# Zambia - 2015 LIVING CONDITIONS MONITORING SURVEY

**Central Statistical Office**

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# Identification

SURVEY ID NUMBER
ZMB-ZSA-LCMS-2015-V1.0

TITLE
2015 LIVING CONDITIONS MONITORING SURVEY

SUBTITLE
Seventh Round

COUNTRY

| Name | Country code |
|---|---|
| Zambia | ZMB |

STUDY TYPE
Living Standards Measurement Study [hh/lsms]

SERIES INFORMATION
Between April and May 2015, the Central Statistical Office (CSO) conducted the seventh Living Conditions Monitoring Survey (LCMS). Previous surveys had been conducted in 1996, 1998, 2002/2003, 2004, 2006 and 2010. The LCMS is a population-based, household survey that collects data using structured personal interviews with household members. The main objective of the LCMS is to measure the wellbeing of the Zambian population, and to provide trends in the different measures of societal wellbeing over time.

The 2015 LCMS was designed to provide estimates at national, rural/urban and province. Survey estimates were also disaggregated by age, sex and socio-economic strata. The survey collected information on the following areas of population wellbeing: general living conditions (including household size, composition and relationships; household incomes and expenditures; food production, food security and coping strategies), economic activity and employment status of household members, education level of household members, health status of household members (including child nutrition; incidence of ill health and injury; household deaths and cause of death), housing conditions (including type of housing; access to water and sanitation; and access to electricity), as well as access to community level socioeconomic facilities such as health facilities, schools, banks and transport.

ABSTRACT
In April/May 2015, CSO conducted the seventh LCMS which will help evaluate the achievements that have been made in meeting the 2015 MDGs targets and provide benchmark indicators for the Sustainable Development Goals (SDGs) and the Seventh National Development Programme (7NDP).

The following are some of the identified key objectives of the 2015 LCMS:

1. Monitor the level of poverty and its distribution in Zambia;
2. Monitor the impact of government policies and programmes on the wellbeing of the Zambian population;
3. Provide various users with a set of reliable indicators against which to monitor progress and development;
4. Identify vulnerable groups in society and enhance targeting of pro-poor policies and programmes.

For the purpose of measuring the above objectives, the LCMS questionnaires covered the following topics:

1 Demography and Migration
2 Orphanhood
3 Marital Status
4 Health
5 Education
6 Economic Activities
7 Household Income
8 Household Agricultural Production
9 Household Expenditure
10. Household Assets
11. Household Amenities and Housing Conditions
12. Household Access to Facilities

13. Child Health and Nutrition
14. Community Developmental Issues
15. Deaths in Households
16. Self-assessed Poverty, Shocks to Household Welfare and Household Coping Strategies.

KIND OF DATA
Sample survey data [ssd]

UNIT OF ANALYSIS
Households

## Version

VERSION DESCRIPTION
V1.0: Final Data, Anonymized dataset for public distribution

VERSION DATE
2016-11-01

VERSION NOTES
V1.0 is the final version of the study.

## Scope

NOTES
The scope of the 2015 LCMS included indicators on the following themes;
1 Demography and Migration
2 Orphanhood
3 Marital Status
4 Health
5 Education
6 Economic Activities
7 Household Income
8 Household Agricultural Production
9 Household Expenditure
10. Household Assets
11. Household Amenities and Housing Conditions
12. Household Access to Facilities
13. Child Health and Nutrition
14. Community Developmental Issues
15. Deaths in Households
16. Self-assessed Poverty, Shocks to Household Welfare and Household Coping Strategies.

