

**Improving Nutrition through Modernizing
Agriculture in Sri Lanka (INMAS)**

TF0A5987

Module No. 1

Linking Agriculture, Rural Development and Nutrition

(Draft to be adopted by CSIAP)

2019

This material has been funded thanks to the contributions of (1) UK Aid from the UK government, and (2) the European Commission (EC) through the South Asia Food and Nutrition Security Initiative (SAFANSI), which is administered by the World Bank. The views expressed do not necessarily reflect the EC or UK government’s official policies or the policies of the World Bank and its Board of Executive Directors.



Table of Contents

Module No. 1.....	1
Introduction.....	5
1. Analyzing positive and negative nutrition implications of agriculture related interventions and rural development interventions.....	11
2. Malnutrition	14
3. Assessment of nutrition	15
4. Food supplementation.....	16
5. Micronutrient deficiencies.....	18
6. Healthy cooking methods	19
7. Nutritional needs at different stages of life.....	19
8. Home gardening.....	20
9. Dietary diversity	23
10. Food hygiene.....	29
11. Non communicable diseases	30
12. Misconceptions on nutrition.....	38
13. Family harmony	39
14. Control the use of alcohol, tobacco and other addictive substances.....	40
15. Family income management.....	41
APPENDIX 1	48
APPENDIX 2	49
References	59
Module No: 2.....	60
Introduction.....	61
1. Needs assessment	63

2. Planning, implementing, monitoring and evaluation of a health promotion.....	66
3. Developing communication skills	75
4. Basic principles of health education	81
5. Behavior Change Communication	86
6. Building a supportive environment	88
7. Media and public policies	91
Module No 3:.....	92
Introduction	93
Competencies	100
1. Ministry of Health	101
2. Ministry of Economic Development	105
3. Central Government	107
4. Department of Agriculture.....	110
5. Ministry of Education	112
6. Exercise to understand intersectoral collaboration.....	113
7. Group work	116
8. Developing Communication skills.....	117
9. Team building sessions	118
References	118

Introduction

What is Nutrition....?

Nutrition is a process of

1. Ingestion
2. Digestion
3. Absorption
4. Utilization of nutrients.

- Why is nutrition important?

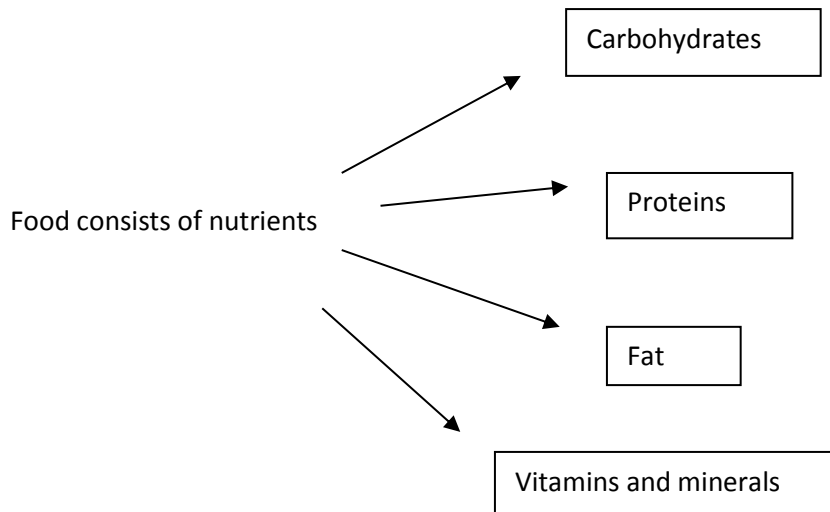
- Good nutrition is an important part of leading a healthy lifestyle
- Proper nutrition increases immunity and fight against diseases.
- Several chronic diseases can be prevented by proper nutrition.
- Quality of life and life expectancy can be improved by proper nutrition
- Proper nutrition will increase working capacity and generate better income
- Unhealthy eating will contribute to illnesses and premature death.
- Malnutrition in early childhood impairs all aspects of development including cognitive functions.
- Malnutrition in early childhood leads to short stature.
- Malnutrition in pregnancy and early childhood can lead to chronic diseases in adult life.

A few facts– Nutrition recommendations and consequences of an unhealthy diet

- Breast feeding should be initiated within one hour of birth.
- Exclusive breast feeding should be maintained for the first 6 months of life
- Breast feeding should be continued till 2 years and beyond.
- Complementary feeding –
 - start complementary food on completion of 6 months with well mashed rice
 - Introduce foods of animal origin by about one week of introducing complementary food
 - Ensure variety in every meal
 - increase the frequency of meals, amount of food at each meal and consistency as the child grows older
- Include locally available fruits and vegetables daily
- Add oil, thick coconut milk to increase energy density of food
- Pregnant and lactating women need more nutritious food
- Children and adolescents should take an adequate and nutritious diet.
- Females need more iron in their food.
- Physical exercises are important to stay healthy.
- Limiting salt and salt containing food are important for prevention of hypertension and control hypertension.
- Fish provide healthy oils, iron and proteins
- Animal proteins have a higher biological value than plant proteins.
- The elderly should eat foods with high nutritional value.
- Five fruit and vegetables per day will reduce several chronic diseases such as cancers, IHD, DM.
- Having central obesity will lead to heart diseases, DM, stroke. (The simplest and most often used measure of **abdominal obesity** is waist size. According to Asian guidelines, central obesity is defined as waist size of 80 cm or higher in women, and a waist size of 90cm or higher in men).
- If you are inactive, eating large starchy meals may lead to diabetes
- If you are overweight, weight reduction is very important for control diabetes, hypertension, and IHD.
- Obese and overweight children very likely to be obese adults and have a higher risk of getting NCDs.
- The epidemic of the diabetes, obesity, hypertension, and heart diseases are associated with recent changes in the lifestyle.
- Coconut oil does not contain cholesterol.
- All type of starch (red rice, kurakkan, wheat) will convert to glucose in our body. However most important factor is the portion size of starchy food.

(Source- Food based dietary guidelines for Sri Lankans- Nutrition Division- Ministry of Health)

- What is our food made of?



A balanced diet should contain all of these nutrients.

- Components of a balanced diet

Energy giving –Carbohydrates, Fats

Body building – Proteins

Body protective- Vitamins, Minerals

Do you know which foods contain which nutrients?

1. Carbohydrates- rice, bread, pittu, hoppers, rotti, manioc, sweet potatoes, yam, bread fruit, Jack
2. Protein- fish, meat, dried fish, egg (white), milk, dairy products. TVP, pulses (beans, green gram, cowpea or lentils),
3. Fats- coconut oil, coconut milk, butter, margarine, vegetable oil
4. Vit C- fruits (nelli, guava, orange, lemon) dark green leafy vegetables
5. Vit A – liver, egg yolk, milk, milk products, meat, fish, spinach (nivithi), kathurumurunga, thampala, carrot and beet leaves, carrot, tomato, yellow pumpkin, mango, papaya,
6. Iron- red meat, liver, fish, (balaya, kelawalla, sawelaya, dried fish) chicken, egg yolk, gotukola, thampala, sarana, mukunuwanna, nelumala, mung, kadala, dhal (meat, liver, fish

contain well absorbed heme type of iron - and egg yolk, green leaves and pulses contain non heme iron which is not that well absorbed)

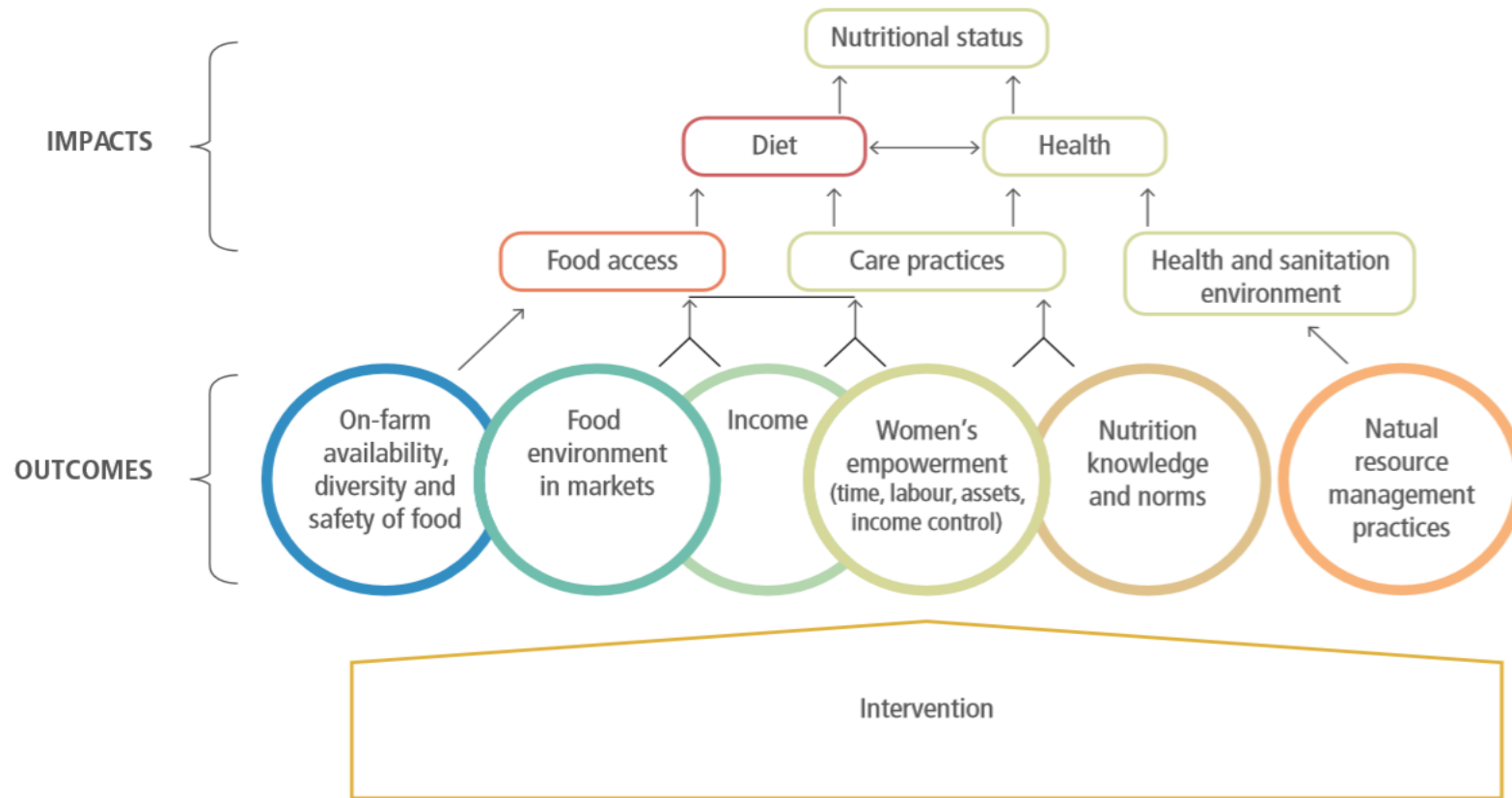
7. Folate - thampala, karapincha (curry leaves), spinach, plantain, pineapple, lime, beans, soya bean, mung (green grams).
8. Fiber- brown rice, kurakkan, corn, green leaves, fruits, vegetables, unrefined cereals,
9. Sugar- sweets, hakuru (jaggery) treacle, soft drinks, sugary biscuits, sweet fruits (eg. Banana), ice cream, chocolate
10. Salt – table salt, dry fish, processed food items
11. Cholesterol- egg yolk, red meat, milk, butter, cheese, full cream milk and milk products.

❖ Competencies

Participant should be able to....

1. Recognize and critically evaluate the nutrition related implications of agriculture related interventions and rural development interventions in promoting the nutrition of the individual and the community
2. Analyze positive and negative nutrition implications of agriculture and rural development interventions
3. Analyze issues related to malnutrition (under nutrition and over nutrition)
4. Identify issues related to deficiencies of micronutrients
5. Identify each stakeholder's role in addressing nutritional needs of special groups
6. Understand issues related to food availability and affordability
7. Analyze other health issues due to inappropriate nutrition
8. Identify common misconceptions regarding nutrition.
9. Create conducive home environment in order to improve nutrition of the family
10. Mitigate the negative nutritional impact of alcohol, tobacco and other addictive substances in the individual and the family

Agriculture to Nutrition



Source:

*** Discuss agricultural interventions to deliver each of the above outcomes. Refer the chart below as you discuss.**

Matrix of investment types and entry points for nutrition

FOOD ACCESS, DIETS and health

Investment project types	Entry points	On-farm food availability & diversity	Food environment in markets	Income	Women's empowerment	Nutrition knowledge & norms	Health & sanitation environment
Agriculture development (extension research, area development inputs)	Agriculture intensification	Meet dietary gaps through own production	Increase availability and affordability of nutritious foods and diets in markets	Increase equitable access to resources and income; reduce poverty	Increase women's access to resources, know-how and income; reduce labour and time burden	Increase awareness/ Behaviour Change Communication (BCC) of nutritious foods and diets	Improve food safety, e.g. reduce mycotoxins & contamination (e.g. from agrochemicals)
	Agriculture diversification						
	Livestock and fisheries						
	Extension -Farmer field schools						
Value chain development (including agro-processing)	Storage & transportation	Increase on-farm and off-seasonal availability of targeted nutritious crops	Increase variety in local markets, reduce prices & postharvest losses & improve convenience of nutritious foods	Increase income from value addition and technical expertise; reduce poverty	Increase women's access to resources, know-how and income; reduce labour and time burden	Increase awareness/ BCC of nutritious foods and diets and retaining nutrient content	Improve food safety, and food standards
	Processing						
	Trade & market linkages						
	Marketing & promotion -Nutrition focused marketing						
Community-Driven Development (CDD)/Social development	Rural institutional development - Women's self-help groups - Capacity development	Increase crop productivity and diversity food subsidies & distribution; households gardens	Strengthen storage, processing and retail of nutritious foods in markets	Increase equitable access to resources and income & enable savings and strategic investments; reduce poverty	Enable equitable decision-making; increase women's access to resources, know-how and income; reduce labour and time burden	Increase nutrition knowledge/BCC including awareness of healthy diets	Improve hygiene and sanitation practices and infrastructure
	Social activities - Community facilities - Social development/WASH						
	Financial inclusion/livelihood activities - Income generating activities						
Water, irrigation and drainage	Irrigation and drainage	Increase crop productivity and diversity and off-season production	Increase off-season availability & affordability of nutritious foods in markets	Increase crop production and income; reduce poverty	Reduce time burden from obtaining water		Reduce risk of waterborne and vector-borne disease; increase access to clean water
	Water for domestic use - Drinking water - Hygiene and sanitation						
	Water management						
Natural resource management/ Forestry/ Environmental	Biodiversity promotion	Sustain biodiversity for diet diversity; traditional indigenous and underutilized food species; Non-Timber Forest Products (NTFPs)	Increase availability of nutritious and underutilized foods in markets	Decrease risk of disasters/ catastrophic income loss (resilience)	Increase access to resources and income; reduce labour time and burden		Reduce environmental risks for food items (contamination)
	Climate smart & nutrition sensitivity win-win						
	Soil rehabilitation						
Key	Green = important entry points to leverage and measure		Yellow = potential contribution requiring attention; measure if addressed		Blank = typically less of a direct contribution, although linkages may be possible; can be measured to ensure no harm		

Source: (To be modified with the help of sector experts to suit the SL context)

1. Analyzing positive and negative nutrition implications of agriculture related interventions and rural development interventions.

(Group discussion – Explore positive and negative nutritional implications of agriculture related interventions and rural development interventions in your area with the help of your instructor)

1.1 Methods of utilizing excess food production effectively.

Food preservation

What food items are being preserved in your area?

(Demonstration)

1.2 Health and nutrition friendly self-employment options.

What are the agriculture related projects in your area that received loans or any other means of support to start self-employments in last year?

.....

.....

.....

.....

Critically analyze their impact on nutrition.

(Ex. A training given to dairy farmers to utilize excess cow's milk to make Curd/Yogurt encouraging consumption of milk products in the village which in return allows families to make an extra income.)



Small group discussion.



1.3 Make a list of agriculture related projects conducted in your village within last year.

.....

.....

.....

.....

.....

.....

Which projects had a positive impact on nutrition?

Which projects had a negative impact on nutrition?

Agricultural programmes and investments can strengthen impact on nutrition if they:

- 1 Incorporate explicit nutrition objectives and indicators into their design**, and track and mitigate potential harms, while seeking synergies with economic, social and environmental objectives.
- 2 Assess the context at the local level, to design appropriate activities to address the types and causes of malnutrition**, including chronic or acute undernutrition, vitamin and mineral deficiencies, and obesity and chronic disease. Context assessment can include potential food resources, agro-ecology, seasonality of production and income, access to productive resources such as land, market opportunities and infrastructure, gender dynamics and roles, opportunities for collaboration with other sectors or programmes, and local priorities.
- 3 Target the vulnerable and improve equity** through participation, access to resources, and decent employment. Vulnerable groups include smallholders, women, youth, the landless, urban dwellers, the unemployed.
- 4 Collaborate and coordinate with other sectors** (health, environment, social protection, labour, water and sanitation, education, energy) and programmes, through joint strategies with common goals, to address concurrently the multiple underlying causes of malnutrition.
- 5 Maintain or improve the natural resource base** (water, soil, air, climate, biodiversity), critical to the livelihoods and resilience of vulnerable farmers and to sustainable food and nutrition security for all. Manage water resources in particular to reduce vector-borne illness and to ensure sustainable, safe household water sources.
- 6 Empower women** by ensuring access to productive resources, income opportunities, extension services and information, credit, labour and time-saving technologies (including energy and water services), and supporting their voice in household and farming decisions. Equitable opportunities to earn and learn should be compatible with safe pregnancy and young child feeding.
- 7 Facilitate production diversification, and increase production of nutrient-dense crops and small-scale livestock** (for example, horticultural products, legumes, livestock and fish at a small scale, underutilized crops, and biofortified crops). Diversified production systems are important to vulnerable producers to enable resilience to climate and price shocks, more diverse food consumption, reduction of seasonal food and income fluctuations, and greater and more gender-equitable income generation.
- 8 Improve processing, storage and preservation** to retain nutritional value, shelf-life, and food safety, to reduce seasonality of food insecurity and post-harvest losses, and to make healthy foods convenient to prepare.
- 9 Expand markets and market access for vulnerable groups, particularly for marketing nutritious foods** or products vulnerable groups have a comparative advantage in producing. This can include innovative promotion (such as marketing based on nutrient content), value addition, access to price information, and farmer associations.
- 10 Incorporate nutrition promotion and education** around food and sustainable food systems that builds on existing local knowledge, attitudes and practices. Nutrition knowledge can enhance the impact of production and income in rural households, especially important for women and young children, and can increase demand for nutritious foods in the general population.

Source:

Now, discuss among yourselves how to encourage agri projects that have a positive impact on nutrition and how to modify agri projects that have a negative impact on nutrition.



(Small group discussion)

2. Malnutrition

Interpreting growth charts. (for case studies refer the appendix 2)

Common causes of malnutrition



Small group discussion on common causes of malnutrition in your area.



List five causes of malnutrition that you discussed and mention your suggestions to overcome those problems.

1.
2.
3.
4.
5.

3. Assessment of nutrition

By the end of this session you will be able to calculate your own BMI and the category you belong to for your knowledge.

- Anthropometric measurements –

How to measure height, weight and calculate BMI

(You will be guided on the technique of taking anthropometric measurements in a demonstration)



Measuring weight



Measuring height

When measuring height;

Look straight ahead with straight shoulders and keep arms at sides.

Your shoulders (scapulae), back of the head, buttocks and heels should touch the measuring board.

Keep your legs straight, heels and knees together, and stand on flat feet.

Always need two persons to measure the heights. One is a helper who looks after the positioning of waist downwards. Measurer has to adjust the head and take the measurement.

From the measurements of height and weight we can calculate Body Mass Index (BMI).

$$\text{BMI}(\text{Kg m}^{-2}) = \frac{\text{Weight (Kg)}}{\text{Height x Height (m}^2\text{)}}$$

According to BMI values level of nutrition can be classified as (ESSL, 2014) :-

BMI	Interpretation
< 18.5	underweight
18.5- 22.9	normal
>23	Overweight
>25	obesity

4. Food supplementation

What is a food supplement?

Food supplements are concentrated sources of nutrients or other substances with a nutritional or physiological effect and their purpose is to supplement the normal diet.

Thriposha

(Triposha is an example of a supplementary food. A supplementary food is given to provide extra energy, nutrients required by the under nourished and certain physiological state like pregnancy and lactation. Additional information on supplementary food items will be provided by your instructor.)



What are the other food supplements you know of?

Are Marmite, Sustegen useful?



(Small group discussion)

.....
.....
.....
.....

5. Micronutrient deficiencies

Micronutrients

- What is a Micronutrient

A chemical element/ substance required **in trace amounts** for the normal growth, metabolism and development of human beings.

Eg. Iron, zinc, vit.A

5.1 What are common micronutrient deficiencies in Sri Lanka? Ex. Iron deficiency, Vitamin A deficiency

Food rich in micronutrients.

- ❖ Iron -
- ❖ Zinc -.....
- ❖ Calcium -.....
- ❖ Vit A -
- ❖ Vit B complex -
- ❖ Vit C -.....

