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y la
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COMMITTEE ON WORLD FOOD SECURITY

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SUGGESTED CORE INDICATORS FOR MONITORING FOOD SECURITY STATUS

I. INTRODUCTION

1. In CFS:2000/2 recent developments for monitoring trends of food security and measuring vulnerability were presented. In this context the need for a list of core indicators for monitoring World Food Summit follow-up was pointed out. It was stressed that the list should be drawn from the Key Indicator Database System (KIDS) under development by the Inter-Agency Working Group (IAWG) of FIVIMS.
2. The IAWG has identified fifteen information domains as relevant for FIVIMS. A large number of variables could be used to assess food security and nutritional status and vulnerability within countries. Therefore the IAWG has decided not to restrict the list of indicators that could be used at national and sub-national level. However, for purposes of cross-country comparison and to provide a manageable dataset for monitoring progress towards the goals established during the World Food Summit at the global level, a core indicator list representing a pool of variables that are currently assumed to be most closely related to food security, nutrition and vulnerability is needed.
3. In order to a pool of indicators, from which final selection could be made, an extensive review has been undertaken of the various indicator lists that are in use or under discussion for monitoring developmental goals in different international settings. They are presented in the Annex Table of the document, and the background to each list shown is briefly explained in section B of the document.
4. After completing a comparison of the preliminary core indicator proposals shown in document CFS: 2000/2 with the larger pool of indicators shown in the Annex Table of this document, a fairly clear consensus emerged around the core indicators considered most relevant for monitoring progress in reducing undernourishment in the world. Thus, in section C a list of seven indicators is proposed for global monitoring of food security outcomes in the domains of food consumption status, health status and nutrition status. These are the same as those proposed in Table 4 of Document CFS: 2000/2 for these three domains, with two exceptions explained

below. This list is presented to the Committee for review and endorsement as the core set to be covered in future Assessment reports.

5. For monitoring factors contributing to vulnerability, a further review of the large number of indicators currently in use by different international monitoring systems is needed before making specific recommendations for the Committee's consideration.

II. COMPARING INDICATORS PROPOSED BY DIFFERENT INTERNATIONAL MONITORING SYSTEMS

6. The Annex Table presents an overview of indicators that are either FIVIMS-related or can be found in two other UN-system indicators lists, organized according to the fifteen information domains or modules under development by the IAWG for KIDS. Column one lists all the indicators resulting from the different sources combined. Column two gives the indicators proposed by the IAWG, whereas column three presents those used by the FAO secretariat for preparing the CFS assessment documents in 1999 and 2000, *The State of Food Insecurity in the World 1999*, the draft version of *The State of Food Insecurity in the World 2000*, and a draft FAO-Secretariat list for developing Indices and for monitoring Agenda 21. The ANDI indicator list, shown in column three has been developed in order to ensure access to data of high quality for monitoring trends in the nutrition situation of African countries.

7. The remaining columns present the indicators contained in the core lists developed by OECD under the "Progress toward International Development Goals" programme and by the United Nations Development Group for the CCA (Common Country Assessment) component in the UNDAF (UN Development Assistance Framework) programme. Both the UN/CCA and the OECD core indicator lists have been developed in order to respond to the need to monitor progress towards the developmental goals established during the various summits and other international conferences organized by the United Nations in the first half of the 1990s. Their purpose is to provide a common entry-point for monitoring the areas covered by the mandates of United Nations system at both national level (CCA) and international level (OECD).

8. The different conceptual backgrounds of the indicator lists are reflected by varying priorities given to the information modules. Nevertheless, some indicators are suggested by both UN-system lists and at least one of the FIVIMS-related lists, which shows a high degree of inter-agency agreement. It may be noted that the OECD list does not currently include any indicators that refer explicitly to the World Food Summit, although several of those included for monitoring other global developmental goals, particularly those of the Social Summit, are very relevant. Following a series of very positive discussions between the FAO secretariat and that of the OECD, it appears likely that one or two goals explicitly related to the World Food Summit will be added to the OECD list when it is next revised.

