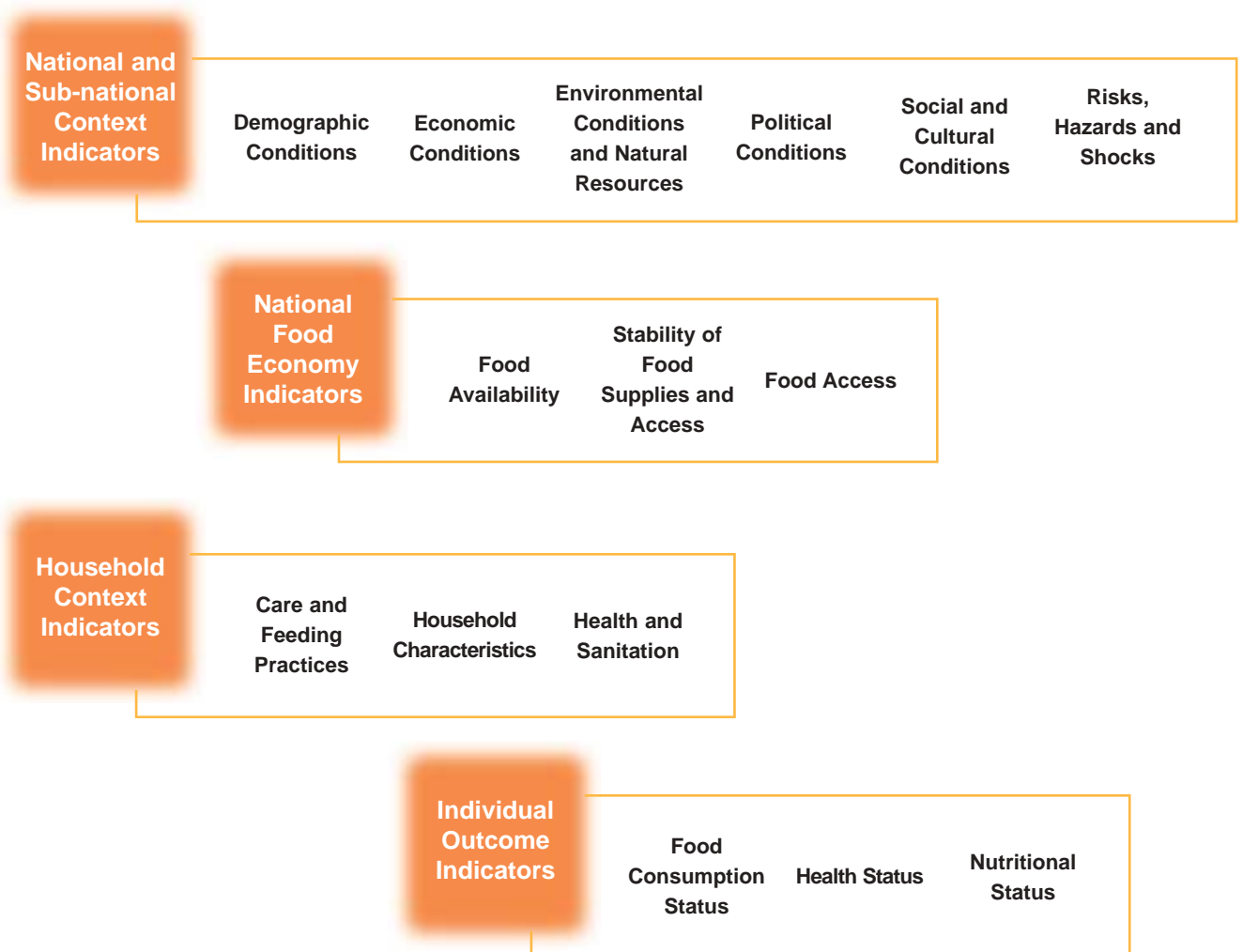


# Selecting Indicators for National FIVIMS



## RECOMMENDED COMPONENTS OF A KEY INDICATORS DATABASE

In order to collect and organise information and use it to best effect, the Inter-agency Working Group (IAWG) on FIVIMS has identified 15 information domains as relevant for the agreed Conceptual Framework for Understanding the Possible Causes of Low Food Consumption and Poor Nutritional Status. They are represented in the diagram above. There are many possible variables that could be monitored for each domain. Instead of trying to select a core list that would be equally applicable for all users, the IAWG-FIVIMS has developed a menu of variables, organized by domain, and provided suggestions regarding the criteria to be applied in selecting indicators for a national FIVIMS.

