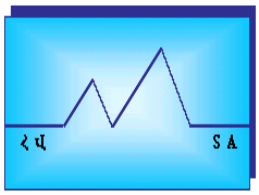

**National Statistical Service**
**Yerevan, Armenia**

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# FOOD INSECURITY ASSESSMENT IN ARMENIA

***INTEGRATED LIVING CONDITIONS SURVEY 2004***

**Yerevan**
**October 2007**

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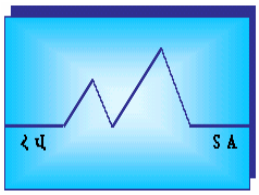

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# ABBREVIATIONS

| | |
|---|---|
| ADER | Average Dietary Energy Requirement |
| CV | Coefficient of variation |
| DEC | Dietary Energy Consumption |
| EC | European Community |
| FAO | Food and Agriculture Organization |
| FBS | Food Balance Sheet |
| FSSM | Food Security Statistical Module |
| ILCS | Integrated Living Conditions Survey of Armenia |
| MDER | Minimum Dietary Energy Requirement |
| MDG | Millennium Development Goals |
| NSS | National Statistical Service of the Republic of Armenia |
| USDA | US Department of Agriculture |
| WFS | World Food Summit |
| WHO | World Health Organization |

The National Statistical Service (NSS) of the Republic of Armenia is pleased to present this Food Insecurity Assessment Report on Armenia which has been produced with support from the EC-FAO Food Security "Information for Action" Programme. The Programme is financed by the European Union and implemented by FAO. This report is the result of the food consumption and security analysis of the ILCS 2004 undertaken by the NSS (with the World Bank support and financial assistance) with collaboration of representatives of various departments of Ministry of Agriculture and Ministry of Health under the technical assistance of the FAO Statistics Division. This collaborative work was initiated in July 2006 following the Food Security Statistics Module (FSSM) training workshop held at the NSS in Yerevan.

The main objective of the activity is to strengthen the statistical analytical capacity of the NSS to derive food security statistics from the available food consumption data, particularly from the ILCS 2004. The report presents a suite of food security indicators including the Millennium Development Goal indicator 5 on the prevalence of undernourishment at the national and sub national levels. The summarized findings cover a wide range of food security statistics which provide the analytical background for identifying and locating the food insecure population.

The NSS is especially grateful to FAO Statistics Division for its continuous technical support provided to the NSS for the preparation of this report in addition for sharing the Food Security Statistics Module (FSSM) software. Special thanks to the FAO personnel, namely, Mr Seevalingum Ramasawmy and Ms Grazina Binkauskiene for their long support and assistance in the use of the FAO statistical programs (FSSM) which started with the FSS training in July 2006; Ms Ana Moltedo for support in preparing files and programs, Mr Ricardo Sibrián in assisting the NSS in the dissemination of the draft preliminary version of this report at the National Seminar to the national and international stakeholders in food security issues in Yerevan.

The project has been implemented by direct coordination of Mr Gagik Ananyan, Member, State Council on Statistics of RA and efforts and participation of staff members of the Household Survey Division and Food Security Statistics Division of NSS, particularly Ms Diana Martirosova and Ms Anahit Avetisyan.

I recommend this report to all those who are actively involved in the fight against hunger and hope that it will provide useful inputs for practical strategies for efficient and effective implementation. The report is open to debate and we would be grateful to receive any comments or suggestions concerning its contents and findings as to improve the next report.

S. Mnatsakanyan

President, National Statistics Service

# EXECUTIVE SUMMARY

Almost one third of the population was food deprived in Armenia based on food consumption data collected in the 2004 Armenian Integrated Living Conditions Survey (ILCS 2004). In Yerevan close to one in two persons was food deprived, a similar level to that for the lowest income quintile group at national level.

The average daily energy consumption of an Armenian food deprived person was of 1580 Kcal in 2004, falling short by around 220 Kcal to reach the minimum energy requirement of 1796 Kcal plus an additional 224 Kcal, that is, more than 440 Kcal to reach the national average dietary energy consumption of 2020 Kcal.

Armenians daily devoted 395 Drams to food, about three fifths of the total consumption expenditure at national level. This level of food consumption expenditure provided on average 2020 Kcal of energy consumption. Most households acquired food as purchases (76 percent) and in Yerevan food purchases were higher than at national level (90 percent).

The dietary energy cost express per 1000 Kcal was on average 196 Drams at national level, 211 Drams in Yerevan and 178 Drams for households in the lowest income quintile at national level.

A macro-nutrient balanced food basket providing the Minimum dietary energy requirement of 1796 Kcal would cost 321 Drams based on food consumed by the lowest income level. This cost is in practice similar to the cost of 320 Drams from current food consumption since the population from households in the lowest income quintile was consuming an acceptable food pattern.

Proteins, fats and carbohydrates contributed 11, 23 and 65 percent respectively to the total energy consumption at national level from a relatively balanced diet. The diet was based on cereals and products and oils and fats to dietary energy consumption, 58 and 11 percent of total energy. Dairy products, roots and tubers and meat contributed with 5 percent each to total energy.

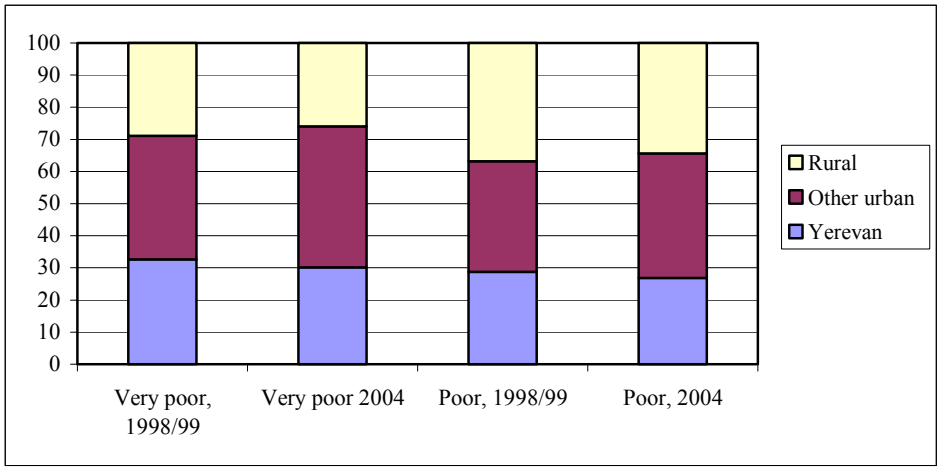
The prevalence of critical food poverty, not having enough income to acquire minimum energy needs as defined by FAO for assessing food deprivation, was less than one percent at national level. This even if the population was devoting a large share of total consumption in food (60 percent).

# I. FOREWORD

Armenia has substantially reduced poverty from 1998/99 to 2004. Almost 700,000 people were lifted out of poverty and the incidence of poor people fell by 21 percent points, from around 56.1 to about 34.6 percent. Extreme poverty, not having enough income to acquire average energy needs, declined even faster, from 21 to about 6 percent, a fall of 15 percent points; almost half a million people—out of 700,000—escaped extreme poverty. Poverty has become lower and less severe, as the poverty gap and severity of poverty have declined significantly as well. In 2004, the poverty gap was estimated at 7.4 percent, down form 17.2 in 1998/99; while severity of poverty was estimated at 2.4 percent (down from 7.2). The shortfall between the consumption of the poor and the poverty line (in percent of the poverty line) fell from 31 to 21 percent. Despite these remarkable results, poverty still remained an important issue for Armenia in 2004 as 34.6 percent of the population—over one million people were poor and among them about 200,000 very poor.

Poverty in Armenia was higher among the urban than rural population, although the difference has been narrowing and was not strongly pronounced in 2004.

Armenia: Composition of very poor and poor by regions, 1998/99 and 2004 (percent )




In 2004, rural areas had the smallest and non-Yerevan urban areas the highest incidence of very poor population (4.4 and 9.2 percent respectively). A similar situation was also observed in 1998/99, indicating that subsistence agriculture played an important role in protecting people from falling into extreme poverty. The growth in agricultural production translated into increased real farm incomes, especially for poor households and had a positive effect on rural poverty reduction. Also, food prices increased much more than non-food prices between 1999 and 2004 (29.3 percent and 6.1 percent respectively). As food production is the dominant source of income/consumption for rural households (mainly in the form of own consumption), the relative price increase of food products had a favorable impact on rural population. Yet, it should be noted that rural poor were mostly employed in agriculture, with a negligible share working in the non-farm sector.

# II. INTRODUCTION

This report provides an assessment of food insecurity based on food consumption statistics derived from the ***2004 Armenian Households Integrated Living Conditions Surveys (ILCS 2004)*** using the methodology developed by FAO.

It is composed of two parts, one describes briefly the survey methodology and the other shows the results analysis on food security indicators at national and sub national levels to identify food insecure population groups.

Food security is achieved, when all people at all times have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. By contrast, food insecurity exists when people lack secure access to sufficient amount of safe and nutritious food for normal growth, development as well as for being active and healthy.

# III. SURVEY METHODOLOGY

The ILCS-s are implemented in Armenia by the World Bank methodology, its direct assistance and comprehensive support. The ILCS was introduced in Armenia in 1996 and it has been conducted on yearly basis since 2001. These surveys allocated households and settlements with a monthly rotation. The survey results serve primarily to assess the level of consumption-based poverty in the country[1].

## *(A) Sampling frame*

The sampling frame for the ILCS 2004 was built using the database of addresses for the 2001 Population Census; the database was developed with the World Bank technical assistance. The database of addresses of all households in Armenia was divided into 48 strata including 12 communities of Yerevan city. The households from other regions (*marzes*) were grouped according to the following three categories: big towns with 15,000 inhabitants and above; villages, and other towns. Big towns formed 16 strata (the only exception is the Vayots Dzor *marz* where there are no big towns). The villages and other towns formed 10 strata each.

According to this division, a random, two-step sample stratified at *marz* level was developed. All *marzes*, as well as all urban and rural settlements were included in the sampled population according to the share of population residing in those settlements as percent to the total population in the country. In the first step, the settlements i.e., primary sample units, were selected: 43 towns out of 48 or 90 percent of all towns in Armenia were surveyed during the year; also 216 villages out of 951 or 23 percent of all villages in the country were covered by the survey. In the second step, the respondent households were selected: 6,816 households (5,088 from urban and 1,728 from rural settlements).

As a result the ILCS 2004, for the first time since 1996 survey data were representative at the *marz* level.

[1] Food deprivation, according to the FAO methodology, is calculated per person (including both adults and the children), while the NSS estimates poverty level equivalent per adult.

### *(B) Description of the field work*

In 2004, a team of 71 interviewers, 6 quality control specialist and 13 supervisors carried-out the fieldwork. The total survey activities were monitored by the project coordinators. Intensive three-day training sessions were arranged for the field teams prior to the survey.

Each interviewer was working in 12 clusters during a year, visiting 8 households every month. Once the interviewer finished the work in a given cluster he/she presented the completed questionnaires and diaries for data control and coding together with a report on sampled household results. Each interviewed household received AMD 550 for keeping a diary during the month of the survey. The field work was under thorough supervision and numerous control interviews were conducted. The collected questionnaires and diaries were coded, logically tested and the information was entered using the special software for data entry, double entry and verification of entered data. As a result, a database containing information on 6,816 households was formed. During the field work the interviewers visited 11,885 addresses. The average national refusal rate was 10.4 percent.

### *(C) Survey tools*

The National Statistical Service (NSS) survey team with assistance from the World Bank developed the following survey tools for the ILCS 2004: a questionnaire, a diary and the interviewers' manual.

***The questionnaire*** is completed by an interviewer during his/her minimum of five visits to a surveyed household within a month. During the face to face interviews with the head of the household or another adult member, the interviewer collected information on the composition and housing conditions of the household, level of education and health status of household members, their employment status, land ownership, availability and utilization of cattle and agricultural equipment, and other information. The sections included in the questionnaire are as follows: (1) Household Roster; (2) Migration; (3) Housing Conditions; (4) Occupation; (5) Education; (6) Agriculture; (7) Self Employment; (8) Transfers Between Households; (9) Health; (10) Savings and Loans; (11) Self Assessment of Well-Being; (12) Social Capital and Provision of Services; and (13) Social Assistance.

***The diary*** is completed by the household within a month. Every day the households recorded all their expenses on food, non-food products and services with detailed description of what they bought, such as the name of the product, its quantity, cost and the place of purchase. In addition, the households recorded the consumption of products, which were bought and/or received and utilized from their own production, as well as products which were received from other households. At the end of the month, the information on rarely used food products, durable goods and ritual (funeral, wedding and etc.) services was recorded as well. The records in the dairy were verified by the interviewer during his/her visits to the household within the same month. The detailed list of the sections in the diary is presented below: (1) Purchased food products during the day; (2) Food consumed at home during the day; (3) Food consumed outside; (4) Non food products purchased and services received; (5) All other non food products and services received free of charge; (6) Household income and revenues; (7) Food that is usually consumed daily in small quantities; and (8) List of real estate, durable goods and ritual services.