Ask PHM which micronutrient deficiencies are more prevalent in your area.

Discuss among yourselves with the help of Agriculture Instructor, which food items can be grown best in your area.

How can you help to improve availability and accessibility of these food items?



(Small group discussion)

6. Healthy cooking methods

How to preserve nutritional value in cooking? (Demonstration)

Now that you know how to preserve nutritional value in cooking, you can get other team members' support and do sessions like this at the community level.

7. Nutritional needs at different stages of life

With the help of PHM discuss the importance and possible components of a balance diet for:

- Pregnant mothers
- Breast feeding mothers
- Complementary feeding

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

With the help of Agriculture Instructor discuss which food items can be grown in your area cost effectively.

Now, discuss among yourselves how to increase the availability and accessibility of these food items.



(Small group discussion)

- **Nutritional needs of the elderly.**

Among the elderly population in Sri Lanka....

- Consumption of foods of animal origin is poor
- Carbohydrates are the main energy contributor
- Dietary diversity is not up to optimal level

(Rathnayake et al, 2012)

- ❖ What are the other nutritional issues that the elderly have?

.....

.....

- ❖ How can their nutritional status be improved?



(small group discussion)

8. Home gardening

(Please refer the handbook on Home Gardening)



Ask your Agricultural Instructor, "What are the problems in your area towards promoting and sustaining home gardens?"

Ex. Lack of water.

.....

.....

.....

.....

.....

Now, discuss among yourselves as how to overcome these problems.

Ask from the Agricultural Instructor, the problems you may have come across when developing home gardens. Ex. Which plants are more suitable for your area?

How to promote school gardens?

.....

.....

.....

.....

Recommended crops for Ampara and Monaragala districts.

1. Carbon calorie crops.

Maize
Sorghum
Millets

2. Special root crops.

Sweet potato
Leeks (nira leeks)
Garlic
Onions
Artichoke
Kiri ala
Other native yams (demas ala, thunmas ala, raja ala, dandila, hingurala, etc.)

3. Vegetables

Peppers, Bitter gourd, Tomato, Beans, Long beans, Wing beans, Okra, Snake gourd, Pumpkin, Cucumber, Brinjal, Raddish, Cabbage, Luffa, Melon, etc.

4. Fruits.

Mango, Papaw, Sweet melon, Banana, Guava, Citrus, Dragon fruit, Woodapple and other native fruits.

It is recommended to use budded plants, because they take less space and give more fruits within a short period of time.

9. Dietary diversity

(source-Food Based Dietary Guidelines for Sri Lankans published by Ministry of Health)

Meals that include no servings or very few servings of different food groups such as fruits and vegetables, dairy products, fish and meat and pulses, lack both balance and variety. It is evident that a substantial proportion of the Sri Lankan population does not consume a varied and balanced diet, which is suggestive of a close association between the nutrition-related NCD in the country and these unhealthy eating habits. (Jayawardanana et al, 2012)

There are six food groups that provide you energy and nutrients to keep you healthy. Each food group gives you different nutrients needed by your body. You need to eat a **variety** of food every day, in **recommended quantities** to form a **healthy diet**.

The food groups are:

1. Grains (cereals) and tubers (yams)

Rice, wheat, *kurakkan*, maize (corn), rice & wheat flour preparations (bread, string hoppers etc.)

Tubers (yams)- manioc, potato and sweet potato, *innala*, *kiriala*

Starchy fruits- jak, breadfruit

- Provides energy for your daily activities

2. Fruits

Plantain, mango, papaya, pineapple, oranges, guava, avocado etc.

- protects you from diseases

3. Vegetables

Leafy vegetables - *kankun*, spinach, *gotukola*, *mukunuwenna*, *sarana*, *katuru-murunga*, *drumstick*, *murungaleaves* etc.

Root and fruit vegetables - gourds, brinjals, ash plantains, ladies fingers, tomato, carrot, beet etc.

- protects you from diseases

4.Fish, pulses, meat and eggs

Fish - fresh water fish & sea fish, sprats, dried fish, shell fish(prawns, cuttle fish)

Pulses - Chick pea (*kadala*), green gram, cowpea, soy bean, *ulundu*, lentil (dhal), other beans

Meats - chicken, beef, pork, mutton, Offal- liver

Eggs - hen's, duck, quail (*vatu*)

- helps in growth and maintenance of your body

5.Milk and/or milk products

Milk, curd, yoghurt, cheese

- Helps in growth and maintenance of your bones and teeth

6.Nuts and oil seeds

coconut, pea nuts, kottang, cashew nuts,pumpkin seeds, coconut milk, coconut oil,gingelly and palm oils,other vegetable oils,butter, margarine, ghee

- Provides energy and helps in bodily functions
- ❖ The Golden rule: Be sure to eat some **food from each of these groups daily**. It is important to include some item (s) from each group rather than a large quantity of one or two groups. This will ensure variety in your diet and thereby give you the nutrients required by your body every day.

How much of each food group should be consumed?

The number of servings needed daily from each of the six food groups depends on the age, sex, body size, level of activity, and the stage of the lifecycle. Illnesses impose additional considerations.

Eat more of some food (grains, fruits and vegetables) and less of others (fats and oil).

What are serving sizes?

It helps you understand how much food is recommended every day from each of the six food groups. It is assessed using household measures.

Portion size estimations

Estimation of vegetable portions

- Three heaped tablespoons or ½ cup or 80 grams of cooked vegetable is defined as one vegetable serving.
- If there is a vegetable curry with half amount gravy six tablespoons are defined as one vegetable portion.
- one medium size coconut spoon is considered as three tablespoons or one serving

Estimation of fruit portions

- Fruit juice- Even if more than one glass per day was reported, it would only count as one portion of fruit per day
- Fruit juices (fresh) count as up to a maximum of two portions per day

One portion of fruit, (average weight is 80 grams)

- Small sized fruits– Ten fruits considered as one portion, example: grapes, veralu, nelli, lovi, rose apple (jamboo)
- Small–medium size fruits – number may vary (2-6): ambarella, banana (small), naminan, rambutan, passion fruit, mangosteen, jack fruit ripen (waraka)
- Medium-sized - one medium fruit, such as one apple, banana, pear, orange, guava, woodapple, belli, mandarin
- Large-sized - one slice of papaya, one slice of melon (two-inch slice), one large slice of pineapple, two slices of mango (two-inch slices), pomegranate (1/2 medium), durian (2 pieces),
- Dried fruit: One tablespoon of raisins, currants, sultanas, one tablespoon of mixed fruit, two figs, three prunes, one handful of banana chips.
- Juice: One medium glass (150ml) of fruit juice.
- A-half cup of chopped fruits
- Pineapple portion is defined as one large slice or two round shapes slices.
- Two bananas were defined as one portion.

Estimation of pulse portions

- Cooked pulses ½ tea cup or three full tablespoons or 1 coconut spoon is defined as one pulse portion.

Estimation of dairy products

- One glass of milk (250 ml) of fresh milk is defined as one portion.
- As milk powder is used commonly in Sri Lanka as main dairy food source three tablespoonfuls is defined as one serving equivalent to fresh milk.
- Two small cups of yoghurt (80grms each) and one tea cup or eight tablespoons of curd is considered as one serving.
- Two slice or two wedges of cheese or 1/8 from 250 g of cheddar cheese are defined as one portion.

Estimation of cereal or equivalent portions

- One portion of cereal or equivalent is defined as the amount of starchy food in which 15 g of carbohydrate is contained.
- 1/3 tea cup of rice, milk rice and noodles, one slice of bread, ¼ of 10cm diameter and 0.5 cm thickness coconut roti, 2 string hoppers and ½ hopper is considered as one serving of each food.
- 1/3 tea cup of boiled bread fruit, jak and sweet potato, ½ tea cup of ash plantain and yam is defined as one portion.
- Serving of cooked starch vegetables is decided by comparing the amount of curry which contains 15 g of carbohydrate.
- Then portion size is calculated as how many household measures with the above weight of curry. This is used for both cooked and raw foods. As an example, one portion of manioc curry is 90 g and it holds in three tablespoons. Ash plantain curry 90 g is defined as one serving and six tablespoons of it is taken as one portion.
- Biscuits, cake, short eats (roll, cutlet), vegetable roti and papadam are also included in starch portions.
- One piece of 4 cm slice cake and one short eat is calculated for one portion cereal or equivalent.

Estimation of meat portions

- The serving size was defined considering 7 grams of protein in the food portion.
- One egg, 30 grams weight of meat, fish, and 30 g weight of prawns and meat balls is defined as one meat portion.
- Since dry fish contain more protein, 15 g is defined as one portion. But one portion of dry fish curry is considered as 30 g since it contains gravy.
- Commonly sprats are served using tablespoons. As one tablespoon holds 7-8 sprats weight of one tablespoon is considered as 7.5-8 g. Thus 2 tablespoons of sprats are defined as one portion.

- In Sri Lanka 1 kg of chicken is cut into 13-15 pieces and one piece of chicken is considered as two portions.
- Since non- vegetarian fried rice contains more than 2.6g protein than normal cooked rice, it is considered as 1/3 of meat portion included in fried rice.

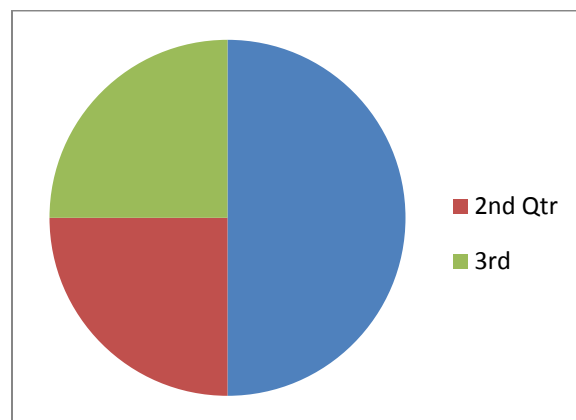
Estimation of sugar portion sizes

- Five grams of sugar is defined as a portion.
- One portion of honey, treacle and jaggery was calculated estimating the weight or volume which contains 5grms of sugar.

Food portion sizes

(Refer- APPENDIX 1Supplementary Materials, Part 1: Portion size estimations)

My plate



- Half the plate should be filled with rice - (approx. 2 cups)
- Quarter of the plate should be filled with protein. It should include pulses i.e., dhal and fish. Ex. Sprats (one serving of fish/eggs/meat and 2 tablespoons of pulses)
- The balance quarter should contain vegetables and fruits (3 servings of vegetables and one serving of fruit)



Prepare menu of healthy diet including commonly available food items in

your area.
(3 weekdays and one weekend day)

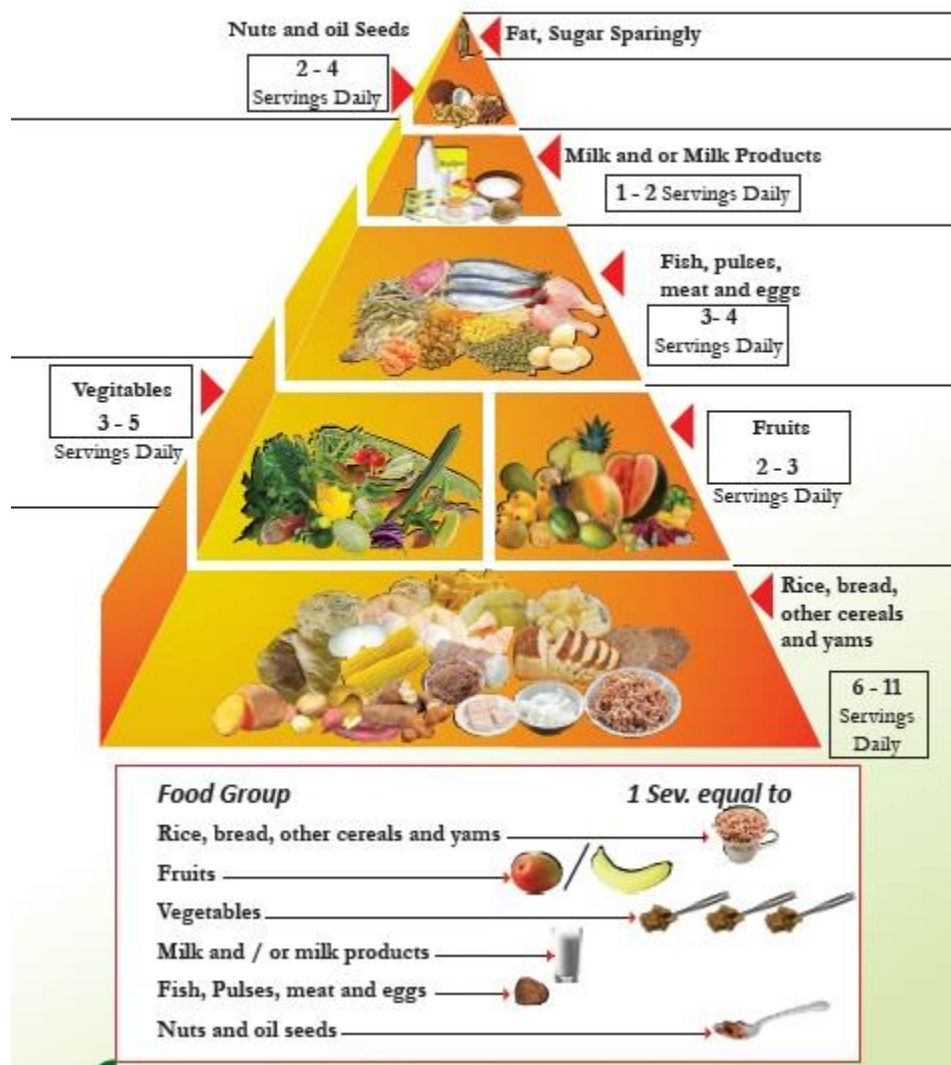
Breakfast -

Lunch -

Dinner -

Food pyramid

(Source- Nutrition division- Ministry of health)



Healthy snacks

Some healthy snacks

Any fruit/ fresh fruit juice

Yoghurt/ curd

A hand full of cashew nuts, peanuts or any other healthy nut

Helapa, munguli

(Source- food based dietary guidelines for Sri Lankans- a publication by Nutrition Division – Ministry of Health)

❖ What are self- employment options that can promote healthy snacks?



(Small group discussions)

.....

.....

.....

.....

10. Food hygiene

Hand washing is important for food hygiene. The five key principles of food hygiene, according to WHO are:

1. Prevent contaminating food with pathogens spreading from people, pets, and pests
2. Separate raw and cooked foods to prevent contaminating the cooked foods.
3. Cook foods for the appropriate length of time and at the appropriate temperature to kill pathogens.
4. Store food at the proper temperature.
5. Do use safe water and cooked materials.



What are the ways that you can improve food hygiene?

1.
2.
3.
4.

11. Non communicable diseases

Malnutrition does not only mean undernutrition, it also includes overnutrition which can result in obesity, diabetes, hypertension, heart diseases, cancers and other and non-communicable diseases.

What are the non-communicable diseases due to lack of proper nutrition?

1.
2.
3.
4.

Obesity

In Sri Lanka, one in four adults are overweight and almost one in ten adults are obese. 26.2 % have central obesity.

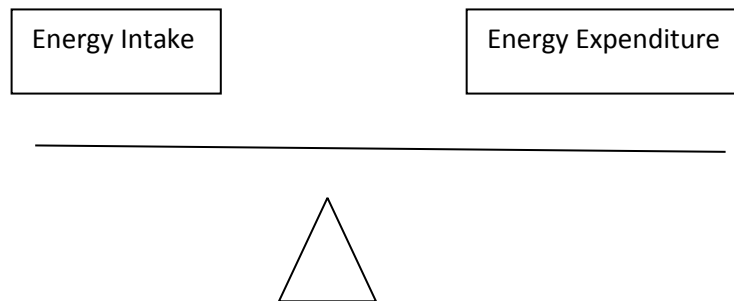
(The simplest and most often used measure of **abdominal obesity** is waist size. According to Asian guidelines, central obesity in women is recognized as 80cm waist size or higher and in men 90cm waist size or higher)

In Sri Lanka, obesity is associated with female sex, urban living, higher education, higher income and being in the middle age.

(Katulanda et al, 2010)

Diagram of an energy balance.

Fig. 2 shows that when we take in more energy than we spend, it accumulates in our body and causes obesity. So, it is important to keep energy intake and energy expenditure at a balance.



So, you need to exercise in order to increase your energy expenditure!!



What are the causes of obesity? (individual and environmental)

1.
2.
3.
4.

Complications of obesity.

- Stroke
- Cataracts
- Coronary heart disease
- Diabetes
- Dyslipidemia
- Hypertension
- Cancer
- Osteoarthritis
- Gynecologic abnormalities- abnormal menses, infertility, polycystic ovarian syndrome
- Gall bladder diseases
- Non-alcoholic fatty liver disease



What are the health issues related to obesity?

1.
2.
3.
4.

Guidelines for a weight reduction programme in overweight and obesity

1. A safe weight reduction programme should be planned on an individual basis considering the lifestyle and medical history.
2. A sensible meal plan should meet the daily dietary requirements from variety of food representing all food groups.
3. Limit consumption of excess staple or starchy foods.
4. Food rich in fats and simple sugars should be limited.
5. Consumption of plenty of fruits (less sweet) and vegetables (non-starchy) will help to maintain optimum body weight
6. An appropriate exercise program should be followed
7. Aim for a realistic goal for weight loss (approximately 0.5 – 1.0 Kg per week) and weight loss target should be reduction of 5-10% of current body weight within 3 months period.
8. It is important to maintain proper weight.

(Source- food based dietary guidelines for Sri Lankans- a publication by Nutrition Division – Ministry of Health and international obesity guidelines)

Exercises for daily life

➤ What are "exercises"?

Exercise is a type of physical activity consisting of planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness.

➤ Why should we be active?

- Physical inactivity is a leading risk factor for global mortality.

- Sri Lankans have a high prevalence of abdominal obesity. Age (35-49 years) and physical inactivity are significant determined factors for increased abdominal obesity and non-communicable diseases.

The elderly population is increasing. Musculoskeletal problems causing loss of balance and coordination and noncommunicable diseases reduce quality of life in old age. Regular physical exercises help to reduce the risk of falls in the elderly and is a therapeutic measure in chronic diseases.

Is your village "active"?

To promote exercises in your village, first you have to assess their level of physical activity. Target all age groups.

1. Children
2. Adults
3. Elderly

Are they active in:

1. Transportation (cycling, brisk walking at least 30 mins per day.)
2. Workplace (lifting weight, heavy work, walking etc.)
3. Leisure time (play, games, sports, walk or exercise as a leisure time activity)

If "Yes" - ask them to continue being active.

If "No" – start being active now!

What are the minimum requirements NOT to be called that you are sedentary?

- Children- Play for at least 60 mins/ Per day
Spend less than one hour watching TV/per day
- Healthy adults (18- 64 years)- Global recommendations on physical activity for health (WHO,2011)

1. Adults aged 18-64 should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous- intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous- intensity activity.
2. Aerobic activity should be performed in bouts of at least 10 minutes duration.
3. For additional health benefits, adults should increase their moderate-intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous- intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous-intensity activity.
4. Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.

It is better if you could do more than recommended as South Asians are more prone to **NCDs** than Caucasians!

- Elderly
 - No restriction on exercises
 - If you suffer from heart diseases, prolonged diabetes mellitus, lung disease, musculoskeletal and neurological diseases, it is better to consult a doctor before engaging in exercises.
 - Sudden vigorous exercises are not recommended. Always start slow and progress gradually

How to incorporate exercises into daily life?

Example 1: office worker

You can-

- Walk or cycle all or part of the way to and from work.
- Parking the car at the far end of the car park and walking to the office.
- Walking to the colleagues' desks instead of internal telephones/ email.
- Taking the stairs instead of the lift whenever possible.
- Going for a walk at lunch time.
- Getting involved in a company sports team and participating in friendly matches during free time.

Example 2: Housewife

- Cleaning the house, sweeping, gardening, mopping, drawing and carrying water, washing clothes and washing windows at regular time intervals.
- Go for a walk with a neighbor/ friend everyday evening. Take your children with you.
- Walk to a grocery to buy items.
- It is important to carry out any of these activities alone or in combination in bouts that last for at least 10 minutes and accumulate several of such bouts to acquire the daily exercise requirement.
- Correct posture is an essential component in every physical activity. Taking abnormal postures will lead to musculoskeletal problems in most parts of the body including muscles and joints. (e.g. back pain, neck pain etc.)

➤ If you are overweight/obese....

Exercise always incorporate with low calorie dietary advices.

Even though you do not lose weight immediately to your desired level; when you start to be physically active, your health parameters will improve. You can be healthy at every size!!!

Ex. Blood sugar level, cholesterol levels (HDL level increases, LDL level decreases), blood pressure.

As a community level worker, you have to explore each and every area, where you can make a change!

In your village, identify key stakeholder groups (Ex, youth sports clubs, elderly communities) and try to promote sports events.

Important

- **Make sure not to be thirsty before starting exercises.**
- **Drink plenty of water.**
- Always start slow and progress gradually
- Choose morning or evening (less hot/sun) if you are planning to start an exercise program

Table 1. Common physical activities according to intensity.

