



FAMINE & FOOD CRISIS
FORECASTING CENTER

FAMINE FORECASTING HACKATHON

GLOSSARY

Common measures or units

Blue font for those used in Hackathon datasets

Malnutrition		
Acronym	Term	Definition
AM	Acute Malnutrition	Being too thin AND/OR having nutritional edema
AMN	Acute Malnutrition Score	(1 low to 5 highest)
WHZ	Weight-for-Height Z-Score	
HAZ	Height-for-Age Z-Score	
MUAC	Mid-Upper Arm Circumference	
Stunting		Short for age, low HAZ
Wasting		Being too thin
GAM	Global Acute Malnutrition	WHZ < -2 or MUAC < 125mm and/or nutritional edema ("combined" just means children by either measurement are counted)
MAM	Moderate Acute Malnutrition	- WHZ < -2 or MUAC < 125mm
SAM	Severe Acute malnutrition	- WHZ < -3 or MUAC < 115mm
Other Acronyms		
Acronym	Term	Definition
VITA	Vitamin A Supplementation	Generally presented as the percentage of children under 5 who have received this supplement in the previous 6 months
MNP	Micronutrient Powder	The percentage of children under 5 who are receiving this powder on their food
IYCF	Infant and Young Child Feeding	a set of feeding practices recommended or promoted for infants (children up to 12 months) and young children (usually up to 2 years) – in the data, the number of caregivers who received the education about IYCF
BSFP	Blanket Supplemental Feeding Program	Specialized supplemental food provided for children under 5
BSFPU2	BSFP under two	Specialized supplemental food provided for children under 2
PLW	Pregnant and Lactating Women	

Acronym	Term	Definition
FEFO	Iron and Folic Acid Supplement	Generally provided to pregnant women to reduce risk of anemia
OCHA (or UNOCHA)		United National Office for the Coordination of Humanitarian Affairs
IDP	Internally Displaced Person	Someone who has had to flee their community or their home/community was destroyed, as opposed to a “resident” who lives in their own home
PIN	People in Need	The total number of people within an area or population who are in need of humanitarian assistance (usually food assistance)
Food Security (INDDEx Indicators)		
Acronym	Term	Definition
AFI	Acute Food Insecurity	Unable to obtain or use sufficient food for a healthy active life
IPC	Integrated Food Security Phase Classification system	system or analytical approach to classifying different levels of food security within a livelihood group. In some data sets, Acute Food Insecurity (AFI) is classified separately from Acute Malnutrition (AMN), with 1 being the best situation and 5 being the worst.
HDDS	Household Dietary Diversity Score	1 day diet recall, score based on the number of food groups in a household’s daily diet over the previous day
FCS	Food Consumption Score	7-day recall, similar to the HDDS, but food groups are weighted This is a proxy indicator that represents the energy and value of the food that households eat. It is calculated based on the type of foods and the frequency with which households consume them over a seven-day period.
HFIAS	Household Food Insecurity Access Scale	A context-specific experiential score of food insecurity, range of 0-27
HHS	Household Hunger Scale	30 day recall, 0-1 little to no hunger in HH, 2-3 moderate hunger in the HH, 4-6 severe hunger in the HH
FIES	Food Insecurity Experience Scale	Experiential food security index, individual person not household, 12 month recall (sometimes modified to 1 month)
CSI	Coping Strategies Index	A context-specific index of food insecurity based on the increasingly severe strategies a household resorts to in order to maintain access to food
rCSI	Reduced CSI	A version of the CSI that is not contextualized, it includes a standard set of questions and weights for strategies – some will use it to compare across contexts, though that was not its original intention