***The Interviewers' Manual*** provides detailed instructions for filling out the questionnaire and the diary. Both the questionnaire and the diary were revised according to the results of a pre-test conducted prior to launch of the survey

### *(D) Welfare measure: consumption aggregate calculation*

A consumption aggregate is used to approximate well-being in Armenia. It is assumed that consumption is better declared and is less sensitive to short-term fluctuations than income. The consumption aggregate is estimated based on the Armenia ILCS. It comprises the following components: (i) the value of food and non-food consumption including consumption from home production, as well as aid received from humanitarian organizations and other sources; and (ii) the rental value of durable goods.

### *(E) Food consumption*

Food consumption includes food consumed at home and outside the home (i.e. in restaurants etc.) and in-kind food consumption such as own-food production, food gifts, food transfers in-kind and humanitarian food aid.

The Armenian ILCS provides information on household purchases of 195 food items and information on household food consumption over the 30 days of the household reference period of the annual household ILCS reference period. In order to express food consumption in monetary values, the estimated prices of purchased items are used. The collected information on household food purchased includes monetary value, quantity, measurement unit and location of purchase. Unit quantity values for all items were estimated at the household level using values and (standardized) quantities. Median unit values were estimated at different levels of aggregation based on household-level unit values.

Three basic categories were disaggregated as follows: regions (*marz*), location (urban/rural), and a quarter of the interview. The median prices were estimated excluding household-level prices that were identified as outliers. An outlier was detected when the difference between household-level price and "local" price was larger than two standard deviations. The local price was defined as the median price at the corresponding *marz*-urban/rural-quarter strata.

When the household purchased the food item, the reported price was used. When the household consumed a food item, but did not purchase it, the *marz*-urban/rural-quarter price was imputed. Note that those prices are not affected by outliers. Five items were reported in the Food Consumption Module but not reported in the Food Expenditures Module. For those items the price was imputed from the corresponding month/quarter provided by the Price Department in the NSS of Armenia.

### *(E) Food deprivation*

The prevalence of food deprivation based on the FAO methodology depends on three components: First, the amount of dietary energy contained in the food consumed which is the mean; second, the inequality in access to food mediated mainly by income which is a component of the variance; and third, the minimum energy requirement which correspond to a minimum acceptable weight for attained heights to be healthy enough and performing a minimum acceptable level of light physical activity for different groups of age and sex. The weighted overall minimum dietary energy requirement (MDER) is used as the cut-off point of the distribution function of dietary energy consumption for estimating the prevalence of food deprivation or the proportion of the population consuming less energy than the MDER. The mean and the variance of energy consumption specify the distribution function of dietary energy consumption.

The MDER for Armenia was estimated at national level as well as for urban, rural areas and Yerevan using the age sex structure of the population and data on height derived from the Demographic and Health Survey (DHS)[2]. The national MDER was used as cut off point for other sub-national population groups. The MDER was estimated also for gender of household heads and household size categories using their corresponding age and sex population structures and attained heights at national level. The MDER for Yerevan assumes is similar to that at national level as Yerevan concentrates more than one third of the population.

**Table 1. Minimum dietary energy requirement (MDER) at national level and for selected sub-national population groups**

| Categories and groupings | Minimum dietary energy requirement (MDER) (kcal/person/day)[3] |
|---|---|
| Nationwide | 1796 |
| ***Area*** | |
| Yerevan | 1796 |
| Other urban | 1824 |
| Rural | 1762 |
| ***Household size*** | |
| Less than 4 persons | 1895 |
| Four to five persons | 1903 |
| More than 5 persons | 1798 |
| ***Gender of household head*** | |
| Male | 1874 |
| Female | 1823 |

The FAO Food Security Statistics Module (FSSM) produces many statistics used for analyzing the situation of food insecurity in the country at national and sub national levels. Only some of these statistics are described in this report with respect to five different sub groups of population (urban/rural location, sex, age and education level of the head of the household, size of the household) and for different levels of income.

[2] According to the 2005 Demographic and Health Survey (DHS-2005) data.
[3] Indicators are calculated by the FAO methodology.

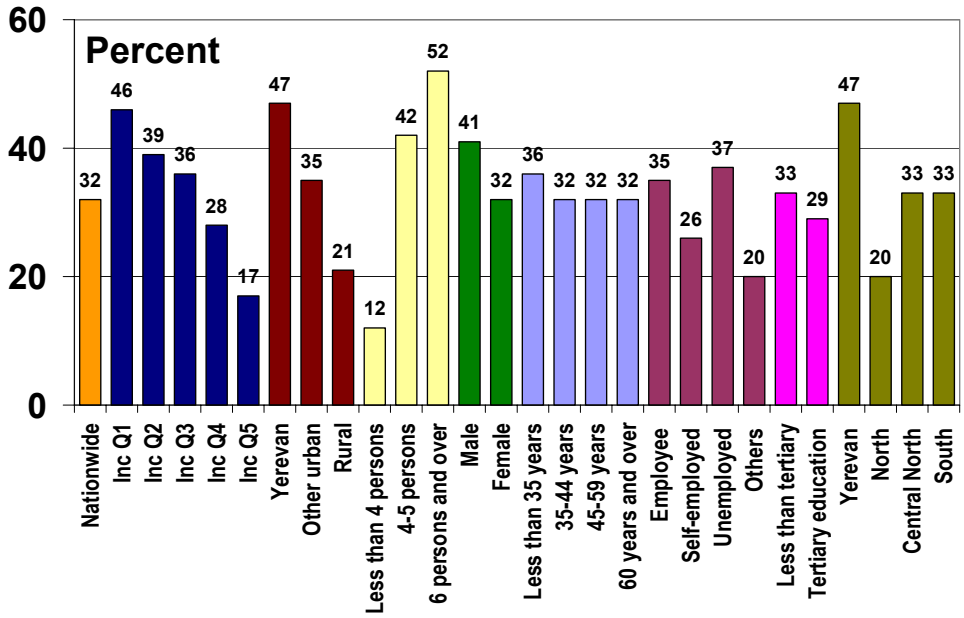
## IV. RESULTS AND FINDINGS

The results described in the sections below were derived from the processing and statistical analysis of food and expenditure data as prepared by the NSS RA including corrections of the errors mentioned above.

### *(A) Prevalence of food deprivation*

The prevalence of food deprivation, which is the proportion of people whose dietary energy consumption falls below the minimum energy requirement, was 32 percent in total population (see figure 1). Forty-six percent of the population was food deprived in the lowest income quintile households and 17 percent in the highest income quintile households. One in two persons was suffering from food deprivation; food deprivation was higher in Yerevan and in households with more than six members than at national level.

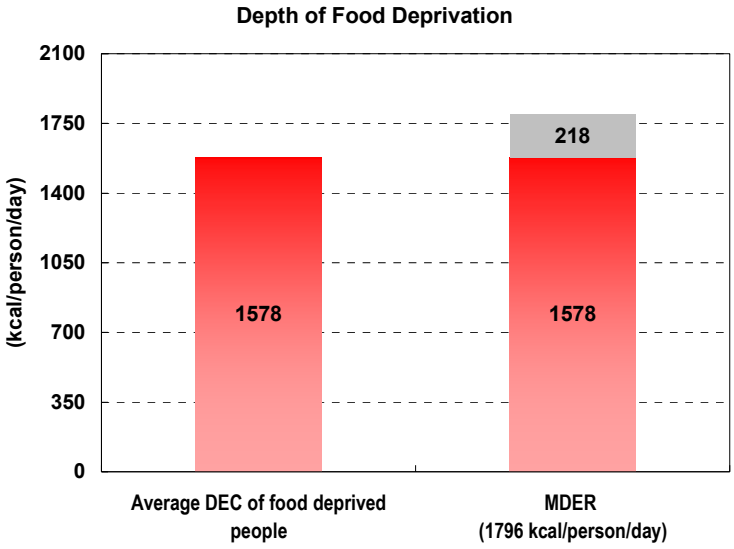
**Figure 1. Prevalence of food deprivation, 2004**




### *(B) Average food deficit of the undernourished*

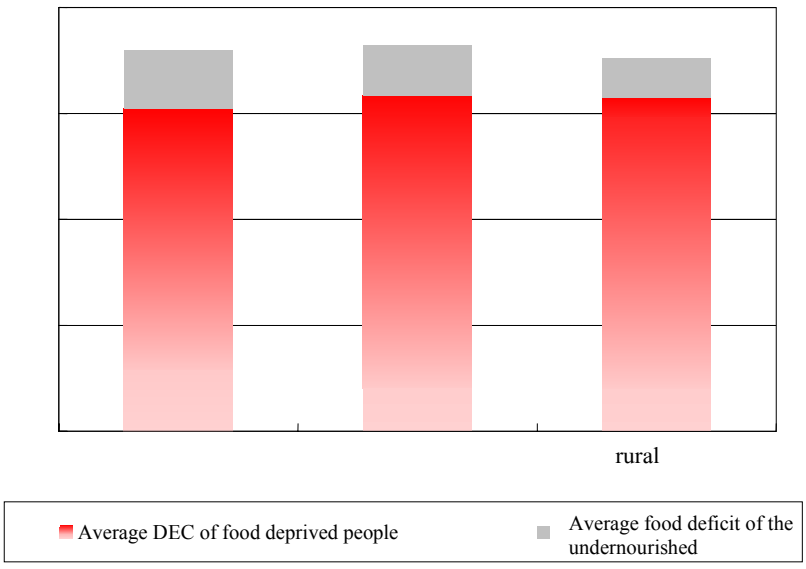
On average a person food deprived was consuming 1578 Kcal per day, which represented an energy deficit of 218 Kcal with respect to the MDER of 1796 Kcal and more than 440 Kcal to reach the energy consumed in average at national level of 2020 Kcal.

**Figure 2. Depth of food deprivation at national level (kcal/person/day), 2004**



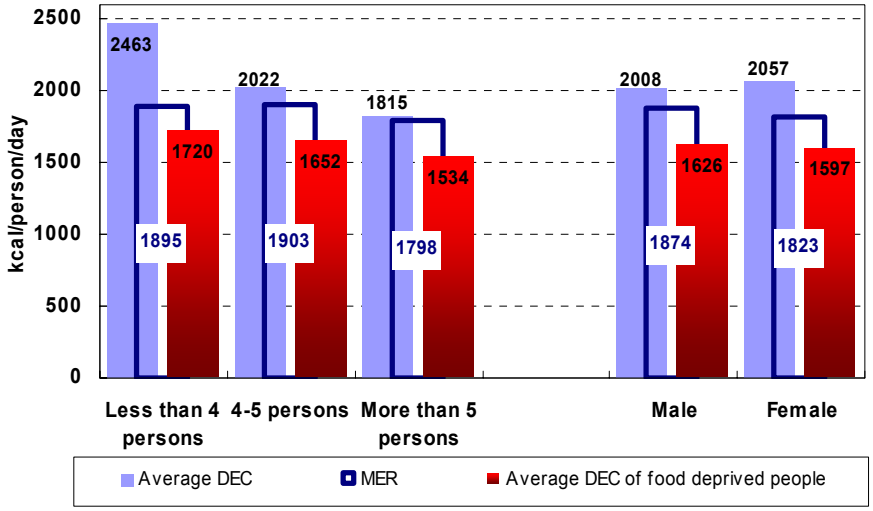

Depth of food deprivation was more pronounced in Yerevan than in rural areas with an absolute deficit between food consumption of undernourished people and MDER of respectively 275 kcal/person/per day and 188 kcal/person/day (see figure 3) corresponding to a relative deficit of 15 percent and 11 percent respectively. In Yerevan undernourished people consumed 57 Kcal less than undernourished people at national level and 63 Kcal less than people living in other urban areas. As discussed further, the higher level of dietary energy consumption in rural areas compared to other urban areas or Yerevan showed that on average people in rural areas are better off than national average.

**Figure 3. Average food deficit of the undernourished in Yerevan, other urban and rural areas**



Depth of food deprivation differed according to the household size or the gender of the household head. The energy consumed by food deprived people and the MDER decreased with larger household size; however the energy deficit increased with larger household size. The food deficit in households of six people and over was 264 Kcal (1798 minus 1534) while that in households of less than 4 people was of 175 Kcal (1895 minus 1720) as shown in figure 4.

**Figure 4. Depth and intensity of food deprivation by household size and gender of head**




The energy consumed by food deprived people and the MDER were lower in women headed households than in men headed households, however the energy deficit was higher in men headed households (248 Kcal) than in women headed households (226 Kcal).

