Travel briefs _
Jan. 19 - Feb

Folder 6 of 8 ~~Folder 3~~

NEPAL: STATUS OF THE ASIAN DEVELOPMENT BANK'S PROJECTS

(IN MILLIONS US$)

1. LOANS

(as of December 14, 1971)

Project	Date Approved	Amount	Terms (Years (incl. grace (period: (Interest	Cumulative Amount Disbursed	Remarks
Air transport Development	Dec. 18,1969	6.01	30 (7) : 2% p.a.	1.102	Entirely from Special Fund Resources
Jute Development	Dec. 10, 1970	(2.00 (2.00	12 (3): 2% p.a. 12 (3): 7½% p.a.	-- 0.006	From Special Fund Resources From Ordinary Fund Resources
Agricultural Credit	Dec. 23, 1970	2.40	16 (4): 3% p.a.	--	Entirely from Special Fund Resources
Kankai Irrigation	Dec. 14, 1971	4.5	25(7): 2½% p.a.	--	From Special Fund Resources
		TOTAL 16.91		TOTAL 1.108	

2. TECHNICAL ASSISTANCE

Project	Date Approved	Amount	Status	Remarks
Air Transport Dev.	Dec. 18, 1968	0.35	Field work proceeding	For advisory and operational purposes
Agricultural Credit	Dec. 23, 1968	0.146	Field work proceeding	For advisory and operational purposes
Kankai Irrigation	Dec. 17, 1970	0.215	Consultant's draft report under review	For project preparation
Chitwan Valley Development	Oct. 19, 1971	0.242	Consultants being recruited	For project preparation
	TOTAL	0.953		

NEPAL: Status of ADB Projects (cont'd.)

3. PIPELINE PROJECTS FOR 1972

Project	Tentative Amount	Description	Status
Chitwan Irrigation	4.0	Construction of diversion weirs, link canals from the Manohari River to the Lohari River, and other irrigation networks to cover about 12,000 ha. of land, together with integrated agricultural development study.	Technical assistance approved on October 19, 1971. Consultants being recruited.
Gandak-Hetauda Power Transmission	1.5	Construction of a 132 KV electric transmission line from the Gandak Power Station (being constructed in Nepal by the Indian Government).	Consultant's report prepared Projects depends on implementation of Nepal-India agreement on provision of energy from Gandak to Raxaul (near Birganj) through India grid.
Hetauda-Narayangarh Highway	6.0	Construction of 80 km. road, which is a section of East-West Highway, together with bridges.	Feasibility study completed by German consultants. Fact-finding mission visited Nepal in October, 1971.
Possible Industrial Project	Amount to be determined.	Arises out of UNIDO Survey report still being studied by Government. Project likely to cover a number of sub-projects through Nepal Industrial Development Corporation (NIDC).	Project depends on the Government and NIDC's intentions to accept terms of Executive Assistance to NIDC, which was recommended in a Board Paper in September, 1971.

SOURCE: Asian Development Bank Statement of Loans, Monthly Operational Summary, and press releases.

UNDP : NEPAL

6. STATUS OF COUNTRY PROJECTS

EXCLUDING PROJECTS COMPLETED THROUGH DECEMBER 1970

Symbol	Country and project	Agency	Approved by Governing Council	Project duration	Governing Council earmarkings	Plan of Operation signed	Authorization to commence execution
				(years)	*(US dollars)*	*(date)*	*(date)*
	NEPAL						
NEP 7	Feasibility Study of Irrigation Development in the Terai Plain (Phase II)	FAO	Jan. 1966	5½	2,312,300 1/	23 March 67	11 April 67
NEP 13	Forest Development	FAO	Jan. 1969	4	1,014,400	8 Jan. 70	30 Jan. 70
NEP 16	Road Feasibility Studies	UN	Jan. 1969	4	1,247,600 2/	19 Feb. 70	24 March 70
NEP 8	Development of Water Supply and Sewerage in Greater Kathmandu and Bhaktapur	WHO	Jan. 1970	2½	752,400	4 Dec. 70	14 Dec. 70
NEP 12	Increased Use of High-Yielding Crop Varieties and Fertilizers, Central Nepal	FAO	Jan. 1970	3	979,400	16 Sept. 70	7 Oct. 70
NEP 19	Training of Supervisors and Skilled Personnel for Public Works	ILO	June 1970	4	876,600	14 May 71	3 June 71
NEP 21	Telecommunication and Civil Aviation Training Centre, Amand Niketan	ITU	Jan. 1971	4	1,265,200		(Oct. 70) 3/

Note: See page 14.

1/ Includes supplementary earmarkings of $464,000 approved by the Governing Council at its January 1971 session.

2/ Includes supplementary earmarkings of $251,300 approved by the Governing Council at its January 1971 session.

3/ Project operations started through a partial allocation, issued prior to project approval by the Governing Council, under "pre-project activities".

4/ Project operations started through a partial allocation, issued prior to official authorization to commence execution.

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: January 4, 1972

FROM: J.-D. Roulet

SUBJECT: NEPAL - UNDP Five-Year Program 1972-1976

1. On December 2, 1971, I met Mr. Joury, UNDP Resident Representative, at the UNDP offices in Kathmandu. Also present for the UNDP were Mr. David Smith, Deputy Resident Representative, Mr. S. Pellback, FAO representative. Mr. Dorris Brown of Agriculture Projects Department was also present and has circulated a separate note on a proposed fisheries project.

2. Mr. Joury gave me a preliminary draft of the UNDP proposed program which had just been put together. He stressed that while the target agreed for Nepal is currently $15 million for five years or $3 million annually, a rough estimate of ongoing and possible new projects would amount to $9.5 million for the next two years alone. Indeed, already approved projects (including the scheme for training of hotel personnel expected to be approved at the next Governing Council meeting in January, 1972) would account for more than $3.5 million in 1972.

3. Mr. Joury stressed that while he planned to submit a special plea to the UNDP to increase the target he emphasized that even if this were successful, it was clear that it would be extremely difficult for UNDP to add new schemes to the program. Actually, he was hoping that other agencies, including the Bank Group, would be prepared to assume some of the financing so far expected to be borne by UNDP. In this connection he specifically referred to the bridging operation for the Birganj project (NEP-7) and enquired if the Bank could finance all or part of the $300,000 allocated for this purpose. I explained to Mr. Joury the Bank's current position on retro-active financing and said that although the amount involved was expected to be used to finance consulting services for project preparation, uncertainties about the timing of the proposed loan were such that I doubted very much this could be possible. In view of this and of the fact that the bridging operation had already been approved, I recommended that no change be made.

4. Mr. Joury said that briefs had been requested from all specialized agencies of the U.N. by mid-January in anticipation of the preparation of the background paper. I said that since we had already provided UNDP with copies of our economic report and of other documents of a general nature, I doubted we would have much to add at this stage. I said, however, that we would be glad to review the list of projects he had given me and let him have our comments.

5. At his request I described in broad terms the areas in which we were hoping to provide assistance to Nepal, as per the five-year lending program attached to the last CPP.

cc: Messrs. Riley/Abdi
Pranich/D.Brown
Hayman
Dickerson
Dickenson
Krombach
Parsons
Kavalsky

UNDP/NEPAL Programme 1972 - 1976 (Preliminary Draft)

I. APProved Projects

a) Large-scale Projects

Project No.	Title	1972	1973	1974	1975
NEP-7	Sun Kosi Bridging Operation.	313,905+	-	-	-
NEP-8	Water Supply and Sewerage In Greater Kathmandu and Bhaktapur	295,306	143,792	-	-
NEP-12	Increased Use of High-Yielding Crop Varieties	404,100	546,800	245,522	-
NEP-13	Forest Development	332,600	196,600	84,799	-
NEP-16	Road Feasibility Studies	300,000	59,400	-	-
NEP-19	Training of Supervisory and Skilled Personnel for Public Works	225,800	200,300	91,800	-
NEP-21	Telecommunications and Civil Aviation Training Centre	324,900	268,800	213,300	91,300
	Sub-total :	2,196,611	1,415,692	635,421	91,300
	Plus adjustment for increased pro-forma rates :	245,000	182,500	97,500	10,000
	Total:	2,441,611	1,598,192	732,921	101,300

+ Possible rephasing to 1971 leaving $ 190,000 only for 1972 being processed.

~~UNDP Programme Data 1973~~

Small-scale Projects

Project Title	Allocation Number	1972	1973 (in US Dollars	1974	1975
Transport & Communications	UN/NEP/68/1/Rev.7	18,500	-	-	-
Natural Resources Development & Power Cadastral Survey	UN/NEP/68/2/Rev.7	82,287	19,983	-	-
Long-term Plg. & Geological exploration & strengthening of MMM	UN/NEP/68/3/Rev.4	16,000	-	-	-
Physical Plg.	UN/NEP/69/7/Rev.4	54,100	-	-	-
Regional and Community Development	UN/NEP/69/8	-	-	-	-
Family Expenditure Surveys & Consumer Price Indices	UN/NEP//71/10	30,000	-	-	-
Manpower Plg. & Human Resources Development	ILO/NEP/68/4/Rev.9	25,000	-	-	-
Labour Policy	ILO/NEP/71/11	30,000	-	-	-
Agricultural Development Planning	FAO/NEP/68/5/Rev.7	63,500	22,000	-	-
Animal Production & Health	FAO/NEP/68/6/Rev.1	7,500	-	-	-
Animal By-Products	FAO/NEP/68/7/Rev.2	30,000	-	-	-
Inland Fisheries Development	FAO/NEP/68/8/Rev.6	30,750	-	-	-
Land Administration	FAO/NEP/68/11/Rev.10	36,400	-	-	-
Wildlife Management	FAO/NEP/69/2/Rev.7	7,500	-	-	-
Agricultural Statistics	FAO/NEP/70/7/Rev.13	34,050	10,000	-	-
Torrent & Erosion Control	FAO/NEP/71/4/Rev.1	17,500	-	-	-
Cash Crop Development	FAO/NEP/71/9/Rev.1	65,500	71,800	61,000	20,400

../-

		1972	1973	1974	1975
Rural Youth Development	FAO/NEP/71/12	7,500	-	-	-
General School Education	UNESCO/NEP/68/12Rev.7	82,600	60,000	30,000	-
Archival Scientist	UNESCO/NEP/70/9	45,000	-	-	-
Teachxxxer Training	UNESCO/NEP/71/5	20,950	35,950	35,950	32,250
Development of Cultural Tourism	UNESCO/NEP/71/6	61,700	31,000	7,500	-
Civil Aviation Administration	ICAO/NEP/68/15/Rev.7	74,350	22,500	-	-
Meteorology	WMO/NEP/68/18/Rev.11	49,900	5,000	-	-
Nursing Adn. and Services	WHO/NEP/68/13/Rev.3	90,000	45,000	-	-
Telecommunications	ITU/NEP/68/17/Rev.7	13,800	-	-	-
Maritime Administration	IMCO/NEP/71/13/Rev.1	30,000	-	-	-
	Total	1,016,887	323,233	134,450	52,650
	Km I Totals :	3,458,498	1,921,425	867,371	153,950

II) PENDING REQUESTS

		1972	1973	1974	1975	1976
a) Large-scale						
NSP-8 Water Supply and Sewerage		35,000	-	-	-	-
NSP-25 Hotel and Tourism Personnel		200,000	250,000	200,000	200,000	-
b) Small-scale						
Natural Resources and Power Cadastral Survey	UN/68/2/Rev. 8	23,787	23,787	23,787	23,787	-
Wildlife Management	FAO/69/2	42,500	16,700	-	-	-
Cash Crops	FAO/71/9	-	45,700	60,000	60,000	7,500
Aircraft Operations	UNDP/71/7	63,000	39,500	-	-	-
Teacher Trg.	UNESCO/71/5/ Rev.1	1,250	1,250	2,250	4,150	20,000
Textile Engr.	UNIDO/70/6/Rev. 2	20,000	-	-	-	-
	Totals	385,537	376,937	286,037	287,937	27,500

II) Possible New Requests

Project No. & Title	1972	1973	1974	1975	1976	1977	1978
NEP-19 Training of Supervisory & Skilled Personnel	54,430	53,030	42,430	34,330	34,330	-	-
NEP-8 Phase II	-	50,000	150,000	-	-	-	-
NEP-26 Mineral Resources Development	263,450	301,650	332,350	126,550	-	-	-
NEP-14 Work-Oriented Literacy	86,565	67,600	23,500	-	-	-	-
Industrial Services Centre	74,900	114,100	137,400	129,700	52,700	-	-
Sheep and Wool	50,000	250,000	200,000	100,000	-	-	-
Other Livestock	-	100,000	100,000	100,000	-	-	-
Rabies	50,000	50,000	50,000	-	-	-	-
Wildlife	50,000	300,000	300,000	200,000	-	-	-
Fisheries	50,000	200,000	100,000	-	-	-	-
Nutrition	-	75,000	200,000	180,000	-	-	-
Erosion Control	40,000	250,000	300,000	60,000	-	-	-
Expansion of Meteorological and Hydrological services	-	336,890	406,625	333,310	142,245	115,685	-
Establishment of Topographical Survey Department	-	-	436,580	176,300	174,650	153,850	64,850
Statistical Development Research+	-	250,000	250,000	250,000	250,000	-	-
National Education Plan	111,300	51,000	-	-	-	-	-
Labour Admin. Development	-	89,000	196,500	182,000	127,500	47,500	-
Institute for Trg. and Research in Panchayat Dpt.	-	200,000	200,000	200,000	200,000	200,000	-
(Trg. of Para-medical Personnel including Nurses)	To be supplied						
Feasibility Studies of Water Supply and Sewerage for towns other than Ktm.	To be supplied (poss. from 1973/74)						
Totals:	829,645	2,486,290	3,175,385	1,822,190	731,425	517,035	64,850

+ Provisional estimate of $ 1 million over 4 years.

b) Small-scale projects

Project Title and No.	1972	1973	1974	1975	1976	1977	1978
Flying hours for FAO Experts FAO/71/3	9,000	9,000					
Tea Adviser	20,000	30,000					
Irrigation Adviser	20,000	30,000					
Agricultural Development Eg. FAO/68/5	-	30,000					
Transport Economist UN/68/1	12,500	17,500					
Regional and Community Development Adviser UN/64/8	30,000	-	Allowance of 84 m/m each year for new Small-scale projects and extensions of existing ones				
Trade & Transit Adviser	22,500	7,500	210,000	210,000	210,000	210,000	210,000
Adviser in Aeronautical Meteorology & Training	17,500	12,500					
Radio Engineer and Cancellation of Airworthiness Adviser in 1973 ICAO/68/15	30,000	(12,500)					
Expert in Cooperations	7,500	-					
Assistance to ~~Mineral~~ HUMAN Resources Division	15,000	30,000					
Assistance to SIDC	51,280	52,280					
Nursing Education & Services WHO/68/13	-	30,000	60,000				
Totals:	235,280	236,280	270,000	210,000	210,000	210,000	210,00
III Totals :	1,064,925	2,724,570	3,445,385	2,032,190	941,425	747,035	274,850

Summary:

1) Approved Projects	3,458,498	1,921,425	867,371	153,950	-	-	-
2) Pending Requests	385,537	376,937	286,037	287,937	27,500	-	-
3) Possible Requests	1,064,925	2,724,570	3,445,385	2,032,190	941,425	747,035	274,850
Totals:	4,908,960	5,022,932	4,598,793	2,474,077	968,925	747,035	274,850

Total : 1972 - 1976 : $ 17,973,687

(Corresponding ~~IP~~ IPF : 1972 - 1976 : $ 15,000,000

Source: Notes on Nepal's Fourth Five Year Plan, July 1970.

E. Agriculture

1. The Fourth Plan sets a growth target for the agricultural sector of 3 percent for foodgrains and 7 percent for cash-crops. The input requirements needed to achieve these targets are estimated in the Plan as follows:

	1969/70 (actual)	1970/71	1971/72	1972/73	1973/74	1974/75
Fertilizer ('000 tons nutrient)	3.5	8.7	14.7	18.1	21.7	25.0
Improved seeds ('000 tons)	0.5	1.1	1.6	3.0	2.8	3.5
Total irrigated area ('000 hectares)	225	230	235	250	306	389

It is estimated that approximately half the increase in production will be obtained from added fertilizers, 20 percent from improved seeds, plant protection materials and implements and 30 percent from added irrigation and land.

2. In 1969/70 an estimated 225,000 hectares of gross cropped area was irrigated. The Fourth Plan target is to add 144,000 hectares of irrigated area. Approximately 25,000 hectares is to be added through minor irrigation works at the rate of about 5,000 hectares per year. The remaining 120,000 hectares would come from the completion of the Chatra, Gandaki East and Gandaki West canal systems plus 12,000 to 15,000 hectares in the Birganj Groundwater project. In terms of achieving the Fourth Plan targets, none of these projects will provide an increase in irrigated area before 1973/74. The best possible estimate is that under present conditions of financing and technical assistance, not more than 40,000 hectares of added irrigated area would be available for 1974/75 crop year.

3. Fertilizer sales have increased at the compound rate of approximately 20 percent a year for the past four years. The Fourth Plan's estimate implies that fertilizer sales would quadruple in the first two years of the Plan, dropping down to an increase of about 20 percent a year in the last three years. It would seem more realistic to assume that the growth in demand for fertilizer would be the reverse of the proposed targets and would be closely associated with growth in added irrigated area and the use of high yielding varieties of seeds. As pointed out above irrigated area is likely to fall substantially short of the targets. It is anticipated that high yielding varieties of seeds will become available during the Plan period and at this time new varieties of wheat and paddy are under test at the research stations.

4. There is no way to determine whether the proposed Rs. 47 crores of agricultural credit allocated in the Plan will be adequate. It is clear, however, that the structure for providing agricultural credit involves the duplication of staff and sources of credit at the Ward Panchayat level. At this level in many districts both the Agricultural Development Bank and the Compulsory Savings Scheme staffs will be providing credit services to farmers.

5. Major progress has been achieved in developing resources for agricultural research in the foodgrain crops. Researchers are now beginning to work on production problems with sugarcane, tobacco and jute and on water management and water requirements for irrigated crops. The greatest weakness continues to be the lack of any effective research in animal husbandry, dairy and horticulture, expect for potatoes. If Nepal is to achieve its livestock, dairy and horticultural production objectives, it appears necessary to initiate research that would provide the needed technology for pasture, fodder and fruit production. The existing agricultural education and research department appears best equipped to perform this type of research.

6. Up to this point the Animal Husbandry, Horticulture and Fishery Departments have concentrated their programs on providing services to farmers. Improved livestock has been distributed at subsidy prices. Fruit tree seedlings and fish fingerlings have been distributed throughout the nation. Except for the beginning of extension work in the fishery departments, very little progress can be observed in the effect on output of these distribution and service efforts.

7. An encouraging development has been the recent expansion of the Agricultural Economics Department in the Ministry of Food and Agriculture to an Agricultural and Economic Planning Unit. This revitalized department has recently initiated a number of studies dealing with evaluation of ongoing agricultural projects and the determination of economic priorities for proposed projects.

8. It is recommended that HMG reconsider its priorities for the completion of ongoing irrigation projects before initiating new projects, the rearrangement of its proposed flows of fertilizer and seeds, the further concentration on research and extension work particularly with water management crop pattern and fertilizer responses and a reevaluation of the proposed UNDP NEP-12 project. The NEP-12 project proposed to build a large size facility at Hetaura for the processing of paddy, wheat and maize seeds. It is questionable whether this is the optimum location or the optimum size for a seed processing facility. It is also suggested that the soil fertility aspect of this project be expanded to include trials on farmers' fields regarding the use of fertilizer, irrigation water and cropping patterns in the Terai districts.

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Jean-David Roulet

DATE: January 7, 1972

FROM: David W.M. Haynes

SUBJECT: Note on Birganj Irrigation Project

Attached herewith is the brief note on Birganj Irrigation Project as requested by you.

Enclosure

KPranich:ccb

AGRICULTURE PROJECTS DEPARTMENT

NEPAL

BIRGANJ IRRIGATION PROJECT

Estimated Cost	US$ 12 million equivalent, of which US$ 5.5 million foreign exchange.
Proposed Credit	Probably US$ 6-7 million.
Timetable	Field appraisal completed - December 20, 1971
	Yellow cover appraisal report - early March 1972
	Negotiations - late April 1972
	Consideration by E.D.s - May 1972

1. The project area is in the Terai in Central Nepal adjacent to the Indian border. The project was prepared by the FAO/IBRD Cooperative Programme on the basis of a UNDP study (NEP 7) for which FAO was the executing agency. It includes two parts:

(a) Completion of a gravity system to irrigate about 28,700 ha.

(b) Improvement of the 14 existing, and development of 14 new, tubewells for groundwater irrigation of about 2,700 ha.

A wide range of agricultural development would be included in both parts, e.g. farm-to-market roads, experimental farms, supply of credit, inputs and marketing through cooperatives. The project would provide consultants to strengthen management and the agricultural extension service and also training of local staff.

2. The groundwater subproject has a low rate of return, probably less than 10%, but would serve as a pilot area for the large area of Nepal where groundwater is the only source of irrigation.

3. The gravity system subproject appears to be technically and economically sound but presents some unusual problems, which may lead to delays in processing.