TOPICS

| Topic | Vocabulary |
|---|---|
| Agriculture & Rural Development | world Bank |
| Education | World Bank |
| Food (production, crisis) | World Bank |
| Energy | World Bank |
| Environment | World Bank |
| Nutrition | World Bank |
| Health | World Bank |
| Water | World Bank |

| | |
|---|---|
| Infrastructure | World Bank |
| Poverty | World Bank |
| Social Development | World Bank |
| Community Driven Development | World Bank |

KEYWORDS

| Keyword |
|---|
| Education |
| Population |
| Poverty |
| Income |
| Expenditure |
| Facilities |
| Immunization |
| Consumption |

## Coverage

GEOGRAPHIC COVERAGE
National, Province, Rural/Urban

UNIVERSE
The survey covered all de jure household members (usual residents), that is all women and men who were residents in the household and all children under the age of five for immunization section.

## Producers and sponsors

PRIMARY INVESTIGATORS

| Name | Affiliation |
|---|---|
| Central Statistical Office | Ministry of Finance and National Planning |

PRODUCERS

| Name | Role |
|---|---|
| World Bank | Provided technical assistance from survey design and preparation to data analysis and report writing. |

FUNDING AGENCY/SPONSOR

| Name | Abbreviation | Role |
|---|---|---|
| Government Republic of Zambia | GRZ | Funded the Study |
| World Bank | WB | Funded the Study |

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

| Name | Affiliation | Role |
|---|---|---|
| Field Staffs | ZamStats | Ensuring the successful implementation of the 2015 LCMS. |
| Respondants/Household Surveyed | ZamStats | For participating and cooperating with the data collectors. |

# Sampling

### SAMPLING PROCEDURE

Central Statistical office (CSO) has consistently been using nationally representative Cross-Sectional household surveys with varied sample sizes to measure, monitor and evaluate the welfare of the Zambian society except in the 2002/3 survey where a longitudinal sample was used. The 2015 survey was designed to cover a representative sample of 12,260 non-institutionalised private households residing in both rural and urban parts of the country. A total of 664 Enumeration Areas (EAs) were drawn from a total of 25,600 EAs nationwide. The survey was designed to produce reliable estimates at national, provincial and Residence (rural/urban) levels.

The sampling frame used for the 2015 LCMS was developed from the 2010 Census of Population and Housing. The country is administratively demarcated into 10 provinces, which are further divided into districts. The districts are further subdivided into constituencies, which are in turn divided into wards. For the purposes of conducting household based surveys, wards are further divided into Census Supervisory Areas (CSAs), which are subsequently subdivided into Enumeration Areas (EAs). The EAs constituted the Primary Sampling Units (PSUs) for the survey.

In order to have reasonable estimates at provincial level and at the same time take into account variation in the sizes of the provinces, the survey adopted the Optimal Square Root sample allocation method (Leslie Kish, 1987). This approach offers a better compromise between equal and proportional allocation, i.e. small sized strata (province) are allocated larger samples compared to proportional allocation. The allocation of the sample points to rural and urban strata was approximately proportional. Over the years the sample distribution of the LCMSs were initially the same but have since been changed in order to meet desired levels of precision for the key domains of analysis.

All rural and urban households were explicitly stratified into groups based on the scale of their agricultural activities and type of residential area, respectively. Rural households were classified as Small, Medium, Large Scale farming and non-agriculture households. In case of households residing in urban areas, the survey adopted the classification system used by the Local authorities (Low, Medium and High cost residential areas).

The 2015 survey employed a two-stage stratified cluster sample design. During the first stage, 664 EAs were selected with Probability Proportional to Estimated Size (PPES) within the respective strata. The measure of size used was population figures taken from the frame developed from the 2010 Census of Population and Housing. During the survey, listing of all the households in the selected EAs was done before a sample of households to be interviewed was drawn. In the case of rural EAs, households were listed and stratified according to the scale of their agricultural activity. Therefore, there were four explicit strata created at the second sampling stage in each rural EA: the Small Scale Agricultural Stratum (SSAS), the Medium Scale Agricultural Stratum (MSAS), the Large Scale Agricultural Stratum (LSAS) and the Non-Agricultural Stratum (NAS).