### *(C) Critical food poverty*

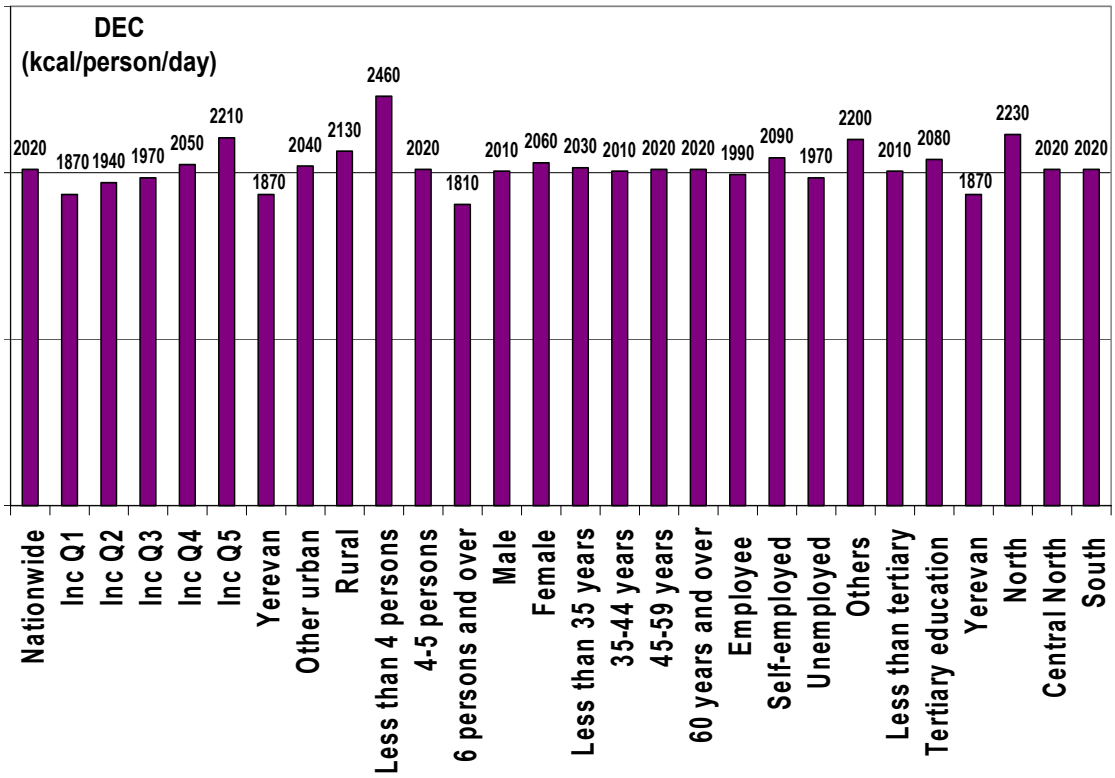
The prevalence of critical food poverty (CFP) is the proportion of the population whose income is not enough to acquire a macronutrient-balanced food basket equivalent to the minimum dietary energy requirement (MDER). The MDER cost was valued using macro-nutrient unit costs from food consumed by households in the first income quintile. The macronutrient-balanced food basket provides 12.5, 22.5 and 65 percent energy from proteins, fats and carbohydrates respectively. In the case of Armenia, the cost of the MDER of 1796 Kcal valued at the cost of 179 Drams per 1000kcal yields a cut-off point of 321 Drams and based on the total expenditure distribution the prevalence of critical food poverty was less than one percent.

### *(D) Food consumption and expenditures*

#### *1. Dietary energy consumption (DEC)*

The dietary energy consumption mirrors food deprivation shown previously. Population groups with high food deprivation showed low dietary energy consumption. The average number of persons in households was on average 3.8 and average dietary energy consumption was 2020 Kcal (see figure 5).

**Figure 5. Dietary energy consumption, 2004**

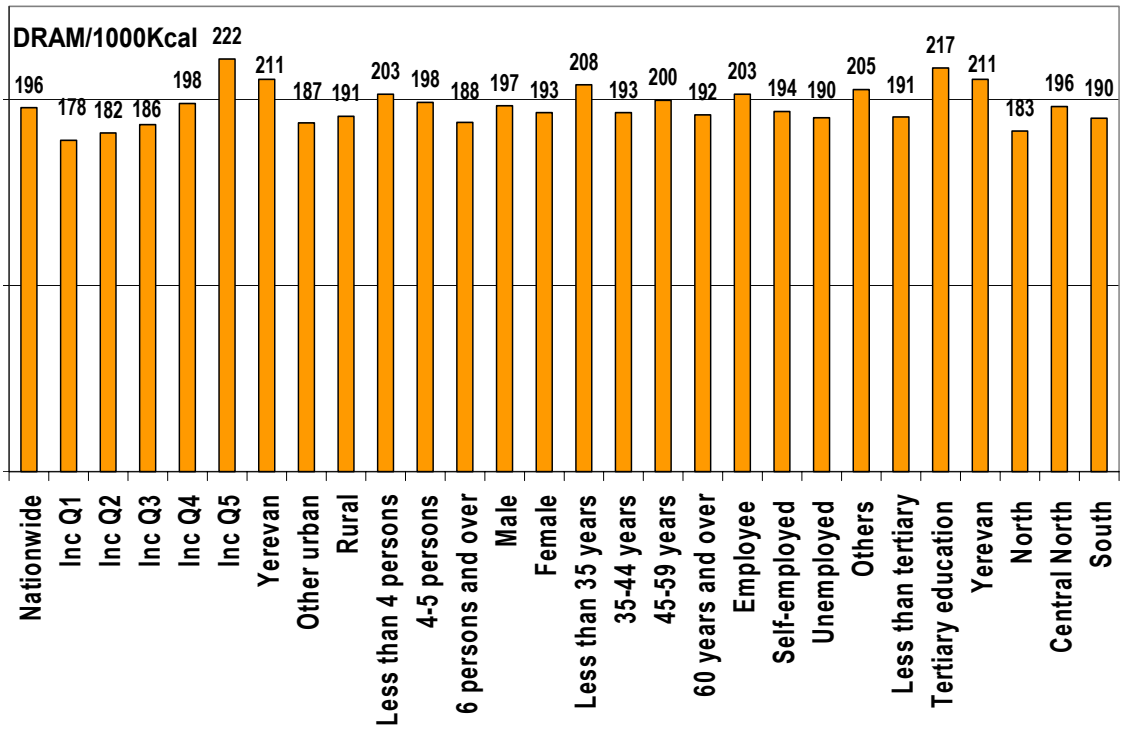



In households of the highest income quintile with average of 3.1 people per household and 2210 kcal, while in households of the lowest income quintile with average 4.5 people per household and 1870 kcal. The average dietary energy consumption in urban and rural areas was 2040 and 2130 Kcal respectively. In Yerevan it was 1870 Kcal, very close to that of the first quintile. There were no essential distinctions in population groups by gender and age of household heads. However, there were differences in energy consumption among household size categories, most likely due to different household compositions. Thus, lowest level of average dietary energy consumption and, of course, highest level of food deprivation was recorded in households with more than six people (1810 Kcal), which is lower than nationwide average level by 2020 Kcal.

## ***2. Dietary Energy Cost***

The dietary energy unit value refers to the cost of 1000 Kcal from edible food, excluding the cost of bringing the food from the state of edible to ready to eat (mainly the fuel cost needed to prepare food). In Armenia, the cost was on average 196 Dram to acquire 1000 Kcal, close to the level observed in the fourth quintile of the population (see figure 6) and table 11 in the annex highlight food groups with low cost nutrient and energy at national level. This unit value differed among population groups. Lower energy costs were recorded in households of low income households and in other urban areas than in other population groups. The high food cost of 1000 of Kcal (211 dram) in the Yerevan city was linked to added cost of transport, distribution, losses and profit of food made available to the market.

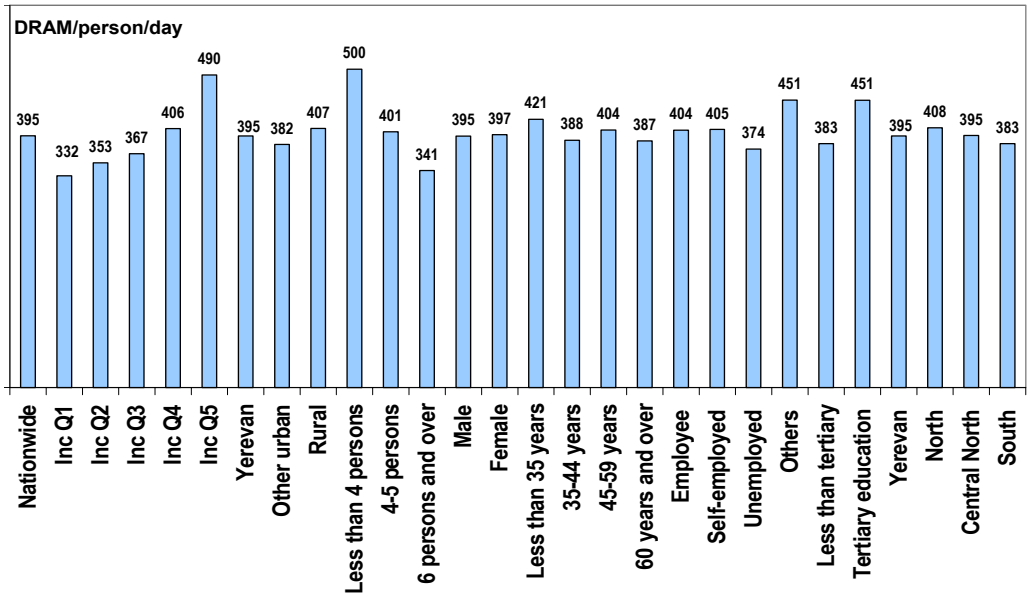
**Figure 6. Dietary energy cost, 2004**




## *3. Monetary value of food consumed and share of food consumption in total consumption expenditure (Engel ratio)*

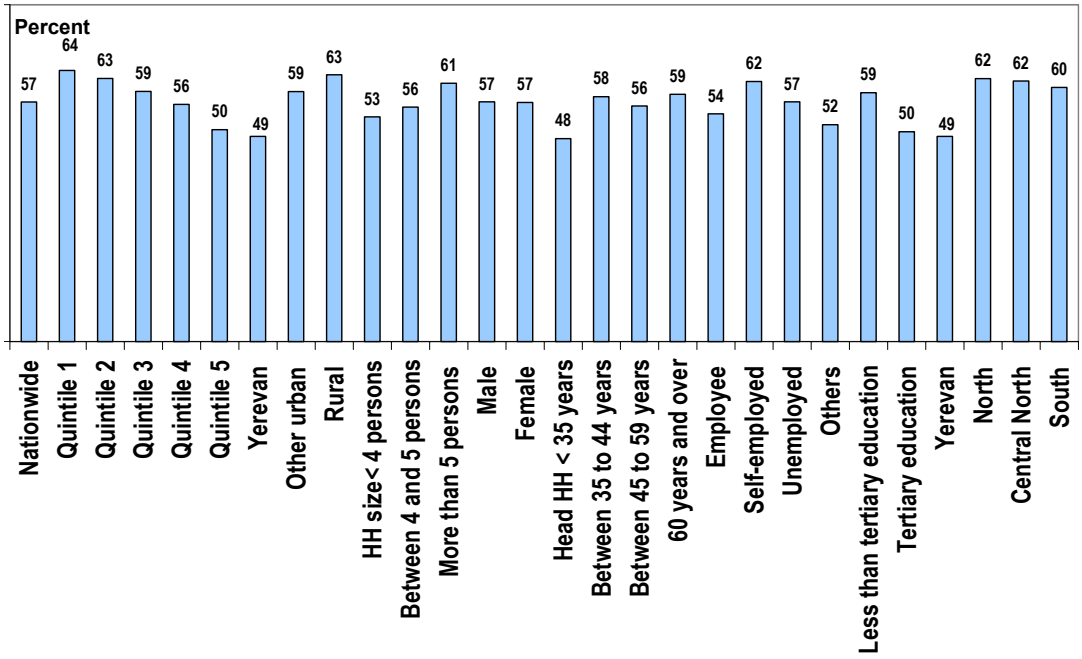
The food consumption in monetary terms was higher (see figure 7) as income was higher. Food consumption was higher in small-size households (500 drams per capita daily), in the highest income quintile of population (490 drams) and households of high-education head (451 drams). On the contrary, in large-size households, first quintile group and households headed by unemployed spent 341 drams, 332 drams and 374 drams on food respectively. Rural populations spent more in food than urban populations, including Yerevan city population (407 drams per capita daily compared to 382 drams and 395 drams). There was no significant difference in the amount spent on food between households headed by males and females with 395 dram/person/day on food which also corresponded to the amount spent at national level.

**Figure 7. Food consumption in monetary terms, 2004**



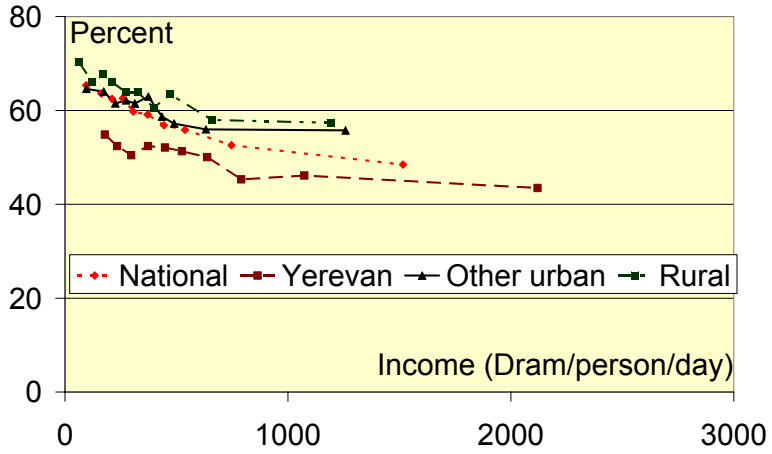

The share of food consumption (in monetary terms) in total consumption expenditure was very high (see figure 8); more than one half of total consumption expenditure was devoted to food at national level. The population groups with high share of food in total consumption expenditure were low income households, households with more than six people, households with senior head or with lower than high-education head and rural populations. The high share of total consumption expenditure devoted to food decreased with higher income as expected; however the income effect was low.