<u>Mortality</u>		
<i>Acronym</i>	<i>Term</i>	<i>Definition</i>
CMR	Crude Mortality Rate	The number of deaths / 10,000 population / day (normally used during acute mortality events like an epidemic)
CDR	Crude Death Rate	The number of deaths / 1,000 population / month or year (normally used to measure impact of programming or in a more stable environment)
	Baseline mortality (rate)	The mortality (rate) of a population that would be expected if there is no crisis
	Excess mortality (rate)	The mortality (rate) in excess of the baseline mortality (rate), usually attributed to an event or dynamic
	Total mortality	All deaths, including both those that would have happened in the absence of a crisis and also those that happened because of the crisis (baseline + excess = total mortality)
U5DR	Under-Five Death Rate	The rate at which children under 5 years of age are dying in the under-five population over a given period of time (recall period), usually deaths of children under 5 years old / 10,000 children / day.
U5MR	Under-Five Mortality Rate	The probability of dying or the number of deaths between birth and exactly five years of age, expressed per 1,000 live births.

General Terms Related to Food Insecurity

Term	Definition
Acute Food Insecurity (AFI)	Food security at a specific moment in time, regardless of causes, context, or duration. Severity is defined by assessing the degree to which households can meet basic survival needs and maintain their normal livelihoods.
Anthropometric Indices	Combinations of human body measurements and their comparison to reference data. For example, measurements of weight and height may be combined to produce Body Mass Index (weight/ height ²), or weight may be related to height through the use of reference data that have been developed/adopted by the World Health Organization.
Availability	One of the four pillars of food security. The total amount of food that is present in a country or given area by means of domestic production, imports, food stocks, and food aid.
Coping Strategies	Activities to which people resort in order to obtain food, income and/or services when their normal means of livelihood have been disrupted or other shocks/hazards decrease their access to basic needs.
Coping Strategies Index	A methodology to estimate the food security status of households based upon the reversibility of coping strategies to which they resort (Maxwell and Caldwell, 2008)
Early Warning Systems	Information collection, analysis and use aimed at predicting, preventing and mitigating the effects of future hazards and risks. (FEWS NET, 2018)
Daily Caloric Requirement	The minimum number of calories needed to sustain normal levels of activity and health, taking into account age, gender, body weight and climate; on average 2,350 kcals per day. Note: Estimates of daily caloric requirements vary; in emergencies, a plan of 2,100 kcals/person/day is a typical planning figure used.
Dietary Quality	The extent to which the diet is optimal in delivering essential nutrients, including all the types and forms of nutrients. Both quantity and nutrient density are important determinants of dietary quality.
Food Security	A situation that 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 (FAO, 1996). However, measurement of food security proves to be elusive. In contrast, food security is most frequently based upon the absence of food insecurity.
Hazard	Something that poses a potential threat to life, health, property, or the environment. Most hazards are dormant, with only a potential risk of harm. Once a hazard becomes "active," it is called a shock (or in some cases, a hazard event). For example: a volcano is a hazard; its eruption is a shock. Hazards can be single, sequential, or combined in their origin and effects. Hazard and vulnerability interact together to create risk.
Livelihood Group	A group of people who share the same basic means of livelihood and lifestyle – i.e. the same main subsistence activities, main income activities and social and cultural practices – and who face the same risks of food and nutrition insecurity (WFP, 2009)
Market System	The network of actors involved in the production, exchange, and/or consumption of goods and services, which relies on infrastructure and other services and inputs,

