be sufficient. Another alternative would be to enter into a formal agreement by which the WHO would take on administrative and technical aspects of the fellowships and training facilities. The mission placed both these alternatives before the Ministry of Health who promised to consider and take a decision on which approach to adopt.

Research Progress

The mission considered that the program for research is both realistic and properly focussed and purely academic research has been kept at a minimum. It was agreed that in addition to the research proposal already put forward, the CRDN would undertake a study of the relationship between nutritional 'risk' and different anthropometric indicators of nutritional status. The CRDN would also undertake a study of available indicators of nutritional status in pregnant and lactating women. The CRDN would require one or preferably two international consultants to develop its program of research from the initial stages of identification through successive stages on existing methodology, protocol etc. It was agreed that CRDN would immediately proceed to identify possible consultants and recruit them through the Project Director.

Equipment

During the mission, the list of equipment was scrutinized and the requirements for the first year revised to fit the budget available. It was agreed that for the subsequent years of the programme, a revised equipment list would be prepared to keep in view possible changes in prices and equipment availabilities. It was agreed that a similar priority list would be prepared each year sufficiently in advance, in consultation with future supervision missions. Assistance, where necessary, would be sought by CRDN of WHO and/or UNICEF in regard to procurement and selection of types, specifications and prices. It was also agreed that the Project Director, Dr. Soebekti, would exercise the final authority for the purchase of laboratory items exceeding U.S. \$4,000 per unit for which sufficient justification would be provided by CRDN. It was agreed that it would be necessary to include provisions in the buildings and equipment for a suitable

maintenance and repair workshop to ensure continuous operation of the laboratory.

There will be adequate communication between CRDN and other component entities so that CRDN's defined research obligations in regard to NIPP and other components can be discharged adequately. The mission felt that the present arrangements should be strengthened on an institutional basis.

The relationship between the Food Science Division and the FTDC should also receive due attention. It was agreed that in principle the Food Science Division of CRDN should be principally concerned with the laboratory animal and human testing aspects of food science, leaving the development of equipment and processes to the FTDC. There may be some initial overstepping of domains of work, but continuous watch has to be kept to ensure that the two institutions keep each other informed and are within their natural domains. The mission felt that there are at present several gaps in the development of the food supplement to be used in the NIPP component. These relate to adoption of formula(e), costing of final products, design and costing of apparatus and equipment, extensive and relevant trials with the food supplement when produced, preparation of training manuals for field operators, etc. It was agreed that CRDN would speed up its work together with NIPP.

The mission advised the CRDN staff that at present a long term WHO staff member, Dr. Thomsen, a specialist in food micro biology, is working in Jakarta for the Project INDONESIA LAB 001. It was agreed that CRDN would explore possibilities of cooperation with this expert through the WHO representative, Dr. Nugent.

2. Nutrition Intervention Pilot Project

Plans of Operation for NIPP

An outline plan of operations covering the whole project period and a detailed plan of operation for the initial two Kabupatens for the first year have been prepared. It was agreed that while some slippage has resulted from restrictions during the election period and because of difficulties in undertaking surveys during the fasting month, loss of time can be made up by April 1978.

It was agreed that provincial Kecamatan NPO and ANPO who have been identified and are being appointed would attend a training course/workshop at the Nutrition Academy in Jakarta beginning early in October 1977. In respect of base-line data surveys, the Central Bureau of Statistics has designed the sampling frame with a view to capturing even nutritional deficiencies which are of low incidence. It was agreed that the Government of Indonesia will cover the additional cost involved as a result of this sampling frame. The methodology for the base-line data survey is to be reviewed based on a field trial as soon as possible after the fasting month is over. It was agreed that the proposed methodology would be reviewed on the basis of the results of the initial trials with a view to eliminating irrelevant data collection. Besides, the nature of the output tables will be finalized quickly so as to enable early work on the computer programming.

It was agreed that the NIPP coordinator would transfer to CRDN the necessary funds for the performance of the trial of the survey methodology.

Data collection in NIPP villages will continue throughout the project period and would provide the opportunity for longitudinal studies to be undertaken by CRDN.

Training

The Working Group on Training has been meeting periodically under the Chairmanship of Dr. Tarwojo. As proposed in the project, it is responsible for preparing curricula for training courses for NPO/ANPO, training officers, village ANPO and village cadres. The curriculum for the NPOs and ANPOs is based on job descriptions and includes the knowledge and skill required to meet their specific responsibilities. It was agreed that the curricula will take into account the preparation of detailed plans of action for each of the NIPP village and the monitoring and evaluation requirements. It was further agreed that the training for NPO/ANPOs, who would be senior people, will be reduced to two weeks.