**Figure 8. Share of food in total consumption expenditure (Engel ratio)**



At a more disaggregated level it appeared that in Yerevan, people spent less on food than people from other urban areas or rural areas. But the higher level of income observed in Yerevan compared to other areas also confirmed the Engel law according to which people with higher income spend less on food than lower income groups (see figure 9).

**Figure 9. Share of food in total consumption expenditure (Engel ratio) by income deciles**




## *4. Share of food consumption from different sources in total food consumption*

In the Republic of Armenia food consumption data were collected from the four main sources: food from own-production, food eaten away from home, food purchased and food from other sources. Most food consumed was purchased (76 and 82 percent in monetary and in energy terms respectively), then from own-production (18 and 13 percent in monetary and in energy terms respectively) as shown in figures 10 and 11.

**Figure 10. Share of food monetary value in total food consumption by sources**

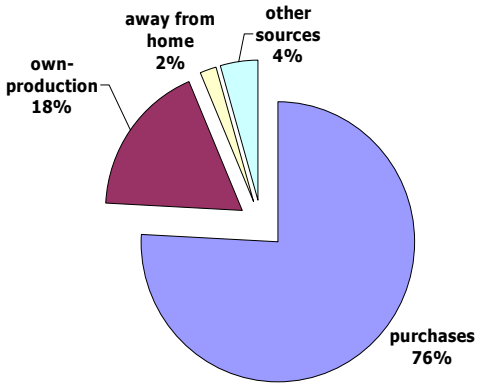
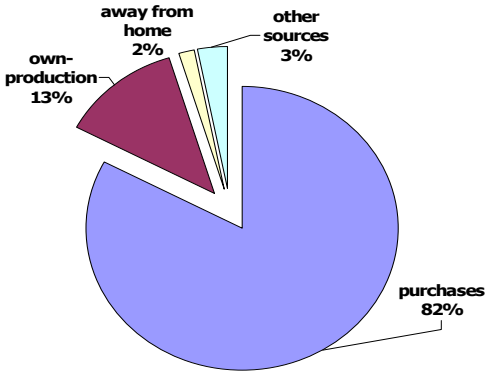



**Figure 11. Share of dietary energy in total food consumption by sources**



The share of food consumption from own production comprised 37 percent in rural areas (28 percent in dietary energy terms) compared to nine percent (four percent in dietary energy terms) for urban areas (see figures 12 and 13). The ratio reflects a strong dependence of rural households to own- production of staple food compared with urban households. Also the share of purchased food in total food consumption comprised 90 percent (93 percent in dietary energy terms) in Yerevan and 84 percent (91 percent in dietary energy terms) in other urban areas.

**Figure 12. Share of food monetary value in total food consumption from purchases and own-production**

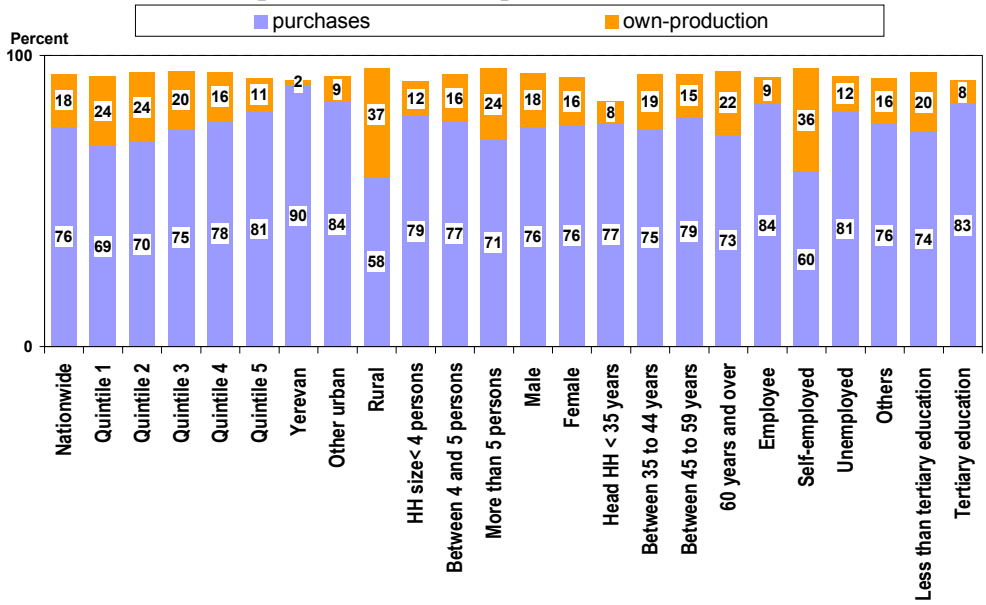
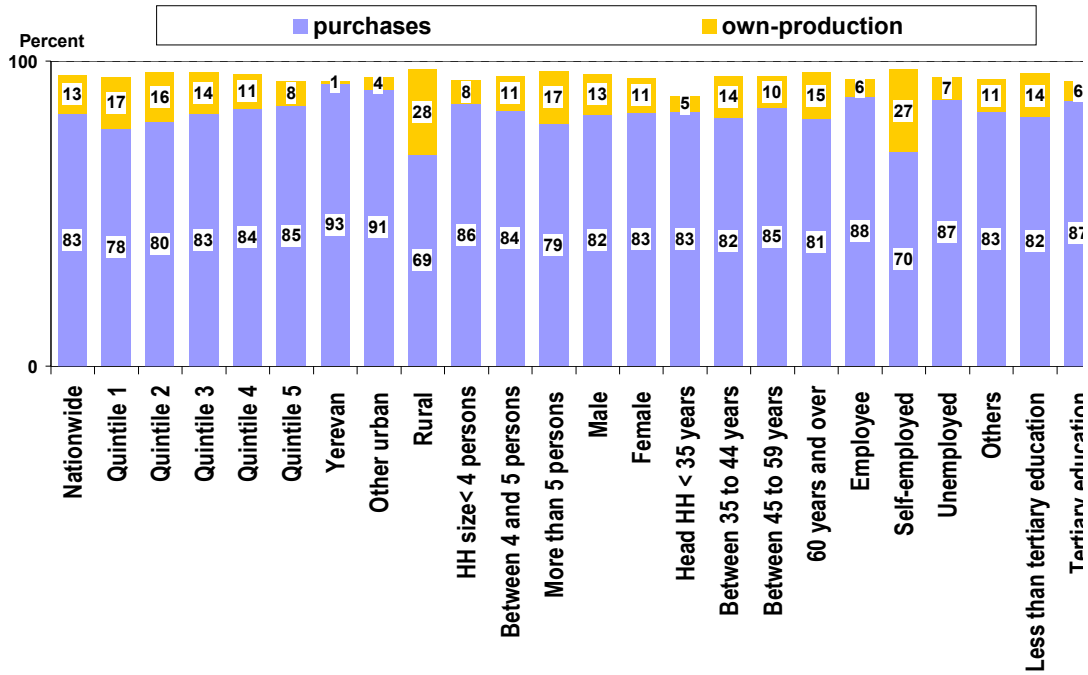



**Figure 13. Share of dietary energy in total food consumption from purchases and own-production**



The dependence from own-production was 24 percent in the low income households as well as in households with more than five people and 22 percent in the households with senior heads.

With respect to food eaten away from home, the share in total consumption was in Yerevan four percent in monetary terms and in dietary energy terms, very close to that observed in households of highest income. Similar food consumption away from home was observed in households headed by persons with tertiary school education (five percent in monetary terms and four percent in dietary energy terms).

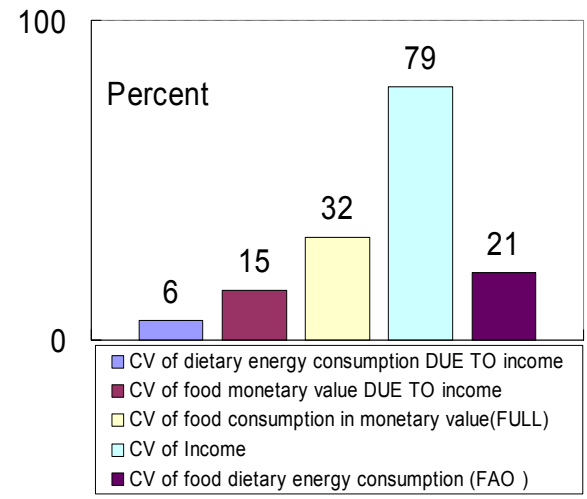
### *(E) Inequality in food access*

The inequality in the distribution of food consumption at national level and by residential area, region, household composition, household size and other classification variables was estimated using Gini coefficient, coefficient of variation (CV) and dispersion ratios for monetary and energy values of food consumption (highest to lowest income quintiles).

Inequality in access to food refers to both data in dietary energy consumption and data in monetary value. Inequality in access to food in monetary terms was higher than in dietary energy terms as it accounts for food cost effects. In the same vein, the income inequality was higher than food inequality in dietary energy and monetary terms.

As shown in figure 14, in the Republic of Armenia, the CV of income as a measure of inequality was four times higher than the inequality of food consumption in 2004 due to income in both monetary and energy values.

**Figure 14. Coefficient of variation (CV)**

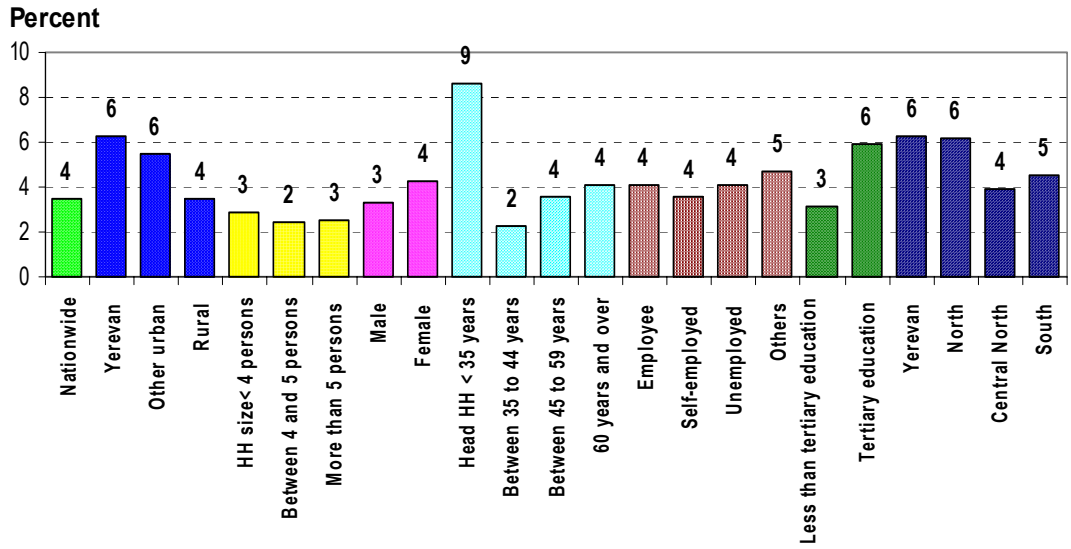



In the tables of the annex, food consumption inequalities both in dietary energy and monetary terms were higher in the urban than in the rural population. So, for example, the CVs of energy food consumption due to income were 11 percent in Yerevan and ten percent in urban areas compared to six percent in rural areas and in monetary terms 24 percent in Yerevan, 16 percent in urban areas compared to 12 percent in rural areas. The situation reversed when looking at inequalities of income, as inequalities in rural areas are higher than that observed in urban areas or in Yerevan with CVs of 83, 70 and 77 percent respectively.

#### *1. Inequality in access to food consumption due to income in dietary energy terms*

Inequality of dietary energy consumption due to income levels as measured by the Gini coefficient was higher in urban areas than in rural areas (figure 15). The highest inequality was found among households whose head is less than 35 years old with a Gini coefficient of nine percent. The second highest inequality was observed in households living in Yerevan with six percent and whose head with higher education level (six percent). Food was distributed more unequally in small size households (less than three members) and in female headed households.

