

## **Poverty Assessment Methodologies Used over 1996-2019 by the ARMSTAT**

Alleviating poverty and reducing inequality among all citizens are important policy objectives in the Republic of Armenia (RA). To monitor progress towards these objectives and to support the design of evidence-based public policies, the measurement of economic welfare and poverty must be accurate and timely. Monitoring poverty and inequality requires regular updates of the methodology and data collection process to reflect the current needs, preferences, and standards of living of the population.

The World Bank has developed the methodology for assessment of poverty in Armenia. It was first implemented in 1996, with further revision and improvement in 2004, 2009 and 2019.

1) Since 1996, when the present Integrated Living Conditions Survey was first implemented in Armenia by the World Bank, the ARMSTAT with the assistance of the World Bank, the US Agency for International Development and other donor organizations, has been putting effort to continuously improve the quality of data collected through household surveys, as well as to advance its own expertise in achieving a more accurate assessment of poverty. These efforts have proven to be successful as the data collected through household surveys and the estimates of poverty rate based on such data appeared to be an important input in defining and monitoring the poverty reduction strategy, which is the responsibility of the Government.

2) In 2004, the ARMSTAT undertook significant measures to improve the Integrated Living Conditions Survey (ILCS) and to update the poverty assessment methodology, which was used until 2008. With the technical assistance provided by the World Bank and due to numerous consultations and practical works: (1) the survey sample frame was updated using the 2001 Population Census database, (2) the sample size was expanded to ensure representativeness of data by regions, (3) the ILCS questionnaire was revised to reflect economic and social changes since 1998/99 up to 2003, as well as a comprehensive section on employment was added into the questionnaire, and (4) the surveying personnel underwent a more profound training.

The ARMSTAT made certain adjustments to the poverty assessment methodology and improved capacities for estimating and analyzing poverty trends and the socio-economic situation. The adjusted methodology was then used in 2004-2008.

With the co-funding provided in 2007-2011 by the Millennium Challenge Account - Armenia (MCA-Armenia), a state non-commercial organization, the annual sample size of the ILCS has been expanded from 5184 households in 2006 (funded from the state budget only) to 7872 households. Nonetheless, due to the termination of activities of MCA-Armenia in 2012, the sample size was reduced back to 5184 households.

At the request of the ARMSTAT, the WB provided technical advice on the construction of the consumption basket and poverty measurement methodology since 2008 when the country was facing an economic recession due to the Global Financial Crisis 2008-2009.

From 2009 to 2018, the annual poverty measurement in the RA relied on an annual update of the poverty lines to changes in the price level of the economy, using the consumer price index (CPI). While this adjusts the poverty line to account for inflation, it does not take into consideration the changing habits and tastes of the population over time.

In 2019 the WB once again provided support to the ARMSTAT on the construction and updating of the national consumption aggregate and poverty lines based on data from ILCS 2019. The recalculated consumption basket and poverty lines reflect changes such as consumption patterns, spending habits, demographic structure, among others, in the Armenian society.

Such adjustments are routine and according to best international practice, they should be undertaken frequently (for instance, every five or six years) in a dynamically changing society like the RA.

**The poverty rates estimated for 2019 differ from the poverty estimates based on the 2009 consumption basket and methodology in three ways:**

- (i) The consumption aggregate is calculated using the data from a revised survey questionnaire of the ILCS<sup>1</sup>;**
- (ii) The ILCS introduced a new data collection method based on computer-assisted personal interviews (CAPI); and**
- (iii) The methodology for the calculation of poverty lines was revised.**

**These are important improvements, which are in line with international best practices in terms of measurement of living standards but make the numbers not comparable to earlier years. Nonetheless, the new lines are better equipped to reflect the amount and structure of household consumption.**

The measurement of poverty in the RA follows the “Cost of Basic Needs” (CBN) approach. The basic notion behind the CBN is to quantify the monetary value of a consumption basket that fulfills households’ basic food and non-food needs. This monetary value is called a “poverty line”.

Poor households are identified as those whose consumption value is insufficient to afford the value of such basket, i.e. their consumption falls below the poverty line. In particular, the welfare level of households in the RA is determined by calculating the value of total monthly consumption per adult equivalent.