## Tools and Tips

# Selecting Indicators for National FIVIMS

## CORE INDICATORS FOR GLOBAL MONITORING OF PROGRESS TOWARD WORLD FOOD SUMMIT GOALS AND OTHER INTERNATIONAL DEVELOPMENT GOALS

In order to measure the presence or risk of food insecurity in areas and populations, it is necessary to identify and measure certain factors which, individually or in combination, can give a more accurate picture of the situation.

These parameters must be easily measured, evaluated and presented in a readily usable form. For purposes of global monitoring it is also necessary that a basic set of information be monitored by all countries, so that cross-country comparisons can be made.

This need not mean introducing new data collection systems. Instead, the core indicators for global FIVIMS can be selected from those that are already commonly monitored and compared across countries. For example, the answer to a simple question such as "What is the average life expectancy of a person born in this group?"

can indicate whether that group is likely to have adequate food consumption, health and nutritional status. In this instance, demographic data derived from birth and death records for a sample of individuals can give us the information we require.

Based on recommendations of the 4th Meeting of the IAWG-FIVIMS (February 2000), seven core food security and nutrition indicators have been selected by the Committee on World Food Security (CFS) for monitoring progress toward the World Food Summit goals on a global level. In addition, the CFS has also identified 16 indicators relating to the performance of the food economy that it will monitor regularly to ascertain the extent to which availability, stability and access targets are being met. They are shown below:

### Food Security and Nutrition Status Indicators (core indicators)

#### Food Consumption

- Average per person dietary energy supply (DES)
- Cereals, roots and tubers as % of DES
- Percentage of population undernourished

#### Health Status

- Life expectancy at birth
- Under-5 mortality rate

#### Nutritional Status

- Proportion of children under 5 that are underweight, stunted or wasted
- Percentage of adults with body mass index (BMI) <18.5

### National Food Economy Indicators (additional indicators)

#### Economic Conditions

- GNP per capita
- Growth in GNP per capita
- GNP per capita at Purchasing Power Parity

#### Food Availability

- Food production index by country
- Volume of production, food use, trade and stock changes for major food commodities, by commodity group and by country groupings
- Ratio of five major grain exporters' supplies to requirements

#### Food Access

- Gini Index of income distribution
- People living below national poverty line
- People living on less than \$1 per day

#### Stability of Food Supplies and Access

- Index of variability of food production
- Food prices index
- Changes in cereal production in low income food deficit countries (LIFDCs), with and without China and India
- Export price movements for wheat, maize and rice

#### Risks, Hazards and Shocks

- Number of countries facing food emergencies

# Selecting Indicators for National FIVIMS

## CHOOSING INDICATORS FOR NATIONAL FIVIMS

Other lists of core indicators were developed for monitoring goals of other international summits and conferences that took place in the 1990s. As the Table in this booklet shows, all of these lists have much in common. Through FIVIMS a single information mechanism can be established that serves multiple monitoring objectives.

As the number of possible indicators listed in the Table is large, each country will need to choose those which are most suitable for its own needs. For national FIVIMS, indicators need to be chosen on the basis of the data needs of the country, considering users' needs at local and national levels. Financial limitations and the capacity of existing information systems to collect and manage data may also dictate which indicators may be monitored. Different groups and institutions may choose to utilise different indicators according to the role they play in reducing vulnerability and food insecurity. However, the system should include all indicators that are considered relevant and essential for the various users.

The process recommended for choosing indicators begins with the review of a large list of possible indicators that national FIVIMS stakeholders think may be useful. A starting point is the list given in the Table. Countries may find that certain aspects of food insecurity, which are specific to their situation, are not adequately covered in the pool of indicators presented in the Table. In this case, they may decide to add indicators which measure their specific food insecurity situation better.

