



Technical sheet

Nutrition Multi-sectoral Seasonal Calendar

A rapid and multi-sectoral tool to better understand and address the seasonal peaks of wasting

V.0 - March 2012

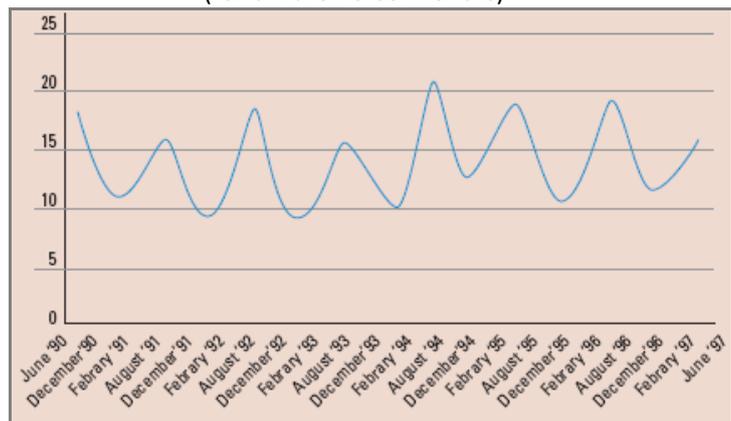
1 | Background: The seasonality of severe acute malnutrition

Undernutrition is one of the world's most serious but least addressed socioeconomic and health problems, falling hardest on the poorest, especially on women and children. Severe acute malnutrition (SAM) causes 1 million under-5 child deaths per year. In many countries where ACF is involved, the prevalence of acute malnutrition among child population fluctuates throughout the year. 'Seasonal peaks' of wasting are observed in Africa, Asia and Latin America. ACF fieldworkers – more specifically the health professionals and nutritionists – are generally well aware of these fluctuations.

In some countries or regions, tailored nutrition surveillance systems allow reflecting these fluctuations throughout the year, such as illustrated by the Helen Keller International (HKI) nutrition surveillance system in Bangladesh (figure 1).

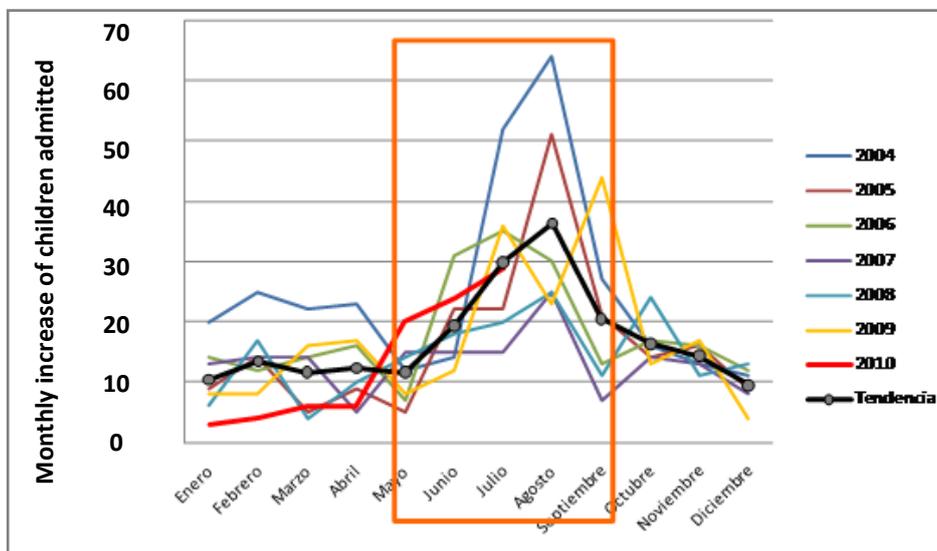
It is important to highlight that the seasonality of acute malnutrition varies from region to region within a country. In others countries or regions, the seasonality of acute malnutrition is reflected by the fluctuating admission rates in nutrition therapeutic centres, as in Guatemala.