Work is proceeding on the preparation of training aids, a manual for the NPO/ANPO under the guidance of the Working Group. It was agreed that the training of the VANPOs would be undertaken at the same time as that of the village cadres. In regard to the details of anthropometry, the mission advised that the same attention to details is required for measuring height and arm circumference as for weight.

Nutrition Education

The mission reviewed the work on nutrition education under NIPP. While a Working Group on Nutrition Education has been appointed under the chairmanship of Dr. Mantra, little progress has been made in actuality. However, independently, as part of the UPGK program, the Government of Indonesia has identified the content, designed materials for nutrition education, pre-tested them and arranged for sources of supply for the applied nutrition programmes. It was agreed that to the extent possible these would be utilized in respect of NIPP nutrition education.

Food Supplement

The Working Group on Food Supplements has been appointed under the chairmanship of Mr. Hermana. Its terms of reference include the preparation of a manual setting forth the basis for providing food supplements, the processing methods, the delivery systems, the training of field and audit staff, arrangements for monitoring quality and recipes which make use of the supplements.

Since the supplements now available have been prepared in a "Brady Cooker", the acceptability tests and trials cannot, however, be presumed to be the same as trials of preparation under local processing methods. It was suggested by the mission that the NIPP Coordinator should arrange for appropriate trials using the proposed local processing methods.

Financial Provision

The mission discussed the need for immediate action on transferring funds directly from the Ministry of Health headquarters to the Kabupaten as soon as the NPOs and ANPOs have been formally designated. Similarly funds will have to be transferred to CRDN who is responsible for base-line surveys, and to FTDC for studies on food storage and food processing.

3. Anemia Prevention and Control Pilot Project

Results of Visit to Plantations

The mission visited plantations in North Sumatra, one of the sites selected for this component of the project. The implementation of local programmes in Medan and surroundings is in the hands of Dr. Rashid Nurdin (Plantations P.T. Perkebunan III, Medan), a competent and enthusiastic medical official, who works under the direction of Dr. Suma'mur of NILHON. The base-line survey field work covering a planned population of 4,000, including male and female labourers together with children under five, in a rubber, a palm and a tobacco plantation, has been completed.

The mission suggested that efforts should be made to improve the methods used to obtain the anthropometric measurements and give necessary training to the personnel. In the mission's view, the Indonesian experts are following the correct practice for treatment of parasites also. It was agreed that CRDN should lend its full recommended technical support to this component specifically in regard to: (a) the selection of survey methodology and training of personnel to carry out the survey, and (b) the establishment of the criteria for interpretation of data.

The mission discussed the progress of work on salt fortification and advised that it should be clarified as to how much salt would be needed, how it is to be distributed and from where it is to be obtained immediately. It was understood that agreement has been reached in principle for using, in the initial stages, fortified salt offered by the Government of India.

4. Home Gardens

Preparatory Work

While there have been meetings, a national seminar and a consultant's report on home gardens under the auspices of the UPKD programme, there has not been much progress. No specific horticultural package has emerged from these meetings. While the mission visited the home gardens project sponsored by CARE in West Java plantations, it was recognized that work done there cannot be adapted to villages which are nearer to sea level in NIPP areas.

Field Staff

During negotiations, an agreement was made that the Ministry of Agriculture will allocate 10 extension staff to the selected NIPP areas to work exclusively on home gardens. The April implementation mission was assured by the Directorate General of Production that the Ministry of Agriculture will issue expeditiously a degree permitting 10 BIMAS staff to work exclusively on the home garden program. The supervision mission regretted to note that the Ministry of Agriculture was now unwilling to make extension staff available solely for horticulture. The suggestion made by Dr. Suwono that the nutrition cadres should be used as contact personnel is not satisfactory. The mission was unable to meet higher level officials in the Directorate General of Food Crops. It was agreed that the Project Director would persuade the Directorate General of Food Crops in the Ministry of Agriculture to appoint the necessary additional staff as agreed at the time of negotiations and would also designate a suitable "Project Officer" from his staff who would control the subcomponent from the point of view of funds as well as technically, under this proposal. If accepted, he would also be in charge of the plan of operations for the home gardens in NIPP areas.