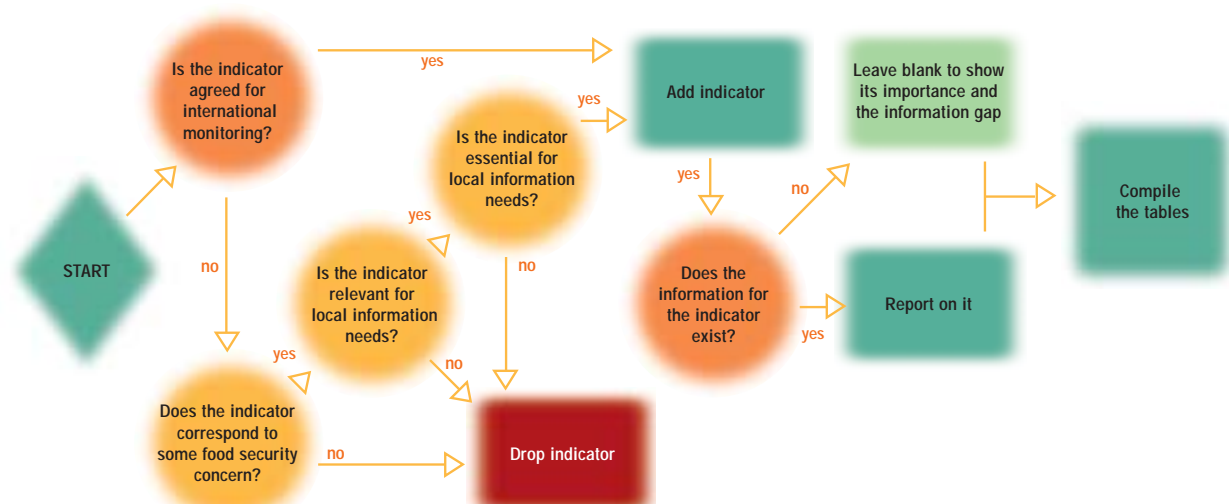
Once the list of possible indicators has been established, each indicator should be evaluated and a decision taken

to retain it or drop it. Some considerations that need to be considered when selecting indicators for inclusion in the national FIVIMS are the following:

- Indicators that correspond to national commitments made for global monitoring purposes should be retained.
- Indicators that do not address some perceived food security concern in the country should not be retained.
- Indicators that address food security concerns but are not particularly useful within the country should not be retained.
- Indicators that are considered useful but not essential, either because they duplicate other, more easily monitored indicators or because the information they provide is non-essential for decision-making, should not be retained.
- Some essential indicators may be identified for which relevant information is lacking. In such cases, including a blank indicator column on the FIVIMS reporting formats would show the importance as well as the presence of an information gap that needs to be filled.

The Flow Chart below illustrates the decision-making process described above in visual terms. When the whole list of indicators has been covered, a clear picture should emerge regarding the variables to be included in the database tables for that particular country.

FLOW CHART FOR CHOOSING INDICATORS



# Selecting Indicators for National FIVIMS

The indicators listed below constitute a menu of possible indicators that countries may consider including in their national FIVIMS. They are grouped according to the 15 domains established by the IAWG. Most of them are already being monitored in at least some countries, and have been considered useful for monitoring and analysis at global and regional levels.

The list has been compiled from the following sources:

- Indicators endorsed by the Committee on World Food Security at its 26th and 27th Sessions, for use in its annual assessments of the world food security situation;
- Indicators used by the FAO Secretariat for preparing annual reports on The State of Food Insecurity in the World, for monitoring Agenda 21, for nutrition country profiles and vulnerable group profiles, and for developing food access and vulnerability indices;
- Indicators included in the African Nutrition Database Initiative (ANDI);

- Indicators included in the Asia Key Indicators Data System (Asia KIDS);
- Indicators for monitoring International Development Goals (IGDs) of the Millennium Summit, as contained in Organisation for Economic Cooperation and Development (OECD) 2000: Measuring Development;<sup>(1)</sup>
- Indicators included in the UNDAF Guidelines for Common Country Assessment.<sup>(1)</sup>

This list represents a starting point for selecting indicators to be maintained at national level. Providing information about the selected indicators at sub-national as well as national level is a good way to begin the process of developing a disaggregated, geo-referenced database. Other country-specific indicators may need to be added to cover variables of particular relevance for specific vulnerable areas or groups, as the national FIVIMS evolves.

## TABLE NOTES

Gender indicators are included in the modules to which they relate.

Acronyms: CRED: Centre for Research on the Epidemiology of Disasters; IIASA: International Institute of Applied Systems Analysis; ILO: International Labour Organization; ISRIC: International Soils Reference and Information Center; UNESCO: United Nations Educational, Scientific and Cultural Organization; UNEP: United Nations Environment Programme; UNICEF: United Nations Children's Fund; UNDP: United Nations Development Programme; UNSD: United Nations Statistical Division; USGS: United States

Geological Survey; WB: World Bank; WHO: World Health Organization; WRI: World Resources Indicators.

(\*) Indicates that no international database holder has been identified.

"most recent year" indicates that the data is published annually, for the most recent year available.