Figure 1 | Seasonality of acute malnutrition in Bangladesh (for children 0-59 months)



Source: based on data published by HKI (1999) in: CDC and WFP, 2005. A Manual: Measuring and Interpreting Malnutrition and Mortality

Figure 2 | Yearly variations of children admitted in the Jocotan therapeutic feeding centre, Guatemala



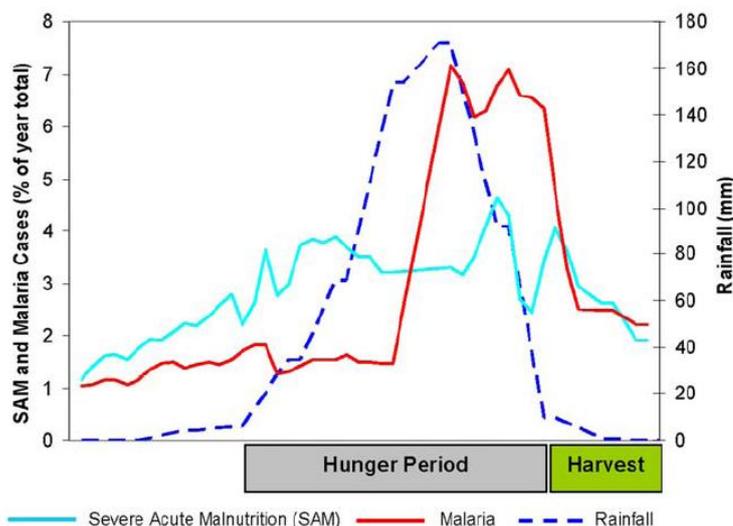
Source: ACF Guatemala

These seasonal fluctuations in acute malnutrition are induced by the converging deterioration of one important or several risk factors related to food access and dietary intake; care and feeding practices; diseases, access to health services and/or unhealthy environment. These seasonal fluctuations can be driven by climatic and environmental factors (e.g. seasonal floods) or by human or socio-economic factors (e.g. high food prices in markets).

In its publication “Seasons of Hunger”, ACF reported that the majority of the world’s poor are exposed to seasonal cycles of hunger, poverty and disease (Devereux et al, 2008. Seasons of Hunger).

Most of the world’s acute hunger and undernutrition occurs not in conflicts and natural disasters but in the annual “hunger season”, the time of year when the previous year’s harvest stocks have dwindled, food prices are high, and jobs are scarce.

Figure 3 | Seasonality in undernutrition, malaria, and rainfall in Niger, 2007



Source: ACF, 2008. Seasons of Hunger

Climate related hazards are expected to magnify seasonal stresses on livelihoods, food and nutrition security; for example, rainfall is reported to be more erratic, shorter and more violent in many regions (Jennings and Magrath, 2009).

2 | Problem statement and general orientations

Despite the fact that the problem of severe acute malnutrition fluctuates throughout the year and is exacerbated during ‘seasonal peaks’ in a given place **these fluctuations and peaks are generally poorly understood, in a comprehensive manner, and poorly addressed, when they are not totally ignored by policy-makers and practitioners.** Thus it would be important:

- To get a better understanding and monitoring of these fluctuations and peaks of severe acute malnutrition;
- To develop a ‘seasonal thinking’ throughout the nutrition security intervention planning process, in order to better address these relatively predictable seasonal peaks of acute malnutrition;
- To reduce to the maximum these relatively predictable seasonal peaks of acute malnutrition, while sustaining efforts to detect, treat and prevent severe acute malnutrition throughout the year.

This could only be achieved through multi-sectoral synergies, which should be encouraged by the head of missions and the programme coordinators, as well as by the desks in the headquarters.

Box 1 | The multi-sectoral approach, a pre-condition to enhance nutrition security through ACF interventions, which require tailored tools

It is now broadly acknowledged, such as reflected in the Scaling Up Nutrition Framework of Action (2010) that a multi-sectoral approach is necessary to enhance nutrition security and address the neglected crisis of undernutrition. The multi-sectoral analysis of the contexts where ACF is involved is an essential pre-requisite to design a pertinent, integrated and quality ACF strategic programming to address nutrition insecurity.