5. The Food and Nutrition Unit, Ministry of Agriculture

The present position in regard to the Food and Nutrition Unit is unsatisfactory. It attracts no budgetary allocations nor can it draw funds specifically from the project. The mission got the impression that at the present moment BAPPENAS was unwilling to give this Unit any higher status. It was agreed that this matter would be discussed at the next supervision mission:

6. Food Technology Development Centre

Organization

The FTDC has been formally established by decree of the Rector of the Agricultural University, Bogor (IPB). A further decree by the Minister of Agriculture will follow but its present status is recognized as being sufficient for budgetary allocations and for designating its director as a "project officer". A supervision committee for FTDC has been established consisting of the Rector IPB, Dr. Satari, the Co-director for Education, Dr. Achyari and Mr. Koswala from the Planning Unit of IPB. The Chairman of the IPB Construction Committee, Mr. Bambang Pranggodo, will be the officer responsible for instructing the architects.

Civil Works

The regulations covering tendering are based on the published regulations of the Ministry of Works and of BAPPENAS. They will be the same as those translated in relation to CRDN and forwarded to the Bank architect. The new site requires a new lay-out plan to allow for future expansion; this is being undertaken by the consultants, following a cadastral survey of the site. Enquiries were sent to Mysore, at the time when the Director was the food technology consultant. A revised blue-print was received for the pilot plant building and passed on to the architects (A copy will be handed to the Bank architect). It had been alledged that 1 km of road making and 1 km of power line would be required for the new site. As these services would benefit other sites on the new IPB campus, it was felt that cost should not be borne wholly by the project. However, a visit by the mission to the site revealed that road and power lines virtually came to the border of the FTDC site. Housing sites, overlooking a senic valley have been selected in the housing development area and application for them is being processed.

Management Study Tour

During July, 1977, the Director, Dr. Winarno undertook a very useful study tour to the Central Food Technology Research Centre, Mysore and the Nutrition Institute of Central America and Panama, Guatemala City.

Food Storage and Processing Village Level

The UNICEF commissioned a food storage study in 1976. Dr. Winarno did not think it would be suitable for application in NIPP areas. It has been agreed that a food storage consultant would be engaged from the project funds for three months to assist in the study. A suitable candidate from Mysore has been identified. Early action should be taken to recruit this consultant.

7. Manpower Training

Civil Works

Drawings and tender documents for the Nutrition Academy have been prepared and it was agreed that early action would be taken to invite tenders.

Curriculum Revision

The mission attended for part of the time, a seminar on curriculum revision for the Academy held at Cipayung from July 28th-30th. The seminar recommendations would assist the staff of the Academy in drawing up its curriculum for the next academic year. This revised curriculum is subject to revision after an initial trial.

Training for Agricultural Extension Staff

The Co-director for Agriculture was unable to arrange any meetings to discuss the proposals for this sub-component. No work appears to have been carried out on preparing detailed curricula.

8. Nutrition Education in NIPP

UNICEF has run at Yogyakarta a 10-day intensive training course for nutrition, aimed at the training of intermediate health personnel. The courses are well designed and place a great emphasis on the much needed practical element of field work. It was agreed that the NIPP personnel will utilize similar courses in future without prejudice to the separate seminars for two weeks being run by Miss Azmira of NIPP staff. The mission discussed specific gaps in the work on training and arrived at agreements on work in this regard.

A group under Dr. Rohde and others is developing material for this. It was agreed that NIPP staff will utilize this material for the time being in order to avoid delays. Further, the two internationally recruited consultants included for the behavioral change component of the project could be at least partially utilized to assist in the nutrition training activities of the NIPP.

9. Nutrition Education and Behavioral Change

While some work has been initiated on this component, it still appears to be weak both technically and organizationally. Technically, much work must be done in relation to the methodology for training of the cadres, identification of messages, their adaptation to the local contexts and the methods to be used for their communication. The messages must be tailored to what are considered to be the objectives of nutrition education in the different target groups. Proper methods for monitoring and evaluating the results obtained need to be worked out. From the organizational point of view, some progress has been achieved in setting up the Project Executives at the national, provincial, kabupaten and kecamatan levels. Training courses are being designed for the members of the Project Executives, by the components directorate (Drs. Wijarno, Mantra and Tarwodjo). The organization at the village level still remains to be finalized. The task of village level workers, the methods to train them, the content of the training given, etc., remain to be defined, and this clearly means an enormous amount of work, that needs detailed spelling out before the training actually begins.

For all the above, there is much need to recruit and place in position, the consultants allotted to this component (a nutrition educator and a

communication specialist). There are advantages in having them both together for the months initially, to assist in their particular field of expertise and in drawing up the much needed plan of operation for this component.

