Food Security in emergencies

Cyril Lekiefs
Senior FSL Advisor
Any precise expectation with regard to this session?
Suggested initial results of the session

1. Have an understanding of food security in emergencies

2. Be familiar with the linkages between food security, health and nutrition

3. Be aware of the main tools to monitor and assess food security

4. Have an understanding of the types of services that contribute to food security
Part 1 - Have an understanding of food security in emergencies
Prevalence of hunger in the world
False / true game

- About 1.2 million people suffer from under-nourishment?
- Malnutrition is responsible for about 45% of child death in the world?
- About 2 billion people suffer from micronutrient deficiencies?
- In a few countries, 1 child out of 2 is stunted?
- Almost 122 million, or 75% percent, of stunted children live in countries affected by conflicts?
About 815 million people are undernourished

- Still 11% of the world population cannot meet the adequate Kcal consumption
- 25% of the sub-saharan population is undernourished (increased number)
- SDG 2: zero hunger by 2030 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture)
- The number of undernourished people has been on the rise since 2014
- 489 million of the undernourished live in countries struggling with conflicts
From hunger to food security…

- What does food security means?
False / true game

• Food security is about ensuring the safety of the food?

• Food security is mostly about increasing the availability of the food?

• Food insecurity only happens in emergency/crisis situations?
Food security: an evolving concept

- 1972-74 world food crisis due to adverse weather that dramatically affected food production, stability of the food supply, storage capacities and grain reserves.

1. Food availability

- Green revolution & increased productivity were not sufficient to ensure access to food to all; greater policy focus on incomes and expenditures & poverty reduction agenda in early 80’s.

2. Food access

- Since the 90’s, increased recognition that General hygiene and sanitation, water quality, health care practices and food safety and quality are instrumental for the body to make the most of the various nutrients of the food consumed.

3. Food utilization

4. Food stability
Food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (1996 World food Summit)
Duration of food insecurity

Chronic ?

Transitory ?

Seasonal ?
Select the correct matches

Chronic food insecurity

The sudden reduction of a household’s access to food to below the nutritionally adequate level

Transitory food insecurity

Occurs when there is a temporary inability to meet food needs, usually associated with a specific shock or stress such as drought, floods or civil unrest

A persistent inability to meet minimum nutrient intake requirements

Affects households that are able to meet their minimum food needs at normal times, but are unable to do so after a shock
How do behave food insecure populations?

Reversible strategies that do not undermine livelihoods in the long run:
- Prostitution, robbery, drug and weapon deal, child labor

Irreversible strategies that damage livelihoods in the long run:
- Change in the diet (ex. reduction of food), utilization of food stocks, selling of non productive assets, economic migration

Survival risky strategies (sometimes illegal and non ethical):
- Selling of productive assets (agricultural land, livestock, etc.), heavy indebtment, etc.
Livelihoods assets

- Human Capital
- Social Capital
- Physical Capital
- Natural Capital
- Financial Capital

The Poor
The livelihoods assets

Human

Social

Natural

Physical

Financial

Nutrition
Seeds, fertilizers
Transports – roads and vehicles
Education
Wild life
Savings
Biodiversity
Kinship
Relation of trust and mutual support
Water supply and sanitation
Health
Credits
Pensions
Remittances
Water and aquatic resources
Part 2 - Becoming familiar with the linkages between food security, health and nutrition
What is nutrition security? Please provide a definition
Factors and pathways leading to undernutrition are diverse, complex and most often interconnected.
Nutrition security framework

adapted from Gross et al (2000)
A definition for nutrition security

‘A household has achieved nutrition security when it has secure access to food coupled with a sanitary environment, adequate health services, and knowledgeable care to ensure a healthy life for all household members’ (Benson, 2004)
**Nutrition-specific** interventions address the immediate determinants of fetal and child nutrition and development—adequate food and nutrient intake, feeding, caregiving and parenting practices, and low burden of infectious disease.