For the purposes of the survey, 7, 5 and 3 households were selected from the SSAS, MSAS and NAS, respectively. Large scale households were selected on a 100 percent basis. Urban EAs were explicitly stratified into Low Cost, Medium Cost and High Cost areas based on CSO's and local authorities' classification of residential areas. In each rural EA, a minimum of 15 households were selected in the absence of large scale agricultural households, while 25 households in each urban EA were selected. The selection of households from various strata was preceded by assigning each listed household with a sampling serial number. The circular systematic sampling method was used to select households.

### DEVIATIONS FROM THE SAMPLE DESIGN

The survey was designed to cover a representative sample of 12,260 non-institutionalised private households residing in both rural and urban parts of the country. The sample was intended to give reliable estimates at national, provincial and rural/urban levels. Four of the original sampled EAs were replaced due to logistical challenges and flooding. Most of the replacements were done in North Western and Muchinga provinces. Since the sample was drawn with a provision for replacements, the targeted number of EAs was achieved representing 100 percent coverage at national level. To account for the effects of replacements, poststratification adjustment of the weights was done.

### RESPONSE RATE

The household response rate was calculated as the ratio of originally selected households with completed interviews over the total number of households selected. The household response rate for the 2015 LCMS was 98 percent at National level. The household selection technique allows for a systematic method of replacing non-responding households.

### WEIGHTING

Due to the disproportionate allocation of the sample points to various strata, sampling weights are required to correct for differential representation of the sample at the national and sub-national levels. The weights of the sample are in this case equal to the inverse of the product of the two selection probabilities employed at each stage of selection.

# Data Collection

DATES OF DATA COLLECTION

| Start | End |
|---|---|
| 2015-04-10 | 2015-05-15 |

DATA COLLECTION MODE
Face-to-face [f2f]

SUPERVISION
Interviewing was conducted by teams of interviewers. Each interviewing team had both male and female interviewers, a supervisor, and a driver. Each team used a 4 wheel drive vehicle to travel from one EA to another.

The role of the supervisor was to coordinator field data collection activities, including management of the field teams, equipment, maps and listings, coordinate with local authorities concerning the survey plan and make arrangements for accommodation and travel. Additionally, the field supervisor assigned the work to the interviewers, spot checked work,edited and sent completed questionnaires and progress reports to the HQ.

Other responsibilities of a supervisor included reviewing each questionnaire at the end of the day, checking for missed questions, skip errors, fields incorrectly completed, and checking for inconsistencies in the data. The supervisor also observed interviews and conducted review sessions with interviewers.

Responsibilities of the supervisors and an Enumerator are described in the Instruction manuals for Supervisors and Enumerators, respectively.

Field visits were also made by a team of monitors from HQ .

DATA COLLECTION NOTES
A number of preparatory activities were conducted prior to the data collection phase. One of the cardinal ones was the training of Enumerators. Enumerators were trainined on how to conduct interviews and ensure that accurate and reliable data is collected from the respondents.

Data collection for the 2015 LCMS was done over the period of April/May. Face-to- face personal interviewswere conducted using a structured electronic questionnaire via the Computer Assisted Personal Interview (CAPI) technique. The questionnaire was designed to collect information on the various aspects of the living conditions of the households using CAPI. Tablets were loaded with the World Bank (WB) Survey Solutions software. This was the first time that LCMS data was collected using the CAPI method. Interviews were conducted in english and interpreted local languages.

Data collection for the 2015 LCMS involved 332 ,Enumerators 54 supervisors and 45 Master Trainers..

DATA COLLECTORS

| Name | Abbreviation | Affiliation |
|---|---|---|
| Central Statistical Office | CSO | Ministry of Finance and National Planning |

# Questionnaires

QUESTIONNAIRES
Three types of questionnaires were used in the survey. These are:-

1. The Listing Booklet:- used for listing all the households residing in the selected Standard Enumeration Areas (SEAs)
2. The Main questionnaire:- used for collecting detailed information on all household members.
3. The Prices questionnaire:- used to collect data on unit prices of various commodities in the established trading places found in distrits,provincial capitals and cities. This information is vital for the harmonising regional differences in prices.