Light intensity	Moderate intensity	Vigorous intensity
Walking	Walking	Walking, jogging and running
Walking slowly around home, store or office	Walking 3.0 mph	Walking at brisk pace (4.5 mph)
		Walking in moderate pace with a light pack
	Walking at a very brisk pace	Jogging at 5 mph
		Jogging at 6 mph
		Running at 7 mph
Household and occupation	Household and occupation	Household and occupation
Sitting – using computer, work at desk, using light hand tools	Cleaning, heavy- washing windows, car, clean garage, sweeping, mopping	Cutting, chopping Carry wood Shoveling sand
Standing and performing light work, such as making bed, washing dishes, ironing, preparing food or store Clerk	Carpentry, carrying and stacking wood, Gardening, planting and harvesting crops, digging dry soil (with spade), Laboring (pushing loaded wheelbarrow), Walking with load on head, Drawing water	Carrying heavy loads such as bricks, Heavy farming, Shoveling, digging ditches
Leisure time and sports	Leisure time and sports	Leisure time and sports
Arts and crafts, playing cards Playing most musical instruments	Badminton Basketball Cycling on flat – light effort (10-12 mph), Playing cricket Dancing	Basketball, cycling on flat – moderate effort (12-14 mph), Soccer, Swimming, Badminton or tennis singles game
	Swimming leisurely Table tennis, Tennis or Badminton doubles Volleyball - noncompetitive	Volleyball – competitive at gym or beach

(Source- Exercise for your day today life by Dr. Romain Perera and Dr. Chathuranga Ranasinghe)

How can we modify our lifestyle in order to increase energy expenditure/exercise/physical activity?

Case scenario-

Mrs. Amitha, a mother of two school children, takes her children to school by a three- wheeler daily. The school is one kilometer from their house. Mrs. Amitha is overweight.

What can she do in this situation to increase energy expenditure?

What are other situations like this in your daily life, in which you can increase your energy expenditure?

.....

.....

.....

.....

.....

.....

Diabetes mellitus (lecture)

Diabetes Mellitus is a growing epidemic in Sri Lanka (Katulanda et al, 2008)

A Cross –sectional study conducted between 2005 and 2006

- Standardized prevalence for Sri Lankans **aged ≥ 20 years – 10.3%**
- Prevalence in the urban population was **16.4%**
- Prevalence in the rural population was **8.7%**
- Prevalence of pre-diabetes in urban and rural population was **11.5%**
- Overall prevalence of some form of dysglycaemia (sugar problems) was **21.8%**

Who are at risk to develop diabetes?

What are the signs and symptoms of diabetes? (diet, lifestyle modifications)

What are the treatment options? how to control

How to assess control of diabetes?

What are the complications of diabetes?

How to prevent diabetes?

12. Misconceptions on nutrition

➤ Identify common misconceptions regarding nutrition

Discuss with your instructor whether the following statements are misconceptions or not.;

1. Red rice is better than white rice.
2. Eating "karavila, thebu, kowakka" can cure diabetes and blood sugar level of diabetes patients can be controlled with them without medication
3. Milk and dairy products can cause cough
4. During menarche and menstruation food of animal origin is not good
5. Eating sugar and sweets can cause diabetes
6. Eggs are not good for infants (due to egg allergy)
7. Coconut oil contains cholesterol and not as good as vegetable oil
8. "manioc" can cure cancers
9. Starch is a better source of energy than fat
10. Rice is better than bread.
11. Meat and fish are unhealthy.
12. Kadala (chick-peas), munata (green grams) has better quality protein than meat, fish.
13. Manual workers need a lot of salt.
14. Wheat flour causes diabetes and other diseases.
15. It is not harmful to eat kithul hakuru.

(Answers provided below)

What are such misconceptions in your community?

.....

.....

.....



Small group discussion – discuss ways of eliminating misconceptions

Critically evaluate cultural health beliefs

Answers:

1. Red rice and white rice contain more or less same amount of carbohydrates. Vitamin B and fiber contain may be higher in red rice. However, what is more important is to control the portion size than the type of rice.
2. Wrong - At the moment there is no scientific evidence to say that eating "karavila, thebu, kowakka" can cure or prevent diabetes. However, it can be consumed as part of a healthy meal (e.g. Karavila curry).
3. Wrong - Some people have allergic reactions for some milk and dairy products and that may cause cough
4. Wrong
5. Wrong The cause of diabetes is multi-factorial - it is not due to sugar or sweets
6. Wrong
7. Wrong - There are no cholesterol in plant oil including coconut.
8. There is no scientific evidence.
9. Wrong - 1 g of starch contains 4 calories whereas 1 g of fat contains 9 calories.
10. Wrong - Bread is also another starch food like rice.
11. Wrong - Meat and fish provide lot of nutrition like protein and vitamin.
12. Wrong - Meat and fish contain high quality protein than pulses.
13. Wrong - For anybody recommended amount of salts is less than 5 g per day.
14. Wrong
15. Wrong - Kirthul hakury (kithul jaggery) also convert into glucose in our blood.

13. Family harmony

Case scenario- identify factors that strengthen family harmony, discuss activities to improve family harmony.

Mr. Samantha, the principal of a primary school, noticed Kasun, an 11-year old boy faints at the morning assembly. When he spoke with Kasun, Mr. Samantha learnt that he hadn't taken his dinner the night before and breakfast in the morning. The principal became concerned that Kasun's family might be very poor and could not afford their meals. He decided to speak to Kasun's mother in order to get them financial assistance from the government. Kasun's mother told the principal that they were not having financial difficulties and a good meal was prepared but Kasun and his siblings missed meals due to a different reason.

Kasun's father drinks alcohol on most of the days and comes home to quarrel with his wife. After these arguments, the children go to bed without eating. This pattern was said to repeat on most of the days.

How can the principal intervene to improve the situation?



(Small group discussion)

14. Control the use of alcohol, tobacco and other addictive substances



Small group discussions

Adverse effects of alcohol related to nutrition.

The harmful use of alcohol can also result in harming other people, such as family members, friends, co-workers and strangers. Moreover, the harmful use of alcohol results in a significant health, social and economic burden on society at large. The consumption of alcohol carries a risk of adverse health and social consequences related to its intoxicating, toxic and

dependence-producing properties. The harmful use of alcohol causes a large disease, social and economic burden in societies. (WHO, 2014)

15. Family income management

Management of family income is an essential determinant of nutrition promotion in a family. We need to identify our unnecessary expenses to cut them down in order to allocate more money for essential things like improving nutrition of the family members and children's educational needs, which will leave a lasting impact on a family's wellbeing.

When you go through the following exercise, you will develop basic skills on family income management.



(Small group discussion)

Case study

Mrs. Kamala is a 40-year old housewife. She lives with her two children, husband and mother – in-law, who is a newly diagnosed diabetic patient. Her husband is a farmer who earns about 32 000 /= per month. Her son is 12 years old and her daughter is 16 years old. She manages to sell vegetables and fruits from her garden when she can and earns about 2000/= per month.

She is very worried that at the end of the month she is unable to save any money.



I'm very careful as not to waste money. But no matter how hard I try, I cannot save any money for our future!

So, we asked her to list down her monthly expenses.

Electricity bill 2000/=
Vegetables, fruits, rice 5000/=
Children's tuition fees 2000/=
Mobile phone/land phone bill 2000/=
Medical expenses for her mother-in-law 2000/=
Short eats, sweets for the children 3000/=
Clothes 1000/=
Bus fare 500/=
Other 1000/=
TOTAL – 18500/=

We also asked her husband to list down his monthly expenses.

Mobile phone bill 1000/=
Cigarettes (2-3 daily) 2000/=
Alcohol 4000/=
Food from outside 2000/=
Expenses for farming (fertilizer, equipment) 4000/=
Other 1000/=
TOTAL 14000/=

What is left from their monthly income?

Total income – 34 000/= -

Total expenses – 32 500/=

1500/=

- Are there times when you have to borrow money?

Yes, if something comes up suddenly, we have to borrow money.

- How do you pay it back?

Sometimes we get extra money. Nothing is fixed. There are good times, there are bad times.

We identified some expenses that Mrs. Kamala could have cut down.

Electricity bill 2000/=

Vegetables, fruits, rice 5000/=

Children's tuition fees 2000/=

Mobile phone/ land phone bill 2000/=

Medical expenses for her mother-in-law 2000/=

Short eats, sweets for the children 3000/=

Bus fare 500/=

Clothes 1000/=

Other 1000/=

TOTAL – 18 500/=

She will tell you why she can't cut those expenses. Now, we want you to discuss in a small group and suggest her ways in which she can improve the situation.

1. Electricity bill 2000/=

Why is your electricity bill so high?

"Well, the television is on most of the time. My mother-in-law watches TV in the morning. My children come home after school and spend the whole evening in front of TV. I of

course watch news and tele dramas. Then my husband says he is very tired and spends about 2 hours watching TV. The lights in the living room are on most of the night. Sometimes the children study at night. So lights in their rooms are on too. I wake up at 4 a.m. to cook for my family. So, I put on lights and the radio. I know that my electricity bill is so high, I just don't know how to reduce it."

What do you suggest her to do?

.....

.....

.....

.....

2. Vegetables, fruits and rice from the market. 5000/=

Don't you spend too much on food?

"Do I? I don't think so. I've heard that you have to spend a lot of money on food to make your family healthy. So, I try to buy the best food from the market."

What do you buy?

"vegetables- my children do not like village food. So, I buy beans, carrots, potatoes etc. They do not like green leaves. Fruits- the kids prefer oranges and apples. So, I specially try to buy them. The children specially ask for sweet biscuits, jam and instant noodles. I also buy bread and marmite."

How can she reduce money spent on food?

.....

.....

.....

.....

3. Mobile phone bill 3000/=

Why is both your mobile and your husband's mobile phone bill around 3000/=?

“Is it high? But everybody seems to be always reloading their phones. I thought I was being careful. Well, you see, I talk to my husband several times a day, just to see how he is doing. If he’s eaten, if he’s well at the Chena and we talk for some time. Then I talk a lot with my friends when I’m alone. We just chat on and on. Some of their numbers are from different networks. I know it is costly, but I miss my friends. I have to check if my children’s tuition classes are over and held on time to go and collect them”

How can Mrs. Kamala and her husband reduce their phone bill?

.....

.....

.....

.....

4. Short -eats, sweets 3000/=

“When my children come from school, they are not interested in eating rice. They ask for plain tea. Then around 5 p.m. there is a bakery van going in the road next to our house. They insist that I buy short eats for them. Of course, they have skipped lunch, so how can I not buy? Then I also buy short -eats for my mother-in-law and myself. The children ask for pocket money to buy things like murruku, ice packets after school. They are so tired after school. What’s wrong with giving a child what they ask? So, I give them each 30/= a day.”

What do you suggest her to do?

.....

.....

.....

.....

5. Medical expenses for her mother-in-law 2000/=

“my mother –in –law is a newly diagnosed patient with diabetes mellitus. I take her to see a doctor every month. The doctor’s consultation fees are high. The tablets are expensive too. Then we go to the clinic in a three wheel, it is costly too”

How can these expenses be reduced?

1.
2.
3.
4.

Then we asked Mrs. Kamala’s husband about his list of expenses.

Mobile phone/ land phone bill 1000/=
Cigarettes (2-3 daily) 2000/=
Alcohol 4000/=
Food from outside 2000/=
Expenses for farming (fertilizer, equipment) 4000/=
Other 1000/=
TOTAL 14 000/=

1. Money spent on cigarettes and alcohol.

“My wife always tells me that I spend too much on alcohol and cigarettes. I know I should try to save for our children’s future. But how can I help it? Each day I’m so tired. It is only after I drink liquor that I feel better and I have to smoke 2-3 cigarettes a day. No harm in it, right?

What do you suggest him to do?

.....
.....

.....
.....

Now you have realized through your small group discussions that most of these expenses can be cut down. Think for a moment about your own list of expenses, and how you can cut them down. You can take this message to villages in your area, using a similar example.

APPENDIX 1

Supplementary Materials, Part 1: Portion size estimations

Exercise for your day today life by Dr. Romain Perera and Dr. Chathuranga Ranasinghe

Handbook on home gardening published by Department of Agriculture.

Assessment of nutritional status and associated factors in Northern province published by ministry of health, Sri Lanka, March 2012.

Nutritional status in Sri Lanka, determinants and interventions: a desk review. 2006- 2011

National nutrition and micronutrient survey, 2012

Assessment of nutritional status, Northern province, 2012, Sri Lanka.

APPENDIX 2

Case Study 01

Main issues highlighted in yellow

Tharindu is 11 months and birth weight 3.4 kg, healthy, Started on formula milk from 7 months of age. Mother works in a garment factory for most of the day time, infant looked after by grandmother, father manual labourer who smokes heavily, small garden around the house but no home gardening.

Diet of the infant during the past 24 hours;

- At about 5.30am breast milk
- Around 6.30 am in the morning formula milk 1/2 cup (\approx 100ml) with a sugary biscuit
- At about 7.30 am thin rice cunjee 1/2 cup (from rice cooked for the family)
- At about 10am formula milk 3/4 cup (\approx 150ml)
- At about 12.30pm very well mashed rice, dhal, carrot and potatoes 3/4 cup
- At about 3pm formula milk 3/4 cup (\approx 150ml)
- At about 6.45pm vegetable (potatoes, dhal, carrot, leeks) soup 1/2 cup + breast milk
- At about 7.30pm formula milk 3/4 cup (\approx 150ml)
- Night breast feeds (2-3 times)

Answers

Shortcomings in the Diet

No. of milk feeds

Breastfeeding baby getting formula milk in addition – As the infant is being breastfed with early morning and night feeds, no need of formula feeds, can omit formula feeds and leave 1-2 feeds of expressed breast milk (formula feeding is an extra cost to a poor income family which could be used to provide good quality animal proteins like fish, sprats etc to the infant).

No. of main meals - Consistency of main meal - Amount per main meal

No. of main meals adequate (three) but the consistency is not age appropriate. Has to make them thicker – with coarse particles of food. (cunjee is not recommended even at 6 months and soup is not a sufficient dinner for an infant). Can make the meals energy rich by adding a bit of coconut oil/scraped coconut or thick coconut milk. Amount given at lunch is adequate but the amount has to be increased to around $\frac{3}{4}$ cup for breakfast and dinner as well.

Variety of food items

Add an animal origin food such as sprats/ fish/ meat at least once a day. Variety through less expensive food – green leaves, pumpkin, sweet potatoes, ash plantains etc. Child is being given the same few vegetable items which are relatively expensive throughout the day (carrots, potatoes for lunch and dinner).

No. of snacks - Quality of snacks

Timing of the snack inappropriate. Can give a snack around 10 am with expressed breast milk instead of at 6.30 in the morning. (Better if sugary foods are avoided and healthy snacks chosen – locally available fruits, piece of boiled yam or egg with margarine). Can replace 3 pm formula feed with a less costly and healthy snack as above.

Timing of meals

Satisfactory except for 6.30am snack and 7.30am formula feed –if 6.30am snack was avoided the infant would have taken an adequate amount ($\frac{3}{4}$ cup) of breakfast at 7.30am.

Other

(PHM to educate grandmother on child feeding, money management, home gardening and the father on reduce smoking)

Case Study 02

Main issues highlighted in yellow

Hasini is 18 months old, birth weight 3kg, not ill, does not breast feed now, both parents working in private sector firm. Child looked after by domestic help. No extended family support

Diet of the child during the past 24 hours;

- 6.30am - 1plus milk one cup (200ml)
- 7.00am - commercial complementary food 1/2 cup
- 10am – 1plus milk ½ cup (100ml)
- 11 am –fruit juice ½ cup + 2 pieces of chocolate
- 12.30pm – rice, dhal and potatoes ½ cup
- 3.00pm – 1plus milk one cup (200ml)
- 5.00pm – two sugary biscuits with 1plus milk ½ cup (100ml)
- 6.00pm – 2 pieces of chocolate
- 7.30pm – 1/2 slice bread with jam
- 8.00pm – 1 plus milk one cup (200ml)

Answer

No. of main meals - Consistency of main meal

Adequate.

Amount per main meal

Not adequate. Has to be increased up to a little more than one full tea cup per each main meal.

Quality and variety of food items

Home made food given only for lunch. Quality of dinner not acceptable – mainly starch and sugar. Not a balanced diet. Nutritious quality of food very poor.

Grossly inadequate. Has to add animal origin iron rich food, vegetables, leafy vegetables, eggs, a variety of pulses, nuts and seeds etc. Has to give a variety of nutrients and energy through adding oils rather than sugar.

No. of snacks - Quality of snacks

Three snacks not necessary. Two would be adequate. Better avoid sugary things as much as possible. Fruits rather than fruit juices.

Too many sugary items – chocolates, fruit juices, sweet biscuits. Has to make healthy food choices.

Milk feeds

Too many (requirement is about 400 – 500ml) and can be given full cream milk, curd, yoghurt – no place for special 1 plus milk (no scientific evidence to show any benefits). Can omit 6.30am, 3pm and 8 pm milk feeds and give 200ml at 10am and 5pm with a small amount of nutritious snack/ or as curd, yoghurt with fruits added.

Timing of meals

Too frequent. Leave 2- 2 ½ hours or more between two meals.

Other

Cook breakfast at home (learn parent's dietary habits and advice appropriately). Educate domestic helper on proper child feeding, healthy food habits, exercise etc.

Case Study 03

Shanju is a 13 month old boy, birth weight 3kg, 4th child of the family. Mother a housewife and father a carpenter. Father very much addicted to liquor. Adequate space outside the house but no home gardening.

Diet of the child during the past 24 hours;

- 6.30am - breast milk
- 7.00am - thin rice cunjee 1/2 cup
- 8.30am breast milk
- 10am – breast milk, 2 sugary biscuits
- 11.30am –breast milk
- 12.30pm – rice, and soya meat ½ cup

- 1.30pm – breast milk
- 3.00pm – two pieces of sweets
- 5.00pm – two sugary biscuits
- 7.30pm – 1/2 slice bread with sugar
- 8.00pm – breast milk

Answer

No. of main meals

Adequate.

Amount per main meal

Not adequate. Has to be increased up to a little more than one full tea cup per each main meal.

Consistency of main meal

Thin gruel is given for breakfast which is not energy dense. The child should take nutritious family food by now

Quality and variety of food items

Not satisfactory. Quality of dinner not acceptable – mainly starch and sugar. Not a balanced diet. Nutritious quality of food very poor. Grossly inadequate. Has to add animal origin iron rich food, vegetables, leafy vegetables, eggs, a variety of pulses, nuts and seeds etc. Has to give a variety of nutrients and energy through adding oils rather than sugar.

No. of snacks - Quality of snacks

Three snacks not necessary. Two would be adequate. Better avoid sugary things as much as possible.

Too many sugary items –sweets and sugary biscuits. Has to make healthy food choices.

No. of milk feeds

Breastfeeding is good but too many breastfeeds for this age. Better if breast fed after a main meal or a snack (about 3 times a day). After one year of age, the main source of nutrition is balanced diet and milk is only a component of that diet.

Timing of meals

Too frequent. Leave 2- 2 ½ hours or more between two meals.

Other

Money management, home gardening, poultry rearing, low cost quality food items, liquor addiction. 4 children in the family – family planning.

Case Study 04

Udara is a 16 month old boy, not breastfed after 5 months, repeated diarrhea infections and respiratory infections from 5 months onwards.

He is from a poor family from an urban slum area with 2 other older siblings, mother and father manual labourers, no garden space surrounding the shanty they live in, do not usually cook at home – regularly eat from outside.

Diet of the child during the past 24 hours;

- Around 6.30 am in morning 1plus milk one cup (≈200ml)
- At about 7 am one pastry from nearby boutique
- At about 10am 2 sugary biscuits
- At about 11 am one small packet of savoury bites
- At about 12.30pm rice, potato curry, beetroot curry 1/2 cup from rice packet bought from nearby boutique for all 3 children
- At about 3pm 1plus milk one cup (≈200ml)
- At about 6.30pm ½ sugar bun from mobile bakery (three wheeler)
- At about 7.30pm 3 string hoppers with kirihody (1/2 cup)
- At about 8.30pm 2 sugary biscuits

Answer

No. of main meals - Consistency of main meal

Satisfactory.

Amount per main meal

Not adequate. Has to be increased up to a little more than one full tea cup per each main meal.

Quality and variety of food items

Grossly inadequate. Nutritious quality of food very poor. Has to add animal origin iron rich food, vegetables, leafy vegetables, eggs, a variety of pulses, nuts and seeds etc. ie an egg to be added to the string hopper and kirihodi meal

No. of snacks - Quality of snacks

Too many (four snacks). Two would be adequate. Better avoid sugary things and savoury/oily short eats as much as possible.

Too many unhealthy snacks – pastry, bites, sugary biscuits and buns. Has to make healthy food choices.

No. of milk feeds

No place for 1 plus (no scientific evidence to show any special benefits). Yogurt/curd can be given instead or full cream milk as child is not been breastfed. Use the money spent of special milks to buy nutritious food (ideally home cooked) – eggs, fish, sprats, fruits, vegetables.

Timing of meals

Leave 2- 2 ½ hours or more between two meals.

Other

Money management. Need to learn home preparation of food is more healthy and saves money. Check indoors for sanitation, air pollution. Good hygienic practices – hand washing and cough hygiene etc. 3 children in the family – family planning.