(a) By an Agreement of 1959, India undertook to build irrigation works in Nepal in exchange for water rights on the Gandak River. The Gandak Barrage diverts water into several canals including the Don Branch Canal, all of which are in Indian territory. GOI has agreed to supply 850 cusec from the Don Branch to the Birganj Project in Nepal. The continuity of this supply will depend on the maintenance by GOI of the Don Branch: design and construction are poor (one major structure has already collapsed) and, prior to negotiations of the proposed Credit, Nepal must make satisfactory arrangements with India for the inspection, maintenance and repair of the canal.

(b) GOI has agreed to finance and construct the main canal and secondaries in Nepal down to a capacity of 20 cusec by June 1972. The mission doubts whether this deadline can be met. Nepal, however, intends to negotiate with GOI an end to these arrangements as of June 30, 1972. Any uncompleted works then would be finished under the proposed IDA project, which would also include improvements to the canals and structures required for the higher cropping intensities now proposed. The negotiations with GOI should also clarify the question of ownership of works in Nepal: the 1959 Agreement suggests that India retains ownership of them indefinitely.

(c) Under the 1959 Agreement, India is committed to provide a grant of US$ 200,000 towards the cost of the distribution canals of less than 20 cusec. Nepal plans to negotiate an increase to US$ 800,000, which is about our estimate of the present-day cost of these works. The mission recommends that these works should be part of the proposed IDA Credit and that Nepal should be allowed to use whatever grant is received as part of her contribution to the financial plan.

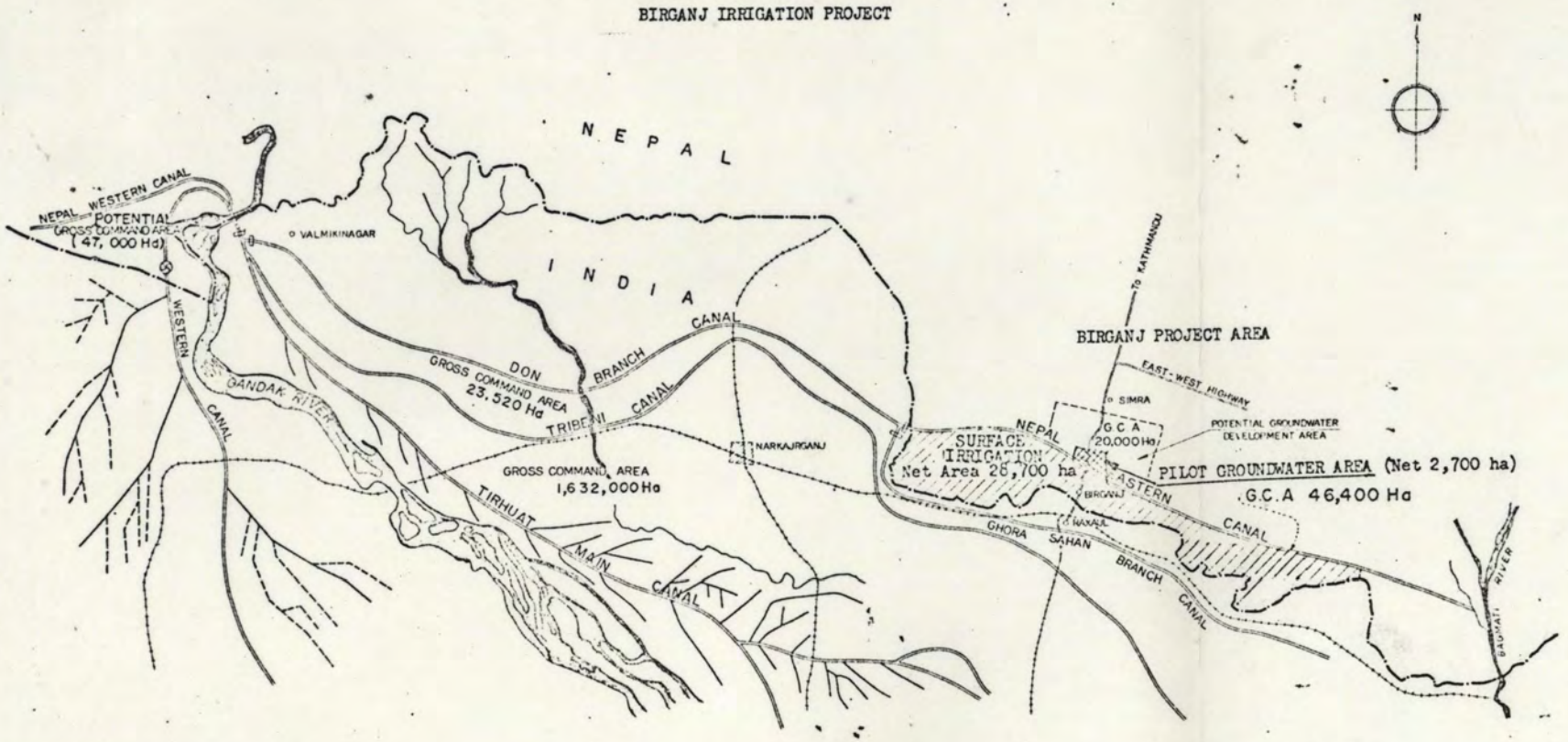
4. Marijuana is a cash crop in the Terai and this year there was no more than 100 ha in the project area. Government licenses growers as a source of revenue but there is no inspection nor regulation and no Government monopoly. Government officials indicated that, if requested, they would ban cultivation of marijuana in the project area but it is not clear how this ban would be enforced.

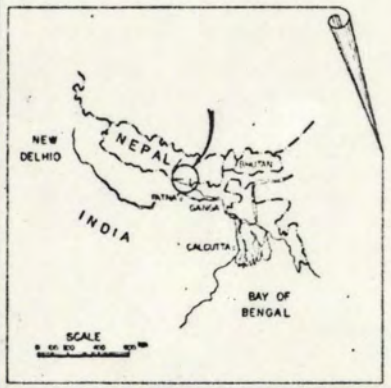
Lending Program - Irrigation Projects

5. The Operations Program envisions further credits for irrigation in FY75 ($5 million) and FY77 ($5 million), the first for the development of the command area of a gravity scheme and the second for extensive groundwater development nearby.

LOCATION MAP

BIRGANJ IRRIGATION PROJECT





LEGEND

- RIVER AND STREAM
- IRRIGATION CANAL
- NATIONAL BOUNDARY
- RAILWAY
- INTAKE BARRAGE
- CONTROL GATE
- POWER STATION
- G C A GROSS COMMAND AREA

NOTE

THIS MAP DOES NOT PURPORT TO DEFINE INTERNATIONAL BOUNDARIES.

SCALE

0 4 8 12 16 20 Mile

0 5 10 15 20 Km

File
Nepal
Irrigation

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OFFICE MEMORANDUM

TO: Mr. David W.M. Haynes DATE: December 22, 1971

FROM: K. Pranich, D.D. Brown, M. Burer
H.R. McDonald and M. Cassam

SUBJECT: NEPAL - Appraisal of the Gandaki-Birganj Irrigation Project - Back-to-Office Report

1. In accordance with its Terms of Reference dated October 29, 1971, the mission visited Nepal between November 8 and December 9, 1971, visiting both the surface irrigation and the pilot groundwater subproject areas. The mission also inspected the Gandak Barrage and the Don Branch Canal.

Surface Irrigation Subproject

2. India has agreed to provide a perennial supply of 850 cusec for the project from the Gandak Barrage through the Don Branch Canal. The mission found that some structures in this canal, which is entirely in Indian territory, were poorly designed and constructed and that one main structure had collapsed. It should be a condition of negotiation that Nepal had concluded arrangements with India, satisfactory to the Association, for inspection, maintenance and repair of the Don Branch Canal with only a one-month closure annually.

3. The project covers 28,700 ha net and, with some modifications, appears to be technically sound and economically viable. India plans to complete construction of the large canals, down to 20 cusec, by June 1972 but the project would include some additional structures needed to obtain proper control in these canals. The project would also include the distribution system down to farm turnouts and integrated agricultural development comprising experimental farms, extension services, multi-purpose cooperatives, storages, feeder roads and training of local staff.

4. The estimated cost of the project is US$10.5 million, including US$4.5 million equivalent foreign costs. India is committed to make a grant towards the cost of the distribution system: the exact amount is being negotiated (Nepal plans to request US$800,000 equivalent). The mission recommends that Nepal should be allowed to apply this grant to her share of the financing plan.

Pilot Groundwater Subproject

5. This subproject consists of improvement to 14 existing tubewells and the sinking of 14 new tubewells for irrigating 2,700 ha adjoining the surface irrigation subproject. It also includes integrated agricultural development.

6. The subproject is technically feasible. The estimated cost is around US$1.5 million with a foreign currency component of about US$1 million. The rate of return of new wells alone, assuming the existing cropping pattern of paddy and wheat, would be lower than 10% but the subproject is economically viable if the existing wells are regarded as sunk cost. Since this subproject will serve as a pilot project for the large areas of Nepal where groundwater is the only source of irrigation, the mission recommends its financing.

Proposed Credit

7. The total cost of the project is about US$12 million, including US$5.5 million equivalent foreign costs. Area Department has indicated that on country ground it would recommend financing also of a portion of local expenditures.

Marijuana or Ganja

8. Ganja is presently grown in small plots totaling no more than 100 ha, scattered over the project area. The Government indicated that should the Association wish, it would not issue permits for growing this crop in the project area. The mission feels that the Association may wish to ban this crop from the project area entirely. A decision on this is requested.

KPranich:ccb

cc: Messrs. Chadenet, Baum, Ripman, King, Rovani, Lee, Engelmann, van der Tak, Lithgow, Lind, Evans (2), Wapenhans (2), McIvor, Adler, Takahashi, Darnell, Courbois, Jones (3), Forcum, Roulet (5), Clyde, de Liedekerke, B. Davis

Central Files

Resident Staff in Nepal (3)

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

OFFICE MEMORANDUM

TO: Files DATE: June 16, 1971

FROM: D. S. Ballantine (with O. Markgren)

SUBJECT: NEPAL - Reconnaissance of Education Project
Full Report

1. I visited Nepal from May 21 to 26 and Mr. O. Markgren from May 16 to 27, 1971. The objectives of the visit, in accordance with terms of reference dated April 27, 1971, were:

(a) to identify project possibilities; and
(b) to assess the state of readiness of a possible project and the time required for completion of project preparation.

Summary

2. The possibility of an education project was discussed with the government during the visit of the economic mission in April 1969. However, the government had little interest in a Bank/IDA financed project at that time. Also priority areas in education could not be clearly defined because of lack of basic information about the system.

3. The situation has changed radically since then. The Ministry of Education has organized a well functioning statistical unit and development of the education system has become a question of vital interest to all concerned. A "New Education Policy" has been agreed on in principle by the Cabinet covering the Fourth Five Year Plan period (FY 1971-1975) with the objectives of making the education system more relevant to economic development needs and of making the best use of scarce resources.

4. This time the government showed keen interest in Bank/IDA participation in an education project to help in the implementation of the new policy. During discussions with government officials, representatives of multilateral and bilateral agencies, the following appeared to be priority areas for possible Bank/IDA financing:

(i) teacher training;
(ii) equipment and furniture supply for "vocational" senior secondary schools - actually pre-vocational by our definition;
(iii) development of education by radio;
(iv) agricultural education for middle level manpower; and
(v) technical assistance related to items (i)-(iv) above.

5. Further studies need to be done by the government as a basis for more detailed and precise views on possible project items. The mission estimated, after discussions with government officials, that some of the studies will take 6-12 months to carry out, which indicates that a loan/credit in FY1974 is a reasonable expectation.

Action Required

6. The Bank should by letter indicate the substance of the mission's findings and request reports of progress in preparing more specific information on the items included above. If progress is good, a mission to confirm the project content and to help prepare the project might be sent to Nepal about one year from now. If progress does not work out as expected, another reconnaissance mission might be considered in about 9 months.

THE REPORT

A New Education Policy

7. Shortly before our arrival (on April 2) the Cabinet had agreed in principle to a "New Education Policy" (NEP) covering the Fourth Five Year Plan (FY 1971-1975) period which has just begun. Although it is not based on any adequate manpower analysis and does not provide answers to a number of specific questions (it is a policy - not a plan), it does outline quite clearly bold and comprehensive reform of the Nepali education system. The initiative for the new policy is said to have come from the Crown Prince and the group which prepared the report is referred to as the "Palace Task Force".

8. The primary objective of the new policy is to make the education system more relevant and serviceable to economic development needs of the country. A number of explicit measures are indicated which, if followed through will make this more than the customary pious statement. In its realistic tone and spirit the policy is comparable to the Tanzanian policy defined by President Nyerere, although more conventional in its specific measures and less an expression of a country's unique social philosophy.

9. Among the major measures indicated are:

(i) A change in structure of the education system from 5-2-3 to 3-4-3. This automatically changes the primary enrollment ratio from about 30% to about 50% with the 5-year objective of reaching 64% on the new basis. Most significant is the decision to provide less primary education to larger numbers of students. There will also be a 5-year increase in enrollment at the intermediate level (formerly upper primary and lower secondary) from about 13% to 20% and at upper secondary (grades 8-10) from about 6% to 13%. Second level technical education, now handled by many ministries, will be coordinated under the Ministry of Education.

(ii) Primary and intermediate curricula will be basically the same for all students except for adjustments of subject matter to regional environments. Upper secondary (grades 8-10) will be divided into 3 principal types (general, sanskrit and vocational) with the vocational being subdivided into various specialized areas, of which agriculture will be predominant for the early future. Both the general and sanskrit streams will include 20% vocational subjects. The vocational streams will have 30% vocational studies (not counting Math and Sciences) plus an additional, optional 10%. This "vocationalizing" of secondary education is a major part of the new policy and was the point on which HMG most persistently pressed for Bank assistance.

The intention is to begin the vocationalizing of upper secondary education in the first year of the plan in two pilot districts and on the basis of information and experience gained to continue at a rate of 13 to 25 districts a year throughout the plan, reaching a total of 73 by the end of 1975. This is undoubtedly an ambitious schedule although just what the program will be in each district has yet to be determined. Two teams are presently conducting surveys in the two pilot districts, not only to outline specific projects but also to collect information on the schools in those two districts not now available in Kathmandu. It may take 3 to 6 months to work out preliminary project data for the first 2 districts and another 6 months or more to project this forward for subsequent years of the plan.

(iii) Reorganization of higher education is also drastic. Apart from a cutback in university admissions begun last year, major structural changes are indicated in the NEP. Higher education which now consists of the University (1,000 students) plus about 40 degree and diploma colleges will be organized under the University as an administrative and policy institution into 16 institutes, representing different disciplines, covering (umbrella style) several levels of training, as may be appropriate and timely for that discipline area. The general emphasis in the Fourth Plan is on the increase of training at the diploma or mid-technician level, postponing initiation of new degree level courses until the end of the plan period or later. Health, engineering and agriculture are the three areas to which most attention will be devoted during the Fourth Plan.

The case of the College of Agriculture illustrates the degree to which the Policy report goes (and does not go) in defining the new system. It is agreed (by most) that the college will concentrate on technician training during the Fourth Plan and probably be in the Kathmandu area, although perhaps at a new site outside the city. Its training target will be 700 junior technical assistants (JTA) and a new course at intermediate college level for JT's or junior technicians. Although some favor it, initiation of degree level and study will probably not take place in the Fourth Plan. BSc. (agriculture) graduates would continue to train mainly in India. However, a new site for the college has not been chosen, no specific institutional planning is under way and it is not clear how much, if any, of the Agriculture Department's facilities might continue to be used when it is detached from the Department and becomes part of the university.

There is a possibility (for the longer term recommended by an AID survey) that degree level work might be concentrated in Kathmandu, fed by one or more intermediate level campuses outside the valley, e.g. at Birgan, where there is already an experiment station and where the Bank irrigation project will be located.

(iv) Teacher training, especially primary, is given a very high priority by everyone, but very low priority and very little budgetary provision is given for expanding facilities. Thus far the teacher supply/demand balance has not been projected in any detail and there is good reason to expect a very substantial shortfall from the target of 31,000 teachers in 1975. Only nominal attention has been given to upgrading the existing teacher force, only 25% of whom are qualified. Attrition of teachers has been very high and recruitment of trainees difficult. It is hoped that an increase of 50% in teacher salaries will improve this situation. A National Development Service will also be introduced as an integral part of university courses. The students who have passed the first year of a diploma or degree course will have to serve for one year in a place decided by the government. Most of these students will serve as teachers.

Radio

10. We discussed with a number of officials the possibility of developing instructional radio as well as broadcasts for adult education and training. Some years ago there had been a not too successful effort in broadcasting, but opinion now favors another, better planned attempt. An expert adviser is expected shortly to help in drafting a scheme. Mr. Clark, the departing Unesco expert, has included a short annex on radio in his final report.

Expenditure

11. The New Education Policy in effect replaces the Education Chapter of the original Fourth Plan and projects total expenditure for education at roughly three times the level of the original plan. We were told by Mr. Thapa, the Finance Secretary, that while the higher figure has been accepted in principle by the Cabinet, no decision has been taken as to how to raise the additional revenue. The 5-year expenditure on education totalling about US$56 million is divided into the development and the regular budgets. Under the definitions, which are difficult to understand, the regular budget for the Third Plan period is substantially smaller than the development budget and in the Fourth Plan it is not much larger.

12. The Fourth Plan allocates almost nothing for new construction of schools, the feeling being that this is costly and of lower priority than equipment and technical assistance. It is also expected that most of the costs of construction for primary and secondary schools will be borne by local authorities. This viewpoint may contribute to the government's reluctance to expand capacity for primary teacher training.

Project Priorities and Readiness

13. Most government officials agreed on the four priority areas listed below, although they ranked them differently. Dr. H. B. Gurung, the education member of the Planning Commission listed them as follows:

(a) Teacher Training - Here, in the judgement of the mission, the more difficult decision may still need to be taken (to expand facilities) and this may take further study and discussion (6-12 months).

(b) Secondary Vocational Education - As indicated, preliminary project data will not be available for 6-12 months.

(c) Educational Radio for: (i) primary instruction, (ii) teacher training, and (iii) adult education. Even an outline scheme as a basis for a decision to do something is probably 6 months away.

(d) Institutes of the University for agriculture, engineering and health. The first stage of the engineering institute (technician level) is soon to begin. It has an allocation from UNDP of US$785,000 and will be assisted by ILO. No interest was expressed in Bank assistance for the medical institute. Necessary decisions for the agricultural college may require at least 3 months, following which preliminary project data needs to be worked out, requiring perhaps 6 more months.

All these time estimates are very rough and tentative, but they suggest that a loan in FY1974 (but probably not before) is a reasonable expectation. Since the priorities for a small loan are fairly obvious and agreed, it is not considered that a PIM would be appropriate. We hope to receive written reports of progress in working out the specifics of the items indicated above as well as information on ways of raising funds for the implementation of the new policy. If progress is very good, we might contemplate a mission to confirm the project content and help prepare the request about 12 months from now. If progress is not good, we might consider another short reconnaissance in about 9 months.

cc: Messrs. Chadenet, Baum, Engelmann, Rovani, King, Lee, Lithgow, Elliott, Calika, Hultin, Dunnill, Stewart, Lethem, Melmoth, Roulet, Kavalsky.
Op. Files, Div. Files.

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: December 27, 1971

FROM: Basil G. Kavalsky

SUBJECT: Nepal: Centre for Economic Development Administration (CEDA)

1. From October 25th to November 9th, 1971, I participated in the course for under-secretaries of the Government of Nepal given by CEDA. I joined Sang Chul Suh of EDI who had been in Kathmandu since the start of the course two weeks earlier.

2. The course was attended by 22 under-secretaries drawn from a wide range of ministries. Most of these men were in their middle or late thirties with considerable administrative experience. There were very few however with any postgraduate training and none who had degrees from overseas universities though some had been on specialized training programs. The under-secretary level is the basic working level of class I officers and is attained after five to ten years of service. Nepal has 6-700 of these and the number is to be increased over the next few years.

3. CEDA's training program for this level has the endorsement of the government which plans at a later stage to make the courses compulsory and promotion dependent on participation and performance. CEDA is in the process of building a large centre on the campus which will enable the course to be run residentially in future. The under-secretaries program consists of three one-month sessions which can be taken in any order. The first which had already been held is on project planning; the second on economic development and the third on development administration.

4. For the first course, CEDA was able to draw on the help of Arie Beenhakker of Ford who was instrumental in devising the program. In addition, a number of very able people with overseas training such as Jagdish Upadhyahya who has subsequently joined the Bank, Ratna Rana who has taken up a teaching appointment in the U.S., and Prakash Lohani who was elected to the Rastriya Panchayat, were available. The departure of all four of the above created an extremely difficult situation for Pashupati Rana, the Director of CEDA with the resulting SOS to the Bank to assist in the course.

5. We were interested in helping for a number of reasons. First of course, it was clear that a program which we judged to be very useful and promising was being jeopardised by personnel scarcity. Secondly, the program is still at a formative stage and there was the possibility of influencing it away from the rather academic orientation which is usually a feature of such courses. Third was the need to assist in the training of the new group of lecturers and staff members who are

now with CEDA. Fourthly, there was CEDA itself, a worthwhile organization to whose present and future activities we would like to contribute.

6. For these reasons, EDI deputed Sang Chul to participate in the course. I was asked to join for the last half, i.e., the sessions on sector programming in Nepal for which a knowledge of the economy was necessary. Sang Chul gave most of the lectures in the first part of the course dealing with the general problems of development. I participated in a series of sessions on planning in individual sectors and foreign aid. We both took part in the final workshop in which the group was divided among four sectors and asked to prepare a plan for each sector.

