Monitoring Food Security
A Round Table to review methods used to estimate the number of hungry
As agreed by the CFS during the 36th session of October 2010

FAO, Rome - September 12-13, 2011

During the deliberations of the 36th session of the Committee on Food Security it was agreed that a Round Table be organized to review different methods of hunger measurement. This note is a first attempt at describing the organization of the event.

Background information

FAO has long been producing estimates of chronic undernourishment, first at the global and regional level and, since 1999, at the individual country level. The estimates have attracted continuous attention of both development specialists and the broader public; eventually and importantly, the estimates have been chosen to monitor progress towards achieving first Millennium Development Goal (MDG 1).

The basic ideas behind the FAO methodology reach back to the seminal work of Sukhatme in the 1960s. The practical result of this work is a parametric approach, which is conceptually simple and can produce reliable estimates, provided it is informed by up-to-date and accurate information for the estimation of its underlying parameters. These include importantly, but not exclusively, precise information on:

i. the amount of food availability per person;

ii. the minimum energy requirements for a healthy and active life;

iii. information on the distribution of, or access to the available food in a population.

How to improve the quality of these parameters and expedite their availability could be a pivotal part of discussions of this Round Table.

Results of a review of the FAO methodology

The FAO methodology and estimates to measure undernourishment have received both considerable recognition as well as criticism by the academic reviewers and development practitioners. Concerns have been raised in two areas. The first relates to the appropriateness of the concept itself; the second to the practical implementation and its underlying parameters.

These concerns have given rise to a fundamental and broad based review of method and parameters. Results of this review so far corroborate the conceptual validity and the theoretical correctness of the methodology and suggest that objections and concerns are largely a reflection of a misinterpretation of the inferential basis of the methodology.

The review process however confirms the need to strengthen the quality and timeliness of the underlying parameter base. Improvements of the parameters are particularly needed for the distributional measures of the method. The overall results of this review will be reflected in the estimates to be disseminated with the State of Food Insecurity 2012.

(See Gennari and Cafiero, 2011)
FAO Members have always played an important role in providing data and improving FAO’s statistical databases. More detailed and more reliable information on food availability, for instance, allowed to gradually refine the estimates of the geographic distribution of hunger and move from regional and global estimates to country-specific ones. The production and publication of such country-specific estimates has meanwhile become a regular feature in FAO’s State of Food Insecurity (SOFI) report. Notwithstanding efforts and success in producing more specific and more reliable estimates, there is a consensus for the need of, and the scope for improvements. Member countries could play again a key role in this process. Firstly, they could help provide improved statistics on production, trade and the various uses of food items and ultimately create more reliable information on the dietary food supply of a population. Secondly, improvements could also entail more accurate information on the distribution of available food at the level of the individual household, i.e. information that would most likely be gathered through household surveys. And thirdly, if better and more comprehensive information on demographic and other social characteristics could be provided, this would ultimately help improve the estimates of the minimum dietary energy requirements for a healthy and active life.

The way forward

In addition to improving the timeliness and accuracy of the hunger estimates, there is a need to address the fact that malnutrition is more than merely a caloric food deficit. There is a growing recognition that hunger is a complex phenomenon that requires a multifaceted concept for its measurement and a whole suit of indicators that can capture the multiple symptoms and consequences of malnutrition.

More work is also required to identify the exact root causes of malnutrition, in particular the role of income, income growth, income distribution and (the currently) large swings in food prices (food price volatility). In this context, it is important to better understand the apparent divergence in the evolution of hunger and poverty over the long-run; it is also important to reconcile the widely diverging views regarding the effects of food price volatility on poverty on the one hand and its more moderate effects on the prevalence of hunger on the other.

Other goals include the need to expedite the availability of food security indicators and to better understand its root causes and consequences. This Round Table is intended to provide a step in that direction. It will bring together hunger and poverty experts from member countries to discuss state-of-the-art methods used for analyzing and quantifying food insecurity and seek an agreement on future directions for research and policy analysis.
Tentative agenda

The Round Table discussion will be organized around three main themes, each being the subject of one session, followed by a final session in which the outcome of the discussion will be summarized and specific recommendations advanced. Each session will be organized around presentations by a panel of experts and open round table discussions among the participants.