In ACF missions:

- The understanding of undernutrition and its risk factors remains patchy and highly variable from one place to another. There are only few areas of operations where ACF understand – in a comprehensive manner – undernutrition and its risk factors.
- There is a lack of capitalisation, often linked with the high staff turnover.
- Ready-to-use and multi-sectoral assessment, strategic programming and capitalisation tools and formats are missing.

A series of tools and format are now being developed to foster this multi-sectoral approach. Among others, let's cite amongst others:

- The practical guide on nutrition causal analysis.
- The present technical sheet to better understand and address the seasonal peaks of wasting.
- The FSL guidelines on Surveillance, on Monitoring & Evaluation, on Maximising the Nutritional Impact of FSL interventions.

It is hoped that these tools will contribute in supporting ACF missions to sharing a common understanding of the contexts, to defining common objectives and synergies, and in better addressing undernutrition and nutrition insecurity, through a multi-sectoral, nutrition-focused approach.

It is suggested that each ACF base and mission consider using the following ready-to-use guide during a half day multi-sectoral brainstorming that could take place ahead of the definition or the update of the mission strategy.

3 | A ready-to-use tool to better understand undernutrition in a given place and to develop a multi-sectoral 'seasonal thinking' during strategic programming

OBJECTIVES OF THE TOOL

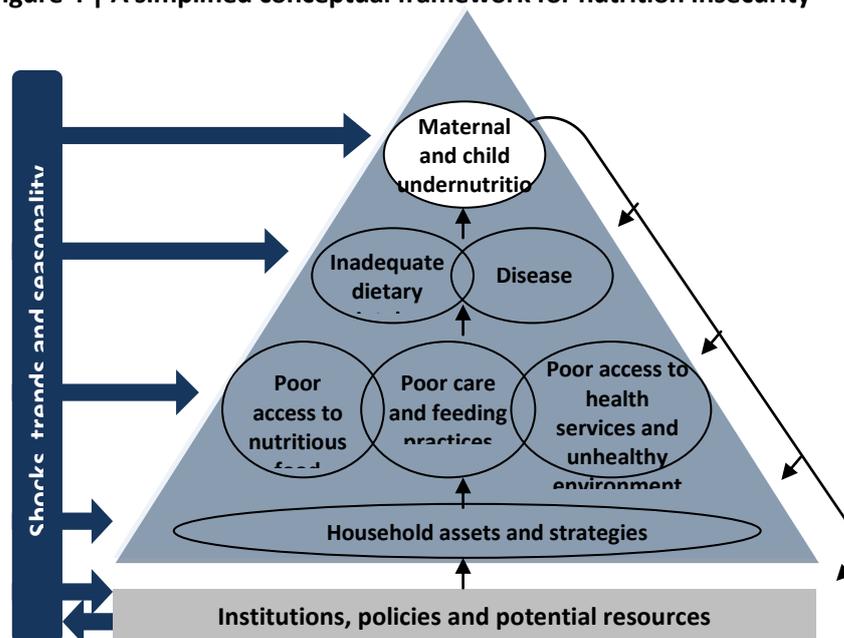
- To conduct a rapid multi-sectoral analysis in order to better understand nutrition insecurity and the fluctuations and peaks of severe acute malnutrition in a given area of operation
- To develop a multi-sectoral seasonal thinking during strategic programming in order to shape ACF mission strategies and programmes.

STEP-BY-STEP GUIDE

FIRST STEP | The head of mission and the coordinators ensure that all staff on the missions (program manager and senior national staff) are familiar with the concept of nutrition (in)security and the conceptual framework of maternal and child undernutrition. The mission should have a clear picture of immediate, underlying and basic causes of under-nutrition.

Refer as well to the figure on the right and to the Annex I – Key terms and concepts related to hunger and undernutrition and the Annex II – A comprehensive framework for maternal and child undernutrition.