Term	Definition
	and operates within the formal and informal regulatory and social frameworks in a given context
Projection	A prediction that is designed to tell "what will likely happen if," typically in the context of prices.
Projection Period	Months selected for scenario period (e.g., typically eight months for a FEWS NET Food Security Outlook scenario).
Response	Any action taken before, during or after a shock, taken with the intention to prevent or mitigate negative short and/or long-term impacts of the shock. Response actors may include: households, local governments, communities and civil society, the private sector (e.g., traders), nongovernmental organizations, multilateral organizations, and other regional and international sources.
Risk	The probability of harmful consequences or expected losses (of lives, livelihoods, persons injured, property, economic activity disrupted, or environment damaged) due to a particular hazard for a given area and reference period resulting from interactions between natural or human-induced hazards and vulnerable conditions. <u>Risk can be expressed as the product of hazard and vulnerability.</u> It is mitigated by coping capacity: $\text{Risk} = f(\text{hazard} \times \text{vulnerability/coping})$. (UNISDR, 2009)
Scenario	In the context of food security analysis, an informed "if/then" analysis that communicates shocks, their impacts on household food and income sources, response by both households and other actors, and the net food security outcomes for different households in specific geographic areas. Scenarios are rooted in a series of reasonable assumptions based on existing conditions, historical information, and expert judgment. Scenarios are used to project future food security outcomes and inform decision-making processes.
Scenario Development	A hallmark of FEWS NET analysis, a methodology for forecasting future events. It relies on analysis of the current situation, the creation of informed assumptions about the future, a comparison of their possible effects, and a description of the likely response of various actors.
Seasonal Calendar	A graphical presentation of the months in which food and cash crop production and key food and income acquisition strategies take place. It also shows key seasonal periods such as the rains, periods of peak illness, and the hunger season.
Seasonality	A process that repeats itself on regular and predictable intervals (usually once every 12 months) often due to biological processes (like the rainy season, which drives market supply) or social events (like holidays, which drive consumption patterns and market demand). Most crops have specific planting, harvesting, and peak consumption times that commonly result in observed seasonal price variation. Livestock body conditions and reproduction patterns also exhibit seasonal patterns, resulting in seasonal price variation.
Shock	An atypical event or series of events (either rapid or slow-onset) with significant impact. Shocks can be positive (e.g., a significantly better-than-average harvest) or negative (e.g., a failed below-average harvest or an unseasonable increase in food prices).
Terms of Trade	a ratio of how much of one good can be traded for another good at a given point in time. In rural contexts with EWS, this is often framed as goat:grain or labor:grain

<i>Term</i>	<i>Definition</i>
Vulnerability	The susceptibility of certain populations to experiencing food security and nutrition crises. It may be an expression of susceptibility to potential disruptive factors OR The conditions determined by physical, social, economic, and environmental factors or processes that increase the susceptibility of a community or population group to hazards. Vulnerability is not a general state; people are only vulnerable to a specific hazard. For example: farmers cultivating along a riverbank may be vulnerable to floods (which are likely to wash away their crops), but may not be vulnerable to drought (since they can irrigate their crops using water from the river).

Additional Terms

Term	Definition
Analogue Year	A year in history that shares key characteristics with the current year and can therefore help to support assumptions about how the current year may progress. In food security analysis, analogue years are most commonly used in relation to climate and seasonal forecasts. Information about current atmospheric and oceanic conditions/patterns is used to identify similar years that may suggest likely precipitation and temperature behavior. Analogue years can also be used to look at other issues, such as market behavior and food prices.
Anomaly	A deviation from the norm or average.
Assets	In broad terms, assets are considered to be anything that is valuable or useful, such as a skill, a quality, a commodity, etc. <i>that a household or community can strategically</i> control or make use of. In the Sustainable Livelihoods Framework, assets are defined under the following five categories: human, social, financial, physical, and natural
Assembly Market	A market where smaller quantities of a commodity are accumulated or aggregated, usually from different farmers and small-scale traders. Assembly markets facilitate marketing, reduce the costs of marketing, and allow for the movement of commodities, which enables sellers from remote areas to reach distant buyers.
Assumptions	For the purpose of scenario development, assumptions are judgments about the anticipated type, magnitude, and timing of future events or conditions. Assumptions are the product of an analysis of current conditions (e.g., rainfall pattern to date), past experiences (a reference period, or how a similar series of events unfolded, such as a previous drought), official or unofficial estimates or projections, qualitative or quantitative data, and/or expert judgment. Assumptions can be made at any level of analysis (i.e., household, village, market, district, national, regional, or international). Assumptions form the basis of a scenario and support and reasonably limit its scope.
Cash Transfers	sums of money provided to recipients. The total amount of money provided is linked to the objective of the transfer.
Commodity	A raw material or primary agricultural product that has value and can be exchanged. Commodities include food and cash crops, livestock, and nonfood consumer items
Disaster	A situation that causes widespread human, material, economic or environmental damage, threatening human lives and/or livelihoods and exceeding the coping capacities of the affected communities and/or government. (WFP, 2009)
Disaster Risk	The potential disaster losses in lives, health status, livelihoods, assets and services which could occur to a particular community/society over some specified future time period. Disaster risk comprises different types of potential losses, some of which are often difficult to quantify. Nevertheless, with knowledge of the prevailing hazards and the characteristics of population and socioeconomic development, disaster risks can be estimated and mapped. with varying levels of confidence. (UNISDR, 2009)

