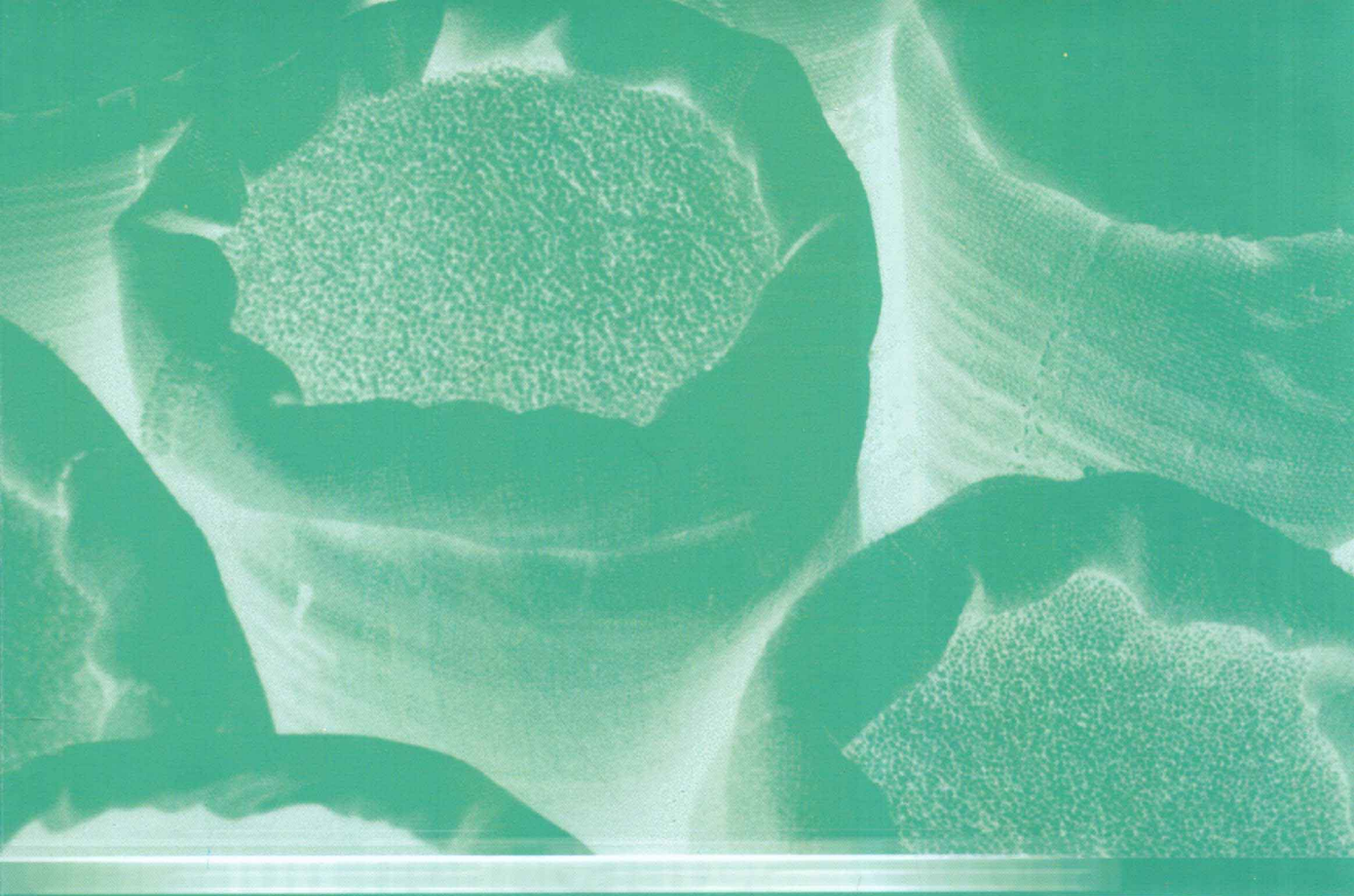




Integrating Food Security Information in National Statistical Systems

Experiences, Achievements, Challenges



INTEGRATING FOOD SECURITY INFORMATION IN NATIONAL STATISTICAL SYSTEMS

Experiences, Achievements, Challenges

*Edited by Seevalingum Ramasawmy
Statistician, FAO*



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Acronyms

AAS	Amino acid score
ADER	Average dietary energy requirement
BMI	Body mass index
BMR	Basal metabolic rate
CARICOM	Caribbean Community
CBS	Central Bureau of Statistics (Sudan)
CFAF	Coopération financière en Afrique centrale - Franc (Niger)
CPA	Comprehensive Peace Agreement (Sudan)
CPI	Consumer price index
CV	Coefficient of variation
DAEP	Direction de l'Agriculture, de l'Elevage et de la Pêche
DEC	Dietary energy consumption
DES	Dietary energy supply
DGSCN	General Directorate of Statistics and National Accounts (Togo)
DHS	Demographic and Health Survey
DSCN	Direction de la Statistique et de la Comptabilité National
DSID	Direction des Statistiques, de l'Informatique et de la Documentation
EA	Enumeration areas
EEA	Essential amino acids
EAR	Estimated average requirement
ECH	Encuesta Continúa de Hogares
ENAHQ	National household expenditure survey (Peru)
ENBC	National survey on the budget and household consumption (Niger)
ESA	Agricultural Development Economics Division (FAO)
ESS	Statistics Division (FAO)
EU	European Union
EWS	Early Warning System
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	FAO statistical databases
FBS	Food balance sheet
FEV	Food equivalent value
FHH	Female-headed households
FNP	Food and nutrition policy
FNSP	Food and nutrition security policies
FSSM	Food security statistics module
GDP	Gross domestic product
GIEWS	Global Information and Early Warning System
GPAFSN	Global Partnership on Agriculture, Food Security and Nutrition
HBS	Household budget survey
HLTF	High level task force
HOBALI	Hoja de balance de alimentos
HSPH	Harvard School of Public Health
ICAS	International Conference in Agricultural Statistics
ICES	Indian Consumption Expenditure Surveys
IFPRI	International Food Policy Research Institute
IHSN	International Household Survey Network
IICA	Inter-American Institution for Cooperation on Agriculture
ILO	International Labour Organization
INE	Instituto Nacional de Estadística

INEI	Instituto Nacional de Estadística e Informática (Peru)
INR	Indian rupee
INS	National Institute of Statistics (Niger)
MDER	Minimum dietary energy requirement
MDG	Millennium Development Goals
MECOVI	Mejoramiento de las Encuestas y Medición sobre Condiciones de Vida
MHH	Male-headed households
MICS	Multiple Indicator Cluster Surveys
