Welcome
Food and Nutrition Security: *Agriculture Sector*

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&
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Join Secretary
Introduction

- The agriculture sector contributes nearly 35% of Nepal’s Gross Domestic Product and supports the livelihood of more than 74% of the population of Nepal (CBS, 2012, NLFS, 2007).

- About 21% of the land is cultivable of which 54% has irrigation facilities.

- Agriculture as well as Livestock plays a vital role in contributing to the wellbeing of rural communities contributing to the food based nutrition.

- Still 25 percent of the people are living below poverty line and rate of wasting, stunting and undernutrition (malnutrition) are at the alarming stage of 41, 11 and 29 percent respectively.
Definition and Concept
Food and Nutrition Security

Definition

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”

- *World Food Summit (October 1996)*
Four-Dimension of Food & Nutrition Security

availability
access
utilization

stability
Infrastructure
Institutions

- National Planning Commission (NPC) - provides policy guidance for Food Security and Nutrition programming in Nepal.

- A High Level Nutrition and Food Security Steering Committee (HLNFSSC): chaired by vice chairman of NPC

- Nutrition and Food Security Coordination Committees (NFSCC) : Chair: Member of NPC

- Nutrition and FS Secretariat - provides necessary support to these committees

- Food and nutrition Section ,Food Security and Environment Division, Ministry of Agriculture Development (MoAD)
Institutions contd…

- District Level Food and Nutrition Security Network,
- Municipality/VDC Nutrition and Food Security Steering Coordination Committee chaired by Mayor
- District Food Management Committee
Institutions contd...

MOAD- In the new restructure of MoAD
Food security and environment division
  • leads the Food Security Monitoring and Programming in close collaboration with line ministries and development partners.
  • Focused on overall policy, coordination, M & E of Food and Nutrition Security program and related program as agriculture inputs, fertilizer, improved seeds, pesticides, etc
Institutions contd…

- Implements Food and Nutrition Security program and related program through its different institution as
  - Department of Agriculture (DoA)
  - Department of Livestock Services (Dols)
  - Department of Food Technology and Quality Control (DFTQC)
  - Nepal Agriculture Research Council (NARC)
  - Food Security Monitoring and Analysis System (NeKSAP)
  - Nepal Agriculture and Food Security Project (NAFSP)
  - Kisanko lagi Unnat Biu Bijan Karyakram (KISAN)
Institutions contd...

- DoA - production of Cereal Crops, Root and Tubes Fruits and Vegetables, Legume and Pulses and Fisheries
- DoLS - production of Milk and Milk Products, Meat and Meat Products and Eggs
- DFTQC - food based nutrition & utilization such as recipe development for weaning foods, Geriatric foods, Food Based Dietary Guideline, development and dissemination of food composition table, nutrition education and training, Dietary survey, RDA development, etc
- NARC - Research in nutrition based food product
Policy & Programme
Policies

Constitution
- The Interim Constitution of Nepal, 2007 has given recognition to Food Security by guaranteeing Food Sovereignty as a basic human right
- But how to implement or achieve this is still not clear

Periodic Plan
- Separate chapter on Food Security in the Three Years Interim Plan (2007/08-9/10), (2010/11-12/13)
- TYP approach paper 2013/14-2015 focused on
  - the improvement food and nutrition security
  - Access in quality food

APP
- Little about food and nutrition but not focused
Agriculture Development Strategy (ADS)
- ADS has objective to ensure food and livelihood security for some of the poorest and most vulnerable households in Nepal
- It has food and Nutrition focused Vision and Strategies
- Consists Food and nutrition outcomes and indicators

Agriculture Policy 2004
- Focused on Food security and poverty reduction
- Focused on Food availability and food safety net for target group
Policies cont....

Multi- Sectoral Nutrition Plan ((MSNP) 2012

• The goal of MSNP is to improve maternal and child nutrition, which will result in the reduction of Maternal Infant and Young Child (MIYC) under-nutrition, in terms of maternal BMI and child stunting, by one third.

The Key proposed output of MSNP for agriculture sector is

• Availability and consumption of appropriate foods (in terms of quality, quantity, frequency and safety) enhanced and women’s workload reduced.
Agriculture sector with help of other line ministry will be responsible to attain this result and carry out the following indicative activities:

- Provide targeted support to make MN rich food, including animal source foods, available at households and community levels
- Support recipe development and promotion of MN rich minor/indigenous crops
- Link up programs to increase income and consumption of MN rich foods among adolescent girls, pregnant and lactating mothers
- Provide support for clean and cheap energy to reduce women’s workload
Policies cont....