Term	Definition
Disaster Risk Reduction	The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the determinants of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, management of land and environment, and improved preparedness for adverse events. (UNISDR, 2009)
Drought	A temporary reduction in water or moisture availability significantly below the normal or expected amount (norm) for a specified period. The key assumptions of such a definition are: <ul style="list-style-type: none"> • the reduction is temporary (if the reduction were permanent, then terms such as “dry” and “arid” would be more appropriate) • the reduction is significant; • the reductions is defined in relation to a “norm”, i.e. normal expectation • the period taken as basis for the norm is specified (Borton and Nicholds, 1992)
Entitlements	“The set of alternative. commodity bundles that a person can command in a society using the totality of rights, and opportunities that he or she faces”. (Sen 1984, p. 497) – these are all the things that a person can use or access
Environment	The surroundings or conditions in which someone is living
Epidemic	An increase, often sudden, in the number of cases of a disease above what is normally expected in that population in that area. (Lesson 1 in Dicker et al., 2012)
Famine	Absolute inaccessibility of food to an entire population or sub-group of a population, potentially causing death in the short term.
Food Insecurity	The state in which people are at risk of or actually suffering from inadequate consumption to meet nutritional requirements as a result of the physical unavailability of food, their lack of social or economic access to adequate food, and/or inadequate food utilization.
Formal Trade Flow	The exchange of large quantities of a given commodity, transported by road, rail, or sea. These trade flows are inspected, taxed, and reported in official government statistics, and abide by the requirements of the local legal system (including national-level laws and regional trade agreements). For example, in some countries, an importer or exporter is required to obtain a license from the local government or regional trade body that gives authority to engage in import or export activities. Formal trade can often also be thought of as legal trade.
Humanitarian Food Assistance	Any direct resource transfers in response to acute events that aim to reduce food gaps, and protect and save lives and livelihoods by facilitating households’ access to food. Humanitarian food assistance may include different modalities, such as transfers of food, cash, livestock and other livelihood assistance
Inflation	An overall rise in the prices of goods and services in an economy. An inverse relationship exists between the prices of goods and services and the value of money in an economy: other things being equal, as prices rise over time, a given amount of money will be able to purchase fewer and fewer goods and services.
Lean Season	The time of year when a household’s access to food and/or cash income is typically most constrained. During this period, households tend to be at greater risk of food insecurity.
Livelihood Strategies	The ways in which households utilize and combine their assets to obtain food, income and other goods and services. (WFP, 2009)