The household consumption aggregate (i.e. total monthly per adult equivalent consumption of a household) is calculated each year based on consumption data collected through the ILCS which collects detailed consumption and expenditure data on both food and non-food items.

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<sup>1</sup> For instance, the consumption diaries were modified to report information consumed by the household in 14 days instead of 30 days as in ILCS 2018.

A poverty line calculated through the new methodology defines, in monetary terms, the value of goods (food and non-food) and services that meet the needs of the minimum level of living standards in the country.

The minimum consumption basket consists of two components: a minimum food basket and an allowance for basic non-food goods and services.

Four different poverty lines are calculated in Armenia:

- (i) A food poverty line to ensure consumption of a minimum energy requirement (MER) for one average individual to perform regular daily activities (based on the demographic characteristics of Armenia, the average MER was calculated at 2,307 kilocalories (kcal) per person per day in 2019);
- (ii) A lower poverty line which quantifies a lower bound of the allowance for basic non-food goods and services in addition to the food poverty line;
- (iii) An upper poverty line which uses an upper bound of the allowance for basic non-food goods and services on top of the food poverty line;
- (iv) An average poverty line was calculated, which is the average of the lower and upper poverty lines.

### **The Armenian Integrated Living Conditions Survey**

The Integrated Living Conditions Survey (ILCS) was first conducted in Armenia in 1996 (within a one-month period), followed by the survey conducted in 1998/99; thereafter, it has been conducted every year since 2001. The survey is carried out during the year with monthly shift (rotation) of households and communities. Findings of the survey are primarily used to estimate consumption-based poverty rates in the country, as well as to provide valuable information on households' living conditions by means of other indicators.

**Consumption aggregate is used as a welfare measure for assessing poverty in Armenia.** International practice shows that consumption – in comparison with income – provides more accurate information and is less sensitive to short-term fluctuations, particularly in low and middle-income economies. Consumption aggregate is estimated on basis of the data obtained through the Integrated Living Conditions Survey.

#### **(I) Sample Frame**

The sample frame for 2019 was designed in accordance with the database of addresses of all households in the country developed on the basis of the 2011 Armenia Population Census results, with the technical assistance of the World Bank. The method of systematic representative probability sampling was used to frame the sample.

For the purpose of drawing the sample, the master sample was layered (divided) into 32 strata, of which 12 were the administrative districts of Yerevan City.

At regional level, all communities were grouped into two categories – towns and villages.

According to this division, a two-tier sample was drawn stratified across the regions and Yerevan. All regions and Yerevan, as well as all rural and urban communities were included

in the sample in accordance to the shares of their resident households within the total number of households in the country. In the first round, enumeration districts – that is primary sample units to be surveyed during the year – were selected. The ILCS 2019 sample included 30 enumeration districts in urban and 18 enumeration districts in rural communities per month.

The households to be surveyed were selected in the second round. A total of 432 households were surveyed per month, of which 270 and 162 households from urban and rural communities, respectively. Every month 48 interviewers went on field work with a workload of 9 households per month.

A total of 5165 households were selected for 2019, of which 3230 from urban and 1935 households from rural communities. Survey data provided for the minimum representativeness by regions.

## (II) Sample Size and Communities Covered by 2008-2019 Surveys

**Table 1: Number of Households Surveyed, Number of Urban and Rural Communities Included in the Sample, 2008-2019**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of households surveyed	7872	7872	7872	7872	5184	5184	5184	5184	5184	7776	5184	5165*
Number of urban communities included in sample	44	45	46	44	37	41	36	40	43	45	45	45
Number of rural communities included in sample	313	313	307	312	192	202	241	214	216	316	203	202

**Source:** *ILCS 2008-2019*

\* *Results of 19 household surveys in 2019 are not available due to technical problems.*

## (III) Description of Field Work

A team of 48 interviewers and 6 control reviewers supervised by the project manager was established for conducting the fieldwork. Prior to launching the survey, relevant training (instruction) was organized for the field work personnel and control reviewers.