**Nutrition-sensitive** interventions address the key underlying determinants and incorporate explicit specific nutrition goals, along with their traditional objectives.
Pathways between Agriculture and Nutrition

Source: Herforth and Harris, 2014

Adapted for Feed the Future by Anna Herforth, Jody Harris, and SPRING, from Gillespie, Harris, and Kadiyala (2012) and Headey, Chiu, and Kadiyala (2011).
Pathways between Livestock and Nutrition
Pathways between Cash interventions and Nutrition

### Health

Growing body of evidence that:
- CCTs (often in development contexts) have a positive impact on health environment and preventive health care

Limited evidence but strong logic that:
- Complementary programs (Cash+V) are necessary in any setting due to multiple causes of undernutrition

No strong evidence of a difference between CCT and UCT on anthropometric outcomes

### Nutritional Status

Growing body of evidence that:
- Where studies are significant they show positive impacts on WHZ and HAZ
- Impacts on stunting are mainly driven by CCTs in development programmes although there is growing evidence of impact in humanitarian settings and shorter-term programmes
- CT have a positive impact on diversity and dietary intake and are often better than food transfers (i.e. HH food baskets) at increasing dietary diversity

Limited evidence but strong logic that:
- Complementary programs (Cash+V) are necessary in any setting due to multiple causes of undernutrition

No strong evidence of a difference between CCT and UCT on anthropometric outcomes

### Food Security

Moderate body of evidence that:
- CT increase expenditures on food and increasing evidence that

Growing body of evidence that:
- CT increases expenditures on food for children

- Cash and vouchers may be better than food transfers at increasing dietary diversity, but not calorie intake.

### Implementation

Growing body of evidence that:
- The amount of cash needs to significantly contribute to the household economy to have an impact on nutritional status
- Cash transfers and vouchers may be more cost-efficient than in-kind food transfers
- Positive impacts driven by development settings; lack of evidence on conditions in humanitarian settings
Discussion about 2 case studies in Mali and Haïti

- « Health gardens », a nutrition centred approach

- Fresh food vouchers to strengthen diet diversification and improve resilience
Types of interventions

Health gardens
Supplementary feeding
Complementary feeding
Cash distribution
Food distribution
Cantines
Fresh food vouchers
Cooking demonstrations
Clean water
etc…

Nutrition specific?

Nutrition-sensitive?
Types of interventions

Figure 5: Framework for actions to achieve optimum fetal and child nutrition and development (Black et al., 2013)
Group 1: Identify 3 potential negative consequences of agricultural interventions onto the nutrition situation

Group 2: same question for food assistance interventions
Maximising the nutritional impact of food security interventions

**Common principles**
- Address seasonality to ensure food and nutrition security all year round
- Consider socio-cultural and economic aspects of nutrition and food systems
- Create linkages and synergies with other interventions
- Do no harm (workload, bad timing, child labour, etc.)

**Agriculture interventions**
- Promote homestead food production
- Promote micronutrient-rich crop varieties
- Promote biodiversity and sustainable agriculture practices
- Improve post-harvest handling
- Do no harm (diseases, pollutants, chemicals)

**Livestock interventions and fishheries**
- Promote the consumption of animal source foods through programs
- Promote other local cheap sources of proteins (insects, worms, termites)
- Do no harm
**Food aid**

- Get the ration composition right
- Cater for the nutritional needs of specific groups
- Make sure that food aid does not displace breastfeeding
- Provide food items that are easily and safely prepared and consumed
- Ensure acceptability

**Income generating activities**

- Promote nutrition sensitive IGAs (food processing, etc.)
- Promote IGAs at home

**Cash-based interventions**

- Consider attaching nutrition-friendly conditions to cash transfers (e.g. care, feeding and hygiene practices)
- Make sure the amount of the transfer is sufficient to cover the cost of an adequate and nutritious diet
- Use voucher to promote access to specific foods and services
Part 3 - Becoming aware of the main tools to monitor and assess food security
Selection of most relevant indicators
How do we measure food insecurity?

Most basic questions are:

- Who are the food insecure?
- How many are they?
- Where are they located?
- How severe is the food insecurity?
- Why are they food insecure?
Measuring Dietary Diversity Scores (HDDS, IDDS, MDDW, FCS)

- At household / individual levels (U5, mothers, etc.)
- Measuring livelihood change through the Coping Strategy Index at HH level
- Measuring wasting with MUAC
- And qualitative assessments (HEA, agrarian diagnosis, seasonal calendar, anthropological survey, etc.)
Cluster approach for improved coordination

- WFP & FAO are the two co-leading agencies for the food security clusters at global & national levels. SAG from June 2016 (ACF, WHH, IFRC)

- More effective, timely humanitarian response
IPC a tool for a consensual analysis of food security situation

Set of protocols (tools & procedures) to classify the severity of food insecurity and provide actionable knowledge for decision support

https://youtu.be/wZ_F_4G9g6c
IPC: how do we measure severity?