MNAC	Micronutrients available for human consumption
MSIP	Ministry of Statistics and Implementation Programme (India)
MUHAS	Muhimbili University of Health and Allied Sciences
NBS	National Bureau of Statistics (Tanzania)
NFBS	National food balance sheet (Tanzania)
NFFP	National Food Fortification Program (Bolivia)
NGO	Non-governmental organization
NHBS	National household budget survey (Sudan and Niger)
NHS	National household survey
NPES	National Poverty Eradication Strategy (in Tanzania)
NPFS	National Programme for Food Security
NSGRP	National Strategy for Growth and Reduction of Poverty (Tanzania)
NSSO	National Sample Survey Organization
PAL	Physical activity level
PDCAAS	Protein digestibility corrected amino acid score
PEAP	Poverty eradication action plan
PFCT	Peru food composition table
PNSA	Programa Nacional para la Seguridad Alimentaria
PPAP	Participatory poverty assessment process
PPS	Probability proportional to size
PRSP	Poverty reduction strategy paper
PSU	Primary sampling units
QUIBB	Questionnaire Unifié des Indicateurs de Base de Bien-être
RAE	Retinol activity equivalent
RNI	Recommended nutrient intake
SADC	South African Development Community
SD	Standard deviation
SDG	Sudan pound
SOFI	The State of Food Insecurity in the World
SSCCSE	South Sudan Centre for Census, Statistics and Evaluation
TFCT	Tanzania food composition table
TFNC	Tanzania Food and Nutrition Centre
THBS	Tanzania household budget survey
TPDS	Targeted public distribution system
TSZ	Tanzanian shilling
UBOS	Uganda Bureau of Statistics
UGX	Ugandan shilling
UNDP	United Nations Development Programme
UNHS	Uganda national household survey
UNICEF	United Nations Children's Fund
UNU	United Nations University
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WFP	World Food Programme
WFS	World Food Summit
WHO	World Health Organization

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Foreword

Under the terms of its mandate, the Food and Agricultural Organization of the United Nations (FAO) makes food security information available at national and sub-national levels. It also monitors progress made in meeting targets for reducing hunger, which were set by the World Food Summit (WFS) and the Millennium Development Goals (MDG).

FAO's Statistics Division (ESS) has been working in partnership with the European Commission on the EC-FAO Programme on Linking Information and Decision Making to Improve Food Security. The programme aims to enhance the quantity and quality of food security information, and to improve its collection and analysis. It also promotes the use of this information in decision-making processes. The work presented in this book represents over a decade of collaboration.