Session 1 – September 12, 9:30 – 12:30
The state of the art in the assessment of food deprivation

In the first session, the fundamental elements informing the definition and calculation of FAO Prevalence of Undernourishment (PU) indicator will be discussed.

The purpose of the session is to gain a common understanding of:

a) what the FAO indicator measures;
b) how to calculate the indicator for an individual country;
c) how improve its quality (timeliness, reliability).

During this session the theoretical bases for the definition and the methodological aspects of the calculation of the FAO hunger measure will be presented. A practical demonstration will help identify the exact data requirements, highlight the importance of data quality, explain processing algorithms and present the software to be used for the actual computations. The appropriate division of labour and the respective roles of the FAO secretariat and individual countries will be an important part of the discussion.

Expected outcomes of the session are shared views on: (i) the scope and limits of the FAO indicator; (ii) the potential for broadening the range of indicators that can be easily produced within the existing methodology; (iii) options and space to improve the quality of elementary data on production, trade, and consumption for food balance sheets; and (iv) the potential role of data from household surveys.

Session 2 – September 12, 13:30 – 17:00
Food security in the broader economic context

This session will focus on the way forward to (i) broaden the scope of analysis and monitoring various dimensions of food security, and (ii) effectively report results and ensure the broadest access possible. Specific issues to be discussed may include:

a) how to identify indicators needed to capture the various dimensions of malnutrition;
b) how to model the complex relationship existing between economic poverty and interactions with the various forms of malnutrition;
c) discuss the potential for, and the usefulness of developing an FAO based platform to effectively report data and estimates on the various dimensions of malnutrition.

The discussion could address the following issues: (i) the dual importance of sufficient food quantities and dietary quality (food diversity, combination of macro and micronutrients,
etc.); (ii) the “double burden” of malnutrition, linkages of under- and over-nutrition; (iii) the diverging trends between poverty and hunger over the longer-term, including an analysis of the relationship between income growth and food consumption in general and the limited price and income responsiveness (elasticities) of demand in particular; (iv) the impact of economic crises and short-term price hikes on hunger and malnutrition;

The FAO secretariat has started analyzing some of these issues. So far emphasis was placed on capturing the effects of income changes and of volatile food prices on various measures of food insecurity; based on these analyses, this session affords an opportunity to first discuss the results of this efforts and then identify the need for further work.

## Session 3 – September 13, 9:00 – 12:00

**The fundamental role of Countries**

The third session will focus on how to strengthen the role of countries in measuring and monitoring food security. This includes the need to handover ownership of method and parameters to countries as well as a commitment by countries to provide more reliable information on the basic data used to produce the estimates of undernourishment, i.e. estimates on food production, access to food and the evolution of the social and demographic indicators; it would also include a capacity development process that ensures that data and parameters are selected and applied in a way that is consistent with the methodology. The discussion will be organized around three major objectives to identify:

- a) data needs for existing and new indicators (reference is made to the outcomes of session 1 and 2);
- b) needs for information processing, data storage, and communication to effectively produce and distribute the suit of indicators;
- c) initiatives and options to enhance the capacity of Member countries in collecting, validating, processing and publishing data and indicators.

To initiate this process, FAO will present the analytical tools that are already available and discuss new methods, algorithms and software developments. Particular attention will be given to practical examples that demonstrate the impact of data inaccuracies and raise awareness of the importance of data quality more generally. The focus will be on food availability (derived from food balance sheets), access to food (from household income and expenditure surveys), conversion factors, local price monitoring, etc.

Further initiatives, in addition to those already conducted by FAO in improving data collection, validation, processing and dissemination methods and efforts (such as CountrySTAT, National Demonstration Centers for Food Security Indicators, etc.) will be discussed.

## Session 4- September 13, 13:30 – 17:00

**Wrapping up of discussions and producing recommendations**

This session will wrap-up the main conclusions from discussion in the previous sessions and consolidate them into a set of recommendations for further action.