7. In general, the course seemed to me to be most successful. We were impressed by the calibre of the students and also impressed by their obvious gain in confidence and increased willingness to question and discuss as the course progressed.

8. While there is not much doubt that CEDA is headed in the right direction and also no question of the ability of Pashupati Rana to steer it properly, the quality of the local lecturing staff gives some cause for concern. Ford is assisting the next courses through a six-month contract to Dr. Vijay Kelker of the Administrative Staff College Hyderabad. The supporting staff remains very weak however and without a determined effort to recruit some able Nepalese and train intensively the people now available, it is hard to see how CEDA is going to carry out the very ambitious programs of its director. We tried to emphasize the need to concentrate on the under-secretaries course and keep at a minimum such activities as consultancy contracts. I doubt however that the message got through and an appropriate letter to Mr. Rana might be drafted re-emphasizing these points.

BGKavalsky:myc

cc: Roulet, Frost, Sirken, S.C. Suh.

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. K.S. Krishnaswamy

DATE: May 21, 1971

FROM: Basil G. Kavalsky

SUBJECT: E.D.I. Assistance for the Center for Economic Development and Administration (CEDA) Nepal

1. While in Kathmandu, Jean-David Roulet, Pieter Bulters and I had discussions with Dr. Arie Beenhakker, one of the Ford Foundation advisers to CEDA. Unfortunately Pashupati Rana, the Director of CEDA was not in Kathmandu while I was there, but Pieter Bulters was subsequently able to meet him. He complained about the lack of response from the EDI to his request for assistance for a short course for administrators at the Joint-Secretary and Department Director level. He envisages a one week course and would like two lecturers from EDI for this purpose. He argues that this course is a necessary complement to the courses being arranged for lower level administrators. While there is some justice in this argument, your view that he does not have the status to carry through a course of this type seems to be correct. In addition his motivation may be as much the desire to achieve additional prestige for himself and the Institute as anything else. On the other hand we heard nothing but praise for the way he is running CEDA at present and the programs which have been organised in the past year. It would seem wise however to wait till such a request came from other quarters of the Government, possibly either the Secretaries for Finance or Planning.

2. We need to reply to him however and I would suggest that we quite frankly express our doubts about the usefulness of such a course and the response that would be forthcoming from the Government, but say that we would reconsider this if at a later stage there did seem to be a need for the course. In the meantime, we could begin our involvement with CEDA at a lower level through association with their program for under-secretaries which Dr. Beenhakker described tous, and is outlined below. Apparently Pashupati Rana did not show any great enthusiasm for our participation in this course, but everyone else we spoke to seemed to feel that this was the point to start. Obviously we have to tread very carefully but hopefully something useful will emerge.

3. The program for training under-secretaries seems to me a very encouraging one, and exactly the level which CEDA should be gearing itself to. Fortunately, the idea has the full support of H.M.G. The idea is to train about 100 of the 500 to 600 Class II officers each year. Promotions would be dependent on officers having undergone the training. The basic course would last three months and be divided into three one-month sections covering general administration, economic development and management respectively. We have no further details about the curricula other than these rather general and uninformative titles. It would not be necessary for an officer to take more than a one month segment at a time since it is unlikely that many could be released for three consecutive months. All three sections would have to be taken at some point,however, to complete the course. About 25 people would be taken at a time, so that the full program is expected to stretch over something like nine years allowing for expansion in the number of officials. (The arithmetic doesn't quite work, but the information we were given was rather sketchy.)

4. Potentially this could be a tremendously useful course and it is important to try and give whatever support is needed to ensure that it is a success. What I proposed was that we send someone out to participate in one three month session as a lecturer. Whoever goes out could spend about a month there beforehand to co-crdinate with the local lecturers. At the end of his assignment he could review the course and suggest revisions if these seem to be needed and also consider the question of an ongoing EDI involvement if this would be useful. It was felt in Nepal that assistance of this kind would be particularly helpful on the public administration side where the teaching staff of CEDA was not adequate for the job. This could however be discussed. The provision of literature and material used in EDI courses would also be appreciated.

5. Could we discuss this at some time?

BKavalsky:pw

c.c. to Messrs. Roulet, Bulters, M.Miller, Stubenitsky

Source: Nepal Economic Report, June 1969.

ANNEX 2

POPULATION AND FAMILY PLANNING

1. The 1961 census reported births and deaths during the previous year at rates of 33 and 13 per thousand, which are clearly far too low. Infant mortality must have been omitted on both sides of the ledger on a substantial scale. The estimated number of infant deaths per thousand was only six; in a country where there is practically no medical service outside Kathmandu, this must have been wrong.

2. The actual rate of growth is not really known. The Central Bureau of Statistics, from internal evidence from the census with adjustments for underestimation in various age groups, estimates a crude birth rate of around 40, a crude death rate of 22, and a growth rate of 18 per thousand during 1961-1971 1/. Much higher estimates have been publicized, on the basis of the National Health Survey carried out in 1965/6. Figures of 54, 27 and 27 are given for the birth, death and growth rate per thousand. Painstaking efforts were made by interviews in sample villages to check on the birth rate by various methods, but the results cannot be accepted as solid evidence without further analysis of the samples. The villages were not representative; it would be necessary to check the results in each one rather than globally, since some of the results do not appear credible; and the way in which samples of women interviewed in the villages were chosen would also need examination.

3. There was a previous census in 1952/4, whose quality is unknown. The growth rate between the two would be of the order of 1-1/2 percent per year, if the first census was not a gross overenumeration and the second a gross underenumeration or both. The difficulties are compounded by the large migration. In 1961/2 over 300,000 people from the hills were outside the country, mostly in India. Over 300,000 people then in the Terai were born in India. It is perhaps safest to speak in terms of round figures of 40, 20 and 20 per thousand for birth, death and growth rates for the time being.

4. The incidence of smallpox, cholera, tuberculosis and malaria is relatively high; life expectancy is less than in India and Pakistan. With improvements in health, the death rate can be expected to fall. The national health program has concentrated on malaria eradication, establishing health centers to provide vaccination and medical services, and the improvement of drinking water with the help of U.N., India, USAID and other agencies. By 1969, malaria had been eradicated or reduced to practical control in most of the infested areas except the Western and Far Western Terai and nearby Hill regions.

5. Family planning was started in 1958 by a voluntary organization. Subsequently the government officially assumed responsibility for a program

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1/ Population Projection for Nepal 1961-1981, H.M.G., Central Bureau of Statistics, 1968.

and handed it over in 1968 to a semi-autonomous board, the Family Planning and Maternal and Child Health Board; the chairman is the Minister of Health. The number of married couples treated in 1967/8 was about 5,000, between 2 and 3 per mil of the total number. The number is increasing and there are ambitious plans to expand the program, now confined largely to Kathmandu except for an occasional airborne vasectomy team. The program intends to use all the 50 hospitals and 100 health centers existing in the country as well as all other suitable channels: the 250 Nepali doctors and the para-medical personnel, government services and voluntary organizations, schools and colleges and commercial distribution of contraceptives. The latter is already subsidized and doctors are paid an incentive fee for vasectomies and IUD insertions. The program receives financial and technical assistance from numerous national and international agencies 1/.

6. A country like Nepal faces formidable difficulties in controlling its population even given the fact that there is said to be ample demand for the program's services in the overpopulated hills. First there is the barrier common to many developing countries that the "ideal" size of family is still large, almost certainly in excess of 4; family planning, even if universal, would still not be synonymous with population control. The number of doctors outside Kathmandu is very low and of nurses still lower 2/. Until there are basic health services for living children, the incentive to limit a family to 2 or 3 is not very great. Even where health facilities do exist in some form or other, distance is still a problem. It is said that many deaths follow illegal abortion. Some responsible opinion favors legalization, not only on health grounds, but also on the grounds that the present state of communications makes regular contact with "acceptors" almost impossible. Finally, as already pointed out, Nepal's population is still determined to a large but unknown extent by migration. Nepal has a long way to go and the need for concentration of effort is just as great in this field as in the others.

1/ WHO, IPPF, UNICEF, USAID, SIDA, Population Council.

2/ In the Economic Affairs Report of the Ministry of Economic Planning, August 1967, Table 5 records 230 doctors and 112 nurses, of which 102 and 26 respectively were located outside the Bagmati zone, which includes Kathmandu.

Source: Report by K.F.S. King, FAO/IBRD Co-operative Program, July 1970

FORESTRY AND FOREST INDUSTRIES IN NEPAL

SUMMARY AND CONCLUSIONS

i. Nepal's forests, which cover 18,000 square miles or about one-third of the area of the country, are rich in hardwoods and some conifers. Perhaps the best evidence of this wealth is the fact that despite extremely conservative forest management practices, an unrealistic and wasteful deployment of forest department staff, outmoded forest administrative rules and regulations, and inadequate transportation infrastructure, the forests make a significant contribution to the economy of the country.

ii. At present, the most important forest region in Nepal is the Terai. However, because of the eradication of malaria, the density of the population in that region has considerably increased in recent years -- and at the expense of the forests. This trend is likely to continue.

iii. It therefore appears unrealistic to spend vast sums of money (as is proposed in the 4th Five-Year Development Plan) on the protection and conservation of all of these Terai forests before a land-use policy is formulated for the Terai. Moreover, the management plans for the forests prescribe their natural regeneration in an 80-year rotation. This prescription is conservative in the extreme, and does not take into account the possibility of replacing the natural forests with more productive man-made forests. Perhaps the greatest example of the lack of foresight, of forward-thinking, however, is the comparative neglect of the hills and the mountains in the forestry plans.

iv. It is therefore suggested that Nepal's forestry development strategy should be as follows:

(a) a land-use plan should be formulated for the Terai;

(b) if the plan calls for the conversion of forest land to other forms of land use, the exploitation of the forests to be released should be such that felling is linked to milling capacity and to demand;

(c) as the Terai forests are exploited they should be replaced wherever possible with quick-growing species;

(d) access roads should be provided immediately to those forests which possess exploitable stands of timber;

(e) particular attention should be paid to developing the western areas of both the Terai and the Hills for forestry;

(f) surveys and plans should be initiated now, with a view to developing forestry in suitable non-Terai areas.

v. Although Nepal's forest industries are virtually confined to the sawmilling industry, and although there are more than adequate supplies of suitable timber in the forests, all the mills operate below capacity. The reason is simply poor forest administration. This failure to administer effectively, to evolve systems which would have a propulsive rather than a stultifying influence on forest industrial development, not only adversely affects the performance of existing industries, but also prevents the introduction of new industries.

vi. If the necessary administrative reforms are made, and if more detailed studies of the Indian market for pulp and paper and for plywood and veneer indicate that there will be a demand for these Nepalese products in India, then it may be feasible to establish these industries.

vii. However, pending such favourable results, the strategy of forest industries development should be as follows:

(a) expand the sawmill industry through the use of equipment more likely to be efficiently used by Nepalese technicians and managers than the type of mill now worked by the Timber Corporation of Nepal at Hetaura; and

(b) develop secondary conversion forest industries such as the parquet industry, which have linkages with the sawmilling industry and for the products of which there is adequate Nepalese and external demand.

OFFICE MEMORANDUM

1st December 1971

To: Mr. J.P. Huyser

From: K.F.S. King, A.A. MacMillan and M. Sugimura

Subject: Forest Exploitation and Land Settlement in Nepal
Back-to-office Report

Introduction

1. An FAO/IBRD Mission comprising K.F.S. King (team leader and forestry specialist), A.A. MacMillan (economist) and M. Sugimura (consultant agronomist) visited Nepal from 1st to 29th November, 1971. Mr. Sugimura was in Nepal for the entire period, Mr. MacMillan between the 5th and 29th November, and Mr. King between the 17th and 29th November.

2. The Mission was assisted by Mr. G. Tibor who advised on possible irrigation studies in the project area, and by Mr. G. Rötzer, small sawmills and forest roads expert, at present attached to the UNDP/FAO Forest Development Project NEP 13.

3. The Mission, working in close cooperation with the Forest Department of Nepal, the Nepal Resettlement Company, and the UNDP/FAO Project NEP 13, assisted HMG of Nepal to prepare a project for possible Bank financing.

4. Before leaving Nepal, the Mission prepared a position paper which was presented to HMG of Nepal and discussed at a meeting on 29th November, 1971. HMG was represented by the Chief Secretary, the Secretary of Agriculture, the Secretary of Forests, the Director of the Agricultural Economics and Planning Division, the General Manager of the Nepal Resettlement Company, the Assistant Secretary of Finance, the General Manager of the Agricultural Credit Bank, and members of the Nepal Planning Commission. The United Nations Group was represented by the UNDP Resident Representative in Nepal and his Deputy, the Chief of the South Asia Division of IBRD, the FAO Country Representative and the Project Manager of the UNDP/FAO Project (NEP 13).

5. The report which follows is basically a summary of the position paper, but it includes amendments agreed upon by HMG of Nepal. The minutes of the meeting of 29th November are being prepared by the FAO Country Representative, and will be attached to the full preparation report.

Project Area

6. The overall project area is that portion of the Bardia Division in the Western Terai, which is bounded on the east by the Mand Nadi, on the south by the Indo-Nepalese border, on the west by the Babai River, and on the north by the Churia Hills. Within the overall project area, land settlement will be confined to an area south of an east-west line connecting Dkakela with Jabadhwa. This line is near the proposed alignment of the east-west highway. The total land settlement area is 8 400 ha, of which 6 400 ha are regarded as being suitable for agriculture.

KFSKing:ag
cc. All team members
IBRD (8)
BK 3/2.8 NEP

7. Forest management, in so far as it is assisted by the project, will be concentrated on the remaining portion of the overall project area to the north of the land settlement area.

8. HMG agreed to the project area provided that a report on future land-use in the Bardia Division, now being prepared by the UNDP/FAO Project NEP 13, does not conflict with the CP's proposals. The Mission was assured by the UNDP/FAO Project Manager that his report would fully support the Mission's choice of the project area.

The Project

9. The project is intended to rationalize the conversion of forest land to agriculture, and to assist in the consolidation of the remaining forest units in the Bardia Division so that they may be managed efficiently and commercially.

10. The project would provide the equipment and facilities necessary for :

(i) the construction of roads for the extraction of 1.6 million cu ft of timber from the land settlement and about 200 000 cu ft from the permanent forests annually;

(ii) the felling and transportation of timber from the entire project area;

(iii) conversion by sawmilling of the timber felled in the project area; and

(iv) the up-grading of the road connecting the project area to Nepalgunj.

11. In addition, the project would provide for the settlement of 2 100 families on the cleared area. Investments in land settlement would include :

(i) equipment and facilities for land clearing and tillage;

(ii) credit for on-farm development;

(iii) construction of settlement infrastructure including roads, domestic water supply and administrative buildings.

12. Rotational rainfed cropping would be introduced. Rice or maize would be grown in the monsoon, depending upon the topography of the land. Winter crops would include mustard, pulses and wheat.

13. Each settler family would be allocated two bighas (1.3 ha) of land, immediately after felling and clearing. An additional two bighas would be allocated upon completion of on-farm development of the first plot.

14. Rainfed farming would be practised in the project area, but provision would be made for detailed soil and hydrological studies to enable subsequent irrigation to be carried out, if this proves to be feasible.

15. Implementation of the project would be phased over five years.

Project Costs

16. Total capital costs of the project are estimated to be about US$ 6 million, of which approximately 55 percent would be foreign exchange. These figures must be considered as being of an indicative nature only.

Organization and Management

17. The permanent forest estate would be managed by HMG's Forest Department in accordance with the revised forest management plan for Bardia which is now being prepared by HMG with the assistance of the UNDP/FAO Forest Development Project.

18. All other aspects of the project, i.e. the clearing of the area zoned for settlement, the extraction and conversion of the forest produce, the provision of infrastructure for the settlers, the provision of extension, marketing and other services for the settlers, and the general supervision of the settlers, would be under the control and management of an independent Project Authority. This Project Authority would be established under Section 3 of the Development Board Act, 1956.

19. The powers of the Authority would be vested in a Board of Directors. The Board would appoint a General Manager who would be the executive head of the Authority. The General Manager would be assisted by two managers responsible for (a) forest exploitation, land clearing, timber conversion and road construction; and (b) agriculture (including settlement, extension, marketing of agriculture produce, etc.). These Managers would be assisted by appropriate staff. The Nepal Forest Department and the Nepal Punarvas Company would be closely involved in the selection of suitable staff, and would be closely consulted by the Managerial Staff on technical matters which fall within their competence.

20. The forests in the area zoned for settlement would be handed over to the Authority, who would be solely responsible for their felling and removal. The Authority would enter into long-term (5-year) contractual arrangements with sawmillers to provide specific volumes of wood within specified periods. These millers would be required to erect sawmills of a specified capacity and to accept the stated volume of timber from the area within the period defined. Severe penalties would be imposed for infringent of the agreement, and the Authority would have the right to revoke the agreement if the sawmiller repeatedly failed to meet his obligations. Provision would be made for the export of logs from the project area, wherever necessary.

21. The sawmillers would pay royalties in advance of felling, on a monthly basis. The royalty for timber to be felled in the project settlement area would be collected by the Authority on behalf of HMG and used in part for the development of the settlement and the permanent forest estate. Part of the royalty would be paid into general revenue.

22. A full report is being prepared and will probably be completed by the end of January 1972.

cc: Mr. Kirk.

A Tarnawiecki /mw
Jan. 7, 1972.

NEPAL - FOREST EXPLOITATION AND PLYWOOD PROJECT

A. Summary of the FAO/IBRD Cooperative Program Report

Project Location and Area Description

1. The forest resources are located in the Chitawan and Birganj districts and the proposed plant would be installed in Hetaura, Chitawan, 77 miles south of Kathmandu. The total area of the two districts is 6,470 Km^2 (about 2,510 sq. miles), of which 58% is forest (Table 1 attached).

Timber Resources

2. They have been estimated at 17.1 million $m^3(r)$ 1/ or 604 million cu. ft. (Table 2) from which an annual yield of 166,700 $m^3(r)$ of logs for sawing and 24,100 m^3 of peeler logs for plywood manufacture was conservatively calculated.2/ The main species in the forest - 63% of the total merchantable timber stock - is sal (Shorea robusta) which would be used exclusively for sawing. Many of the other species were assumed to be adequate for plywood manufacture. The main of these species was to have been asna (Terminalia tormentosa), which accounts for 14% of the stock.

The Project

3. The project comprises the following:

(i) Plywood mill with an estimated annual timber input of 22,350 $m^3(r)$ working two shifts daily and production of 30 million sq. ft. of 4mm thick plywood (11,150 m^3) at full capacity operation after 4 years from loan approval.

(ii) Improvements in an existing sawmill owned by the Timber Corporation of Nepal (TCN), which would result in an annual timber input of 54,080 $m^3(r)$ working one shift daily3/ and an estimated production of 12 million Board Feet (28,150 m^3).

1/ "Round" measure.

2/ While in Nepal, the project authors' advised the Bank mission that the yield of plylogs would actually be about 52,500 $m^3(r)$.

3/ In the Mission's opinion, there is no reason why the mill cannot operate two shifts or even three shifts daily.

(iii) Acquisition of logging and road construction equipment for timber extraction.

(iv) Construction and maintenance of main-line logging roads.

(v) Market promotion and improvement of existing depots in Kathmandu and Hetaura.

(vi) Technical and managerial assistance.

Investment Required and Projected Sales

4. The FAO/IBRD Cooperative Program estimated the total investment required at U.S.$ 4 million of which U.S.$ 2.8 million in foreign exchange (Table 3).

5. Sales of sawnwood (mainly in Nepal) would be N.Rp. 12.9 million (U.S.$ 1,280,000) and of plywood (mainly in India), N.Rp. 18 million (U.S. $ 1,782,000).

B. Bank Mission Findings and Recommendations

6. The findings and recommendations of the Bank Appraisal Mission are contained in the attached Back-to-Office report. Most salient features of this report follow:

7. Timber volumes available may be smaller than those given in the FAO/IBRD report because of the creation of a wildlife preserve and settlers' encroachment proceeding faster than estimated.1/ In spite of these factors, there will be no problem to supply the existing sawmill, even after improvement and working more than one shift daily.

8. Critical obstacle for the proposed plywood plant is lack of evidence that the second most abundant species in the project's area can be rotary peeled for plywood manufacture. This species (asna) has been used in India as sliced veneer but only in small quantities. (Changing the manufacturing process from rotary peeling to slicing would also change the investment required, operating and fixed costs, and sales potential).

9. More than one half of the proposed plywood plant's production will have to be sold in India. Although some early resistance from existing Indian manufacturers may be expected, the 1971 Indo-Nepalese Treaty of Trade and Transit specifically includes plywood among those products which can be exported by Nepal exempt of duties and quantitative restrictions. The Treaty will be effective only through August 1976, but given the GOI's interest in its landlocked neighbor's orderly economic development, no changes in the Treaty arrangements related to plywood are likely to emerge. This can be furthered by securing the Indian manufacturers' participation in the distribution and sale of Nepalese plywood.

1/ Fast orderly conversion to agriculture as a matter of fact would increase availability of timber for the project.

Other Indian industries may also share in the supply of some equipment, spare parts, and adhesives for the proposed plant.

10. In view of the above, the following steps will be required:

(i) Testing in commercial-sized quantities of the peeling and slicing properties of asna and other species.

(ii) Making an operational cruise to determine the area or areas required to supply both the sawmill and the proposed plywood plant with adequate quantities of suitable logs. (This presupposes that the testing of main species has been completed. The areas determined should cover only two years' requirements of the proposed plant, but by comparison of photographic data, volumes of main species can be extrapolated to other project areas).