FAO Statistics Division has extended its statistical capacity-building activities to twenty countries as a result of support from the programme. These activities include providing the tools and technical support needed to analyse available food consumption data collected in national household surveys (NHS). The programme has also supported the development of a micronutrient module in the food security statistic module (FSSM). The module is a useful tool for deriving a suite of food security indicators at national and sub-national levels from NHS. Thanks to these activities, over twenty countries have produced technical food insecurity assessment reports. These provide valuable information and inputs for policy-makers in countries preparing national food security frameworks.

A follow-up to *Deriving food security information from national household budget surveys: experiences, achievements, challenges* (2008), this work is a compilation of papers from Bolivia, India, Niger, Peru, Sudan and Tanzania on the use of food security statistics for food security analysis. It includes a paper on how harmonized food security information can improve food and nutrition policies, and outlines the challenges for future work. There is also an analysis of food security in Uganda from the perspective of gender.

The intention of this work is to provide a better understanding of how food security indicators can be used for policy-making and intervention planning. It highlights how food data collection can be improved to obtain more reliable, consistent and timely food security information.

I wish to thank all authors from the national statistical offices and the other institutions involved in food security, for sharing their experiences. I am also grateful to national teams and FAO colleagues involved in the EC-FAO Programme on Linking Information and Decision Making to Improve Food Security, and, in particular, to colleagues from the Food Security and Social Statistics team of the Statistics Division. Finally, I express my gratitude to the European Union (EU) for their financial support of participating countries and to the EC-FAO Programme.

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Hafez Ghanem
Assistant Director General,
Economic and Social Development Department, FAO

Preface

FAO has a global mandate to monitor progress made towards achieving the targets on hunger set by the MDG in 2000 and the WFS in 1996. It tracks this progress by providing regular estimates of the proportion and number of people whose daily dietary energy consumption (DEC) is less than the minimum daily dietary energy requirement (MDER). The methodology for estimating hunger, or the prevalence of undernourishment indicator, is a parametric approach based on the distribution of DEC. It uses agricultural and food data derived from several sources such as trade, crop surveys, national household income and expenditure surveys, etc.

Global hunger estimates are based on food security indicators from each of the following three main pillars of food security: food availability, food access and food utilization. Those indicators are, respectively: the average dietary energy available for human consumption; the inequality measure of food access, which is the coefficient of variation (CV) of DEC; and a measure of food utilization, which is the MDER. Country hunger estimates use production and trade data provided by national institutions, as well as food consumption data from NHS, to derive those three food security indicators.

FAO Statistics Division has been providing technical support to countries through its statistical capacity development programme. This programme helps to improve the collection and analysis of agricultural and food security data used to estimate the prevalence of undernourishment and other food security indicators. FAO Statistics Division is also currently working on the implementation plan of the Global Strategy to Improve Agricultural and Rural Statistics. That strategy aims to provide a framework for national statistical systems that enables them to produce and apply the basic data and information needed to guide decision-making. Methodologies for analysing food balance sheets (FBS) and NHS are being reviewed, updated and harmonised to provide more reliable and timely inputs for the national and global monitoring of MDG indicator 1.9 and WFS targets.

This compilation presents eight countries' experiences in deriving food security information at national and sub-national levels from NHS. Food consumption statistics derived from NHS and food availability estimates derived from FBS are discussed to understand their impact on measuring the level of undernourishment of the population, and their use for improving food security policies. The papers also discuss ways in which statistics can be used to improve the reliability of food security information at both national and sub-national levels.

The papers in this volume were presented at the Side Event of the Fifth International Conference in Agriculture Statistics (ICAS-5) held in Kampala, Uganda, from 12–15 October 2010.

Part one summarizes lessons learned in improving food security statistics for decision-making. Part two deals with how food security is monitored at national and sub-national levels in four countries, which includes the use of food security information in the Togo national programme of food security. The paper on Uganda analyses the food security statistics from the perspective of gender, while the papers on India and Tanzania are examples of trend analyses. Part three addresses approaches to measuring food acquisition and food consumption that can enhance estimates of food security. Examples from Sudan, Niger, Peru and Tanzania examine methodologies in detail, and consider how food data collection affects estimates of food security statistics. Part four reviews the policy implications of food security and micronutrient statistics on agriculture and the quality of life in Bolivia. It also looks at the quality and availability of food in terms of micronutrients in Tanzania. Finally, part five provides a glossary of terminology related to food security statistics.