9. An important factor constraining the selection process is the non-availability of highly relevant data. The Annex Table gives the latest year for which relevant data are generally available from an internationally compiled database, and the holder of the database is shown. However, for many indicators listed, the international coverage of the databases and the periodicity of updating are not currently adequate to allow changes to be reported on a regular basis.

10. Indicators included in the OECD and UN/CCA lists have been given highest priority for improved data collection. In addition, both UNICEF and FAO itself are planning to invest in improvement in data collection for health and nutrition status indicators additional to those currently included on the core lists.

11. As improved data begins to be generated from these investments, it may prove both feasible and desirable to introduce some modifications into the core indicator lists, to take full advantage of new and better information.

III. RECOMMENDED CORE INDICATORS FOR MONITORING FOOD SECURITY OUTCOMES

12. For the selection of core indicators for monitoring food security outcomes, the following criteria have been used:

- The indicator has been identified by the IAWG-FIVIMS subgroup on Indicators, Assessment and Mapping as suitable for inclusion in the global FIVIMS core indicator list, or there is some other indication of inter-agency consensus about the relevance of the indicator, as evidenced by its inclusion in more than one of the lists shown in the Annex Table of this document.
- The list is adequately representative of the different aspects of the food security status of individuals, and is balanced in terms of coverage from the 3 pertinent information domains.

13. On this basis, it was considered useful to add DES to the recommended core indicators for the food consumption domain, and to drop stunting and wasting among under 5 children from the nutrition domain.

Table1. Recommended Core Indicators for Monitoring Outcomes Related to World Food Summit Goals

Status Indicator Categories		
Food consumption status	Health status	Nutritional status
Preliminary proposals contained in document CFS:2000/2		
<ul style="list-style-type: none"> • Main food group as % of diet • Percentage of population undernourished 	<ul style="list-style-type: none"> • Life expectancy at birth • Under 5 mortality rate 	<ul style="list-style-type: none"> • Proportion of children under 5 that are underweight, stunted or wasted • Percentage of adults with low body mass index
Recommended for endorsement		
<ul style="list-style-type: none"> • Average per person dietary energy supply (DES) • Cereals, roots and tubers as % of DES • Percentage of population undernourished 	<ul style="list-style-type: none"> • Life expectancy at birth • Under 5 mortality rate 	<ul style="list-style-type: none"> • Proportion of children under 5 that are underweight • Percentage of adults with body mass index (BMI) <18.5

14. The average per person dietary energy supply (DES) shows the availability of food for human consumption, and cereals, roots and tubers (formerly main food group) as % of DES shows the degree of dietary dependence on the major staple, and hence the average quality of the diet for a national population. The percentage of population undernourished provides information on the number of people within a population whose dietary energy intake lies below their minimum requirements. Together, these three indicators provide a picture of the quantity and quality of food available and the proportion of a population that is not getting enough. The proposal to include DES as a core indicator is consistent with the approach adopted for use by ANDI for using this proxy indicator of food consumption status, in the absence of survey information on nutrient intake.

15. As indicators of health status, life expectancy at birth is found in both the FAO and OECD lists, while mortality rate for children under 5 is included in FAO, OECD and CCA lists

and is recommended by the IAWG. While the former is considered the best single indicator of the overall health status of a population, the latter indicates the extent to which an especially vulnerable group – young children – is afflicted by disease.

16. The suggestion is to include only proportion of children under 5 that are underweight and percentage of adults with low body mass (i.e., low weight for height) as nutritional status indicators because, for children, underweight (weight for age) captures the effects of poor nutrition on their growth as well as reflecting the extent of wasting (weight-for-height), while for adults the body mass index also captures weight-for-height.

17. Regularly updated anthropometric data is currently not available in many countries. Nevertheless, because of the generally accepted importance of these indicators, they are recommended for inclusion in the core list.

18. There exist inexpensive, easy-to-use methods for obtaining such data. Many countries are already investing in these types of activities, but this is sporadic and not necessarily statistically representative. As a part of its Medium Term Plan, FAO, in collaboration with other agencies, will implement a series of actions to assist countries to make more systematic use of these methods to collect, compile and disseminate dietary intake data and anthropometric data on a continuing basis.