- Food consumption: Kcal intake, diet diversity
- Livelihood change: Assets depletion,
- Nutritional status: Acute malnutrition, BMI prevalence
- Mortality: Crude mortality rate, U5MR

<table>
<thead>
<tr>
<th>Phases</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute malnutrition</td>
<td>&lt; 5%</td>
<td>5 – 10%</td>
<td>10-15%</td>
<td>15-30%</td>
<td>&gt; 30%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phases</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMR (/10,000 /d)</td>
<td>&lt; 0.5</td>
<td>&lt;0.5</td>
<td>0.5 - 1</td>
<td>1 - 2</td>
<td>&gt; 2</td>
</tr>
</tbody>
</table>
The IPC most famous product is a map

- Map of the current situation & a projection map (early warning, preparedness)

**POPULATION DISTRIBUTION FOR MAY 2017**

<table>
<thead>
<tr>
<th>Former States</th>
<th>Mid-2017 Population (h/ks)</th>
<th>Phase 1 Minimal</th>
<th>Phase 2 Stressed</th>
<th>Phase 3 Crisis</th>
<th>Phase 4 Emergency</th>
<th>Phase 5 Famine</th>
<th>% of Crisis, Emergency &amp; Humanitarian Catastrophe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Equatoria</td>
<td>1,609,844</td>
<td>588,000</td>
<td>485,000</td>
<td>410,000</td>
<td>130,000</td>
<td>-</td>
<td>33.6%</td>
</tr>
<tr>
<td>Eastern Equatoria</td>
<td>1,182,841</td>
<td>260,000</td>
<td>540,000</td>
<td>420,000</td>
<td>145,000</td>
<td>-</td>
<td>45.8%</td>
</tr>
<tr>
<td>Jonglei</td>
<td>1,822,086</td>
<td>115,000</td>
<td>485,000</td>
<td>825,000</td>
<td>385,000</td>
<td>10,000</td>
<td>67.0%</td>
</tr>
<tr>
<td>Lakes</td>
<td>1,119,715</td>
<td>310,000</td>
<td>500,000</td>
<td>235,000</td>
<td>70,000</td>
<td>-</td>
<td>27.4%</td>
</tr>
<tr>
<td>Northern Bahr el Ghazel</td>
<td>1,428,111</td>
<td>115,000</td>
<td>340,000</td>
<td>640,000</td>
<td>310,000</td>
<td>-</td>
<td>67.0%</td>
</tr>
<tr>
<td>Unity</td>
<td>1,048,239</td>
<td>129,000</td>
<td>210,000</td>
<td>470,000</td>
<td>235,000</td>
<td>10,000</td>
<td>10.7%</td>
</tr>
<tr>
<td>Upper Nile</td>
<td>1,254,313</td>
<td>260,000</td>
<td>410,000</td>
<td>415,000</td>
<td>165,000</td>
<td>-</td>
<td>46.2%</td>
</tr>
<tr>
<td>Waero</td>
<td>1,448,812</td>
<td>380,000</td>
<td>580,000</td>
<td>355,000</td>
<td>105,000</td>
<td>-</td>
<td>31.8%</td>
</tr>
<tr>
<td>Western Bahr el Ghazel</td>
<td>545,565</td>
<td>100,000</td>
<td>285,000</td>
<td>135,000</td>
<td>25,000</td>
<td>-</td>
<td>29.3%</td>
</tr>
<tr>
<td>Western Equatoria</td>
<td>812,360</td>
<td>370,000</td>
<td>330,000</td>
<td>120,000</td>
<td>25,000</td>
<td>-</td>
<td>10.9%</td>
</tr>
<tr>
<td>Total</td>
<td>12,285,167</td>
<td>2,320,000</td>
<td>4,080,000</td>
<td>4,015,000</td>
<td>1,495,000</td>
<td>20,000</td>
<td>45.2%</td>
</tr>
</tbody>
</table>
The IPC nutrition security classification

Challenges of the IPC FS classification?

1. Low severity of acute food insecurity and high levels of acute malnutrition within the same population group

2. High severity of acute food insecurity and low rates of acute malnutrition

New contributing Factors?