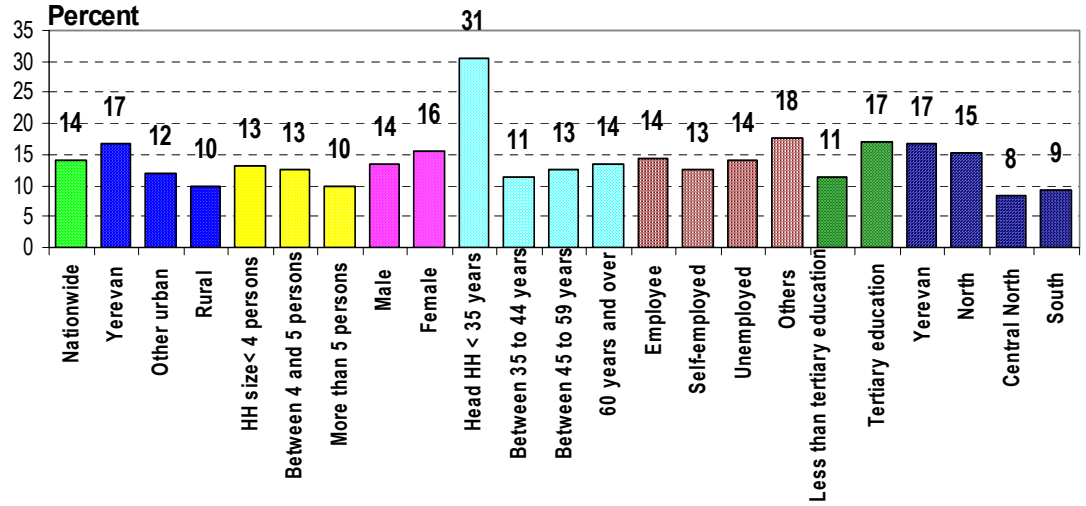
**Figure 15. Gini coefficient of energy consumption due to income**




***2. Inequality in access to food consumption due to income in monetary terms***

As shown in the figure 16 below, inequality of food consumption due to income in monetary terms by areas and for different population groups followed similar patterns with higher magnitude than in dietary energy terms, except for households groups by category of head age; the higher inequality in terms of monetary value reflect the effect of food cost.

**Figure 16. Gini coefficient of food monetary value due to income**

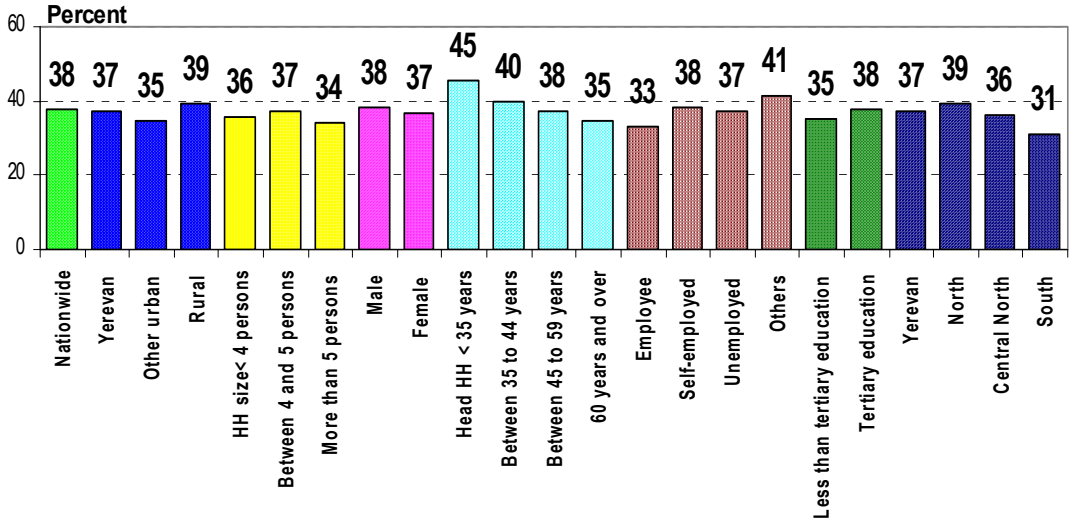



Nationwide food consumption inequality in 2004 was almost four times higher in monetary terms than in energy terms. However these differences within rural, other urban and Yerevan were of less magnitude; in all groups food consumption inequality was around twice higher in monetary terms than in energy terms. Households with young heads showed a higher differential (more than three times) in inequality between monetary and energy terms reflecting the acquisition of food at very high food cost than the other groups. It is worth noting that rural populations in general consume industrially processed food items such sugar and oil for higher cost and may yield high inequality. The opposite may have occurred in urban areas so that the differential was similar.

### *3. Income inequality*

Looking at the income inequality, other situation was depicted (see figure 17).

**Figure 17. Gini coefficient of income (%)**

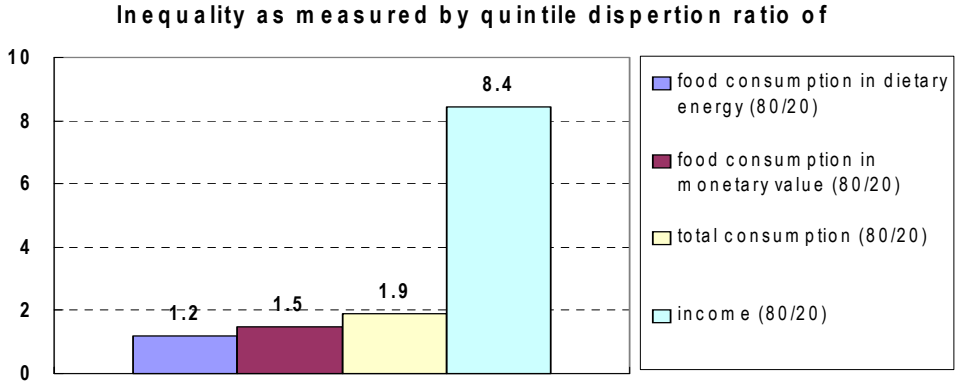



Higher inequalities were observed among young households living in rural areas of the northern regions. Also income inequalities were higher among male headed households than female. On reverse income was more equally distributed among household living in the regions of the south.

### *4. Dispersion ratios*

The dispersion ratio is the ratio between the average in the high income quintile population and the lower income quintiles in the population. It gives a quick snapshot of inequality of the distribution due to income based on averages by income quintile populations.
The figure 18 shows that the dispersion ratio of dietary energy consumption was 1.2 (consumed 20 percent more energy) while that of monetary value of food consumption was 1.5 (spent 50 percent more in food). The dispersion ratio of total consumption was 1.9 (spent 90 percent more in food and non-food) while that of income was 8.4 (had income more than 8 times higher).

**Figure 18.**

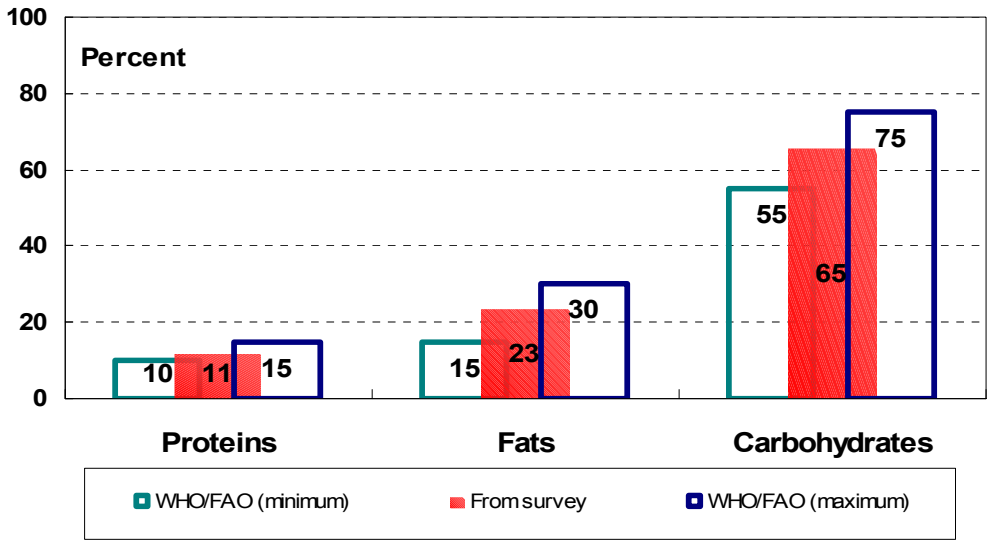


The highest dispersion ratios both dietary energy and monetary values consumption and total consumption were recorded in Yerevan. Unlike the latest, the dispersion ratio of income was higher in rural areas (10.1) compared to 6.9 of urban areas.

## *(F) Dietary Diversity*

According to the results of Households Integrated Living Conditions Survey (ILCS) 2004 at national level the highest share of total dietary energy (kcal) was from carbohydrates (65 percent) with density of 130 grams per 1000 kcal, followed by fats (23 percent) with density of 28 grams per 1000 kcal and by proteins (11 percent) with density of 26 grams per 1000 kcal. The share of proteins in total energy was near the lower bound of recommended range for proteins and the share of fat closer to the higher bound of recommended range for fats, hence the diet was within recommended ranges of FAO/WHO experts (see figure 19). Table 10 in the annex highlights food groups providing most of energy, proteins, carbohydrates and fats at national level.

**Figure 19. Share of proteins, fats and carbohydrates in total energy from at national level**




When comparing among households from different income quintiles at national level, the share of carbohydrates in total dietary energy was higher (68 percent) in households in the lowest income quintile; in contrast, the share of fats in total energy was higher and close to the recommended upper bound of 30 percent (27 percent) in households with the highest income.

When comparing by residential areas, the share of proteins in total energy ranged between 11 and 12 percent in households of all income quintiles and all areas. Hence the major variations were observed for shares of carbohydrates and fats. Higher share of fats in households with the highest income in Yerevan (29 percent) while lower shares in households with the lowest income of rural populations (21 percent). These two groups of populations showed reversed shares of carbohydrates in total energy (60 and 68 percent respectively).

**Figure 20. Share of carbohydrates in total energy by lowest and highest income quintile**

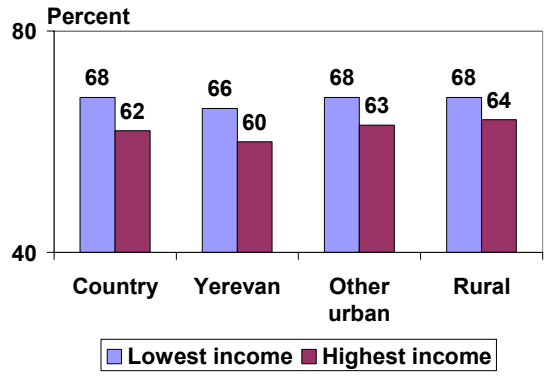
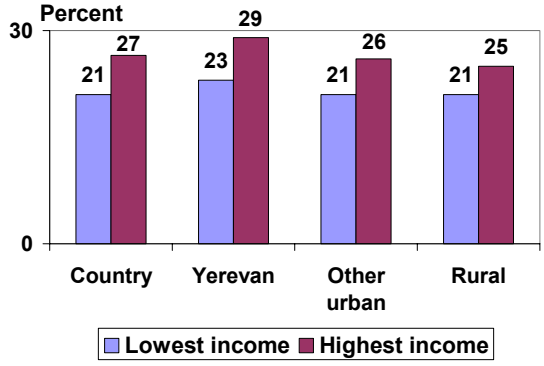
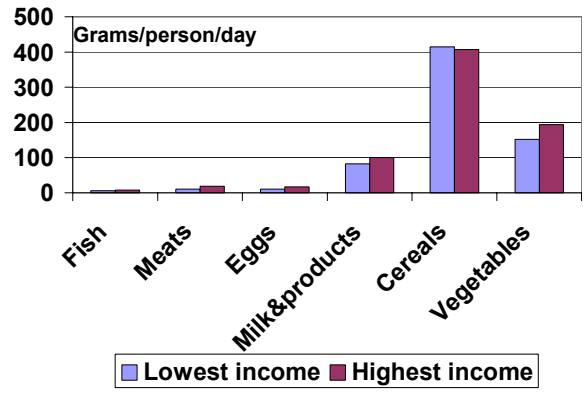



**Figure 21. Share of fats in total energy by lowest and highest income quintile**




The share of proteins in total energy as indicated above was almost the same for all income groups.

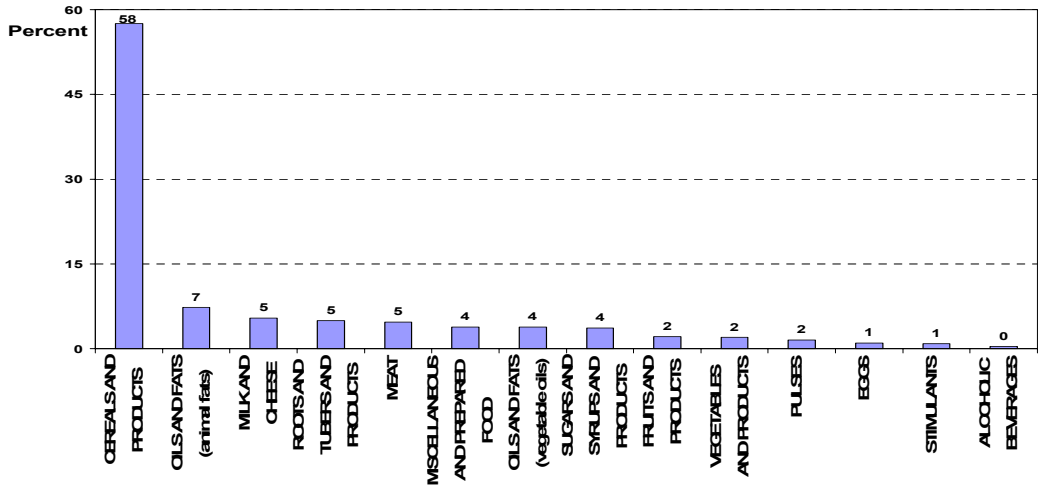
**Figure 22. Consumption of selected food items by lowest and highest income quintile at national level**




However the highest income group consumed more animal proteins from meat, fish, eggs and dairy products) than the lowest income group (18.4 and 10.9 grams/person/day of animal protein respectively). Figure 22 shows daily consumption of main animal protein sources as well as cereals and vegetables.