Term	Definition
Market Demand	The choice of specific goods and services that satisfy the wants and needs within the limits imposed by income (purchasing power)
Market Dependence	The degree to which individuals depend on markets to access food as opposed to consuming food they produce.
Market Structure	The economically significant features of a market that affect the behavior of firms in the industry supplying that market. The main elements of market structure are: seller concentration, product differentiation, barriers to entry of new firms, buyer concentration, height of fixed costs and barriers to exit, and growth rate of market demand.
Market Supply	The willingness and ability of sellers or suppliers to make available different possible quantities of a good at all relevant prices. Determinants of supply include but are not limited to: own price, price expectations, price of inputs, production technology, and macroeconomic factors.
Price Transmission	The process in which prices in one market affect prices in another market. Often used to describe the effect of upstream prices on downstream prices.
Purchasing power	Measurement of the relative value of money in terms of the quality and quantity of goods and services it can buy. It represents the ability of a household to acquire goods and services based on its access to money or other forms of wealth
Resilience	The ability of a system to resist or return to a normal state when faced with a hazard/shock or ongoing stress.
Response Analysis	The process by which a set of appropriate actions is identified and based on: (a) the needs and livelihoods of the affected population; and (b) the operating environment. Simply put, response analysis is the process of connecting needs assessment or situational analysis to programme design. (FAO and WFP, 2011)
Safety Nets	Non-contributory transfer programmes targeted in some manner to the poor and those vulnerable to poverty and shocks (Grosh and Milazzo, 2009)
Spatial Arbitrage	The act of taking advantage of a price differential across locations or markets. The differential must exceed all costs of moving the commodity from one location or market to another (costs of the interspatial transfer). A simple measure of potential spatial arbitrage is the difference between the prices observed for the same product in two different locations.
Substitute Good	A commodity that can replace another in consumption or production, such as millet for sorghum. When the price of one commodity rises, consumers will decrease their consumption of that commodity and increase consumption of the substitute commodity.
Trade Flow	The movement of goods and services resulting from buying and selling.
WASH	Water, Sanitation and Hygiene: a humanitarian sector that combines these domains

Famine Systems Definitions (Howe 2018)

<i>Term</i>	<i>Definition</i>
Bands	Sub-groups of a population that are affected more (or less) than others based on economic, social, political, demographic, environmental, or biological characteristics.
Closed Famine System	Can occur when the pressure and hold are focused in a clearly delimited area, as in the siege of a town, a blockade of a country, or a politically isolated society. The system is closed in the sense that populations are unable to move in and out of the area, and people from outside the area are unable to observe the famine itself or to provide assistance.
Disruptive Factors	The shocks, stressors, and other influences that alone or in combination impede a group's ability to meet their food and nutrition needs. They can take a variety of forms: politically-induced, such as conflicts, blockades, and raiding; naturally-induced, such as droughts, floods, and other hazards; economically-induced, such as high food prices or currency depreciations; and socially-induced, including discrimination based on political, religious, or ethnic affiliation.
Disturbances	Relatively contained spatial areas of intense pressure that may form at the start of a crisis. They may appear in various locations where the shock is intense and the vulnerability is high, creating an initial 'spotty' pattern of severity within the wider area of concern.
Epicenter	The place where the famine is the most severe. Usually, the area around the epicenter is also affected but the degree of severity decreases as you move further out. Since there can be more than one area fitting this description, it may be more helpful to speak of ' nodes ,' but both terms can be used.
Famine System	When there is a tipping point and a growing sense of unstoppable momentum that results in a sudden and dramatic rise in undernutrition and mortality rates. It usually takes place when the dynamics driving the hunger can no longer be balanced by the coping strategies of the populations. At that point, the dynamics become even more strongly self-reinforcing and lead to the spikes in undernutrition and mortality, with rates crossing the agreed thresholds that indicate the presence of a famine
Hold	A condition in which communities affected by pressure do not receive sufficient release from it to prevent a deterioration of their food security and nutrition situation. Within the evolution of a famine, the hold's primary function is to permit the pressure to lead to the creation of self-reinforcing dynamics. Holds can take many forms, including natural, policy, political, social, economic, and others; they can be put in place deliberately or unintentionally; and they can occur alone or in combination.
Open famine system	Refers to a famine in which there are few restrictions on movements of the affected populations and those wishing to assist them. They often involve a process of 'emptying,' which can take two forms. First, people sometimes out-migrate from an area affected by famine to a place where conditions are better. Second, emptying can take the form of higher mortality rates for populations left in the famine-affected area.

