

Statistics Division

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$$\pi_n = \left(\frac{y_n^k}{y_n} \right) \left(\frac{p_n^k}{p^k} \right)$$

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منظمة الأغذية
والزراعة
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联合国
粮食及
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Food
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of
the
United
Nations

Organisation
des
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Unies
pour
l'alimentation
et
l'agriculture

Organización
de las
Naciones
Unidas
para la
Agricultura
y la
Alimentación

MEASURING HUNGER AT SUB NATIONAL LEVELS FROM HOUSEHOLD SURVEYS USING THE FAO APPROACH

MANUAL

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ACRONYMS AND ABBREVIATIONS

BMI	Body Mass Index
BMR	Basal Metabolic Rate
COICOP	International Classification of Individual Consumption by Purpose
CPI	Consumer Price Index
CV	Coefficient Of Variation
DES	Dietary Energy Supply
DEC	Dietary Energy Consumption
DEI	Dietary Energy Intake
DHS	Demographic and Health Survey
ESS	FAO Statistics Division
ESSG	FAO Global Statistics Service
FAO	Food and Agriculture Organization
FAOSTAT	FAO Statistical Databases
FBS	Food Balance Sheets
FCT	Food Composition Tables
FIVIMS	Food Insecurity And Vulnerability Information And Mapping Systems
FPI	Food Price Index
FMV	Food Consumption In Monetary Values Expressed In The Local Currency
GDP	Gross Domestic Product
GIS	Geographical Information System
GNP	Gross National Product
HES	Household Expenditure Survey
HIES	Household Income and Expenditure Survey
IFPRI	International Food Policy Research Institute
IMR	Infant Mortality Rate
LSMS	Living Standards Measurement Study
MDG	Millennium Development Goals
MDER	Minimum Energy Requirement
MICS	Multiple Indicator Cluster
MIS	Management Information System
NCHS	National Center for Health Statistics
NGO	Non-Governmental Organization
NHANES	National Health and Nutrition
NHS	National Household Surveys (HIES/HBS/LSMS)
NSO	National Statistical Organization
OECD	Organisation for Economic Co-operation and Development
PAL	Physical Activity Level
SNA	System of National Accounts
SOFI	State of Food Insecurity
SPSS	Statistical Package for the Social Sciences
UNICEF	United Nations Children's Fund
USAID	United States Agency for
USDA	United States Department of
WB	World Bank
WFP	World Food Programme
WFS	World Food Summit

INTRODUCTION

1. This manual provides a set of guidelines to professionals involved in the estimation of food security statistics using food consumption data collected in National Household Surveys (NHS). It contains statistical procedures and tools to derive food security statistics, including the prevalence of food deprivation (hunger) at national and sub national levels. These sub national estimates allow the identification and locations of food insecure groups and likely underlying factors. The manual also includes suggestions on how to report on these subjects, having in mind policy makers and other stakeholders responsible for hunger reduction policies and programmes as final users.

2. The NHS quite often collects data on food quantities, which not always are processed and analysed due to scarcity of resources and appropriate skills. The national statistical organizations (NSO) conducting expenditure surveys give more emphasis to the process and analysis of the monetary value of the total household food expenditure. This manual introduces new procedures and concepts in order to make full utilization of the food consumption data for the estimation of a minimum set of food security statistics. It also contributes to the harmonization of the collection, processing and analysis of food consumption data from NHS and the standardization of food security indicators for comparison over time and between countries.

3. The manual introduces some concepts and definitions of food security statistics. It also describes systematic procedures for the derivation of a suite of food security statistics using data on food consumption and income (or proxy total expenditure or total consumption) collected in NHS such as household income and expenditure surveys (HIES), household budget Surveys (HBS), Living Standard Measurement Studies (LSMS) and other family expenditure surveys. The FAO Statistics Division has developed procedures and the corresponding computer programs using the Statistical Package for Social Science (SPSS) version 10.0 and Microsoft Office Excel to derive food security statistics at national and sub national level. Other available statistical packages can also implement these procedures.

4. The manual comprises three parts. The first part introduces the relevant concepts and definitions. The second part presents the Food Security Statistics Module software (FSSM) developed by FAO Statistic Division. The third part discusses the analysis of the derived food security statistics and provides guidelines for the preparation of a food security assessment report using the statistics derived from national household survey data.

PART A. CONCEPTS AND DEFINITIONS

5. This part presents the different concepts and definitions related to food security statistics. It also examines characteristics and limitations of data collected in NHS. It also addresses on how to improve NHS on implementing concepts.

A1. BACKGROUND

A1.1. NEED FOR STATISTICS ON FOOD SECURITY

6. International Summits such as the World Food Summit (WFS) and the Millennium Declaration have set goals and targets to reduce hunger by year 2015. The target of the WFS refers to halving the number of people suffering from hunger while the Millennium Development Goals (MDG) calls for halving the proportion of such people in the total population. Consequently, there is a need for information to monitor the progress towards these targets.

7. In addition to these demands, other initiatives such as the Poverty Reduction Strategies Papers (PRSP), Marketing Information Systems and Rural Development Strategies have increased the needs for food security statistics at national and sub-national levels (rural/urban, geographical regions, etc.) for monitoring, policy design and programme planning and evaluation.

Box 1. Use and application of food security statistics

1. Assess the magnitude of food deprivation at national or sub-national levels;
2. Assess the prevalence of food poverty and critical food poverty;
3. Estimate the level of food and nutrient consumption (energy, protein, fat and carbohydrate) among various population groups;
4. Measure access to food in national or sub-national groups;
5. Assess minimum dietary energy requirements;
6. Estimate food consumption from different food sources;
7. Assess the contribution of energy-yielding nutrients to total energy of different population groupings;
8. Provide inputs for determining poverty lines used in poverty assessments;
9. Provide information for the forecasting of long-term food consumption demand for different population groups;
10. Provide elements to monitor and evaluate effects over time of programmes with food security policy implications.

8. People whose dietary energy consumption is continuously below a minimum dietary energy

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