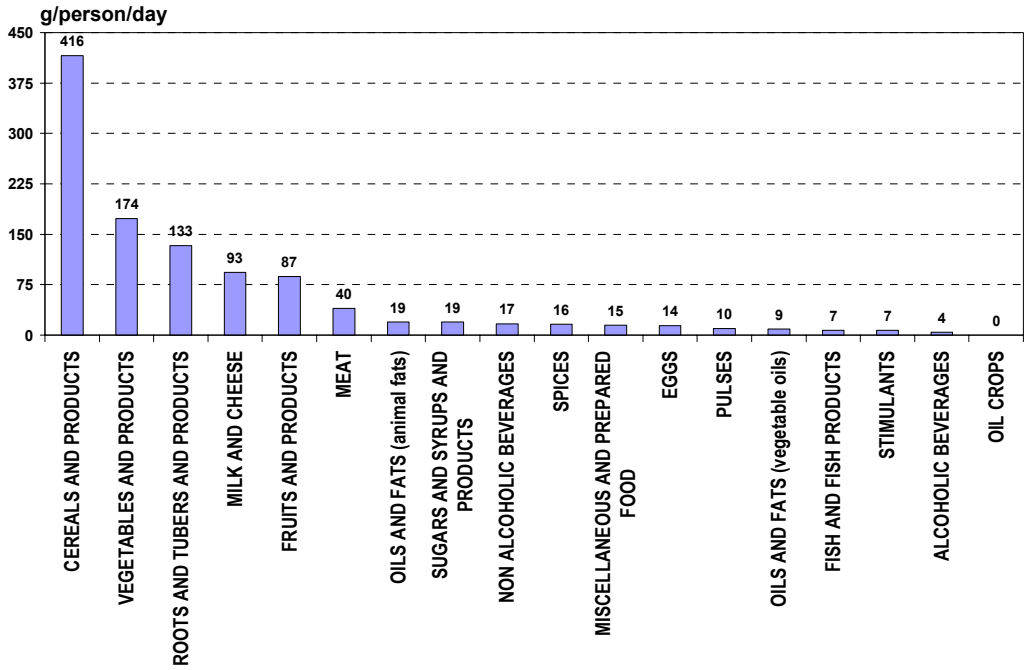
Cereals and products contributed with 58 percent of total dietary energy consumption, (see figure 23) followed by oils and fats from animals (seven percent), dairy products, roots and tubers and meat were contributing the same with five percent of total dietary energy consumption.

**Figure 23. Share of food items in total energy consumption**



In terms of quantities in figure 24, food consumption consisted mainly in cereals and products (416 grams per person per day) providing 1162 kcals, vegetables, roots, tubers and products contributing (307 g/person/day altogether) contributing for only 141 kcals. Only 133 grams per person per day of meat and dairy products were consumed altogether, that is 205 kcals.

**Figure 24. Food consumption**




As shown in table 2 below, basic food groups for food security. Households consumed important quantities of food products yielding energy at low cost from cereals and products, animal oils and fats, roots and tubers, vegetable oils and fats as well as from sugar and products.

**Table 2. Dietary energy unit values by food products**

| Food commodity group | Average food dietary energy consumption (kcal/person/day) | Average Dietary Energy Unit Value (Dram/1000kcals) | Average food quantity consumed (g/person/day) | Average food consumption expenditure (Dram/person/day) |
|---|---|---|---|---|
| CEREALS AND PRODUCTS | 1162 | 102 | 416 | 119 |
| OILS AND FATS (animal fats) | 148 | 147 | 19 | 22 |
| MILK AND CHEESE | 110 | 351 | 93 | 38 |
| ROOTS AND TUBERS AND PRODUCTS | 100 | 134 | 133 | 13 |
| MEAT | 95 | 502 | 40 | 48 |
| MISCELLANEOUS AND PREPARED FOOD | 78 | 314 | 15 | 24 |
| OILS AND FATS (vegetable oils) | 77 | 90 | 9 | 7 |
| SUGARS AND SYRUPS AND PRODUCTS | 74 | 82 | 19 | 6 |
| FRUITS AND PRODUCTS | 43 | 530 | 87 | 23 |
| VEGETABLES AND PRODUCTS | 41 | 1244 | 174 | 50 |
| PULSES | 31 | 118 | 10 | 4 |
| EGGS | 20 | 701 | 14 | 14 |
| STIMULANTS | 18 | 626 | 7 | 11 |
| ALCOHOLIC BEVERAGES | 9 | 601 | 4 | 5 |
| FISH AND FISH PRODUCTS | 7 | 557 | 7 | 4 |
| SPICES | 4 | 1006 | 16 | 4 |
| NON ALCOHOLIC BEVERAGES | 4 | 678 | 17 | 3 |
| OIL CROPS | 0 | 193 | 0 | 0 |

# GLOSSARY

**BALANCED DIET**

The diet is balanced when is judged to be consistent with the maintenance of health in a population. The balance can be examined in terms of the contributions of the various energy-supplying macronutrients and other nutrients. A macronutrient-based balance food consumption pattern should contribute to total energy from proteins, fats and carbohydrates within recommended ranges as follows: proteins from 10 to 15 percent, fats from 15 to 30 percent and carbohydrates from 55 to 75 percent as from a technical report of a 2002 Joint WHO/FAO Expert Consultation (WHO 2003).

**CRITICAL FOOD POVERTY**

The prevalence of critical food poverty (pCFP) refers to the proportion of persons living on less than the cost of the macro-nutrient balanced MDER (for MDER see below and for balanced diet see above) with food prices from households in the lowest income quintile. It can be estimated at national and sub-national levels.

**DIETARY ENERGY UNIT COST**

The dietary energy unit cost is the monetary value of 1000 kilo-calories of food consumed.

**DEPTH OF FOOD DEPRIVATION**

It refers to the difference between the average dietary energy consumption of an undernourished population and its average minimum dietary energy requirement (MDER).

**DIETARY ENERGY CONSUMPTION**

Food consumption expressed in energy terms. At national level, it can be calculated from the FBS (see below); this estimate refers to both private and public food consumption. At sub-national levels is estimated using food consumption data in quantities collected in national household surveys; this estimate refers to private food consumption.

**DIETARY ENERGY DEFICIT**

Same as Depth of Food deprivation

**DIETARY ENERGY REQUIREMENT**

It refers to the amount of energy required by an individual to maintain body functions, health and normal physical activity.
The ***minimum*** dietary energy requirement (MDER) refers to the amount of energy considered adequate to meet the energy needs for normative ***minimum*** acceptable weight for attained height while performing ***light*** physical activity in good health.
The ***average*** dietary energy requirement (ADER) refers to the amount of energy considered adequate to meet the energy needs for normative ***average*** acceptable weight for attained height while performing ***moderate*** physical activity in good health.

**FOOD CONSUMPTION DISTRIBUTION**

Food consumption distribution refers to the variation of consumption within a population. It reflects both the disparities due to socioeconomic factors and differences due to biological factors, such as sex, age, body weight and physical activity levels.

**FOOD DEPRIVATION**

Food deprivation refers to the condition of people whose food consumption is continuously below its requirements. FAO's measure of food deprivation refers to the proportion of the population whose dietary energy consumption is below the MDER.

**FOOD INSECURITY**

A situation when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power or inappropriate distribution. Food insecurity may be chronic, seasonal or transitory.

**FOOD SECURITY**

A situation that exists when all people, at all time, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

**GINI COEFFICIENT**

The Gini coefficient is a measure of inequality and ranges from 0 (perfect equality) to 1 (perfect inequality). In this document it refers to inequality of income.

**GINI COEFFICIENT DUE TO INCOME**

The Gini coefficient is a measure of inequality in food consumption due to income and ranges from 0 (when income has no effect on food consumption) to 1 (when food consumption depends only on income). In this document it refers to inequality in food consumption in monetary or in energy terms.

**HOUSEHOLD CONSUMPTION EXPENDITURE**

Total household consumption expenditure as defined in the United Nations guidelines is the sum of all monetary value or expenditure on goods and services intended for consumption, goods produced and consumed from own production or own-business stocks, including the imputed rent of owner-occupied housing, and goods and services received in kind.

**HOUSEHOLD FOOD CONSUMPTION EXPENDITURE**

Household consumption expenditure refers to food consumed by household members during a specified period, at home and outside the home, for example, at restaurants, bars, the work place, school, and so on. It includes food from all sources, purchased or from garden or farm. Further deductions should be made to allow for wastage and losses occurring from acquisition to cooking and plate and kitchen wastage.

**HOUSEHOLD NON CONSUMPTION EXPENDITURE**

It refers to income taxes, other direct taxes, pension and social security contributions, remittances, gifts and similar transfers made by the household in monetary terms or in kind, including food such as given away raw or ready to eat.

**HOUSEHOLD EXPENDITURE**

Consumption plus non-consumption expenditure made by the household, including food.

**HOUSEHOLD INCOME**

Income is the sum of all receipts, in money or in kind, which as a rule are received regularly and are of recurring nature, including food.

**INCOME ELASTICITY OF FOOD DEMAND**

The income elasticity of food demand measures the responsiveness of the food demanded (quantity, monetary or nutrient terms) to a unit change of income.

**INCOME INEQUALITY**

Inequality refers to disparities in the distribution of income.

**INEQUALITY IN FOOD CONSUMPTION DUE TO INCOME**

The inequality refers to the variation of the food consumption level within a population due to disparities in the income distribution**.**

**KILOCALORIE (Kcal)**

Kilocalorie is a unit of measurement of dietary energy. In the International System of Units (ISU), the universal unit of dietary energy is the joule (J) but Kcal is still commonly used. One kilocalorie = 4.184 kilojoules (KJ).

**MICRONUTRIENTS**

The vitamins, minerals and certain other substances required by the body in small amounts. They are measured in milligrams or micrograms.

**NUTRITIONAL STATUS**

The physiological state of an individual that results from the relationship between nutrient intakes an requirements and from the body's ability to digest, absorb and use these nutrients. Lack of food as well as poor health and sanitation and inappropriate care and feeding practices are the major causes of poor nutritional status.

**SHARE OF FOOD EXPENDITURE**

The proportion of household consumption expenditure allocated to food ; it is also known as Engel ratio.

**UNDERNOURISHMENT**

Same as Food Deprivation.

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# ***ANNEX***

## *Table 1. Selective Statistics of Food Consumption at National and Sub National levels*

***Selective statistics of food consumption***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Number of sampled households | Average number of people in household | Average food consumption in dietary energy value (kcal/person/day) | Average food consumption in monetary value, (dram/person/day) | Average dietary energy value, (dram/1000kcals) | Average total consumption (dram/person/day) |
|---|---|---|---|---|---|---|
| **Nationwide** | **6816** | **3.8** | **2020** | **395.29** | **195.63** | **694.75** |
| **Income level** | | | | | | |
| Quintile 1 | 1363 | 4.5 | 1870 | 332.09 | 178.01 | 515.68 |
| Quintile 2 | 1363 | 4.2 | 1940 | 352.68 | 182.00 | 564.09 |
| Quintile 3 | 1364 | 4.0 | 1970 | 366.77 | 186.45 | 617.25 |
| Quintile 4 | 1363 | 3.7 | 2050 | 406.39 | 197.77 | 721.49 |
| Quintile 5 | 1363 | 3.1 | 2210 | 490.37 | 221.71 | 974.21 |
| **Area** | | | | | | |
| Yerevan | 2016 | 3.5 | 1870 | 394.89 | 210.79 | 810.66 |
| Other urban | 3072 | 3.5 | 2040 | 381.55 | 187.45 | 642.64 |
| Rural | 1728 | 4.3 | 2130 | 406.51 | 190.95 | 641.74 |
| **HH Size** | | | | | | |
| Less than 4 | 2406 | 1.9 | 2460 | 499.60 | 202.81 | 936.30 |
| 4 to 5 | 2821 | 4.0 | 2020 | 401.21 | 198.41 | 720.12 |
| More than 5 | 1589 | 6.1 | 1810 | 340.55 | 187.65 | 554.94 |
| **Gender of head of HH** | | | | | | |
| male | 4723 | 4.1 | 2010 | 394.78 | 196.61 | 693.49 |
| female | 2093 | 3.1 | 2060 | 396.75 | 192.85 | 698.42 |
| **Age of head of HH** | | | | | | |
| <35 | 402 | 3.2 | 2030 | 420.97 | 207.82 | 874.01 |
| 35 – 45 | 1193 | 3.9 | 2010 | 388.22 | 192.89 | 667.65 |
| 45 – 60 | 2561 | 3.9 | 2020 | 403.93 | 199.58 | 721.79 |
| >60 | 2660 | 3.7 | 2020 | 387.20 | 191.63 | 659.24 |
| **Economic activity of head of HH** | | | | | | |
| employee | 2025 | 3.8 | 1990 | 403.72 | 202.82 | 746.18 |
| self-employed | 1503 | 4.2 | 2090 | 405.02 | 193.57 | 655.56 |
| unemployed | 2821 | 3.6 | 1970 | 374.09 | 190.20 | 656.95 |
| others | 467 | 3.3 | 2200 | 451.10 | 205.29 | 875.77 |
| **Education** | | | | | | |
| less than tertiary or non education | 5477 | 3.9 | 2010 | 382.68 | 190.63 | 647.06 |
| tertiary education | 1339 | 3.4 | 2080 | 450.82 | 216.88 | 904.80 |
| **Region** | | | | | | |
| Yerevan | 2016 | 3.5 | 1870 | 394.89 | 210.79 | 810.66 |
| North | 1536 | 3.6 | 2230 | 407.70 | 183.07 | 652.57 |
| Central North | 1536 | 4.2 | 2020 | 395.37 | 196.16 | 639.09 |
| South | 1728 | 4.0 | 2020 | 382.83 | 189.88 | 634.41 |