19. Anthropometric data will be collected, and presented as prevalence of stunting, wasting, underweight and overweight in children under 5, and underweight and overweight by degrees in adults. All data will be disaggregated by gender. In addition, dietary intake data will also be more systematically collected, and presented as prevalence of protein, fat, energy- and selected micronutrients-in the diet, with special attention being given to the category of children from 5-9 years, for which data in developing countries are lacking. Efforts will be directed toward collaborating with school feeding programmes and setting up regular monitoring of school children within that structure, if operational.

20. In addition to permitting better monitoring of the food security situation, having a body of time series data on nutritional status at national and subnational level will allow better targeting of interventions and therefore more progress in reducing the number of hungry people in the world.

Annex Table Indicators proposed for FIVIMS-related activities and WFS follow-up monitoring, compared with those in use for monitoring follow-up to other Summits and international conferences¹

Indicator	FIVIMS-related indicators			UN-system lists		Data availability ² (incl. main institutional source)
	IAWG	FAO-Secretariat	ANDI	OECD	UN/CCA	
Food security and nutrition outcomes						
<i>Food Consumption Status</i>						
Average per person dietary energy supply (DES)	X	X	X			1999 (FAO)
Cereals, roots and tubers as % of DES		X				1999 (FAO)
Percentage of population undernourished	X	X	X		X	1996/98 (FAO)
<i>Health Status</i>						
Life expectancy at birth		X		X		1998 (UN)
Maternal mortality rate (%)		X		X	X	1998 (WHO)
Under-5 mortality rate (%)	X	X		X	X	1998 (UN)
Infant mortality rate (%)		X		X		1998 (UN)
Prevalence of anaemia		X				1999 (WHO)
Prevalence of cholera		X				1999 (WHO)
Prevalence of acute respiratory infections			X			1999 (WHO)
Prevalence of diarrhea			X			1999 (WHO)
Prevalence of HIV		X				1999 (WHO)
Prevalence of malaria		X				1999 (WHO)
Prevalence of tuberculosis		X				1999 (WHO)
<i>Nutritional Status</i>						
Percentage of adults with low BMI		X	X			varying years (WHO) ³
Percentage of children under 0-3 months exclusively breastfed			X			1990-99 (UNICEF)
Percentage of children under 5 that are underweight	X	X	X	X	X	varying years (WHO) ³
Percentage of children under 5 affected by night blindness		X				varying years (WHO)
Percentage of households consuming iodized salt			X			varying years (UNICEF) ³
Percentage of newborns with low birthweight		X				1997 (WHO/UNICEF)
Percentage of population affected by goitre		X				varying years (WHO)
Outcome indicators for vulnerability factors						
<i>Demographic conditions</i>						
Fertility rate		X	X	X		1998 (UN)
Percentage of population in different age groups			X			varying years (UN)
Population growth rate		X	X			1999 (UN)
Urban/rural population shares		X	X			1999 (UN)
<i>Environmental Conditions</i>						
Arable land per person		X			X	1998 (FAO)
Average annual rate of deforestation		X				varying years (WRI) ³
Carbon Dioxide emissions per person				X	X	1996 (WB)
Carrying capacity of land		X				2000 (FAO/IIASA)
Countries with environmental strategies (%)				X		1997 (WRI)