Case Study 05

Lasan is 27 year old. Male. His weight is 88 kg. His height is 108 cm. He works as an accountant in a government office. His fasting blood sugar (FBS) level is 102 and Total Cholesterol (TC) is 253. His LDL cholesterol is 172 and HDL is 32. His triglyceride level (TAG) is 220 and hypertension level is 140/90. He has a family history of heart disease. His father died when he was 51 years old due a heart attack.

Lasan's usual daily diet as recorded

Time	Event
6.45am	Wakeup
8.30am	Breakfast (short-eats) and tea
10.30am	Plain tea
1.00pm	Lunch - fried rice
4.00pm	Snack (short-eats like vegetable roti or rolls) and tea
9.00pm	Outside meal (kottu or mixed fried rice)
Other	Alcoholic beverages

Discussion:

What are the nutritional and health problems you identify in Lasan's case study and dietary history?

Calculate his BMI.

Compare his diet with recommended plate for adults in SL. (discuss each food group)

He has a family history of heart disease. What lifestyle changes do you recommend him?

How do you improve his diet to give a balance diet (recommended plate)

How can he modify food intake from local food supply?

What food items should be cultivated to support this person's dietary pattern?

Come up with an idea as to how you can increase availability of healthy food choices?

Discuss about high body weight, high blood cholesterol, high blood pressure etc.

Answers:

He requires lifestyle changes.

In order to address his high cholesterol level he needs to reduce oily food intake. Instead of unhealthy snacks like short-eats he can take healthy snacks like fruits.

In order to address his hypertension condition, he can cut daily down salt intake.

With his family history, he has a high chance of getting heart disease and therefore he should be careful of his dietary pattern and should engage in physical exercise. He should maintain a healthy weight and take measures to lose at least 8 kg body weight.

He should consume more vegetables, green leaves, mullu. Such food items should be made available in the local market.

They can encourage the office canteen to sell healthy snacks such as fruits, salads or dress-salads.

Normal range of BMI < 25, WC < 90cm, TC < 200, LDL < 150 and HT =/ < 120/80.

Case Study 06

Siriwimal is 49 year old. His weight is 77 kg and height is 165cm. He is a manager of a local hotel. He has been a diabetes patient for over 4 years. He takes oral drugs but diabetes is not well

control (HbA1c = 10.1). He has one child and his wife is a supervisor in a factory outlet.

Siriwimal's usual daily diet as recorded

Time	Event
5.00 am	Wakeup
5.10 am	Walk - 1 hr
7.00 am	Breakfast (large portion of pulses)
10.30 am	Plaint tea and bran crackers
1.30 pm	Red rice with little bit of vegetables
3.30 pm	Snacks (short-eats) and tea
6.30 pm	Biscuits
9.00 pm	Kurakkan roti, curd
11.00 pm	Sleep

Discussion:

What are the nutritional problems you identify in his diet?

Calculate his BMI.

Compare his diet with recommended plate for adults in SL. (discuss each food group)

He is a diabetes patient and how do you recommend him to control his diet?

Discuss what kind of fruits or vegetables they can grow in his area?

How can they supply fresh fruits and vegetables?

How can they reduce the price of the fruits and vegetable?

Answers:

In his case, he is having a large portion of red rice.

He is taking oral drugs and his diet pattern is not under control.

He can take pulses (in a reduced portion) with onion and tomato sambal.

Instead of biscuits and other type of unhealthy snacks he can take a healthy snack like fruits/ less sweet fruits like Guava (Pera), Ambarella

He can control the portion of red rice intake and add more vegetables.

He should have dinner little earlier. Kurakkan is also a starchy food. Therefore he should have less amount of starchy food and have a meal with more vegetables.

Nutritionists do not encourage curd for a diabetes patient (after meals).

Walking can have impact on increasing appetite. Walking is fine as long as he controls the amount of food intake

Case Study 07

Ariyadasa is 40 years old. His weight is 82 kg, and height is 170cm,. He is a teacher. He thinks he has a healthy dietary pattern. He walks to school from home everyday. There is about 2 km

distance from home to school. However, he drinks at least two cans of beer every other day. He has two children and his wife is also a teacher. He believes that his family follows a healthy dietary pattern.

Ariyadasa's usual daily diet as recorded

Time	Event
5.00 am	Wakeup
6.30 am	Non-fat milk (two spoonful of milk powder)
7.30 am	Lot of red rice
10.30 am	Snacks (Wade) and plain tea
2.30 pm	Red rice
5.00 pm	Green Tea and bran crackers
8.30 pm	Vegetable soup
10.00 pm	Sleep
Other habits	eats lot of banana. Consumes alcohol

Discussion:

What do you think of his dietary pattern? Do you recommend any changes?

Calculate his BMI.

Compare his diet with recommended plate for adults in SL. (discuss each food group)

Answers:

There needs to be few changes in his dietary pattern. If he needs to take low fat milk he should either take non-fat liquid milk or have one spoonful of milk powder in his tea.

Red rice portion size should be with lot of vegetables, protein and other nutrient as recommended. Follow the plate model.

Instead of Wade and bran crackers he can take a healthy snack like fruits.

For the vegetable soup he can add fish/ egg white/ soya

Banana has a higher calorie content and therefore he should not eat an excessive amount.

His alcohol consumption should be discouraged.

References

Fact sheets.WHO.2014. <http://www.who.int/mediacentre/factsheets/fs349/en/>

Is harmful use of alcohol a public health problem.WHO.

2014.<http://www.who.int/features/qa/66/en/>

Global recommendations on physical activity for health.WHO. 2010

GLRS Perera, DC Ranasinghe. 'Exercise for your day today life'.Handbook for Health Educator staff, NIROGI Lanka project,Sri Lanka Medical Association. 1, 2012.34-35.

Jayawardana R et al, 2012,Food consumption of Sri Lankan adults: an appraisal of serving characteristics,*Public Health Nutrition*: 16(4), 653–658

Katulanda P. Constantine G.R., Mahesh J. G. et al., Prevalence and projections of diabetes and pre-diabetes in adults in Sri Lanka- Sri Lanka Diabetes, Cardiovascular Study (SLDCS), *Diabetic Medicine*, 25(9),1062-1069

Katulanda P, et al, 2010, prevalence of overweight and obesity in Sri Lankan adults. *Obesity review*.Volume 11, Issue 11, 751–756

Rathnayaka KM, Madushani PAE, Silva KDRR, 2012, Use of dietary diversity score as a proxy indicator of nutrient adequacy of rural elderly people in Sri Lanka, *BMC Research Notes*,Vol 5, 469.

Module No: 2

Health promotion
through agriculture
related interventions
and rural development

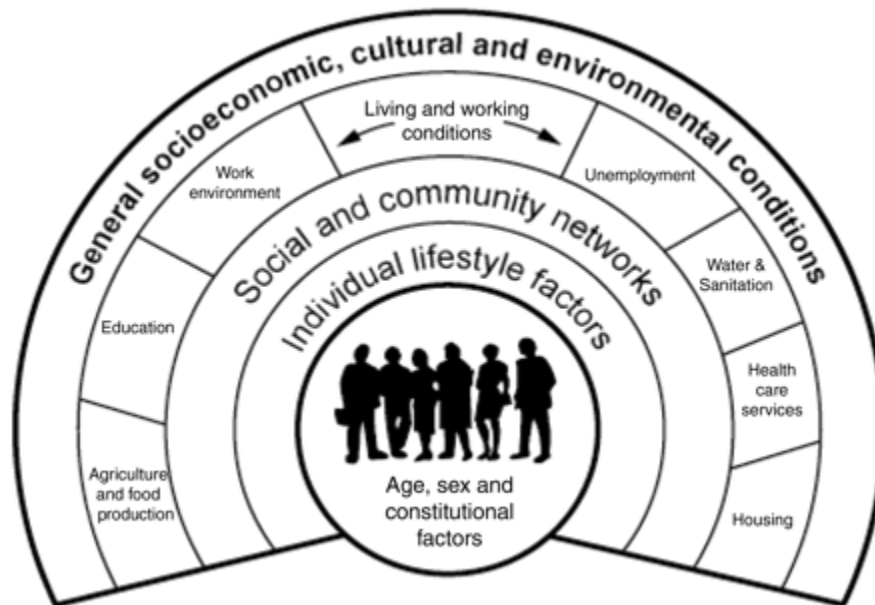
Introduction

➤ What is health?

“A state of complete physical, mental and social wellbeing not merely the absence of disease and infirmity.”

➤ What are the dimensions of health?

Physical, mental and social.



➤ Social

determinants of health.

➤ What is health promotion?

HP is the process of enabling people to increase control over and to improve their health (WHO, 1986)

Control over factors which affect our wellbeing

It moves beyond a focus on individual behavior towards a wide range of social and environmental interventions. (WHO, 2013)

➤ What are the key features in health promotion?

- Holistic view of health.
- Focus on participatory approaches.
- Focus on determinants of health, social, behavioral, economic and environment conditions that are the root causes of health and illness.
- Building on existing strengths and asserts, not just addressing health problems and deficits.
- Using multiple, complementary strategies to promote health at the individual and community level.

Competencies

1. Able to assess community needs for health promotion.
 2. Plan a programme to improve nutrition of community.
 3. Implement the health promotion programmes
 4. Monitor a health promotion programme
 5. Evaluate health promotion programmes
 6. Use basic principles of health education.
 7. Understand the discourses in public policy, media and use them to effectively promote nutrition.
 8. Communicate effectively in educating the community
 9. Act as a facilitator in health education and coordinating the process
 10. Able to develop self-awareness about the community
 11. Build up a supportive environment
 12. Integrate principals of individual behavioural change with structural and living conditions in order to empower the individuals and the community
 13. Able to create a vision plan to achieve the targets for basic nutritional needs
 14. Able to plan, implement and evaluate the interventions in accordance with the vision plan
-

1. Needs assessment

Able to assess community needs for health promotion.

➤ How to conduct a Needs Assessment?

(small group brainstorming session)

- What are our needs?

Example- Needs of pregnant mothers

- What are the sources to conduct this needs assessment?

➤ Documents -

Antenatal clinic attendance registry

Vaccination registry

PHM's registries

➤ Resource people

MOH

PHI

PHM

Gramaseva Niladari

Social worker

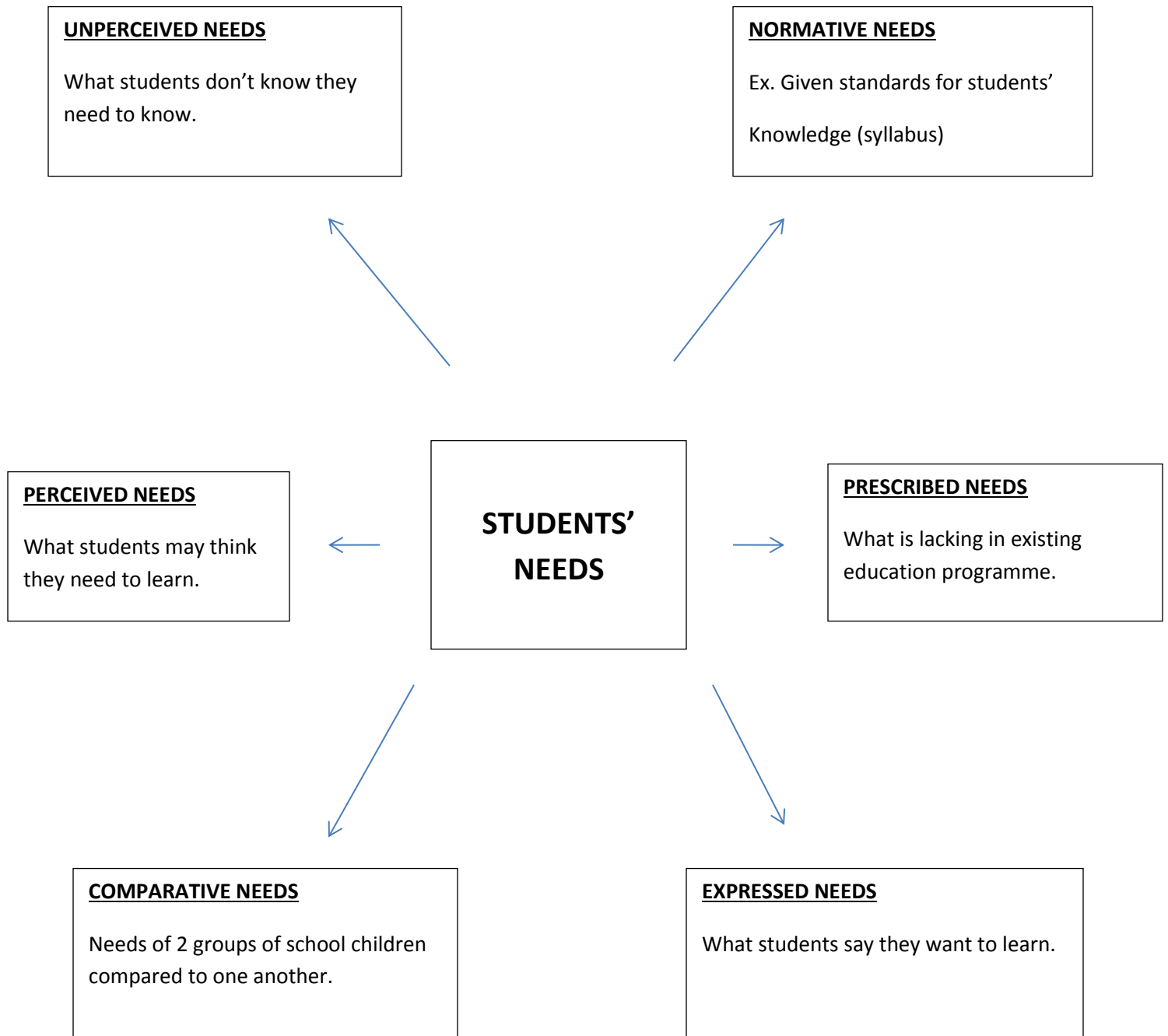
Health education officer

Economic development officer

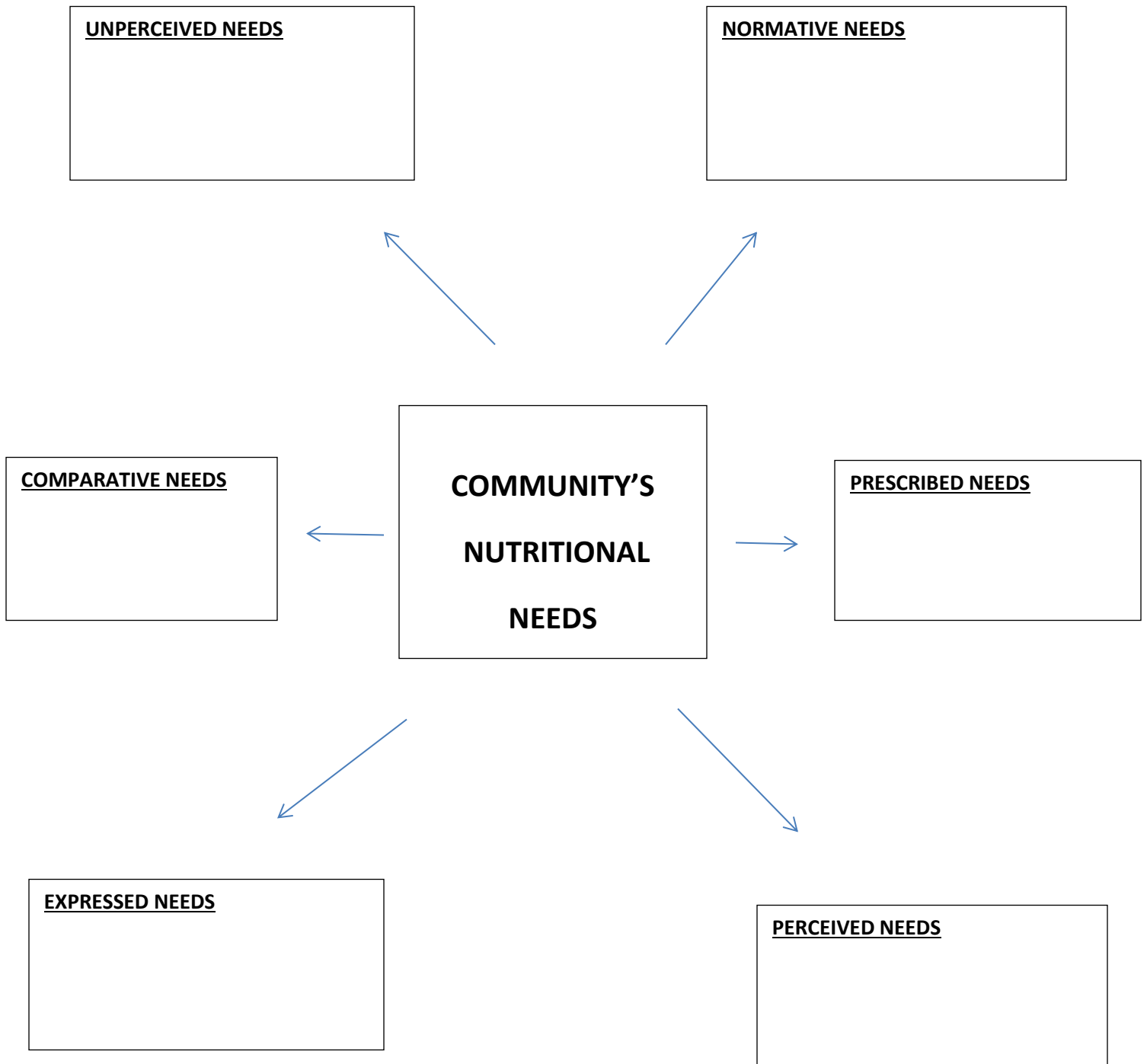
You can meet these stake holders and conduct their needs assessment.

Finally, you will understand what the community's needs are. Then you can list them, prioritize and design your interventions.

Here is an example of a needs assessment that can be conducted on school children.



Now like this example you can develop your community's nutritional needs.



2. Planning, implementing, monitoring and evaluation of a health promotion

Developing a problem tree and a solution tree.

Let's look at a problem we need to solve.

Example- low nutritional state among school children in Ampara and Monaragala districts.

By drawing a problem tree we can get an overview of all cause and effects to this problem. This problem may have many causes. It is not practical to solve them all.

A problem tree helps us to prioritize the most pressing causes and plan interventions to address them.

➤ How to draw a problem tree?

When you start drawing the problem tree have the project proponent and other stakeholders present.

1. Select the core problem and place it at the centre of the tree.

The core problem should be specific

Example- low nutritional state among school children in Ampara and Moneragala districts.

If you select a broad problem,

Example- improving nutritional state in Moneragala and Ampara districts.

This will have too many causes and it will be difficult to design interventions and plan the project effectively.

2. Identify all the causes and effects.

- What are the direct causes to your problem?

Example- lack of availability of healthy food.

Write these in negative terms below the core problem.

- What are the direct effects? Example- reduced educational performance of students.

Write these above the core problem.

- What are the causes to immediate causes? (secondary causes)
- What are the effects of immediate effects? (secondary effects)

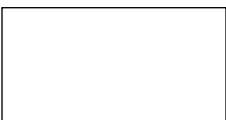
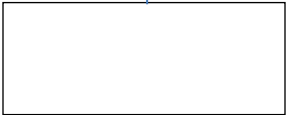
You can add these on and on.

