Nutrition Program Planning and Supervision: For Health and Agriculture Program Managers

Reference Manual

Empowering New Generations to Improve Nutrition and Economic Opportunities (ENGINE) Project
Jhpiego Ethiopia

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<td>ASF</td>
<td>Animal Source Food</td>
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<td>BCC</td>
<td>Behavior Change Communication</td>
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<td>CBN</td>
<td>Community Based Nutrition</td>
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<td>CHD</td>
<td>Community Health Days</td>
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<td>CMAM</td>
<td>Community Based Management of Malnutrition</td>
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<td>CSA</td>
<td>Central Statistical Agency</td>
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<tr>
<td>DHS</td>
<td>Demographic and Health Survey</td>
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<td>EBF</td>
<td>Exclusive Breast Feeding</td>
</tr>
<tr>
<td>EDHS</td>
<td>Ethiopia Demographic and Health Survey</td>
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<tr>
<td>ENA</td>
<td>Essential Nutrition Action</td>
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<tr>
<td>EOS</td>
<td>Enhanced Outreach Service</td>
</tr>
<tr>
<td>FMOH</td>
<td>Federal Ministry of Health</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GMP</td>
<td>Growth Monitoring Project</td>
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<td>GNP</td>
<td>Gross National Product</td>
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<td>HEP</td>
<td>Health Extension Package</td>
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<td>HEW</td>
<td>Health Extension Worker</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IMCI</td>
<td>Integrated Management Child Illness</td>
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<td>IYCF</td>
<td>Infant and Young Child Feeding</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organizations</td>
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<td>NNCB</td>
<td>National Nutrition Coordination Body</td>
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<td>NNP</td>
<td>National Nutrition Programme</td>
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<td>NNS</td>
<td>National Nutrition Strategy</td>
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<td>ORS</td>
<td>Oral Rehydration Salt</td>
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<td>OTP</td>
<td>Outpatient Therapeutic Programme</td>
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<td>PCM</td>
<td>Project Cycle Management</td>
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<tr>
<td>PSNP</td>
<td>Productive Safety Net Programme</td>
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<td>SC</td>
<td>Stabilization Center</td>
</tr>
<tr>
<td>TFP</td>
<td>Therapeutic Feeding Programme</td>
</tr>
<tr>
<td>TSF</td>
<td>Targeted Supplementary Feeding</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>VCHW</td>
<td>Voluntary Community Health Worker</td>
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<td>WASH</td>
<td>Water, Sanitation and Hygiene</td>
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<tr>
<td>WHO</td>
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MODULE ONE: WHY NUTRITION MATTERS?

Introduction
Malnutrition is the underlying cause of more than 2.6 million child deaths each year. Of 171 million children, 27 percent of all children globally, are stunted, meaning their bodies and minds have suffered permanent, irreversible damage due to malnutrition. Children whose bodies and minds are limited by stunting are at greater risk for disease and death, poor performance in school, and a lifetime of poverty. More than 80 countries in the developing world have child stunting rates of 20 percent or more. Ethiopia is one of thirty countries which are considered to be “very high” stunting rates above 40 percent. While many countries are making progress in reducing child malnutrition, stunting prevalence is on the rise in at least 14 countries, most of them in sub-Saharan Africa (SC USA 2012). The effects of malnutrition in developing countries can translate into losses in Gross Domestic Product (GDP) of up to 2-3 percent annually. Globally, the direct cost of malnutrition is estimated at $20 to $30 billion per year (SC USA 2012).

Malnutrition is one of the main public health and development problems in Ethiopia. The country has the second highest rate of malnutrition in Sub-Saharan Africa. The 2011 Demographic and Health Survey (DHS) report has shown about 44 %, 29% and 10% of children under five were stunted, underweight and wasted respectively.

The module covers important concepts in nutrition, types, causes trends and impact of malnutrition in general with particular emphasis on Ethiopian context.

Main Objective: After completing this module, the participants will be able to describe causes, trends and impact of malnutrition in Ethiopia

Specific Objectives: To attain module objective, the participants will:
- Define terms and concepts of nutrition
- Discuss types & causes of malnutrition
- Describe trends of malnutrition in Ethiopia
- Describe nutrition programmatic indicators and trends among children and mothers
- Discuss the impact of malnutrition

Definitions of terms

Nutrition: The scientific study of food and its nutrients; its functions, actions, interactions and balance in relation to health and disease. It can also be defined as the process of ingesting; digesting, absorbing and utilization of food (nutrients) for body to properly function (maintain, grow, produce, reproduce and resist and recover from disease).
**Malnutrition** is a general term that includes many conditions, such as *undernutrition*, *overnutrition* and micronutrient deficiency diseases (like vitamin A deficiency, iron deficiency anemia, iodine deficiency disorders and scurvy). The main focus of this module is *undernutrition* which resulted from inadequate intake of Macronutrients (proteins, fats and carbohydrates) and micronutrients (minerals and vitamins) or inability to utilize the food they eat due to illness.

**Wasting, or thinness**, is an indicator of acute (short-term) malnutrition. Wasting is usually the result of recent food insecurity, infection or acute illness such as diarrhea. Measurements of wasting or thinness are often used to assess the severity of an emergency situation, with severe wasting often being linked to the death of a child.

**Stunting, or shortness**, is an indicator of chronic (long-term) malnutrition. It’s often associated with poor development during childhood and is one of the harmful effects of poverty. Stunting is commonly used as an indicator for development, as it is strongly associated with poverty.

**Underweight** is an indicator of both acute and chronic malnutrition. Underweight is a useful indicator when examining nutritional trends. It is the indicator used to monitor the Millennium Development Goal (MDG) of ending hunger, with a target of halving the prevalence of underweight children and adults by 2015.

**Overnutrition** (overweight & obese): results from excessive intake and deposit of micronutrients

**Types and Causes of Malnutrition**

There are three types of *undernutrition*:

- **Acute malnutrition** (rapid weight loss (wasting) or inadequate weight gain due to severe nutritional restrictions, a recent bout of illness, inappropriate childcare practices or a combination of these factors),
- **Chronic malnutrition** (inhibited growth in height (Stunting) and cognitive development caused by *undernutrition* over a period of time) and
- **Micronutrient malnutrition** (deficiency in one or more minerals or vitamins) results in symptoms specific to the deficient micronutrient.

As reflected in Figure 1.1, the causes of malnutrition are classified into three stages.

**Immediate Cause**: The immediate cause of malnutrition, operating at the individual level, is an imbalance between the amount of nutrients absorbed by the body and the amount of nutrients required by the body. When the body’s requirements are not met, malnutrition can occur. This happens as a consequence of consuming too little food or having an infection which either increases the body’s requirements or causes the body not to absorb the food consumed. In practice, these two problems often occur at the same time because one can lead to another.

**Underlying Causes**: Whether an individual gets enough food to eat or whether s/he is at risk of infection is mainly the result of factors operating at household and community level.
These are known in the framework as the underlying causes. They are grouped into three types: those related to food security, those related to the social and care environment, and those related to public health.

**Basic Causes**: the basic causes of malnutrition are a result of the resources available (human, structural and financial) and the political ideology affecting how these resources are used, particularly how they determine the formal and informal infrastructure which is put into place. Local priorities in turn determine to what extent households and communities can access these resources.

**Prevalence and Trends of Malnutrition in Ethiopia**

The prevalence and trends of acute and chronic malnutrition in Ethiopia are found to be among the highest in the world. In recent years, there has been good progress in reducing the prevalence of malnutrition in Ethiopia. Ethiopian Demographic and Health Survey (EDHS) carried out by CSA in 2000, 2005 and 2011 which focused on rural Ethiopia has shown a decline in prevalence of malnutrition.

<table>
<thead>
<tr>
<th>Status of Children</th>
<th>EDHS</th>
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<tr>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Malnutrition status &amp; trends in Ethiopia</td>
<td></td>
</tr>
<tr>
<td>Indicator</td>
<td>2005 (%)</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------</td>
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<tr>
<td>Infant mortality rate (per 1,000 live births [LB])</td>
<td>77</td>
</tr>
<tr>
<td>Children &lt; 5 years mortality rate (per 1,000 LB)</td>
<td>123</td>
</tr>
<tr>
<td>Maternal mortality rate (per 100,000 LB)</td>
<td>673</td>
</tr>
<tr>
<td>Newborns with low birth rate</td>
<td>14</td>
</tr>
<tr>
<td>Prevalence of anemia in women</td>
<td>27</td>
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<tr>
<td>Maternal malnutrition (BMI &lt;18.5)</td>
<td>27</td>
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<tr>
<td>Anemia in children 6–59 months of age</td>
<td>54</td>
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<tr>
<td>Vitamin A deficiency (VAD) (%)</td>
<td>61</td>
</tr>
<tr>
<td>Early initiation of breastfeeding</td>
<td>69</td>
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<td>Exclusive breastfeeding under 6 months</td>
<td>49</td>
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<td>Children aged 6–9 months who receive complementary food and continued breast feeding</td>
<td>44</td>
</tr>
<tr>
<td>Deaths attributed to breast feeding</td>
<td>NA</td>
</tr>
<tr>
<td>Iodization of household salt</td>
<td>4</td>
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</tbody>
</table>

Impact of Malnutrition
Globally, malnutrition is associated with more than half of all child deaths through increasing the risk factors of other child illnesses. In Ethiopia, as reflected in Fig 1.2, more than 50% of child death is related to malnutrition.

Figure 1.2: Causes of under-five deaths in Ethiopia (Data source health and health related indicators FMOH 2011)

While any attempt to assign an economic cost to this excess loss of life is futile, productivity loss due to iodine deficiency costs 1,347 million birr each year; loss due to stunting costs 2,992 million birr. (Eleven cms of height is lost in the first two years due to suboptimal feeding.) besides the economic costs of increased health care required for malnourished children including both the increased number of days for hospitalization and the costs of outpatient care (Ethiopia profiles 2006). It is also readily apparent that the achievement of the MDG for child mortality is hampered by the slow pace of improvement in nutrition.
Figure 1.3: Impact of Malnutrition on Economy

Table 1.3: Explanation of impact of malnutrition on economy

<table>
<thead>
<tr>
<th>Arrow-1: How malnutrition decreases productivity</th>
<th>Arrow-2: How malnutrition increases deaths and illness</th>
<th>Arrow-3: How malnutrition causes poor educational performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>- When malnourished individuals are sick, they can’t perform their daily work (e.g., sick farmer)</td>
<td>- Malnutrition weakens immunity and predisposes individuals to different infections</td>
<td>- Iron deficiency anemia lowers IQ by 9 points, mild iodine deficiency by 10 points, severe stunting by 5-10 points, and low birth weight by 5 points</td>
</tr>
<tr>
<td>- Individuals with iron deficiency anemia (particularly women) become tired and can’t perform their day-to-day activities</td>
<td>- More than half of infant deaths are associated with malnutrition</td>
<td>- High absence and drop-out rates from school due to malnutrition associated illness</td>
</tr>
<tr>
<td>- Shortage of iodine decreases IQ and causes a productivity loss</td>
<td>- Suboptimal breastfeeding is accountable for 24% of infant mortality and vitamin A deficiency for 17% of deaths</td>
<td></td>
</tr>
<tr>
<td>- Stunting also causes less productivity</td>
<td>- Marasmus and kwashiorkor and finally death are caused by severe malnutrition</td>
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<tr>
<td></td>
<td>- Goiter due to iodine deficiency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Night blindness to complete blindness from vitamin A deficiency</td>
<td></td>
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<tr>
<td></td>
<td>- Anemia from iron deficiency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Diseases from deficiency of vitamins (scurvy, pellagra, etc.)</td>
<td></td>
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</tbody>
</table>
Summary

Significant per cent of the world’s children under the age of five continue suffer from acute and chronic undernutrition, a condition that is life-threatening and undermines their health and development. Malnutrition results from a combination of problems related to poor diet, ill-health and inappropriate care. The causes of malnutrition are generally categorized as basic, underlying and immediate which is reflected at country, community and individual level.

Undernutrition is the major problem of developing countries and Ethiopia is among the countries of highest stunting rate. The most vulnerable population groups are those whose nutritional needs are higher and social status is lowest: young children, pregnant and lactating women, the sick and the elderly. The resulting mortality, morbidity and loss of productivity impede social and economic development worldwide.
### Job Aid 1.1: How to identify the immediate, underlying and basic causes of malnutrition

| Immediate Cause | 1. Why a child, a mother or other person is malnourished?  
|                 |   - Inadequate dietary intake (both in quantity and quality)?  
|                 |   - As a result of illness? or  
|                 |   - Combination of both?  
| Underlying Cause | 2. What are the reasons for the existence of inadequate dietary intake or illness happening at household or community level?  
|                 |   - Is it because of food insecurity?  
|                 |   - Is it lack of proper feeding?  
|                 |   - Is it because of poor caring practices?  
|                 |   - Is it because of inadequate health services? or  
|                 |   - Is it because of unhealthy environment (sanitation and hygiene)? or  
|                 |   - Combination of these?  
| Basic Cause | 3. What are the reasons for the existence of food insecurity, improper feeding and caring practices, lack of service facilities and unhealthy environment at country level?  
|             |   - Is it because of lack of resources (financial, human and material)?  
|             |   - Is it because of lack of political commitment?  
|             |   - Is it because of lack of adequate infrastructures like health facilities, schools, roads, networks etc? or  
|             |   - Combination of these  

MODUETWO: PREVENTATIVE NUTRITION INTERVENTIONS IN ETHIOPIA

Introduction

The Government of Ethiopia has developed an impressive array of national nutrition Strategy (NNS) and National Nutrition Programme (NNP) with the overarching goal of ensuring all citizens attain an adequate nutritional status for productive and healthy life. The national nutrition programme is mainly focused on a set of affordable and highly effective nutrition interventions, identified as the seven essential nutrition actions (child and maternal feeding practices) and community based nutrition. Currently, different nutrition interventions are in place using NNP as platform in the country at different level.

Program managers need to have basic understanding of nutrition interventions in place for effective planning and supervision. Therefore, in this module national nutrition strategy/program, multi-sectoral approach and selected preventative nutrition interventions are covered.

Main Objective: After completing this chapter, the participants will be able to describe the national nutrition strategies and program, discuss preventative nutrition interventions and its multi-sectoral nature.

Specific Objectives: To attain module objective, the participants will:

- Describe the national nutrition strategy and program
- Explain the seven essential nutrition actions
- Discuss infant and young child feeding practices
- Discuss maternal nutrition and under-nutrition cycle
- Discuss micronutrient malnutrition and its prevention strategies
- Explain the concepts and strategies of community based nutrition

National Nutrition Strategy and Program

Malnutrition has been a serious obstacle to economic development to Ethiopia. The realization of sustainable human and economic development requires sustainable improvement in nutritional status of the population. In order to identify, prioritize and take actions, the government of Ethiopia has formulated National Nutrition Strategy (NNS) and National Nutrition Programme (NNP) in 2008.

National Nutrition Strategy: In order to prevent malnutrition and improve the nutritional status of the population, the government, together with key partner organizations, has formulated the NNS in 2008. NNS is expected to be successfully implemented though strengthened collaboration and coordination of efforts among all stakeholders.
The goal of this NNS is to ensure that all Ethiopians attain an adequate nutritional status, which is an essential requirement for a healthy and productive nation. This will be achieved when food security – defined as secure availability of, access to, and utilization of food – is coupled with a healthy environment, adequate health services, and knowledgeable care for all. The strategy seeks to ensure the nutritional well-being of all Ethiopians. Good nutrition is a key element of the quality of life that all citizens desire.

**National Nutrition Programme (NNP):** The NNP is a long-term program that is being implemented in two phases for 10 years, each phase lasting five years. The NNP phase I (NNP I) spanned for first five years from July 2008 to June 2013.

The second phase (NNP II), which covers the period of July 2013 through June 2015, has been launched in June 2013 to strategically address the key nutrition problem in the country and strengthen initiatives that were not adequately addressed in the 2008 NNP. Besides, the revised NNP has included initiatives that have emerged since NNP was devised.

**NNP Objective:** The primary objective of the NNP is to improve nutritional status of women, infant and young children and children under five and adolescents through cost effective and sustainable interventions. The following five strategic objectives support the primary objective of the NNP.

**Table 2.1: NNP Strategic Objectives and Programs**

<table>
<thead>
<tr>
<th>Strategic Objectives</th>
<th>Interventions / Programmes</th>
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<tbody>
<tr>
<td>SO1</td>
<td>Improve the nutritional status of women (15–49 years) and adolescents (10–19 years)</td>
</tr>
<tr>
<td>SO2</td>
<td>Improve the nutritional status of infants, young children and children under 5</td>
</tr>
<tr>
<td>SO3</td>
<td>Improve the delivery of nutrition services for communicable and non-communicable/lifestyle related diseases (all age groups)</td>
</tr>
<tr>
<td>SO4</td>
<td>Strengthen implementation of nutrition sensitive interventions across sectors</td>
</tr>
<tr>
<td>SO5</td>
<td>Improve multi-sectoral coordination and capacity to ensure NNP implementation</td>
</tr>
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**NNP Key Indicators:** The achievement of the objectives is measured with the following core performance indicators and targets:

1. Reduce the prevalence of stunting from 44.4% to 30% by 2015;
2. Reduce the prevalence of wasting from 9.7% to 3% by 2015;
3. Reduce the prevalence of chronic undernutrition in women of reproductive age from 27% to 19%

The detailed performance indicators and targets for each strategic objective are listed under the strategic objectives and presented in the following table.

**Table 2.2: NNP Performance Indicators and Targets for each Strategic Objective**

<table>
<thead>
<tr>
<th>Strategic Objectives</th>
<th>Indicators and Targets by 2015</th>
</tr>
</thead>
</table>
| SO1: Improve the nutritional status of women (15–49 years) and adolescents (10–19 years) | Reducing the proportion of adolescent girls aged 15–19 with a BMI <18.5 from 36 percent to 25 percent.  
Reducing the prevalence of anemia among pregnant women from 22 percent to 12 percent |
| SO2: Improve the nutritional status of infants, young children and children under 5 | Increase the proportion of infants 0–6 months old who are exclusively breastfed from 52 percent to 70 percent.  
Increase the proportion of breastfed children aged 6–23 months with the minimum acceptable dietary score from 4 percent to 20 percent.  
Reduce the prevalence of Bitot’s spots in children ages 6–59 months from 1.7 percent to less than 0.5 percent.  
Reduce the percentage of children 6–12 years old with median urinary iodine concentration of less than 100 µg/l to below 50 percent.  
Increase the proportion of households using iodized salt from 15.4 percent to 95 percent.  
Reduce the prevalence of anemia in children 6–59 months from 44 percent to 25 percent.  
Increase zinc supplementation in the treatment of diarrhea from 5 percent to 50 percent.  
Maintain coverage of Vitamin A supplementation/de-worming at over 90 percent |
| SO3: Improve the delivery of nutrition services for communicable | Improved nutrition service delivery for communicable and non-communicable / lifestyle related diseases |
and non-communicable/lifestyle related diseases (all age groups)

| SO4: Strengthen implementation of nutrition sensitive interventions across sectors | Increase the proportion of households consuming fruits and vegetables by 30 percent.  
Increase fruit and vegetable production from 894,000 (2011) tons to 5,905,000 tons by 2015 to improve food diversification at community level.  
Increase potable water coverage from 60 percent to 76 percent.  
Increase the proportion of primary schools with school gardening to 25 percent.  
Increase the proportion of schools that provide biannual de-worming to 60 percent. |
|---|---|
| SO5: Improve multi-sectoral coordination and capacity to ensure NNP implementation | Increase the proportion of the health development army (HDA; women) trained in the preparation of complementary food to 60 percent.  
100 percent of nutrition sensitive sectors will integrate nutrition in their annual work plan in line with NNP.  
100 percent of nutrition sensitive sector ministries will assign nutrition focal persons for the sector.  
Conduct five National Nutrition Coordinating Body (NNCB) meetings (two meetings per year).  
100 percent of the regions will establish a Regional Nutrition Coordinating Body and technical committee. |

**Essential Nutrition Actions (ENA)**

ENA is a set of affordable and highly effective nutrition interventions delivered at health facilities and in communities to improve the growth and micronutrient status of children. Growth failure in children is concentrated into the first two years of life; therefore, reduction in child malnutrition depends on interventions during fetal development and very early childhood. Women, particularly women who are pregnant or breastfeeding, and children less than two years of age are the primary target groups of ENA. These essential nutrition actions protect, promote and support the achievement of seven priority nutrition behaviors in the country:
1. Promotion of optimal breastfeeding during the first six months
2. Promotion of optimal complementary feeding starting at 6 months with continued breast feeding to 2 years of age and beyond
3. Promotion of optimal nutritional care of sick and severely malnourished children
4. Prevention of vitamin A deficiency in women and children
5. Promotion of adequate intake of iron and folic acid and prevention and control of anemia for women and children
6. Promotion of adequate intake of iodine by all members of the household
7. Promotion of optimal nutrition for women

Infant and Young Child Feeding Practices

Malnutrition has been responsible, directly or indirectly, for over 50% of the 10.6 million deaths annually among children under five (FMoH 2005). Well over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life. Though breast feeding is universal in Ethiopia, proportion of optimal (recommended) infant feeding practices are still low. According to DHS 2011, only 52% of infants under the age of 6 month are exclusively breast fed and 51% of infants are given complementary foods by the age 6-9 months. Bottle feeding also appeared to be common where 16% of infant under the age of 6 months are given bottle feeding.