Figure 4 | A simplified conceptual framework for nutrition insecurity



SECOND STEP | Each technical department (nutrition and health, care practices and psycho-social, WaSH, food security and livelihoods) prepare an annual seasonal calendar considering key events and the fluctuations of key sectoral indicators throughout a 'representative' year, for each area of operations¹. If one ACF sector is not represented in the area of operation, another ACF department should collect the required information for this sector, in order to 'fill up the picture'.

THIRD STEP | A day/half-day brainstorming is organized in each area of operation in order to develop a multi-sectoral seasonal calendar and to suggest strategic orientations through a multi-sectoral seasonal thinking. The rolling-out of the workshop – expected to last a minimum of 4 hours – is explained in the box 2 below.

FOURTH STEP | A synthetic report of the brainstorming (Word format; 5 pages max) and an annotated seasonal calendar (Excel format, refer to Annex IV) are produced by the head of base or the person in charge of an area of operations, the facilitator and the person who took notes during the meeting. This report and seasonal calendar is sent to the head of mission and the coordinators for comments and questions. The head of base or the person in charge of an area of operations review or enrich the report and the seasonal calendar considering these inputs.

¹ Ideally the analysis is conducted per livelihood group, for the most food and nutrition insecure, the women and/or the children

Box 2 | Multi-sectoral seasonal calendar and seasonal thinking for strategic orientations

Activity 1 | Gathering the people and sharing responsibilities

- The person in charge of an area of operations gathers the program managers and the assistant/ deputy for each technical department for a half-day workshop.
- The group should not exceed 20 persons.
- A facilitator will be selected to animate the workshop, another person will be in charge of taking notes and a third one will be the 'time-keeper'.

Activity 2 | Introduction (30 minutes)

- Brief and interactive introduction on the different types of malnutrition, the analytical framework of maternal and child undernutrition and the multi-sectoral approach in addressing nutrition insecurity. It is particularly important to ensure that the basics are understood by all.
- Presentation of the objectives and the rolling-out of the workshop (activity 3 to 5).

Activity 3 | Development of a multi-sectoral seasonal calendar for a given area of operations (1 hour)

- The different technical departments fill up progressively a multi-sectoral seasonal calendar, considering the key natural and man-made events and fluctuations that occur (in a generally predictable way) throughout the year, and considering the information collected during the step 2 above.
- Illustrations in terms of outcomes of this exercise are presented below. The more the seasonal calendar is detailed, the better. A 'minimum' package of indicators is presented in the Annex III. There is of course room for innovations and enrichments.
- If needed, the group can be split into two, in order to facilitate the interactions.

Activity 4 | Analysis of the linkages between events, fluctuations and undernutrition (1 hour)

- The different technical departments discuss of the linkages between these different events, fluctuations and the prevailing undernutrition.
- The following points should be addressed in priority: (i) How likely can be explained the seasonal peaks of severe acute malnutrition? (ii) What are the likely risk factors that lead to undernutrition throughout the year? (iii) At which period of the year is 'hunger', 'diseases', 'lack of safe drinking water' the most severe, extreme climate-related hazards, and how does this period relate to the seasonal peak of severe acute malnutrition? (iv) At which period of the year are the women and the caretakers of children below 5 particularly busy, and how do these periods relate to the seasonal peaks of severe acute malnutrition? (v) Which elements of information are missing or remain poorly understood?

Activity 5 | Strategic orientations and seasonal thinking (1 hour)

- The different technical departments discuss of the strategic orientations considering a 'seasonal thinking'. The support departments should join the group during this session.
- The following points should be addressed in priority: (i) What are the operational implications of the (potential) fluctuations and seasonal peak(s) of severe acute malnutrition, regarding nutrition preparedness, surveillance, the prevention and the treatment of SAM? (ii) What are the 'busy periods' for mothers and caretakers and how to avoid negative interferences with our interventions during these periods? (iii) What are the priority interventions to address the seasonal peaks of undernutrition and nutrition insecurity throughout the year, along with their timing? (iv) What are the implications of these seasonal trends regarding timing, preparedness, etc. and the 'hotspot periods' for each sector of interventions? How to better solicit the support departments? (v) What are the operational implications for others stakeholders involved in the areas of operation under focus? (vi) What are the operational lessons learned in the former years regarding seasonality (both in terms of issues and operations)? What worked? What didn't work and why?