(iii) As a result of the two previous steps, decide whether a plywood plant based on rotary peeling or in slicing (or both or none) is indicated, estimate what the timber input by species would be, and what modifications, if any, should be made in the operating and fixed costs as calculated in the FAO/IBRD project.

Mr. L. H. Cash

January 4, 1972

A. Tarnawiecki

NEPAL - Hetaura Plywood Project
Appraisal Mission
Back-to-Office Report

1. In accordance with your terms of reference, a Mission comprised of Messrs. A. Tarnawiecki (Mission Chief), R. D. H. Rowe (Agricultural Projects Department Forestry Expert), K. Hall (sawmill operation consultant) and S. Dickson (plywood consultant) visited Nepal and India between November 16 and December 8, 1971, to appraise a project based on the utilization of forest resources located in the Chitawan and Birganj districts of Nepal. Mr. J. Thadani (Industrial Projects Department) joined the Mission during its visit to India to coordinate its market review in that country. The project considers the establishment of a plywood plant and the improvement of an existing sawmill at Hetaura, 77 miles south of Katmandu. The project also includes acquisition of logging, road building, and maintenance equipment; market promotion expenses; and technical and managerial assistance. Total investment required was estimated at US$4 million ($2.8 million in foreign exchange). Sawnwood sales (in Nepal) were estimated at US$1.3 million annually, and plywood sales (mainly in India) at US$1.8 million after 4 years of operation.

2. Timber volumes available for the proposed plant's operations may be smaller than originally envisaged as a result of the creation of a wildlife preserve and to settlers' encroachment proceeding faster than the 0.5% annually visualized when the project was prepared. In addition, some areas classified as commercial forests may prove to be economically inaccessible. In spite of the above, the Mission believes that there is sufficient volume of the predominant project area species - sal (Shorea robusta) - and other species now being sawn by the Timber Corporation of Nepal (TCN) to sustain operation of the existing sawmill, even if improved and operated on a two or three shift basis.

3. Although the project was based on making plywood mainly by rotary peeling asna logs - Terminalia tormentosa, the second most abundant species in the project area - the Mission has been unable to find any evidence that this species is or can be rotary peeled commercially. This is a critical fact that must be clarified as the project authors and the Mission consultants agree that other species alone cannot justify the establishment of a practicable size plywood plant.

4. Asna has been occasionally used in India as sliced veneer for external surfaces in plywood manufacture, but an adequate niche for it in that country's market has not yet been found. Asna logs are more expensive than other species generally available in India for commercial plywood, but it is not accepted as decorative plywood by the buyers, who are used to teak and walnut surfaces, and may even prefer plastic laminates.

5. Plywood is included in the Protocol to the 1971 Indo-Nepal Treaty of Trade and Transit among the Nepalese projects which, pending procedural agreements, will be exempted from import duties and quantitative restrictions. The Treaty will remain in force only through August 1976, but because of her interest to secure an orderly economic development for her landlocked neighbor, the GOI is expected to make room for part of the proposed plant's production, if this can be programmed so as not to have a serious impact on existing plants. 1/ Since the project will in all probability require the use of existing distribution channels, the development of Indian manufacturers' interest in the distribution and sales of Nepalese plywood would help to dissipate resistance to the entrance of a new competitor. The project can also be found attractive by Indian manufacturers of adhesives and some of the plywood plant equipment.

6. In view of the Mission findings, in order to continue with the appraisal of the project, we recommend that:

a) Using existing inventory data, the Forestry Service of Nepal should calculate not only total timber volumes, but also its distribution on a volume per area basis for the different subdivisions of the Chittawan and Birganji areas.

b) TCN should collect samples of asna and other plylogs and send them to India for testing under controlled supervision. 2/ The tests should determine whether these species can be rotary peeled and what are the best pre-treatment and work conditions for peeling and slicing the logs. The time required for collecting samples, transportation, testing and reporting results is estimated at three months.

1/ Total capacity of the proposed plywood mill is 30 million sq. ft. (11,100 m^3) of 4 mm plywood, which is only about 10% of present Indian production.

2/ Testing should be carried out at least in two places: the Forestry Research Institute at Dera Dun and a commercial mill. For the first, permission from the GOI would be required, but no objection is expected. For commercial tests, a choice of locations is available.

c) The Forestry Service and/or TCN should make operational cruises to determine the areas programmed for total cutting of sal, asna and other species, as well as the areas, if any are required, in which only plylogs would be extracted. These areas should be determined so that a two year supply for the proposed plywood mill could be assured, and the volume of each species to be used, known. The time required for this work should not take more than three months.

d) In view of the importance of the Indian market for plywood in assuring the project's success, the GOI and HMG of Nepal should be requested, at the appropriate time, to consider not changing the regulations applicable to Nepalese plywood when the Indo-Nepal Treaty of Trade and Transit is renewed.

AST:mw

cc: Messrs. Chadenet
Baum
Ripman
Van der Tak
Lithgow
Rovani
Engelmann
James W. Lee
Lind
Fuchs
Kalmanoff
Moore
El Darwish
von Hoffman (IFC)
John King
Elliott
Mrs. Bonenfant

THE NEPAL INDUSTRIAL DEVELOPMENT CORPORATION (NIDC)
(US$1 = Rs. 10.125)

Bank Group Involvement

1. Responding to a suggestion by the Nepalese Government, a Bank mission visited NIDC in February 1970 to get acquainted with the company. At that time resources were not a problem of NIDC, and no IDA credit for NIDC was needed. The mission gave some advice on operational matters. An IDA credit of $4.2 million for a tourism project now under consideration, will be channelled from the Government through NIDC to the project.

General Background

2. Established in 1959, and fully owned by the Government, NIDC is the only development finance company in Nepal, financing not only industrial projects but hotels, and engaging in a wide range of activities including loan and equity participations, consultancy service and the promotion of industrial estates. Loan approvals have ranged annually between Rs. 10 million and Rs. 20 million, in its life of 11 years. The general manager since June 1971 came from the Central Bank and was formerly deputed as Secretary to the Finance Ministry. Professional staff numbers about 80, the majority of whom have been trained in European and American universities.

Problems and Issues

3. The major problems the Bank mission that visited NIDC in February 1970 found were: (a) a high level of arrears (85% of NIDC's total outstanding loan were affected by arrears, the bulk of which was connected with the royal family) and (b) lack of independent management as a result of government influence.

4. An Asian Development Bank mission that visited NIDC in June 1971 concluded that, as a condition for an ADB loan, an expatriate "executive assistant" should be attached to NIDC management, to act as Deputy General Manager. This proposal has been reportedly rejected by the Government which would prefer to have an "advisor". NIDC has indicated, through Bank resident mission in Kathmandu, its interest in Bank's assistance. Not to undercut the ADB's position, the Bank staff is discussing this matter with ADB.

DFC's January 1972

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Jean-David Roulet

DATE: June 2, 1971

FROM: Luckman Siahaan

SUBJECT: Industrial Sector in Nepal

1. The development of the industrial sector in Nepal is a necessary condition for achieving a faster rate of economic growth. At present about 90 percent of the population are engaged in the agricultural sector. In relation to arable land, Nepal is overpopulated. Some of the people, especially in the Hill regions,have begun to cultivate very low quality land whose marginal productivity is barely positive. Accordingly, the creation of other opportunities, especially in the industrial sector, could increase the productivity of these people and hence speed the process of development. At present Nepal depends to a considerable extent on its exports of agricultural products - mainly rice, timber, and ghee - to India in order to import most of the basic manufactured consumer goods. This cannot be maintained indefinitely. The stage is now being reached where the export of primary products may become inadequate to balance the import requirements of the country, especially as a result of the green revolution in India. Last but not least, as more and more of the population become educated other occupations outside the traditional agricultural sector should be developed, otherwise there is the possibility of unemployment of this group with the consequences of social tension.

2. The first industrial ventures in Nepal were started in 1935. The Nepal Companies Act was established in 1938, and the Government took the lead in the establishment of relatively large manufacturing units, among which were two cotton mills, two match factories, and two jute factories. Most of these industries went into liquidation right after the end of the war. A coordinated effort based on a development plan to stimulate the industrial sector has been underway since 1956. In 1957 a new industrial policy was announced and the Industrial Factory Workers Act followed in 1959. In 1960, the policy statement of 1957 was replaced by a new one. This policy was in turn successively amended in 1961, 1963, 1966 and most recently on October 25, 1968. For the purpose of granting facilities under the Act, industries are now classified into four categories: (a) industries which utilize indigenous or foreign raw materials and produce import substitutes, or export-oriented industries which use indigenous raw materials, or basic industries assisting in agricultural or other development; (b) industries related to tourism and cottage industries; (c) industries processing certain specified indigenous raw materials (e.g., ghee and bristles), and (d) industries which import raw materials through convertible foreign exchange and export their entire production, or a major portion of it. In general this Act provides numerous incentives in order to stimulate the industrial sector, such as: (a) protection against foreign competition; (b) tax holidays of up to ten years; (c) the provision of foreign exchange for the import of machinery, spare parts, and other necessary items from outside Nepal.

3. In addition to this, the Government also established the NIDC (Nepal Industrial Development Corporation) in 1959, in order to encourage and assist the development of private industries by giving the necessary financial and technical assistance. This year the SIDC (Small Scale Industrial Development Corporation) was established in order to perform the same functions for the development of cottage and small-scale industries. Up to the present about 75 percent of the fixed assets of any private industrial venture is provided by the Government either directly or through the two institutions mentioned above. The Government has also established three Industrial Estates (Balaju, Patan and Hetaura) and plans to establish five more. The setting-up of industrial estates is expected to encourage the establishment of industries, through the provision of facilities such as: (a) land and buildings at low rentals; (b) power at low rates; (c) filtered water and (d) other facilities such as: clinics, canteens, training centers, warehouses, banks, display centers, etc.

4. Despite the numerous incentives provided by the Government, there has been very limited progress in the industrial sector so far. The number of industries which have been established is still very small and many of them are still working far below capacity. The share of the industrial sector in Gross Domestic Product remains extremely low, only about 2 percent according to the 1966/67 National Accounts. A comparison between Industrial Development Targets and the actual progress during the third plan period (1965/66 - 1969/70) leads to a number of conclusions. There is a phenomenal gap between the plan targets and actual physical achievements in both the expansion of existing industries and the setting-up of new ones. It is surprising to note that at the end of the Third Plan, the output level of the oldest established industry, namely jute, was below the pre-plan level. With regard to the establishment of new industries which were given high priority in the Third Plan (such as cement, paper, solvent extract, cotton textiles and paint and varnish) the targets have their only reality in the pages of the Plan. The shoe and cigarette industry which have come up were not even mentioned in the Third Plan. A few industries producing stainless steel utensils and nylon suitings based entirely on imported raw materials registered great progress. There was, however, no mention of these industries either in the Third Plan.

5. The failure of the trade talks with India has led to an awareness of the need to establish new industries. The failure of the talks has created serious problems for Nepal's economy, especially the industrial sector. Some of the industries whose products are mainly sold in the Indian market, such as stainless steel and synthetic fibers, have already been closed. Other factories whose raw materials are mainly imported from India, such as hosiery, iron rerolling mills, biscuits and confectionery have already closed or are nearly closed. The closing of biscuit factories dramatizes the lack of planning in industrial development since Nepal is a surplus wheat producer.

6. The time is now ripe for proper industrial development planning and the establishment of a number of industries. The Government has recently issued a two-year plan for the establishment of a large number of new industries. This plan, however, is simply a list of possibilities without any clear indication of financing, priority or phasing. Accordingly, there is an urgent need to determine priority more specifically with regard to criteria such as availability of raw materials, demand, linkages, and regional development. Based upon these criteria, it would seem desirable that efforts should be concentrated on the establishment and expansion of the following industries: cement, textiles, animal and vegetable oils, flour mills, food and meat processing, tanning and footwear, brick and tiles, plywood, pulp and paper.

7. The industrial sector in Nepal is characterized by an almost complete absence of private entrepreneurs. Most of the existing larger industrial ventures are public sector, while the private sector is mostly engaged in small industry, and even their number is still very small. A number of factors have contributed to this situation. Firstly, the people were raised in a traditional agricultural economy which has no tradition of industrial or even large-scale commercial undertakings. Secondly, the shortage of manpower, especially skilled labor, together with competition from Indian manufactures has discouraged industrial ventures. Thirdly, lack of consistency in the application of incentives by the Government and the absence of a meaningful industrial development plan, has created a credibility gap between the private sector and the Government. Given these circumstances, obviously most of the larger investments will have to be in the public sector, e.g. cement, textiles, brick and tiles, pulp and paper, and plywood. Even for smaller investments, however, the public sector should go ahead on a fixed timetable unless private capital is forthcoming. In the long run many of those industries could be handed over to the private sector as soon as there is a willingness and ability to undertake them. From the outset, for any industries established by the Government, opportunities should be given to the private sector to participate in the ownership as well as in the management. Accordingly, although the Government should undertake most of the responsibility for establishing new industries, efforts should also be made to encourage the private sector. First, there is the need to create consistent incentives for which the Act should be amended so as to make the tax holiday for a fixed period of say five years. (At present it is for a period of up to 10 years, completely at the discretion of the authorities). It is also important to reconsider the necessity of duty free imports and other tax incentives, but the main thing is that whatever is applied should be automatically and equally applied.

8. A number of other constraints will have to be overcome if Nepal is to mount a successful industrial development program. One of the major constraints which has hampered industrial development is the lack of coordination between all of the Government institutions involved in industrial development. Accordingly, there is the need to create coordination between Department of Industry, Ministry of Finance, Planning Commission and NIDC in licensing, financing, provision of foreign exchange and application of incentives. In the public sector there is a need to give greater autonomy to managers in questions of decision-making, pricing and hiring policy. The manpower constraints are due primarily to the lack of trained people, especially in accounting. In this respect, there is the need for a comprehensive manpower plan in relation to industrial expansion and a review of the capacity of technical education to meet this.

9. Many of the existing public sector industries were established with the assistance of bilateral donors. The sugar mill and the agricultural tools factory in Birganj, and the cigarette factory in Janakpur were all established through aid from Russia. The shoe factory and the brick and tiles factory in the Kathmandu valley were established through Chinese aid. While Nepal will quite rightly continue to look for bilateral aid for the industrial sector, there is one disadvantage of Russian and Chinese assistance for industry in that it precludes any participation by the private sector. The Government has no doctrinaire attitudes with regard to the ownership of industry, indeed some of the lag in the establishment of an industrial sector has been a consequence of waiting for the private sector to come in. Given the new sense of urgency

the Government has been discussing the setting up of a textile factory with China and a pulp and paper mill with the U.S.S.R. These are the two major investments in the industrial sector, contemplated in the next five years or so. Agreements have not yet been concluded however and there is no certainty of their being concluded.

10. The multilateral agencies have not been active in this sector except for assistance in planning and pre-investment from UNIDO, and the jute processing project of ADB. Of the Western bilateral donors USAID has withdrawn completely from this field and others have only been involved with small-scale and cottage industries (Indian and Swiss aid). The IBRD involvement in this sector has been through our interest in NIDC and more recently in the preparation of a plywood project by the IBRD/FAO Cooperation Program. This last is at a very promising stage as can be seen from the back-to-office report of the FAO/IBRD mission. It will involve $2.5 million and include the rehabilitation of the sawmill at Hetaura which is presently being inefficiently run and underutilised.

11. The UNIDO team has submitted to the Government a seven year plan involving an investment of $5 to $6 million a year in a wide variety of industries. The largest of course are textiles and pulp and paper which would account for roughly half of the total investment. This would still leave a fairly long list of smaller industries for which financing and management is required. The public sector should go ahead with these on a fixed timetable. If the private sector is willing to commit itself within a limited period to go ahead, then well and good, otherwise they should be set up in the public sector and arrangements made for private participation later. In any case there is hardly an industry set up in Nepal in the private sector which does not have something like 75% public financing through NIDC. The Bank's participation in a project to provide financing for these industries through NIDC would be useful in many respects. Firstly it would provide some assurance that these projects will go ahead; secondly we could help to rationalise management procedures in the public sector; thirdly it would enable us to assist in strengthening NIDC (this has been a long-standing request to us from the Government). There is no problem in principle about NIDC financing thepublic sector either from their side or from ours. A fairly small initial loan for about $3 million, tied to a specific list of public sector projects with perhaps some amount kept open, could go ahead fairly quickly and we therefore propose to include it in the lending program for 1973. We also propose to include loans for textiles and pulp and paper on a contingency basis. Both these projects look extremely attractive and if the Nepalese are unable to conclude bilateral agreements we should respond quickly to any request for appraisal.

c.c. Messrs Lethbridge, Cash, Baddar, Parsons

LSiahaan:pw

The Nepal Industrial Development Corporation

1. The Government-owned Nepal Industrial Development Corporation (NIDC) was established in 1959, and is the country's only industrial development bank. It is able to make short and long-term loans, and participate in equity. It has also some non-banking activities, such as a Consultancy Services Division, an Industrial Promotion and Productivity Centre, and two Industrial Districts.

2. The Chairman is the Minister of Commerce and Industry, and other directors are the Secretary of Finance, the Governor of the Nepal Rastra Bank, and two prominent private businessmen.

3. The staff totals over 200, of whom 80 are professionals. The general level of competence is good, and some professionals have received training abroad, including at the Economic Development Institute.

4. The resources of the NIDC, as at early 1971, stood at Rs. 78,500,000 net of repayment, of which Rs 35,680,000 was equity, the balance being provided by loans from USAID, Kreditanstalt fuer Wiederaufbau, ExIm Bank of Japan, the Government of India, and the Government of Nepal.

5. The last three available Balance sheets can be summarized as follows:

	As at July 15 (Rs million)		
	1968	1969	1970 (Provisional)
ASSETS			
Cash and banks	3.01	4.45	2.5
Accounts receivables	7.35	8.13	5.0
Investments:			
Loans	35.43	35.22	43.3
Equity	3.96	4.17	4.8
Industrial Districts	7.76	8.76	8.8
Net fixed assets	1.74	1.71	2.4
Guarantees	12.33	13.13	13.8
	71.58	75.57	80.6
LIABILITIES AND EQUITY			
Current	5.60	1.82	1.0
Long-term borrowings	26.99	25.53	30.7
Share capital	25.72	34.12	34.4
Reserves and surplus	0.94	0.97	0.7
Guarantees	12.33	13.13	13.8
	71.58	75.57	80.6

6. In the first eleven years of operation, NIDC has approved 154 projects, for which the proposed loans totalled Rs 140 million. Of this, however, only Rs 55 million was disbursed, for 115 projects. Among these were 13 hotel projects, for which NIDC loans amounted to Rs 19 million. NIDC appraisals of hotel projects have shown some attention to detail, and are in general conscientiously done, though their assumptions are sometimes questionable.

7. The main problem the NIDC has encountered has been its management's inability to insist on timely repayment from influential borrowers. In early 1971, no less than 59 loans were in arrears, interest and principal due amounting to Rs 3.9 and Rs 15.7 million respectively. Loans in arrears included 4 hotel projects, of which the Soaltee Hotel accounted for 99% of the amount due. Since that time, however, the Soaltee has begun to meet its obligations. The newly appointed General Manager of the NIDC appears to be able and willing to institute much firmer policies, and a general tightening up of NIDC's operations. Executive assistance from the ADB is under discussion.

8. NIDC's standard terms for long term finance are an interest rate of 7½% per annum, paid semi-annually, for a term of up to 15 years, plus a commitment charge of 3/4% on the undisbursed balance. A grace period for the repayment of principal is granted on the basis of the length of time required for the project to be in full operation. Loans are normally secured by a mortgage on up to 70% of total fixed assets, or 80% for a project in the Industrial Districts.

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: January 4, 1972

FROM: J.-D. Roulet

SUBJECT: Nepal Industrial Development Corporation (NIDC)

1. On December 3, 1971, Mr. Kirk and I met Dr. P.N. Pant, Secretary, Ministry of Industry and Commerce, and Mr. G.B. Thapa, General Manager of NIDC, at NIDC's office.

2. After having summarized the status of the proposed tourism and plywood projects as they stood at the time, we enquired about the prospects of assistance by the Asian Development Bank for NIDC's general operations. Dr. Pant and Mr. Thapa confirmed in general terms what we already knew, namely, that following a mission last summer, ADB had offered executive assistance to NIDC. Both Dr. Pant and Mr. Thapa stressed that while NIDC - and actually Nepal in general - has no difficulty in accepting advisory assistance in the form of experts, consultants, etc., they are quite reluctant to accept outsiders in an executive capacity. They added that although no decision had yet been taken about ADB's proposal, they anticipated difficulties, particularly since ADB seemed unwilling to provide financing at the same time for NIDC's general operations. To avoid undercutting ADB's negotiating position, Mr. Kirk and I refrained from indicating any interest on the part of the Bank in providing assistance to NIDC at this stage. Mr. Kirk would continue to press NIDC for the financial information promised several months ago but not yet supplied. In addition, I think it would be useful to have general discussions with Mr. Rimal (currently here to negotiate the tourism project) on NIDC in general.