Breast Feeding: For the first 6 months of life breast feeding is adequate for the growth and development of infants because it contains all nutrients the infant needs. Breastfeeding is important because of the nutritional, health, immunological, developmental, and psychological benefits that breast milk provides for infants and children. Table 2.1 summarizes the benefits of breastfeeding to the baby, mother and the family and community as well.

<table>
<thead>
<tr>
<th>Box 2.1: Recommended breastfeeding practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Promote early initiation of breastfeeding (i.e., within one hour of birth)</td>
</tr>
<tr>
<td>• Promote exclusive breastfeeding (EBF) for the first six months of life (i.e., no other liquids or foods)</td>
</tr>
<tr>
<td>• Promote breastfeeding on demand, day and night (i.e., usually 8-12 times per day) for an adequate time at each feeding; offer the second breast after infant releases the first</td>
</tr>
<tr>
<td>• Practice correct positioning and attachment of infant at the breast</td>
</tr>
<tr>
<td>• Promote good breast health care</td>
</tr>
</tbody>
</table>
Table 2.3: Benefits of Breast Feeding

<table>
<thead>
<tr>
<th>Benefits of Breast Feeding</th>
<th>Benefits for the baby</th>
<th>Benefits for the mother</th>
<th>Benefits for the family and community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comp</td>
<td>ementary Feeding: To meet their evolving nutritional needs, infants should receive safe and nutritionally adequate complementary foods while breastfeeding continues for up to two years of age or beyond. Starting from end of the 6th month (at 181 day) infant need to start additional foods. The first 2 years are critical time periods for the growth and development of a child and as such both the quantity and quality of complementary foods are important. After the age of 2 years some mental and physical developments are irreversible and can’t be regained. So, it is important that focus is given to children in those critical periods.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 2.4 Six food groups with their major nutrients</td>
<td>• Supplies everything the baby needs to grow well during the first 6 months of life.</td>
<td>• Reduces blood loss after birth (immediate breastfeeding).</td>
<td>• Available 24 hours a day.</td>
</tr>
<tr>
<td></td>
<td>• Digests easily and does not cause constipation.</td>
<td>• Is always ready at the right temperature.</td>
<td>• Is always ready at the right temperature.</td>
</tr>
<tr>
<td></td>
<td>• Protects against diarrhea and pneumonia.</td>
<td>• Saves time and money.</td>
<td>• Delays new pregnancy, helping to space and time pregnancies.</td>
</tr>
<tr>
<td></td>
<td>• Provides antibodies to illnesses.</td>
<td>• Makes night feedings easier.</td>
<td>• Reduces time lost from work to care for a sick baby.</td>
</tr>
<tr>
<td></td>
<td>• Protects against infection, including ear infections.</td>
<td>• Reduces the risk of breast and ovarian cancer.</td>
<td>• Children perform better in school.</td>
</tr>
<tr>
<td></td>
<td>• Reduces the risks of allergies.</td>
<td>• Promotes bonding.</td>
<td>• More children survive.</td>
</tr>
<tr>
<td></td>
<td>• Increases mental development.</td>
<td></td>
<td>• Reduces environmental destruction (no use of firewood for boiling or cooking).</td>
</tr>
<tr>
<td></td>
<td>• Promotes proper jaw, teeth, and speech development.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Promotes bonding.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is the baby’s first immunization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staples: Foods in this include cereal grains such as sorghum, millet, maize, barley, oats, wheat, teff, rice, and starchy roots (cassava, sweet potato, false banana, and potato). They are good sources of energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legumes and Nuts: This group includes ground nuts, soya beans, beans, peas, chick peas, broad beans, kidney beans, lentils. They provide mainly protein and are important for growth, repair, and body building</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Animal Foods:** All of the foods in this group are of animal origin such as meat, poultry, eggs, milk products, and fish. They provide protein, fats, vitamins and minerals. They help for the child to grow, have strong bones and be healthy

**Vegetables:** Include green leaf and yellow vegetables such as cabbage, kale, spinach, cauliflower, lettuce, carrot, celery, cucumber, egg plants, green paper, broccoli, pumpkin, onions tomato and others such as mushroom. They provide mostly vitamins, minerals, and water. Vegetables also contain fibre that is necessary for proper digestion.

**Fruits:** They include citrus fruits (oranges, lemons, and mandarins), bananas, avocado, cherry, grapes, pine apple, papaya, mangoes, peaches, apples, guava, water melon, sweet melon and many others. Fruits provide mostly carbohydrates, vitamins & water. They help the child to protect from illness

**Fats:** This group includes oil seeds (soybeans, sesame, linseeds, and groundnuts), avocado pear, cooking oil, milk and milk products such as butter, margarine, yoghurt, meat, fish, and poultry. They mainly provide fat (additional energy)

To ensure good health and development of the baby and young child, the following key optimal complementary feeding practices need to be promoted.

**Recommended complementary feeding practices for children**

- Introduce soft, locally available diversified and appropriate foods complementary food at the six completed month (mix three portion of cereals with one portion of legumes and this food need to be further enriched with oil, butter, fruits and vegetables)
- Continue breastfeeding on demand
- Variety of complementary foods: for the child to grow well and healthy, s/he needs to get a variety of local foods. It is advisable that a child shall get at least 4 types of foods during each feed.
- For a child to get the required nutrients from the food, it is recommended that the food be thick (see fig 2.2). If the food is made thin, the child will get only water and her/his stomach will be full of water and can’t even eat additional food that you wanted to give. This will eventually affect growth and development of the child.

**Figure 2.1: The right consistency/thickness of porridge**
• As the child continues to grow, the amount and frequency of food should increase to maintain the required growth and development.

• Active or responsive feeding: The mother or caregiver should interact with the child during feeding to consume the food they need and stimulates the child’s verbal and intellectual development. The mother or caregiver should minimize distractions during meals, especially if the child loses interest easily. Feeding times should be periods of learning and love; encourage but not force the infant to eat. Sing songs or tell stories to make feeding enjoyable.

• Practice good hygiene and sanitation: Promote hand washing before preparation and eating meals, after using toilets. Cover the food before or after meals. Use soap/ash and water to clean utensils and hands

Table 2.5: Recommended complementary feeding practices

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 up to 6 months</td>
<td>Breastfeed day &amp; night as often as the child wants (at least 10-12 times)</td>
<td>At 6 months (181 days) start with 2 to 3 table spoons and gradually increase amount</td>
</tr>
<tr>
<td>6 up to 11 months</td>
<td>2 to 3 meals plus frequent breastfeeding 1 to 2 snacks may be offered</td>
<td>Increasing gradually to 3 full coffee cups</td>
</tr>
<tr>
<td>12 up to 24 months</td>
<td>3 to 4 meals plus breastfeeding 1 to 2 snacks may be offered</td>
<td>4 full coffee cups</td>
</tr>
</tbody>
</table>

Feeding and Care of the Sick child: Illness is depleting energy from our body. A sick child has to be fed more frequently and during rehabilitation he/she needs one extra meal for the first two weeks after illness which helps him/her to gain the lost energy. It is important to feed your baby more often to help fight the illness, reduce weight loss and recover quickly. Give more food and liquids than usual since sick child needs more food and liquids to make his/her body strong and able to fight the illness.

Nutrition and Water, Sanitation and Hygiene (WASH)

In developing countries inadequate water access, and poor sanitation and hygiene condition is the driving force for child and maternal malnutrition, which works through the infection pathway. The transmission of most of childhood infectious diseases such as diarrhea and acute respiratory infections is very closely associated with the quantity & quality of water, hygiene, and sanitation condition of households and communities. Adequate access to water and proper hygiene and sanitation is essential at the period of child complementary feeding and related care services.
According to WHO and CDC reports 80 percent of all childhood diseases are directly and indirectly related to unsafe drinking water, poor hygiene, and open defecation. While adults also suffer from WASH related diseases, 90 percent of those who succumb to this condition are under five children. Providing a household with access to safe water, sanitation, and hygiene is one of the most effective ways to ensure the survival of children, before we help them to strive. Child morbidity from diarrhea can be reduced by 25% when access to water is improved; by 22% when disposal of human waste is improved; and by 16% when water quality is improved.

WHO estimates that 50% of malnutrition is associated with repeated diarrhea or intestinal worm infections as a result of unsafe water, inadequate sanitation or insufficient hygiene. Diarrhea is a leading cause of death in children under-five globally. Research reveals that diarrheal disease is responsible for 15 percent of deaths worldwide among under-five children, and almost 90 percent of all child deaths from diarrheal diseases are related to unsafe water and inadequate sanitation. More than one-third, and in some low-income contexts as much as two thirds, of all neonatal mortality results from unhygienic birthing and post-partum care. Furthermore, about half of all pneumonia death, 750,000 children per year, also result from poor hygiene.

WASH also affects nutritional status of mothers and children indirectly. The time wasted collecting water or suffering from water-related illnesses prevents young people from getting an education, or working on livelihood activities which has a significant impact on their health, wellbeing and economic status.

Specific to the Ethiopian context only 8 percent of households have an improved toilet facility, not shared with other households, and 54 percent have access to an improved source of drinking water (DHS 2011). In line with this the 2013 revised NNP underscored that increasing access to potable water will directly improve nutrition through reduction in disease burden and indirectly saves time spent to fetch water, and giving mothers more time to care for their children.

Proper hand washing practice plays a key role in reducing diarrheal infection and maternal and child mortality. Researches indicated that around 47% reductions in the risk of contracting a diarrheic infection, and 17% in child mortality can be achieved only by proper hand washing with soap. Maternal and child nutrition program planners therefore need to promote proper hand washing practice parallel to essential nutrition actions interventions. Hand-washing requires only soap and water or an alcohol-based hand sanitizer.

**Maternal Nutrition**

Women as any adult person need nutrition for healthy living. Pregnancy and lactation are important time periods where women need additional amount and variety of food for themselves and as well as the infant. If women didn’t get adequate amount and variety of food, their health and the health of the infant will be affected.
Box 2.2: Key nutrition practices during pregnancy and lactation

<table>
<thead>
<tr>
<th>During Pregnancy</th>
<th>During Lactation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat one extra meal each day. Eating more helps the baby to develop well and strengthens the women for delivery. Eating an extra meal will not cause the baby to grow too big.</td>
<td>Eat two additional meals each day.</td>
</tr>
<tr>
<td>Eat diversified foods to remain healthy and strong and to help the baby grow and develop well. Eating a variety of foods makes you strong enough to deliver without problems.</td>
<td>Eat a diversified of foods to remain healthy and strong and to help the baby grow and develop well. Eat a variety of the following foods as available: cereals, roots and tubers, animal products, legumes, oils and fats, fresh fruits, and vegetables</td>
</tr>
<tr>
<td>Eat a variety of the following foods as available: cereals, roots and tubers, animal products, legumes, oils and fats, fresh fruits and vegetables</td>
<td>Use iodized salt to help your baby's brain and body develop well.</td>
</tr>
<tr>
<td>Use iodized salt to help your baby's brain and body develop well.</td>
<td>Avoid alcohol and smoking during pregnancy. Alcohol and cigarette smoking can harm the health of the fetus in the womb</td>
</tr>
<tr>
<td>Avoid alcohol and smoking during pregnancy. Alcohol and cigarette smoking can harm the health of the fetus in the womb</td>
<td>Use iodized salt to help your baby's brain and body develop well.</td>
</tr>
<tr>
<td>Avoid drinking tea and coffee during meals. Tea and coffee changes the way your body used the food you eat. It is better to drink tea and coffee at least one or more hours before or after a meal</td>
<td>Avoid alcohol and smoking</td>
</tr>
<tr>
<td>Avoid drinking tea and coffee during meals. Tea and coffee changes the way your body used the food you eat. It is better to drink tea and coffee at least one or more hours before or after a meal</td>
<td>Visit health facility to get nutrition related services</td>
</tr>
<tr>
<td>Visit the health facility for antenatal care services and other nutrition related services</td>
<td></td>
</tr>
<tr>
<td>Use mosquito net to prevent malaria and Decrease work load and get rest</td>
<td></td>
</tr>
</tbody>
</table>

The Under-nutrition Cycle

The cycle of poor nutrition is perpetuated across generations. Young girls who grow poorly become stunted (low height for their age) women and are more likely to give birth to low birth weight infants. If those infants are girls, they are likely to continue the cycle by being stunted in adulthood. Adolescent pregnancy heightens the risk of low birth weight and the difficulty of breaking the cycle (See fig.2.3. below). Good nutritional support needs at all stages—infancy, childhood, adolescence, and adulthood—especially for girls and women.
Figure 2.2: The under-nutrition cycle
What can be done to break the cycle?

Table 2.6: Different nutrition and health interventions that can be implemented at each stage to break the under-nutrition cycle

<table>
<thead>
<tr>
<th>Actions for the child (stage 1)</th>
<th>Actions for the teenage girl (stage 2)</th>
<th>Actions for adult women (stage 3)</th>
<th>Actions for the developing child/fetus: prevent low birth weight (stage 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prevent growth failure by:</td>
<td>2. Non-feeding actions to break the under-nutrition cycle at this stage include:</td>
<td>Improve women’s nutrition and health by:</td>
<td>1. Improve women’s nutrition and health during pregnancy by:</td>
</tr>
<tr>
<td>• Encouraging early initiation of breastfeeding.</td>
<td>• Practicing good hygiene.</td>
<td>• Encouraging consumption of different types of locally available foods</td>
<td>• Increasing the food intake of women during pregnancy: eat one extra meal</td>
</tr>
<tr>
<td>• Exclusive breastfeeding from 0 up to 6 months.</td>
<td>• Attending immunization sessions.</td>
<td>• Preventing and seeking early treatment of infections.</td>
<td>• Encouraging consumption of different types of locally available foods</td>
</tr>
<tr>
<td>• Promote optimal complementary feeding practices</td>
<td>• Using insecticide-treated bed nets to prevent malaria</td>
<td>• Encouraging parents to give girls and boys equal access to education; under nutrition decreases when girls/women receive more education.</td>
<td>• Giving iron/folate supplementation (or other recommended supplements</td>
</tr>
<tr>
<td>• Feeding a sick child frequently</td>
<td>• De-worming</td>
<td>• Encouraging families to delay marriage for young girls.</td>
<td>• Preventing and seeking early treatment of infections</td>
</tr>
<tr>
<td>3. Preventing and treating infections</td>
<td></td>
<td>• Avoiding processed/fast foods.</td>
<td>• Encouraging good hygiene practices.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Avoiding intake of coffee/tea with meals.</td>
<td>• Encourage family planning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Encouraging good hygiene practices.</td>
<td>• Decrease energy expenditure by delaying the first pregnancy to 20 years of age or more and encouraging couples to use appropriate family planning methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Encouraging use of insecticide-treated bed nets to prevent malaria</td>
<td>• Encourage men’s participation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Provide insecticide-treated to prevent malaria</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Support equal access to education for girls and boys.</td>
</tr>
<tr>
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</tbody>
</table>
Micronutrients

Micronutrients are essential for proper growth and development. As tiny as the amounts are, however, the consequences of their absence are severe.

- They cannot be manufactured by the human body and must be obtained through dietary means
- Micronutrients are important for physical, cognitive and intellectual development
- Vitamin A, iron, iodine and zinc are key micronutrients of public health importance in Ethiopia
- Micronutrients are important because billions of people live with vitamin and mineral deficiencies.
- According to DHS 2011 report, 44 per cent of Ethiopian children age 6-59 months, 17 per cent of women age 15-49 years and 11 per cent of men age 15-49 years are anemic. Only 53% of children 6-59 months received vitamin A supplements
- It is estimated that by giving adequate vitamin A supplementation, overall mortality in children 6 to 59 months of age can be reduced by 23 per cent
- Children and pregnant women are at higher risk of micronutrient deficiency

Causes of Micronutrient Deficiency

Similar to the causes of malnutrition, major causes of micronutrient deficiencies are

- Absence or in-adequate consumption of the required amount and variety of foods (e.g. meat, fish, egg, vegetables, fruits, etc)
- Disease and infections (e.g. Hookworm, helminthes, measles, diarrhea, etc)
- Limited access to health care (poor care seeking behavior, limited supplementation, etc)
- Other factors: illiteracy, gender inequalities, traditional practices

Strategies for Prevention and Control of Micronutrient Deficiencies

1. **Dietary diversification** (eating different food groups): Includes optimal infant and young child and maternal feeding practices

2. **Micronutrient supplementation** (vitamin A, iron folate, zinc, and iodine capsule): Promote home and fruit garden and consume fruits and vegetables on regular basis

3. **Food fortification** (fortify food with iodine, vitamin A, iron etc)

Community Based Nutrition (CBN)

The CBN sub-component seeks to provide community-based nutrition and health services, fully utilizing existing HEP outreach and model household service provision, and seeking to build on these with additional community-based resources and activities in the most efficient and effective manner. The CBN package seeks to identify and address both the immediate and underlying causes of malnutrition.
The specific objectives of the CBN sub-component are to:

- Build community capacity for assessment, analysis, and action specific to preventing child malnutrition (triple-A-approach—Assess, Analyze, and Action);
- Promote improved caring practices for children and women to prevent malnutrition;
- Improve referral linkages to relevant child health & nutrition services and other linkages for addressing non-health causes of child malnutrition;
- Develop and implement strong advocacy & communication/mobilization strategy to support all CBN activities;
- Enhance capacity for CBN implementation at Regional and Woreda levels (see Annex II CBN monitoring tool)

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Analysis</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly GMP &amp; Community Conversation (Triple A Cycle)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Counseling &amp; Collective Action: EBF/Improved feeding TFP referral/follow-up Diarrhea management Immunization Deworming/VAS Malaria bednet/treatment Newborn care Maternal nutrition/care Adolescent nut/care Psychosocial care Hand-washing Water treatment Food security</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TFP/TSFP WASH IMNCI/EPI ANC/RH Adolescent care ECD PSNP/FSP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TFU/OTP TSF Screening/Referral (EOS/CHD)</td>
<td></td>
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</tbody>
</table>

Table 2.7: Explanation of triple A approach in community based nutrition interventions
Realization of the situation of their own children:
Involves Weighing of children on regular basis and comparison of children’s growth by comparing current weight and previous weight and growth or retardation of growth is observed (the direction of the growth curve determined).

Understanding of the causes in their own context:
Involves identification of the cause of good or poor growth of the child and possible solutions that could be sought.

Improving their child care practices/behaviors within family/community:
Involves counseling the mother/care giver and making suggestions about the relevant actions. Ideally these actions are feasible and taken by the caregiver and the household. After sometime the child is weighed again and re assessment is made followed by a new analysis and a new action as needed.

CBN will concentrate primarily on young children under the age of two and pregnant and lactating women, and will include six sets of activities (Growth Monitoring Project and pregnancy weight gain-based BCC using ENA and community conversation, targeted food supplementation, micronutrient supplementation, parasitic control, hygiene and sanitation) of which nutrition is centrally involved in three and closely linked to the others. The CBN component will seek to assure referral to health posts of severely malnourished children (initially under age 5, subsequently under age 2) identified at Community Health Days (CHD). In addition, through monthly growth monitoring of children experiencing two consecutive months of growth faltering, and of children with health problems are identified through community-based IMCI counseling. Similarly, linkages will be made with Water Sanitation and Hygiene (WASH) and Productive Safety Net (PSNP) programs to address the sanitation, hygiene and poverty determinants of malnutrition.

Summary

Malnutrition is one of the major public health and development problems in the country affecting primarily children and women of the child bearing age. Protein-energy malnutrition,
vitamin A deficiency, iron deficiency anaemia, iodine deficiency disorders are the forefront nutritional problems prevailing in the country.