INDONESIA
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NUTRITION DEVELOPMENT PROJECT
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Proposed Draft Paragraph for President's Report

The project will strengthen and expand the existing nucleus of personnel and institutions for the formulation of nutrition programs, operational research, manpower training, monitoring and evaluation. The center for Research and Development in nutrition and the Food Technology Development Center will be strengthened through provision of staff, training, technical assistance, equipment and expansion of physical facilities. The project provides for a direct nutrition action program which integrates nutritional, educational, agricultural and health activities, initially starting in 2 regencies, but later expanding to a total of 7. An iron supplementation program will tackle nutritional anemia among workers and families in selected estates. Alternative nutrition communication methods will be tested; the training of nutritionists in the Nutrition Academy will be expanded by 120% and the quality of teaching upgraded; and nutrition will be introduced into the curriculum of agricultural extensionist training. The management staff for project headquarters and most of the components is in position. Tender documents have been prepared for the first phase of two out of three of the civil works; redesigning of the Food Technology Development Center is being undertaken to suit a new site, which allows for future expansion. Approved lists of equipment have been prepared and are ready for procurement. Preparations for base-line data surveys are well advanced and the training of field staff is expected to proceed according to schedule.

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Main Actions During Period September 1 - December 31, 1977

<u>Action</u>	<u>Critical Date</u> <u>1977</u>
<u>NIPP</u>	
1. Transfer of funds to CRDN for base-line data trial and for BLD Survey	Sept 15
2. Transfer of funds to CRDN for food supplement trials	Sept 15
3. Transfer of funds to FTDC for study of village storage and processing	Sept 30
4. Transfer of funds to NIPP Kabupaten	Oct 31
5. Formal appointment NPO/ANPO	Sept 15
6. Testing of BLD methodology completed	Oct 31
7. Report of Working Group on Training and decisions on training curricula	Sept 15
8. Report of Working Group on Nutrition Education and decisions on content	Sept 15
9. Report of Working Group on Food Supplement and decisions on course of action	Oct 1

<u>Action</u>	<u>Critical Date</u> <u>1977</u>
10. Selection of 3rd and 4th Kabupaten (See 3.08 of Agreement)	Oct 1
11. Identification of out-put tables for BLD survey	Nov 15
12. Completion of computer program for BLD analysis	Dec 30
13. Preparation of community for BLD survey	Nov 30
14. BLD Survey fieldwork begins	Dec 1
15. Preparation of Plans of Action for each NIPP village	Nov 30
16. Selection of Training Officers completed	Nov 15
17. Training course for Training Officer begins	Dec 1
18. Selection of VANPO and Cadres	Dec 15
19. Completion of trials of food supplement	Dec 31
<u>CRDN</u>	
20. Decision regarding method of fellowship placement and relevant action	Sept 15
21. Guidelines for anemia contract component	Sept 15
22. Ordering equipment for 1st year	Sept 15
23. Mr. Hermana on study tour of 2 weeks to Mysore and Madras	Oct 15

<u>Action</u>	<u>Critical Date</u> <u>1977</u>
24. Recruitment of consultant on research program and design	Nov 30
25. Completion of development work on food supplement	Nov 30
26. Invitation to tender for civil works	
27. Award of contract, civil works	
<u>FTDC</u>	
28. Completion of drawings and tender documents for civil works	Oct 31
29. Definitive list of equipment for first year	Oct 15
30. Recruitment of Food Storage consultant	Oct 31
31. Start of study on food storage in NIPP areas	Nov 30
32. Memorandum of understanding relating to FS Div., CRDN and FTDC	Nov 30
<u>Manpower Training</u>	
33. Invitation to tender for Nutrition Academy	
34. Award of contract	
35. Completion of revised curriculum	Sept 15
<u>Anemia Prevention</u>	
36. Completion of Base-line Data analysis for 1st year	Sept 30

<u>Action</u>	<u>Critical Date</u> <u>1977</u>
37. Ordering of 7½ tons of iron fortified salt	Sept 7
38. Plan of operations for construction of latrines	Sept 30
39. Procurement of boots	Sept 15
40. Start of treatment/prevention of anemia	Oct 30
41. Start of treatment of parasitosis	Oct 30
<u>Nutrition Education</u>	
42. Recruitment of 2 consultants	Oct 31
43. Plan of operations for village level	Nov 30
44. Design of Base-line data survey	Dec 31
<u>Home Gardens</u>	
45. Designation of project officer in D.G. of Food Crops	Sept 30
46. Preparation of plan of operations for home gardens	Nov 30
<u>Management</u>	
47. Recruitment of Project Management Advisor	Nov 30
48. Preparation of DUP	