Activity 6 | Wrap-up (30 minutes)

- The group agrees on strategic orientations for each sector and for a specific area of operations, considering (i) further assessment and research needs; (ii) surveillance and early warning; (iii) preparedness; (iv) priority ACF interventions and their timing; (v) coordination and advocacy.

FIFTH STEP | The head of mission, the coordinators and possibly some representatives from the bases conduct a brainstorming in order to validate and finalize the multi-sectoral seasonal calendar and to highlight strategic orientations for the country of operations through a multi-sectoral seasonal thinking. The rolling-out of the workshop follows the orientations provided in the box 2 above. The final report and annotated seasonal calendar are produced by the head of mission or a coordinator and shared to the desks for eventual comments and questions.

SIXTH STEP | The head of mission and the coordinators integrate the priority recommendations in the mission strategy document. They ensure that ‘new comers’ are sensitized with these seasonal patterns in their areas of operations and with the attached operational implications. A proper capitalization process is ensured at base, mission and desk levels. Ideally, the multi-sectoral seasonal calendar is attached as an annex to the country strategy document.

SEVENTH STEP | The seasonal calendar and the attached operational orientations are progressively improved, and the brainstorming exercise is conducted at least once every one-two years on the different areas of operations.

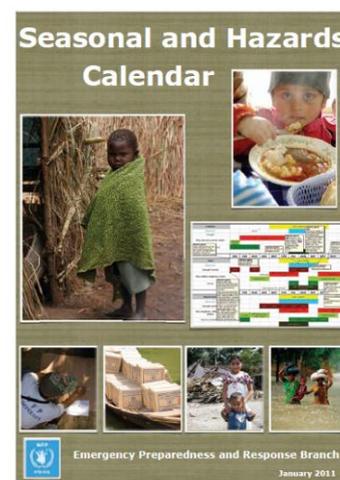
4 | An important add-on: the seasonal risks of disasters

Whereas the tool above focuses mainly on undernutrition and nutrition insecurity throughout the year, it is important to recognize that hazards and disasters – mainly those related to the climate, tend to occur on a seasonal basis, even though if the global changing climate tend to bring more surprises (*refer to Annex III*).

The seasonality of undernutrition has to be complemented by an analysis of the seasonal risks of disasters and its operational implications, in terms of preparedness, surveillance and early warning, risk management measures.

WFP released in 2010 an interesting publication entitled “Seasonal and Hazards Calendar”. This calendar combines the most authoritative information on major seasonal hazards, like floods, droughts, cyclones and the prevalence of pests like locusts, alongside crop growing cycles and lean seasons.

Other tools from FAO include basic agricultural calendar and detailed crop calendar. See References below for web links.



References and further reading

ACF, 2008. Seasons of Hunger

ACF, 2011. Maximising the Nutritional Impact of FSL Interventions. A manual for field workers

CDC and WFP, 2005. A Manual: Measuring and Interpreting Malnutrition and Mortality

Oxfam, 2009. What Happened to the Seasons?

WFP, 2010. Seasonal and Hazards Calendar

FAO detailed crop calendar: www.fao.org/agriculture/seed/cropcalendar

FAO GIEWS Country Briefs agricultural calendar : www.fao.org/giews/countrybrief/

IASC HEWS (Humanitarian Early Warning System) / Seasonal and Hazards Calendar : www.hewsweb.org/hazcal/

Annexes

Annex I – Key terms and concepts related to hunger and undernutrition

Malnutrition is a broad term that refers to all forms of poor nutrition. Malnutrition is caused by a complex array of factors including dietary inadequacy (deficiencies, excesses or imbalances in macronutrients –carbohydrates, protein, fats– and micronutrients), infections and socio-cultural factors. Malnutrition includes undernutrition as well as overweight and obesity (Shekar M, 2009; UNSCN, 2010; SUN, 2010). **Hunger** is a term which literally describes a feeling of discomfort from not eating, and which has also been used to describe undernutrition, especially in reference to food insecurity (Black et al, 2008).