The Government of Ethiopia has launched the revised of the National Nutrition Programme (NNP) and is on the process of implementing the NNP through multi-sectoral coordination members are (FMoH, MoA, MoE, MoLSA, Women’s and Youth Ministry, Water Resource, MoFED). The NNP targets the most vulnerable: children under-5 years with especial emphasis on under-2 years, pregnant and lactating women, and adolescents. It also gives initial priority to the rural population while recognizing that significant malnutrition exists in low income urban areas. There are seven essential nutrition interventions being implemented in the country to address immediate and underlying cause of malnutrition. The key preventative nutrition interventions being implemented by the government and key stakeholders are the ENA, IYCF practices, Maternal Nutrition, Micronutrients, CMAM (Community Based Management of Malnutrition), CHD and CBN.

**Job Aids 2.1: Steps to conduct CBN activity using the triple ‘A’ cycle**

**Step I. Assessment:** (Realization of the nutrition and health situation of pregnant and lactating mothers and children under five)
a. Mobilize communities through the help of HEW or VHEW (Voluntary Community Health Worker) to introduce the concept of CBN and its approach to the community.
b. Encourage mothers to bring their children to the nearby health facilities for assessing their nutritional status through GMP (Growth Monitoring Project)
c. Encourage pregnant mothers to go to the health facilities for check up
d. Advise mothers to regularly bring their children for weighing the children regularly
e. Assist mothers to see the result on the child’s GMP card and inform them about the result (Show mothers the direction of the growth curve)
f. Assess the nutrition and health condition of pregnant mothers
g. Conduct community conversation to assess the nutrition and health situation of the children and pregnant and lactating mothers in their own context

**Step II: Analysis:** (understanding the causes in their own context)

a. Using the HEW or VCHW, the community is expected to be convened on regular basis
b. Assist the community to identify the nutritional status of the children using the growth curve
c. Advise to continue if the growth curve or status of the child is okay.
d. However, if the growth of the child is poor, then identification of the immediate and underlying causes of malnutrition in their own context should be carried out.
e. Assist communities to come up with their own solutions (plan of action) to address the problems identified

**Step III Action:** (Improving their child care practices/ behaviors within family/community)

a. Use nutrition BCC materials to provide individual and group counseling services
b. Coordinate meetings with communities regularly to discuss on how to implement the action plan and who will be responsible in implementing the community led nutrition interventions
c. Provide technical and logistic assistance such as providing targeted food supplementation, micronutrient supplementation, parasitic control, hygiene and sanitation materials etc to the community to implement the action plan
d. Encourage them to implement the proposal and follow through
MODULE THREE: NUTRITION HEALTH AND AGRICULTURE LINKAGE AND MULTI-SECTORAL COLLABORATION

Introduction

Nutrition is a much diffused discipline rooted in agriculture, health and other related disciplines. The three sectors are naturally interlinked and exclusive and standalone intervention will not achieve the desired goal. Agriculture is the source of all food items. Nutrition and health status of the society is both an input for, and outcome of agricultural productivity. Nutrition plays a critical role in economic and human development. More over nutritional status is a corner stone that affects the health of all people, enabling us to reach our fullest potential as individuals and societies. Malnutrition keeps us short sight visionaries, less motivated and less competent citizens, and so hinders back from the opportunities. Good nutrition and health for all are recognized as socially desirable development objectives around the globe. It is generally accepted that national and local governments have a duty to provide the goods and services necessary for maintaining good nutrition and health, which will be possible with sound agricultural development among others. Moreover, improved health and nutrition are critical inputs for achieving broad economic growth and poverty reduction.

Therefore, this module provides various approaches and tools that help agriculture and health managers to recognize the very interlinked nature of agriculture, health and nutrition, and to consider nutrition in their daily works and work in collaboration.

Main objective: After completing this module, participants will be able to explain how agriculture, health and nutrition are linked, identify nutrition sensitive agricultural interventions; and describe multisectoral collaboration for nutrition.

Specific objectives: To attain module objective, the participants will be able to

- Describe nutrition-agriculture-health linkage
- Recognize the contribution of agriculture to nutrition and Identify the pathways
- Identify nutrition sensitive agricultural interventions
- Describe the concept of multisectoral collaboration for nutrition

The Linkage b/n Nutrition Health & Agriculture: Conceptualizing the Overall Linkage

Agriculture is the primary supplier of food, essential nutrients, source of income, employment, and an engine of growth; concomitantly it has important implications for nutrition and health status of human being. Agriculture and health are tightly welded through the contributions they have for nutrition. Agricultural productivity, health status, and nutritional status are linked in a self-reinforcing. Health status affects agricultural productivity, agricultural productivity affects nutritional intake, and nutritional intake affects
health status. Strengthening the policy and programmatic links between agriculture, health and nutrition requires a means of looking at how their myriad links fit together.

Figure 3.1: Linkages among Agriculture, Health and Nutrition

Currently a framework is developed to elucidate the channels through which agriculture affects health and nutrition and vice versa. While the framework is applicable at the global or national level, the focus here is on households and individuals, given that improving individual welfare is the ultimate goal of public policy.

The framework has three components: settings, resources, and the processes associated with agricultural production and the determinants of health and nutrition status.

I. **Settings:** The physical, social, legal, governance, and economic settings in which households and individuals live and work influence their actions related to agricultural production, and at the same time the health care, and nutritional status of the community. Therefore keen consideration of the settings will be vital while planning for agriculture and health interventions.

II. **Resources:** Households have time and capital resources. Time refers to the availability of physical labor for work. Capital includes such assets as land, tools, livestock, social capital, financial resources, and human capital in the form of schooling and knowledge. Human capital in the form of health and nutrition status is also another capital resource. Agriculture, nutrition, and health, though not explicit, are interlinked at the resources level.

III. **Processes associated with:**

   a. **Agricultural production, saving and consumptions** - production processes have the potential to affect the health of the producing community through different associated diseases transmission and environmental influences. The saving and the consumption process will have direct or indirect effect on the health and nutritional status of the community.

   b. **Determinants of Health, and nutritional status** - settings and resources that affect agricultural production process will also determine the health and nutritional status of households and individuals. Majority of the determinants of nutritional status are contributed from agricultural and health processes and outcomes.
Agriculture and Health: The Bidirectional Relationship

Agriculture and health are the two broad disciplines, where the majority of determinants of nutritional status are contributed. Analysts of agricultural production do not usually recognize that health status has great potential to affect productivity, nor do they recognize that agricultural programs and processes have health consequences. The level of agriculture and the health care service status automatically determine the nutritional status and wellbeing of a society.

The links between health status and agriculture are bidirectional. Choices made in agricultural production affect health through three channels. First, manual work in agriculture is physically demanding and can directly damage health. Second, agricultural work exposes individuals to harmful pathogens, such as those found in water-borne diseases or those that come from zoonotic sources. Third, where agricultural production involves the use of chemical pesticides, exposure to these can be another threat to health.

Agriculture-Associated Diseases are worth mattering, particularly to farming communities of developing countries. Many diseases have agricultural roots. Food-borne diseases, water-associated diseases, many zoonoses, most emerging infectious diseases, and occupational diseases associated with agrifood chains are common examples. The economic and health losses of these diseases is substantially

Indirect costs of disease are also important. Impaired human health lowers labor productivity and human capital accumulation, worsening livelihood outcomes in both the short and the long run. Malnutrition itself is responsible for 3 percent of the disease burden in low-income countries. Malnutrition enhances vulnerability to disease and is, in turn, exacerbated by

Biofortification, Management of Zoonotic diseases and HIV/AIDS, irrigation management and malaria control, Crop protection, Sustainable management of natural resources and, Food safety are the recently identified areas of integrations, where integrated action can serve the goals of all three sectors: the food system, nutrition and health.

The Contribution of Agriculture to Nutrition

Agriculture is the primary source of food to meet people’s needs for energy and essential nutrients worldwide. Agriculture is the center of societal nutritional improvement. As the same time, majority of both of the immediate and underlying causes of malnutrition are contributed from factors related to food access and utilization. Practitioners should clearly understand the relationship of agricultural growth and nutritional outcomes, the linkage pathways, and interventions to address these linkage pathways.
Agricultural Growth and Nutrition Outcomes

The relationship between growth (whether nonagricultural or agricultural) and nutrition is not straightforward. Agricultural development can serve as an engine of growth and poverty reduction. It is a necessary condition for reducing malnutrition even though not a sufficient one. Ideally, agricultural growth leads to food and nutrition security, but the reality is not always true. Substantial progress is achieved in agricultural productivity. However, the number of people suffering from hunger and undernutrition—a deficiency in energy, protein, and essential vitamins and minerals, is still unacceptably high. As part of overall economic growth, agricultural growth has an especially important role to play in reducing and preventing undernutrition. Maximization of agricultural production will ensure food security through food availability and access, but will not be a guarantee for nutritional security. Therefore, the questions remain on how agriculture can most effectively contribute to improved nutrition outcomes.

The concept of nutrition security goes beyond the traditional concept of food security and emphasizes on other variables that affect the nutritional status. This involves obtaining a deeper understanding of food consumption patterns, dietary intake and micronutrient adequacy, nutrition needs of group at risk, gender considerations, care practices as well as health and sanitary environment. General hygiene and sanitation, water quality, health care practices and food safety and quality are determinants of good food utilization by the body. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, and diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.

Growth strategies, therefore, need to be designed with a nutritional lens and should take into account what types of sectorial and sub-sectorial practices and policies can enhance nutrition. Agricultural growth, to be translated into food and nutrition security, depends on different conditional factors such as equitable distribution of resources and products, gender equality, health status and infrastructure.

High income inequality, unequal allocation of productive assets (such as land and water), and unequal access to health and education services within developing countries have been linked to lower nutritional status. When women have more control over household resources and better access to health services and education, child and household nutrition rates have been found to be higher. While agricultural growth that benefits women can lead to improved household and child nutritional status through higher incomes among women, it can also have a negative impact on nutrition by changing time and labor allocation patterns, which reduces women’s time for child care and the quality of food provided by the mother.

Agriculture and Nutrition Linkage Pathways

From the previous discussions, it is obvious that agricultural program aimed at production maximization and food security are prerequisites for nutrition security. The point of debate is
that production maximization and ensuring food security do not guaranteed nutrition security. The consensus among the nutrition community therefore, is agricultural programs and interventions need to go beyond production maximization, food availability and access creation. The interplay among food production, consumption and human nutrition needs to be carefully considered. And the linkage pathways through which agriculture contribute to nutrition needs to be identified and addressed. Agricultural growth strategies such as promoting agricultural intensification, greater linkage to markets, and high value production can influence the nutritional outcome of the community/households through the five different intrinsic linkage pathways/Dimensions:

Table 3.1: The Agriculture-Nutrition Linkage pathways

<table>
<thead>
<tr>
<th>Linkage Pathways</th>
<th>Description of the Pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Household production for own consumption</td>
<td>The different types of foods produced determine the impact of the production increase on diet quality. The production of staple foods leads mainly to greater access to and consumption of energy. Increased production of fruit, vegetables, and animal source foods can likewise raise access to energy, protein, and fat, but can also greatly improve the quality and micronutrient content of diets. Some proportion of the food produced may also be intended for sale in local markets. Some households may for instance meet their staples requirements themselves while depending on markets for other products such as fruits and vegetables. Others may rely mainly on home gardens for fruits and vegetables. Whatever role production-for-income plays in this scenario is secondary to the principal purpose of producing food to meet the household’s own food requirements.</td>
</tr>
<tr>
<td>2 Income-oriented production for sale in markets</td>
<td>As agricultural households become more market oriented, production-for-own-consumption becomes less significant relative to income from the sale of what is produced. Technology becomes more important relative to the household’s resource endowment, and the selection of crops to be grown is based principally on their tradability and the price they are expected to command in local markets. Extra income may be used to buy more food, higher-quality (more nutrient-dense) foods, or both. The balance between the two affects the final impact of this additional income on the household’s consumption of energy and micronutrients. The translation of increased income into better child nutrition, in turn, depends on a series of intra household factors and processes. These include women’s status, education, knowledge, health-related practices, decision-making power, income, and access to and use of health and sanitation services.</td>
</tr>
</tbody>
</table>
### Nutrition Sensitive Agricultural Interventions: Addressing The Agriculture-Nutrition Linkage Pathways

The pathways that link agriculture to nutrition, and the lessons learned from the different nutrition aimed programs dictated the need and shifted the attention to a nutrition sensitive agriculture approach. In order to improve nutrition outcomes, agricultural programs need to be planned and implemented in line with nutrition sensitive agriculture approach.

Nutrition Sensitive (Nutrition Friendly) agriculture is defined as “agricultural intervention that involves the design and adoption of farming systems (crops & animals) which can provide agricultural solutions to the prevailing nutritional problems. Nutrition sensitive agricultural interventions are designed with nutrition lens to maximize the impact on nutritional outcomes.”
In order to link agricultural programs or projects to impact on health and nutrition we have to consider the following nutrition sensitive issues during agricultural programs planning and implementation phases. We also have to ensure supporting conditions or mechanisms are in place to bring about the desired nutritional outcomes and impacts since nutrition is not as such the mandate of a single sector (agriculture) rather it is the responsibility of different sectors.

1. **Diversify agricultural production and livelihoods**
Diversifying agricultural production and livelihoods will be important for improved food access and dietary diversification, natural resource management, and other purposes. Agricultural production diversification can offer support for multiple pathways to nutrition, including:

- Food access and dietary diversification
- Productivity enhancement through incorporating home gardens, which often implies diversification, and can boost production
- Risk reduction (e.g. from mono-crop failure) from seasonal crop failure
- Reduced seasonality of food access through use of irrigation
- Improved income streams and reduced cost of a nutritious diet
- Women’s empowerment, based on production of home gardens and minor crops, which in many cases would constitute production diversification incorporating in most cases legumes with staple crops
- Use improved seed and information to facilitate diversification through extension service
- Introduction of cash crops as supplements rather than substitutes for food crops
- Facilitate integrated crop-livestock systems which will improve household nutrition
- *Livelihoods diversification* as a strategy to improve incomes, reduce risk/increase resilience, and increase the amount of nutrient-dense foods for household consumption

1. **Increase production of nutrient dense foods**
An effort needs to be made to increase production of nutrient-dense foods, with particular emphasis on locally-adapted varieties rich in micronutrients and protein, chosen on the basis of context assessment and local nutrition issues.

- **Horticultural crops (vegetables and fruits)** are highly recommended to improve micronutrient intakes and dietary diversity, increased income and women’s income control, and reduced seasonality of food access. Both homestead and market-oriented production are likely to have positive nutritional impacts.

- **Homestead food production** supported through extension service, nutrition education and agricultural inputs for the poorest segment of the community offers substantial improvements in health and nutrition. Evidence indicates that even small-scale homestead production of micronutrient-rich foods, when combined with nutrition education, can have impact greater than its income effects. Homestead production systems offer the
potential to improve nutrition for peri-urban and agricultural laborer households, as well as small holder farmers.

- **Produce animal-source foods on a small scale** to improve intakes of micronutrients, protein, and fat; keep production at small-scale to avoid harms to the natural resource base.

  Livestock production affects an indispensable asset of the poor, their human capital, through its impact on their own nutrition and health. Livestock kept by the poor can produce a regular supply of nutrient-rich Animal-Source Food that provides a critical supplement and diversity to staple plant-based diets. This is particularly true for milk, meat and eggs, which can help mitigate the effects of often large seasonal fluctuations in grain availability.

- **Promote the use of nutritious underutilized foods** (such as indigenous or traditional crops) as powerful resources to address malnutrition.

- **Increase legume** production for their nutritional value (rich in energy, protein, and iron) and for their attribute of nitrogen fixation, which can improve soil fertility and yield and reduce inputs.

- **Invest in bio-fortification** as a complement to other approaches such as supplementation and fortification of micronutrients. Bio-fortification is the breeding of new varieties of food crops with improved nutritional content (e.g. Orange flesh sweet potato). When people in malnourished communities receive these varieties to grow and eat, bio-fortified crops can contribute to the overall reduction of micronutrient deficiencies in a population. Compared with other approaches to micronutrient malnutrition, such as supplementation and fortification, bio-fortification offers several advantages: it targets poor people and rural areas; it is cost-effective because after the initial investment in research, the crops are available year after year; and it is sustainable because it relies on staple crops that people are already accustomed to eating.

- **Staple crop production** may be necessary but insufficient for addressing under-nutrition because of its limited ability to improve dietary diversity.

- **Cash crops** are not recommended as a strategy likely to improve nutrition on their own, based on high risk of unintended consequences, particularly reduction in food security and dietary quality; mitigation strategies should go along with cash crop production. But the production of cash crops as a supplementary source has a positive contribution to impact on nutrition.

3. **Reduce post-harvest losses and improve processing** to increase and prolong access to and consumption of micronutrient-rich foods, to preserve or increase nutrient content of food, increase income and profit margins, and to improve food safety. Solar drying and fortification are highly recommended processing techniques.

4. **Increase market access and opportunities.** Social marketing and demand creation for foods that smallholders have a comparative advantage through increasing income of producers and improving access to non-producer consumers.
5. Reduce the occurrence of seasonal food insecurity through diversification and use of locally-adapted varieties throughout the year, improved storage and preservation, and other locally appropriate approaches.

**Table 3.2: Explanation for some of the important relationship of agriculture and nutrition**

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>Nutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate and appropriate agricultural inputs <em>maximizes production</em></td>
<td>Producing adequate and diversified food starts with agricultural inputs. Agricultural inputs include crops, animals, fertilizer and other technology, <strong>strong and healthy farmers</strong></td>
</tr>
<tr>
<td>Improved nutrition sensitive agricultural practices (cropping, animal rearing practices, use of technology, etc…)</td>
<td>Nutrition sensitive cropping and farming practices produce a variety of foods that helps to improve the consumption of diversified foods at the HH level that improves the nutritional status</td>
</tr>
<tr>
<td>Good food value chain practice (storage, handling, processing, distribution, marketing, etc…)</td>
<td>Good agricultural production when coupled with improved harvesting, storage, processing and proper marketing helps to maintain the nutrient content of the food. The better the food value chain, the better the availability and quality of food, and the better the nutrition</td>
</tr>
<tr>
<td>Increased production, increased HH food security and income</td>
<td>HH income through selling surplus agricultural products which improves food consumption and nutritional status will be improved.</td>
</tr>
<tr>
<td>Increased income from surplus production- Better HH investments in health care and education</td>
<td>When households have better income, they have the capacity for investments in health care and education for their children and other family members, and good health improves nutrition</td>
</tr>
<tr>
<td>Increased production improves access to food (availability, nutrient quality and affordability)</td>
<td>For consumption of adequate and diversified foods for improved nutrition there should be good access to food (both amount and quality)</td>
</tr>
<tr>
<td>Agricultural growth increases diversity, HH food expenditure, etc.)</td>
<td>When households have good access to adequate and diversified foods, the nutritional status of the household will be improved from the consumption of such foods.</td>
</tr>
<tr>
<td>Productive and healthy farmers, including women and children</td>
<td>The final outcome of improved nutritional status is productive and healthy farmers. This is an important input for establishing improved agricultural practices.</td>
</tr>
</tbody>
</table>
Agriculture complemented with Nutrition Education such as feeding and caring practice

Good agricultural practices alone may not result in improved consumption and feeding practices. HHs should also have access to nutrition information.

Multi-sectoral Collaboration for Nutrition

Nutrition is not a single sector agenda. It is a cross-cutting development problem that needs to be integrated into the activities and policies of the agriculture, health, education, and sanitation and water sectors (among others), and featured in the priorities of broader agencies such as ministries of finance and gender. Despite this fact, both at policy and programmatic levels, sectors operate in separate silos, seldom considering the consequences of their actions on sectors outside their own.

Tackling Malnutrition will require solutions to be developed with the integration of these different sectors. The health and agriculture sectors are central to such efforts, reflecting their mandates to provide curative and preventative health services and to facilitate food production. However, several other sectors must contribute their efforts as well: the education sector, given the importance of knowledge to proper nutrition and healthcare practices; the water, sanitation, and housing sectors to promote hygienic environments; the labor sector to maintain adequate household incomes; and public finance and planning agencies to ensure that government resources are appropriately allocated.

Multi-sectoral organizational collaboration is a process in which organizations exchange information, alter activities, share resources, and enhance each other’s capacity for mutual benefit and a common purpose by sharing risks, responsibilities, and rewards. The concept of multi-sectorial collaboration is currently fully realized, and accepted; the problem is the linkage between the sectors is not straignt forward; by nature it is complex, and action to date is taken almost separately. We cannot change the nature of complexity of the linkage, but through effective collaboration, we can use this natural linkage of the sectors in the positive way, not blindly but mindful of the benefits of linkage of the sectors. For example homestead production for home consumptions, for sale and income rising; Primary Health Care interventions together with agricultural programs, food price subsidy, etc.

