

# Rwanda - Comprehensive Food Security and Vulnerability Analysis 2006.

**National Institute of Statistics Rwanda**

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# Overview

## Identification

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RWA\_2006\_CFSVA\_v01\_EN\_M\_v01\_A\_OCS

## Version

VERSION DESCRIPTION  
Vo.1: Basic raw data, obtained from data entry

PRODUCTION DATE  
2006-12

## Overview

### ABSTRACT

After a decade of rapid and sustained economic growth, Rwanda has made significant progress toward rebuilding after the devastating 1994 genocide. Still, it remains one of Africa's poorest countries and the majority of the population (60 percent) lives below the poverty line. Per capita income, even when adjusted for purchasing power parity, has yet to reach its 1990 levels. Population and Household Living Conditions Study (EICV) survey data from 2001 suggest that over 70 percent of the rural population is considered to be food poor; 45 percent of children aged 6–59 months are stunted and 3.9 percent are wasted. Thus, it is evident that there is still a need to address structural causes of food insecurity; including low agricultural productivity, increased population pressure on land, soil erosion, malfunctioning markets, spread of diseases and epidemics, as well as, the longstanding effect of conflict/genocide, which has increased human vulnerability.

It is against this background that the World Food Program (WFP) proposed to undertake a national Comprehensive Food Security and Vulnerability Analysis (CFSVA) with the objective of measuring the extent and depth of food insecurity and vulnerability, and identifying the underlying causes. The study is intended to inform relevant decision-making processes to mitigate food crises and increase food security. This report presents the results of the analysis of three sources of data: collection of quantitative primary data from 2,806 households selected nationwide to be representative at a sub-provincial level (food economy zones); collection of qualitative primary data; and secondary information (literature review).

The purpose of this Comprehensive Food Security and Vulnerability Analysis (CFSVA) is to provide an accurate baseline and understanding of chronic food insecurity and vulnerability conditions in rural Rwanda, and how best to respond to them. It seeks to identify the population and location of people vulnerable to food insecurity and malnutrition, highlight causes and determine necessary interventions and priority areas that can reduce their vulnerability and support their livelihood.

This will help to develop and target programme activities toward those who most need them (profiles) in the most effective way (intervention). It will further support the development of a monitoring and evaluation system by establishing a baseline against which to measure post-shock changes.

Food security exists when "all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life<sup>10</sup>". It is understood as a multidimensional function of:

- 1) food availability: the amount of food physically available to a household (micro level) or at the national level (macro);
- 2) food access: the physical (e.g. road network, market) and economical (e.g. own production, exchange, purchase) ability of a household to acquire adequate amounts of food; and
- 3) food utilization: the intra-household use of the food accessible and the individual's ability to absorb and use nutrients (e.g. function of health status).

Vulnerability is "the probability of an acute decline in food access, or consumption, often in reference to some critical value that defines minimum levels of human well-being". It is a function of:

- 1) exposure to risk: the probability of an event that, if it did materialize, would cause a welfare loss (e.g. drought); and
- 2) risk management: the ability to mitigate the possible consequences of a probable event. This can in turn be divided into ex-ante risk management (preparedness) and ex-post risk management (ability to cope). The ability to cope is the response after an event occurred; it can be negative and affect the resource base of the household, such as the selling of assets, or positive (non-negative response such as migration). The ability to cope is undermined by the intensity of the event itself but also by poor structural and societal conditions such as poverty.

#### KIND OF DATA

Sample survey data [ssd]

#### UNITS OF ANALYSIS

Households

## Scope

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#### NOTES

The 2006 CFSVA covers indicators relating to human and social capital, natural capital, physical capital, economic capital and livelihood strategies, agricultural production and expenditure, food consumption, food security shocks, as well as, maternal and child health/nutrition.

## Coverage

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#### GEOGRAPHIC COVERAGE

National Coverage

#### GEOGRAPHIC UNIT

Sub-provincial level (food economy zones).The 12 food economy zones (FEZ) identified in 2003 by the Rwanda Vulnerability Baseline Assessment conducted by the Ministry of Agriculture and Animal Resources (MINAGRI), the Ministry of Youth, Culture and Sports (MIJESPOC), the Ministry of Local Administration, Community Development and Social Affairs (MINALOC), the

World Food Programme (WFP) and FEWS NET. All FEZ but Kigali were surveyed.

#### UNIVERSE

Rural Household members

## Producers and Sponsors

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#### PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Institute of Statistics Rwanda	Government of Rwanda

#### OTHER PRODUCER(S)

Name	Affiliation	Role
World Food Programme	International Organisation	Technical assistance

#### FUNDING

Name	Abbreviation	Role
Strengthening Emergency Needs Assessment Capacity	ODAN/SENAC	
European Commission (Humanitarian Aid)	ODAN/SENAC	
MSF-Belgium	MSF-Belgium	
FEWS NET	FEWS NET	
The Disaster Management Unit (DMU) of the Prime Minister's Office	DMU	

## OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
Ministry of Agriculture (MINAGRI)	Government of Rwanda	Technica assistance
MINALOC	Government of Rwanda	Technica assistance
MINECOFIN	Government of Rwanda	Technica assistance
UNICEF	International Organisation	Technica assistance
Medecin Sans Frontières	International Organisation	Technica assistance
The head of VAM, Joyce Luma	International Organisation	secured funding for the HIV/AIDS portion of the survey
Food security partners in Rwanda (FEWS NET, MINAGRI)	International Organisation	secured funding for the HIV/AIDS portion of the survey
Staff of the WFP country office	International Organisation	secured funding for the HIV/AIDS portion of the survey
National Institute of Statistics (NISR)	Government of Rwanda	logistics, planning and coordination stages of the survey
WFP Rome ODAN/ODAV	International Organisation	questionnaire design and survey methodology
The initial technical working group (PMO/DMU, MINECOFIN, MINAGRI, MSFBelgium, FEWS)	International Organisation	questionnaire design

## Metadata Production

## METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Metadata adapted for FAM
National Institute of Statistics of Rwanda	NISR	Government of Rwanda	Metadata producer

## DDI DOCUMENT VERSION

RWA\_2006\_CFSVA\_v01\_EN\_M\_v01\_A\_OCS\_v01

## DDI DOCUMENT ID

DDI\_RWA\_2006\_CFSVA\_v01\_EN\_M\_v01\_A\_OCS\_FAO

# Sampling

## Sampling Procedure

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The Rwanda 2006 Comprehensive Food Security and Vulnerability Analysis (CFSVA) sought to characterize household food insecurity and vulnerability at the sub-provincial level of the country. The country is divided into five provinces (Kigali-Ville, Northern Province, Southern Province, Eastern Province and Western Province), 30 districts and 416 sectors. Each sector is composed of cells, which are subdivided into designated villages (imidugudu). Since it was impossible to cover and be representative of all 30 districts of Rwanda within the time and budget allocated to the study (and because there were too few provinces), it was decided to use the 12 Food Economy Zones (FEZ) identified in 2003 by the Rwanda Vulnerability Baseline Assessment conducted by the Ministry of Agriculture and Animal Resources (MINAGRI), the Ministry of Youth, Culture and Sports (MIJESPOC), the Ministry of Local Administration, Community Development and Social Affairs (MINALOC), the World Food Programme (WFP) and FEWS NET. All FEZ but Kigali were surveyed.

The sample universe for this study was all rural households of Rwanda. A multi-stage sampling procedure was used to select households within each FEZ. Zones de dénombrement (ZD, enumeration zones) were selected first, followed by households. The 2002 census divided sectors in 7,727 ZD. ZD were also used for the 2002 and 2005 Population and Household Living Conditions Study (EICV). ZD were used for the first stage of sampling so that data from EICV studies could be incorporated in the analysis.

A total of 493 ZD were selected randomly (stratified by FEZ and well distributed throughout the former administrative provinces) from the list of all rural ZD. Within those ZD, comprehensive household lists were used to randomly select a total sample of 2,806 households. The sample size was designed to provide representative results at the FEZ level. A total of 2,786 households were interviewed for this study. General characteristics of the sampled population are provided in Figure 2-2: Sample size and composition. The average household size was 5.2 people. The average age of the household head was 46, and 29 percent of the households were headed by women.

## Weighting

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Taking into consideration the sampling methodology summarized above, adjustment weights were computed to provide results representative at country and ZEF level. The household probability of selection is equal to the product of a household's probability of being selected in a ZD by the probability of the ZD of being sampled. The inverse of this probability is the design weight. The design weight was adjusted for the expected and actual number of households in the surveyed ZD and was used in the complex sample calculations.

The design weight was divided by the product of the total number of households in the population divided by the number of sampled households. The result is the normalized weights which were used in all non-complex sample analyses.

# Questionnaires

## Overview

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The community questionnaire was developed using an approach similar to that of the household questionnaire. It used both a closed-ended and an open-ended, structured format and covered five areas (occupation, contextual information, HIV/AIDS, migration and market information).

# Data Collection

## Data Collection Dates

Start	End	Cycle
2006-03-21	2006-04-10	N/A

## Data Collection Mode

Face-to-face paper [f2f]

## Data Collection Notes

Data collection was conducted from 21 March to 10 April under the supervision of the NSIR. A total of 25 experienced teams conducted data collection. Each team was composed of four interviewers, one supervisor and one driver. Training was organized for the supervisors and interviewers. The training included a general overview on how to conduct interviews and practice sessions with the questionnaire and with measurement instruments. Interviewers were expected to conduct an average of four interviews per day. Clear instructions on which households to interview and how to find them were provided and entered into fiches de ménages. Supervisors were provided with a list of over-sampled households in the event that a household had to be replaced. A standardized consent form was used to secure the participation of selected individuals. Participation was voluntary, and respondents did not receive any money or compensation for participating. Names were not recorded.

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## Data Collectors

Name	Abbreviation	Affiliation
National Institute of Statistics of Rwanda	NISR	Government of Rwanda

## Supervision

A total of 25 experienced teams conducted data collection. Each team was composed of four interviewers, one supervisor and one driver. Training was organized for the supervisors and interviewers. The training included a general overview on how to conduct interviews and practice sessions with the questionnaire and with measurement instruments.

# Data Processing

## Data Editing

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A team of ten people at the National Institute of Statistics Rwanda (NISR) handled data entry for the household and community questionnaires. A database was developed using CSPro for data entry. The database was imported in SPSS for analysis. Statistical analysis was conducted by WFP in Rwanda and Rome, with the support of NISR. SPSS and ADDATI 5.2c were used to conduct Principal Component Analysis (PCA) and clustering analysis. Nutritional indicators were calculated using Epilinfo EPINUT. All other analysis was done using SPSS.

## Data Appraisal

No content available