**Immediate
Effects**

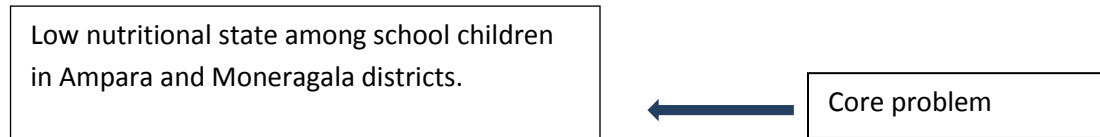


Core problem

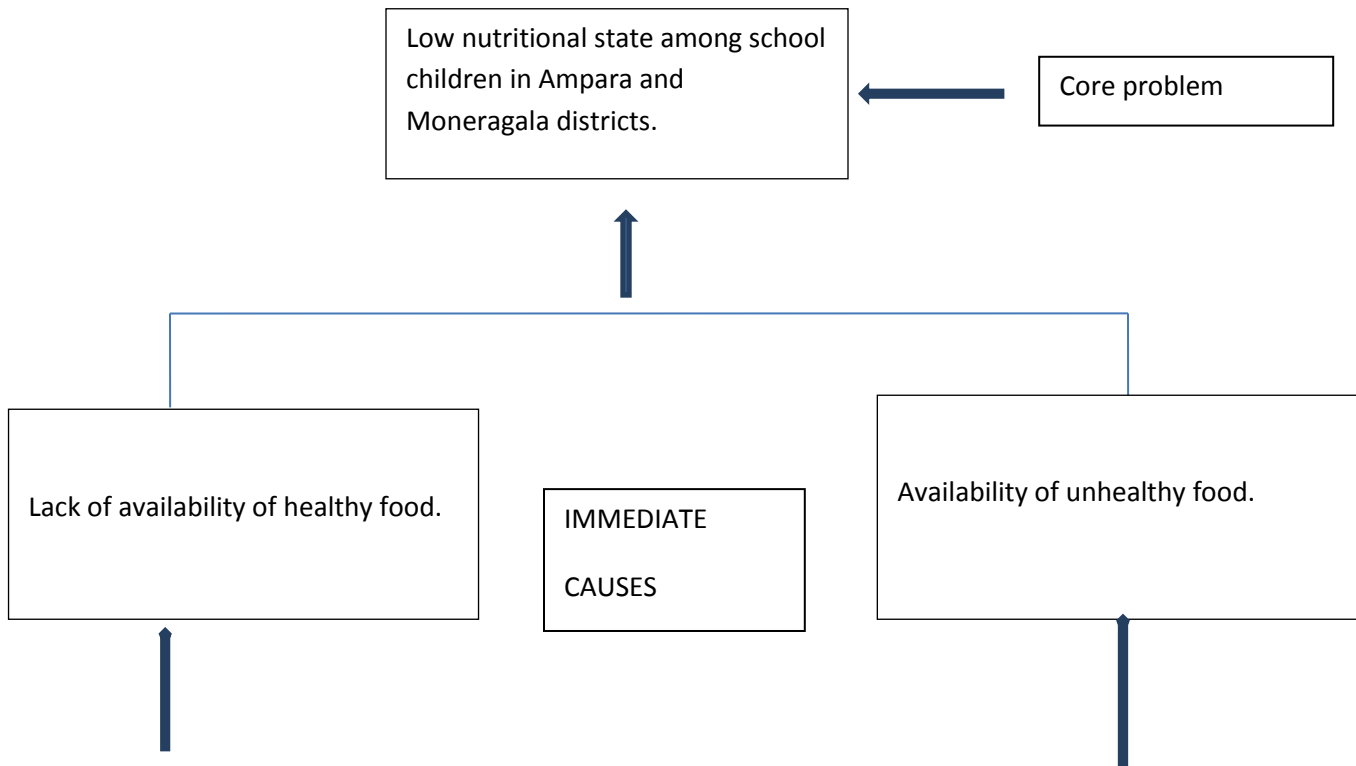
Immediate causes

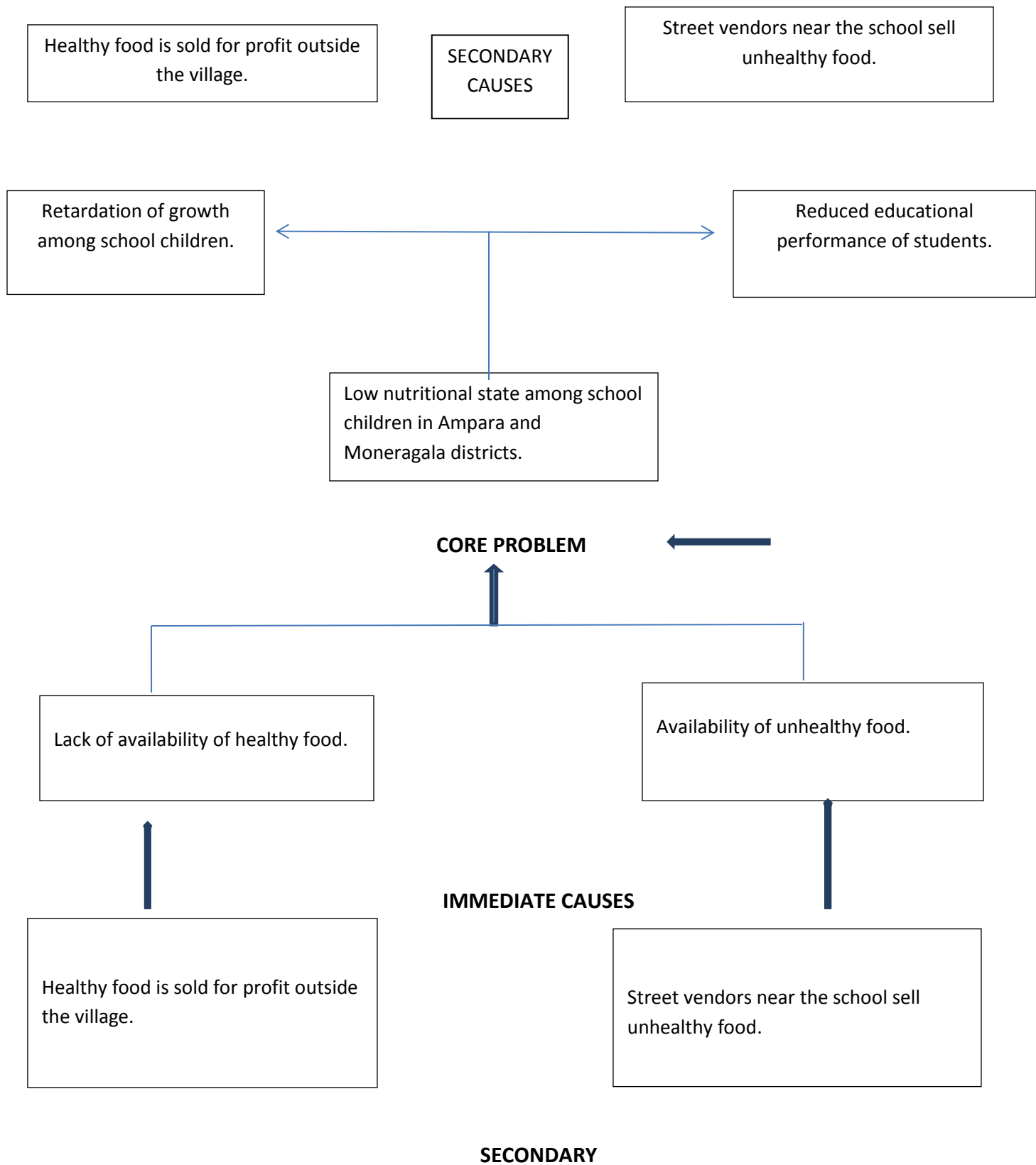


Let's start to draw a problem tree



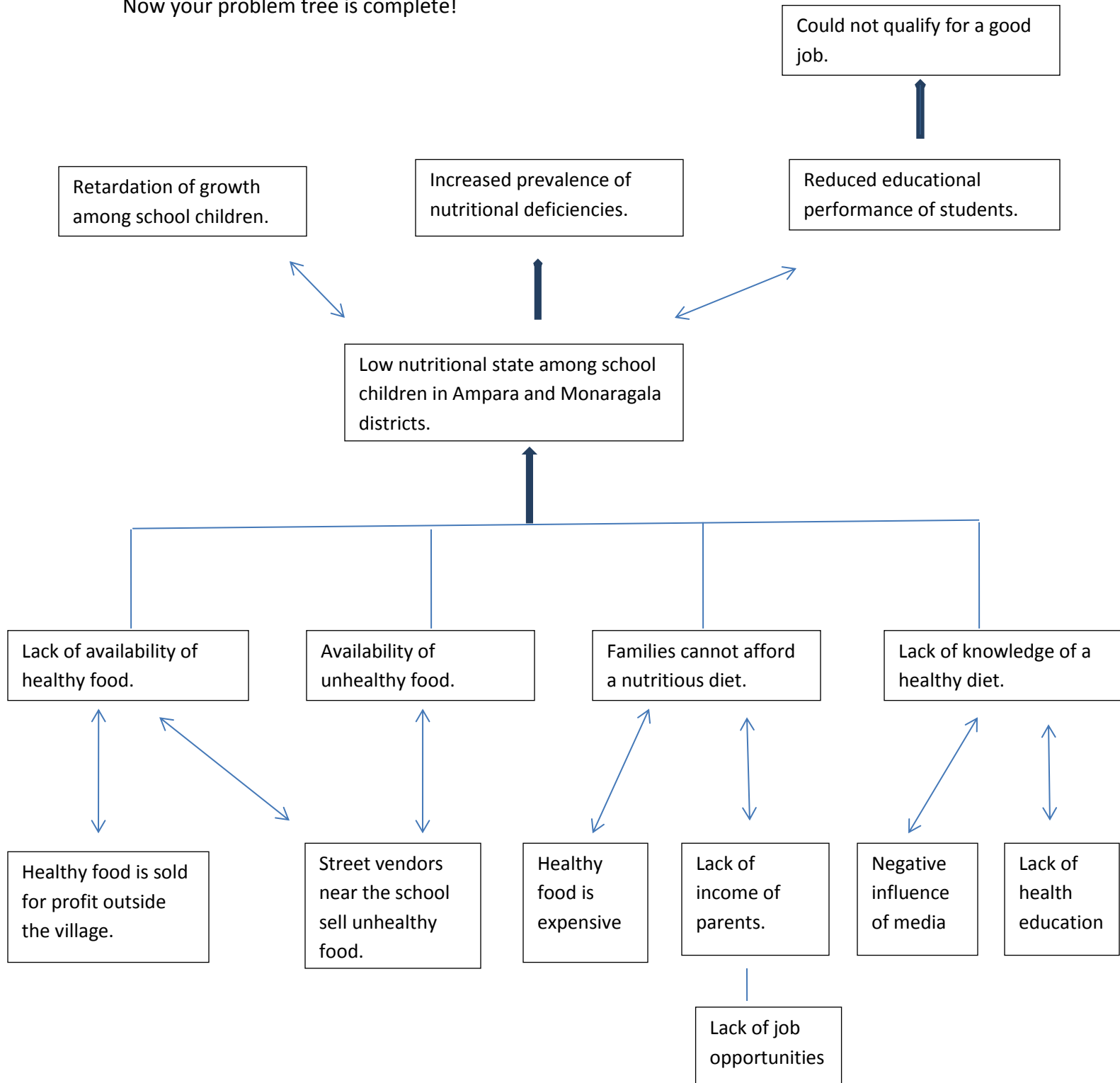
- Then add immediate causes and secondary causes.





CAUSES

Now your problem tree is complete!



3. Developing a solution tree

Solution to a problem need to turn the negative state in to a positive state.

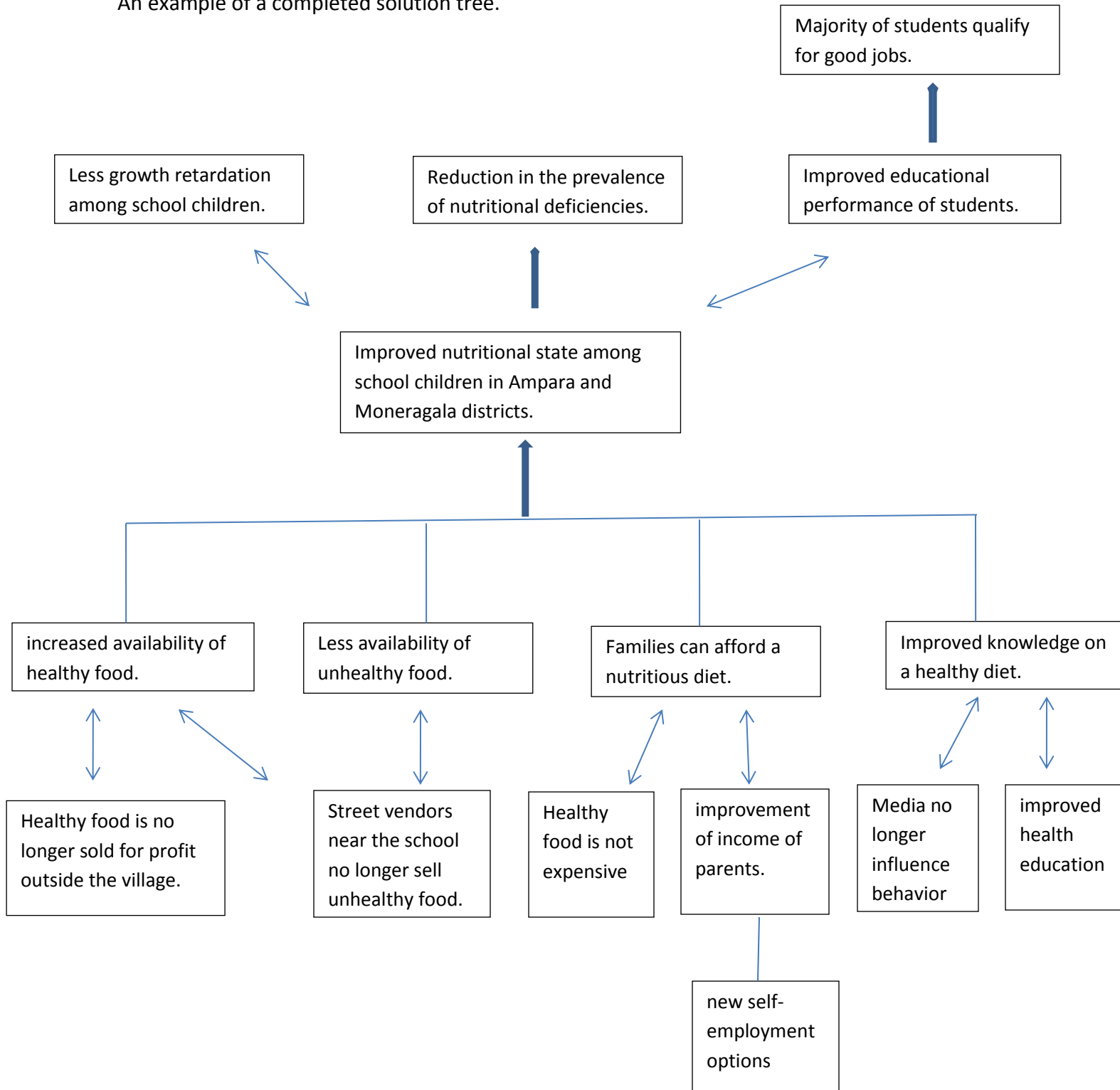
In keeping with the above statement a solution tree is developed by reversing the negative statements that form the problem tree in to positive ones. The solution tree demonstrates means-end relationship between objectives.

Example-

In problem tree –"lack of knowledge"

In solution tree –"improvement of knowledge"

An example of a completed solution tree.

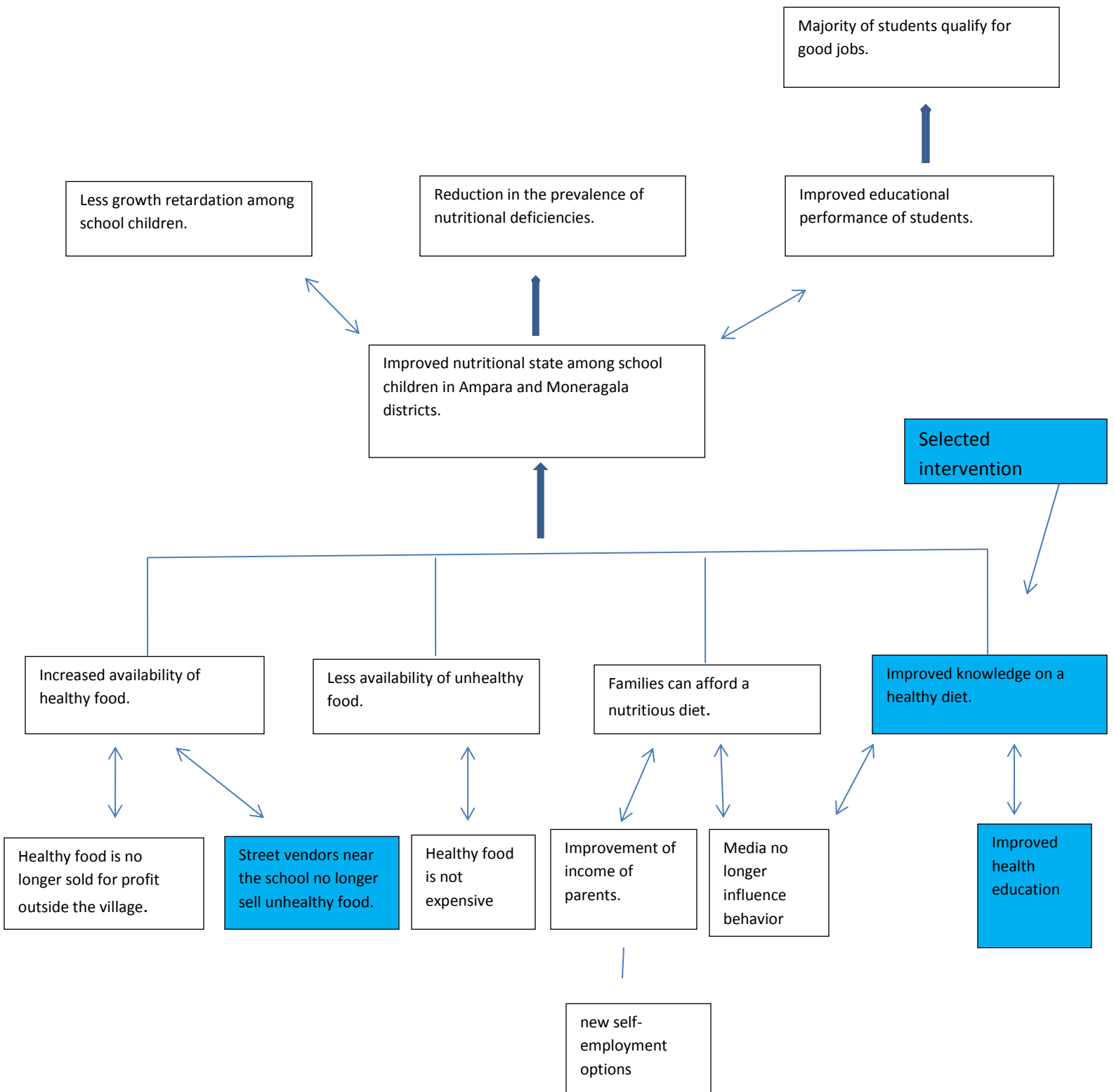


Now you have to prioritize and select your interventions by looking at the solution tree.

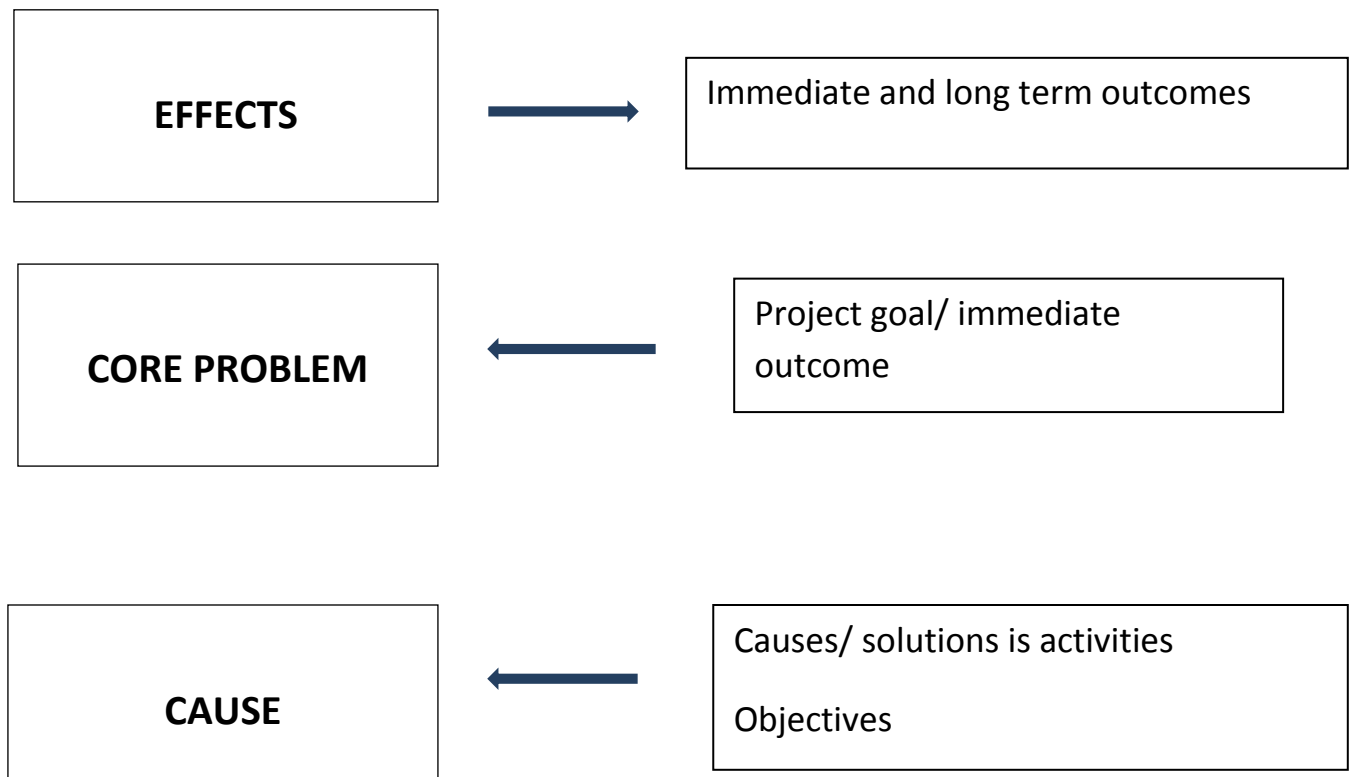
If you can't address all the causes, identify the branches that are more influential than the others in solving a problem.

You can also consider the impact of other branches in your monitoring and evaluation.

An example of selecting a preferred intervention:



How to use solution tree for project designing?



- ❖ As a group get together and develop a problem tree and a solution tree for the identified problems in your community.



(small group discussion)

Through the above exercise you learned how to plan interventions.