Collaboration implies the existence of a partner, one who is interested in participating because of the potential to receive some benefit. An essential and useful question to ask about any multi-sectoral action, then, is why the different organizations led and staffed by employees for their own missions, goals, and incentives need to collaborate? In order to work in collaboration, there has to be an incentive for collaborating organization. Above all the incentive for the government sector offices, as public serving organizations, should be the multidiscipline and multi-sectorial nature of causes and effects of malnutrition.

The following are some of the benefits of collaboration:

• It helps to exchange evidences and views among participating organizations
• It helps to reduce transaction costs by avoiding redundant activities or creating dedicated mechanisms for cooperation
• It can foster empowerment
• It helps to create common understanding among participating organizations
• It helps to increase program impact and lower program costs.

Continuum of collaboration

Multi-sectoral collaboration is not-at a point in time issues. It is a process affected by many factors. Based on the nature of the program for which the collaboration is made, the multi-sectoral collaboration can be initiated, maintained and sustained to the desired level.

• Networking: exchanging information for mutual benefit
• Coordination: exchanging information and altering activities for mutual benefit and to achieve a common purpose
• Cooperation: exchanging information, altering activities, and sharing resources for mutual benefit and to achieve a common purpose
• Collaboration: exchanging information, altering activities, sharing resources, and enhancing one another’s capacity for mutual benefit and to achieve a common purpose.

Table 3.3: Factors affecting the success of multi-sectorial Collaboration

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>1. Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Are there staffs to take the lead in initiating or implementing the collaboration, including the creation of political space? There has to be an authorized body initiating the multi-sectorial planning and implementation of nutrition.</td>
</tr>
<tr>
<td>2. Vision</td>
<td>• Do organizations have a common sense of purpose, a vision of the problem, solutions, and collective goals?</td>
</tr>
<tr>
<td></td>
<td>• Do they share objectives, priorities, an understanding of the issues, and definitions of success?</td>
</tr>
<tr>
<td>3. Capacity</td>
<td>• Does the organization have adequate technical and managerial capacities (including human resource management, negotiation, and mediation), experience, and financial resources, separately or in partnership with others, to carry out design, implementation, and evaluation?</td>
</tr>
<tr>
<td>4. Organizational structures, values, culture, and experience</td>
<td></td>
</tr>
</tbody>
</table>
Do organizational and individual attitudes, behaviors, and methods of acting or sharing knowledge encourage collaboration?

Is there a history of working with staffs in other sectors and being open to new ideas?

Are decisions making structures appropriate to needs, capacities, authority, legal frameworks, and values?

Do they encourage participation and ownership, such as transparency in decision making processes and the existence of some authority to make decisions?

Does decision making align with organizational deadlines (or other considerations of timing) and resources?

Are institutional structures and decision making arrangements flexible enough to adapt to differences in needs, capabilities, and structures within and across partners?

5. Incentives

Are there tangible or intangible economic, financial, political, and personal incentives that encourage working together?

1. Development priorities

Do actors believe and agree that the issue (nutrition) is a priority for national economic and political development?

2. Urgency

Does the problem (of malnutrition) lead the different actors to believe there is a need for urgent action?

What priority does the issue (Malnutrition) has for society or influential stakeholders?

Is there an urgent need for action resulting from, say, a natural, economic, or political crisis or from donor pressure that might encourage joint action?

Are there windows of opportunity that can be taken advantage of?

Are there considerations of timing or issue development that may encourage or discourage action?

3. Economic, social, cultural, political, and legal environment

How does the broader socioeconomic, cultural, or politico-legal environment in which organizations operate affect the collaboration?

Facilitating Collaboration

To take advantage of opportunities to work multisectionally, policymakers and programmers must clearly understand the motives, factors, mechanisms, and processes that trigger and sustain multisectional activities. Effective collaboration is likely to be central to the success multi-sectorally operated programs. Collaboration is not a natural state of affairs for organizations. Government ministries and development organizations rarely place high premiums on collaboration outside of the sectors in which they work, and incentives for individuals in these organizations to step outside their sectors are unusual.

Different tools such as Stakeholders Analysis and Organizational Capacity Assessment with special emphasis to nutrition can help to identify relevant partners for collaboration. All governmental, agency and NGO partners engaged in implementing nutrition related activities should be consulted from an early stage. Hence, at program level multi-sectoral collaboration
can be initiated by establishing a steering committee or joint task force for sharing information, resources and joint advocacy for nutrition that could lead to formal collaboration at policy maker’s level at later stage.

The success and sustainability of multi-sectorial collaboration depends on the internal and external context and with the nature of the mechanisms that link organizations. The principles that seem to help lubricate the mechanisms of coordination include the following:

- Build shared understanding about nutrition among members.
- Have clearly defined roles, responsibility, and accountability for all participating organization and obligation, an ownership, for activities, results, and success.
- Participation and partner and stakeholder relations. The decision making process and action should be inclusive. In addition the mechanisms of partnership should support participation by operational partners and other stakeholders to build consensus and trust around goals and actions.
- Have the right type of partnership that fits partners, in terms of intensity, structure, and size, level of autonomy, decision making processes, and implementation.

**National Nutrition Program & Multi-sectoral Collaboration**

The revised NNP states that the Nutrition Programme is long-term development agenda that requires the involvement of all responsible sectors and partners. Timely and effective implementation requires an efficient operational framework as well as appropriate leadership and implementation capacity. The NNP will continue to use existing government structures to ensure achievement of objectives and their sustainability. The implementation of the revised NNP is based on multisectoral collaboration. Ministry of Health, Ministry of Education, Ministry of Agriculture, Ministry of Women Children and Youth Affairs, Ministry of Trade, Ministry of Industry, Ministry of Water and Energy, Ministry of Labour and Social Affairs, and Ministry of Finance and Economic Development are officially recognized for their mandates in the NNP implementation and pledged their commitment to support the achievement of the targets laid out in this revised NNP.

To ensure viable linkages and harmonization among relevant sectors, the FMOH is mandated to house and manage the organizational and management structure of the NNP. The National Nutrition Coordination Body and the National Nutrition Technical Committee were established in 2008 and 2009, respectively, to ensure effective coordination and linkages in nutrition. This revised NNP outlines human resource capacity-building activities, with emphasis on all relevant sectors. These adjustments will ensure that implementation of the NNP is harmonized across all sectors and at different levels, particularly at regional, woreda and community levels.

Out of the total five strategic objectives of the revised NNP; Strategic Objective 4 and 5 deals directly or indirectly with multisectoral collaboration and clearly indicated the roles and responsibilities of each sectors. The roles and responsibilities of these collaborating sector are summarized and provided in Annex 3. .
Summary

Agriculture, health, and nutrition are closely linked. Majority of nutritional status determinants are contributed from agriculture and health related factors. Agricultural programs and interventions have profound impact on the nutritional outcomes. Agriculture needs to be leveraged to improve the health and nutrition of the rural farming community in particular, and the society in general. Over all the most successful agricultural programs/projects in relation to nutritional outcomes were those that invested broadly in improving human capital, and sustained and increased the livelihood assets of the poor. Understanding the agriculture-nutrition linkage pathways and designing agricultural interventions in line with these linkage dimensions will be ensured by nutrition sensitive agriculture. Nutrition program planners and practitioners should also have a keen consideration of the multisectoral nature of nutrition, and work for the realization. The national NNP is revised mainly to strengthen the multisectoral collaboration for implementation of the nutrition programmes and achievement of the desired results.
MODULE FOUR: GENDER AND NUTRITION

Introduction

Gender and nutrition are inextricable parts of the vicious cycle of poverty. Gender and nutrition are not stand-alone issues; they are naturally interlinked with agriculture, health and other sectors. Gender and nutrition are mutually reinforcing. Gender inequality can be a cause as well as an effect of hunger and malnutrition. Higher levels of gender inequality are associated with higher levels of undernutrition. Women are an important group linking agricultural development and human health and nutrition. They are not only responsible for food preparation and caring practices, but in many countries women are also the main agricultural producers. Strengthening women’s position both within the agricultural sector and within the household can significantly improve households’ nutrition and health. Experiences from several agricultural development strategies show that much scope exists for increasing women’s access to and control of resources.

While diverging interpretations of gender exist, there is a common understanding that women and men should have equal rights and opportunities. Women continue to face discrimination and often have less access to power and resources, including those related to nutrition. This underscores the need to apply a rights-based approach to gender programming, with opportunities to leverage complementary rights-based nutrition principles such as the Right to Food.

The way women and men are affected by nutrition actions differ. The commonly practiced tendency is to focus on women when addressing gender, yet this overlooks the instrumental role of men in closing the gender gap. Both men and women need to be involved in this process, acknowledging their respective roles and needs, and fostering mutual awareness and partnership.

This module focuses on the gender dimension of nutrition and provides various tools for agriculture and health managers to plan gender sensitive nutrition interventions.

Overall Objective: After completing this module, the participants will be able to describe gender and development related concepts, and identify gender sensitive nutrition interventions.

Specific Objectives: To attain module objective, the participants will be able to

- Describe the key gender related concepts
- Describe gender and nutrition sensitive agriculture
- Explain gender sensitive nutrition interventions
Important Gender Related Concepts

Being aware of the key role of gender, development planners and practitioner are trying their best to design gender sensitive development programs. Understanding and well describing important gender terminologies and concepts is the primary activity of development planners. Majority of these terminologies and concepts are described below.

Sex and Gender:
Sex refers to biological attributes of men and women. These attributes are generally permanent, universal and cannot be changed over time.

While “Gender” refers to the socially constructed roles and responsibilities assigned to men and women in a given culture or location. These roles are learned and they vary between cultures and they change over time. These roles are perceptions and expectations arising from cultural, social, economic, political and religious factors and also laws, customs, class, ethnicity, individual or institutional bias.

Table 4.1: The difference between gender and sex

<table>
<thead>
<tr>
<th>Sex</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological factors from birth</td>
<td>Social and cultural factors, not from birth</td>
</tr>
<tr>
<td>Are inborn &amp; cannot be changed</td>
<td>Are learned &amp; can be changed</td>
</tr>
<tr>
<td>It is universal</td>
<td>Differs across cultures</td>
</tr>
<tr>
<td>e.g.</td>
<td>e.g.</td>
</tr>
<tr>
<td>✓ Only women can get pregnant</td>
<td>✓ Men &amp; women can perform housework</td>
</tr>
<tr>
<td>✓ Only women can give birth and breast feed</td>
<td>✓ Men and women can care for children</td>
</tr>
<tr>
<td></td>
<td>✓ Men &amp; women can be engineers, drivers…etc</td>
</tr>
</tbody>
</table>

Gender roles

It is concerned about the roles both women and men expected to fulfill in the society as defined by their virtue of being female or male. These roles are shaped by different social, economic, cultural and political factors. Both men and women play multiple roles in society. These roles can be broadly categorized into three:

1. Productive roles: Tasks which contribute to the economic welfare of the household through production of goods. Women’s role as producers is usually undermined and undervalued.

2. Reproductive role: Activities performed for reproduction and all forms of caring practices for the members of the household.

3. Society/Community management or socio-cultural activities: Activities primarily carried by men & women to ensure the co-existence of themselves as well as their family in their social environment. This ranges from Parliamentary Leadership to community level participations.

In developing countries men control the decision making positions along the administration hierarchy, less frequently engaged in reproductive (caring) roles. In these countries,
especially of the sub Saharan, women share the greater productive role. These facts show that women are overburdened with triple roles and the probability that they face time related constraints in providing adequate care for the children and seeking health care is high.

**Gender Relations**

Gender refers to the power relationship between men and women. Usually, the relations between women and men are based on unequal power relations. Women’s and men’s gender are not only different, but they are often unequal in power, weight and value. These relations determine women’s and men’s access to and control over material resources and benefits. Since these relations are socially constructed they can be changed. Ensuring that women have the same access to productive resources as men and improving the gender inequalities can significantly improve nutrition and well-being for the entire household.

**Gender Equality, gender equity, and affirmative actions**

**Gender equality** refers to ensuring equal opportunities, resources, rights and access to goods and services between men and women, and boys and girls. Gender equality also means equal opportunities and equal responsibilities in sharing workloads and energy expended within individual capability in caring for families and communities.

**Gender equity** refers to ensuring fair distribution of (resources, opportunities) to meet the needs that arise from the biological differences, and additional roles. Special nutritional cares for adolescents and lactating mothers, establishment of maternity wards in the health centers, TT immunization, and iron supplementation are interventions to ensure gender equity.

**Affirmative action** refers to actions taken in supporting the disadvantaged groups. Affirmative action continues as far as the gender inequality persisted for longer times. Promoting gender equality in nutrition program requires, taking into consideration the social, economic and biological differences between men and women and addressing the inequalities which are barriers to good nutrition.

**Gender Sensitivity**

Gender sensitivity is about being aware of the differences between women’s and men’s needs, roles, responsibilities, and constrain and seeking out opportunities and mechanisms to include and actively involve women as well as men in whatever we do. It requires redressing the existing gender inequalities by addressing gender norm, roles and access to resources in so far as needed to reach the desired development goal.

**Gender Analysis and Gender Mainstreaming**

**Gender analysis** refers to a systematic approach to understanding the roles, opportunities and constraints of men and women, including understanding the relations between men and women. Gender analysis provides information on who will be impacted (positively or negatively) by any interventions. It covers questions concerning the division of labor, the relative access to or control over resources and benefits by men and women.
Gender mainstreaming, as defined by The United Nations refers to the process of assessing the implications for women and men of any planned actions, including legislation, policies, programs and projects in all areas and at all levels. Gender mainstreaming is a key strategy or approach applied for promoting gender equality in development activities. It is a process of ensuring that girls, women, boys and men are consulted and their different needs and perspectives are considered at all level. The ultimate goal of mainstreaming is to achieve the goal of gender equality.

Gender mainstreaming entails a shift from focusing on women to gender analysis as part of the goal. The focus in gender mainstreaming is not exclusively on beneficiary groups but on the gender issues in the community and making all staff responsible and accountable

Access to and control over resources and benefits

Access to resources refers to ensuring opportunity to use resources with having the authority to decide on the output and the exploitation methods.

Control over resources or benefits means having full right to use and authority to decide what the outputs should be and how it should be used. In general men and women have different levels of access to resources needed for their work and control over those resources. Lack of information or being inconsiderate of these aspects can lead to incorrect assumption during project designing. The analysis of access to and control over resources and benefits helps the project planner in identifying challenges which might be alleviated or tackled through the project. It can also help in identifying the potentials which could be use as well as the imbalance between men and women to be considered during the project implementation.

Gender and Nutrition Sensitive Agricultural Development

Women are key segments of the agricultural community in increasing agricultural production, increasing income from agriculture, and improving the nutritional status of the household. In most developing countries, agriculture is the most important source of employment for women in rural areas. Women comprise 43 percent of the agricultural labour force in developing countries, near to 50 percent in Eastern and Sub-Saharan Africa.

In most of these countries, the agriculture sector is underperforming, and one of the key reasons is that women do not have equal access to the resources and opportunities they need to be more productive.

If the agricultural interventions are supposed to improve the nutritional outcomes, these programs need to consider gender, and women empowerment as the central key of success. Closing the gender gap in agriculture would put more resources in the hands of women and strengthen their voice within the household, a proven strategy for enhancing the food security, nutrition, education and health of children. And better fed, healthier children learn better and become more productive citizens. The benefits would span generations and pay large dividends in the future.
The five pathways through which agricultural interventions are supposed to affect nutrition highlights the substantial influence of gender roles. Gender almost entirely spans all the five linkage pathways, particularly in relation to food availability and increased income. The key gender related factor that affects the impact of agricultural interventions on nutrition is whether agricultural interventions enhance women’s control over of livelihood assets.

Agricultural development endeavours therefore needs to be designed in light of gender sensitivity emphasizing gender analysis and women empowerment. Three agricultural development strategies are identified, as discussed below, to illustrate the significance of the gender dimension in promoting improved nutrition and health: (1) linking smallholders to markets, (2) large-scale agriculture, and (3) homestead food production.

A. Recommendations for Linking Smallholders to Markets

- The potential gender disparities of programs linking smallholders to markets need to be directly addressed to realize their full benefits for improved health and nutrition.
- Include women producers in contracts and group membership, and make payments directly to women.
- In commercializing food crops or expanding cash crops, ensure that control does not shift from women to men, compromising household food security.
- Integrate health and safety concerns with the introduction of new technologies and markets; ensure that both women and men are trained to minimize exposure to agrochemicals and ensure compliance with biosafety requirements.

B. Recommendations for Large-Scale Agriculture

Large-scale agricultural operations can avoid disadvantaging women and communities by being gender-aware as well as by observing environmental safeguards.

✓ Ensure that employment opportunities, including task allocation, hours worked, wages, and promotion possibilities, are gender equitable.
✓ Provide appropriate and affordable healthcare and childcare facilities.
✓ Ensure that new technologies, such as mechanization, new crops and varieties, inorganic fertilizer, and pesticides, are introduced in a gender-sensitive manner.
✓ Provide appropriate safety equipment and training to both female and male laborers.
✓ Minimize the negative environmental impacts of plantations on the local community.

C. Recommendations for Homestead Food Production

Taking gender roles into account can help homestead food production programs improve health and nutrition. The following are key strategies:

✓ Encourage diversified gardens that include high-value crops and small livestock in order to increase dietary diversity, provide sources of additional income, and enable women to accumulate assets.
✓ Explicitly address nutrition education and behavior change and communication in HFP programs.
Identify gender-specific constraints on participation.
Foster income generation and better links to markets.

Gender Sensitive Nutrition Interventions

A large body of evidence shows that, in many parts of the world, men and women spend money differently: women are more likely to spend the income they control on food, healthcare, and education of their children. Increasing household income does not necessarily improve the nutritional and health status of women and children when that income is controlled by men. Women’s relative bargaining power within the household is likely to influence whether gains in income translate into nutritional improvements. Empirical evidence shows that increasing women’s control over land, physical assets, and financial assets serves to raise agricultural productivity, improve child health and nutrition, and increase expenditures on education, contributing to overall poverty reduction (World Bank 2001; Quisumbing 2003).

The socially constructed gender roles of men and women interact with their biological roles to affect the nutrition status of the entire family and of each gender. From the perspective of nutrition and some aspects of health, therefore, any development strategy should explicitly consider its impacts on women and children, and especially on the critical “window of opportunity” from preconception through the second year of life, when nutritional deprivation and toxic environmental exposures can have lifelong consequences.

In designing agricultural development projects, planners must make informed provisions for:
- reducing environmental toxin risks
- providing optimal childcare, either through maternity leave policies or through provision of adequate childcare facilities
- ensuring that women have adequate control over income, resources, and time; and
- providing nutrition and health education, ideally, simultaneous with agricultural interventions

Key points to be considered in gender sensitive nutrition and health interventions

1. Pay attention to socio-cultural contexts: program that aim at improving the maternal and child nutrition need to give greater attention to socio cultural contexts in the areas:
   - Taboos associated with maternal and child feeding practices
   - Prevalence of harmful traditional practices and gender based violence
   - The roles of key household actors such as grandmothers and men in child and maternal feeding practices

2. Conduct regular assessments to identify the barriers to access by men and women and include the perspective of both to address their differential needs.

3. Adopt family focused approaches:
Enhance effective male involvement- husbands in family health care and sharing the burden in the house in the household by giving them accurate and appropriate information
Include men and community leaders in community based programming and trainings aimed at improving maternal and child nutritional status.
4. Improve quality of services to make them appropriate and acceptable by men and women
5. Recognize and build up on women’s role in family health care, sanitary and hygienic activities in the house hold and communities and enhance their knowledge and increase their access to resources
6. Enhance partnership and networking to achieve multi-sector collaborations to meet the practical and strategic needs of women. E.g. reducing women’s work load.
7. Improve the role of men in the daily household activities.

Key points in gender and nutrition sensitive livelihood programs:

1. Enhance women’s role in food production and preparation by increasing their access to and control over assets (extension advice, credit
2. Awareness raising and behavioral change communication through local meetings and community conversation to ensure fair use of household assets.
3. Ensuring the access of women to affordable micronutrients for themselves and their children
4. Addressing the socio-cultural practices, food taboos, cultural beliefs or caring practices that affect women’s, men’s, boys’ and girls’ nutrition status differently.
5. Educate men and women on the effects of malnutrition and the importance of adequate child care practices.
6. Collect sex disaggregated data and use the data to inform interventions
7. Conduct gender analysis to gather first hand evidence on the status of women, men, boys and girls and the socio cultural factors affecting gender relations in a given community
8. Provide women with Income generating activities as a way to increase their access to sustainable nutritious food and income source
9. Improve women’s access to microfinance, time saving agriculture and post-harvest technology.