## Data Processing

DATA EDITING

The 2015 LCMS data was electronically collected using the Computer Assisted Personal Interviewing (CAPI) technique. Using tablets loaded with the WB Survey Solutions software, data collected from the field was transmitted to CAPI command Centre created in all the provincial headquarters for editing and quality checks. If accepted, the same information was then sent to the HQ command Centre for further scrutiny in terms of completeness and accuracy. However incomplete questionnaires were sent back to the field staff for verification and subsequent correction. Once that was done, it was re-transmitted through the relevant channel to the HQ to be part of the verified dataset. After data collection, the data were subjected to extensive checks on their validity and consistency in order to facilitate analysis using statistical software.

## Data Appraisal

ESTIMATES OF SAMPLING ERROR

The Living Conditions Monitoring Surveys (LCMS) are typically undertaken on a sample basis as opposed to conducting a complete census survey. This implies that errors of estimation will always exist regardless of the perfection in the underlying design of the survey. Further, the 2015 LCMS poverty analysis is based on data from cross- sectional sample surveys as opposed to longitudinal surveys. The main limitation of these designs is that results cannot directly be generalised to the rest of the year since the emerging poverty outcome will depend on the month
or period or season when the data was collected. Therefore direct comparison of the results from cross-sectional surveys is only possible if and only if the surveys were undertaken during the same period or season. Another limitation of the 2015 analysis of poverty emanates from the use of household consumption data which is collected using the Recall as opposed to the Diary
methods. It is obvious that some households experience memory lapses and may not be in a position to account for all their consumption expenditures which they could have incurred.

Finally, lack of appropriate community prices to be used in deriving spatial and temporal price indices which are necessary for normalizing welfare is another limitation of the 2015 poverty analysis. Normalising cost of living differences across space and time requires the use of prices that each and every household is facing. The 2015 poverty analysis relied on price data from the Consumer Price Index (CPI) which is mainly carried out in urban parts of all the districts in Zambia. The set of prices from the CPI survey may not totally correspond to the set of prices that across Zambia face.Other specific limitations have been highlighted in their respective chapters.

## Access policy

CONTACTS

| Name | Affiliation | Email | URL |
|---|---|---|---|
| Head - Dissemination Office | Zambia Statistics Office | info@zamstats.gov.zm | Link |

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ACCESS CONDITIONS

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1. The data and other materials will not be redistributed or sold to other individuals, institutions, or organizations without the

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2. The data will be used for statistical and scientific research purposes only. They will be used solely for reporting of aggregated information, and not for investigation of specific individuals or organizations.
3. No attempt will be made to re-identify respondents, and no use will be made of the identity of any person or establishment discovered inadvertently.

CITATION REQUIREMENTS
Central Statistical Office, 2015 Living Conditions Monitoring Survey (2015 LCMS), V1.0

ACCESS AUTHORITY

| Name | Affiliation | Email | URL |
|---|---|---|---|
| Zambia Statistics Agency | Ministry of Finance and National Planning | info@zamstats.gov.zm | Link |

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## Metadata production

DDI DOCUMENT ID
DDI-ZMB-ZSA-LCMS-2015-V1.0

PRODUCERS

| Name | Abbreviation | Affiliation | Role |
|---|---|---|---|
| Zambia Statistical Office | ZamStats | Ministry of Finance and National Planning | Documentation of the Study |

DATE OF METADATA PRODUCTION
2026-01-12

DDI DOCUMENT VERSION
version 1.0 (January 2026)