## *Table 2. Share of food consumption in monetary value to total consumption by food Sources at National and Sub National Levels*

***Share of food consumption to total consumption in monetary value and by food sources***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Number of sampled households | Share of food consumption in monetary value to total consumption (%) | Share of food consumption in monetary value purchased to tota food value (%) | Share of food consumption in monetary value from own production to total food value (%) | Share of food consumption in monetary value eaten away from home to total food value (%) | Share of food consumption in monetary value from other sources to tota food value (%) |
|---|---|---|---|---|---|---|
| Nationwide | 6816 | 56.9 | 75.7 | 17.8 | 2.0 | 4.5 |
| Income level | | | | | | |
| Quintile 1 | 1363 | 64.4 | 68.9 | 23.8 | 0.6 | 6.7 |
| Quintile 2 | 1363 | 62.5 | 70.4 | 23.6 | 0.6 | 5.3 |
| Quintile 3 | 1364 | 59.4 | 74.9 | 19.6 | 0.8 | 4.6 |
| Quintile 4 | 1363 | 56.3 | 77.8 | 16.4 | 1.6 | 4.1 |
| Quintile 5 | 1363 | 50.3 | 80.8 | 11.4 | 4.7 | 3.1 |
| Area | | | | | | |
| urban | 3072 | 59.4 | 84.1 | 8.7 | 1.4 | 5.8 |
| rural | 1728 | 63.3 | 58.3 | 37.4 | 0.6 | 3.7 |
| Yerevan | 2016 | 48.7 | 89.9 | 1.7 | 4.2 | 4.2 |
| HH Size | | | | | | |
| Less than 4 | 2406 | 53.4 | 79.3 | 11.8 | 1.9 | 7.1 |
| 4 to 5 | 2821 | 55.7 | 77.3 | 16.1 | 2.5 | 4.1 |
| More than 5 | 1589 | 61.4 | 71.3 | 24.2 | 1.4 | 3.2 |
| Gender of head of HH | | | | | | |
| male | 4723 | 56.9 | 75.6 | 18.3 | 2.1 | 4.0 |
| female | 2093 | 56.8 | 76.2 | 16.4 | 1.7 | 5.8 |
| Age of head of HH | | | | | | |
| <35 | 402 | 48.2 | 76.7 | 7.6 | 6.6 | 9.2 |
| >=35and<45 | 1193 | 58.1 | 74.9 | 18.7 | 1.6 | 4.8 |
| >=45and<=60 | 2561 | 56.0 | 78.9 | 14.8 | 2.3 | 4.0 |
| >60 | 2660 | 58.7 | 73.0 | 21.7 | 1.3 | 4.1 |
| Economic activity of head of HH | | | | | | |
| employee | 2025 | 54.1 | 83.5 | 9.1 | 3.5 | 3.8 |
| self-employed | 1503 | 61.8 | 60.1 | 35.7 | 0.7 | 3.6 |
| unemployed | 2821 | 56.9 | 81.1 | 11.8 | 1.5 | 5.5 |
| others | 467 | 51.5 | 76.5 | 15.7 | 2.9 | 5.0 |
| Education | | | | | | |
| less than tertiary or non education | 5477 | 59.1 | 73.7 | 20.4 | 1.3 | 4.6 |
| tertiary education | 1339 | 49.8 | 83.3 | 8.1 | 4.6 | 4.0 |
| Region | | | | | | |
| Yerevan | 2016 | 48.7 | 89.9 | 1.7 | 4.2 | 4.2 |
| North | 1536 | 62.5 | 71.3 | 22.5 | 0.6 | 5.7 |
| Central North | 1536 | 61.9 | 70.4 | 24.2 | 1.5 | 3.9 |
| South | 1728 | 60.3 | 66.1 | 29.0 | 0.8 | 4.1 |

## *Table 3. Inequality Measures of Income and Food and Total Consumption (dispersion ratio)*

***Inequality measures (Dispersion Ratios) of food consumption, total consumption and income***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Dispersion ratio of food consumption in dietary energy (80/20) | Dispersion ratio of food consumption in monetary value (80/20) | Dispersion ratio of total consumption (80/20) | Dispersion ratio of income (80/20) |
|---|---|---|---|---|
| Nationwide | 1.2 | 1.5 | 1.9 | 8.4 |
| Area | | | | |
| urban | 1.3 | 1.5 | 1.8 | 6.9 |
| rural | 1.2 | 1.4 | 1.7 | 10.1 |
| Yerevan | 1.3 | 1.7 | 2.1 | 7.3 |
| HH Size | | | | |
| Less than 4 | 1.2 | 1.4 | 1.8 | 6.7 |
| 4 to 5 | 1.1 | 1.3 | 1.7 | 9.3 |
| More than 5 | 1.1 | 1.4 | 1.6 | 6.4 |
| Gender of head of HH | | | | |
| male | 1.2 | 1.5 | 1.9 | 8.8 |
| female | 1.2 | 1.6 | 2.0 | 7.7 |
| Age of head of HH | | | | |
| <35 | 1.4 | 1.9 | 3.6 | 13.1 |
| >=35and<45 | 1.1 | 1.4 | 1.7 | 9.2 |
| >=45and<=60 | 1.2 | 1.4 | 1.7 | 9.4 |
| >60 | 1.2 | 1.5 | 1.9 | 6.4 |
| Economic activity of head of HH | | | | |
| employee | 1.2 | 1.4 | 1.7 | 5.5 |
| self-employed | 1.2 | 1.4 | 1.8 | 9.6 |
| unemployed | 1.2 | 1.5 | 1.8 | 7.4 |
| others | 1.2 | 1.7 | 2.1 | 11.4 |
| Education | | | | |
| less than tertiary or non education | 1.2 | 1.4 | 1.7 | 7.3 |
| tertiary education | 1.2 | 1.6 | 2.0 | 8.4 |
| Region | | | | |
| Yerevan | 1.3 | 1.7 | 2.1 | 7.3 |
| North | 1.4 | 1.7 | 2.1 | 9.4 |
| Central North | 1.2 | 1.4 | 1.5 | 8.2 |
| South | 1.2 | 1.4 | 1.5 | 5.6 |

## *Table 4. Inequality Measures: Income, Food and Total Consumption - GINI COEFFICIENTS (Log Normal assumption)*

***Inequality measures (GINI coefficients – Log normal assumption) of food consumption, total consumption and income by population groupings***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Number of sampled households | Average number of people in household | GINI of Food dietary energy Consumption DUE TO income (Log Normal assumption) (%) | GINI of Food Consumption in monetary value DUE TO income (Log Normal assumption) (%) | GINI of total consumption DUE TO income (%) | GINI of Income - FULL (%) | GINI of Food dietary energy Consumption – FULL (Log Normal assumption) (%) | GINI of Food Consumption in monetary value - FULL (Log Normal assumption) (%) | GINI of Food dietary energy consumption - FULL as defined by FAO (%) |
|---|---|---|---|---|---|---|---|---|---|
| Nationwide | 6816 | 3.8 | 3.5 | 8.6 | 14 | 37.9 | 11.4 | 17.5 | 11.6 |
| Area | | | | | | | | | |
| urban | 3072 | 3.5 | 5.5 | 9.2 | 12 | 34.5 | 11.1 | 16.5 | 12.4 |
| rural | 1728 | 4.3 | 3.5 | 6.6 | 9.8 | 39.1 | 11.1 | 16.8 | 11.6 |
| Yerevan | 2016 | 3.5 | 6.3 | 13 | 16.9 | 37 | 14.3 | 21.7 | 12.7 |
| HH Size | | | | | | | | | |
| Less than 4 | 2406 | 1.9 | 2.9 | 8.2 | 13.1 | 35.6 | 11.8 | 18.2 | 11.5 |
| 4 to 5 | 2821 | 4.0 | 2.4 | 7.2 | 12.6 | 37.3 | 9.9 | 15.8 | 11.4 |
| More than 5 | 1589 | 6.1 | 2.5 | 6.5 | 9.9 | 34 | 9.5 | 14.2 | 11.4 |
| Gender of head of HH | | | | | | | | | |
| male | 4723 | 4.1 | 3.3 | 8.3 | 13.6 | 38.2 | 10.8 | 16.9 | 11.6 |
| female | 2093 | 3.1 | 4.3 | 9.8 | 15.5 | 36.5 | 12.9 | 18.9 | 11.9 |
| Age of head of HH | | | | | | | | | |
| <35 | 402 | 3.2 | 8.6 | 17.6 | 30.5 | 45.4 | 15.5 | 22.3 | 13.9 |
| >=35and<45 | 1193 | 3.9 | 2.3 | 7.1 | 11.3 | 39.6 | 10 | 15.8 | 11.4 |
| >=45and<=60 | 2561 | 3.9 | 3.6 | 8.6 | 12.5 | 37.5 | 10.9 | 17.2 | 11.7 |
| >60 | 2660 | 3.7 | 4.1 | 8.8 | 13.6 | 34.5 | 12.1 | 17.8 | 11.8 |
| Economic activity of head of HH | | | | | | | | | |
| employee | 2025 | 3.8 | 4.1 | 9.7 | 14.4 | 33.2 | 10.9 | 17.1 | 11.8 |
| self-employed | 1503 | 4.2 | 3.6 | 7.1 | 12.5 | 38.3 | 10.9 | 16.3 | 11.7 |
| unemployed | 2821 | 3.6 | 4.1 | 9.6 | 14 | 37.2 | 11.9 | 18.1 | 11.8 |
| others | 467 | 3.3 | 4.7 | 11.5 | 17.6 | 41.4 | 11.2 | 18.8 | 12.1 |
| Education | | | | | | | | | |
| less than tertiary or non education | 5477 | 3.9 | 3.1 | 7 | 11.3 | 35.1 | 10.9 | 16.3 | 11.5 |
| tertiary education | 1339 | 3.4 | 5.9 | 12.4 | 17.1 | 37.8 | 13.5 | 20.8 | 12.6 |
| Region | | | | | | | | | |
| Yerevan | 2016 | 3.5 | 6.3 | 13 | 16.9 | 37 | 14.3 | 21.7 | 12.7 |
| North | 1536 | 3.6 | 6.2 | 10.2 | 15.4 | 39.2 | 13.1 | 18.9 | 12.7 |
| Central North | 1536 | 4.2 | 3.9 | 7 | 8.4 | 36.2 | 11.1 | 16.9 | 11.8 |
| South | 1728 | 4.0 | 4.5 | 7.2 | 9.4 | 30.9 | 7.7 | 12.2 | 12.0 |

## *Table 5. Inequality Measures: Income, Food and Total Consumption by National and Sub National Levels - COEFFICIENT OF VARIATION*