- Maternal well-being index
- Caregiver workload
- Diarrhoea
- Measles
- Malaria
- Anaemia
- Micronutrient deficiency
- Outbreaks
- Vaccination coverage
- Low birth rate
- Access to clean water
- Etc...
How is Nutrition Integrated into IPC FS Classification?

- IPC Acute Food Security Classification (IPC)
  - is a classification of the severity of FOOD SECURITY
  - Nutrition is integrated into the analytical framework and analysis:

- Nutrition is both an outcome, of food insecurity
  - “2nd Outcomes”, if have inadequate food consumption (Quantity and/or Quality), this will manifest in malnutrition
  - More extreme the inadequacy of food consumption, the more severe malnutrition outcomes & stronger correlation between indicators

- And Nutrition is an input, to food security
  - “Food Security Contributing Factors”, Causal Factors related to Vulnerability Livelihood Assets – through Human Capital
    - Livelihood Strategies – through impact on access to income/food through labour productivity
Food Security Contributing Factors

Causal Factors

Vulnerability:
- Exposure, susceptibility, and resilience to specific hazards or ongoing conditions
- Livelihood strategies (food & income sources, coping, & expenditures)
- Livelihood assets (human, financial, social, physical, & natural)
- Policies, institutions, and processes
- Gender and other socio-economic inequalities and discrimination
- Mitigating factors

&

Acute Events or Ongoing Conditions
(natural, socio-economic, conflict, disease and others)

Food Security Dimensions

Availability
- Production
- Wild foods
- Food reserves
- Markets
- Transportation

Access
- Physical access
- Financial access
- Social access

Household Utilization
- Food preferences
- Food preparation
- Feeding practices
- Food storage
- Food safety
- Water access

Stability (at all times)

Feedback

Food Security Outcomes
(directly measured or inferred from contributing factors)

Non-Food Security Specific Contributing Factors
- Disease
- Water/sanitation
- Conflict
- Others

2^ Outcomes
- Nutritional Status
- Mortality

1^ Outcomes
- Food Consumption
  - Quantity & Nutritional Quality
- Livelihood Change
  - Assets & Strategies

Classification of Acute Phase (current or projected) and Chronic Level
### IPC acute malnutrition scale

<table>
<thead>
<tr>
<th>Phase Name and Description</th>
<th>PHASE 1 Acceptable</th>
<th>PHASE 2 Alert</th>
<th>PHASE 3 Serious</th>
<th>PHASE 4 Critical</th>
<th>PHASE 5 Extremely Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5% of children are acutely malnourished.</td>
<td>≤5%</td>
<td>5.0 to 9.9%</td>
<td>10.0 to 14.9%</td>
<td>15.0 to 29.9%</td>
<td>≥30%</td>
</tr>
<tr>
<td>Situation progressively deteriorating with increasing levels of acute malnutrition. Morbidity levels and/or individual food consumption gaps are likely to increase with increasing levels of acute malnutrition.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Priority response objective to decrease acute malnutrition and to prevent related mortality**: 2
- **Maintain the low prevalence of acute malnutrition**: 3
- **Strengthen existing response capacity and resilience. Address contributing factors to acute malnutrition. Monitor conditions and plan response as required.**

<table>
<thead>
<tr>
<th>Global Acute Malnutrition measured by Weight of Height Z-score and/or Oedema (GAM by WHZ)</th>
<th>&lt;5%</th>
<th>5.0 to 9.9%</th>
<th>10.0 to 14.9%</th>
<th>15.0 to 29.9%</th>
<th>≥30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Acute Malnutrition measured by Mid-Upper Arm Circumference and/or Oedema (GAM by MUAC)</td>
<td>&lt;5%</td>
<td>5.0 to 9.9%</td>
<td>10.0 to 14.9%</td>
<td>≥15%</td>
<td></td>
</tr>
</tbody>
</table>

*GAM by MUAC must only be used in the absence of GAM by WHZ. In exceptional conditions where GAM by MUAC is significantly higher than GAM by WHZ, classification should be done using both GAM by WHZ and GAM by MUAC. If the Phase classification based on GAM by MUAC is 2 Phases or higher than the Phase classification by GAM by WHZ, convergence of evidence with contributing factors should be used to arrive at the final Phase.
The IPC most famous product is a map

- Map of the current situation & a projection map (early warning, preparedness)
For an effective surveillance system...