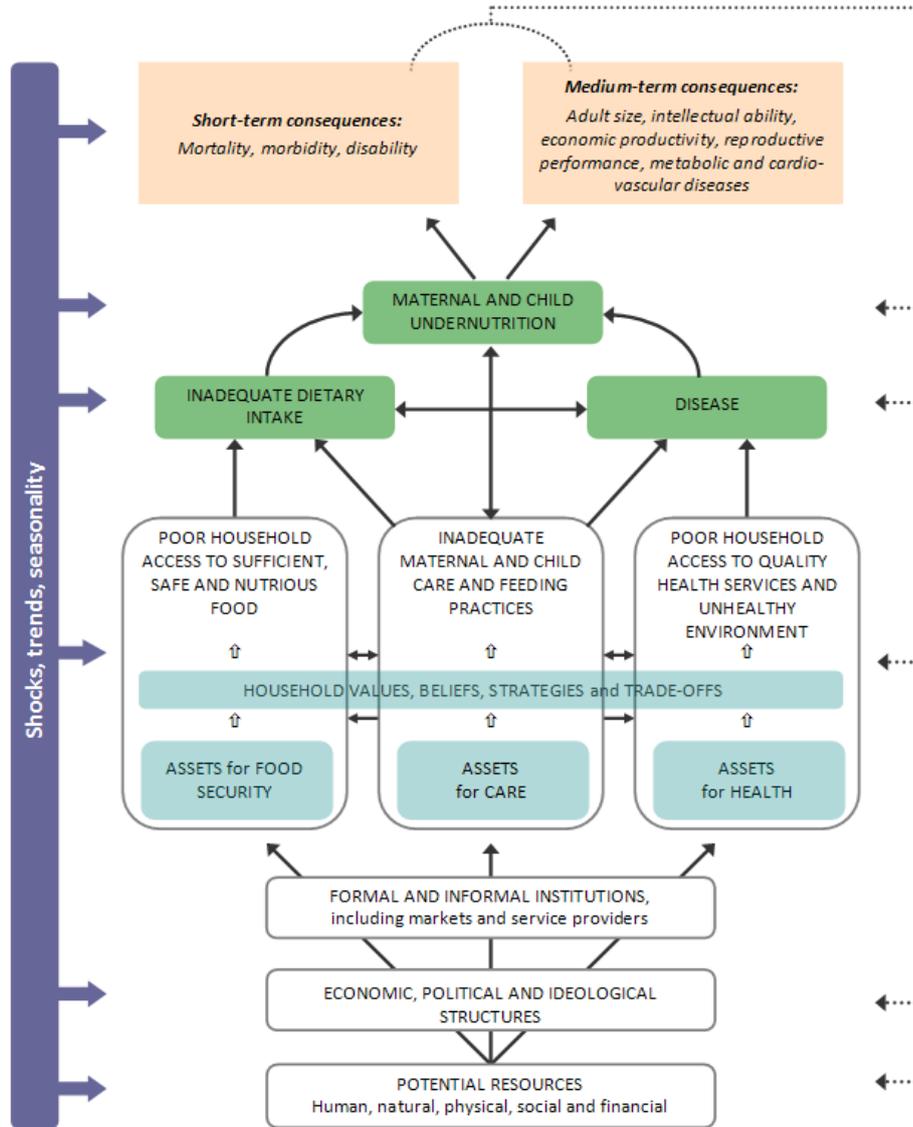
Undernutrition exists when insufficient food intake and repeated infections result in one or more of the following: underweight for age, short for age (stunted), thin for height (wasted), and functionally deficient in vitamins and/or minerals (micronutrient malnutrition) (UNSCN, 2010). **Stunting** reflects shortness-for-age; an indicator of chronic malnutrition and calculated by comparing the height-for-age of a child with a reference population of well-nourished and healthy children. Wasting reflects a recent and severe process that has led to substantial weight loss, usually associated with starvation and/or disease. **Wasting** is calculated by comparing weight-for-height of a child with a reference population of well-nourished and healthy children. Wasting is often used to assess the severity of emergencies because it is strongly related to mortality (SUN, 2010).