Summary

Gender and nutrition are interlinked and mutually reinforcing cross cutting issues of development endeavors. Achieving the desired development goals will be impossible with poor consideration and working on gender and nutrition. As women are the most affected section of society by malnutrition, any development strategy should explicitly consider its impacts on women and children. Agriculture, nutrition and health development programs needs to be gender sensitive. In order to improve the nutritional status of women effort should be made both in terms of control of resources and agricultural productivity, and in terms of relative bargaining power within the household.
## Job Aid 4.1: Outline Gender Analytical Framework

<table>
<thead>
<tr>
<th>Category of enquiry</th>
<th>Issues to consider</th>
</tr>
</thead>
</table>
| **Roles and responsibilities**                  | - Productive roles (paid work, self employment, and subsistence production)  
- Reproductive roles (domestic work, childcare and care of the sick and elderly)  
- Community participation/self help (voluntary work for the benefit of the community as a whole)  
- Community politics (representation/decision-making on behalf of the community as a whole)  |
| **Assets**                                       | - Human assets (e.g. Health service, education knowledge and skills)  
- Natural assets (e.g land, labor)  
- Social assets (e.g social networks)  
- Physical assets (transport, communication)  
- Financial assets (capital/income, credit)  |
| **Power and decision making**                   | - Household level (e.g. decisions over household expenditure)  
- Community level (e.g decision on the management of resources and services)  
- Local government level  
- National government level  |
| **Needs, priorities and perspectives**          | - “practical” gender needs (needs arising in the context of the existing gender role/assets)  
- “strategic” gender needs (i.e requiring changes to existing gender roles/assets to create greater equality of influence, opportunity and benefit e.g increasing women’s access to decision-making)  
- Perspectives on improved services and delivery systems such as priorities service; choice of technology; location, type and cost of services; systems of operation, management and maintenance. Etc  |
MODULE FIVE: BEHAVIOR CHANGE COMMUNICATION IN NUTRITION

Introduction

*Communication* is the transmission of messages or issues of interest. In the process, there is a sender and receiver involved, a message to be transmitted, a channel through which information flows and a media on which message appears. Behaviour change communication is beyond mere communication. It is evidence based through formative assessment, interactive, consists of strategic messages, and involves audience segmentation. Often, it uses multimedia to appeal to the heart and mind of the target audience.

This module covers the behavior change communication (BCC) aspect of nutrition. It introduces the different ways or strategies you can use to help people to improve their own nutrition and that of their family. It covers the basic BCC concepts, purposes and strategies of communication and the key messages about the essential nutrition actions as well as useful ways of communicating information about these actions to people in your community.

**Main Objective:** At the end of this module, the participants will identify the basic concepts, strategies and tools of behavior change communication in relation to nutrition.

**Specific Objectives:** To attain module objective, the participants will:
- Explain the basic concepts of BCC in nutrition
- Discuss BCC strategies and tools for nutrition
- Identify the two focus areas of nutrition interventions and their key messages
- Design appropriate BCC strategies and tools for a target audience

**Behavior Change Communication (BCC)**

*Communication* is an act by which a person shares knowledge, feelings, ideas and information, in ways such that each gains a common understanding of the meaning, intent and use of the message.

*Behavioral change communication* is a process of any intervention with individuals, communities and/or societies to develop communication strategies to promote positive behaviors which are appropriate to their settings. This in turn provides a supportive environment which will enable people to initiate and sustain positive and desirable behavior outcomes. Behavior change approaches are a really important way of improving the nutritional status of the community especially the most vulnerable segment of the society such as women and young children. Its strategies are aimed at influencing the actions of families and communities.
Segmentation refers to targeting key messages to the relevant audience at the right time. It’s a way of ensuring that people get the information that is most relevant to them when they need it. This helps prevent information overload for people, by ensuring they are not given unnecessary information. For instance, during pregnancy, it is better to focus on maternal nutrition and breastfeeding rather than talking to the mother and family about complementary feeding, which can be discussed at a later stage.

Nutrition behavior change communication is different from nutrition education in that nutrition education aims at increasing awareness or knowledge while BCC targets change of behavior or practice. BCC is important because it can influence and lead to lasting change in an individual’s behavior and practice. The purpose of communication is to change behavior whereas advocacy is directed to influence system or policy changes.

<table>
<thead>
<tr>
<th>Box 5.1 BCC Key Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensuring that it is based on evidence from formative research</td>
</tr>
<tr>
<td>• Understanding the target groups and working from their perspective(s)</td>
</tr>
<tr>
<td>• Exploring the multiple factors that affect behavior</td>
</tr>
<tr>
<td>• Addressing barriers to change</td>
</tr>
<tr>
<td>• Targeting those who influence behavior as well as those who practice it</td>
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<tr>
<td>• Tailoring programming to each target group</td>
</tr>
<tr>
<td>• Reaching target groups through multiple channels and contact points</td>
</tr>
<tr>
<td>• Maintaining frequent and consistent contact with target groups</td>
</tr>
<tr>
<td>• Keeping in mind that knowledge is not enough to change behavior</td>
</tr>
<tr>
<td>• Ensuring that messages are timely and relevant to the target group</td>
</tr>
<tr>
<td>• Employing adult education techniques</td>
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</table>

Nutrition BCC Strategies and Tools

It is a strategy that enables to change nutrition related behaviors in a given community. Using the BCC techniques and approaches, you will be able to bring about change in behavior (attitude and practices) of the community that promote better health through optimal feeding practices and improved dietary habits. BCC focuses on essential nutrition actions, most particularly optimal infant and young child and maternal feeding practices and the key messages in relation to these, and also to facilitate the adoption of healthy adult dietary styles.

The behavior change strategy should promote the range of practices recommended for specific ages in a culturally appropriate and timely way, targeting not just those who practice the behaviors but those who influence the behaviors in a household and community. The
behavior change program seeks to achieve the highest coverage possible, maintain regular and frequent contact with target groups, ensure appropriate targeting and facilitate adoption of the behaviors. A review by Caulfield et al. found that clear, age-appropriate and action-oriented messages delivered through multiple contact points and channels are most effective.

An effective strategy will address these key questions:

- Whose behavior do you want to change?
- What behavior do you want to help them practice?
- Why aren’t they practicing the behavior now?
- What approaches can you use to address factors that influence their behavior?

The BCC activity in your community will involve you educating the community about a wide range of activities including horticultural activities, development of backyard fruit and vegetable gardens, and use of irrigation and water harvesting systems. For such activities health and agriculture managers will need to collaborate, as together they can have a greater impact.

Nutrition BCC can be done with individuals or with groups or communities. As a communicator, you will also be able to improvise or adapt strategies using locally available resources in your own community’s context. The table below shows some of the BCC strategies and tools that can be used in nutrition programs.

**Table 5.1: Some Examples of Nutrition BCC Strategies and Tools**

<table>
<thead>
<tr>
<th>BCC Strategies</th>
<th>BCC tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drama and Songs</td>
<td>Billboard</td>
</tr>
<tr>
<td>Community groups</td>
<td>Banners</td>
</tr>
<tr>
<td>Mass Media (Radio, Television)</td>
<td>Posters</td>
</tr>
<tr>
<td>Individual counseling</td>
<td>Leaflets</td>
</tr>
<tr>
<td>Group discussions or talks (Community Gatherings)</td>
<td>Brochures</td>
</tr>
<tr>
<td>Oral and printed word</td>
<td>Audio visuals</td>
</tr>
<tr>
<td>Counseling cards</td>
<td>Counseling cards</td>
</tr>
<tr>
<td>Home visits</td>
<td>TV &amp; radio broadcasts</td>
</tr>
<tr>
<td>Care groups or small groups</td>
<td>Magazine</td>
</tr>
<tr>
<td>Community-based Growth Promotion (CBGP)</td>
<td>Bulletin</td>
</tr>
<tr>
<td>Use of visuals aids</td>
<td>Newspaper etc</td>
</tr>
<tr>
<td>Groups of activities for family and the community</td>
<td></td>
</tr>
</tbody>
</table>

**BCC in Nutrition Interventions**

The focus of CBN behavior change communication in Ethiopia and throughout Africa is to facilitate feeding and dietary behaviors that are compatible with growth, development, long-
term health, survival and productivity. The focus of nutrition BCC is on the seven components of essential nutrition actions and their key messages. These messages are communicated at the six health contacts and through other contacts outside the health sector. The second focus of nutrition BCC is food-based approaches, which includes the promotion of diversified production and diversified consumption of plant source and animal source foods.

**BCC and the ENA:** Major emphasis is given to ENA in all national nutrition-related policies, strategies, programmes and guidelines including the NNS, NNP and the national guidelines for control and prevention of micronutrient deficiencies.

**BCC and Food-based Approach:** Promotion of food-based approaches using locally available resources are important and sustainable to the community as other interventions such as fortification and supplementation of micronutrients in the form of capsule or tablets are very costly. Horticultural activities and dietary diversification are both examples of important food-based approaches. The intensification of horticultural activities needs to be supported by nutrition education and practical demonstrations for people in your community and encourage women to cultivate vegetable gardens as a source of nutritious food for their families.

**Summary**

Behavior Change Communication is an effective tool for dealing many community and group related problems. BCC has been adapted as an effective strategy for community mobilization, health, nutrition and environment education and various public outreach programs. Enhanced knowledge about the behavior change process has facilitated the design of communications programs to reduce the risk of ill health and malnutrition by providing people with information and teaching them how they should behave. However, when there is a supportive environment with information and communication then there is a desirable change in the behavior of the target group. Thus, BCC is proved to be an instructional intervention which has a close interface with education and communication. It is a strategic and group oriented form of communication to perceive a desired change in behavior of target group.
## Job Aid 5.1: Essential Nutrition Action and Key messages for BCC

<table>
<thead>
<tr>
<th>Essential Nutrition Actions</th>
<th>Key Nutrition Messages</th>
</tr>
</thead>
</table>
| **Optimal breastfeeding**   | • Promote early initiation of breastfeeding (i.e., within one hour of birth); do not give pre-lacteal feeds  
• Promote exclusive breastfeeding (EBF) for the first six months of life (i.e., no other liquids or foods)  
• Promote breastfeeding on demand, day and night (i.e., usually 8-12 times per day) for an adequate time at each feeding; offer the second breast after infant releases the first  
• Practice correct positioning and attachment of infant at the breast  
• Promote good breast health care |
| **Optimal complementary feeding** | • Continue frequent, on-demand breastfeeding through 24 months of age and beyond  
• Introduce complementary foods at 6 months of age  
• Prepare and store all complementary foods safely and hygienically  
• Increase food quantity as child gets older  
  - 6-8 months: 200 kcal/day from complementary foods  
  - 9-11 months: 300 kcal/day from complementary foods  
  - 12-23 months: 550 kcal/day from complementary foods  
• Increase frequency of feeding complementary foods as child gets older  
  - 6-8 months: 2-3 meals per day  
  - 9-23 months: 3-4 meals per day, 1-2 snacks per day (as desired)  
• Increase food consistency and variety gradually as child gets older  
• Feed a variety of foods daily to ensure adequate nutrient intake, including animal products, fortified foods and vitamin A-rich fruits and vegetables  
• Practice responsive feeding (i.e., feed infants directly and assist older children, encourage children to eat, do not force feed, minimize distractions, show love to children by talking and making eye contact) |
| **Optimal nutritional care of the sick and malnourish child** | • Continue feeding and increase fluids during illness  
  - Child under 6 months of age: increase frequency of EBF  
  - Child 6-24 months: increase fluid intake, including breast milk, and offer food  
• Increase feeding after illness until child regains weight and is growing well  
• For diarrhea: provide zinc supplementation for 10-14 days, |
### Prevention of Vitamin A deficiency in women and children
- Breastfeed children exclusively for the first 6 months, and continue breastfeeding until the child is 24 months or older
- Treat xerophthalmia and measles cases with vitamin A, according to WHO guidelines
- Provide high-dose vitamin A supplementation to children 6-59 months of age, every six months according to WHO guidelines
- Promote consumption of vitamin A-rich foods, including liver, fish, egg, red palm oil, dark yellow or orange fruits (e.g. mango ripe and dried, papaya ripe and dried, apricots fresh and dried, persimmon), dark green leafy vegetables, and orange or dark yellow fleshy vegetables, roots and tubers (carrots, pumpkin, squash, sweet potatoes).
- Promote consumption of vitamin A-fortified foods, where available

### Adequate intake of iron, folic acid and prevention and control of anemia for women and children
- Promote intake of iron-rich foods, especially animal products and fortified foods
- Provide iron/folic acid supplementation to all pregnant women; continue
- supplementation for three months post-partum in areas with anemia prevalence greater than 40 percent
- Provide IFA supplementation for children
- Deworm children over 12 months of age, pregnant women after the first trimester and lactating women according to WHO protocol in areas where parasitic worms are a common cause of anemia
- Prevent and control malaria
  - Intermittent preventive treatment for pregnant women
  - Long-lasting insecticidal nets for women and children

### Adequate intake of iodine
- Promote consumption of iodized salt
- Supplement pregnant and lactating women and children 6-24 months of age with iodized oil capsules when iodized salt is not available, according to WHO-recommended doses

### Optimal nutrition for women
- Consume more food during pregnancy and lactation
  - Pregnancy: 285 extra kcal/day (one additional small meal each day)
- Lactation: 500 extra kcal/day (1-2 additional small meals each day)
  - Increase protein intake during pregnancy and lactation (e.g., beans, lentils, legumes, animal source foods, oilseeds)
  - Provide IFA supplementation for all pregnant women, according to WHO protocol
  - Treat and prevent malaria
  - Deworm during pregnancy (after first trimester) in areas where parasitic worms are a common cause of anemia
  - Provide post-partum vitamin A supplementation
  - Promote consumption of iodized salt
  - Supplement pregnant and lactating women with iodized oil capsules when iodized salt is not available, according to WHO recommended doses
MODULE SIX: NUTRITION PROGRAM PLANING AND SUPERVISION

Introduction
The planning and implementation of a program depend largely on good management and the success of a program depends to a large extent on the management skills of those who are in charge at different levels. The technical soundness of the program is not sufficient to ensure success. The development and implementation of program plans, such as nutrition program plans call not only for technical competence in nutrition but also for skills in setting objective and targets, organizing and staffing, coordinating, integrating, monitoring and evaluating, and many other areas which are regarded as different facets of program management.

Management is even more important in the case of developing countries where technical, financial and capital resources are fairly limited. The major responsibilities of a program manager are to plan, coordinate, supervise, monitor and evaluate programs. These are the same for any manager whether in health, agriculture or other sector. The basic functional areas of management are, therefore, the following: planning, organizing, staffing, leading, coordinating, supervising, monitoring and evaluation.

Good supervision can increase the competence and satisfaction of providers, which improves the performance of the facility, which in turn can increase the well-being and satisfaction of clients. One of the primary responsibilities of a supervisor of a program in a health or agriculture sector is to improve the performance of people. The performance of a program can be improved by giving due attention to each element of the program and through involving the client and community in the planning and identification of gaps in the sector. It is, however, equally important to obtain feedback, comments and suggestions from the clients, and community, provide tools to the staff for self and peer supervision, provide standards and guidelines to supervisors, and build the capacity of the supervisor in setting and communicating standards, monitoring performance according to the standards, building teams, and strengthening communication skills.

Supervision includes monitoring the work of staff as well as the quality of services provided. The person responsible for this task is defined as the supervisor. The supervisor plays a critical role in effecting change on the service provided. Introducing interventions to improve performance and quality of for instance nutrition services involves change, and people are not always comfortable with change. It is not enough to design solutions for improving the quality of service. The best ideas can fail because the people who are supposed to implement them are resistant to change. To improve performance and services, you must know how to manage the change process. This requires complete involvement of all stakeholders. Therefore, supervision becomes a team effort to make these improvements happen.

Main Objective: After completing this module, the participants will be able to discuss the basic concepts of program planning & supervision, and effectively plan, manage and supervise a nutrition program.
Supporting Objectives: To attain the main module objective, the participants will:

- Describe the concepts and stages of program planning
- Discuss why program managers fail in planning
- Plan an integrated nutrition program in collaboration with other sector offices
- State the types, roles and key skills of a supervisor
- Describe how supervision improves staff performance and quality of service
- Discuss how to plan and conduct supportive supervision and productive meetings
- Demonstrate supervisory skills

What is planning?

Planning is simply decision making. It involves selecting the course of action that a program or project will follow. For example, in a supplementary feeding program, planning should very clearly outline the course of action to be followed at the central, intermediate and peripheral levels over a given time frame. Procurement of food and its distribution to different feeding centers is a central responsibility, supervision is an intermediate responsibility and actual feeding is a task at the peripheral level. Good planning should ensure that these responsibilities are carried out at all levels.

<table>
<thead>
<tr>
<th>What to do:</th>
<th>How to do it:</th>
<th>When to do it:</th>
<th>Who is to do what:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What steps must be taken and in what order to reach the program objectives?</td>
<td>Methods to be followed to reach the objectives should be clearly specified in the plan.</td>
<td>A specified period during which specific actions are to be taken in specific phases. This is known as the time frame.</td>
<td>Which activities are actionable by which type of workers?</td>
</tr>
</tbody>
</table>

There are four main goals to planning:

1. To focus attention on objectives – clear, unambiguous and realistic objectives are the most vital components of a good plan,
2. To prevent any uncertainty or change in the course of action of the program that might be foreseen during the planning process,
3. To make the work as economic as possible to justify its cost-effectiveness, and
4. To have an in-built mechanism of monitoring by which the manager can keep a continuous watch on the operation and so make corrections when necessary.

Planning bridges the gap from where we are to where we want to go within a set time frame. For instance, in the planning of a program for the control of nutritional anemia among women, it is important to decide how much of the existing deficiency is expected to be brought under control over a given period of, say 10 years. Planning, therefore, will make it possible for things to occur in an organized manner in order to reach this target. A proper
plan will, therefore, set out in very clear terms what role each individual at every level will play over periods of time and with what objectives or targets.

Planning also involves selecting, from among the alternatives, future courses of action for the attainment of a particular objective. A planner has also to decide which problems, among the many, should be tackled and solved first. A planner should be able to make decisions regarding the selection of problems to be tackled which can be done with limited resource and manpower. A good planner will select the most feasible alternative.

**Stages in Program Planning**

It is essential for program managers to know some of the basic stages to planning a program. In general, the following are necessary to good planning.

**A. Awareness of the problem:** Although awareness of the problem precedes the actual planning and is, therefore, not strictly a part of the planning process, it is, nevertheless, the real starting point. Planning needs a realistic diagnosis of the problem.

*Diagnosis of the problem in a disaggregated manner is the first stage in nutrition program planning*

In making a plan for the control of any type of malnutrition, the first task is to determine who is suffering, from what type of malnutrition, where they live, what time of the year, which particular groups are most at risk and what the major underlying causes are. It is not sufficient simply to be aware that the problem exists. For example, the statement that in a particular country about 4% of children under five years of age is suffering from protein-energy malnutrition is not adequate to start the planning process.

**B. Establishing Objectives:** The next stage in planning is to establish objectives for the program and, if necessary, to establish sub-objectives for different components of the overall program. The objectives of a program should indicate the expected results of that program. For example, reducing the prevalence and extent of malnutrition, developing an infrastructure for delivery of nutrition services, and training health workers on nutrition may be three sub-objectives of one nutrition program. If a program has been implemented without precise objectives, it would be impossible for that program to be evaluated at a later stage. Unless nutritional objectives are specifically incorporated in the program from the outset, any nutritional benefit will be left to chance.

**C. Setting Targets:** Establishing objectives without setting targets is an incomplete process. Setting targets over a specified period ensures that the program proceeds along a predetermined course to reach the objectives. For example, the objective of an iodine deficiency disorder control program is to eradicate goiter and its other manifestations in a country. However, this might take a very long time, a period which cannot be specified in the planning process. The target might, therefore, in this case, be set at the reduction of the
existing prevalence rate of goiter in schoolchildren by 25 percent over a five year period. Realistic target setting needs careful consideration of the available resources both internal and external; administrative support, and other factors that potentially affect implementation of the program. Too ambitious a target which is difficult to reach with the available resources should be avoided.

| Target setting needs careful consideration! |
| High targets might be unrealistic and low targets are expensive, so one has to compromise |

D. Determining alternative courses: The next stage in planning is to search for and examine alternative courses of action. There is seldom an objective for which reasonable alternative approaches do not exist. This stage not only consists of identifying the alternatives but of making a preliminary analysis of the potential benefits of each alternative, and then making the final decision.