1 According to latest survey data available in each country.

Indicator	FIVIMS-related indicators				UN-system lists		Data availability (incl. main institutional source)
	CFS	FAO-Secretariat	ANDI	Asia KIDS	OECD IDGs	UN/CCA	
<b>Food security and nutrition outcomes</b>							
<b>Food Consumption Status</b>							
Average per person dietary energy supply (DES)	X	X	X	X			most recent year (FAO)
Cereals, roots and tubers as % of DES		X		X			most recent year (FAO)
Percentage of population undernourished	X	X	X	X		X	most recent 3-yr. ave. (FAO)

<sup>(1)</sup> These lists were in the process of being updated as this booklet went to print.

# Selecting Indicators for National FIVIMS

Indicator	FIVIMS-related indicators				UN-system lists		Data availability (incl. main institutional source)
	CFS	FAO-Secretariat	ANDI	Asia KIDS	OECD IDGs	UN/CCA	
<b>Health Status</b>							
Life expectancy at birth	X	X		X	X		most recent year (UN)
Maternal mortality rate (%)		X		X	X	X	most recent year (WHO)
Under-5 mortality rate (%)	X	X		X	X	X	most recent year (UN)
Infant mortality rate (%)		X		X	X		most recent year (UN)
Prevalence of anaemia		X					most recent year (WHO)
Prevalence of cholera		X					most recent year (WHO)
Prevalence of acute respiratory infections			X				most recent year (WHO)
Prevalence of diarrhea			X				most recent year (WHO)
Prevalence of HIV		X					most recent year (WHO)
Prevalence of malaria		X					most recent year (WHO)
Prevalence of tuberculosis		X					most recent year (WHO)
<b>Nutritional Status</b>							
Percentage of adults with body mass index (BMI) <18.5		X	X	X			varying years (WHO) 1
Percentage of children under 0-3 months exclusively breastfed							1990-99 (UNICEF)
Percentage of children under 5 that are underweight	X	X	X	X	X	X	varying years (WHO) 1
Percentage of children under 5 that are stunted	X	X	X	X			varying years (WHO) 1
Percentage of children under 5 that are wasted	X	X	X	X			varying years (WHO) 1
Percentage of children under 5 affected by night blindness		X	X				varying years (WHO) 1
Percentage of households consuming iodized salt							varying years (UNICEF) 1
Percentage of newborns with low birthweight		X	X				1997 (WHO/UNICEF)
<b>Outcome indicators for vulnerability factors</b>							
<b>Demographic Conditions</b>							
Fertility rate		X	X	X	X		most recent year (UN)
Percentage of population in different age groups			X	X			varying years (UN) 1
Population growth rate		X	X	X			most recent year (UN)
Urban/rural population shares		X	X				most recent year (UN)
<b>Environmental Conditions</b>							
Arable land per person		X				X	1998 (FAO)
Average annual rate of deforestation		X					varying years (WRI) 1
Carbon dioxide emissions per person					X	X	1996 (WB)
Carrying capacity of land		X					2000 (FAO/IIASA)
Countries with environmental strategies (%)					X		1997 (WRI)
Intensity of freshwater use from renewable internal sources		X			X		varying years (FAO) 1
Energy use in agriculture		X					varying years (FAO) 1
Forest area as % of total land area					X		1995 (WB)
GDP per unit of energy use					X	X	(*)
Land area protected as % of total arable land					X		1996 (WB/FAO)
Mangrove areas					X	X	(*)
Percentage of change in km2 of forest land in the past ten years						X	most recent year (FAO)
Severely degraded land as % of total area		X					FAO
Tree density outside forest		X					(*)
Total human induced soil degradation		X					varying years (UNEP, ISIRIG, FAO) 1
Urban air pollution					X		1995 (WB)