Now, follow the following case scenario, through this you will learn principles of implementing, monitoring and evaluation of a health promotional programme.(you will be guided by a resource person)

Case scenario

Among school children in village "X" the prevalence of anemia is high. School children and parents have a low knowledge on a nutritional diet. Stalls near schools are filled with unhealthy food items and children are used to spend their pocket money on junk food.

In the village teenage pregnancy rate is high with under-age marriages. Most of the people are farmers and live within a low income range. There is lack of water in the dry season and farmers can't grow crops which result in lack of food production and loss of jobs for labourers. People say that they are constantly troubled by elephants.

1. What are your thoughts on this?
2. How are you going to deal with this situation?
3. Identify the initial steps of your plan of action.
4. What would you expect to see after 6 months? (According to your plan)

After 6 months

- ❖ Prevalence of anemia was reduced.
- ❖ The community's knowledge on a nutritional diet improved.
- ❖ Unhealthy food items were not available near schools

After one year

- ❖ The village was able to get water in the dry season.
- ❖ An electric fence against elephants was constructed around the village.
- ❖ The villagers' economical state improved.
- ❖ There was a reduction in under-age marriages and teenage pregnancies.

Now discuss in pairs,

- What caused this change?
- Think about the major steps of a programme which have enabled this change.
- What other changes could have happened in this scenario?

3. Developing communication skills



What do you understand by "communication"?

.....

.....

❖ What is successful communication?

It is a process of exchanging ideas using words, body language and pictures/photos in an appropriate way in order to make the other person understand correctly what has been expressed.


Let's look at two examples of communicating a health education message on prevention of Dengue.

Example 1:



Communicator - MOH

What I think



Eliminating mosquito
breeding places is the best
way to prevent Dengue!!



What I say

There are many ways to prevent Dengue.

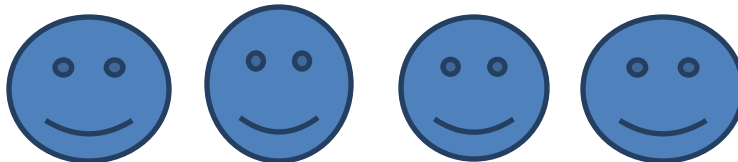
1. Mosquito control
2. Early suspicion of Dengue
3. Waste management



What the audience understand and remember
(group of PHI s)

Mosquito control!

Yes, I should start fog spraying!!!



Example 2:

The



Communicator- MOH

What I think

Eliminating mosquito
breeding places is the best
way to prevent Dengue!!



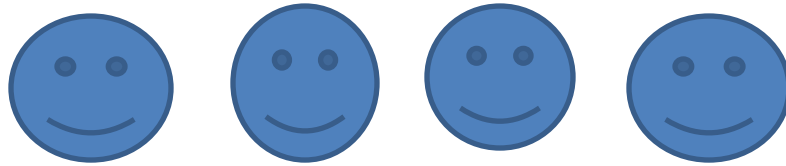
What I say

Eliminating mosquito
breeding places is the best
way to prevent Dengue!!!



What the audience understand and remember
(group of PHI s)

I should start a campaign to
eradicate mosquito breeding
places!!



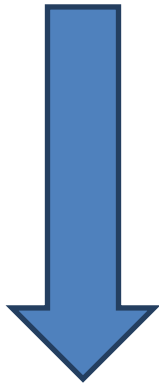
From these two examples it is clear the importance of using communication effectively to deliver your message.

At the end of this session you can discuss among yourselves what went wrong in example1 and how the situation could be improved in example 2.



Types of communication

1. One way



From up to down

Ex. Lecture

Seen as an order/command

No feedback

2. Two way (the preferred method)



Parallel

Ex. Small group discussion

A friendly approach

Feedback

In the process of communication, there is a,

1. Communicator – (ex. MOH)
2. Recipients – (ex. PHIs)
3. Message – (ex. Prevention of Dengue)
4. Channel/ mode of communication – (ex. Lecture)
5. Feedback- (ex. Asking questions....)

Who is a good communicator?

Someone who.....

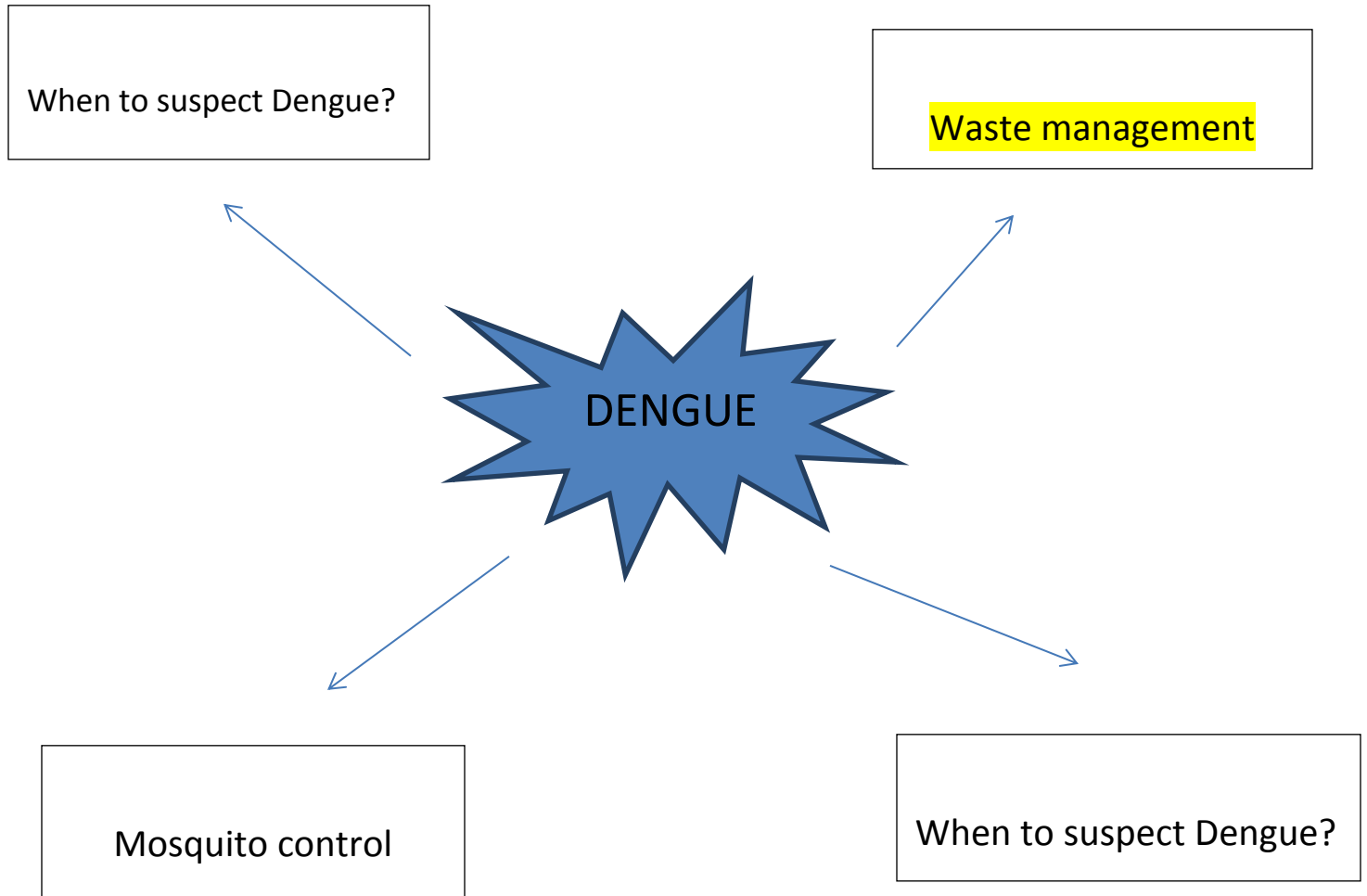
- Understands service-recipients
- Has a good understanding of the communication process
- Good knowledge about the topic of communication
- Ability to identify problems
- Has the ability to explain facts clearly in simple language
- Is a good listener & patient
- Understands limits
- Ability to hold the attention of the service recipients
- Truly believes in what she is saying
- Has positive views on communication
- Ability to adapt to the situation
- Ability to modify language and style of speech according to recipients
- Ability to obtain feedback/responses

4. Basic principles of health education

How to deliver a message of health education.

Example- Prevention of dengue.

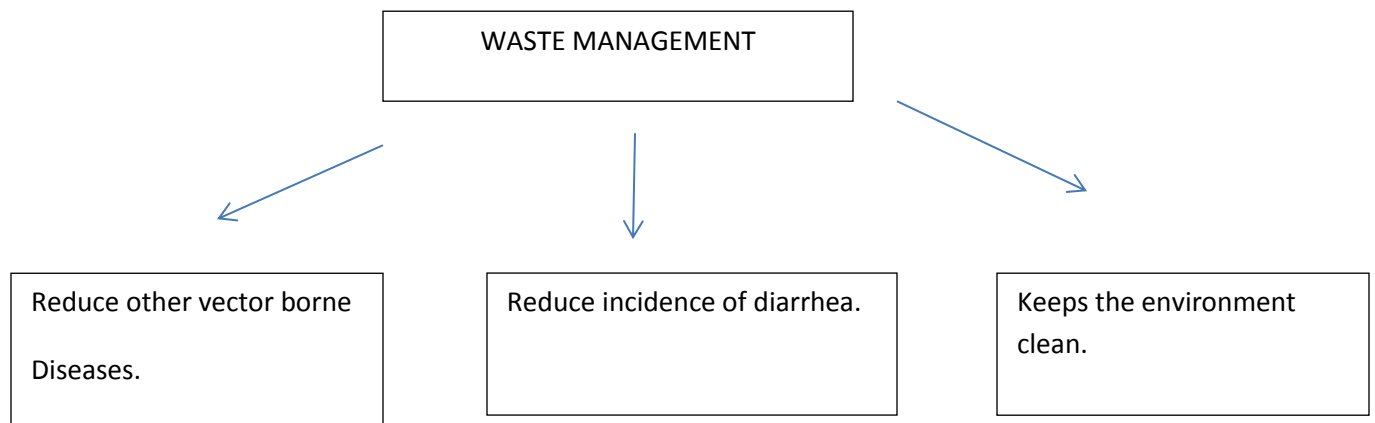
What are the health education messages you can give on dengue?



What is the most important message?

Waste management

Why?



To deliver a health education message, it has to be :

- Simple
- Short
- Keep uniformity
- Acceptable
- Attractive
- Delivered as one message at a time
- Presented in a picture when possible
- Tailor the message to the needs and understanding of the recipient, where possible

Use an eye-catching slogan-

“Only when my neighbourhood is clean

Will I be free of Dengue

“Cash your Trash”

Channel of communication

Use a variety of ways of communication

- Lectures
- Small group discussions
- Picture/photo demonstrations
- Practical skill demonstrations – ex. Measuring anthropometric data, cooking
- Drama

Feedback

Always be sensitive to your recipient's reactions (both verbal and non-verbal)

Modify your channel/style of communication where necessary, according to feedback you receive

Barriers to successful communication due to communicator

- Not understanding the recipient
- Using language that is too technical/ difficult to understand
- Not choosing an appropriate way/channel of communication
- Not receiving feedback

Barriers due to message

- Not clear
- No logical flow
- Too complex
- Too many messages

Barriers related to feedback

- Not receiving feedback
- Mode of communication not being amenable to feedback
- Not considering feedback received

(source – Health Education Bureau)

A poster on dengue prevention

(source- Ministry of Education)



Then you have to reinforce the message every 2-3 monthly.

Also asses if you are making a difference.

Example- a reduction in the number of houses that has to pay fines for having Dengue breeding places.

- Now identify a nutrition related issue in your community and develop a health educational message.

(small group discussion)



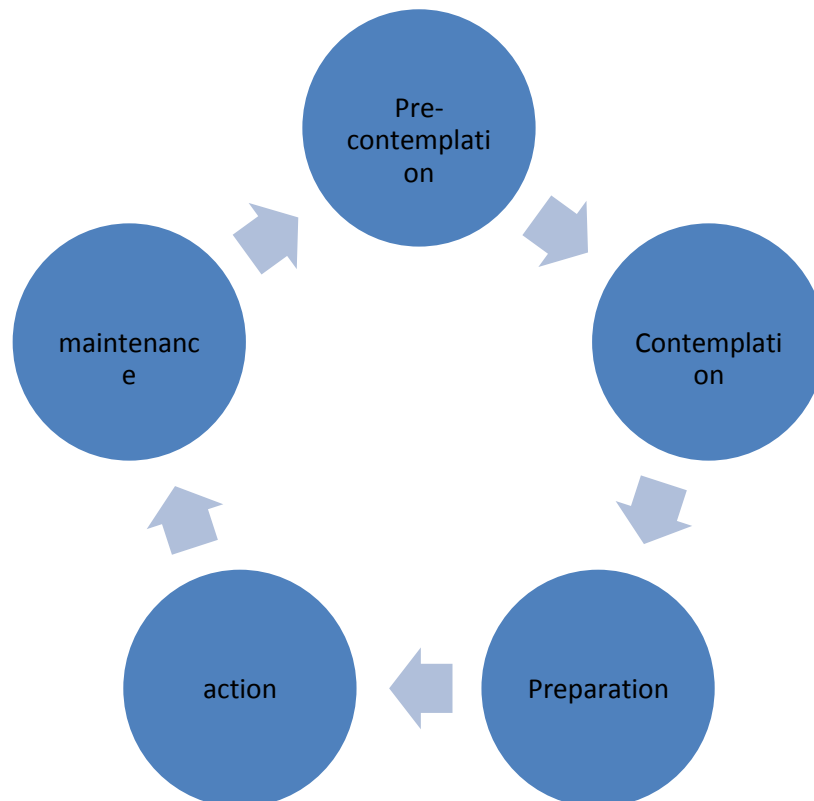
5. Behavior Change Communication

Behavior Change Communication aims to change behavior and practice. Let's understand how behaviors can be changed by looking at the following example.

Ex. "having a nutritious diet"

Stages of change

(adapted from Diclemente and Prochaska)



STAGE 1 – Pre- contemplation

The individual does not have any intention of having a nutritious diet. He does not know the importance of having a nutritious diet. To make him aware we need to feed him information.

Ex. The importance of having a nutritious diet.

STAGE 2 – Contemplation

The individual is now aware of the importance of having a nutritious diet. He needs more information and continued support. He weighs pros and cons of having a nutritious diet. He may begin to think of having a nutritious diet but is not fully decided yet.

STAGE 3 – Preparation

The individual decides to have a nutritious diet. He accepts that his normal diet pattern is unhealthy and he is willing to make a change. He needs more encouragement to overcome obstacles.

STAGE 4 – Action

The individual takes a nutritious diet, commits time and effort.

STAGE 5 –Maintenance

The individual modifies his daily routine by having a nutritious diet. He works to prevent relapses of having unhealthy food. He needs reinforcement.

Now pick an unhealthy behavior pattern in your community. Discuss in groups how it can be changed using the model in the above example.



(small group discussion)

6. Building a supportive environment

An example from a community support group-

What are Mothers' Support Groups?

Mothers' Support Groups (MSG) / Community Support Groups are groups of persons, approximating 5-20 per group, of any age, who come together to learn about and discuss issues of health and nutrition relevant to their communities and promote good practices. These people primarily support each other as they improve awareness and practices to uplift the nutritional and health status of their communities. Priority is given to having members caring for children aged 0–5 years. However, MSG are certainly not confined to those having children in this age group and **mixed membership is encouraged, comprising pregnant mothers, those with infants and young children, including fathers, community leaders/ those respected by the community, teenagers and any other interested persons.** MSG are facilitated by the local Public Health Midwife (PHM) in collaboration with PHI, who is the grass-root level worker in the government health care delivery system.

General objective of MSG

To promote good health and nutrition practices through empowering and mobilizing local communities

Starting and sustaining MSG

In a MOH area where there are currently no MSG, one MSG per PHM is a good goal to start with the guidance of the Medical Officer of Health (MOH) the area.

Where there are already at least a few MSG in a MOH area, expansion to reach the goal of one MSG per PHM and then to a minimum of one MSG per village/ one per estate division and achieve higher quality of community empowerment is targeted. This would be at the discretion of the MOH, taking local factors into consideration

Suggested activities to be conducted through the MSG (to achieve its objectives)

- a) Nutrition promotion activities*
- b) Promoting health screening for NCD
- c) Promoting exercise and sports programmes

- d)** Keeping the environment clean and free of mosquito breeding sites and open garbage dumps
- e)** Preventing school dropping out
- f)** Promoting safety and environment friendliness
- g)** Promoting income generating activities through collaboration with other relevant stakeholders
- h)** Developing baby rooms
- i)** Developing safe and hygienic kitchens using the 5S concept
- j)** Making low cost educational play material/ toys for children
- k)** Promoting good parenting skills
- l)** Promoting the development of healthy settings
- m)** Maintaining happiness calendar to promote good mental health

- a) Discussions aimed at promoting nutrition of children, mothers, adolescents and others
- b) Learn and discuss about locally available food items which are nutritionally good
- c) Learn and discuss about general nutrition and food groups
- d) Positive deviant - sharing good and bad feeding practices in discussion
- e) Breastfeeding support – to promote recommended practices in breastfeeding
- f) Cookery and food demonstrations to promote correct complementary feeding practices and healthy meals
- g) Menu planning and group feeding of preschool children
- h) Encouraging organic home gardening (through having model gardens, competitions in the community, improving awareness about local plants which are easily grown and high in nutritional (micro-nutrients) and medicinal value, etc.).
- i) Improving awareness on proper household budgeting and income management to ensure that health and nutritional needs of the family is met
- j) Nutritional mapping of the community with the guidance of the PHM. Pockets having nutritional issues could be then prioritized for intervention.
- k) Helping PHM by identifying and following-up with families with pregnant mothers or newly married mothers-to-be with low BMI and teenage mothers (with the guidance of the PHM)

- l) Helping PHM in identifying and following-up with children underweight for age, having growth faltering, stunting or overweight (with the guidance of the PHM)
- m) Strengthening growth monitoring by working with the PHM to ensure that families bring their children aged 5 years and less to the clinic and weighing posts regularly, as recommended

Collaboration with other sectors – agriculture, samurdhi, DO, counsellors, child rights promotion officer, social officer
Water board

- n) Growth promotion activities -
- o) Conducting innovative activities to promote nutrition of their communities, such as exhibitions, competitions, puppet shows and street dramas

Ideally, a good mix of some of the above-mentioned activities should be done through each MSG. Where this mix is achieved, health and nutrition upliftment of communities would be easily achievable.

Reference

2014 Mothers' Support Groups Guideline Draft, Health Education Bureau



Now you can discuss among yourselves how to build a supportive environment in your community. (small group discussion)

7. Media and public policies

- What are public policies regarding nutrition and health?

.....

.....

.....

- How do they promote/limit nutrition?



(small group discussion)

Handling media pressure



Small group discussion to critically analyse advertisements.

Module No 3:

Inter-sectoral collaboration

Introduction

The current state of nutrition in Sri Lanka requires urgent attention. Among under 5 children in Sri Lanka, 0.43 million are underweight, 0.23 million are well below required weight-for-age and 0.38 million are below required height-for-age, while 18.1% of births are of below satisfactory weight (Department of Nutrition, 2011). Therefore, there is a need to employ a focused effort in nutrition promotion and related activities.

Particularly in health promotion and developmental initiatives service providers have become more specialized and services are rendered by different governmental and non-governmental organizations, and therefore services need to be integrated in order to achieve a common goal (Axelsson and Axelsson, 2006). No health promotion strategy can stand on its own as a clear success but need to act in conjunction with each other and include supporting actions in order to be successful (Jackson et al.,)

Intersectoral collaboration in public health is recognized as a core strategy in the Ottawa Charter for health promotion (WHO, 1986). This includes community health partnerships and health alliances, and 'socio – ecological' approaches to prevention and health promotion (Davis and Macdonald, 1998). In the past 25 years there have been initiatives for integration in different fields of health care such as care of elderly, vocational rehabilitation and other forms of community care (Axelsson and Axelsson, 2006).

The need for intersectoral collaboration is highlighted in Sri Lankan government policy as well. In Mahinda Chinthanaya (MEA, 2014) the "Suwa Sevana" programme overseen by Ministry of Health plans to promote collaboration between all the sectors involved in preventive care. Plans for improving Agriculture and thus promoting nutrition are also mentioned, highlighting the importance placed on intersectoral collaboration for nutrition promotion.

When collaborating to design interventions/ implement project targeting nutrition outcomes, it is necessary to identify the stakeholders and do a thorough analysis of the nutrition context. Stakeholders for nutrition promotion include (but not limited to,

- Ministry of Health.
- Ministry of Economic development.
- Central government.
- Department of Agriculture.
- Ministry of Education.