E. Evaluating alternative courses: This stage is very similar to the previous stage (D) because it consists of examining the strong and weak points of the alternative courses with reference to the set objectives of the program. One course may appear to be most profitable but requires a large capital investment and a strong infrastructure, while another may look more time consuming, but involves less money and less risk. Every approach to reaching an objective has plus and minus factors which must be carefully considered before a decision is made.

F. Decision-making in selecting a course of action: Selecting a course of action involves decision-making. In the process of making a decision regarding the course of action to be followed, the program manager collaborate closely with other program managers on whom she/he has to depend for the implementation of her/his program. Thus, for example, goiter control through iodinated oil injection might have to be undertaken in many countries through the immunization program. Similarly, vitamin A prophylaxis might have to be done through the services of maternal and child health units. In such cases, decision making must be done in collaboration with the managers of these programs.

When selecting from alternative courses of action, mangers can take one of two basic approaches: (i) experience, and (ii) experimentation and research.

i. Experience in decision-making: Reliance on past experience generally plays a larger part in decision-making. Experienced managers usually believe, often without realizing it, that the things they have successfully accomplished and the mistakes they have made, furnish good guides to the future. This attitude is likely to be more pronounced the more experience a manager has had. The manager, in addition to his own experience, can utilize the experience of others, available in documented form.

ii. Experimentation and research in decision-making: Another course of action in making a selection from alternatives is to try one or more out in similar field
conditions over limited periods of time and assess the results. This is usually done through operational research. The pilot project is a widely used method of assessing the feasibility of one or several methods in order to make decisions for a national program. It is often said that the only way a manager can be sure that a particular course of action will give the desired results is to try it out on a limited scale.

In a number of cases, experiences from different pilot projects are already documented in the country or in other similar countries. The results may be analyzed by the program manager to help her/him make a decision as to what will be the best in his own program and save time and expense of implementing a pilot project locally. A good program planner must be able to analyze the inputs and outputs of a pilot project in making decisions for its adaptation as a national or regional program.

G. Strategy formulations: Having analyzed the problems and set the objectives and the targets, the last stage in the planning process is the formulation of a strategy. This will include careful consideration of the favorable and unfavorable factors. The favorable factors are the available resources (funds, equipment and human power) and the unfavorable factors are the potential obstacles which must be foreseen. The strategy will consist of a set or sets of coordinated activities along a predetermined course(s) in order to reach the objectives and targets.

Why Managers Fail in Planning?

There are a number of reasons why managers fail in a planning process and it is important to be aware of the factors that lead to an unsuccessful plan. The most important reasons for ineffective planning are as follows.

1. Lack of meaningful objectives and targets: Planning cannot be effective unless goals are clear, attainable and can be translated into action. Goals must be defined in the light of strengths and weaknesses in the environment and should preferably be in terms of quantifiable targets. Nutrition programs without clear-cut objectives and quantifiable targets will be doomed to failure.

2. Failure to develop and implement sound strategies: Program plans without a sound strategy may easily proceed in the wrong direction and unless a strategy is accompanied by a plan of action, it becomes merely a statement of wishes and hopes.

3. Excessive reliance on experience: Although past experience is a useful guide, a manager may depend too much upon it and be unable to foresee changes and obstacles. The managers must be careful to evaluate her/his own past experience and use if flexibly.
4. Lack of top management support: Planning is not likely to be effective if top managers do not believe in it, encourage it and make the necessary decision that will allow their subordinates to make their own plans.

5. Lack of clear delegation of authority: It is obviously very difficult for people to plan if they do not know precisely what their jobs are, if they are unaware of how their jobs relate to others in the program and if they do not have clear authority to make decisions.

6. Lack of adequate control and monitoring techniques: Since the task of managerial control is to follow up on plans and to make sure that they are actually succeeding, the plans can hardly be very effective unless the manager knows in what direction the plan is moving. Without a control and monitoring system, good plans may easily proceed in a wrong direction.

What is Supervision?

Supervision of a program or a service is defined as a process of guiding, helping, training, and encouraging staff to improve their performance in order to provide high-quality services. A skilled supervisor builds and works with a team to improve performance. Supervision can be conducted by someone at the facility or externally by someone who makes periodic supervision visits. The on-site supervisor helps staff improve and maintain performance and quality of services as part of everyday activities. Many of these supervisors also provide services at the facility.

A supervisor has many responsibilities. Supervisors are responsible for ensuring that sufficient numbers of trained staff exist to provide high quality services, that those staff have the supplies and equipment they need to use their skills, and that there are financial resources to buy necessary supplies. They are responsible for scheduling, maintaining relationships with the regional or zonal bureaus, problem solving, creating an environment of teamwork, motivating staff, facilitating community outreach, and so on.

Types of Supervisors

There are two types of supervisors based on the places they work. These are internal and external supervisors. **Internal supervisors** perform their role as part of everyday activities, often while also providing service at the facility. **External supervisors** visit the facilities from time to time. They do not work there on a routine, day-to-day basis to help staff improve and maintain quality. External supervisors have some additional responsibilities in their work, such as planning visits to various facilities and maintaining contact with them between visits.
Roles of Supervisors

There are certain essential responsibilities that a supervisor must accept to improve staff performance and the quality of services. A supervisor:

- Identifies, with stakeholders, standards of good performance and clearly and effectively communicates them to staff members
- Works with staff to periodically assess their performance in comparison to these standards
- Provides feedback to staff about their performance
- Decides at which level of the service delivery system it is appropriate to address a performance gap
- Works with staff and the community to identify appropriate changes that will lead to the improvement of performance by staff
- Helps build close links with the community
- Mobilizes resources from many different sources (e.g., community, government, nongovernmental organizations, private sector, etc.) to implement changes
- Monitors the effects of selected interventions.

In carrying out the above responsibilities, the **supervisor needs certain skills**, which include being able to:

- Involve stakeholders
- Use standards and guidelines to assess technical abilities (e.g., nutrition competence: counseling, education, anthropometric assessment, etc)
- Use standards to assess competence in management areas such as logistics, financial management, or strategic planning
- Facilitate team work
- Motivate staff to perform well
- Persuade those with resources of the facility’s needs
- Facilitate meetings and discussions
- Provide constructive, timely, and interactive feedback
- Communicate clearly and effectively with staff and decision makers
- Gather and analyze information
- Lead the design and implementation of interventions
- Make decisions
- Delegate (assign responsibility for) duties to staff members

Some of the **personal characteristics a supervisor** should develop include:

- Leadership and the ability to motivate others
- A desire to help others do the best work that they can do
- A commitment to the provision of high-quality healthcare services
- Strong communication skills
- Openness to new and creative ideas
Supervision for Performance Improvement and Quality of Service

Traditional approaches to supervision emphasize “inspecting” facilities and “controlling” individual performance. They focus on finding fault or errors and then reprimanding those involved. This type of supervision causes negative feelings. It rarely results in improved performance. In contrast, supervision for improvement of performance and quality of services focuses on:

- The goal of providing high-quality services,
- Use of a process of continuous improvement of staff performance & quality of services
- A style of encouraging and supportive interaction with all staff and other stakeholders.

The goal of supervision is to promote and maintain the delivery of high-quality services. This goal is achieved by focusing on the improvement of individual staff performance. In a traditional system of supervision, this goal is often not obvious to those being supervised. Staffs sometimes view supervision in a negative way. If a supervisor begins by clearly stating this goal and explaining the process for achieving it, this view can be changed into a much more positive one. Supervisors can take advantage of the clear, step-by-step process, presented in this chapter, to help achieve high-quality nutrition services.

The process encourages the supervisor and her/his team to:

- Communicate well-defined performance standards,
- Find out if the performance standards are not being met, find out what is preventing achievement of the standards,
- Identify and carry out interventions to improve performance and quality, and
- Regularly monitor and evaluate how the team is performing compared to the standards.

This manual encourages a style of supervision that includes stakeholders and achieves results through teamwork. The underlying theory is that people do better work when they actively participate in setting goals and creating solutions. Constructive and useful feedback also plays an important role in supportive supervision. The workers need to feel that the supervisor listens to them. In this style the supervisor treats staff well, encourages them to do a good job, gives recognition for work well done, and sets clear expectations when they need to improve their performance.

A Process for Improvement of Performance and Quality of Services: The process that supervisors use to identify a performance gap and its causes and to create solutions for closing the gap is called performance improvement (PI); this process is illustrated in Figure 6.1. This process involves a series of steps that are repeated until the desired performance is achieved. The series of steps can be used to identify solutions for any type of performance gap. These gaps may be found in practices to prevent malnutrition, management...
of nutritional supplies and materials, nutrition counseling and education and gaps in knowledge and skills of employees, etc.

Figure 6.1 The Performance Improvement Process (Source: Supervising Healthcare Services: Improving the Performance of People)

The performance improvement process has the following steps:

1. **Get and maintain stakeholder participation**: Buy-in from all stakeholders is necessary. Stakeholders are the people who have an interest in improving staff performance and the quality of services at the service delivery facility. Getting stakeholders to agree on using the performance improvement process and then keeping them informed about the services at the facility is the first step in implementing the process.

2. **Define desired performance**: Staff members must know what they are supposed to do. Performance standards need to be available. Staff must know not only what their job duties are, but also how to perform them. Desired performance should be realistic, and take into account the resources (e.g. the number of staff, training, budget, equipment, supplies, and transport) at the facility.

3. **Assess performance**: The supervisors should continually assess how the staff and the facility are performing compared to how they are expected to perform. Methods to assess performance include conducting self-assessments and obtaining feedback from clients and/or observation by staff or external supervisors.
4. **Find causes of performance gaps:** A performance gap exists if the supervisor and staff find that what they are actually doing does not meet the set standards of performance. If a gap is found, then the supervisor needs to carefully explore with staff why the gap is there. What is preventing the desired performance? Sometimes the reasons for poor performance are not immediately clear. It may take some time to find the real cause.

5. **Select and implement steps to improve performance:** Once the causes of the performance gap have been identified, the supervisor and her/his staff will need to develop and implement ways to improve performance. Steps may be planned to improve the knowledge and skills of staff.

6. **Monitor and evaluate performance:** Once interventions have been implemented, it is very important to determine whether or not performance has improved. Is the staff now closer to meeting the established standards? If not, the staff team will need to go back and consider again what is preventing the desired performance. It is important that the interventions be targeted at the real cause of the performance gap. If performance has improved, it is important for the supervisor to continue monitoring to make sure that the desired level of performance is maintained.

Planning and Conducting Supervision Visit

**Planning a supervision visit:** A supervision visit must be well planned. If it is not, time will be wasted and the visit will accomplish little. To ensure a well-planned supervision visit, work with the facilities you supervise to:

1. **Set the objectives for your supervision visit:** It is important to set objectives for your visit so that both you and those at the facility know what to expect and how to prepare.

2. **Decide on which activities you will undertake while at the facility:** You need to think through exactly what you will do while at the facility and inform the staff there of these proposed activities. Again, this will help you and the staff make the most of your time.

3. **Review the performance and quality standards and indicators that have been established:** It is important to know what you are looking for when you visit the facility. What are the standards that have been set and what will you do to determine if improvements have been made? Review any previous supervision reports to identify problems that were to be addressed and the actions that were to be undertaken since the last visit.

4. **Review the supervision instruments that you will use to assess performance and quality:** A review of the performance standards and areas that needed improvement as of the previous visit will guide you in selecting the supervision instruments (e.g., observation checklists) that
you will need for this visit. Make sure you are familiar and comfortable with the use of these tools.

5. **Make administrative preparations:** Be sure that you have made all the administrative arrangements to ensure a smooth and productive trip. For example, you will need to:
   - Gather any documents necessary for the visit, including supervision instruments, new guidelines or directives from the ministry, and permission forms for observing procedures.
   - Notify the facility about the details of your visit including the date, the amount of time you will need, the people you wish to see, and the activities you plan to conduct.
   - Make logistical arrangements including transport, fuel, money, and travel documents.

**Conducting Supervision Visit:** this is the most important part of an external supervisor’s job. During the visit, the supervisor demonstrates technical as well as communication and management skills. The supervisor also transfers knowledge and skills, and facilitates problem solving by the team. The supervisor uses an inclusive style of communication and makes use of supervision instruments to document what is observed during the visit. Specific activities to be conducted during an external supervision visit include the following:

1. **Hold a meeting with the facility’s supervisor and staff:** The first thing after arriving at the facility is to hold a brief meeting with the staff to share the objectives of the visit and plan how the visit will take place. This meeting should not disrupt daily activities. At a small facility, all staff should participate. At a larger facility, the facility’s supervisor, unit head, and unit staff should participate. During this meeting, the external supervisor should review with the staff the problems and strengths identified during the last visit and ask about progress made toward resolving problems previously identified and any new problems that have surfaced. It should be clear to the supervisor and all staff which areas of the facility and which activity will be the focus of the visit.

2. **Observe service provision and client-provider interaction:** At the core of supervision is observation of service provision. The critical areas to observe, for instance in nutrition service provision may include:
   - Welcome of and communication with clients
   - Nutrition technical competence of providers
   - Supplies and facilities for nutrition service provision

In conducting staff performance observation, it is easiest to use a supervision checklist to note how the provider is performing in comparison with preset standards.

3. **Examine client records and facility statistics:** It is important to periodically examine client records and facility statistics to make sure that they are well kept and up-to-date. This will help those reviewing the records:
   - Make good decisions regarding the quality of service being provided to the client
✔ Make good decisions regarding client follow up
✔ Evaluate the technical competence of providers
✔ Evaluate the quality of services offered at the facility

Facility statistics represent a numeric picture of facility activities. They can illustrate changes in monthly or yearly service delivery trends, which may provide one measure of how services are improving. These statistics should be reviewed with the staff, and the supervisor should make sure the staffs understand why they are collecting these statistics and what they mean.

4. **Observe work conditions:** Staff performance at a service delivery point is often closely related to the working conditions there, and usually, the better the conditions, the better the performance and results. Specific conditions to be observed include:
   - The general physical environment (e.g., cleanliness, ventilation)
   - Furniture, equipment and supplies
   - Availability of information, education, and communication materials
   - Organization of the facility space
   - Amount and condition of inventory

The external supervisor should listen carefully to any concerns that staff have about working conditions to determine if conditions are affecting their ability to provide high-quality services.

5. **Discuss services with clients and other users:** An important aspect of performance and quality improvement is the viewpoint of those who use the services provided. The external supervisor should always reserve time to find out what clients and other community members think of the services.

6. **Help staff conduct self-assessment:** When staff participate in the identification of problems, they are more likely to find solutions to them. The external supervisor must help staff to make self-assessment a part of their ongoing work. The supervisor must help staff to ask themselves the following questions:
   - In what areas are we having good results?
   - In what areas are the results not as good?
   - Who, among the staff, should be congratulated for a job well done?
   - What has this person done that can serve as a good example for others?
   - What can be done to strengthen those areas that need improvement?

Instituting self-assessment at a facility will allow for better problem solving in the periods between external supervision visits.

7. **Meet again with staff to summarize the visit:** After observing, discussing and meeting with staff and clients, the external supervisor should meet again with staff in order to:
   - Acknowledge progress made since the last visit
   - Identify priorities and discuss any issues that need immediate attention
   - Discuss available resources for problem solving
   - Establish a plan of action for addressing priority issues
   - Discuss follow up activities that the internal supervisor will need to undertake.
8. **Establish a follow up action plan:** Finally, the external supervisor should meet with the internal supervisor to establish a follow up action plan, complete with names of persons responsible for specific activities and dates by which those activities are to take place. The internal supervisor should read and sign these notes in acknowledgment of the external supervisor’s visit. The external supervisor should always leave on a positive note so that the staff is left with the impression that they are doing good work and that any problems identified can be resolved.

9. **Assuring follow up to a supervision visit:** The external supervisor’s job is not completed when s/he leaves the facility. Next comes the follow up phase. This aspect of supervision is just as important as planning and conducting the supervision visit. In following up on a supervision visit, a variety of different tasks are undertaken, including:

10. **Writing and submitting the supervision report:** The supervision report is one of the ways to summarize and establish that a supervision visit took place. This report should be completed immediately after the visit and it should complement the notes that were left there. The format of the report will depend on what is required by the system. At a minimum, the report should include the action plan established with the staff at the facility and the recommendations made by the external supervisor. The supervisor needs to make sure that this report is submitted to the various required levels, which will usually include the facility, the district and regional authorities, and any other agency involved in sponsoring the supervision visit (e.g. nongovernmental organizations).

11. **Debriefing with appropriate authorities:** Often there will be other people who are responsible for or interested in what is happening at the facility. These could include a director or program officer at regional or zonal level or from a nongovernmental organization, or other supervisors. The external supervisor should make sure that these people are properly briefed about on-site activities. Keeping as many people informed as possible can help when mobilizing resources for problem solving and facility improvements.

12. **Following up on problem solving:** Perhaps the most important aspect of follow up is making sure that actions identified to solve problems are in fact carried out. The external supervisor should not just wait until the next visit to see if the situation has improved. S/he must be an active partner with the facility in making sure that the recommended actions are taken as soon as possible. If possible, contact can be made by phone, or another brief visit may be needed to check on progress.

**Mentoring**

Mentoring is the process of supporting and encouraging people to manage their own learning in order that they may maximize their potential, develop their skills, improve their performance and become the person they want to be. It is a partnership between two people (mentor and mentee) normally working in a similar field or sharing similar experiences. It is a
helpful relationship based upon mutual trust and respect. In mentoring an experienced individual helps another person develop her/his goals and skills through a series of time-limited, one-on-one conversations and other learning activities so as to enhance performance and quality of service rendered.

Mentoring has five essential components. These are:
1. Knowledge base
2. Understanding systems issues
3. Building relationship skills
4. Feedback skills
5. Teaching/coaching skills

The first two components are critical foundations that a mentor needs to start her/his mentorship task. The other three components are important skills that the mentor needs to apply or practice while mentoring health workers. The table below shows components of effective mentoring.

Table 6.1: Components of an effective mentoring

<table>
<thead>
<tr>
<th>Components</th>
<th>Brief descriptions of components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge base</td>
<td>A solid and up-to-date technical knowledge on nutrition and related issues</td>
</tr>
<tr>
<td>Understanding systems issues</td>
<td>Understanding of how the facility works and the existing performance problems and their causes (poor management/leadership, poor recording, shortage of supplies/equipment, etc.)</td>
</tr>
<tr>
<td>Building relationship skills</td>
<td>Building trust and mutual respect with the mentee to help avoid barriers or discomfort during the mentorship process</td>
</tr>
<tr>
<td>Feedback skills</td>
<td>Mentors transfer knowledge and skills to mentees through feedback. Feedback should be clear, specific and timely.</td>
</tr>
<tr>
<td>Teaching/coaching skills</td>
<td>This includes sharing information and demonstrating skills or procedure to enhance the mentees knowledge and skills competencies and job performance</td>
</tr>
</tbody>
</table>

**Working with People**

At the heart of supervising service delivery is communication between people. You need to work well with people at many different levels and in many different situations to make it possible for staff to perform their best and for your facility to provide high-quality services. You can get better results as a supervisor by:
- Promoting teamwork,
- Being aware of and responding to the needs of staff, and
- Encouraging and motivating staff members to do their best.
To perform well, you need good communication skills. Much of your work will take place in meetings; therefore, you must be able to plan and conduct productive meetings. To increase your effectiveness, you must also be able to develop relationships with different stakeholders, including staff, community members, and representatives of different levels of the service delivery system.

**Facilitate A Team:** Team is a small number of people with various and different skills who are committed to a common purpose and performance goals. Each member is responsible and accountable to other team members. You will be more likely to succeed as a supervisor if you work with staff and stakeholders as a team. You can agree on a common purpose, determine what is good about the facility and what might need to be improved, and find ways to make improvements as a team. One way to create teamwork is regular communication among staff or team members. When staff communicate regularly and are aware of each individual’s roles and responsibilities, they tend to feel a sense of ownership and responsibility to their colleagues. Regular communication can be accomplished by meeting regularly. The planning and facilitation of meetings, therefore, is an important skill for supervisors to strengthen.

**Planning and Facilitating Productive Meetings:** As a supervisor, you will find yourself in the position of planning, calling, and facilitating many meetings. They may be with community leaders, program managers/directors or facility staff. Below are some questions you may want to consider as you plan and facilitate meetings:

- What information do you wish to give or obtain?
- Is there a decision to be made or a problem to be solved?
- Is there a specific goal to be accomplished or a task to be completed with your staff?