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life; household food security is the application of this concept to the family level, with individuals within households as the focus of concern (FAO, 2002; FAO, 2009; UNSCN, 2010). **Food insecurity** prevails when this situation is not fulfilled.

Nutrition security exists when food security (or *'when secure access to an appropriately nutritious diet'*) is coupled with a sanitary environment, adequate health services, and proper care and feeding practices to ensure a healthy life for all household members (Shekar M, 2009; UNSCN, 2010; SUN, 2010). **Nutrition insecurity** prevails when food insecurity is coupled with a poor sanitary environment, inadequate health services and inadequate care and feeding practices that lead to an unhealthy life for some household members.

Annex II – Conceptual framework for maternal and child undernutrition

A comprehensive conceptual framework for maternal and child undernutrition is proposed in the figure below. It considers three main conceptual frameworks, respectively the conceptual framework of malnutrition (UNICEF, 1990), the Lancet maternal and child nutrition framework (Black et al., 2008) and the sustainable livelihood framework (Chambers, 1991).

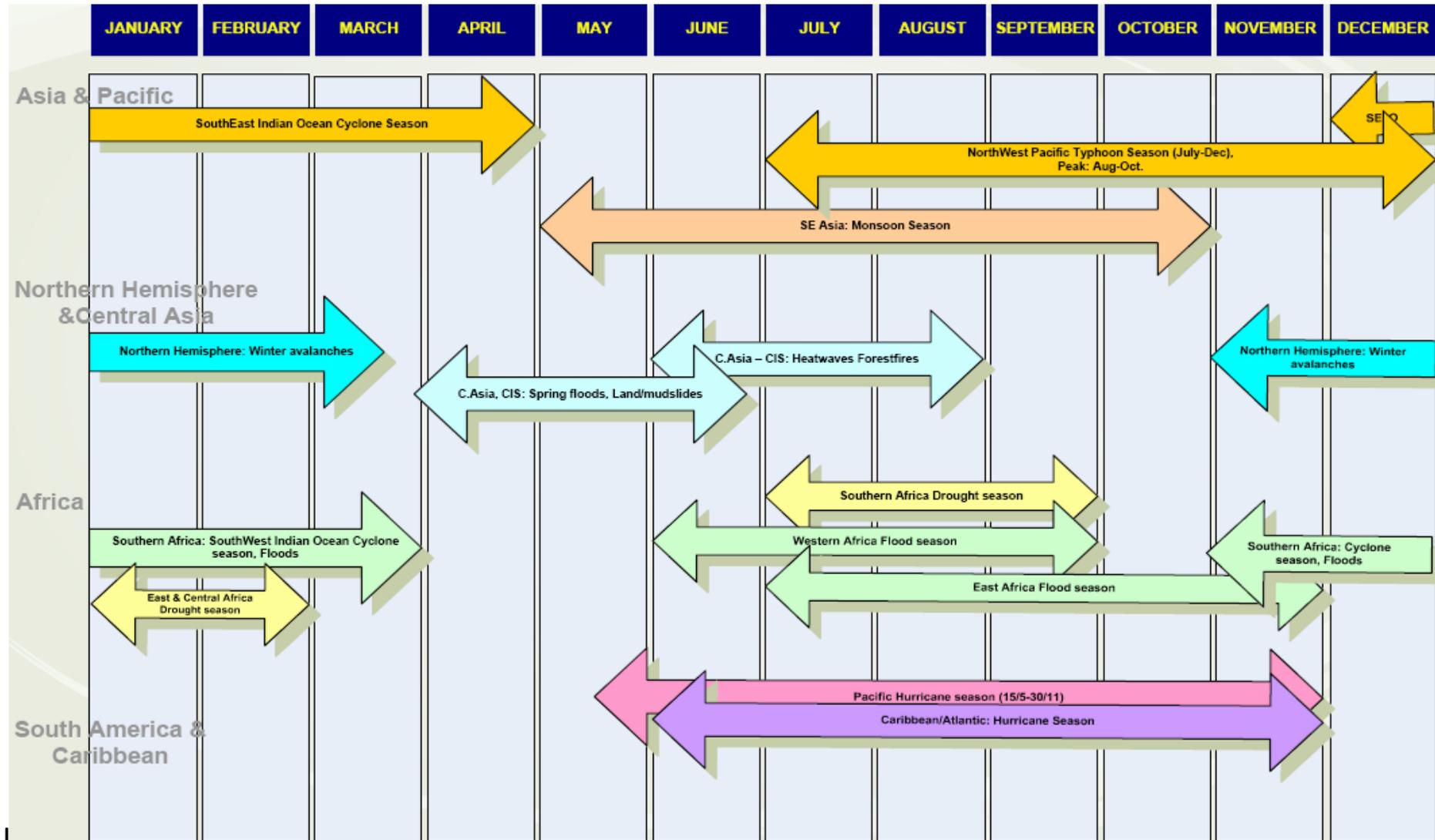


The figure on the left illustrates the differences between food insecurity and nutrition insecurity at the household level.

LEGEND

- ▲ Food insecurity at the household level
- ▲ Nutrition insecurity at the household level

Annex III – Seasonal patterns climate-related hazards at global level



Annex IV – Suggested minimum package for a multi-sectoral seasonal calendar

Description of seasonal variations	January	February	March	April	May	June	July	August	September	October	November	December
Country:												
Base/Area:												
Year:												
Seasonal variations of hunger and under-nutrition in the community, considering:												
Hunger gap												
Acute malnutrition prevalence												
Characteristics of each season:												
Rainy season												
Other relevant climatic factors (wind, temperature, ...)												
Types of water sources/water availability												
Road states/travel issues												
Harvest time (main staple foods)												