Food and Nutrition Security Plan
Millennium Development Goals
Nutrition Assessment and Gap Analysis
Major Acts and Regulations related to FNS

- Food Act 1966, Food Regulation 1970
- Essential Commodities Act 1960
- Local Self Governance Act 1999 / Rules 2000
- Breast Feeding Substitution Commodities (Sales & Distribution Control) Act 1992
- Iodized Salt (Production, Sale and Distribution) Act 1999
Programs

- Agriculture Programs (Ministry of Agriculture Development, and related Ministries)
- Supply Programs (Ministry of Commerce and Supplies)/ Nepal Food Corporation (NFC), Salt Trading Corporation (STC), and National Trading Limited
- Health Sector (Ministry of Health and Population)
- Public Works Program (Ministry of Local Development)
- Nutrition Programs – Clinical Nutrition (Ministry of Health and Population)
- Nutrition Programs – Food based Nutrition (Ministry of Agriculture Development/DFTQC)
- Social Welfare Programs (Ministry of Women, Child and Social Welfare)
- World Bank, Asian Development Bank, IFAD, etc
- UN Agencies such as UNICEF / WFP/WHO/FAO
- Bilateral Donors
- INGOs/NGOs
- MDG Tracking: District Poverty Monitoring and Assessment System (D-PMAS) and Central Poverty Monitoring and Analysis System (PMAS)
Current Situation
Current Situation on Food and Nutrition Security

- Nearly 41 percent of the population is using less than minimum dietary requirements (NPC TYP approach paper 2013/14-2015/16).
- The FNS insecurity faces challenges from all the four dimensions.
- Poverty headcount has decreased over the past decades from 40 percent (1995/96) to 25 percent (2010/11). Despite such gain; many remote districts where the poverty headcount rate is as high as 42 percent (Mountains).
- Child acute under-nutrition is around 15 %, which is critical.
Current Situation cont...

- There have been improvements in the chronic under-nutrition (stunting) however, it is still high. 41 per cent of children suffer from chronic malnutrition.
- Prevalence of stunting is over 40% among children below 5
- 29% of the children are underweight
- Out of the total population over 40% of Nepalese are undernourished.
- There are large regional variations: in the Mid- and Far-West Hills and mountains chronic malnutrition affects between 50% and 70% of the population.
Cereal crop area over years, Nepal

Year from 1950 to 2009
Production area (ha)

Paddy
Maize
Millet
Wheat
Barley
Total
Cereal production over years, Nepal

Year from 1950 to 2009

Production (tons)

Rice
Maize
Millet
Wheat
Barley
## Food Balance (MoAD Data)

(In 000 MTon)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total production</td>
<td>7,360.4</td>
<td>7,747.1</td>
<td>7,767.5</td>
<td>7,656.5</td>
<td>7,329.0</td>
<td>8,069.1</td>
<td>8,114.1</td>
<td>8,615.4</td>
<td>9,457.6</td>
</tr>
<tr>
<td>Edible production</td>
<td>4,884.4</td>
<td>4,942.6</td>
<td>4,869.4</td>
<td>4,753.4</td>
<td>5,195.2</td>
<td>5,170.4</td>
<td>4,967.5</td>
<td>5,512.9</td>
<td>6,037.7</td>
</tr>
<tr>
<td>Requirement</td>
<td>4,671.3</td>
<td>4,779.7</td>
<td>4,891.0</td>
<td>4,941.1</td>
<td>5,172.8</td>
<td>5,303.3</td>
<td>5,297.4</td>
<td>5,069.8</td>
<td>5,151.4</td>
</tr>
<tr>
<td>Balance (in MT)</td>
<td>213.1</td>
<td>162.9</td>
<td>-21.6</td>
<td>-187.7</td>
<td>22.4</td>
<td>-132.9</td>
<td>-329.9</td>
<td>443.1</td>
<td>886.3</td>
</tr>
<tr>
<td>Balance (in % of requirement)</td>
<td>4.6</td>
<td>3.4</td>
<td>-0.4</td>
<td>-3.8</td>
<td>0.4</td>
<td>-2.5</td>
<td>-6.2</td>
<td>8.7</td>
<td>17.2</td>
</tr>
</tbody>
</table>
Food Balance

![Graph showing edible production and requirement over years](image-url)
<table>
<thead>
<tr>
<th>Belts</th>
<th>Deficit districts</th>
<th>surplus districts</th>
<th>Total districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain</td>
<td>10</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Hills</td>
<td>15</td>
<td>23</td>
<td>38</td>
</tr>
<tr>
<td>Terai</td>
<td>8</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>42</td>
<td>75</td>
</tr>
</tbody>
</table>
Level of Malnutrition
(Source: NDHS)

Status of Children under 5 in NDHS

- Stunting
- Wasting
- Underweight
### Food Group Requirement and Supply

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Requirement (Ave. ICMR)</th>
<th>Supply (MDD 2001)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>183</td>
<td>206</td>
</tr>
<tr>
<td>Roots &amp; Tubers</td>
<td>32</td>
<td>59</td>
</tr>
<tr>
<td>Legumes &amp; Pulses</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>Vegetables</td>
<td>73</td>
<td>80</td>
</tr>
<tr>
<td>Fruits</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>Milk &amp; Products</td>
<td>55</td>
<td>46</td>
</tr>
<tr>
<td>Meat, Egg &amp; Fish</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>Sugar &amp; Honey</td>
<td>16</td>
<td>09</td>
</tr>
<tr>
<td>Fats &amp; oil</td>
<td>16</td>
<td>03</td>
</tr>
<tr>
<td>Spices &amp; Others</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>432</strong></td>
<td><strong>461</strong></td>
</tr>
</tbody>
</table>
Economic Burden of Nepal due to Malnutrition and Food-borne Diseases

