

Yemen - Food Security Baseline Survey 2010

Haitham Zeidan

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Overview

Identification

ID NUMBER

YEM-CSO-FSBS-2010

Version

VERSION DESCRIPTION

This is the first version 1.0 produced by the Food Security Information System and the Central

Statistical Organisation, Government of Yemen, with the support of the European Commission.

Technical

PRODUCTION DATE

2014-08-27

NOTES

This is the first version and may be review and updated as soon.

Overview

ABSTRACT

The baseline survey was carried out on three levels:

- At the household level in order to get the key indicators of food security at this level.
 - At the community level through the discussion of target groups in order to obtain information on the possibilities and obstacles available at this level.
 - At local government level to explore the views of the maintenance service providers with respect to food security.
- o the objectives of the survey:
- Collect data and establish benchmarks for key indicators of food security and food insecurity.
 - Check the status of food security and food insecurity in the province of Hodeidah and factors affecting it.
 - Design of subsequent surveys to monitor changes in the food security situation in the province.
 - To provide decision-makers in government data and information needed in order to benefit from the application of policies and programs related to food security.

The baseline survey

Survey at the household level (The framework choosing sampling ,Questionnaires)

The FSIS baseline survey was undertaken with the following specific objectives:

- to establish a food security reference (baseline) for the governorate;
- to identify factors contributing to food insecurity in the governorate;
- to plan follow-up surveys to monitor trends in the governorate's food security; and
- to inform policy makers, planners and programmers of the governorate's latest food security situation in particular, and in Yemen generally.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

Housholds

Scope

NOTES

The FSIS baseline survey: a state-of-the-art experience for collecting and analysing data

There were three components to the baseline survey. The first was the statistical survey of almost 9,000 households in Al Hodeidah governorate. The other two were the community and district level surveys where communities and local councils were asked for their view of the food security situation and its determinants. Cross analysis of the data aims to ensure coherence between what is described at the household level and how communities and local councils understand the food security situation.

Each survey followed specific methods. Questionnaires covered the three pillars of food security (availability, access and utilisation). For the statistical survey, a two stage-cluster sampling was used.

Over one hundred personnel implemented the surveys under the overall management of FSIS and CSO. Strict quality control was conducted at three levels: (i) field work, (ii) local survey office in Al Hodeida, and (iii) at the CSO in Sana'a.

TOPICS

Topic	Vocabulary	URI
agricultural, forestry and rural industry [2.1]	CESSDA	http://www.nesstar.org/rdf/common

KEYWORDS

FOOD, SECURITY, Basline, FOOD SECURITY

Coverage

GEOGRAPHIC COVERAGE

Governorate of Al Hodeidah

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Central Statistical Organization	Ministry of Planning and International Cooperation

OTHER PRODUCER(S)

Name	Affiliation	Role
GFA/AEDES		Technical assistance

FUNDING

Name	Abbreviation	Role
European Commission	EC	supports this three-year FSIS pilot project in the Governorate of Al Hodeidah

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Central Statistical Organization	CSO	Ministry of Planning and International Cooperation	Collection, processing and dissemination data

DATE OF METADATA PRODUCTION

2014-08-27

DDI DOCUMENT VERSION

V1.0

DDI DOCUMENT ID

DDI-YEM-CSO-FSBS-2010

Sampling

Sampling Procedure

Sampling methodology

A two stage-cluster sampling was used (Enumeration Areas -EAs, and Households). In each district, EAs were selected, with probability proportional to their population size. This method was chosen, because (i) it allows estimations of household characteristics at district level, and (ii) the proportional selection of the enumeration areas in the districts provides their best representation according to size.

Size of sample households

The sample size was determined using a statistical method based on the estimation of the national poverty rate (15%), with a standard error of 0.38%, and also the financial means available for collecting the data. The theoretical size of the sample was estimated to 8,797 households, covering 33% of the total 2,681 EAs.

Determination of sample size

The sample size calculation was based on two hypotheses.

1. As food security has a strong correlation to poverty, and the prevalence of food insecure households in the governorate was not available from secondary sources, the prevalence of food poverty for rural Yemen was used as proxy to estimate the sample size, by fixing a standard error that we consider to be acceptable for this kind of study, and also in consideration of resources committed to the baseline.

2. Based on the Population Census 2004, simple random sampling was used to estimate the size of sample households (n) from the total number (N) for the governorate.

Estimation of the sample size was contingent upon the precision expected in the key indicators (poverty or food insecure household), which in turn rested on the variability of poorer households in the population under investigation.

Using existing demographic data and poverty incidence, the sample size was estimated by applying the following formulae:

2004 census data

Incidence of food poverty for Rural Yemen: 15%⁸⁷

No of districts in Al Hodeidah governorate: 26

No of villages in the governorate: 2,304

No of households in the governorate: 349,307

$$N = P * Q / \text{SQUARE}(S)(\text{FIXED}) = N * Q / P * \text{SQUARE}(V)(\text{FIXED})$$

Where:

n = Sample size

N = Total households in Al Hodeidah governorate

p = % food poverty in rural Yemen

q = % population not affected by food poverty (1-p)

V = Variation co-efficient.