Harvest time (fruits and vegetables)												
Milk production/availability												
Staple food market prices												
Terms of Trade												
Casual Labour opportunities												
Seasonal movements of population												
Seasonal occurrence of climate-related hazards:												
Droughts												
Floods												
Cyclones												
Others climate-related hazards (e.g. earthquake, landslides)												
Seasonal occurrence of others hazards:												
Diarrhoea												
Fever/Malaria												
Acute Respiratory Infections												
Crop diseases												
Animal diseases												
Pest (insects) invasions												
Measles/ other epidemic												
Caretakers												
Busy times/high workload for women												
Busy times/high workload for others caretakers (detail who is the principal Caretaker)												
Seasonal activities for the main livelihood strategies in the community, considering gender differentiations:												
Agriculture (planting, harvesting) MEN												
Agriculture (planting, harvesting) WOMEN												
Livestock MEN												
Livestock WOMEN												
Fishing MEN												
Fishing WOMEN												
Collection of wild products MEN												

Collection of wild products WOMEN														
Casual labour in community/district MEN														
Casual labour in community /district WOMEN														
Handicraft-making MEN														
Handicraft-making WOMEN														
Waged labour outside community MEN														
Waged labour outside community WOMEN														
Waged labour in community MEN														
Waged labour in community WOMEN														
Miscellaneous														
Holidays and festivals														
Weddings														
Schooling period/school fees														

Annex VI – Operational ACF recommendations and decision-making based on seasonal calendar

ACF operations	January	February	March	April	May	June	July	August	September	October	November	December
Mission												
Care and psycho social department												
Nutrition and health department												
FSL department												
WaSH department												
Logistics department												
Administration and finances department												
Miscellaneous												