3. Dr. Pant broached the question of assistance by IFC. He said that so far there had been no operation by IFC in Nepal and he felt that there might be cases where assistance by IFC could be most useful. He had essentially in mind the proposed textile mill, the cost of which he estimated at between $4 - 5 million. This mill was expected to be financed by the private sector, and he thought that assistance by IFC might be helpful in bringing additional foreign capital. Another possibility was pulp and paper. Two projects in this field were currently under consideration, one in western Nepal, based on softwood, which the USSR was looking into, and one in eastern Nepal based on bamboo, which he thought might be appropriate for IFC. Dr. Pant said that the Government would welcome a visit by someone from IFC whenever this could be conveniently arranged.

cc: Messrs. R.K. Jones, Gustafson, Takaramura, Anderlind, Kavalsky, Kirk

JDRoulet:dp

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: January 5, 1972

FROM: A. Cleveland

SUBJECT: The Power Sector in Nepal

The power sector in Nepal is characterized by an excess of generating capacity in the Central Corridor, a shortage of capacity in the Eastern Terai and except for a few minor facilities serving specific plants and small communities, an absence of power in other areas of the Country. Total maximum demand at present is estimated at about 18,000 KW of which about 80 percent is consumed in the Central Corridor (the axis from Kathmandu to Birganj on the Indian Border) and most of the balance in the Eastern Terai. Consumption is mainly residential and commercial and transmission losses and thefts amount to about one-third of the power generated. Power requirements of industry are small and are likely to remain so unless the severe constraints on realization of Nepal's industrial potential can be overcome. 1/

Total power consumption in Nepal, although small in comparison with other countries, seems to have been growing by about 15-20 percent per year. The potential for generation of additional hydro power is enormous and could be exported if India would furnish the market. However, at this juncture, it is very doubtful that India would rely on Nepalese power without insisting on unacceptable control over generation and transmission.

In May, 1970, a master plan for power development to 1981 was completed with the assistance of a Japanese consulting firm. The study underlying the plan indicates that in the Central Corridor existing generating capacity of about 30,000 KW is roughly double present demand and that even assuming that consumption will continue to increase rapidly, the capacity in existence and under construction will be sufficient through 1980. Power development in the Corridor is therefore expected to consist mainly of transmission facilities and sub-stations in order to link all generating facilities and consuming areas into a single grid.

1/ See note on the Industrial Sector.

In the Eastern Terai, domestic power demand is served by a number of small organizations and industrial users generate their own supplies. The total maximum demand and installed capacity in the area is about 3,000 KW of which about one-third is hydro. The master plan estimates that power demand in this area will increase to about 22,000 KW by 1981 and will be met largely by installing additional diesel facilities and distribution of power from a new hydro station on the Kosi River in Kataija. To integrate the power system in the Eastern Terai, a transmission system is being constructed which will serve to connect the principal load centers of the area with the Kosi River generating facility.

Outside the Central Corridor and the Eastern Terai, little power is available. To supply estimated future demand in the Western Terai, it is proposed to construct a hydro station on the Babai River. Capacity is estimated at between 3,000 and 8,000 KW depending on possible sales to India and refinement of demand estimates. In the meantime, demand in the area will be met by transferring excess diesel capacity from the Kathmandu Valley and possibly by purchase of power from India.

The master plan estimates total investment in the power sector at $68 million but this is very tentative because it includes projects in the Central Corridor and the Far East totaling $50 million which are still in the identification stage and which preliminary estimates suggest may be premature in terms of likely demand. The balance of the estimated capital expenditure for power during the 1970's includes small hydro and diesel stations, transmission facilities and sub-stations. The Five-Year IDA lending program for Nepal includes US$5.0 million in FY75 for power transmission in the Central Corridor and US$4.0 million in FY77 for the Babai River hydro station in the Western Terai.

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: December 29, 1971

FROM: J.-D. Roulet

SUBJECT: Nepal - Power

1. During my recent visit to Nepal I met Mr. Rajbhandari, Secretary to the Ministry of Water and Power, on December 3 to review the prospects of a Bank Group operation in Nepal's power sector. Mr. Malla of the Nepal Electricity Corporation (NEC), and Mr. Shah, Chief Engineer, NEC, as well as a Mr. Baylis, Adviser to NEC, were present.

2. First of all, I enquired about HMG's reaction to Mr. Bulter's note of August 19, 1971, on Nepal's power sector, copies of which had been sent through Mr. Kirk a few months before. It turned out, however, that the copies had been misplaced and that none of those present had read the note. I therefore summarized its content and stressed in particular that in our view the Babai plant and the inter-connection of the Central Corridor with the Eastern Grid seems to have a higher priority. Mr. Rajbhandari expressed interest in getting financial assistance for the Babai plant which he said was ready to go ahead, although it later turned up that various technical investigations still have to be carried out. Mr. Rajbhandari gave me a summary of the project dated December 1971. Regarding the inter-connection of the Central Corridor with the Eastern Grid, Mr. Rajbhandari expressed doubts about the need to proceed at this stage and said that HMG, having reviewed its load forecast, had concluded that priority should first be given to the first stage of the Kulikhani generating scheme in the Central Corridor. I commented that before proceeding with an investment as expensive as this (about $25 million), one should be quite certain about its feasibility and justification. Our present information was that a substantial surplus of power would remain in the Central Corridor for still some time to come (particularly if power from the Gandaki Station can be fed into the system, either through a direct transmission line or through India. Mr. Rajbhandari, however, repeated the Government's view and also gave me a summary of the Kulikhani project, asking for the Bank's comments.

3. At that meeting, the Karnali project was mentioned only briefly, Mr. Rajbhandari having merely confirmed press reports that agreement had been reached with India about the purchase of power. A few days earlier, however, Mr. Joury, the UNDP Resident Representative, had told me that the matter had suddenly been reactivated and that he had been asked by Prime Minister Bista to summarize the current status of the project. Mr. Joury gave me on a confidential basis a copy of a letter he intended to deliver personally to the Prime Minister in this respect (attached).

4. The Karnali issue was raised forcefully by Mr. V.P. Lohani, Minister of Commerce and Industry, later the same day. Mr. Kirk and I had called on him essentially to brief him about the outcome of the various missions that had just visited Nepal. Towards the end of the meeting he confirmed that India had recently agreed in principle to purchase Karnali power, that letters were being prepared about this, and that in his opinion this had removed the major bottleneck which had so far prevented financing of the scheme. He was therefore hoping that the Bank which in the past had already been apprised of the project would be prepared to finance it. Mr. Kirk and I replied that India's agreement to purchase power was only one of several issues affecting the project, and stressed among other things that even if the project were found technically feasible and economically justified, its magnitude (over $250 million) would make it impossible for one institution alone to finance it. Minister Lohani brushed these questions aside as being technical details and instructed us to discuss the matter further with Mr. Shah, Chief Engineer of NEC, whom he summoned to the meeting.

5. Thereupon, I cancelled the next appointment I had that afternoon. I left with Mr. Shah and spent about an hour with him discussing the scheme. Mr. Shah briefed me about the current status of the investigations, particularly about the exchange of comments between Nippon Koei and the Snowy Mountains Authority, the two consulting firms asked to review the scheme, and undertook to send through Mr. Kirk copies of the relevant reports. He also confirmed that so far India had only given its agreement in principle and that discussions were still going on. In this respect I stressed that while agreement in principle was important, this in my view would not be sufficient. In my opinion any agreement should not only cover how much power India would buy, but also the price and the currency of payment, since if the project were to get off the ground, Nepal would have to incur a substantial debt that would have to be serviced in foreign exchange. I also recalled that at one point the question of control over the generating facilities seemed a serious issue and that even if it now seemed to have faded, it still remained an important element on which agreement would have to be reached. Mr. Shah appeared to agree with all these points and gave the impression that the Minister's enthusiasm about the project was rather motivated by political considerations.

6. In view of the foregoing, I would consider it essential that a representative of the Public Utilities Projects Department be attached to the Economic Mission scheduled for next Spring in order to get full coverage of the power sector. Meanwhile I recommend that we communicate to Nepal our views about how to proceed with the proposed Babai scheme. Karnali is, of course, an entirely different proposition, indeed a fascinating one. I

believe, however, that for all practical purposes one should begin by considering its justification as if it were exclusively an Indian project and determine if in the context of India's interest it is worthwhile pursuing and, if so, under what conditions.

Attachment - Letter from UNDP Resident Representative dated November 22, 1971, to Prime Minister Bista re Karnali.

cc: Mr. Wyatt - with following additional attachments:
(1) Hydro-Power Potentiality of Nepal
(2) NEC Loan Growth Study and 10 Year Generation Plan
(3) Kulekhani Hydel Project Report
(4) The Power Development Schemes from Babai and Sarada (Synopsis) Dec. 1971.

cc: Mr. D. King

cc: Messrs. Blobel, Baneth, Kavalsky/Abd El Aty, Kraske, Kirk

JDRoulet:dp

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Files

DATE: January 11, 1972

FROM: K. Hideshima

SUBJECT: NEPAL - Karnali Hydroelectric Project (UNDP NEP - 2 Project)

1. The main purpose of this UNDP/SF project was to carry out a preliminary survey of the Karnali River and its tributaries with a view to evaluate the hydroelectric power potential of the river and identify favorable sites for power development. The project was approved by the Governing Council of the UN Special Fund in May, 1961. The executing agency was the United Nations.

2. Since the demand for power in Nepal is very small relative to the size of the project, the justification rests on the adequacy of the Indian market. Concerning this, UNDP stated in January, 1961 as follows: "In India, power demand is growing very rapidly ..... The two most important cities of Uttar Pradesh, Kampur and Lucknow, with a common population of about two million, are being industrialized at a rapid rate. At the present time, these two cities are served only by thermal power plants. However, as they are situated in an area far from any known coal field, hydro power development is indicated to satisfy the demand. The hills nearest this area are situated in the Karnali Basin of Nepal. We, therefore, feel that Karnali hydro power could be absorbed by the demand of Northern Uttar Pradesh in the period of India's fourth Five-Year Plan, if the two countries could reach agreement in this regard."

3. Field work of the UNDP Survey was started in December, 1962, by the consultants, Nippon Koei Company of Japan, and completed in January, 1965. In March, 1966, the consultants submitted their final report to the United Nations.

Among ten technically feasible hydroelectric projects in the Karnali Basin, Nippon Koei considered three possibilities:

a) Chisapani "High Dam" project
b) Chisapani "Run of the River" project
c) Lakhaparta "Run of the River" project

They advised against (b) and (c) as being uneconomic. They recommended in favor of the Chisapani "High Dam" project, as being fully competitive in cost and as producing the right order of magnitude of power to meet expected needs in India.

The main features of the proposal for Chisapani are:

Number of units	6
Installed capacity (MW)	1800
Annual energy output (Mn. kwh)	8350
Capital cost (million $)	243.5
Power Rate (Mills per kwh)	4.2

(The capital cost does not include interest during the construction period.)

The foreign currency requirement is estimated at $208 M. The project would require 9 years to complete the first stage with the first two units put on-line. Thereafter, five more years are scheduled to complete the plant by installing an additional four units.

4. In December, 1966, Mr. Kirti Nidhi Bista, who is the present Prime Minister and was the Vice Chairman of the Council of Ministers and Minister for Foreign Affairs at that time, requested UNDP to arrange an independent evaluation of Nippon Koei's proposal.

Consequently, the United Nations asked the Snowy Mountain Hydroelectric Authority (SMHA), Australia, to review the feasibility study prepared by Nippon Koei. In July 1968, SMHA submitted a two volume report entitled "A Review of the Feasibility Studies of the Chisapani High-Dam Project".

5. The SMHA review confirmed the feasibility of the Chisapani High-Dam project, and indicated that Nippon Koei's cost estimates for the power installations were generally reasonable. The report suggested some changes in the design of the dam and power installation which SMHA believed would make for safer operation and for improved efficiency. In addition, SMHA suggested that the rock foundation at the high-dam site might not be capable of supporting a concrete dam of the size proposed by Nippon Koei. SMHA proposed as an alternative solution that a gravel-filled dam be investigated at a location downstream from the high dam site.

Because there was a difference in opinion between Nippon Koei and SMHA, the United Nations asked Nippon Koei to comment on the points

raised by the SMHA review. In January, 1969, Nippon Koei submitted a report entitled "Comments on a Review of the Feasibility Studies of the Chisapani High-Dam Project".

While the SMHA's evaluation generally supports Nippon Koei's feasibility study, there remain certain areas of disagreement between SMHA and Nippon Koei which can only be resolved by further detailed investigation. These relate to the magnitude of the design flood, the strength of the rock foundation to support a concrete high-dam and the alternative solution of a gravel-filled dam, the ultimate installed capacity and capacity factor, the seismic factor, and cost considerations. Attached is a note summarizing briefly these areas of disagreement between SMHA and Nippon Koei, and giving the recommendations of the United Nations, the Executing Agency.

6. As I mentioned before, the power would have to be sold to India, but no agreement has been reached with India either on the rates at which India would buy the power, or about who should control the facilities. There were also problems of how India would pay for imported power. The Nepalese have proposed that payment for Karnali power should be in two forms:

(a) Freely convertible foreign exchange up to an amount sufficient to service the foreign debt, and

(b) Indian rupees for any additional purchases.

The negotiations have almost been suspended since early 1969. However, as Mr. Roulet reported in his memorandum to files on December 29, 1971, India recently agreed in principle to purchase Karnali power.

KHideshima/BKavalsky:myc
Attachment

cc: Messrs. Cargill, Votaw, Blobel, Roulet, Cleveland/Kavalsky/Abd El Aty, and Erkman.

Summary of the most serious areas of disagreement between SMHA and Nippon Koei, followed by the recommendations of the United Nations.

1. Hydrology

The disagreement over hydrology concerned the magnitude of the design flood. Nippon Koei used a design flood with a peak discharge of 25,000 cu.m. per second and SMHA recommended using a design flood with a peak discharge of 38,000 cu.m. per second. SMHA proposed storing the excess inflow in the reservoir. However, to increase the storage capacity of the reservoir would require raising the height of the dam. In the opinion of the United Nations, more data must be collected and additional study done during the final design period in order to resolve this problem.

2. Geology

The SMHA expressed considerable reservation about the strength of the bedrock as a foundation for a concrete dam of the height proposed unless very extensive treatment is undertaken. SMHA recommended that the site be closely investigated before a decision is made regarding the possibility of constructing a very high concrete dam.

Nippon Koei pointed out that its geologic investigation was preliminary in nature and agreed that the additional work called for in the SMHA report would be necessary before the final design plans for the dam could be drawn.

As an alternative solution SMHA suggested a gravel-fill dam at a location downstream from the high-dam site. Nippon Koei agreed that the suggestion was reasonable but expressed some reservation about the cost and construction difficulties. As SMHA indicated in its report, much work would need to be done to test the feasibility of the proposed gravel-fill dam.

In the opinion of the United Nations it would be preferable to do the additional rock investigations at the high-dam site and determine the structural feasibility of a dam there before undertaking at considerable cost a feasibility study of a dam and power plant at the gravel-fill dam site.

3. Power Installation

The major disagreement in the area of power installation is the ultimate installed capacity and capacity factor. SMHA recommended an installed capacity of 3,600 MW operating at a capacity factor of 27-1/2 per cent whereas Nippon Koei designed for an installed capacity of 1,800 MW operating at a capacity factor of 55 per cent. Nippon Koei's plan reflects the objective of generating power at the most favourable rate in order to make it attractive for sale in India. Nippon Koei agrees that other installations could be considered, however, a thorough discussion would be required with Indian power authorities before a final conclusion is reached on the installed capacity. The United Nations agrees that this is a reasonable and practical attitude.

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4. Earthquake consideration

In its calculation for the design of an earthquake resistant dam Nippon Koei adopted a seismic factor of 0.12 g whereas SWHA recommended a seismic factor of 0.15 g, chiefly because it had been used elsewhere in India. After review Nippon Koei still believes that a seismic factor of 0.12 g is sufficient. Because Japanese engineers have considerable experience in seismic areas, the United Nations believes that Nippon Koei's opinion should have the greater weight.

5. Cost consideration

The total amount of the capital required to finance the project depends on the actual cost of construction and the interest rate on the money which must be borrowed. The SWHA in its estimate of the construction cost increased the cost from US$243 million to US$275 million to allow for price escalation at the rate of approximately 3 per cent per year. Undoubtedly there is an escalation factor which must be considered when final estimates based on construction designs are made.

The interest rate chosen by Nippon Koei - 5-1/2 per cent was employed against both foreign and local currency borrowings, but it was understood that this assumption was a compromise, as it was not possible to predict the final terms for either portion of the cost. An additional difficulty is the prediction of the amount of foreign currency required. Nippon Koei assumed about 53 per cent (the foreign currency component of US$129.8 million) of the total cost of construction whereas SWHA believed that this component might be reduced to 20 per cent (roughly US$35 million) if full use is made of the resources available in India. It seems probable that the interest rate for foreign currency may be higher than 5-1/2 per cent and that for local currency lower. For a sampling of loans by the World Bank for the construction of hydroelectric projects over the last five years, an average rate of 6-1/2 per cent was charged on loans to be amortized over 20 to 25 years. The United Nations believes that the interest rate employed for both currencies appears to be a good compromise.

To recapitulate, in March 1966 Nippon Koei estimated the cost of the development, without interest during construction, to be US$243 million whereas SWHA in July 1968 reassessed the cost due to inflation at US$275 million. Including interest charges at 5-1/2 per cent, the total investment required, according to Nippon Koei would be US$302 million and applying the same rate to the SWHA figure the total investment would be in the order of US$350 million. A higher rate of interest would naturally increase this figure but on the other hand a large increase in the local currency component, as suggested by SWHA as probable, obtained at a lower interest rate, would reduce the cost.

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In view of the difficulty of estimating the rate of cost escalation, the interest rates and the distribution of cost between foreign and local currencies, it is difficult to forecast with accuracy either the total cost of the Karnali development or the cost of energy at the time of construction.

In this connexion, UNDP has reservations about the economic and financial aspects of the United Nations' (the executing agency) report. The UNDP feels that the United Nations should have given a considerably stronger presentation of the economic and financial implications of the proposed Chisapani High-dam scheme.

The UNDP feels that the UN has not given sufficient prominence to the considerable disparity between Nippon and the SMHA in estimated foreign exchange costs which amounts to a difference of almost US$100 million. Furthermore, UNDP believes that it would be more realistic to compute total investment cost on the basis of 6-1/2 per cent interest rather than 5-1/2 per cent.

While the cost per kilowatt hour for power transmission from Mohana to Kanpur, India, (0.95 mills per kilowatt hour) is mentioned, the UN report fails to give Nippon Koei's global estimate of an additional US$88.7 million that would be required for transmission costs to the Indian market.

Finally the SMHA report was submitted in 1968, and since then there has been a rise in construction costs. For all these reasons, UNDP believes that total project cost including interest will be close to US$500 million rather than the US$350 million mentioned in the United Nations report.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OFFICE MEMORANDUM

TO: Mr. C. P. Vasudevan DATE: December 14, 1971

FROM: C. R. Dickenson and B. Holmgren

SUBJECT: NEPAL - Credit 166-NEP
Nepal Telecommunications Project
Full Supervision Report

In accordance with terms of reference dated October 18, 1971 we visited Kathmandu from November 11 to November 20, 1971, in order to review the progress and performance of the Nepal Telecommunications Board (NTB) under telecommunications credit 166 NEP. Details of the installations visited during the mission and persons with whom discussions took place are included in Annex 1.

1. Project Data

1.01	Amount of Credit 166 NEP	US$1.70 million
	Amount Disbursed October 31, 1971	US$0.16 million
	Amount Committed, October 31, 1971	US$1.55 million
	Date of Credit Agreement	November 10, 1969
	Effective Date	March 1, 1970
	Closing Date	July 31, 1974
	Date of Last Supervision Mission	October 16-26, 1970
	Current Exchange Rate	US$1.0=NRs10.10

1.02 The project is the Borrower's Five-Year Telecommunications Program covering the period July 1968 - July 1973 and provides for connection of 5,700 subscribers lines, the provision of long distance and international land line carrier and microwave radio systems, the provision of telex facilities at Kathmandu, and the reorganization of the operating entity.

1.03 The project was to be financed by two grants in aid from India totalling US$1.8 million and by the credit of US$1.7 million with Nepal meeting the local costs of the IDA financed part of the project amounting to US$0.67 million equivalent from internal cash generation and the government budget.

1.04 The credit agreement required that:

(a) Government should employ the consultants, experts and accountants required to design, introduce and operate the new organization;

(b) a new commercial accounting system with opening balance of accounts would be put into operation by no later than July 16, 1970;

(c) experts would be employed for periods satisfactory to IDA in the positions of Financial Comptroller and Business Manager;

(d) NTB would repay the subloan to the Government over 12 years including two years of grace at 6-1/2% interest, from November 10, 1969;

(e) from July 16, 1973 the rate of return should be at least 8%.

It was also agreed during negotiations that through July 31, 1973 the maximum number of employees at any time should not exceed 1,200.

2. Summary

2.01 The physical execution of the part of the project financed by IDA and by the First Indian Grant is now progressing satisfactorily, although one year behind schedule, due to initial difficulties which have now been overcome. (Paragraphs 4.01 to 4.03).

2.02 The agreement with India for the Second Indian Grant which provides for three telephone exchanges in the Terai has not been signed. In order to fully utilize the microwave system, alternative financing should be sought and procurement action taken in early 1972 if the Indian assistance is not forthcoming. (Paragraph 4.04).

2.03 The operating results for fiscal year ending July 1971 are less satisfactory than anticipated. However, NTB is expected to comply with the rate of return covenant, which specifies 8% from July 1973. It will not, however, be possible to meet the terms of repayment of the subloan from the Government. (Paragraphs 6.01 and 6.05).