The calculations resulted in a sample of 8,797 households to be investigated at a V-value of 15%, That is, at a theoretical standard error factor of 0.38 As computed in final report.

there is a possibility of 1,320 households in the total sample of 8,797 being poor. However, at the given C.I it can lie between 1,231 and 1,409. (8,797* 15%* 89* 1,320* 89 and 1,320* 89* 1,231 and 1,409.

⁸⁷ Source:

Sampling method and results

In the third stage, a sample of EA per district was selected using the Proportional to Population Size sampling method, which aims to ensure the EAs will represent the areas surveyed.

The steps used for establishing EA sample list were

- 1) Establish list of districts and Enumeration Areas with their corresponding number of households;
- 2) Calculate the number of the households to sample by district;

- 3) Calculate the number of Enumeration Areas to sample by district;
- 4) Compute the cumulative number of households for each EA;
- 5) Determine the lower and the upper limit for the cumulative size for each EA;
- 6) Using a random numbers generator, select the EA for which the random number falls in the cumulative range. The selection of the first stage units (EA) is done with replacement. When an EA happened to be selected more than once, the number of households to select in the second stage is a multiple of this number of times.

Questionnaires

Overview

Questionnaires

These were based on the framework of the food security information system that was adopted in December 2008. Indicators were taken from the three pillars of the food security concept. Three separate questionnaires were developed – one for collecting data at the household level, a second for the community level, and a third for collecting information from local councils.

These three tools were intended to provide data at each level, independently. Cross analysis of the data aims to ensure coherence between what is described at the household level and how communities and local councils understand the food security situation.

The draft questionnaires were submitted for feedback to FSIS stakeholders, including CSO, MoAI, MoPHP, MoTI, and SWF, and then finalised. Questionnaires were twice pre-tested, before being translated into Arabic

Data Collection

Data Collection Dates

Start	End	Cycle
2010-04-02	2010-05-07	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

Recruiting and training the survey teams

To implement the survey, 74 enumerators, 20 team leaders, and five supervisors were recruited. Team leaders and supervisors were trained. Before launching the survey, enumerators, team leaders and supervisors were all trained together on how to collect the data. The training process was conducted using a method that combined theoretical learning and field practice, which allows minimising data collection errors.

Data collection

The full scale data collection in the field lasted six weeks. It started on 2nd April 2010 and by 7 May 2010 all 8,860 household surveys, 80 community surveys and, 26 local council (district) interviews had been completed. The FSIS project committed the following resources to conclude the fieldwork, and necessary assistance was sought from the 26 district managers based across the governorate:

- 64 Enumerators in 20 teams
- 20 Team Leaders
- Survey Supervisors (also held district interviews)
- 4 Community Interviewers (teams of two each)
- 2 Survey Coordinators
- 3 Logistics and Control room
- TA team (2 key experts + 2 support staffs)
- 30 vehicles (4x4)

Field work and data quality control

Household level

Quality control was conducted at three levels: (i) by the team leaders and supervisors of the field work, (ii) at the survey office in Al Hodeida for consistency, and to ensure comprehensive coverage of households, and (iii) at the CSO in Sana'a, before and after data entry.

Community level

Local project staff in the CSO Sana'a (Central Coordination Unit and Regional Implementation Unit) were trained on 'participatory rural appraisal' (PRA) methods. Four staff collected the data. The interviews took place with a set of 8-10 communities' representatives, so that the opinions recorded are representative of the community. A total of 80 villages were covered by this community level survey.

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Data Collectors

Name	Abbreviation	Affiliation
Central Statistical Organization	CSO	Ministry of Planning and International Cooperation

Supervision

To ensure the quality of the data, the following measures were applied.

1. Data collection under team leaders control Each enumerator was tasked to complete 3-5 household surveys per day depending on the hardship involved, and each team leader had to check 9-15 household questionnaires for accuracy and errors. After scrutiny, the team leaders returned the questionnaires with errors to the respective enumerators who re-visited those households to correct/verify data. All this work was completed before the teams left for their next locations. This was strictly controlled throughout the survey.
2. Quality control by supervisors Five supervisors assisted 20 team leaders to complete 8,860 household surveys. Each supervisor oversaw the work of four teams. He was tasked to scrutinise 20% of the daily collection, and correct any errors by working with the respective team leaders and enumerators. The supervisors also filled out a Supervision Report Sheet with the Team Leaders to assess quality of the household surveys.
3. Quality control by coordinators The coordinators included a CSO Technical Advisor to FSIS, the FSIS Coordinator, the TA Food Security Expert and the TA Team Leader. In groups of two, they frequently visited random selections of teams doing household and community surveys. They thoroughly examined the teams' work, and offered appropriate guidance. During the entire survey, they visited each team at least two to three times, and also ensured that teams facing difficulties received appropriate support from both supervisors and coordinators.

Data Processing

Data Editing

Data processing

To ensure efficiency and sustainability, the survey used the existing CSO database system to enter and process the data. The FSIS IT expert and STE together designed, tested and finalised a database to enter and clean data.

Coding and verification of household questionnaires by trained CSO staff preceded data entry. About 40 data entry operators, both from the CSO and locally recruited, received training on data entry techniques. In two shifts of 20 each, they completed the data entry over a four-week period (21 August to 20 September 2010) using a double-entry method whereby each questionnaire was entered twice into the database to verify data accuracy. Subsequently, through a specially designed programme (consistency check), the two sets of data were verified to remove errors and optimise accuracy.

Data Appraisal

No content available