Term	Definition
Pressure	The result of a set of factors combining to partially or systematically disrupt a vulnerable group's ability to meet their food and nutrition needs. The degree of pressure is a function of the strength and comprehensiveness of the disruptive factors (whether shocks or stressors) and the vulnerability (or, conversely, the resilience) of the communities.
Rebalancing	Occurs when there is a change in dynamics and the conditions that have driven a famine's creation are taken away causing the collapse of the system.
Self-Reinforcing Dynamic	A pattern of accelerated and interrelated changes in key factors driving food insecurity and undernutrition.
Vulnerability	The susceptibility of certain populations to experiencing food security and nutrition crises. It may be an expression of susceptibility to potential disruptive factors.

References

Borton, J. and N. Nicholds. (1994). [Drought and Famine](#). 2nd. Ed. United Nations Disaster Management Training Programme.

Chambers, R. and G. Conway (1992) [Sustainable rural livelihoods: Practical concepts for the 21st century](#). IDS Discussion Paper 296. Brighton: Institute of Development Studies.

Department for International Development [DFID]. (1999). [Sustainable Livelihood Guidance Sheets](#).

Dicker, R. C., Coronado, F., Koo, D., & Parrish, R. G. (2012). [Principles of epidemiology in public health practice: an introduction to applied epidemiology and biostatistics](#). 3rd Ed. Centers for Disease Control and Prevention: Atlanta, Georgia.

Famine Early Warning Systems Network [FEWS NET]. 2018. [Scenario Development for Food Security Early Warning](#). Washington, DC: FEWS NET.

Food and Agriculture Organization [FAO]. (1996). [Rome Declaration on Food Security and World Food Summit Plan of Action](#).

FAO. (2001). [Human energy requirements](#). Report of a Joint FAO/WHO/ONU Expert Consultation, Rome, October 2001. Food and Nutrition Series Technical Report 1

FAO. (2008). [An Introduction to the Basic Concepts of Food Security](#).

FAO and World Food Programme [WFP]. (2011). [Inter-Agency Food Security and Nutrition Response Analysis Workshop](#). Rome: FAO.

Grosh, M. and A. Milazzo. (2009). *Chapter 5: Social Safety Nets in World Bank Lending and Analytical Work, 2002 – 07*. In: [Social Protection and Labor at the World Bank, 2000-08](#). Ed. Robert Holzmann. 2009. Washington, DC : World Bank.

Howe, P. (2018). [Famine systems: A new model for understanding the development of famines](#). *World Development*, 105, 144-155.

IPC Global Partners. 2021. [Integrated Food Security Phase Classification Technical Manual Version 3.1. Evidence and Standards for Better Food Security and Nutrition Decisions](#). Rome.

Maxwell, D., & Caldwell, R. (2008). [The Coping Strategies Index: Field Methods Manual](#). 2nd Ed.

Sen, A.K. (1981). [Poverty and Famines: An Essay on Entitlements and Deprivation](#). Oxford. Clarendon Press.

United Nations International Children's Emergency Fund [UNICEF]. 1990. [Strategy for improved nutrition of children and women in developing countries](#). UNICEF, New York.

United Nations International Strategy for Disaster Reduction [UNISDR]. (2009). [UNISDR terminology on disaster risk reduction](#). Geneva: United Nations.

World Food Programme [WFP]. (2009). [Comprehensive food security & vulnerability analysis guidelines](#). United Nations World Food Programme.

World Health Organization [WHO] (2006) [WHO Child Growth Standards: Length/Height-for-Age, Weight-for-Age, Weight-for-Length, Weight-for-Height and Body Mass Index-for-Age: Methods and Development](#). Geneva: WHO.