- Based on the WB estimation and calculation in Nepalese context, it can be said that Nepal is losing around 110 billion Nepalese Rupees per year due to Protein Energy Malnutrition (PEM) and Iron Deficiency Anemia (IDA), that comes around one fourth of its total annual budget.

- On the basis of data derived in developed countries, it can be assumed in our context that we are losing Billions of Nepalese Rupees annually due to food borne illness.
PROBLEMS & CHALLENGES
Problems/ Challenges

- Insufficient **agricultural inputs** such as fertilizer, seeds, etc and infrastructures such as irrigation, agri roads, Electricity, etc
- No **pricing control mechanism** of GoN for essential commodities
- Prioritizing **Food Based Approaches** of Nutrition
- Lack of **Recommended Dietary Allowance (RDA)** for Nepalese people
- Non-establishment of periodic direct method of **food consumption survey** (Dietary Survey) rather system is relied only on indirect method (food balance sheet) that does not give exact indication for FNS monitoring
Problems/ Challenges

- Prioritizing Food and Nutrition education and training
- Strengthening food security system by integrating pre-harvest and post-harvest systems
- No Mission Program of developing and disseminating technologies to use underutilized produces of high hills and mountains to replace air transport of rice.
WAYS FORWARD
Ways Forward

- Redesigning of FNS indicators
- Periodic conduction of Food Consumption Surveys
- Implementation of Food Based Nutrition Program as a priority program
- Establishment of Recommended Dietary Allowances for Nepalese People
- Estimation of Economic loss (in terms of GDP) due to malnutrition and food borne diseases
- Promotion of consumer awareness on food safety and nutrition
Ways Forward contd...

- Per capita availability of foods from different groups is to be monitored regularly
- Focus is to be given to use underutilized foods such as potatoes, buckwheat, sorghum, kagunu (foxtail millet), chino (proso millet), uwa (naked barley), simal tarul (cassava), colocasia, etc as staple food specially in hills and mountains.
- Special programs to be launched to minimize the existing heavy post-harvest losses
- Emphasis is to be given to cope with the problems caused by climate change in agriculture
# Annex-I
## Proposed FNS Indicators

<table>
<thead>
<tr>
<th>Social/Administrative Level</th>
<th>Availability</th>
<th>Accessibility</th>
<th>Utilization</th>
<th>Stability</th>
</tr>
</thead>
</table>
| **Macro Level** (National)  | **Infrastructure for food storage:** Fertilizer use (Nutrients Kg/Ha) Seed Replacement Rate (SRR %)  
Per Capita Food Production (Kg) – Cereals, root & tubers; Legumes & pulses; Fruits; Vegetables; Meat products; and Dairy products | **Food price**  
Wages  
Unemployment rate (%)  
Minimum support price  
Consumer subsidy for BPL  
Transportation subsidy (remote areas)  
Buffer stock (MT) | **Anthropometric data:**  
- Stunting, underweight, wasting rate of US Children  
- BMI -adult  
- LBW rate  
- Anaemia rate  
- IDD rate  
- Vit A defic  
**Food Consumption Data:**  
Energy intake  
Protein  
Fat  
Micronutrients  
**Food Safety data:**  
-Food adulteration rate  
-No of death due to food poisoning  
-No of cases of food-borne illness | **Food price fluctuation regional gaps**  
-commodity prices |  
**Population Growth** |
| **Meso Level** (District)   | **Fertilizer use (Nutrients Kg/Ha) Seed Replacement Rate (SRR %)  
Per Capita Food Production (Kg) – Cereals, root & tubers; Legumes & pulses; Fruits; Vegetables; Meat products; and Dairy products** | **Market and retail food prices**  
Unemployment rate (%)  
Consumer subsidy for BPL HHs – food coupon  
Transportation subsidy (remote districts)  
Buffer stock (MT) | **Latrine coverage DD rate** | **Pre-/post harvest food**  
women’s BMI  
**Number of strikes/bandh**  
**Population Growth** |
| **Micro Level** (Family/Individual) | **Household Food Production including wild foods –Cereals, root & tubers; Legumes & pulses; Fruits; Vegetables; Meat products; and Dairy products**  
**Food purchase** | **Number of employment(including agriculture)/HH**  
Meal frequency per capita food consumption | **Weight-for-age goiter anemia** | **Pre-harvest food practices**  
**migration**  
changing consumption behaviour  
**Population Growth**  
**Food price inflation** |
Any Questions Comments? Thank you