- Weather forecasts (temperatures, precipitations, snow cover, etc.)
- Crop and pasture conditions
- Food commodities market prices
- Early warning food security indicators (HHS, CSI, etc.)

A good approach? coordination, value-added, observation, analyze local requests...
<table>
<thead>
<tr>
<th>EMERGENCY INDICATORS</th>
<th>How to Quantify? Triggers at the beginning of the dry season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert threshold</td>
<td></td>
</tr>
<tr>
<td>Almost no pasture regeneration</td>
<td></td>
</tr>
<tr>
<td>Very low value of livestock (poor health and general state)</td>
<td>Goat price decreases by 50%, camels by 25%, cattle by 50%</td>
</tr>
<tr>
<td>Livestock mortality increases</td>
<td>10% goat herds die</td>
</tr>
<tr>
<td>Lack of water</td>
<td>Indicators WASH</td>
</tr>
<tr>
<td>Very low milk production</td>
<td>camels.&lt;2lit/jr; goats&lt;1/2 lit</td>
</tr>
<tr>
<td>Decrease in milk consumption</td>
<td>Indicators Nut</td>
</tr>
<tr>
<td># meal/ day decreases, or # days without food increases</td>
<td>40% 1 meal/day; 25% 1 member hh no food at least 1 day in the past 3 days</td>
</tr>
<tr>
<td>Near collapse of livestock markets</td>
<td></td>
</tr>
<tr>
<td>Emergency threshold</td>
<td></td>
</tr>
<tr>
<td>No pasture</td>
<td></td>
</tr>
<tr>
<td>0 livestock value, even camels and goats</td>
<td>Goat prices decreases by 75%, camels by 50%</td>
</tr>
<tr>
<td>Very high livestock mortality</td>
<td>40% shoat herds die</td>
</tr>
<tr>
<td>Milk Production and Consumption almost non-existent</td>
<td>Camels. &lt; 1.5 lit.; goats nil + Nut Indicators</td>
</tr>
<tr>
<td># meals per day – or # days without food still increase</td>
<td>60% 1 meal/day; 40% 1 hh member without food for at least 1 day in the past 3 days</td>
</tr>
<tr>
<td>No surface water in most communities (without borehole)</td>
<td>Indicators WASH</td>
</tr>
</tbody>
</table>
IASC guidelines once disaster stroke
A Link NCA is a structured, participatory, holistic study, intended to build evidence-based consensus.

What is the prevalence and severity of wasting and/or stunting in the study population?

What is the prevalence of key risk factors for under-nutrition among the population?

What are the causal “pathways of under-nutrition”?

How have the prevalence and causes of stunting and/or wasting in this population changed over time?

Which causal pathways are likely to explain most cases of under-nutrition?

What recommendations can be made for improving nutrition security programming?
Part 4 – Get an understanding of the types of interventions that improve the food security
Videos on food security activities

• Du champs à l’assiette 2’

• Programme REPI au Burkina Faso 15’

• Programme Coupons en côte d’ivoire 5’
Livelihoods-saving activities in SAME

Distribution of seeds

Development of seed banks

Fertilizers distribution / compost

Vegetable gardening / health gardens

Animal husbandry

Activities

Animal health - vaccination

Restocking / Destocking

Urban / peri-urban / rural areas

Income Generating Activities

Any examples of IGA?

Market-support interventions

Cash/food for work transfers

Cash/food for assets

Cash/food for training

Advocacy

Early warning systems
http://www.franceinter.fr/emission-interception-nasan-le-buiness-de-la-faim
Many thanks for your kind attention!

Cyril Lekiefs
clekiefs@actioncontrelafaim.org
1. Which pillar of food security refers to the capacity of a household to procure sufficient food? (1 pt)

   Availability? Accessibility?
   Utilization? Stability?

2. Is the persistent inability to meet minimum nutrient intake requirements related to ? (1 pt)

   Chronic food insecurity?
   Transitory food insecurity?
   Seasonal food insecurity?
   Acute food insecurity?

3. Does the extreme lack of food and other basic needs where starvation, death and destitution are evident match with ? (1pt)

   Minimal? Stressed? Crisis?
   Emergency? Famine?

4. Please explain why food security interventions may have negative impacts on nutritional status ? (3pts)

5. Please explain why we may have a low severity of acute food insecurity and high levels of acute malnutrition within the same population group ? (4 pts)