Questions to be raised to understand the institutional, policy and programme context:

- Which are the main ministries and other governmental institutions involved in food and nutrition security policies and programmes, at the central, district and local level?
- Which are the main development partners - donors, UN, NGOs, academia, CSOs - involved in food and nutrition security and what are their areas of work?
- Which are the main private sector entities (including farmers' organizations) involved in food and nutrition security interventions and how are they engaged?
- Which are the main guiding policy and programming frameworks related to food and nutrition security? What is their status of application and implementation?
- Which coordination mechanisms deal with food and nutrition security related issues

Questions to be raised to understand the nutritional situation in the programme area:

- What is the prevalence of malnutrition in the country/programme area? – Acute malnutrition/wasting (severe and moderate); – Chronic malnutrition/stunting; – Micronutrient deficiencies among preschool-age children and women, especially iron (anaemia), iodine, vitamin A and zinc; – Overweight among children and adults; – Underweight among women.
- Are there any seasonal or gender patterns in rates of acute malnutrition? How are these explained?
- Are certain geographical areas more affected by malnutrition than others? (If so, which ones and why?)
- Are certain livelihood groups and/or socio-economic groups, such as smallholders, landless, urban residents, unemployed, ethnic minorities, more affected by malnutrition than others? What forms of malnutrition, and why?

Questions to be raised to understand health and sanitation environment, including food safety:

- What are the most prevalent diseases (e.g. malaria, HIV/AIDS, diarrhoeal diseases, acute respiratory infections (ARI), chronic diseases)? Specify the prevalence and severity of major diseases, if possible.
- Where do households access drinking water? Is there a piped water supply? Is the water clean or contaminated (with biological or chemical contaminants)?
- Who collects water, for agricultural and household use?
- Do agricultural or agro-industrial activities influence the water supply, either in quantity or quality?
- Do animals live in or near the household (especially where young children may be playing)?
- Are there risks of zoonotic disease?

- Do households have access to and practice regular deworming?
- Do households have access to latrines? Do households use the latrines?
- Do households have access to soap? Is hand washing practiced, i.e. before handling, preparing and eating food, feeding children, using the latrine, touching and handling animals?
- Are there differences between localities, socio-economic status or gender?
- Are there any food safety issues, such as chemical or microbiological contaminants, in the food supply?

#Questions to be raised to understand food consumption patterns and dietary needs:

- Does the local diet allow people to meet their nutritional needs, in terms of diversity, energy, protein and micronutrients? If not, which foods, food groups or nutrients seem to be lacking in the local diet? – What are the most commonly eaten foods in the local diet? – What does the typical local food plate look like? For instance, how much of it is taken up by cereals, and how does it compare to the local dietary guidelines? – Are specific foods processed and consumed (including cultivars, varieties or breeds, or wild or underutilized foods), which could be used to solve existing nutritional problems, especially if produced in greater quantities? Are they accessible to the population? Can they be grown in the area or transported into the area?
- Are there disparities among sub-populations in terms of meeting nutritional needs? – Are there geographic or ethnic differences in food consumption? Gender differences? Which are the vulnerable groups in the population in terms of nutrition? – Are breastfeeding and complementary feeding practices for children under two years of age adequate, in terms of frequency of feeding, energy density and diversity? – Are pregnant and lactating women able to meet their heightened dietary needs? – Do any cultural practices and food taboos limit consumption of certain foods by particular groups or individuals?
- Are food consumption patterns changing? If so, in what way: for example increasing demand due to population increase; changes in diet linked to urbanization and growing reliance on markets, increased consumption of imported foods? – What proportion of the diet is composed of industrially processed ultra-processed foods like soft drinks and refined starch-based snacks or alcoholic beverages?

#Questions to be raised to understand food availability and seasonality:

- What foods are produced in the country/programme area, and during which season? Are foods from all food groups produced: cereals, tubers/ starchy roots, fruits, vegetables, legumes, nuts, dairy products, eggs, meat and fish, oil and fat? What are the seasonal patterns of food availability? Are there times of food scarcity; if so, for which foods and for how long?
- Are produced foods mostly consumed by the household, sold, or both?
- What kinds of foods can be produced in local agro-ecological conditions, considering climate, soil health, rainfall, etc.? What are the most climateresilient crops that can be grown? What are the main constraints to food production?
- What foods are most commonly available in the markets, stores and from street vendors? How does availability vary by season?
- What foods are typically purchased and what are the main constraints to accessing them (income, distance, scarcity, etc.)? How does this vary by season?
- Are foods stored and/or processed to increase availability throughout the year? If so, which ones? Is food stored or processed at household, community or industrial level? What are the major challenges to storing and preserving foods?

#Questions to be raised to understand household access to food:

- How do households access food: through homestead production, purchase, collection, barter, gifts and food aid? What is the relative importance and reliability of each source?
- Do middle- and low-income households have sufficient purchasing power to buy sufficient food and other essential items?
- What are the prices of the major food items? Are there differences by location and season?
- Are certain food groups, such as animal products, fruits and vegetables, too expensive for middle- and low-income households? Are food prices increasing or likely to increase?
- What are the main sources of income of local households: e.g. employment, sale of own production, remittances, loans, incomegenerating programmes, etc., and how reliable are they?
- Do households have safe access to food markets in terms of distance, transportation means and cost?
- Are household strategies for accessing food changing? If so, how: for instance, increasing reliance on purchased foods and supermarkets?

#Questions to be raised to understand gender and care practices:

- How do women compare with men regarding educational status, rights, access to resources and decision-making power?
- What are the roles and responsibilities of different household members?
- Related to agricultural work, what is the largest labour burden for women? What are the opportunities for, or obstacles, to increasing their income and reducing drudgery?
- What constraints do women face in securing adequate food for their family?
- Who takes care of dependents - children, the elderly, the sick - in the household, and at community level: community structures and kinship networks?
- How much time do mothers devote to child care and feeding?
- Do women have access to reproductive health services and family planning?
- Which households face problems providing adequate care for all family members: for example, households with a high number of dependents compared to the number of working or able individuals?

#Questions to be raised to understand access to productive assets and marketing opportunities: equity issues

- Do identified vulnerable households or groups have access to productive assets, namely land, water, agricultural inputs and extension services?
- Do they have the possibility to engage in small-scale gardening or small livestock-raising or pond aquaculture/fish ponds?
- Do they have the opportunity to engage in off-farm activities, such as food processing and retail?
- What are the constraints to market access among various population groups?
- Does the existing infrastructure and security enhance or hinder access to productive assets, income-generation activities or marketing of foods?
- Note: the answers to these questions may vary by group or community.

#Questions to be raised to understand policy frameworks and regulations:

- Which policies exist in nutrition, food, agriculture or other sectors that mention explicitly nutrition as target, means or as entry point for policies? – Are policy frameworks designed to increase the production of a wide variety of micronutrient-rich foods, make them available at affordable prices and/or increase intakes of micronutrient-rich foods? – Are policy frameworks designed to support informed food choices, namely nutrition labelling, school meal standards, national dietary guidelines, nutrition education for the public and schoolchildren?
- Do any policy frameworks or regulations have a significant impact on household food consumption patterns and strategies for accessing foods? If so, which ones? Examples may include food subsidies, agricultural input subsidies, social protection programmes - in the form of vouchers, cash and/or food - trade policies, regulations on food quality and safety or absence thereof. What are the positive and negative impacts of these policies on household consumption patterns?
- Are there any major policy issues (e.g. food safety regulations; nutrition composition of food rations given through social protection programmes) that are not addressed by current policy frameworks?
- What implications may these policies - or lack thereof- have for programme formulation?
- How will the programme interact with existing policies?
- How can programmes influence the policy and decision-making process? What are the most pertinent arguments that policy-makers may raise to change national or international policies?

About each ministry/ department, we will learn the following.

1. The organisational structure within the ministry/ department.
2. What are the goals/ duties of grass root level officer.
3. Meetings held within the ministry/ department.

So, at the end of the learning process, you will know whom to contact at the community level and how each ministry/ department can work together to achieve a common goal.

Qualitative study on Inter-sectoral collaboration for nutrition promotion among stakeholders in Sri Lanka

Dr.AselaOlupeliyawa of the Faculty of Medicine, MEDARC

The specific objectives

- To identify beliefs and attitudes on promoting nutrition, especially in rural communities and on inter-sectoral collaboration including perceived role/s.
- To discuss the current policies and practices in participating in nutrition promotion and the existing partnerships with other agencies
- To discuss the challenges and limitations in inter-sectoral collaboration for nutrition promotion.

Method

Semi-structured interviews were carried out with executive level state and non-governmental sector stakeholders who are directly or indirectly involved in promoting nutrition.

For the preliminary study 10 interviews were conducted with the executive level officers of the government ministries, funding/International agencies, Eastern and Uva local governments and community based NGOs.

Results

Five themes were identified

1. Role clarification
2. Implementation and evaluation
3. Communication gaps
4. Attitude towards collaboration
5. Training and development

1. Role clarification

- Many sectors have recognized the Health Ministry as the lead ministry on nutrition related activities whereas the Economic Development Ministry is being identified for its capacity to implement projects at the grass root level.
- A major role is also being identified for the Ministry of Planning.

- There is also a limited accountability on non-health sector to deliver nutrition related outcomes and a limited recognition of their role.
- Meantime, decisions are made at the top level with limited consultation of the ground realities whereas the grass root level follow given instructions (e.g. circulars) but contribute minimally to decision making.

2. Implementation and evaluation

- Duties and activities are being identified for each sector but not the nutrition-related objectives.
- Each sector has individual institutional objectives that limit collaboration.
- There is also a need for indicators to evaluate the contribution of other sectors building on the health sector indicators as there is a lack of mechanism to evaluate collaboration.
- Many have agreed that sufficient funds are being received to promote nutrition but no consensus on what need to be done to make an impact.

3. Communication gaps

- Even though there is a good existing structure, there is a lack of knowledge on the local structure which limit the collaboration.
- Decision making power is also limited to the top level and the grass root level work based on activities assigned to them.
- Based on these, the need for an upward reporting mechanism for multi-sectoral action is also being identified.

4. Attitude towards collaboration

- The need for collaboration is identified by all the sectors based on minimizing waste, sharing knowledge and resources.
- However, there is a lack of commitment to achieve a common goal related to nutrition due to individual institutional objectives that limit intersectoral collaboration.
- Meantime, the capacity of non-health sector is constantly being questioned by experts of the health/ nutrition sector.

5. Training and development

- Understanding the role of the health sector and other sectors and programme objectives in nutrition promotion are being highlighted.
- The emphasis is also given on not duplicating the roles in the process but supplementing the roles to get a better outcome.
- While operational guidelines should promote intersectoral collaboration, the existing structure at the grass root level should be put into practice.

The following are recommendations based on the study.

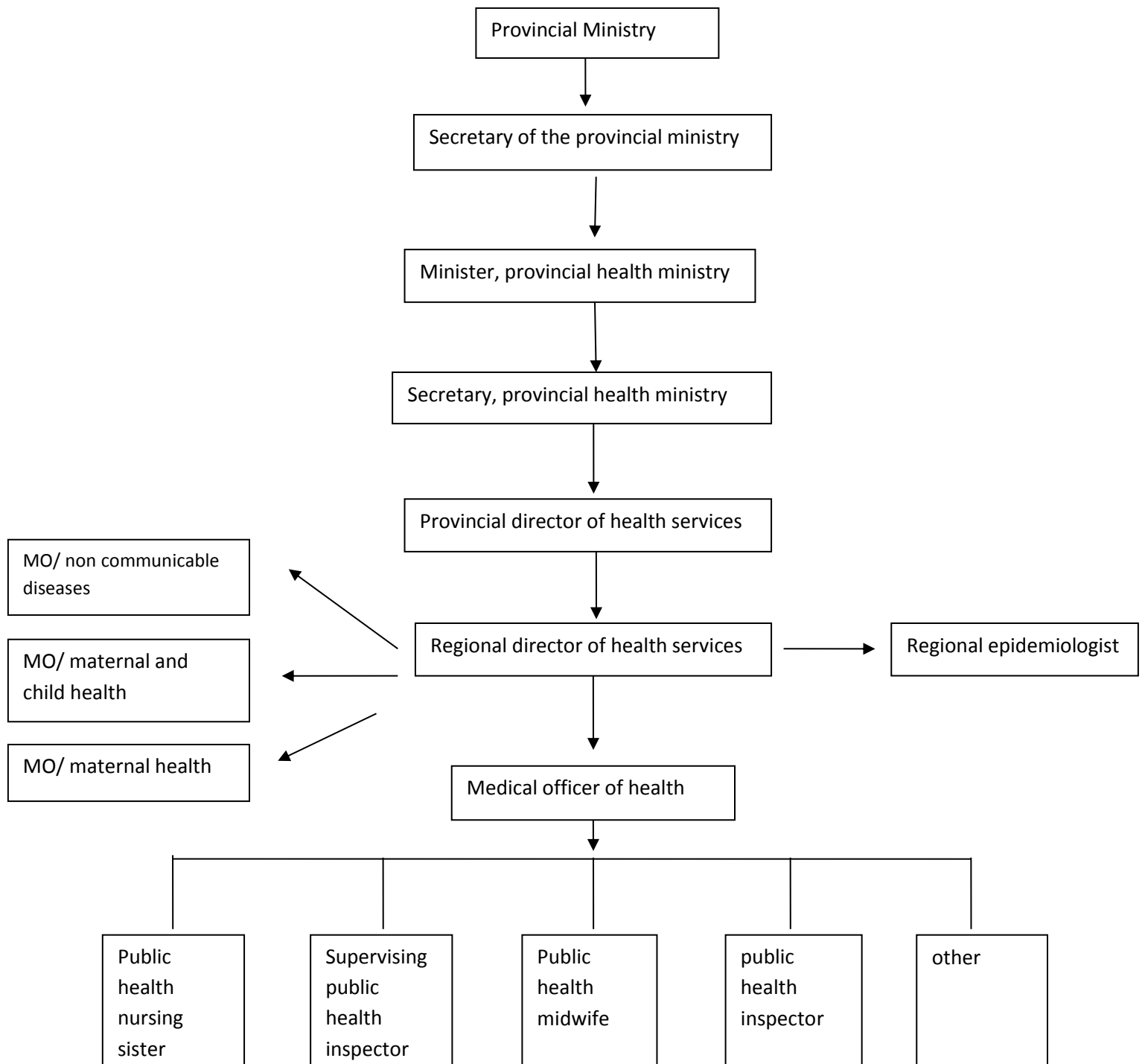
- National multi-sectoral planning to promote nutrition – not only financial planning but also necessary technical input in planning.
- Flexibility in operational guidelines of different ministries.
- Specifying objectives of each sector related to nutrition and make each sector accountable to deliver those objectives.
- The implementation stage to be monitored, evaluated and cross-communicated to all sectors through a proper mechanism.
- Broader discussion on nutrition indicators and identifying indicators to measure the contribution of other sectors in promoting nutrition.
- Need for change in attitudes.
- Health sector to genuinely support activities led by non-health sector institutions/individuals
- Need for other sectors to identify necessary interventions to promote nutrition and evaluate them appropriately.

Competencies

1. Promote/establish effective intersectoral collaboration at their own level.
2. Acquire skills of interpersonal communication.
3. Develop leadership and decision-making skills
4. Cultivate good team working skills

1. Ministry of Health

1. Organizational structure



2. Duties of PHI

General

- Shall gain the confidence and co-operation of the people of his assigned area
- Shall carry out a survey of the area and write a report according to departmental

Instructions, and prepare a programme of work for approval of the supervising officer, within three months of assuming duties in the area

- Shall take prompt action regarding public complaints
- Shall maintain the office in a neat and tidy manner, within the geographical area

of the range, according to the departmental instructions

- Shall attend to the monthly conference at the M.O.H Office and other official meetings convened by the supervising officers

Other

- Control of Communicable Diseases
- Control of Non-Communicable Diseases
- Housing
- Sanitation
- Water supply
- Waste Disposal
- Vector Control
- Rabies control
- Food Safety
- Sanitation in Medical Institutions
- School Health Work
- Occupational Health and Estate Health
- Sanitation during Disasters and Epidemics
- Mental health
- Adolescent health
- Reproductive health
- Health Promotion and Health Education
- Maintaining records and reports

Relationship with local authorities

All PHII of the Department of Health are under the purview of the Director General of Health Services, exercised through the relevant departmental supervising officers. In instances when the services of PHII have been seconded to local authorities, such PHII will work under the direct supervision of the Medical Officer of Health, or the Supervising Public Health Inspector of the area, subject to the overall administrative control of the Head of the Local Authority.

All PHII shall discuss with the leaders of Local Authority, regarding the community health problems in his area.

Duties of PHM

The Public Health Midwife (PHM) is the "front line" health worker providing domiciliary care to mothers and children within the community. The PHM is given a well-demarcated area having a population ranging from about 2000 to 5000. Through systematic home visiting, she provides care to pregnant women, newborns, infants and preschool children and offers family planning services within her area. She provides education and advice on health and health related activities and necessary counseling on family planning to potential clients. She also distributes contraceptives (orals and condoms) and regularly follows-up contraceptive users within her area. She also motivates women above 35 years to attend the area Well Woman Clinic and thereafter follows them in the field to ensure that the instructions are carried out by the individual clients. In addition to her domiciliary care, she also participates in the area clinics linking the community with the health care system.

(Source- Family Health Bureau)

3. Meetings held at the Ministry of Health

- Provincial ministers' meeting.

This meeting is held annually. It is attended by provisional directors and chaired by the minister of health.

- National health development committee meeting.

This meeting is held quarterly annually. It is attended by

- Provincial health secretary
- Provisional directors
- All of provincial health ministry, central health ministry staff.
- Chief secretaries
- Members of finance commissions
 - Finance ministry
 - Development partners (WHO)

- Health development committee meeting.

This meeting is held in two monthly intervals.

It is attended by

- Health minister
- Provincial minister
- Central minister
-

- Monthly conference.

This meeting is held at the MOH office.

It is attended by MOH staff, agriculture instructors, Gramasevaka,

2. Ministry of Economic Development

1. Organizational structure

<p>Project director (PD)-five main sections under PD</p> <p>Additional PD (2 in the country)-Kandy and northeast (each APD for multiple districts)</p>	<ul style="list-style-type: none"> • Technical (technical director) • Finance (finance management specialist) • Administrative (administrative officer) • Livelihood (agriculture specialist) • Community mobilization (community development specialist)
<p>Deputy project director in each district (DPD)- at the level of district project office (main 3 sections under DPD)</p>	
<p>Finance branch</p>	<p>Livelihood and community mobilization branch</p>
<p>Technical branch</p> <ol style="list-style-type: none"> 1. Project engineer 2. Engineering assistant (under livelihood section LDO-livelihood development officer and management assistant) 3. Graph man 4. Management assistant 	

Community mobilization (CM) section is the section that extent into tovillage level)

Community development officer-CDO/community mobilization officer-CMO

CM-community mobilizers

Community Resource Person (CRP)

2. Duties of the CRP

- CRP are the workers at grass root level (they work only at village level).
- They form the connection between Deputy Project Director's (DPD) office and village.
- They are not paid by the project, their allowance (5000/=) is from the income of financial work(loans) at the village level.
- They are responsible for reporting progress of village level works to the Deputy Project Director's office (district project management unit)

➤ There are several committees active at village level and coordinated by CRP

Ex; executive committee (main committee)

Sub committees-livelihood development committee (involve in recommending micro loans)

-infrastructure committee (when developing infrastructure facilities- water supply)

-social auditcommittee (feedback from this committee is considered when giving loans)

- The members of above committees are volunteers as CRPs, not employees of project
- There is monthly village assembly in every month in each village where all the committee members participate.

- ❖ At the district/divisional level DPD office having connections/meetings with many government sectors related to livelihood development and technical fields eg;agriculture service centres”govijanasewa”,vetenarary,irrigation,water board, divisional secretariat, district secretariat.