2.04 In August 1971, telecommunications became the responsibility of the newly created Ministry of Communications instead of the Ministry of Public Works. (Paragraph 7.01).

2.05 The Government has decided to convert NTB into a corporation to give it more autonomy. The draft order has been approved by IDA and is expected to be issued in January, 1972. (Paragraph 7.02).

2.06 Due to the sectorial reorganization, the internal reorganization of NTB and the implementation of the consultants proposals have been temporarily suspended. (Paragraph 7.02).

2.07 Proposals for the next phase of NTB's development are expected to be finalized by mid 1972 and if the Government requests Bank group financing, the project should be appraised in late 1972. (Paragraph 8.01).

3. Action Taken and Recommended

3.01 The Nepalese Government is pressing India to sign the Second Indian Aid Agreement, which is now a matter of urgency. Alternatively, NTB intends in early 1972 to seek other means of financing. (Paragraph 4.04).

3.02 The Communications Secretary has stated that his Government intends to write to IDA proposing a change in the repayment terms of the subloan from the Government to NTB. (Paragraph 6.03).

3.03 If the order setting up a Corporation has not been issued by March 1972 the Government should be written and requested to independently implement the consultants recommendations. (Paragraph 7.02).

3.04 IDA should write to the Government and NTB and urge them to take all necessary steps to have the consultants recommendations in connection with the accounting arrangements implemented by July 1972. (Annex 2). (Paragraph 7.05).

3.05 Further supervision of the project should take place towards the end of 1972, possibly in conjunction with the appraisal.

4. Physical Execution of the Project

4.01 For the part of the project financed by the first grant from India, the land line route from Kathmandu through Birganj to India has been completed. (Two three-channel telephone carrier systems, one of which carries a 12 channel VF telegraph system are now working to India. These have been terminated on a temporary, three position international switchboard installed in Kathmandu). Erection of the new international exchange building at Kathmandu has been completed and installation of the permanent international exchange consisting of three positions and a domestic trunk exchange of six positions was due to commence before the end of November. Installation of the Birganj automatic exchange was also scheduled to commence in November.

4.02 Procurement of IDA financed goods has been delayed due to problems which have been overcome. Orders have now been placed for all equipment except for one automatic telephone exchange and for the teleprinters to be associated with the telex system.

4.03 NTB has extended the Kathmandu and Biratnagar cable networks, completed the interim extension of Biratnagar exchange by 100 lines, completed the construction of the road to the top of Pulchowki Mountain required for the main microwave radio station and commenced erection of the radio

station buildings. Detailed surveys by the microwave system contractor are in hand. The number of working exchange lines has increased from 2,230 at January 1, 1969 to 4,569 at October 31, 1971 in line with the forecast of 4,850. The minor short-fall is due to the delay in the provision of the Indian financed exchanges.

4.04 The agreement with India for the second grant in aid which was intended to provide the exchanges connecting with the IDA financed microwave system has not yet been signed (the second grant would have provided for 1,600 lines). NTB has expressed concern regarding the delay and the agreement is now under consideration by the Indian Communications and Finance Ministries. In order to fully utilize the microwave system on completion, alternative financing should be sought and procurement action taken in early 1972 if the Indian assistance is not forthcoming. The Nepalese Secretary for Communications is pressing through intergovernmental channels for an early decision in this matter. Opportunity was also taken to prepare a brief for the Bank Group's Resident Representative for information and possible action.

4.05 Assuming early agreement is reached on the second phase of the Indian financed provisions, completion of the project is expected by the present closing date of July 31, 1974.

5. Disbursements

5.01 A revised disbursement estimate is shown in Annex 3. As at October 31, 1971, the credit was 92% committed and about 10% of the credit amount had been disbursed. The difference between actual disbursements and the appraisal forecast is due to a lack of knowledge of international tendering procedures and the sudden death in the early stages of the project of NTB's capable chief executive. These problems have now been resolved. The credit is expected to be fully disbursed by the closing date of July 31, 1974.

6. Operating Results and Financial Position

6.01 In the fiscal year ending July 1971, NTB made a net loss of NRs0.84 million on a revenue of NRs5.3 million compared with the appraisal forecast of a net profit of NRs0.9 million (Annex 4). This is only in small part due to the physical delays of the project in that the number of lines connected is only 3% less than the forecast. Telephone revenues were lower than forecast due to a lower tariff for extension telephones than assumed (NRs10 instead of NRs25 per month) and less local excess calls. Domestic telegraph revenues have decreased slightly whereas the forecast allowed for an 80% increase between 1968 and 1971. A possible cause of both reduced telephone and telegraph usage has been the introduction of charges for Government Departments. Expenses for salaries were higher than forecast. The number of staff has now been brought down to 80% of the maximum level agreed to with IDA but this action was only taken towards the end of the fiscal year. The cost of the IDA financed consultants of NRs0.42 million was charged fully to operations.

6.02 The value of fixed assets was only 70% of the forecast because the commissioning of the part of the project constructed and financed by India was delayed, and also, 80% of NTB's present assets were brought into the books at the old exchange rate i.e. at US$1=NRs 7.7 versus the present rate of US$1=NRs 10.10 (Annex 5). It was pointed out to NTB, that the rate of return covenant in the credit agreement requires gross assets to be adjusted to reflect changes in current prices. This matter was also brought to the attention of the auditors.

6.03 The cash position is extremely strong with cash and bank deposits exceeding last years revenue by about one third. The reasons for this are the delays in project execution with the local portion of the project cost accumulating and the fact that the Government has been separately supplying the local funds which already were to be provided in the financing plan by internal cash generation. The management of NTB was requested to take appropriate action to adjust the position.

6.04 The accounts receivables which have previously been somewhat high have been reduced and are now reasonable. Although inventories have been reduced somewhat over the past fiscal year, they still seem excessive. NTB was asked to review its inventories to establish appropriate levels for the major stock items. The high level of current liabilities is because the Indian administrations share of international revenues has not been settled promptly. NTB is now updating these accounts and they will be settled as soon as approved by the Indian Government.

6.05 The credit agreement dated November 10, 1969 provides for repayment of the subloan between the Government and NTB over 12 years including a grace period of two years. Funds expected to be available for debt service in fiscal years 1972-1975 amount to some NRs 5 million (see Annex 6). Total debt service over this period 1/ with the terms specified in the credit agreement amounts to NRs 11.18 million whereas the debt service with standard terms i.e. 20 years including 5 years grace and equal annual payments of interest and principal, would amount to NRs 3.76 million. The Secretary for Communications appreciates that in order to change the original terms the Government will have to make a formal request to IDA and he intends to take action accordingly.

6.06 NTB is expected to continue to show a loss in the fiscal year ending July 1972 but from fiscal year 1974 it should, assuming completion of the project, meet the rate of return covenant of 8%.

1/ The appraisal report assumes that the principal is paid in equal annual installments which is also the assumption here. However, the credit agreement is open on this point.

7. Organization, Management and Performance of the Borrower

7.01 The responsibility for telecommunications was transferred from the Ministry of Public Works to the newly created Ministry of Communications in August 1971.

7.02 The Government has decided to convert NTB into a government-owned corporation and the implementation order is expected to be issued in January 1972. The change in status is desirable and in line with the Bank's original recommendations which were modified during negotiations to meet difficulties raised at the time by the Government. In the light of the proposed change in status, work on the reorganization of NTB as proposed by the consultants financed under the credit has been suspended. While some adjustment of the consultants proposals to meet the revised circumstances will be necessary, completion of the reorganization as required in the Credit Agreement is a matter of urgency and if the corporation has not been created by March 1972, we should then write the Government and urge them to implement the consultants recommendations independently of the conversion of NTB into a corporation.

7.03 The period of employment of the expert made available under the Colombo Plan as Business Manager (2 years) will not be sufficient to complete the implementation of the consultants recommendations. The Secretary of Communication confirmed that he would be requesting an extension for a period of one year, which would make both the Business Manager and the Financial Controller (who has a three year contract) available to NTB through 1972. The British Ambassador indicated that he foresaw no difficulty in obtaining the extension under the Colombo Plan.

7.04 Staffing arrangements within NTB are, on the whole satisfactory. The accountants required to be employed in connection with the setting up of a commercial accounting system have been recruited and after some delay the overall staff levels have been reduced to a figure below that agreed during negotiations. Difficulties created by the loss of two of the most senior qualified Nepalese engineers will be solved by two engineering experts who are being made available through the Colombo Plan and are expected to arrive in Nepal in January 1972. However, the counterparts who were to be appointed to the expatriate experts have not yet been nominated and the importance of taking early action was stressed.

7.05 NTB's opening balance sheet as of July 15, 1970 was submitted to IDA on July 25, 1971. The audited accounts for the fiscal year ending July 16, 1971 will probably be made available to IDA by February 1972 or within seven months after the close of the fiscal year compared to the five months required under the credit agreement. The importance of an adequate management information system was stressed and it was pointed out that the implementation of the accounting systems and procedures proposed by the consultants could and should be introduced independently of the decision to convert NTB into a corporation.

7.06 The setting up of the UNDP financed Telecommunications Training Institute has been delayed. Temporary accommodation has been obtained but the project manager has yet to be recruited. The matter was taken up through the UN resident representative and two nominations are now being forwarded to Government and one of these is expected to be approved shortly. Action is also being taken to nominate Nepalese for training under overseas fellowships. The training program, which is necessary for maintenance and operation of the facilities provided by the project, should now get under way.

8. Future Investment Plans

8.01 The ITU telecommunications advisor has prepared an advance development plan for the period July 1974 to July 1979. This plan, after a review within NTB, is likely to be submitted to the Association by mid 1972, with a view to appraisal towards the end of 1972. The total cost of the program is likely to be in the region of US$8 million with a foreign exchange component of US$5 million.

CRDickenson/BHolmgren:tm

cc: Messrs. Chadenet, Baum, Ripman, Rovani, John King, Engelmann, Lee, Lithgow, Perch, Weiner, Armstrong, Howell, Berrie, Jennings, White, Saeed, Bomani, Abd El Aty - Loan Officer (3), Grosvenor - Controller's Dept., Clyde - Legal Dept., Central Files (2), Division Files, Chronological File.

Jan. 1972

NEPAL: TOURISM

1. Since Nepal was opened to foreigners in 1951, demand for transport and accommodation facilities for visiting this fascinating country has far exceeded supply. Although the number of foreign arrivals has been growing steadily at some 37% compound per year since 1965, they only amounted to 46,000 in 1970. These exclude Indian citizens, who are not required to complete the same immigration formalities as other foreiners, and so do not appear in the statistics: some 4,000 Indians are estimated to reach Kathmandu each year by air, and there are in addition many thousands of unrecorded land frontier crossings by Indians. Many group tours were cancelled during 1971 as a result of upheavals elsewhere in the sub-continent, and total arrivals for the year are expected to be about the same as for 1970.

2. Nepal has a variety of attractions which enable it to appeal strongly to a number of tourist markets. Its climate can attract Indians and expatriates from neighboring regions having intolerable summers. The Himalayas draw climbers, trekkers, and sightseers. The ancient cities of the Kathmandu Valley represent a unique blending of cultures, and provide the sightseer with a profusion of temples, monasteries, markets, statues, carvings, fairs and ceremonies. The jungles of southern Nepal support many varieties of game. The birthplace of Buddha at Lumbini draws many thousands of pilgrims.

3. Kathmandu is the main center for international tourism, and the only place where hotel accomodation is at all developed. Of the 558 hotel rooms classified by the Department of Tourism, 500 are in Kathmandu.

4. Direct foreign exchange earnings from tourism are difficult to estimate, due to the belief that many tourist transactions are made through the grey market. The official estimate of gross direct foreign exchange earnings was US$ 1.3 million equivalent in 1969/70. The true figure may have been almost double this, but even so, tourism would have accounted for less than 10% of total receipts of convertible foreign exchange. Direct full-time employment in tourism throughout the country probably does not exceed 1,500, but substantial numbers of porters are employed during the trekking season.

5. Pokhara, located near a lake beneath the spectacular Machhapuchare ("Fishtail") peak, is an established center for trekking, and has one small hotel more or less suitable for international visitors, and other more modest accommodation. On completion of the Kathmandu-Pokhara road, under construction with assistance from Mainland China, driving time from the capital will be some 4 hours. The airport is also being improved as part of the Asian Development Bank program.

6. The prospects for greatly increasing Nepal's net foreign exchange earnings from tourism are excellent in the long run. Moreover, it is probable that a much greater number of foreign visiters can be accommodated in the Kathmandu valley and elsewhere without leading to social tensions vis-a-vis the local inhabitants. As accommodation and

and internal transport facilities expand, so Nepal can develop as a tourist destination area in its own right. But it will also gain from the growth of multi-country tours based on regional travel from air charter gateways such as Bangkok and Singapore.

7. The short term problems arise partly as a result of the early stage of Nepal's development, and partly from its geographical location. Technical skills for the construction and operation of tourist facilities have mostly to be imported, as do many hotel supplies. Communication links to and within Nepal are as yet inadequate for the demands of the increasingly sophisticated international tourist industry. Operating conditions at the present Kathmandu airport have not been such as to encourage foreign airlines to negotiate traffic rights, and the national carrier, Royal Nepal Airlines Corporation, (RNAC) has suffered from inadequate financial, managerial, and technical resources. The joint IDA/Indian Government Telecommunications Project, the Asian Development Bank Airport Program, the proposed UNDP/ILO Hotel Training School, the RNAC/Air France Technical Assistance Agreement, and the IDA Highway program all contribute to a greatly improved situation for developing tourism. The main constraint will be the availability of suitable tourist accommodations. The proposed IDA credit (see para.11 below) will provide an additional 271 rooms in Kathmandu.

502 rms

8. Present scheduled air services link Kathmandu with Bangkok, Rangoon, Calcutta, Delhi, Patna and Benares. Air routes from Kathmandu westward therefore involve a change of flight in India. Thai International were unable to negotiate adequate traffic rights from the Afghan government to extend their Bangkok-Kathmandu service via Delhi to Kabul. Royal Nepal Airlines are considering new routes, over which they are planning to operate jets. The runway of Kathmandu airport will be extended under the Asian Development Bank airport program to 10,000 feet enabling aircraft of the DC8/B707 type to operate without undue restrictions. Improvements are also being made in lighting and navigational aids. A few charter flights have already reached Kathmandu, but they have been restricted by limited hotel accommodations.

9. The government has laid down a tourism policy which is well conceived. While recognizing the opportunities tourism offers in terms of economic development, and providing for appropriate encouragement and incentives, the policy is to maintain control over the entry of tourists and their movements outside the Kathmandu Valley.

10. Nepal has received substantial outside assistance in developing tourism. A tourism master plan is being prepared with technical assistance from the German government. UNESCO missions have begun preparing programs for the scheduling, restoration and preservation of antiquities. Kreditanstalt fuer Wiederaufbau and USAID have provided resources for the Nepal Industrial Development Corporation (NIDC), some of which have been used to finance hotels. With the personal support of U Thant, and of governments of Buddhist countries, preliminary plans have been made for the construction of a religious complex at Lumbini, birthplace of Buddha, to be financed partly by international subscriptions. The Asian

Development Bank airport program provides essential infrastructure for tourism. Swiss technical assistance has helped local handicrafts, and the promotion and execution of a "tourist village", the first phase of which is nearing completion on the outskirts of Kathmandu. The International Labor Organization has helped the government prepare a request for UNDP assistance in the establishment of a hotel training school in Kathmandu.

11. An IDA credit of US$ 4.2 million for tourism is being negotiated, and will be submitted to the Board in February 1972.[1] It provides for the enlargement, refurbishing and extension of the existing 90 room Hotel de l'Annapurna into a 241 room hotel of first class international standard, and for the construction of a new second class hotel of 120 rooms. The total investment in both hotels, including land and the valuation of the existing assets, is US$ 6.64 million equivalent. The proposed IDA credit would cover total estimated foreign exchange costs. The credit would be chanelled to the sponsors of each project through NIDC, who would provide administrative and technical supervision on the Government's behalf, in return for a service charge. The terms of each sub loan are 7½% p.a. plus ¼% commitment charge, over 24 years, including 4 years grace. The estimated returns on equity range from 9.9% to 14.9% for the first class hotel, and from 7.5% to 11.99% for the other one, depending on the assumptions made on occupancy rates and opening date. The best estimate of the economic rate of return is about 19% for each sub-project. Extra direct employment is estimated at 500 jobs, and net direct foreign exchange earnings are expected to be of the order of US$ 2.8 million p.a. at full operation. The project has many unquantifiable but nevertheless real benefits such as: improved profitability for the national airline; stimulus to local handicrafts; expansion of base facilities for trekking expeditions, which provide employment in remote areas; encouragement of expanded air services, of special interest to a land locked country; and justification for a hotel training school, from which all hotels can benefit.

12. The rates of economic return arising from hotel investments in Nepal are much greater than the financial returns to the promoter, even when the latter is calculated taking inflation into account. This is due to adjustments for sales taxes, and tourist expenditures outside the hotel. Financial returns on hotel investments are almost invariably modest, and in Nepal they tend to be even lower, due to relatively high construction and operating costs, and the limited scope for local trade and convention business. Moreover, as far as the stop-over group tour market is concerned, occupancy rates are vulnerable to political unrest in any one of a number of neighboring countries.

13. The prospects for achieving the proposed lending program for tourism seems good. The close contact between IDA and the NIDC will be necessary during implementation of the Kathmandu hotel project should help towards strengthening the Napalese institution. Once the Tourism Master Plan is available, the Bank Group would wish to be able to review its recommendations with the Government, and with other potential donors.

NEPAL: TOURISM BASIC STATISTICS

TOURIST ARRIVALS (EXCLUDING INDIAN CITIZENS). '000

Nationality	1968	1969	1970
United States	9.6	12.8	14.3
Great Britain	3.2	4.4	5.2
France	2.4	3.3	5.3
W.Germany	2.2	2.8	4.6
Australia	1.0	1.6	2.2
Japan	0.8	1.4	2.3
Other	5.0	8.6	12.1
TOTAL	24.2	34.9	46.0
Means of transport			
Road	4.5	6.8	9.5
Air	19.7	28.1	36.5

Source: Central Bureau of Statistics.

MAP 1

NEPAL
POTENTIAL FOR TOURISM

SOURCE: DR. H. B. GURUNG

- Air route
- Surface route existing
- Surface route proposed
- Bridge
- Airfield
- STOL field existing
- STOL field proposed
- Hotel
- Guest house
- Tourist service
- Archeological site
- Fair site
- Temple
- Mountain climbed
- Mountain unclimbed
- View site
- Wild life
- International boundary

0 50 100 150 KILOMETERS

0 25 50 75 100 MILES

TIBET

INDIA

SIKKIM

GREAT HIMALAYA

ANNAPURNA

MT. EVEREST

Dhangarhi
Surkhet
Dang
Nepalganj
Pokhara
Gorka
Kathmandu
SEE MAP 2 FOR DETAIL
Bhairawa
Lumbini
Meghauli
Simra
Raxaul
Janakpur
Dhankuta
Rajbiraj
Biratnagar
Bhadrapur