## Data Dictionary

| Data file | Cases | Variables |
|---|---|---|
| **AggregateIncome_10_12_15_ANONYMIZE**<br>This data file contains information on Household income, Education and emloyment levels. | 11921 | 34 |
| **Anthro 26_9_15 merged Household size_ANONYMIZE**<br>The information on the nutritional status of children in the 2015 LCMS survey included anthropometric measurements for children under the age of 5 years. These anthropometric measurements allow for measurement and evaluation of the overall nutritional and health status of young children. The evaluation also allows for identification of subgroups of the child population that are at increased risk of faltered growth, disease, impaired mental development and death. The factors that influence nutritional status of children are many. Among them are poverty status of mothers, poor diet and poor environmental conditions of households. These can impair growth in children and result n reduced weight or height.<br><br>The three standard indices of physical growth that describe the nutritional status of children are defined as follows:<br>Stunting (height-for-age) is a condition reflecting the cumulative effect of chronic malnutrition.<br><br>Wasting (weight-for-height) is a failure to gain weight in relation to height. It is a short-term effect and reflects a recent and severe process that has led to substantial weight loss, usually associated with starvation and/or disease.<br><br>Underweight (weight-for-age) is a condition of low weight in relation to age. It is a composite index of weight-for-height and height-for-age and thus does not distinguish between acute malnutrition (wasting) and chronic malnutrition (stunting). A child can be underweight for his/her age because he/she is stunted or wasted, alternatively because he/she is wasted and stunted. Weight for age is a good overall indicator of a population's nutritional health. | 5542 | 35 |
| **Child Health and Nutrition 2015_ANONYMIZE**<br>This data file contains information on Child Health and Nutrition on the frequency of consumption of solid foods by children (0-59 months). Infants and young children eat small quantities of food at a go therefore, frequent meals are necessary to provide them with required nutrients. It is recommended that infants aged 6-8 months eat 2-3 meals, and infants aged 19-23 months eat 3-4 meals per day and 1-2 additional snacks as required (WHO, 1998). The number of meals required is based on the energy density of foods being fed. Consuming an appropriate variety of foods is essential for the child's nutritional wellbeing. | 6384 | 172 |
| **crop_costs_expenses_17Aug_ANONYMIZE**<br>This data file contains information on food crops grown by anybody in the houehold or somebody on their behalf in the last agricultural season prior to the survey | 208505 | 35 |
| **CropPoultryLivestock_10_12_15_ANONYMIZE**<br>This data file contains information on Crop production, Poultry and Livestock and sales. ownership of livestock and poultry, and fish farming activities by the household:<br><br>Livestock ownership (cattle, goats, pigs, sheep), and Poultry | 13775 | 23 |
| **deaths_ANONYMIZE**<br>This data file contains information on the deaths recorded in the households , death by sex, age and cause of death | 1059 | 8 |
| **Expenditure_ANONYMIZE**<br>This data file contains information on food and non food expenditure per month | 369161 | 14 |
| **Expenditure_ANONYMIZE_1**<br>This data file contains information on food and non food expenditure | 6855 | 14 |
| **HH Expenditure Agregated File_ANONYMIZE**<br>This data file contains information on food and non food expenditure by wealth quintile | 12251 | 32 |
| **HH File_ANONYMIZE**<br>This data file contains information on Housing Characteristics, Household amenities and access to facilities | 12251 | 242 |

| | | |
|---|---|---|
| **HouseholdAssets_Clean**<br>This data file contains information on household asset ownership | 128353 | 29 |
| **livestock_costs_expenses_06Sept_ANONYMIZE**<br>This data file contains information on households expenditure on livestock and costs | 23264 | 28 |
| **Person Record_ANONYMIZE**<br>This data file contains information about an individual in a household, household members age, sex, educational background and employment status | 62880 | 188 |
| **Poverty 2015_ANONYMIZE**<br>This data file contains information on the poverty status of household | 12251 | 51 |
| **production_food_crops_06Sept_new_ANONYMIZE**<br>This data file contains information on Crop production by type, quantity and land size | 12262 | 43 |
| **Self Assesed Poverty Part 2_ANONYMIZED**<br>This data file contains information on self assessed poverty, a subjective measure of poverty based on the perception of the household. Households were asked to specify their poverty status across three possible categories, Very Poor, Moderately Poor or Non-Poor. This information is meant to complement other measures of poverty, obtained using money metric measures, and provide some context to the overall picture of poverty in Zambia. | 11816 | 34 |