# Selecting Indicators for National FIVIMS

Indicator	FIVIMS-related indicators				UN-system lists		Data availability (incl. main institutional source)
	CFS	FAO-Secretariat	ANDI	Asia KIDS	OECD IDGs	UN/CCA	
<b>Economic Conditions</b>							
Changes in cereal production in LIFDCs	X						most recent year (FAO)
Cropped area as % of total area		X		X			1997 (FAO)
Employment of population of working age (%)				X		X	varying years (ILO) 1
Export price movements for wheat, maize and rice	X						most recent year (FAO)
Growth in cereal yields		X					most recent year (FAO)
Growth in GDP		X					most recent year (WB)
Growth in GNP per person	X	X					most recent year (WB)
Growth in staple food yields, by commodity		X					most recent year (FAO)
Informal sector employment as % of total employment						X	varying years (ILO) 1
Ratio of five major grain exporters' supplies to requirements	X						most recent year (FAO)
Share of agriculture in GDP		X				X	1998 (WB)
Volume of production, food use, trade and stock changes for major food commodities	X						most recent year (FAO)
Wages, by economic activity (real \$ per year)		X					1998 (ILO)
Yields per hectare for major cereals		X		X			most recent year (FAO)
<b>Political Conditions</b>							
Number of countries facing a conflict-related emergency		X					2000 (CRED)
<b>Socio-Cultural Conditions</b>							
Adult literacy/illiteracy rate		X		X	X	X	1998 (UNESCO)
Female illiteracy rate			X	X			varying years (UNSD) 1
Girl net enrolment rate in primary school			X	X			1997 (UNESCO)
Literacy rate of 15-24 year-olds					X	X	1998 (WB)
Net primary enrolment or attendance rate (%)			X	X	X	X	1999 (UNESCO)
Percentage of population with access to primary health care		X					varying years (WHO) 1
Percentage of pupils starting grade 1 who reach grade 5					X	X	1996 (WB)
<b>Risks, Hazards, Shocks</b>							
National monthly rainfall index		X					varying years (FAO) 1
Number of countries facing food emergencies	X						most recent year (FAO)
Land use change		X					1997 (WB)
Percentage of population affected by droughts and natural disasters		X		X			varying years (CRED) 1
Percentage of land with erosion risk		X					varying years (USGS) 1
Rate of deforestation		X					varying years (FAO) 1
<b>Food Availability</b>							
Animal protein supply per person			X				most recent year (FAO)
Cereals supply per person			X				most recent year (FAO)
Dietary fat supply per person			X				most recent year (FAO)
Dietary protein supply per person			X				most recent year (FAO)
Food production index		X					most recent year (FAO)
<b>Food Access</b>							
Consumer prices index		X		X			varying years (WB) 1
Food prices index	X	X		X			varying years (WB) 1
Gini Index of income distribution	X	X		X			varying years (WB) 1
GDP and GNP per person	X	X	X		X		most recent year (WB)

# Selecting Indicators for National FIVIMS

Indicator	FIVIMS-related indicators				UN-system lists		Data availability (incl. main institutional source)
	CFS	FAO-Secretariat	ANDI	Asia KIDS	OECD IDGs	UN/CCA	
GNP per person at Purchasing Power Parity	X						most recent year (WB)
Market density (number of markets per unit area)		X					(*)
Paved roads as % of total road mileage		X		X			1998 (WB)
People living below national poverty line (%)	X	X		X		X	varying years (WB) 1
People living on less than \$1 a day (%)	X				X	X	varying years (WB) 1
Percentage of household income spent on food for the poorest quintile						X	(*)
Percentage of income spent on food	X	X					1985 (UNDP)
Poorest fifth share of national consumption					X	X	(*)
Poverty gap ratio		X			X	X	varying years (WB) 1
Road density (kilometers of road per unit area)		X					(*)
Share of national income by percentile of population		X					varying years (WB) 1
<b>Stability of Food Supplies and Access</b>							
Cereal import dependency ratio		X		X			most recent year (FAO)
Frequency of published or broadcast market information		X					(*)
Index of variability of food production	X	X					most recent year (FAO)
Months of cereal self-provisioning capacity		X					(*)
Variability of food prices	X	X		X			most recent year (FAO)
<b>Household Characteristics</b>							
Average household income (only urban)		X					1993 (WB)
Average household size		X					(UN)
Number of persons per room, or average floor area per person						X	(UN)
Ratio of dependants to wage-earners in average households		X					(UN/ILO)
<b>Health and Sanitation</b>							
Contraceptive prevalence rate (%)					X	X	varying years (UNDP) 1
Estimated HIV adult prevalence rate (%)						X	varying years (WHO) 1
HIV prevalence in pregnant women under 25 years of age (%)					X	X	(*)
Percentage of 1 year old children immunised against measles			X			X	varying years (UNDP) 1
Percentage of population with access to adequate sanitation		X				X	1996 (WHO)
Percentage of population with access to primary health care services						X	varying years (WHO) 1
Percentage of population with access to safe water		X		X	X	X	1996 (WHO)
<b>Care and Feeding Practices</b>							
Number of meals eaten in a day		X					(*)
Percentage of births attended by skilled health personnel					X	X	1996/98 (WHO)
Percentage of children under 15 in the labour force						X	varying years (ILO) 1
Weaning age		X					varying years (WHO) 1



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