To New Delhi
To Benares
To Patna
To Calcutta
To Dacca

80° 82° 84° 86° 88°
30° 28°

MARCH 1971

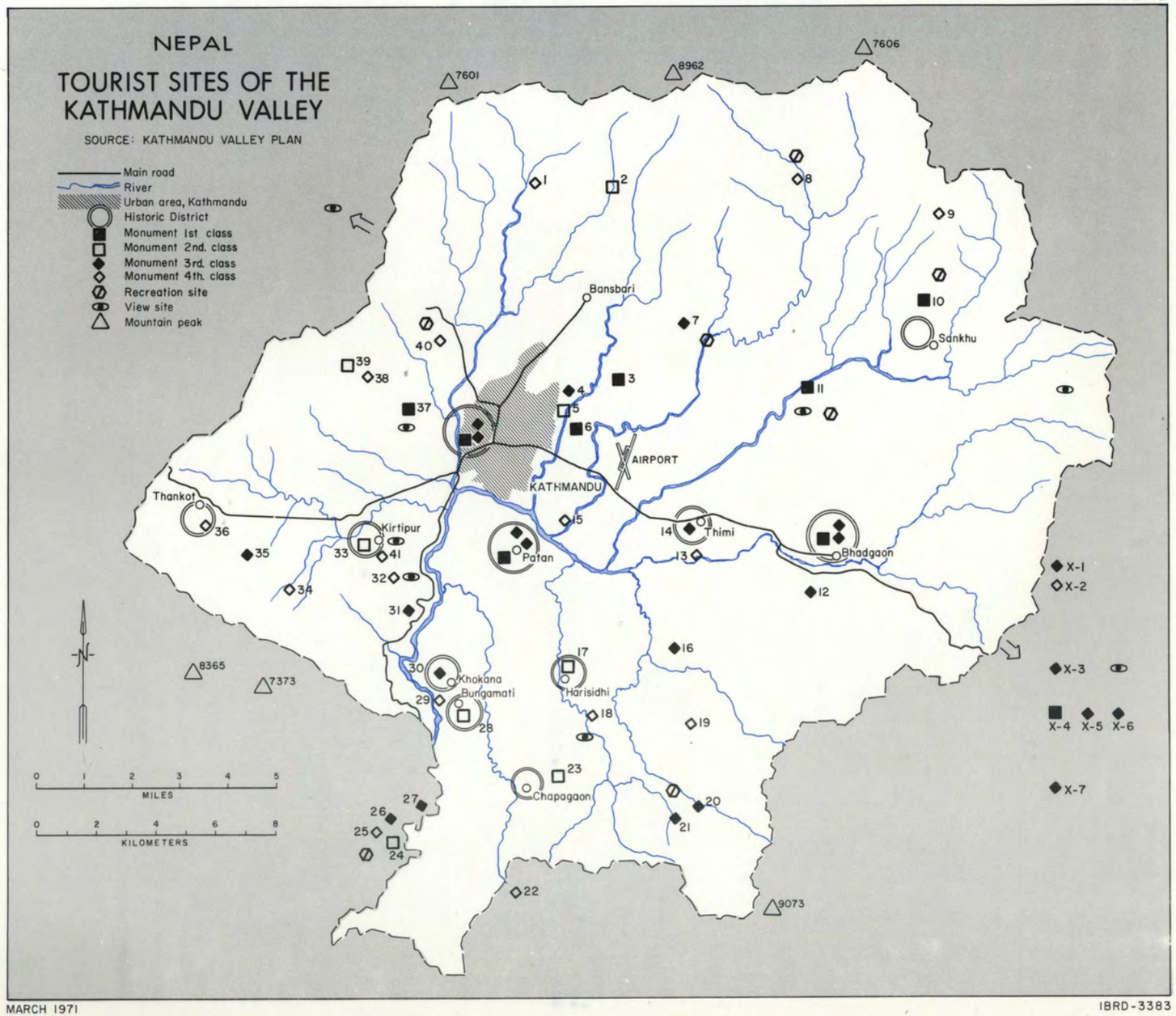
IBRD-3382

MAP 2

NEPAL

TOURIST SITES OF THE KATHMANDU VALLEY

SOURCE: KATHMANDU VALLEY PLAN



MARCH 1971

IBRD-3383

NEPAL

Key to Map No. IBRD-3383

Tourist sites of the Kathmandu Valley

Map No.	Name	Setting	Architecture	Cultural Importance
1	CHANDESWARI	C	C	C
2	BUDHANILKANTHA	D	-	A
3	BAUDDHANATH	A	A	A
4	GANESH	B	C	B
5	CHABAHIL	B	A	B
6	PASUPATI	B	B	A
7	GOKARNA MAHADEV	B	B	A
8	MAI	B	C	C
9	MANICHUTAN OF BOUDHA	B	B	B
10	KHADGA JOGINI	A	A	B
11	CHANGU NARAYAN	A	B	C
12	SURYA BINAYAK	B	D	A
13	DARKSHIN VARAHI	B	C	B
14	BAL KUMARI	B	C	A
15	KOTESWAR MAHADEV	B	C	B
16	MAHA LAXMI	B	B	A
17	HARISIDDHI BHAWANI	C	C	A
18	SANTANESWAR MAHADEV	B	C	C
19	BISANKU NARAYAN	B	C	B
20	GODAVARI KUNDA	A	-	B
21	PULCHOKI MAI NAV DHARA	D	D	A
22	TIKA BHAIRAB	B	D	B
23	VAJRAVARAHI	A	B	A
24	DARSHIN KALI	C	-	A
25	GORAKHANATH	B	-	C
26	VAJRA JOGINI	B	C	B
27	SIKHA NARAYAN	B	C	A
28	MACHENDRANATH	C	C	A
29	KARYA BINAYAK	A	D	B
30	SHEKHALI DEVI	C	C	B
31	JAL BINAYAR	B	C	A
32	ADINATH	B	B	C
33	BAGH BHAIRAV	B	A	B
34	MACCHE NARAYAN	A	D	C
35	MATATIRTHA	A	-	A
36	MAHA LAXMI	A	B	B
37	SWAYAMBHU	A	A	A
38	BHAGWATI	A	B	C
39	ICHANGU NARAYAN	A	C	B
40	AJIMA DEVI	B	B	B
41	CHITUBIBAR	B	C	B
X-1	BHAGWATI	A	B	C
X-2	KARANUMAYA	B	B	B
X-3	CHANDESWARI	A	C	A
X-4	INDRESWAR MAHADEV	B	A	A
X-5	BRAHMAYANI	A	B	C
X-6	KRISHNA TEMPLE	B	B	C
X-7	VIJAYA BHAGWATI	B	C	C

A = Outstanding
B = Above average
C = Average
D = Little interest

Source: Mission interpretation of description of sites in 'Kathmandu Valley Plan'

November, 1971

Source: Appraisal Report of Highway Project, October 27, 1970 Updated: January 11, 1972

THE TRANSPORT SECTOR

1. General: Historically, transport in Nepal has been by means of porters and, to a smaller extent, by pack animals and bullock carts in the Terai. These means of transport are still of great importance, especially in the hills of central Nepal where the majority of the population lives.

2. Topographic and climatic conditions are major obstacles to reliable, inexpensive transport. The rugged terrain and the large number of rivers and streams, together with heavy monsoon rains create great difficulties in the development of the transport system, particularly the construction of roads and all-weather aircraft landing facilities.

3. The transport demand is largely concentrated in the north-south direction and is associated with foreign trade and also movements between rural areas and villages.

4. Highways: The construction of roads for motor vehicles outside the Kathmandu Valley was only started in 1953, and Nepal still has one of the smallest road networks, either in relation to surface area or to population, of any country in the world. The network consists of about 2,700 km of road, 660 km of which are paved (as of 1970). In 1968, total motor vehicle registration was about 8,000 units, of which half were jeeps or passenger cars. The highway system is described in more detail in the following pages.

5. Railways: The Government-owned Transport Corporation of Nepal (TCN), in addition to operating the ropeway (para 6) and some trucks, operates two short railway lines from the Indian border. These run from Raxaul to Birganj (about 10 km) and from Jaynagar to Bizalpura (about 53 km). Both are extensions of the Indian railway network and do not play a significant role in the overall transport system of Nepal.

6. Ropeway: The TCN also operates the 41 km long Hitaura - Kathmandu ropeway which was built in 1964. In 1968/69 the ropeway carried some 35,000 tons of food grains and some 270 tons of construction materials, almost all in the direction up from Hitaura to Kathmandu. TCN estimates that the ropeway can now operate about 280 days a year, giving an annual capacity up to Kathmandu of about 70,000 tons. Rates on the ropeway are lower than comparable trucking rates between Hitaura and Kathmandu (roughly NRs 2.00 per maund (37.5 kg) for foodstuffs on the ropeway as compared with NRs 3.00 by truck). There are no plans for expanding the present facilities.

7. Air Transport: Air transport started in 1950 and the Government owned Royal Nepal Airlines Corporation (RNAC) now serves 15 airports in Nepal and four abroad (New Delhi, Calcutta, Patna and Dacca). The volume of domestic passenger traffic, which reached 164,000 passengers in 1969, increased by almost 30% annually during the previous three years. In 1969, some 84,000 passengers arrived in or left Nepal on international flights and these services are expanding. Freight carried by RNAC totalled some 3,000 tons in 1969.

8. According to a recently completed study by the International Civil Aviation Organization and the Asian Development Bank (ICAO/ADB), effective operations of domestic air transport have been handicapped by obsolete equipment, the high cost of flight operations, inadequate and unreliable navigational aids and communications, lack of airport facilities and the insufficient availability of trained staff. The Government is aware of these problems and has taken steps to improve air transport.

In August 1969, the Government signed an agreement with Australia for assistance in improving navigational aids and communications. In December 1969, the Government also obtained a loan of US$6.36 million equivalent from the ADB for: (i) improving the airports at Kathmandu, Pokhara, Bhairawa, Simra and Biratnagar; (ii) navigational aids and communication facilities; (iii) workshop equipment, passenge buses, a pilot navigational trainer; (iv) and technical assistance to RNAC and the Department of Civil Aviation (DCA); (v) the Government is currently evaluating aircraft with a view to extending international operations.

9. Waterways: The use of waterways within Nepal is limited. Rivers are used for some movement of rice and merchandise to and from India during the wet season and for floating logs from the hills in central Nepal. Canoe ferry operations also exist at many places along the rivers, but these are partially or completely interrupted during the wet season.

Transport Coordination

10. In order to obtain a proper basis for the development of a realistic and integrated transport system, the Government in 1964 asked the Bank for assistance in organizing and financing a Transport Survey. The Survey report was submitted in June 1965 and included a review of the existing transport system, a 30-year transport development plan and a more detailed five-year transport investment program for inclusion in the Third Five-Year Plan of Nepal, 1965/66 - 1969/70. The Survey concluded that the lack of adequate transport was a limiting factor to economic development in Nepal and that transport investment should receive high priority. The Survey also concluded that roads would provide the lowest cost of transport in Nepal and should, therefore, be the prime mode. The report also recommended that air transport should be developed. The proposed five-year investment program totalled NRs 517 million (US$68 million equivalent) of which NRs 424 million was for roads, NRs 84 million for air and NRs 9 million for railways.

11. Most development expenditures including investment in transport have in recent years been financed almost wholly by bilateral assistance from Mainland China, India, U.S.S.R., the United Kingdom and the United States. Although this bilateral assistance has been essential for the development of the infrastructure, it has made the preparation and implementation of coordinated and consistent investment plans more difficult.

12. All matters relating to transport policy and operations are the responsibility of the Ministry of Public Works, Transport and Communications (MPW). However, transport planning has, in the past, been weak and dispersed amongst several separate agencies within the MPW. The Government is anxious to improve this planning and the preparation and execution of projects. In addition to the technical assistance for aviation (para 8), UNDP is financing feasibility studies of about 1,000 km of roads with primary emphasis on north-south feeder and secondary roads. These studies commenced in mid-1970 and are due for completion mid-May 1972. The Bank has expressed Special Interest in this project and has participated in the Mid-Term Review. Also with financial assistance from the UNDP, the Government, in mid-1970, obtained the services of a transport economist. This expert is reviewing the present organization, responsibilities and functions of the various agencies concerned with transport with a view to improving coordination, planning and policies for transport development.

THE HIGHWAY SECTOR

A. The Highway Network and Trails

13. Highway Network (Table 1 and Map): The highway network in Nepal is limited in extent. The main artery of the country is the 128 km road from the Indian border to Kathmandu which was completed in 1956 by the Indian Government. It is paved and carries all road traffic from India to the capital. In the Kathmandu Valley, there is also a picturesque but limited network of roads connecting the smaller satellite towns with the capital.

14. The present road system consists of about 2,700 km of road divided into four clases - international routes, trunk routes, local roads and feeder roads. The international and trunk routes (paved and gravelled) and the local roads (principally in the Kathmandu Valley) comprises the national system which is under the authority of the Department, while the feeder roads are looked after by the village councils (panchayats). With a coverage of 1 km of road per 4,000 people (and 1 km per 50 km^2), Nepal is poorly served compared with countries having a similar per capita income; the same ratio for Afghanistan is 1 km per 1,000 people (and 1 km per 38 km^2) and for Malawi 1 km per 400 people (and 1 km per 12 km^2).

15. The network is, however, expanding rapidly. International and trunk routes are under construction by bilateral agencies with village self-help schemes tackling the minor roads. The East-West Highway planned for the whole length of the country is currently under construction by three bilateral agencies (India, U.S.S.R. and the U.K.). The total length of this road (1,040 km) is scheduled for completion by 1985 with the eastern two-thirds expected to be fully open for traffic by 1975. Current UNDP feasibility studies to be completed by mid-72 (para 12) will identify a first priority group of north-south feeder roads for early construction. This would serve in preparation of a proposed second IDA project (US$7 million) in FY 74. IDA has some reservations on economic methodology being used by consultants; a presentation by the consultants of the economic methodology to be used is expected mid-January, 1972 for the Bank's review.

16. Trails: The Himalayas and its foothills, which cover two-thirds of Nepal, are laced with narrow steep trails used by porters and animals laden with the needs and products of isolated valleys and villages. These trails not only link the many minor valley economies but also play a vital role in unifying the country. The total length of Nepal's trails has been put at about 10,000 km and several small but interesting studies have indicated that up to 40,000 tons per year may pass over the more important routes. The terrain is rugged resulting in steep trails winding down to rivers of melting snow, the main obstacle in this system of trails. The Department is taking an active interest in trail improvement, both by widening existing trails and also by a program for the supply of modern suspension bridges. These bridges will replace either small dangerous canoe ferries or existing primitive suspension bridges. That transport in the hills over porter trails will continue for decades to come is certain, and the Government, therefore, plans to step up its panchayat assistance program to improve this historic system. The proposed project will help in this respect.

B. Characteristics and Growth of Road Traffic

17. Data on present road traffic in Nepal are scarce and even less information exists on past trends. Total vehicle registration as of 1968 was about 8,000 (5,120 light vehicles -62%, 2,520 trucks - 31% and 560 buses - 7%). Of these, about 65% were registered in the Kathmandu Valley. The gross annual increase in vehicle registration was 20% during 1964-1968. Information on scrapped vehicles is not available, hence the present fleet and net growth are not known. However, even on the basis of gross vehicle registration there would be about 1,350 persons per vehicle as compared with about 700 in India, 500 in Afghanistan and 250 in Malawi.

18. Past traffic data are available from one check point on the important Indian border-Kathmandu road. Traffic here increased by about 13% annually since 1963/64 and in, 1968/69 reached about 230 vehicles per day, almost all trucks. The Department in 1969 recognized the need for traffic information and started additional traffic counts on some of the more important highways. It is expected that the UNDP financed transport economist (para 12) will assist the Department in expanding the present counting program. Assurances were obtained during negotiations that the Government will prepare and implement a program of regular traffic counts and improve the collection of traffic data generally. Traffic regulations limiting vehicle weights and dimensions, which are inadequately enforced, require revision. Revised vehicle size and weight regulations consistent with the capacity of the road network are being introduced and these regulations will be enforced under the present Highways project (Credit No. 223-NEP of US$ 2.5 million made in November, 1970).

C. Highway Planning and Financing

19. Planning is the responsibility of the Department Planning Section, but the establishment of construction priorities has not always been based on economic criteria. Priorities have been influenced by the offers of the several bilateral aid programs in Nepal, and attempts to coordinate and standardize these programs have not always been successful.

20. A five-year road plan was first produced in 1964 but was not promulgated by the Government. In 1965, the Bank Survey recommended a 30-year plan designed to provide the country with a basic road network. The Government, however, wanted a faster rate of network expansion and modified the Survey recommendations to form the present 20-year Plan (1966-1985). Most items included in the first five-year period of this Plan were projects already committed under foreign aid. The Government, however, recognised that comprehensive feasibility studies are required to reassess relative priorities, and therefore, asked the UNDP for assistance to carry out these studies. This two-year study, from which further projects suitable for Bank Group financing might emerge, commenced in mid-1970.

21. Highway investments are met largely from foreign aid. This aid is provided in the form of foreign staffed construction units and donated consumer goods subsequently sold locally by the Nepalese Government. The total annual value of investment in road construction has increased from about NRs 24 million to NRs 110 million in the last five years. The planned investment by Government (including foreign aid) for FY 1970 of NRs 217 million (US$ 21 million equivalent) represents a spectacular jump over previous years and is supported by the noticeable increase in bilateral road construction (by the British, USA and Mainland Chinese).

The total investment for the five year highways plan (1966-1970) was about NRs 534 million (about US$53 million) with a tentatively planned investment for the five years 1971-1976 of NRs 820 million (about US$81 million).

22. For FY 1970, revenue from road user charges (license fees together with import duties and surcharges on fuel, vehicles and spare parts) is estimated at about NRs 30 million compared with estimated Government expenditures on roads (both capital and recurrent but excluding foreign aid) of NRs 25 million. The recurrent maintenance budget, although having increased over the recent years, has not kept pace with the expanding road network. There has also been a tendency not to provide adequate funds for equipment replacement and repair. However, on the basis of the Department's maintenance improvement plan, the Government increased maintenance allocations.

23. The local contracting industry is small and engaged on building and some civil works. In addition, a Government-owned contracting firm has recently carried out some moderate sized road and bridge contracts in the Kathmandu Valley. In other parts of the country, Indian firms are undertaking works on contract to the Indian aid agency.

24. At present, Government contracts are awarded on a competitive basis or by negotiation with a single contractor. Due to the small scale of Government works being carried out by contract, the Department's experience in contract administration is limited. Following preparatory work carried out by the Consultants, the Department has now revised its contract procedures together with associated documents.

25. Maintenance of the national highways is the responsibility of the Maintenance Section of the Department with, at present, 862 km of road under its authority. In addition, there are presently 433 km of national highway being maintained by bilateral construction agencies and an estimated 1,400 km of feeder and minor roads under partial maintenance by panchayats. All bilateral financed roads, both completed and under construction, and also some panchayat roads will eventually be transferred to the Department for maintenance. The Government estimates that by 1976 the Department will be maintaining about 3,000 km of road - an increase of about 250% in 6 years.

26. Funds for road maintenance are presently inadequate. Requests for increased funds have not been supported by maintenance plans nor by up-to-date accounts of actual expenditure. Similarly, cost accounting is not employed to measure the efficiency of maintenance operations. The Government is understandably reluctant to meet the demands for increased funds until a system of road maintenance planning, programming and cost accounting is adopted by the Department.

27. The Department is aware of these deficiencies both in organization and operations and has drawn up a tentative expansion and improvement program to meet the needs of the present and future road network. The program covers, among other items, the improvement and expansion of workshop facilities, participation in UNDP and other training schemes and the purchase of necessary road maintenance equipment. Implementation of the program will require financial and technical assistance, and is the basis of the maintenance element of Credit No. 223-NEP.

E. IDA Credit No. 223-NEP dated December 21, 1970 for US$ 2.5 million

28. Work on the project is progressing satisfactorily. Last supervision mission's report is attached.

Cleared by Mr. Dickerson

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OFFICE MEMORANDUM

TO: Mr. Charles Morse DATE: January 10, 1972

FROM: Juergen Krombach and Maurice Mould

SUBJECT: NEPAL - UNDP/WHO Study of Greater Kathmandu Water Supply and Sewerage Project Identification Back-to-Office and Full Report

1. In accordance with Terms of Reference dated November 17, 1971, we visited Kathmandu from December 3 through 6, 1971. We had several meetings, and we undertook one field trip, with local representatives of WHO and their consultants, Messrs. Binnie and Partners of London. Mr. J.D. Roulet of the South Asia Department (who was also in Nepal at that time) and Mr. A. Kirk, the Bank's Resident Representative in Nepal, were kept informed of our discussions and were present at the concluding meeting with Mr. K.D. Adhikary, Chief Engineer of the Ministry of Water and Power, Government of Nepal (GN). Our movements and effectiveness during this short initial visit were somewhat hampered by the outbreak of the Indo-Pakistan war (fuel shortage, emergency arrangements by consultants, etc.).

2. The status of the project was also discussed in our meetings with WHO in Delhi (November 29), Geneva (December 10), and Washington (December 22), as well as in Mr. Mould's meetings with the consultants in London (December 14). A list of persons met during and after the mission is shown in Annex I.

Summary and Conclusions

3. The main objective of the current Phase I of the study is to prepare master plans for urban water supply and sewerage in the Kathmandu Valley (covering the towns of Kathmandu, Lalitpur and Bhaktapur). After completion of Phase I, scheduled for mid 1973, a further year's work on Phase II (preliminary engineering) will be necessary before the main works program (1975-80) would be ready for appraisal.

4. Included in Phase I is an immediate works program to provide relief water supplies for Bhaktapur and Lalitpur and to reduce leakage and wastage in Kathmandu. A tentative provision of $1.2 million is believed to be in UNDP's budget for this purpose, but subject to agreement with UNDP/WHO and GN these works (due to start early in 1973) could also be financed by IDA. The advantages would be that:

(i) this small initial program (total cost probably US$1 to 2 million) would provide experience for the main works program to be defined in the master plans, and,

(ii) UNDP could reallocate these earmarked funds to Phase II of the study and to other projects requested by the Government, thereby relieving their already over-committed budget.

5. In spite of their initial delays, logistic problems, the slow pace of development in Nepal and the lack of effective project executing agencies, the consultants are confident of completing the study on time. Based on our admittedly more superficial impression, we believe, however, that the present schedules for project preparation and implementation are too optimistic (see paragraphs 13-17).

6. The consultants' preliminary proposals on institutional reform (to create a national water supply corporation) appear too ambitious and unrealistic. At best they can be regarded as desirable long term targets but in the meantime more realistic short term objectives must be defined. This will require a better cooperation between WHO, the consultants and the Government departments responsible for water supply and sewerage.

7. Phase I also includes a water supply sector study, mainly to collect data and review the present situation outside the Kathmandu Valley and to put the Kathmandu problem into perspective. To transform this sector study into a vehicle for developing reliable preinvestment proposals for systems outside the Kathmandu Valley (as may be desirable from IDA's country lending program point of view) would require considerable adjustments of the consultants' contract.

Action Recommended

8. If it is confirmed that IDA is interested in the financing of interim water supply projects in Nepal prior to completion of the Greater Kathmandu Master Plan, agreement should be reached with UNDP in principle that IDA would provide the financing for the immediate works program due to start in 1973.

9. The timetable for further project pre-appraisal and for appraisal of the immediate and final works programs through 1974, as set out in paragraph 32, should be adopted by IDA.

Present Situation of Water Supply and Sewerage Services in Greater Kathmandu and Nepal

10. GN's Request for Assistance to UNDP (see paragraph 12) contains considerable relevant statistical data both of the country and of the background to this project. Except for a small section of Kathmandu, which has a rudimentary system, there is no sewerage or sewage disposal in the country, and the following indicate the limited water supplies to Greater Kathmandu composed of the capital city of Kathmandu, Lalitpur (linked with Kathmandu's southern boundary but separated by the Bhagmati River), and Bhaktapur (9 miles east of Kathmandu).