**Preparing for a meeting:** Consider the following questions when preparing for a meeting:

- **Is a meeting necessary?** Ask yourself if the work to be done or the decisions to be made could be accomplished through any other means (e.g., memos, letters, reports, telephone conversations, or face-to-face conversations). If the answer is no, you should proceed with planning your meeting.

- **What is the objective of the meeting?** The meeting objective is a statement of purpose. It shows what the meeting intends to accomplish. You should keep the meeting centered on your objective/s.

- **What information do you need to gather about the topic prior to the meeting?** It is important that everyone attending the meeting know something about the topic to be discussed. This information can be made available before the meeting or you can begin the meeting with an introduction to the topic.

- **Who should participate?** Ask who needs this information? Who will do the work or make the decisions? Who are the people who will be affected by the discussions and decision about the meeting’s agenda?

- **Where, when, and for how long will the meeting take place?** Are the meeting place and time convenient for everyone? Is there enough time to accomplish the meeting objective?
Once these questions have been addressed, be sure to do the following:

- **Prepare the agenda for the meeting.** The agenda should be based on the meeting objective, the amount of time available for the meeting, and the number of participants invited. You may wish to ask the meeting attendees for agenda items, or ask certain participants to introduce specific items. The agenda should be distributed to participants before the meeting. Finally, list agenda items in order of priority. Put them in a logical order. Decide how each item will be addressed (e.g., brainstorming, small group discussion). Allow enough time for each item.

- **Announce the meeting.** People should be informed of a meeting well ahead of time. Distributing the agenda before a meeting is very helpful to the participants. It helps them to prepare themselves for the meeting and provides an opportunity for participants to give their input on the agenda. The type of meeting will determine how it is conducted. Three simple rules, however, apply to all group meetings: The person conducting the meeting:
  - Should allow no rudeness or personal remarks
  - Has the absolute right to control the discussion, rule out irrelevant remarks, and stop the proceedings if necessary
  - Is responsible for the progress of the discussion (e.g., by raising questions or new topics, encouraging all participants to take part)

**The Role of the Facilitator:** The person conducting the meeting is often referred to as the facilitator. To be an effective meeting facilitator, you must use all of the team leadership and communication skills described earlier in this chapter. As the leader, you must keep the group focused on its objective and draw the group together to accomplish its goal. Keep in mind the following major responsibilities of the meeting facilitator or chairperson:
  - Define the objectives and agenda for the meeting ahead of time
  - Start and end the meeting on time
  - Set the rules of conduct for the meeting (e.g., raising a hand to be recognized)
  - Keeps the meeting moving forward by managing the discussion
  - Encourage full participation of all attendees
  - Encourage active discussion, expression of opposing viewpoints, and teamwork
  - Restate or summarize participants’ positions for clarity
  - Maintain order and courtesy; the climate of the meeting should be one of mutual respect
  - Clarify and summarize conclusions or actions to be taken
  - Delegate responsibilities and make effective use of subcommittees to work on activities before the next meeting
  - Delegate responsibility for creating and distributing the minutes of the meeting
  - Establish the time, place, and agenda for the next meeting
  - Follow through on the future work that was decided on at the meeting
If you are left with too little time to discuss all remaining agenda items, deal with the most important ones first and leave the rest of the items for a future meeting. Rushing through the agenda items is not productive.

**Summary**

The success of a program largely depends on good planning and management. A well planned and managed program needs less money, time, and human power. Problem definition is first step in the planning process followed by establishing priorities among the problems before planning the program. The manager has to formulate a sound strategy for an effective and efficient execution of the plan of action. However, without a detailed plan of action a strategy is of no value. Good plans and strategies may easily perish without a systematic control and monitoring system.

The process of defining desired performance, assessing performance, finding root causes, selecting and implementing interventions, and monitoring performance is very useful to improve health services. A supervisor should facilitate a team approach to supervision and improve performance and services at service delivery facility.
Job Aid 6.1: The Nine Steps in Program Planning

Step 1: Advocacy for administrative support
Identify priority problem, present the case and get ‘green light’ to start the actual planning

Step 2: Analysis of the organizational situation in the sector concerned
Get a clear picture of the structural environment in which the proposed program will have to be carried out (decision making process, resources, policies, past and on-going programs, past experiences, etc)

Step 3: Analysis of the situation related to the problem identified
A summary of the problem, its magnitude and probable future trends
Identify population groups and size affected by the problem

Step 4: Detailed analysis of the problem, its major causes and associated factors
What is the extent of the problem, where and who are most affected, what are the major identifiable causes, what program exist in the area

Step 5: Set objectives and targets overtime
Set realistic objectives to be achieved within a specified time
Set targets that must be reached within a specified time

Step 6: Identify potential obstacles, and suggest measures for overcoming them
Predict what might stand in the way of reaching the objectives
Have list of ideas to overcome obstacles

Step 7: Identify approaches and design strategies
A list of approaches identified for implementation of the program
A strategy with a detail list of activities

Step 8: Detailed planning of program with specific activities
Plan should specify detail as to how the strategy will be put into operation

Step 9: Program document
A well-prepared program document that enables essential organizational and resource allocation decisions by even non-technical person
Job Aid 6.2: Key Steps You need to Consider in Conducting Supportive Supervision

1. Hold a meeting with the facility’s supervisor and staff
2. Observe service provision and client-provider interaction
3. Examine client records and facility statistics
4. Observe work conditions
5. Discuss services with clients and other users
6. Help staff conduct self-assessment
7. Meet again with staff to summarize the visit
8. Establish a follow up action plan
9. Assure follow up to a supervision visit
10. Write and submit the supervision report
11. Debrief with appropriate authorities
MUDUEL SEVEN: MONITORING & EVALUATION OF NUTRITION PROGRAM

Introduction

In recent days there is a growing emphasis of the need for monitoring and evaluation (M&E) systems for nutrition interventions. The need for data has been stressed because of a strong focus on results, accountability, transparency, and the need for measuring progress towards meeting targets set in order to achieve a development objective to curb certain societal challenges such as malnutrition. In the health field, this is intensified with the Millennium Development Goals and the Global Fund for HIV/AIDS, TB and Malaria and vaccination (immunization). Monitoring is closely linked to program management and designed to assess and improve program performance. Evaluation permits decision makers to assess whether program objectives are being met. The absence of a good M&E system, despite their continued evidence of value & need, suggest that beyond resources constraints, program staffs or governments experts may not yet have the necessary skills or confidence to develop and operate such an M&E system effectively. Often, M&E activities are viewed by professionals as a “cumbersome”, “something imposed from above”, and “as a waste of time”. Many have their own varied impressions. Yet there is often confusion about what M&E entails.

This module presents the concepts and tools of Nutrition Program Monitoring and Evaluation in a simple to understand and put them into practice through exercises and adult learning principles. In addition, it focuses on the components of the data use (data for decision making processes) and joint monitoring and evaluation of nutrition programs.

Overall Objective: After completing this module participant will be able to describe monitoring and evaluation, identify nutrition indicators and make use of appropriate formats for monitoring and evaluation purposes.

Specific Objectives: To attain module objective, the participants will:

- Explain the difference between monitoring and evaluation
- Identify a set of nutrition indicators
- Discuss basics of data collection, presentation, analysis/interpretation
- Use of appropriate formats for monitoring and evaluation purposes.

Overview of Monitoring and Evaluation

Nutrition programs aim to improve the nutritional status of children and women thereby improve the lives of the rural poor. As a manager of a program or part of it, do you always know what impact you are having and why? Learning about successes and failures through regular monitoring and reflection is critical for guiding your program intervention towards achieving maximum impact or change. Monitoring and Evaluation are the heart of such endeavor.
Monitoring & Evaluation is often used as one term without distinguishing the two components clearly. They are two sides of a coin, which have complementary functions. The major differences between monitoring and evaluation are shown in the following table.

Table 7.1: The major difference between Monitoring & Evaluation

<table>
<thead>
<tr>
<th></th>
<th>Monitoring</th>
<th>Evaluation</th>
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<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>• Are we doing the project correctly?</td>
<td>• Are we doing the correct project?</td>
</tr>
<tr>
<td></td>
<td>• To alert management to any problems that arise during implementation;</td>
<td>• To determine whether objectives set were realistic;</td>
</tr>
<tr>
<td></td>
<td>• To determine the efficiency of application and use of inputs and their</td>
<td>• To assess the impact of program interventions.</td>
</tr>
<tr>
<td></td>
<td>conversion into outputs;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• To facilitate adjustment of activity plans, time schedules or budgets.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus on</strong></td>
<td>• Inputs, Outputs and the challenges in due course of program implementation.</td>
<td>• Mainly on the impact, relevance, efficiency and the coherence of the program design.</td>
</tr>
<tr>
<td><strong>Responsibility</strong></td>
<td>• Mainly Program Management together with concerned stakeholders.</td>
<td>• Usually led by people external to the program (for example, from relevant ministries, central</td>
</tr>
<tr>
<td></td>
<td></td>
<td>government, funding body or donor agency).</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>• It takes place during the implementation of program;</td>
<td>• Periodical; as specified in the approved program document; usually midterm, terminal and ex post.</td>
</tr>
<tr>
<td></td>
<td>• It is a continuous feedback system throughout implementation period.</td>
<td></td>
</tr>
<tr>
<td><strong>Tools/approaches</strong></td>
<td>• Qualified personnel and well established system;</td>
<td>• Usually by external consultants</td>
</tr>
<tr>
<td></td>
<td>• Practical implementation mechanisms (e.g. field visits, stakeholders</td>
<td>• Well established M&amp;E system;</td>
</tr>
<tr>
<td></td>
<td>meetings, documentation of activities, regular reporting, review</td>
<td>• It uses baseline survey; outcome and impact indicators;</td>
</tr>
<tr>
<td></td>
<td>meeting).</td>
<td>• It needs a study/assessment as a means.</td>
</tr>
<tr>
<td></td>
<td>• It uses work plans, indicators of performance/target as a base and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>progress reviews as a means.</td>
<td></td>
</tr>
</tbody>
</table>

**Procedure for Monitoring and Evaluation**

In principle, M&E system is designed and implemented to serve, primarily as a tool to program management. This implies that managers and the key stakeholders, to successfully carry out their decision-making responsibilities at different levels, should obtain all the required information through M&E system.
Box 7.1: The major steps in M&E

1. Establishing a M&E System
2. Planning the M&E process
3. Setting up of objectives and indicators
4. Developing data collection methods
5. Collecting data
6. Analyzing data
7. Report writing
8. Dissemination of M&E findings

Monitoring and Evaluation are most effective as interwoven activities. Together they can provide information that will help decision-makers choose an appropriate course of action for the future of the project or on the direction of future projects. Depending on the M&E findings, decision makers may decide to:

- Continue the project, either as it is currently implemented or with revisions;
- Expand the project by increasing the target population;
- Replicate the project in a new setting; or
- Curtail the project and reallocate the resources elsewhere.

The M&E process involves establishing its policy and system, setting up of objectives, indicators and collecting & analyzing data and making comparison with targets indicated in the work plan and progress review to provide the required information for decision makers.

Indicators and Targets in M&E

Indicators are the variables used to measure progress toward the program goals. An indicator is often expressed as a number or percentage. While Targets are the quantified levels of the indicators that program intended to achieve at given point in time.

<table>
<thead>
<tr>
<th>Targets</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double the proportion of mothers practicing exclusive breastfeeding between 2013 and 2015</td>
<td>proportion of mothers practicing exclusive breastfeeding between 2013 and 2015</td>
</tr>
</tbody>
</table>
Double, between 2013 and 2015, the proportion of farmers who engaged in nutrition sensitive agriculture.

- Proportion of farmers who produce and consume nutritious products.
- Proportion of farmers engaged in nutrition sensitive agriculture.

Example in Millennium Development Goals: “Goal 4: Reduce Child mortality”; “Reduce under five mortality rate by two-thirds, between 1990 and 2015,” is a target; while “Under 5 mortality rate”, “Infant mortality rate, and Proportion of 1-year old children immunized against measles” are listed as indicators.¹

What to monitor and evaluate?

The principal project/program components to be monitored and evaluated are inputs, outputs, outcomes and impacts. The monitoring & evaluation system should be targeted to measure these aspects of the project.

<table>
<thead>
<tr>
<th>Box 7.3: Examples on Nutrition Indicators by level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome indicators</strong></td>
</tr>
<tr>
<td>• Minimum dietary diversity (children 6–23 months)</td>
</tr>
<tr>
<td>• Minimum acceptable diet (children 6–23 months)</td>
</tr>
<tr>
<td>• Individual dietary diversity score (for women of reproductive age)</td>
</tr>
<tr>
<td>• Prevalence of low birth weight</td>
</tr>
<tr>
<td>• Prevalence of anemia in women of reproductive age</td>
</tr>
<tr>
<td>• Prevalence of iodine deficiency disorders</td>
</tr>
</tbody>
</table>

Hence, if our Monitoring and Evaluation system should provide the required information for decision makers, then we need to collect data on indicators to measure the progress of our program. Appropriate data collection tool should be used for program monitoring (see Annex I & II)

Data Source and Data Quality Concepts

Data is defined as factual information in raw un-synthesized form. Data can be either numeric or narrative. In nutrition and agriculture, we have various sources of data that might be collected for various reasons by government or donors. When we process data in some meaningful forms it is called information. It means that the data can be used for decision making.

Sources of data in nutrition, health & agriculture

- Service delivery statistics: This is a data source that we will be collecting as we provide nutrition and health services in health facilities or in the community (household level).
- Census: A census is a counting of the people in a specific geographic area. This is an important data source in the health field because it allows us to calculate the numbers of people in need of specific services.
- Surveys, evaluations, research studies: These capture information on specific topics and populations. These data sources help us to answer specific questions and frequently give us information that can help us to improve our programs.
- Sentinel surveillance: Tracks the prevalence of specific diseases and condition in a target population over time.
- Prevalence refers to the total number of cases of a disease in a given population at a specific time. These data help us to estimate the burden of specific diseases.
- Budget information: there are other sources of data that we don’t often consider. For example, budget information can help us track our expenditures and illuminate what specific program elements cost.
- Base-line study: An analysis describing the situation prior to a development intervention, against which progress can be assessed or comparisons made.
- Food and agriculture, Weather condition data, data on farmers survey, etc

**Data Quality Issues**

When we talk about collecting data that are accurate, complete, and timely, then we are talking about data quality. Data quality refers to:

- **Accurate data** – meaning that the data collected are true and without errors
- **Complete data** – meaning that all data requested on a data collection form are present and there is nothing missing
- **Timely Data** – meaning that the data are recorded and reported by the time they are requested. We don’t want to delay for months to report on our services because by then the information we are reporting on is old and does not reflect the current situation.

Even though the primary responsibility of ensuring quality of data is at the hands of the service provider and data staffs, program managers as leader has to make sure that the data collected by service providers and data staffs are of good quality so that to make the right decision. Therefore, data quality is important and is linked to data use.

Strong decision making and management rely on high-quality M&E or strategic information. Without information, it is difficult to make an effective and successful decision or manage shifts in a program.

**Data Analysis**

The process of transforming data into information is called data analysis. The purpose of data analysis is to provide answers to questions being asked at a program site or research questions. It means taking the data that you collected or somebody collected for you, and looking at them in the context of the questions that you need to answer.
Descriptive analyses are the most common data analysis techniques used for most program purposes. It includes, for example, the average number of farmers in a given kebele or average number of clients seen per month in a health center.

**Common analyses at program level**

Data analysis can help to answer questions pertaining to many aspects of a program. The most common analysis at program level is calculation of program coverage such as Vitamin A coverage, Deworming coverage, watershed coverage, latrine coverage, agriculture extension program coverage, irrigation coverage.

Addressing questions related to coverage requires information about the number and type of people being reached or covered with specific services. After calculating the coverage, comparison with last year figure/last quarter or comparing the performances between woredas, health centers, farmer training centers, etc is important in order to see differences, to explore and learn about program successes, etc.

Coverage may be expressed as cumulative numbers of people receiving a health service or product, the relative population served or reached by program activities, or the total amount and type of activities.

Another very important aspect of coverage is service availability. This answers the question: Are there services available where there is a need? To fully understand the utilization of services, you need to know if they are available for clients to access. Together, these two measures comprise program coverage.

Service utilization can be measured by calculating the percentage of the target population that is using the services. It is like calculating percentages. Measuring coverage requires defining your target population and having an accurate count of that population to use as the denominator. We also will need to define the number of individuals in the target population using the service. This is the numerator. The answer then is multiplied by 100 to get a percentage.

\[
\text{Availability + Utilization} = \text{Coverage}
\]

**Data presentation & interpretation**

There are two main ways of summarizing data: using tables and charts or graphs. A table is the simplest way of summarizing a set of observations/data. A table has rows and columns containing data, which can be in the form of absolute numbers or percentages, or both. Do not forget to provide title for your table. Charts and graphs are visual representations of numerical data and, if well designed, convey the general patterns of the data.

Once we have transformed data into information by summarizing them with tables, graphs, or narratives; then we need to interpret the data. That is, we need to consider the relevance of the
findings to our program – the potential reasons for the findings and possible next steps. In this process, we move from the ‘what’ is happening in our programs to the ‘why’ it is happening.

Data interpretation is the process of making sense of the information. It allows us to ask: What does this information tell me about the program? It is adding meaning to information by making connections and comparisons and exploring causes and consequences.

Here, you see a flow chart of the steps involved in interpreting data

![Figure 7.1: Steps interpreting data](image)

**Step 1: Relevance of finding**

In this step we need to ask the following questions:
- Does the program meet the target?
- How far from the target is it?
- How does it compare (to other time periods, other facilities)?
- Are there any extreme highs and lows in the data?

**Step 2: Finding reasons**

When seeking potential reasons for the finding, we often will need additional information that will put our findings into the context of the program.

Supplementing the findings with expert opinion is a good way. For example, talk to others with knowledge of the program or target population, who have in-depth knowledge about the subject matter, and get their opinions about possible causes.

For example, if your data show that you have not met your targets, you may want to know if the community is aware of the service or not. To answer this, you could talk to community leaders or other providers to get their opinions. Sometimes ad hoc conversations with experts are insufficient. To get a more accurate explanation of your findings, you often will have to consider other data resources.

**Step 3: Consider other data**

Let’s go back to the finding of ‘the program has not met its annual target’. Can we understand why this is happening by looking at other program indicators? E.g. commodity data, staff mix, performance improvement data, etc.
**Step 4: Conduct further research if you can**

Once you review additional data, it may become apparent that these data are not sufficient to explain the reasons for your findings – that a data gap exists. In these instances, it may be necessary to conduct further research. The types of research designs that are applied will depend on the questions that need to be answered, and of course will be tempered by the feasibility and expense involved with obtaining the new data.

**Summary**

During the implementation of programmes and projects, managers must keep track of progress. Managers need to monitor expenditure, resource use and the implementation of activities. Monitoring reports continuously provide information to support internal decision making to fine-tune activities.

In contrast, evaluations assess the worth of the programme. It will examine the impact and results, for instance: Have the objectives been fulfilled? Was the intervention efficient and sustainable? Did the nutrition interventions/activities lead to improved nutrition security? What lessons can be learned in designing future projects and programmes? For monitoring reports the primary audience will be the internal managers and donors. Evaluation reports may target a broader number of external decision makers.

An M&E process will report on what happened and how this compared to what was intended. On the basis of this analysis, recommendations will be made. For monitoring and evaluation to be effective in informing decision, one need to consider quality data collection, proper analysis, presentation and interpretation.
Job Aid 7. 1: Tabular Report Format (to be adapted)

**Annual Physical Report**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit of Measurement</th>
<th>Annual Plan</th>
<th>Achievement</th>
<th>Performance (%)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

**Quarter report**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit of Measurement</th>
<th>Quarter Plan</th>
<th>Achievement</th>
<th>Performance (%)</th>
<th>Remark</th>
</tr>
</thead>
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</table>

**Second Option for Quarter Report**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit of Measurement</th>
<th>Quarter Plan</th>
<th>Plan Up to this Quarter</th>
<th>Achievement in the Quarter</th>
<th>Achievement up to this Quarter</th>
<th>Quarter Performance (%)</th>
<th>Up to this Performance (%)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>
Job Aid 7.2: Checklists for Monitoring and Evaluation

A. Checklist for program/Project Monitoring
   1. Are the activities taking place as scheduled?
   2. Are the outputs being achieved as expected?
   3. How are the beneficiaries responding to the project?
   4. Identify possible causes of differences between actual and target performance. Were the original targets realistic?
   5. Have any unexpected outputs arisen? Should they be included in a revised logical framework?
   6. Are the assumptions identified in the logical framework relevant? Have any killer assumptions emerged? Have any new risks appeared?
   7. What is the likely achievement of the project purpose?
   8. Recommend corrective action that would improve the implementation of the existing project.