Since 1 January 2019, the “*Integrated Living Conditions Survey Questionnaire*” was completed by the interviewer in electronic form using a tablet in the course of three visits to households per month. During face-to-face interviews with the household head or another knowledgeable adult member, the interviewer collected information on the composition and housing conditions of the household, the employment status, educational level and health status of the members, availability and use of land, livestock, and agricultural machinery, monetary and commodity flows between households, and other information.

Each interviewer worked in 12 clusters (enumeration districts) during the year, by visiting 9 households per month.

In compliance with the methodology of the survey, the hard copy of the “*Diary of Current Expenses, Consumption and Income*” was completed by the household over a period of 14 days. The records in the diary were verified by the interviewer in the course of the regular visits to the household.

The completed diary was entered by the interviewer into the tablet, codified and along with the electronic versions of the completed questionnaires and the sample report sent online to the control reviewers. Within the survey month the control reviewers checked the filings for discrepancies and, in case of errors, sent them back to the interviewers for correction, by conducting a double survey in the household if necessary.

Thereafter, the verified questionnaires and diaries along with the sample report were sent online to the project manager for approval. The latter accepted and archived them. Based on the entered data, a relevant database was developed by means of a special data entry software.

In 2019, each surveyed household received AMD 1000 for filling in the diary.

A total of 9185 addresses were visited by interviewers in the course of field works, while the national average refusal rate totaled 19.5% (Table 2).

**Table 2: Number of Surveyed Households and Refusal Rates, by Regions and in Yerevan, 2019**

Regions	Number of completed questionnaires, 2019	Refusal rate, 2019	Refusal rate, 2018	Refusal rate, 2017	Refusal rate, 2016	Refusal rate, 2008
Yerevan	1403	34.3	32.3	30.4	19.7	18.9
Aragatsotn	315	2.5	1.3	1.6	0.8	2.6
Ararat	432	12.4	10.8	12.2	6.1	7.5
Armavir	432	13.8	11.3	9.4	7.2	10.6
Gegharkunik	324	11.0	1.4	1.5	0.6	0.6
Lori	540	15.5	8.3	12.7	5.3	4.6
Kotayk	324	21.3	16.6	11.8	6.9	2.3
Shirak	432	9.9	8.0	10.7	5.3	4.0
Syunik	324	8.7	1.6	2.8	0.5	2.2
Vayotz Dzor	324	20.3	4.1	5.4	3.6	2.7
Tavush	315	5.5	1.7	3.4	5.1	2.9
<b>Total</b>	<b>5165</b>	<b>19.5</b>	<b>14.9</b>	<b>16.3</b>	<b>9.8</b>	<b>7.5</b>

**Source:** *ILCS 2019 (2008, 2016-2019)*

**Note:** *Refusal rate is defined as the ratio of refusals and the total number of visited addresses.*

Refusal rates defined as the ratio of refusals and the total number of visited addresses significantly varied by regions. Refusal rates were the highest in Yerevan (34.3%) and the lowest in Aragatsotn region (2.5%).

#### **(IV) Description of Survey Tools**

The following tools are used to conduct the survey: the Integrated Living Conditions Survey Questionnaire and the Diary of Current Expenses, Consumption and Income.

Since 1 January 2019, the “*Integrated Living Conditions Survey Questionnaire*” was filled in by the interviewer in electronic form using a tablet in the course of three visits to households per month.

In 2019 certain revisions were made to the questionnaire, due to which it had sections on all household members, absent members (migration), education, healthcare, employment, social exclusion, housing conditions, food security, durable goods, social assistance, agricultural activities etc.

The hard copy of the “*Diary of Current Expenses, Consumption and Income*” was completed by the household over a period of 14 days. Every day the household would record all its expenditures on food, non-food products and services, also giving a detailed description of such purchases; e.g. for food products the name, quantity, cost, and place of purchase of the product was recorded. Besides, the household would record its consumption of food products received and used from its own land and livestock, as well as obtained from other sources (e.g. gift, humanitarian aid). Non-food products and services purchased or received for free were also recorded in the diary.

The questionnaire and the diary were revised and adjusted, as appropriate, prior to the launch of the survey.