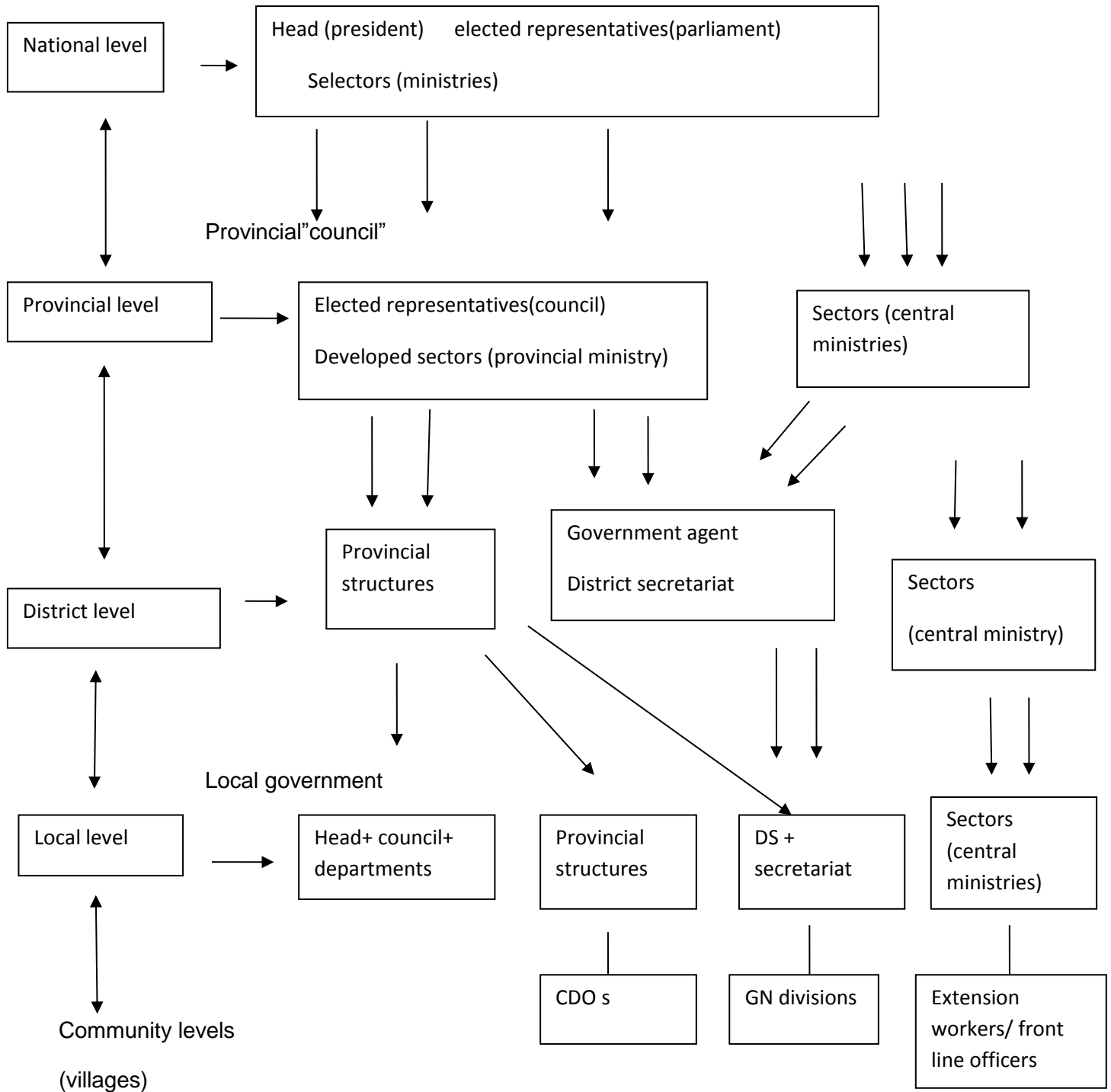
3. Meetings held at the Ministry of Economic Development.

1. (district level) DCC-district coordination committee at district secretariat once in 3 months- all politicians, government sectors participate.
from DPD office DPD/engineering assistant participate
2. (divisional level) DCC-divisional coordination committee- CM/CDO participate
from DPD office
3. (divisional level) DAC-divisional agricultural committee-all government sectors participate, from DPD office LDO/CM participate

Other than these regular meetings there are several meetings arranged with relevant sectors according to requirements.

3. Central Government

1. Organizational structure. (Kruse, 2007)



Local government (Leitan, 2011)

The five provincial ministries in provincial government;

- Agriculture, Lands, Livestock Development, Irrigation and Fisheries
- Education, Cultural Affairs, Sports and Youth Affairs
- Health and Indigenous Medicine
- Rehabilitation, Reconstruction, Social Welfare and Buildings
- Provincial Public Administration, Local Government, Co-operative Development, Road Development, Rural
- Development, Industries, and Management Development & Training

Some units are incorporated under the Chief Secretary's Office:

- Treasury (including Motor Traffic)
- Planning Secretariat (including the Centre for Information Resources Management)
- Engineering Services and Infrastructure
- Legal Unit

Sri Lanka's institutions of local governance consist of the following:

Municipal Councils (18)

Urban Councils (42)

PradeshiyaSabhas (270)

Inter-relationships

It is to be noted that there is no official linkage and interaction between the different types of local authorities. Their relationship is with the Ministry of Local government of the Provincial Council (Ministry which includes local government), as well as the Ministry of Local Government and Provincial Councils at the centre, which functions through Provincial Commissioners of Local Government.

Participation at the Grass Roots

The *PradeshiyaSabhas* in rural areas encompass large territorial areas, so that it is necessary for mechanisms that would provide for meaningful participation of the people in local authority activity.

Presently, large numbers of Community Based Organizations (CBOs) function in village areas, such as rural development societies, women's societies, youth organizations, religious societies, sports societies, etc. These bodies are linked to, and are registered with, the administrative institution, the Divisional Secretariat, and not the elected body, the *PradeshiyaSabha*.

Attention has also to be drawn to the gender issue: representation of women in local government, which is 1.97 % the lowest in the South Asian region.

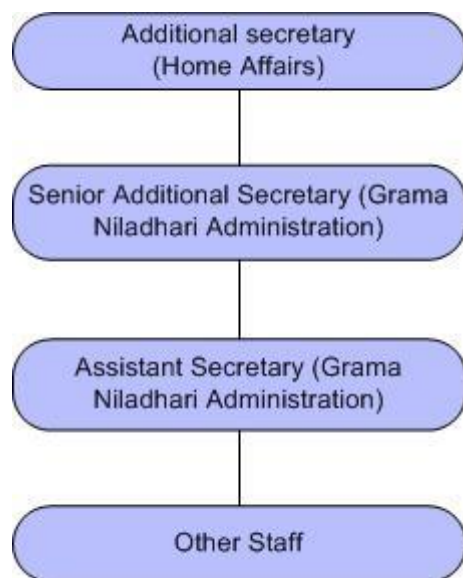
GramaNiladhari Administration Division

With a view to ensure an administrative system at rural level on par with public policies, GramaNiladhari Division which is under Home Affairs Division of the Ministry of Public Administration and Home Affairs implements all administrative functions of GramaNiladharis performing their duties in 14,022 GN Divisions under 331 Divisional Secretary's Division all over the island

Vision. An efficient and productive public service with modern technology

Mission. Ensuring a productive public service and administrative system at rural level which is highly responsive to the expectation of the general public and the priorities of nation

Organization Structure

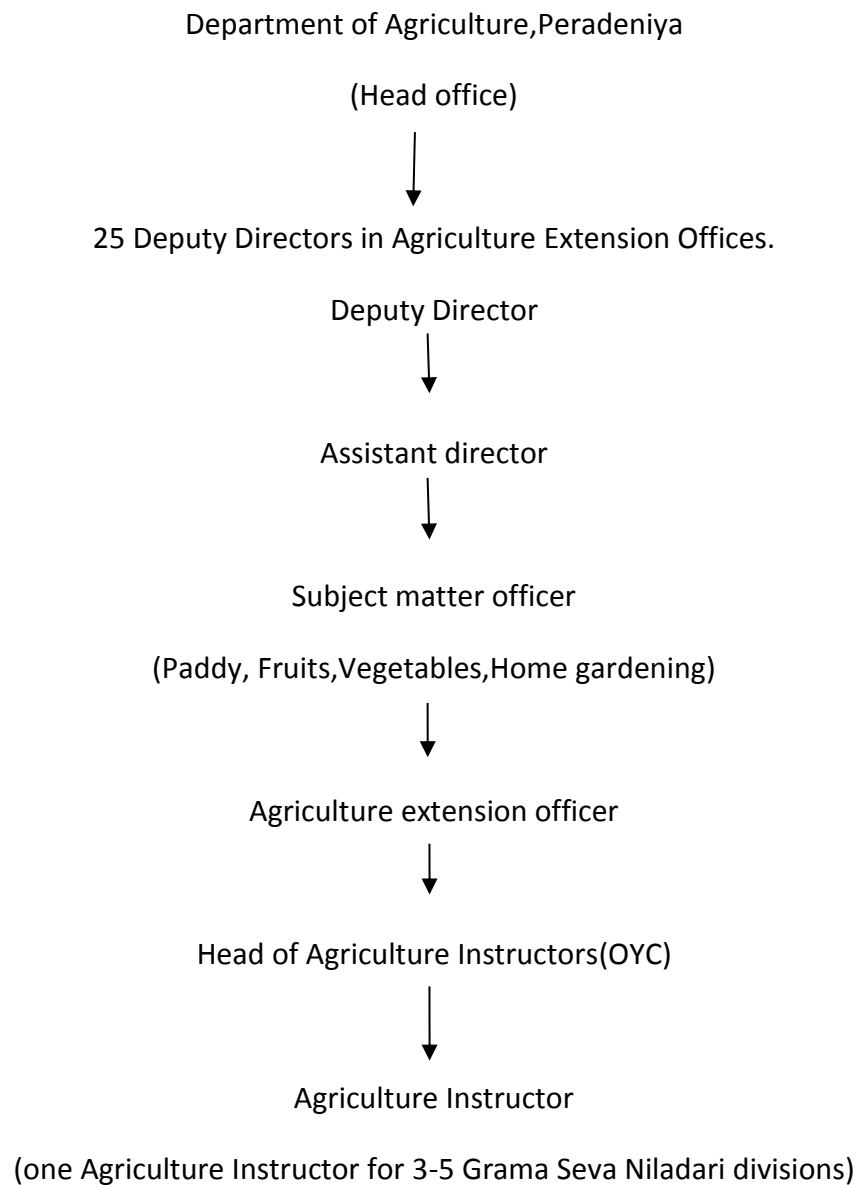


2. Meetings held at Central government

1. DDC - District development committee
participants - GA, DS, Local and National politicians, Other resource persons
2. DDC - Divisional development committee
participants- DS, GN, DO (development officers), local politicians

4. Department of Agriculture

1. Organizational structure.



2. Goals of Agriculture Instructor.

- Improving economic level of farmers.
- Improving production of vegetables, fruits.

Role of Agriculture Instructor.

1. Introducing technology for the farmers.
 - Conducting training programmes.

Ex. Training programmes to improve paddy harvest.

2. Conducting agricultural programmes in schools.

- Establishing home gardens in schools.
- Establishing Young Farmers' Associations involving students in grade 9-11.
- Conducting training programmes, competitions.
- Report these programmes in the media- GoviBimataArunalu TV programme

Radio programmes

3. Improving economic level of women.
 - Establishing women's associations.
 - Providing technology for self-employments. – food preservation, fruit drinks, rice flour-based food production.

3. Meetings held at Department of Agriculture.

- Value area meeting.

This is a Progressive review. It is held two weekly and chaired by Assistant director.

- Coastal area meeting.

This is a Progressive review. It is held two weekly and chaired by Assistant director.

- Monthly meeting of Value and Coastal areas.

Attended by agricultural instructors, OYC s, Subject matter officers, and Assistant director.

- Deputy Directors' meeting.

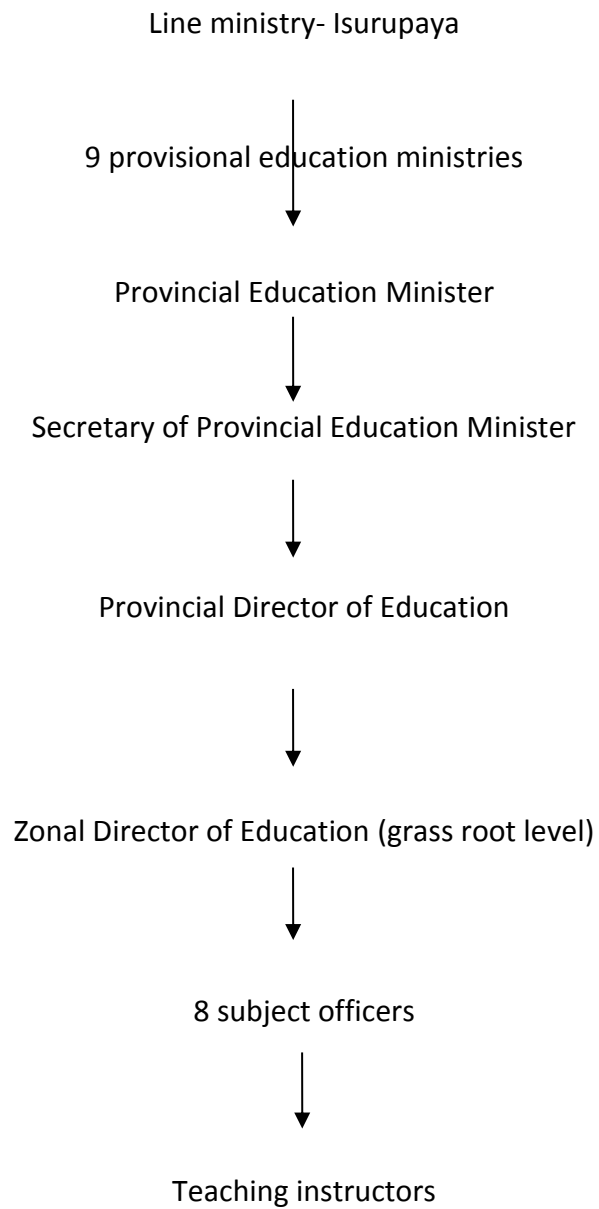
Held two weekly. Attended by Subject matter officers.

- Director General's meeting.

Held twice weekly. Attended by Deputy Directors.

5. Ministry of Education

1. Organisational structure.



2. Goals of the Zonal Director.

- The Zonal Director, Subject officers and Teaching instructors, depending on the subject share the same goal.

Ex. Maths- improving maths results.

Other goals-

- Improvement of overall results
- Absence of disciplinary issues
- Absence of teachers' issues

Goals of Provincial Director of Education.

- Goals are associated with National goals- ex. Improving results by 60 %.

All the officers under the Provincial Director of Education work together to achieve the same goal.

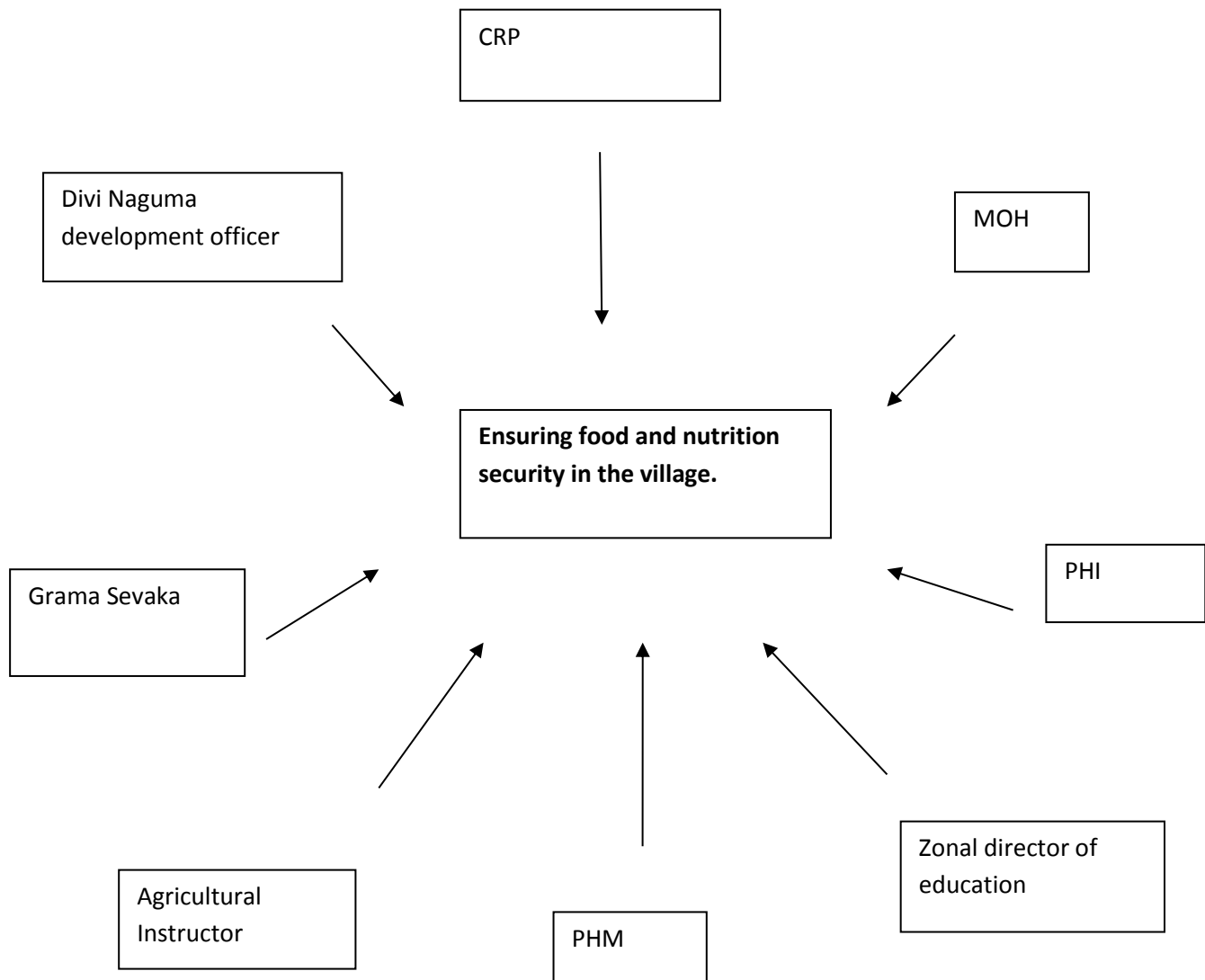
3. Meetings held at the Education Ministry.

- At Zonal Education Office.
Chair- Zonal Director
Attended by Subject Officer, Teaching Instructors.
Held every Wednesday.
Report sent to Provincial Education Ministry.
- At Provincial Education Ministry.
Chair- Provincial Director of Education
Attended by Zonal Directors.
Held two weekly.
- Teleconference
Chair- Minister of Education
Attended by all the Provincial Directors of Education, Zonal directors.

6. Exercise to understand intersectoral collaboration

Now, let's do the following exercise to understand how all sectors work together.

How do all the grass root level workers in the village come together to ensure food and nutrition security in village.



Now, each of the officers will fill the following worksheet.

Example- PHM

- What is my job role?

.....

.....

.....

- What are my goals?

.....

.....

.....

- How can I help to achieve food and nutrition security in my village?

.....

.....

.....

- Who else can contribute to achieve this goal?

.....

.....

- How can they help?

.....

.....

.....

- What are the existing organizations in the village that can contribute to ensure food and nutrition security?

Ex. Village development organization

Consumer groups

Women's associations

.....

.....

.....

When all of you complete this exercise, you will realize who play the key roles to ensure food and nutrition security in village. You will also in order to achieve a common goal, you all need to work together.

7. Group work

Revise problem prioritisation and development of an action plan that you studied in Health Promotion Module. You can apply that knowledge to do this activity.

- 1) Individually write the 5 most important nutrition related problems in your village.
(Please do not discuss and complete this individually. Write the list in a separate sheet of paper)

.....

.....

.....

.....

.....

- 2) Give your list to the workshop facilitator/ lecturer. Workshop facilitator will make a one long list by compiling all the problems you wrote individually.
- 3) Now look at the full list and individually write down the five most important problems from that list.
- 4) Now you can show your top 5 problems to the rest of the group. Give one mark for the problem when it has been written by one person. Identify the top five problems based on the everyone's individual selection.

- 5) Now you need to develop an action plan to address these 5 problems in your village.
- 6) Think about the skills you developed in Health Promotion Module and complete this task.
- 7) Make a list of stakeholders you require to implement that action plan and the role of each participant around the table.
- 8) Present this plan at the final workshop and discuss with the INPARD team.
- 9) You will be implementing this over the next one year and keep a good record of all the activities and your individual contribution.
- 10) We will review this at the end of the one year and discuss challenges you faced and how you tackled them.

8. Developing Communication skills

Case scenario-

MOH of village X, wants to assess knowledge on nutrition of school children and village people. He entrusts this task to PHI and PHM of the MOH area.

PHI-"How can we do this. We are busy as it is."

PHM-"yes, but we can ask others to help us"

PHI-"others?"

PHM-"Grama sevaka, CRP, Zonal director..."

PHI- " will they help us? This is not their task"

PHM-"we have to ask them to help us."

PHI-"yes, we have to take permission from the Zonal director to collect data in schools"

Now, discuss in your group as to how to contact the Zonal director, and take permission.

.....
.....

PHM-"how do we talk to Grama sevaka?"

.....
.....

PHM-"what if he says he is busy?"

.....

.....

.....

PHI-"who else can we contact?"

.....

.....

Discuss among yourselves as to how the PHM and PHI should proceed on.

9. Team building sessions

Your training session facilitator will guide you through team building sessions.

References

- Axelsson R, Axelsson S B. 2006. Interaction and collaboration in public health – a conceptual framework. *International Journal of Health Planning and Management*. 2006; 21: 75-88.
- Davis J K, Macdonald G (eds). 1998. *Quality, Evidence and Effectiveness in Health Promotion*. Routledge: London
- Department of Nutrition, Medical Research Institute (2011) *The Nutrition Bulletin of Sri Lanka, Inaugural Edition*, Colombo, Ministry of Health, Sri Lanka.
- Hoffman, K. and Jackson, S. (2003) A review of the evidence for the effectiveness and costs of interventions preventing the burden of non-communicable diseases: how can health systems respond? Unpublished: Prepared for World Bank Latin America and the Caribbean Regional Office.
- Kruse, C. (2007) *State Structure in Sri Lanka*. Trincomalee/ Colombo, Center for International Migration and Development.
- Leitan G.R.T. (2011) *Overview of decentralization and local governance in Sri Lanka*. Colombo, Swiss Agency for Development Cooperation, Sri Lanka.
- Ministry of External Affairs (MEA), Sri Lanka (2014) *Mahinda Chinthana* [online] Available from: www.mea.gov.lk/index.mahinda-chinthana/3016_mahinda-chinthana [Accessed: 30th April 2014]

World Health Organization (1986) *The Ottawa Charter for Health Promotion*, Geneva, WHO.