B. Checklist for Evaluation
   1. What did the project set out to achieve? Was the problem correctly identified? Were the project activities appropriate? Were the targets realistic?
   2. What were the expected linkages between outputs and purpose?
   3. What is the likelihood that the project purpose will be fulfilled? What would have happened in the absence of the project?
   4. Is the project purpose still relevant? Are there other ways in which the same purpose could be achieved? Would they be more appropriate? Would they be more cost effective?
   5. What are the indications about the likely achievement of the project goal? Are the project benefits sustainable?
   6. Who were the intended beneficiaries of the project? How were they to benefit? Did the project address practical or strategic gender needs?
   7. Were there any unexpected outputs or beneficiaries?
   8. Were the assumptions identified in the logical framework relevant? Have any killer assumptions emerged? Have any new risks appeared?
   9. Identify the lessons learnt for the future design of similar projects.
Job aid 7.3: Reporting outline for Monitoring and Evaluation

M&E reports commonly include the following structural elements:

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td>A reader sees the title first. They may use it to decide whether to continue reading the paper. A well-chosen title gives readers a quick overview of the subject of the report and encourages them to look further at the report.</td>
</tr>
<tr>
<td><strong>Table of contents</strong></td>
<td>The table of contents is a skeleton or overview of the structure of the paper. It shows the overall organization, the main sections and their sub-sections and page numbers to locate sections in the paper. The table of contents leads readers through the whole report. It provides a quick overview of the focus and major issues addressed. The table of contents helps readers to find specific sections or information that they are particularly interested in.</td>
</tr>
<tr>
<td><strong>Executive Summary</strong></td>
<td>The main function of the executive summary is to satisfy the needs of those readers who will not read the entire paper and readers whose main interest is in the conclusions and recommendations, especially decision-makers. It should be tightly drafted, and usable as a free-standing document. It should be short and focus on the main analytical points, indicate the main conclusions, lessons learned and specific recommendations.</td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td>The introduction will describe the project, programme or policy to be monitored or evaluated. It will discuss the study objectives and the methodology used. The introduction may conclude with a road map, showing how the paper is organized.</td>
</tr>
<tr>
<td><strong>Findings</strong></td>
<td>The core section of the report will examine the performance of the policy, programme or project against its design criteria. This section should describe the facts and interpret or analyze them.</td>
</tr>
<tr>
<td><strong>Conclusions and recommendations</strong></td>
<td>The key points of the conclusions will vary in nature but will often cover aspects of the evaluation criteria. The ultimate value of an evaluation depends on the quality and credibility of the recommendations offered. Recommendations should therefore be as realistic, operational and pragmatic as possible. Recommendations should be carefully targeted to the appropriate audiences at all levels.</td>
</tr>
<tr>
<td><strong>Appendices</strong></td>
<td>Appendices should be used to present additional information which might otherwise interrupt the flow of the main discussion. This may include; terms of reference, methodology, planning documents (e.g., logical framework matrices original and improved/updated), map of project area, list of persons/organizations consulted and literature and documentation consulted.</td>
</tr>
</tbody>
</table>

NB: While all these elements should be included in the report, the headings may vary. Some sections may be combined, or expanded and subdivided. As the audience of monitoring reports is familiar with the activity under discussion, the report may not require much introduction and may compress many of the elements.
REFERENCES


Core Nutrition Competencies For Mid-Level Animal And Plant Science Disciplines at Agriculture TVET Colleges (ATVET) In Ethiopia, Jhpiego Ethiopia, Addis Ababa, December, 2012.


Ethiopian Health and Demographic Survey (2005), CSA Addis Ababa, Ethiopia

Ethiopian Health and Demographic Survey (2011), CSA Addis Ababa, Ethiopia


FMOH () Blended Learning Modules for the Health Extension Programme. HEAT (Health Education and Training in Africa)


Save the Children USA (2012) State of the World Mother, May 2012 USA.


ANNEXES
Annex I: Integrated Supportive Supervision Checklist - Nutrition Component

Regional/Zonal level supervision

Name of the Region/Zone ___________________________ Number of Woreda ______
Number of Hospital ______ Number of Health centers ______ Number of health posts_______

Nutrition service coverage

Number of CBN Woreda ________________
Number of EOS woreda__________________
Number of EOS woreda transitioning to CHD__________
Number of EOS woreda transitioning to HEP__________
Number of Health facilities (Hospital & Health center) with TFU/SC_______________
Number of health facilities (Hospital & Health center) with HIV/Nutrition service__________
Number of Health posts with CMAM/OTP______________

Nutrition program coordination

Is the regional/zonal nutrition coordination body established? Yes_______ No______
If no, why?_____________________________________________________
If yes, do the main nutrition targeted sectors have developed their plan?
_____________________________________________________________
Is there a mechanism to coordinate nutrition programs implementing partners in the region?
If yes,
State how they are coordinated ______________________________

Nutrition service delivery (Quality)

Community based nutrition

CBN data base in use? Observe. __________________________________________

Is the Region using CBN data (graphs) for analysis and discussion? E.g. In review meetings with zonal and within the office (particularly disease prevention and health promotion core process)?
_________________________________________________________________________
Regional level GMP participation rate _____________ trend of malnutrition

How often the Region conducted supportive supervision? What did the Region do to support those Zones with low performance?

Are Reports coming timely from Zones? Look at reports of Zones of the last month.

Did the Zone submit report to the region regularly? If not Why? Look at the latest CBN/OTP report submitted.

Challenges faced (gaps/Bottlenecks identified by the region)

Possible solutions suggested

Best practice indentified

Implementation of child survival nutrition interventions (VAS, Deworming & nutritional screening) (through EOS/TSF or CHD/HEP)

What was the last EOS/CHD session coverage

Vitamin A___________________
Deworming_________________
Nutritional screening___________
% of PLW mothers with malnutrition provided with ration card

% of malnurished children linked for management

Coverage of VAS deworming & participation of nutritional screening in woreda transition from EOS to HEP

Problems faced during implementation of the campaign with solutions provided

Status of EOS to HEP transition and any challenges identified with solutions provided

**HIV/Nutrition**

Who is supporting the program in the region

How many facilities are providing the service

Health center

Hospital

How many health professionals are trained for the program

Any challenges identified

**Management of acute malnutrition**

Number of health centers Hospitals providing TFU/SC services

How many health posts are providing CMAM/OTP services

Any challenges identified

**Micronutrient interventions**

Did you distribute iron folate to all zones/woredas

% of pregnant or lactating women receiving iron folate

Did the region/zone distribute iron folate brochures to all zones/woredas

Did the region/zone distribute iron folate to all zones/woredas

Did the region/zone distribute zinc tablets to all zones/woredas

Did the region/zone distribute zinc brochures to all zones/woredas
Nutrition commodity supply

Did the region/zone face shortage of the following nutrition commodities in the last quarter?

Iron folate
Zinc Acetate
MUAC
Measuring board
Weight scale
RUTF
RUSF
F-100
Iodine test kits
Albendazole tablets
Vitamin A capsules

Nutrition training/ IEC/BCC material need

Does the region/zone identified gap of nutrition related trainings?

If yes, list the the name of the trainings

Is the region/zone identified need of nutrition related IEC/BCC materials
(specify)
Annex II: Community Based Nutrition (CBN) Monitoring Checklist

<table>
<thead>
<tr>
<th>Zone: _______</th>
<th>Woreda: ____________________</th>
<th>Kebele</th>
<th>Date: ____ month <em><strong>201</strong></em>_</th>
</tr>
</thead>
</table>

**INDICATOR**

**ACTIVITIES TO BE MONITORED**

**Regional Level:**
Did all woredas submit their CBN report to RHB last month? How many reported?

Yes/No  No. of woredas: _______

<table>
<thead>
<tr>
<th>Woreda Level</th>
<th>What proportion of kebelles reported on CBN last month (e.g out of xx total keblee, xx kebelle reported)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Are all the data sent from kebelles filled on the data excel -sheet (computer based) in the woreda? (see if it is done) if not why not, explain</td>
</tr>
<tr>
<td></td>
<td>How many review meetings were conducted based on the CBN/OTP data in the woreda, this year?______</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kebele Level</th>
<th>How many volunteer CHWs were trained in the kebelle? <strong><strong><strong>. How many reported last month?</strong></strong></strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How many Under-2 children are in the kebelle? ______ How many of them weighed last month? ________</td>
</tr>
<tr>
<td></td>
<td>Is the data at kebelle level compiled in terms of Normal Weight (NW), Under weight(UW), Sever under weight (SUW)? Is the data plotted and posted in the HP showing the trend?</td>
</tr>
<tr>
<td></td>
<td>Are children with SUW regularly referred for further checkup from vCHWs to HP? Yes/no if no why</td>
</tr>
<tr>
<td></td>
<td>Do the HEWs regularly report to kebelle cabinet on children’s nutrition situation during the kebelle cabinet meeting  Yes/No if no assist</td>
</tr>
<tr>
<td></td>
<td>How many Community Conversation session have been conducted in the kebelle in the previous quarter.  YES/No why not?</td>
</tr>
<tr>
<td></td>
<td>Is it regularly done per month?</td>
</tr>
<tr>
<td></td>
<td>If during TFP monitoring you coincide with a monthly weighing session, check the quality of weighing session (suitability of site, scale reading, registration), plotting on FHC and counselling, registering on GMP register.  Yes/no why not?  Yes/no why not?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VCHW level</th>
<th>Any comments?</th>
</tr>
</thead>
</table>
ENGINE supportive supervision checklist for program staffs

Supervision level: Health Post

Instructions: Please make a tick mark (✓) in the "yes or no" column section below and document any potential details about your observations and comments in the last column. At the last end of the assessment checklist is a summary form on which we plan what needs to be done in the near future and each stakeholder involved in such support will be shared the findings of the assessment.

Purpose and Intended Users: The purpose of this checklist is to: 1) review the progress made since ENGINE implementation in the health facilities in integrating nutrition services into the existing health centre system, 2) monitor compliance with the basics of MIYCN training, 3) to identifying challenges and possible solutions in the process of providing nutrition services (MIYCN) in the health centre. It will used by all ENGINE staffs in central office as well as regional offices, but regions could have a detailed one as well.

Frequency: Support supervision visits will be on quarterly basis or monthly as per the plan.

Name of Health Post _______________________________ Woreda____________________
Region_____________ Date of visit _______________________

Name of supervisors: __________________, _________________________,
____________________

Part I: Interview with health extension worker(s)

<table>
<thead>
<tr>
<th>Supervisory questions/items</th>
<th>Mark tick</th>
<th>Comments/observations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Nutrition service coverage/availability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there CBN service in the kebele where the HEW works?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a Child Health Day conducted in the community?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3- interventions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there vitamin A supplementation program in the community level?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there de-worming program?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are children screened for malnutrition?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are pregnant and lactating women screened for malnutrition?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are pregnant and lactating women counselled on nutrition?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is growth promotion done regularly?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4- micronutrients</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are pregnant women supplied with iron-folate?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, check for documentation in ANC logbook?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are children U5 with diarrhea also treated</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
with zinc?
Is vitamin A supplemented as routine for children > 6 months?
Is there a job aids about dosage of vitamin A supplementation?
Is the use of iodized salt promoted in the HP

<table>
<thead>
<tr>
<th>5- Nutrition commodity availability: check availability and use for the following drugs and supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron folate</td>
</tr>
<tr>
<td>Zinc acetate</td>
</tr>
<tr>
<td>Mebendazole/Albendazole tablets</td>
</tr>
<tr>
<td>Vitamin A capsules</td>
</tr>
<tr>
<td>Coartim</td>
</tr>
<tr>
<td>MUAC tape</td>
</tr>
<tr>
<td>Measuring board</td>
</tr>
<tr>
<td>Weight scale</td>
</tr>
<tr>
<td>Counselling card/job aids for nutrition counselling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Were there any stock outs in the last month or so for the drugs? Note which drugs were with stock-out and # of days out of stock?</th>
</tr>
</thead>
</table>

**Recording, report and documenting nutrition services**

<table>
<thead>
<tr>
<th>Do HEWs record iron-folate provisions?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do the HEW record counselled mothers on MIYCN?</td>
</tr>
<tr>
<td>Do MIYCN counselled ANC women reported to WorHO on quarterly basis?</td>
</tr>
<tr>
<td>Do HEW record the Growth monitoring activities of babies? Do they classify using the standard nutritional classification?</td>
</tr>
</tbody>
</table>

**Part II: Direct observation checklist for assessing Health extension workers (HWs) nutrition counselling skills (Remark: this requires observing 1-2 mothers!!)***

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Yes</th>
<th>No</th>
<th>Comments/observations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At ANC follow up:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the HEW counsel/discuss about woman’s diet and provided suggestions on food she should consume?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the HEW discuss nutritional supplements? eg Iron-folate</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>If the pregnant women is given with Iron-folate, did the HEW counsel about side effects, &amp; compliance?</td>
<td></td>
<td></td>
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<tr>
<td>Did the HEW discuss about her infant feeding plan?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the HEW discuss adequacy of pregnant woman's weight?</td>
<td></td>
<td></td>
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<tr>
<td>Did the HEW discussed about 2 or more extra meals during pregnancy?</td>
<td></td>
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<tr>
<td>Did the HEW screen woman's for flat, inverted nipples and advised about care of it?</td>
<td></td>
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<tr>
<td>Do HEWs advised the women about ITN use?</td>
<td></td>
<td></td>
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<tr>
<td>Is she advised/counselled about danger signs of pregnancy: weakness, fainting, severe headache, blurring of vision, vaginal bleeding, facial and finger edema, fever</td>
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<td></td>
</tr>
</tbody>
</table>

**For U5 children**

**a. For below 6 months (IYCF)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the HEW discuss the adequacy of the child’s weight with the mother/care giver?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW discuss current feeding practices with mom?</td>
<td></td>
</tr>
<tr>
<td>Did the HW discuss previous feeding practices (what child was fed yesterday, last week, or since the last contact)?</td>
<td></td>
</tr>
<tr>
<td>Was the woman counselled on exclusive breast feeding?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW asked for current breastfeeding status?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW observe the infant a breastfeed?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW asked for any health problem the infant experienced?</td>
<td></td>
</tr>
<tr>
<td>If the infant is sick or has recently been sick, did the HEW provide any advice on feeding practices during and after illness?</td>
<td></td>
</tr>
<tr>
<td>Did the HW discuss helping the mother with poor positioning and attachment, breast problems, or other breastfeeding difficulties?</td>
<td></td>
</tr>
</tbody>
</table>

**b. Feeding for young child (6-23 months)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the HEW discuss complementary feeding? and why it is important for the baby?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW discussed about continued BF upto 24 months?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW discuss the number of times the child should be fed per day?</td>
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</tr>
<tr>
<td>Did the HEW discuss feeding the appropriate variety of foods?</td>
<td></td>
</tr>
<tr>
<td>Did the HW discuss the appropriate density of food?</td>
<td></td>
</tr>
<tr>
<td>Did the baby weighed and his growth monitored?</td>
<td></td>
</tr>
<tr>
<td>Was the HEW advised about feeding during and after sickness?</td>
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<td>-------------------------------------------------------------</td>
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<tr>
<td>c. HW conduct and counselling environment</td>
<td></td>
</tr>
<tr>
<td>Did the HEW warmly greet the client?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW speak in a language that the mother could understand (clear and simple)?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW give the mother the opportunity to talk, repeat, and ask questions?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW respond respectfully to the mother?</td>
<td></td>
</tr>
<tr>
<td>Did the HEW look at the mother when she speaking with him/her? (maintain eye contact)</td>
<td></td>
</tr>
<tr>
<td>Did the HEW acknowledge what the mother is doing well?</td>
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<tr>
<td>Did the HEW use Job aids or counselling cards during the counselling session?</td>
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<thead>
<tr>
<th>Visit summary sheet</th>
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<tbody>
<tr>
<td>Strengths</td>
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| Overall observation on the nutrition service delivery |

<table>
<thead>
<tr>
<th>Follow up actions to be taken by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisee/Institute</td>
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</table>
Annex III : Sectors’ Roles and Responsibility in Revised NNP

<table>
<thead>
<tr>
<th>Sector</th>
<th>Sector’s Roles under strategic objective/result area</th>
</tr>
</thead>
</table>
| **Agriculture Sector** | **Result 4.1 Strengthened implementation of nutrition sensitive interventions in the agriculture sector**  
1. Increase production of fruits, vegetables, nutritious roots, cereals and pulses to improve the consumption of a diversified diet at household level  
2. Improve access to and utilization of animal source foods  
3. Increase production and consumption of fish  
4. Promote appropriate technologies for food production and processing through handling, preparation and preservation for food diversification to ensure nutritious food utilization  
5. Promote value addition to ensure availability and consumption of diverse, nutritious foods  
6. Promote consumption of diversified foods through the Agricultural Extension Programme and through agricultural development agents (DAs) at community level  
7. Strengthen the capacity of the agriculture sector to integrate nutrition sensitive interventions into agriculture programmes  
8. Support local complementary food production and create economic opportunities for women through development groups and cooperatives  
9. Support agriculture research centers to develop seeds of high nutritional value. |
| **Education**   | **Result 4.2: Strengthened implementation of nutrition sensitive interventions in the education sector**  
1. Promote key nutrition actions through teachers, parent-teacher associations (PTAs) and school clubs.  
2. Encourage schools to promote and transfer sustainable and replicable school gardening models at community level.  
3. Facilitate or implement targeted micronutrient distribution, such as provision of de-worming tablets, at school.  
4. Improve water, hygiene and sanitation facilities in schools.  
5. Promote the use of iodized salt at household level through school children.  
6. Incorporate nutrition into school curricula at primary and secondary levels, TVETs and higher learning institutions.  
7. Build the capacity of teachers, teachers’ associations and PTAs on nutrition and food security.  
8. Support and promote home-grown school feeding in selected schools.  
9. Support higher institutions to conduct nutrition sensitive operational research.  
10. Support higher institutions to produce nutrition professionals.  
11. Promote girls’ education.  
| **Water**       | **Result 4.3: Strengthened implementation of nutrition sensitive interventions in the water sector**  
1. Increase access to safe water  
2. Provide water supply for sewerage facilities.  
3. Increase irrigated farmland through IDP. |
<table>
<thead>
<tr>
<th>Industry</th>
<th><strong>Result 4.4: Strengthened implementation of nutrition sensitive interventions in the industry sector</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Strengthen the capacity of Ministry of Industry staff involved in supporting the production and distribution of food items.</td>
</tr>
<tr>
<td></td>
<td>2. Support industries in the use of appropriate technologies for food fortification.</td>
</tr>
<tr>
<td></td>
<td>3. Promote the provision of credits, grants and microfinance services to support low and medium scale industries, with primary on the production of fortified foods.</td>
</tr>
<tr>
<td></td>
<td>4. Ensure that the quality and safety of locally produced food items are as per the national standard.</td>
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<tr>
<td></td>
<td>5. Conduct awareness creation events for the private sector (producers) on nutrition related requirements and standards of locally manufactured food items.</td>
</tr>
<tr>
<td></td>
<td>6. Build industry capacity to produce fortified food (edible oil, flour, salt, etc.).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trade</th>
<th><strong>Result 4.5: Strengthened implementation of nutrition sensitive interventions in the trade sector</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Strengthen the capacity of Ministry of Trade staff involved in the regulation of imported food items.</td>
</tr>
<tr>
<td></td>
<td>2. Ensure that the quality and safety of imported food items are as per the national standard.</td>
</tr>
<tr>
<td></td>
<td>3. Conduct awareness creation events for the private sector (importers) on the nutrition related requirements and standards of imported food items.</td>
</tr>
<tr>
<td></td>
<td>4. Conduct awareness creation events for consumers on the benefits of fortified food.</td>
</tr>
<tr>
<td></td>
<td>5. Support importation of fortified food (edible oil, salt, etc.).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health</th>
<th>All the initiatives mentioned under the following Strategic Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Strategic Objective 1: Improve the nutritional status of women (15–49 years) and adolescents (10–19 years)</td>
</tr>
<tr>
<td></td>
<td>2. Strategic Objective 2: Improve the nutritional status of infants, young children and children under 5</td>
</tr>
<tr>
<td></td>
<td>3. Strategic Objective 3: Improve the delivery of nutrition services for communicable and non-communicable/lifestyle related diseases (all age groups)</td>
</tr>
</tbody>
</table>