	Estimated 1971 Population	Available Supply 1/ Imgd 2/	Gallons per capita per day (gcd)
Kathmandu	200,000	5.0	25
Lalitpur	100,000	0.4	4
Bhaktapur	50,000	0.1	2
Greater Kathmandu	350,000	5.5	16

Nepal's current population is about 11 million, of which over 85% are estimated to be in rural areas i.e., in towns or villages having populations of 500 or less. With the demonstrated inadequacy of water and sewerage services to the three major towns, the situation in the remainder of the country can only be described as a total lack of facilities. Apart from this project, a limited rural water supplies project being undertaken by virtually one man from WHO and small schemes in the higher hills around Mount Everest (by Sir Edmund Hillary), there is no active water supply or sewerage project development in Nepal.

11. Water supplies and sewerage in Nepal are at present the responsibility of the Ministry of Water and Power. The principal water engineers of this Ministry are concerned with irrigation, while drinking water supplies and sewerage do not appear to have priority, except in Kathmandu and the two valley towns. Another GN department, the Ministry of Home and Panchayat 3/ (equivalent of a Ministry of Home or Local Government Affairs) have formed a new department called the Department of Decentralisation, whose apparent aim is to pass as much local administration as possible into the hands of local authorities from the central government. Amongst the services which are being immediately passed from the Department of Water and Power are those of water supply (outside the Kathmandu Valley there is no sewerage, so this is not under present consideration). 4/

1/ From this supply, over 50% wastage is estimated to be incurred before supply reaches consumers.

2/ Million Imperial gallons per day.

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Master Plan for Development of Water Supply and Sewerage Systems of Greater Kathmandu

12. In July 1969, GN formally requested assistance from the UNDP (Special Fund) for the investigation of water resources, planning and design of water distribution and sewerage systems for Greater Kathmandu. The UNDP Governing Council approved the Study in October 1969 and the Bank/IDA expressed its "Special Interest". WHO was assigned as Executing Agency and selected Binnie & Partners, London, as subcontractors (contract signed December 1970).

13. The UNDP Study is designed to produce a phased program of water supply and sewerage development through the year 2000 for Greater Kathmandu and an overall water balance study for the Kathmandu Valley (76,400 hectares). Two phases are called for: Phase I includes preparation of the Master Plan, detailed designs for immediate works in Lalitpur and Bhaktapur, the water balance study, organizational studies and visits by specialists for advising on key activities. The study will not make any recommendations for towns or villages within the Kathmandu Valley, or in the remainder of Nepal, other than the three towns of Greater Kathmandu. As part of their studies, the consultants will prepare a sector study of water supplies and sewerage for Nepal, but this will be of limited value for project identification in other areas (see paragraphs 23-25). Phase II is to include surveys, engineering design and planning of water supply and sewerage systems required to be in service by 1980. So far, the consultants are only engaged for Phase I of the project, having commenced work in February 1971 and expecting to present their final reports between April and August 1973. Their time-table for submission of reports for Phase I is:

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(i) logistic problems in building up the equipment necessary for a professional team in Nepal;

(ii) serious lack of adequate mapping of the Kathmandu Valley;

(iii) pressure from WHO to produce the sector study earlier and in a more comprehensive form than originally intended, in order to assist the authorities in preparing 1972/3 and later budgets.

15. Logistic problems are caused mainly by Nepal's reliance on Indian transit systems, including the port of Calcutta, for virtually all supplies. However, some trade is developing with China on the new Chinese-built Kathmandu-Lhasa road. Apart from expensive air freight systems, there is only one serviceable road into Kathmandu from India, which has to negotiate mountain passes up to 6,200 feet in altitude. In addition, a trade dispute in 1971 caused the Indian Government to close the supply route for a short time, and more recently, the Indo/Pakistan war put Nepali supplies in jeopardy. Any timing for project development in Nepal must take into account the unreliability of foreign supplies, particularly if they are to be obtained through the port of Calcutta. We received indications that some Indian suppliers are disinterested in supplying Nepal, or give very poor service when orders are placed.

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Immediate Works for Greater Kathmandu

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21. We were informed that UNDP will provide US$1.2 million for these immediate works, with an equivalent amount being available from an undefined source, if required (probably counterpart funds fron GN) 1/. This subject is further discussed in paragraphs 29 and 30.

22. As confirmed by sources familiar with the local conditions, the Ministry of Water and Power has no experience in water supply project execution. This may pose a problem for execution of the immediate works program.

Sector Study

23. The Plan of Operations definition of the scope of the sector study does not coincide with the consultants' proposals and so far WHO have still not clarified the matter sufficiently with the consultants. The consultants' proposal, as accepted by WHO, envisaged only a desk study of information of the whole of Nepal (to the extent available in Kathmandu), and limited reconnaissance visits to outlying areas. Sector information available on Nepal in Kathmandu is likely to be very sketchy and, based on our impressions from a brief aerial survey to the east of Kathmandu, to carry out a detailed sector study throughout Nepal would take considerably more time than the consultants have allowed.

1/ This was discovered from documents made briefly available to the mission but needs to be confirmed, because it is not in the Plan of Operations.

24. The consultants estimated to complete their initial data collection for the sector study in 15 months (May 1972), with the draft and final reports as in paragraph 13. WHO and UNDP have been exerting pressure on the consultants to complete the study by the end of February 1972, in order that any projects which may be revealed by the study could be considered by financing agencies, including IDA, as soon as possible. Although Mr. D. Atkin had promised WHO that the consultants would try to make the study available, the mission felt that the result may not meet WHO expectations because:

(i) it may not provide sufficient information; and

(ii) it is considered unlikely that a report, even in the form originally envisaged by the consultants, could be produced in three months.

This was confirmed in subsequent discussions in London.

25. WHO is hoping to receive sufficient information on 9-11 towns (district capitals) outside the Kathmandu Valley with populations around 20,000, on which early project investment decisions may be based. Although the study, even if provided by end-February 1972, may point to such possible projects, it is unlikely to identify the best solution for each town, much less to accurately analyse the correct priorities within the sector as envisaged by the Plan of Operations.

Institutional Reform and Sector Reorganization

26. As requested by GN, one objective of the UNDP/WHO study is to establish the most appropriate institution for developing and administering the water and sewerage services in the country. The consultants' interim report recommends the establishment of a national corporation for water supply and sewerage (similar to the already existing electricity and telecommunications industry corporations). This corporation would have responsibility for control, regulation and development of all water resources, water distribution, sewerage and sewage disposal throughout the country. Its constitution follows the pattern of similar authorities which have been established with varying degrees of success throughout the world. Clearly directed at IDA, the consultants' interim report states that "they have kept in mind the conditions which are likely to be required or imposed by international lending agencies..." We explained that this is too rigid an interpretation, because while IDA is generally in favour of autonomous public utilities in water supply, the degree of sophistication in their formation and development must always be related to the ability of the country and its resources.

27. In the context of the current situation and trends in Nepal the consultants' proposals are, in our opinion, unrealistic, or at least premature. As explained in paragraph 11, GN, although it may be prepared to consider a corporation for the Kathmandu Valley (related primarily to the three towns under study), has initiated a policy which would run

counter to the consultants' proposals. There seem to have been no serious discussions on this subject between WHO and the consultants on one hand, and GN on the other. Moreover, neither Mr. Caldwell nor the consultants appeared to have any knowledge of the developments in the Ministry of Home and Panchayat, and even Mr. Adhikary appeared reluctant to discuss them, except for the establishment of a corporation for the Kathmandu Valley.

28. The establishment of a corporation for either the valley or nation-wide would require an initial staff of professionals which would have to be drawn from the Ministry of Water and Power. There is a considerable shortage of water engineers, administrators and accountants and unless the build-up of such a corporation is geared to the pace of development and training in Nepal, it could fail before ever becoming reality and the government departments could be rendered even less effective than at present.

UNDP/WHO

29. Although a scheduled meeting with UNDP representatives had to be cancelled, we received indications of their views through WHO, both on finance of this project and development finance for Nepal in general. The UNDP budget for 1972/73 for Nepal is to be prepared during February/March 1972, and early indications are that the US$3 million ceiling will be considerably exceeded. It is suggested that the three fiscal years 1972/73 to 1974/75 may have projects for inclusion totalling US$15 million - US$6 million in excess of ceiling. We were told that UNDP was hoping, therefore, that IDA would be able to finance Phase II of the Greater Kathmandu water and sewerage study, so that UNDP funds could be allocated to new GN projects of higher priority. We argued that:

(i) it would not be logical for UNDP to abandon at an intermediate stage a study which has been initiated under its sponsorship;

(ii) it would cause considerable confusion among the various parties involved (Government, consultants, WHO) if another financing agency, operating under different procedures, would take over from UNDP;

(iii) it would be a reversal of the respective roles of UNDP and IDA, if under Phase I, UNDP would finance emergency works (thus reaching beyond its "pre-investment" functions), and if under Phase II, IDA would become a pre-investment financing agency.

Mr. Bierstein, with whom we discussed the matter further in Geneva and in Washington, agreed to our views.

30. The obvious solution would be for IDA to finance the immediate works program arising from Phase I, and if UNDP have allocated funds for this purpose, these could be partly or fully used to finance Phase II of the study. This would permit an early direct involvement of IDA in the development of the Nepal water supply sector, which may also be desirable on the grounds of IDA's overall lending targets for Nepal.

31. The WHO engineers, Messrs. Caldwell, and Adorno, appeared to lack co-ordination both between each other and with Dr. Kim, under whose guidance they operate. Our joint meetings with them may have helped to overcome this problem.

Timetable

32. Although still subject to the resolution of principal problems discussed above relating to local expertise for project execution, institutional reform and financing of the immediate works, the following program could be considered by IDA:

(a) Immediate Works Program

Between February and May 1972	Providing it can be timed with other water supply missions to India and assuming that IDA will provide financing, a short pre-appraisal mission should examine the status of preparation for these immediate works.
August 1972	Appraisal mission subject to draft consultants' report availability from June 1972.
Early 1973	Negotiations/approval of first IDA credit.

Master Plan

Early 1973	Pre-appraisal mission to consider with Master Plan reports on water supply and sewerage.
Mid 1974	Appraisal mission for first stage of Master Plan works, scheduled to start 1975.
End 1974	Negotiations/approval of second IDA credit.

Attachment - Annex 1.

MCMould/JKrombach:bkd/cmn
IDA

Cleared with and cc. Mr. W.J. Armstrong.

cc. Messrs. Chadenet, Baum, Ripman, Rovani, John King, Engelmann, Lee, Lithgow van der Tak, Weiner, Howell, Warford, Jennings, White, Saeed/Bomani, Lind (Inf. & Public Affairs), Abdi (Development Services), Clyde (Legal), Grosvenor (Controller's), Abd El Aty (South Asia) - (6), Central Files (2), Division Files, Chronological Files.

ANNEX 1

SCHEDULE OF PERSONS MET DURING MISSION TO NEPAL, AND IN NEW DELHI, GENEVA AND LONDON

Nepal - December 3 through 6, 1971

Government of Nepal - Ministry of Power and Water

Mr. K.D. Adhikary, Chief Engineer
Mr. H. Sharma, Co-Project Manager (Nepali counterpart of WHO)

World Health Organization (WHO)

Dr. L. Kim, Resident Representative
Mr. M.J. Caldwell, Project Manager
Mr. W. Adorno, Rural Water Supplies Engineer
Dr. Street, Medical Officer

Consultants, Messrs. Binnie and Partners

Mr. D.M. Atkin, Project Representative
Mr. A. Kell, Water Supply Engineer
Mr. R. Darling, Sanitary Engineer
Mr. N.J. Dawes, Sanitary Engineer

New Delhi - November 29, 1971

WHO

Mr. Z.J. Buzo, Chief Resident Engineer (pending retirement in January 1972)
Prof. J.J. McSweeney (projected replacement for Mr. Buzo)
Mr. Unakul, Regional Advisor.

Geneva - December 10, 1971

WHO

Dr. Dietrich
Mr. P. Bierstein
Messrs. Bachmann, Deneller, Haig, Kent, Lojoille, Pinto, Prescott, Robinson, Stevens (PIP Unit)

London - December 14, 1971

Consultants, Messrs. Binnie and Partners

Mr. R.V.C. Phillips, Partner
Mr. R. Powell, Acting Responsible Representative for the project

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OFFICE MEMORANDUM

TO: Mr. Charles Morse DATE: January 10, 1972

FROM: Juergen Krombach and Maurice Mould

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2. The status of the project was also discussed in our meetings with WHO in Delhi (November 29), Geneva (December 10), and Washington (December 22), as well as in Mr. Mould's meetings with the consultants in London (December 14). A list of persons met during and after the mission is shown in Annex I.

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3. The main objective of the current Phase I of the study is to prepare master plans for urban water supply and sewerage in the Kathmandu Valley (covering the towns of Kathmandu, Lalitpur and Bhaktapur). After completion of Phase I, scheduled for mid 1973, a further year's work on Phase II (preliminary engineering) will be necessary before the main works program (1975-80) would be ready for appraisal.

4. Included in Phase I is an immediate works program to provide relief water supplies for Bhaktapur and Lalitpur and to reduce leakage and wastage in Kathmandu. A tentative provision of $1.2 million is believed to be in UNDP's budget for this purpose, but subject to agreement with UNDP/WHO and GN these works (due to start early in 1973) could also be financed by IDA. The advantages would be that:

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22. As confirmed by sources familiar with the local conditions, the Ministry of Water and Power has no experience in water supply project execution. This may pose a problem for execution of the immediate works program.

Sector Study

23. The Plan of Operations definition of the scope of the sector study does not coincide with the consultants' proposals and so far WHO have still not clarified the matter sufficiently with the consultants. The consultants' proposal, as accepted by WHO, envisaged only a desk study of information of the whole of Nepal (to the extent available in Kathmandu), and limited reconnaissance visits to outlying areas. Sector information available on Nepal in Kathmandu is likely to be very sketchy and, based on our impressions from a brief aerial survey to the east of Kathmandu, to carry out a detailed sector study throughout Nepal would take considerably more time than the consultants have allowed.

1/ This was discovered from documents made briefly available to the mission but needs to be confirmed, because it is not in the Plan of Operations.

24. The consultants estimated to complete their initial data collection for the sector study in 15 months (May 1972), with the draft and final reports as in paragraph 13. WHO and UNDP have been exerting pressure on the consultants to complete the study by the end of February 1972, in order that any projects which may be revealed by the study could be considered by financing agencies, including IDA, as soon as possible. Although Mr. D. Atkin had promised WHO that the consultants would try to make the study available, the mission felt that the result may not meet WHO expectations because:

(i) it may not provide sufficient information; and

(ii) it is considered unlikely that a report, even in the form originally envisaged by the consultants, could be produced in three months.

This was confirmed in subsequent discussions in London.

25. WHO is hoping to receive sufficient information on 9-11 towns (district capitals) outside the Kathmandu Valley with populations around 20,000, on which early project investment decisions may be based. Although the study, even if provided by end-February 1972, may point to such possible projects, it is unlikely to identify the best solution for each town, much less to accurately analyse the correct priorities within the sector as envisaged by the Plan of Operations.

Institutional Reform and Sector Reorganization

26. As requested by GN, one objective of the UNDP/WHO study is to establish the most appropriate institution for developing and administering the water and sewerage services in the country. The consultants' interim report recommends the establishment of a national corporation for water supply and sewerage (similar to the already existing electricity and telecommunications industry corporations). This corporation would have responsibility for control, regulation and development of all water resources, water distribution, sewerage and sewage disposal throughout the country. Its constitution follows the pattern of similar authorities which have been established with varying degrees of success throughout the world. Clearly directed at IDA, the consultants' interim report states that "they have kept in mind the conditions which are likely to be required or imposed by international lending agencies..." We explained that this is too rigid an interpretation, because while IDA is generally in favour of autonomous public utilities in water supply, the degree of sophistication in their formation and development must always be related to the ability of the country and its resources.

27. In the context of the current situation and trends in Nepal the consultants' proposals are, in our opinion, unrealistic, or at least premature. As explained in paragraph 11, GN, although it may be prepared to consider a corporation for the Kathmandu Valley (related primarily to the three towns under study), has initiated a policy which would run

counter to the consultants' proposals. There seem to have been no serious discussions on this subject between WHO and the consultants on one hand, and GN on the other. Moreover, neither Mr. Caldwell nor the consultants appeared to have any knowledge of the developments in the Ministry of Home and Panchayat, and even Mr. Adhikary appeared reluctant to discuss them, except for the establishment of a corporation for the Kathmandu Valley.

28. The establishment of a corporation for either the valley or nation-wide would require an initial staff of professionals which would have to be drawn from the Ministry of Water and Power. There is a considerable shortage of water engineers, administrators and accountants and unless the build-up of such a corporation is geared to the pace of development and training in Nepal, it could fail before ever becoming reality and the government departments could be rendered even less effective than at present.

UNDP/WHO

29. Although a scheduled meeting with UNDP representatives had to be cancelled, we received indications of their views through WHO, both on finance of this project and development finance for Nepal in general. The UNDP budget for 1972/73 for Nepal is to be prepared during February/March 1972, and early indications are that the US$3 million ceiling will be considerably exceeded. It is suggested that the three fiscal years 1972/73 to 1974/75 may have projects for inclusion totalling US$15 million - US$6 million in excess of ceiling. We were told that UNDP was hoping, therefore, that IDA would be able to finance Phase II of the Greater Kathmandu water and sewerage study, so that UNDP funds could be allocated to new GN projects of higher priority. We argued that:

(i) it would not be logical for UNDP to abandon at an intermediate stage a study which has been initiated under its sponsorship;

(ii) it would cause considerable confusion among the various parties involved (Government, consultants, WHO) if another financing agency, operating under different procedures, would take over from UNDP;

(iii) it would be a reversal of the respective roles of UNDP and IDA, if under Phase I, UNDP would finance emergency works (thus reaching beyond its "pre-investment" functions), and if under Phase II, IDA would become a pre-investment financing agency.

Mr. Bierstein, with whom we discussed the matter further in Geneva and in Washington, agreed to our views.

30. The obvious solution would be for IDA to finance the immediate works program arising from Phase I, and if UNDP have allocated funds for this purpose, these could be partly or fully used to finance Phase II of the study. This would permit an early direct involvement of IDA in the development of the Nepal water supply sector, which may also be desirable on the grounds of IDA's overall lending targets for Nepal.

31. The WHO engineers, Messrs. Caldwell, and Adorno, appeared to lack co-ordination both between each other and with Dr. Kim, under whose guidance they operate. Our joint meetings with them may have helped to overcome this problem.

Timetable

32. Although still subject to the resolution of principal problems discussed above relating to local expertise for project execution, institutional reform and financing of the immediate works, the following program could be considered by IDA:

(a) Immediate Works Program

Between February and May 1972	Providing it can be timed with other water supply missions to India and assuming that IDA will provide financing, a short pre-appraisal mission should examine the status of preparation for these immediate works.
August 1972	Appraisal mission subject to draft consultants' report availability from June 1972.
Early 1973	Negotiations/approval of first IDA credit.

Master Plan

Early 1973	Pre-appraisal mission to consider with Master Plan reports on water supply and sewerage.
Mid 1974	Appraisal mission for first stage of Master Plan works, scheduled to start 1975.
End 1974	Negotiations/approval of second IDA credit.

Attachment - Annex 1.

MCMould/JKrombach:bkd/cmn
IDA

Cleared with and cc. Mr. W.J. Armstrong.

cc. Messrs. Chadenet, Baum, Ripman, Rovani, John King, Engelmann, Lee, Lithgow van der Tak, Weiner, Howell, Warford, Jennings, White, Saeed/Bomani, Lind (Inf. & Public Affairs), Abdi (Development Services), Clyde (Legal), Grosvenor (Controller's), Abd El Aty (South Asia) - (6), Central Files (2), Division Files, Chronological Files.

ANNEX 1

SCHEDULE OF PERSONS MET DURING MISSION TO NEPAL,

AND IN NEW DELHI, GENEVA AND LONDON

Nepal - December 3 through 6, 1971

Government of Nepal - Ministry of Power and Water

Mr. K.D. Adhikary, Chief Engineer
Mr. H. Sharma, Co-Project Manager (Nepali counterpart of WHO)

World Health Organization (WHO)

Dr. L. Kim, Resident Representative
Mr. M.J. Caldwell, Project Manager
Mr. W. Adorno, Rural Water Supplies Engineer
Dr. Street, Medical Officer

Consultants, Messrs. Binnie and Partners

Mr. D.M. Atkin, Project Representative
Mr. A. Kell, Water Supply Engineer
Mr. R. Darling, Sanitary Engineer
Mr. N.J. Dawes, Sanitary Engineer

New Delhi - November 29, 1971

WHO

Mr. Z.J. Buzo, Chief Resident Engineer (pending retirement in January 1972)
Prof. J.J. McSweeney (projected replacement for Mr. Buzo)
Mr. Unakul, Regional Advisor.

Geneva - December 10, 1971

WHO

Dr. Dietrich
Mr. P. Bierstein
Messrs. Bachmann, Deneller, Haig, Kent, Lojoille, Pinto, Prescott, Robinson, Stevens (PIP Unit)

London - December 14, 1971

Consultants, Messrs. Binnie and Partners

Mr. R.V.C. Phillips, Partner
Mr. R. Powell, Acting Responsible Representative for the project