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How harmonized information improves food and nutrition security policies and programmes

Mr. Ricardo Sibrian¹

ABSTRACT

Data collected in accordance with the complex of criteria governing food and nutrition security provide elements for identifying what food security information, statistics and indicators are best suited to the formulation of food and nutrition security policies (FNSP) in developing countries. Data sources come from food production surveys and trade administrative records that are used to estimate domestic supply of food commodities for human consumption in terms of FBS. The main source for food consumption, however, is restricted to data on private consumption in households as collected in national HBS. Food security information relates to energy and energy-yielding macronutrients, amino acids essential for an assessment of protein quality, as well as vitamins and minerals deriving from food commodities. These are supplied and estimated using FBS data and acquired by households using HBS data. The formulation of FNSP is based on current status and trends in domestic food supply at the national level. These policies can, however, be fine-tuned by using regional status and trends derived from food security information from HBS where this contrasts with production data. Examples are taken from countries in different continents. This diversity highlights the importance of these statistics as a basis for decision-making processes which have an impact on the food and nutritional status of different populations. This information is relevant to the formulation of policy on agricultural production, agro-industry and trade in relation to domestic food supply. It also helps to assess the impact of interventions affecting the demand for food by population groups.

Keywords: household surveys, food balance sheets, food security, food quality and quantity, food and nutrition policies

BACKGROUND

In the 1980s, global food and nutrition policies (FNP) made food available to a growing population, particularly to those older and physically developed individuals who required more of it. These policies initially enjoyed great success, but in the last 15 years this trend has reversed and they have failed.

Why did FNPs succeed in the 1980s and what were the underlying causes of their recent failure? A number of factors were at work, including the fact that FNPs failed to take into account the soaring food prices in the period 2008–2010.

With one and a half billion poor and one billion hungry in 2010, the world requires better-tailored FNPs. But how can FNPs be improved if they are based on misleading targets, on insufficient information or both? For example, the agricultural policies of several developing countries are aimed at increasing income from agriculture rather than at positive human development. Such agricultural policies are usually focused on external markets and ignore the needs of the local

¹ Former Senior Statistician, FAO Statistics Division, Rome; Ricardo@Sibrian.net

market. This focus is probably due to a lack of awareness of the needs of local people by programme implementers. Where policy is geared towards the achievement of revenue goals without regard for the population, resources allocated for human development goals worldwide will be insufficient.

Global food prices soared in mid-2008 as a result of the impact of global food policies on those countries that were unprepared to deal with the food insecurity of their populations at a local level. As UN agencies² tackle food insecurity, improved information on food and nutrition should emerge, which will result in the implementation of more effective policies and programmes in developing countries.

FNP must take into account both the levels and trends of food in terms of needs, access and sustainability of natural resources and the characteristics of its environment. Food needs must be quantified not only in terms of energy, but also in terms of those nutrients essential for human physical and mental development. Food access includes physical access to food through trade, increased production or both. It also includes identifying ways to reduce the effects that income level has on the acquisition of food and nutrients. Access is enhanced by improving income-generating activities of the poor and by marketing strategies aimed at keeping food prices low. Improved access can increase the ability of low-income population groups to acquire and consume a more balanced diet with an optimal quality of protein, essential vitamins and minerals. This strategy is particularly important for vulnerable population groups such as children, adolescents and women of reproductive age.

In the context of food policies, bio-fuel policies should be based on a careful analysis of their food and nutrition implications as well as their effect on the environment. The relationship between bio-fuel production and food policies raises controversial issues. For example, when bio-fuel production from palm oil was promoted, it was assumed that saturated fat from palm oil would not be consumed by people due to the risk of an increase in chronic diseases. However, with the large-scale production of palm kernels for use as bio-fuel, workers were diverted from using them as feed for livestock only. Instead, palm oil was produced from kernels as food for the general population. Palm product consumption has also increased the fat content of meats and meat products. The share of energy derived from animal fat and from palm oil in humans has also increased. In order to meet the nutritional needs of a targeted population, food and nutritional policies should, therefore, be based on a holistic framework.

Worldwide availability of palm oil and palm kernel products for human consumption has increased steadily. In the period 1990–2007, Africa had the highest level of consumption of palm products, followed by Asia and then the Americas.

The objective of this paper is to highlight how the proper use of food and nutrition statistics and other indicators can improve FNP design. Improved policies will provide a basis for informed decisions that will have a positive impact on the food security of populations. These improved policies will contribute to the fight against world hunger and malnutrition and will enhance human development.

CONCEPTS ON FOOD AND NUTRITION SECURITY

Food and nutrition security is achieved when everyone has physical, social and economic access to sufficient, safe and nutritious food that meets dietary needs and food preferences for an active and healthy lifestyle. Food security, as its definition implies, is quite complex.

Firstly, the definition refers to the daily consumption of food where distribution systems ensure a continuous supply of food to all population groups, regardless of markets, locations, seasons and acquisition patterns.

² For example: the Global Partnership on Agriculture, Food Security and Nutrition (GPAFSN) launched by the UN high level task force (HLTF) on the Global Food Security Crisis, the comprehensive agenda on food security adopted at the G8 Summit in L'Aquila, Italy, in 2009 and the reaction of the EU.