Indicator	FIVIMS-related indicators			UN-system lists		Data availability ² (incl. main institutional source)
	IAWG	FAO-Secretariat	ANDI	OECD	UN/CCA	
Energy use in agriculture		X				(*)
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 km ² of forest land in past ten years					X	1999 (FAO)
Severely degraded land as % of total area		X				FAO
Tree density outside forest		X				(*)
Total human induced soil degradation		X				varying years (UNEP,ISRIG,FAO)
Urban air pollution				X		1995 (WB)
<i>Economic Conditions</i>						
Cropped area as % of total area		X				1997 (FAO)
Employment of population of working age ratio (%)					X	varying years (ILO) ³
GDP/GNP per person		X	X	X		1999 (WB)
Growth in cereal yields		X				1999 (FAO)
Growth in GDP		X				1999 (WB)
Growth in staple food yields, by commodity		X				1999 (FAO)
Informal sector employment as % of total employment					X	varying years (ILO)
Share of agriculture in GDP		X			X	1998 (WB)
Wages, by economic activity (real \$ per year)		X				1998 (ILO)
Yields per hectare for major cereals		X				1999 (FAO)
<i>Political Conditions</i>						
Number of countries facing a conflict-related emergency		X				2000 (CRED)
<i>Socio-Cultural Conditions</i>						
Adult literacy/illiteracy rate		X		X	X	1998 (UNESCO)
Female illiteracy rate			X			varying years (UNSD) ³
Girl net enrolment rate in primary school			X			1997 (UNESCO)
Literacy rate of 15-24 year-olds				X	X	1998 (WB)
Net primary enrolment or attendance rate (%)			X	X	X	1999 (UNESCO)
Percentage of population with access to primary health care		X				varying years (WHO) ³
Percentage of pupils starting grade 1 who reach grade 5				X	X	1996 (WB)
<i>Risks, Hazards, Shocks</i>						
National monthly rainfall index		X				varying years (FAO)
Intensity of freshwater use from renewal internal sources		X		X		varying years (FAO)
Land use change		X				1997 (WB)
Percentage of population affected by droughts and natural disasters		X				varying years (CRED)
Percentage of land with erosion risk		X				varying years (USGS)
Percentage ofRate of deforestation		X				varying years (FAO)
<i>Food Availability</i>						
Animal protein supply per person			X			1999 (FAO)
Cereals supply per person			X			1999 (FAO)
Dietary fat supply per person			X			1999 (FAO)
Dietary protein supply per person			X			1999 (FAO)
Food production index		X				1999 (FAO)

Indicator	FIVIMS-related indicators			UN-system lists		Data availability ² (incl. main institutional source)
	IAWG	FAO-Secretariat	ANDI	OECD	UN/CCA	
Food Access						
Consumer prices index		X				varying years (WB) ³
Food prices index		X				varying years (WB) ³
Gini-index of income distribution		X				varying years (WB) ³
GDP/GNP per person	X	X				1999 (WB)
Market density (number of markets per unit area)		X				(*)
Paved roads as % of total road mileage		X				1998 (WB)
People living below national poverty line (%)		X			X	varying years (WB) ³
People living on less than \$1 a day (%)				X	X	varying years (WB) ³
Percent. 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) ³
Road density (kilometers of road per unit area)		X				(*)
Share of national income by percentile of population		X				varying years (WB) ³
Stability of Food Supplies and Access						
Cereal import dependency ratio		X				1999 (FAO)
Frequency of published or broadcast market information		X				(*)
Index of variability of food production	X	X				1999 (FAO)
Months of cereal self-provisioning capacity		X				(*)
Variability of food prices		X				1999 (FAO)
Household Characteristics						
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)
Health and Sanitation						
Contraceptive prevalence rate (%)				X	X	varying years (UNDP) ³
Estimated HIV adult prevalence rate (%)					X	varying years (WHO)
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) ³
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)
Percentage of population with access to safe water	X	X		X	X	1996 (WHO)
Care and Feeding Practices						
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) ³
Weaning age		X				varying years (WHO) ³

Sources:

Column One: Report of the Fourth Meeting of the IAWG-FIVIMS Subgroup on Indicators, Assessment and Mapping, October 1999.

Column Two: *Assessment of the World Food Security Situation* (CFS:99/2); *Assessment of the World Food Security Situation* (CFS:2000/2), *The State of Food Insecurity in the World* (FAO 1999), *The State of Food Insecurity in the World* (draft, FAO 2000); draft FAO-Secretariat lists for developing food access and vulnerability indices and for monitoring Agenda 21 (FAO 2000).

Column Three: *African Nutrition Database Initiative*, <http://www.africanutrition.net/>.

Column Four: *OECD 2000: Measuring Development*; United Nations 2000

Column Five: *Guidelines for Common Country Assessment (CCA)*, United Nations 1999.

¹ Gender indicators are included in the modules to which they relate.

² 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. * indicated no international database holder identified.

³ According to latest survey data available in each country.