***Inequality Measures (CV – Coefficient of variation - Log normal assumption) of food consumption, total consumption and income by population groupings***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Number of sampled households | Average number of people in household | CV of food dietary energy DUE TO income (%) | CV of food consumption in monetary value DUE TO income (%) | CV of total consumption DUE TO income (%) | CV of Income - FULL (%) | CV of food dietary energy consumption FULL (%) | CV of food consumption in monetary value FULL (%) | CV of food dietary energy consumption - FULL as defined by FAO (%) |
|---|---|---|---|---|---|---|---|---|---|
| Nationwide | 6816 | 3.8 | 6.2 | 15.4 | 25.3 | 79.3 | 20.5 | 32.1 | 20.9 |
| Area | | | | | | | | | |
| urban | 3072 | 3.5 | 9.8 | 16.4 | 21.5 | 70.2 | 19.9 | 30.1 | 22.3 |
| rural | 1728 | 4.3 | 6.1 | 11.7 | 17.6 | 82.8 | 19.9 | 30.6 | 20.9 |
| Yerevan | 2016 | 3.5 | 11.2 | 23.5 | 31.0 | 76.8 | 25.9 | 40.5 | 22.9 |
| HH Size | | | | | | | | | |
| Less than 4 | 2406 | 1.9 | 5.2 | 14.6 | 23.6 | 72.9 | 21.2 | 33.4 | 20.7 |
| 4 to 5 | 2821 | 4.0 | 4.3 | 12.9 | 22.6 | 77.6 | 17.7 | 28.7 | 20.5 |
| More than 5 | 1589 | 6.1 | 4.4 | 11.6 | 17.7 | 68.8 | 17.0 | 25.8 | 20.5 |
| Gender of head of HH | | | | | | | | | |
| male | 4723 | 4.1 | 5.9 | 14.9 | 24.5 | 80.4 | 19.4 | 30.9 | 20.9 |
| female | 2093 | 3.1 | 7.7 | 17.6 | 28.3 | 75.3 | 23.3 | 34.9 | 21.4 |
| Age of head of HH | | | | | | | | | |
| <35 | 402 | 3.2 | 15.3 | 32.3 | 60.0 | 103.6 | 28.3 | 41.6 | 25.2 |
| >=35and<45 | 1193 | 3.9 | 4.0 | 12.7 | 20.2 | 84.5 | 18.0 | 28.8 | 20.4 |
| >=45and<=60 | 2561 | 3.9 | 6.4 | 15.3 | 22.6 | 78.2 | 19.6 | 31.4 | 21.0 |
| >60 | 2660 | 3.7 | 7.2 | 15.8 | 24.6 | 70.0 | 21.8 | 32.7 | 21.3 |
| Economic activity of head of HH | | | | | | | | | |
| employee | 2025 | 3.8 | 7.4 | 17.4 | 26.1 | 66.7 | 19.7 | 31.3 | 21.3 |
| self-employed | 1503 | 4.2 | 6.4 | 12.6 | 22.6 | 80.7 | 19.5 | 29.6 | 21.0 |
| unemployed | 2821 | 3.6 | 7.2 | 17.1 | 25.3 | 77.5 | 21.4 | 33.2 | 21.3 |
| others | 467 | 3.3 | 8.4 | 20.6 | 32.3 | 90.0 | 20.1 | 34.6 | 21.7 |
| Education | | | | | | | | | |
| less than tertiary or non education | 5477 | 3.9 | 5.5 | 12.4 | 20.3 | 71.7 | 19.5 | 29.7 | 20.7 |
| tertiary education | 1339 | 3.4 | 10.6 | 22.4 | 31.3 | 79.0 | 24.5 | 38.7 | 22.6 |
| Region | | | | | | | | | |
| Yerevan | 2016 | 3.5 | 11.2 | 23.5 | 31.0 | 76.8 | 25.9 | 40.5 | 22.9 |
| North | 1536 | 3.6 | 11.0 | 18.2 | 27.9 | 83.2 | 23.7 | 34.8 | 22.8 |
| Central North | 1536 | 4.2 | 6.9 | 12.6 | 15.0 | 74.7 | 20.0 | 30.8 | 21.2 |
| South | 1728 | 4.0 | 7.9 | 12.9 | 16.8 | 61.0 | 13.7 | 22.0 | 21.5 |

## *Table 6. Food Deprivation at National, Sub National and Other Population Groups*

***Food deprivation and parameters by population groupings***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Number of sampled households | Average number of people in household | CV (%) of food dietary energy consumption (kcal/person/day) -FULL as defined by FAO | Minimum dietary energy requirement (kcal/person/day) as defined by FAO | Average of food dietary energy consumption (kcal/person/day) | Proportion of food deprivation in total population (%) as defined by FAO |
|---|---|---|---|---|---|---|
| Nationwide | 6816 | 3.8 | 21 | 1796 | 2020 | 32 |
| Income level | | | | | | |
| Quintile 1 | 1363 | 4.5 | 20 | | 1870 | 46 |
| Quintile 2 | 1363 | 4.2 | 20 | | 1940 | 39 |
| Quintile 3 | 1364 | 4.0 | 20 | | 1970 | 36 |
| Quintile 4 | 1363 | 3.7 | 20 | | 2050 | 28 |
| Quintile 5 | 1363 | 3.1 | 20 | | 2210 | 17 |
| Area | | | | | | |
| urban | 3072 | 3.5 | 22 | 1824 | 2040 | 35 |
| rural | 1728 | 4.3 | 21 | 1762 | 2130 | 21 |
| Yerevan | 2016 | 3.5 | 23 | 1796 | 1870 | 47 |
| HH Size | | | | | | |
| Less than 4 | 2406 | 1.9 | 21 | 1895 | 2460 | 12 |
| 4 to 5 | 2821 | 4.0 | 20 | 1903 | 2020 | 42 |
| More than 5 | 1589 | 6.1 | 20 | 1798 | 1810 | 52 |
| Gender of head of HH | | | | | | |
| male | 4723 | 4.1 | 21 | 1874 | 2010 | 41 |
| female | 2093 | 3.1 | 21 | 1823 | 2060 | 32 |
| Age of head of HH | | | | | | |
| <35 | 402 | 3.2 | 25 | 1796 | 2030 | 36 |
| >=35and<45 | 1193 | 3.9 | 20 | 1796 | 2010 | 32 |
| >=45and<=60 | 2561 | 3.9 | 21 | 1796 | 2020 | 32 |
| >60 | 2660 | 3.7 | 21 | 1796 | 2020 | 32 |
| Economic activity of head of HH | | | | | | |
| employee | 2025 | 3.8 | 21 | 1796 | 1990 | 35 |
| self-employed | 1503 | 4.2 | 21 | 1796 | 2090 | 26 |
| unemployed | 2821 | 3.6 | 21 | 1796 | 1970 | 37 |
| others | 467 | 3.3 | 22 | 1796 | 2200 | 20 |
| Education | | | | | | |
| less than tertiary or non education | 5477 | 3.9 | 21 | 1796 | 2010 | 33 |
| tertiary education | 1339 | 3.4 | 23 | 1796 | 2080 | 29 |
| Region | | | | | | |
| Yerevan | 2016 | 3.5 | 23 | 1796 | 1870 | 47 |
| North | 1536 | 3.6 | 23 | 1796 | 2230 | 20 |
| Central North | 1536 | 4.2 | 21 | 1796 | 2020 | 33 |
| South | 1728 | 4.0 | 22 | 1796 | 2020 | 33 |

## *Table 7. Share of food dietary energy by food sources to total food dietary energy consumption*

***Share of food dietary energy by food sources to total food dietary energy consumption***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Number of sampled households | Share of dietary energy purchased to total food consumption (%) | Share of dietary energy from own production to total food consumption (%) | Share of dietary energy eaten away from home to total food consumption (%) | Share of dietary energy from other sources to total food consumption (%) |
|---|---|---|---|---|---|
| Nationwide | 6816 | 82.6 | 12.7 | 1.7 | 3.0 |
| Income level | | | | | |
| Quintile 1 | 1363 | 78.0 | 16.8 | 0.5 | 4.6 |
| Quintile 2 | 1363 | 80.0 | 16.3 | 0.5 | 3.2 |
| Quintile 3 | 1364 | 82.7 | 13.5 | 0.7 | 3.0 |
| Quintile 4 | 1363 | 84.5 | 11.4 | 1.5 | 2.6 |
| Quintile 5 | 1363 | 85.3 | 8.3 | 4.2 | 2.2 |
| Area | | | | | |
| urban | 3072 | 90.7 | 4.0 | 1.3 | 4.0 |
| rural | 1728 | 69.3 | 27.9 | 0.6 | 2.2 |
| Yerevan | 2016 | 92.7 | 0.6 | 3.7 | 3.0 |
| HH Size | | | | | |
| Less than 4 | 2406 | 85.8 | 7.8 | 1.6 | 4.8 |
| 4 to 5 | 2821 | 83.6 | 11.4 | 2.1 | 2.9 |
| More than 5 | 1589 | 79.5 | 17.4 | 1.2 | 2.0 |
| Gender of head of HH | | | | | |
| male | 4723 | 82.4 | 13.3 | 1.8 | 2.6 |
| female | 2093 | 83.3 | 11.1 | 1.5 | 4.1 |
| Age of head of HH | | | | | |
| <35 | 402 | 83.5 | 5.1 | 4.9 | 6.6 |
| >=35and<45 | 1193 | 81.5 | 13.7 | 1.4 | 3.3 |
| >=45and<=60 | 2561 | 84.8 | 10.4 | 2.0 | 2.7 |
| >60 | 2660 | 81.0 | 15.3 | 1.1 | 2.6 |
| Economic activity of head of HH | | | | | |
| others | 467 | 83.3 | 10.7 | 2.3 | 3.8 |
| employee | 2025 | 88.4 | 6.0 | 3.1 | 2.6 |
| self-employed | 1503 | 70.1 | 27.2 | 0.6 | 2.0 |
| unemployed | 2821 | 87.4 | 7.4 | 1.3 | 3.8 |
| Education | | | | | |
| less than tertiary or non education | 5477 | 81.6 | 14.2 | 1.2 | 3.0 |
| tertiary education | 1339 | 87.0 | 6.2 | 3.9 | 3.0 |
| Region | | | | | |
| Yerevan | 2016 | 92.7 | 0.6 | 3.7 | 3.0 |
| North | 1536 | 79.6 | 16.4 | 0.6 | 3.4 |
| Central North | 1536 | 78.4 | 17.7 | 1.4 | 2.5 |
| South | 1728 | 77.5 | 18.9 | 0.8 | 2.8 |

## *Table 8. FAO indicators on average food deficit of the undernourished based on total consumption expenditure and the first quintile*

***Table 8: FAO indicators on average food deficit of the undernourished based on total consumption expenditure and the first quintile***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | | | (kcal/person/day) | Minimum dietary energy requirement (kcal/person/day) | Dietary energy unit value of the first quintile (Drams/1000kcals) | Critical food poverty line of the 1st quintile (Drams/person/day) | Total consumption expenditure (Drams/person/day) | CV of total consumption expenditure - FULL (%) | Prevalence of Critical Food Poverty (%) |
|---|---|---|---|---|---|---|---|---|---|
| Nationwide | 32.1 | 20.9 | 2020 | 1796 | 178.61 | 320.78 | 694.75 | 25.3 | 0.1 |
| Area | | | | | | | | | |
| urban | 34.9 | 22.3 | 2040 | 1824 | 175.79 | 320.64 | 642.64 | 21.5 | 0.1 |
| rural | 20.9 | 20.9 | 2130 | 1762 | 176.60 | 311.17 | 641.74 | 17.6 | 0.0 |
| Yerevan | 47.1 | 22.9 | 1870 | 1796 | 188.14 | 337.91 | 810.66 | 31.0 | 0.3 |
| HH Size | | | | | | | | | |
| Less than 4 | 11.9 | 20.7 | 2460 | 1895 | 178.61 | 338.47 | 936.30 | 23.6 | 0.0 |
| 4 to 5 | 42.2 | 20.5 | 2020 | 1903 | 178.61 | 339.97 | 720.12 | 22.6 | 0.1 |
| More than 5 | 52.2 | 20.5 | 1810 | 1798 | 178.61 | 321.09 | 554.94 | 17.7 | 0.1 |
| Gender of head of HH | | | | | | | | | |
| male | 40.9 | 20.9 | 2010 | 1874 | 178.61 | 334.73 | 693.49 | 24.5 | 0.2 |
| female | 32.1 | 21.4 | 2060 | 1823 | 178.61 | 325.60 | 698.42 | 28.3 | 0.4 |
| Age of head of HH | | | | | | | | | |
| <35 | 35.9 | 25.2 | 2030 | 1796 | 178.61 | 320.78 | 874.01 | 60.0 | 6.3 |
| >=35and<45 | 32.2 | 20.4 | 2010 | 1796 | 178.61 | 320.78 | 667.65 | 20.2 | 0.0 |
| >=45and<=60 | 31.9 | 21.0 | 2020 | 1796 | 178.61 | 320.78 | 721.79 | 22.6 | 0.0 |
| >60 | 32.5 | 21.3 | 2020 | 1796 | 178.61 | 320.78 | 659.24 | 24.6 | 0.2 |
| Economic activity of head of HH | | | | | | | | | |
| others | 20.2 | 21.7 | 2200 | 1796 | 178.61 | 320.78 | 875.77 | 32.3 | 0.1 |
| employee | 35.1 | 21.3 | 1990 | 1796 | 178.61 | 320.78 | 746.18 | 26.1 | 0.1 |
| self-employed | 26.4 | 21.0 | 2090 | 1796 | 178.61 | 320.78 | 655.56 | 22.6 | 0.1 |
| unemployed | 37.2 | 21.3 | 1970 | 1796 | 178.61 | 320.78 | 656.95 | 25.3 | 0.3 |
| Education | | | | | | | | | |
| less than tertiary & no educ. | 33.0 | 20.7 | 2010 | 1796 | 178.61 | 320.78 | 647.06 | 20.3 | 0.0 |
| tertiary education | 29.4 | 22.6 | 2080 | 1796 | 178.61 | 320.78 | 904.80 | 31.3 | 0.1 |
| Region | | | | | | | | | |
| Yerevan | 47.1 | 22.9 | 1870 | 1796 | 188.14 | 337.91 | 810.66 | 31.0 | 0.3 |
| North | 20.0 | 22.8 | 2230 | 1796 | 171.03 | 307.17 | 652.57 | 27.9 | 0.4 |
| Central North | 32.8 | 21.2 | 2020 | 1796 | 180.42 | 324.03 | 639.09 | 15.0 | 0.0 |
| South | 33.1 | 21.5 | 2020 | 1796 | 180.35 | 323.91 | 634.41 | 16.8 | 0.0 |

## *Table 9. Food consumption in monetary and nutrient values by national, sub national and population groupings*

***Food consumption in monetary and nutrient values by national, sub national and population groupings***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Categories and Groupings | Average food dietary energy consumption (kcal/person/day) | Average food consumption in monetary value of food consumed (LC$/person/day) | Average food protein consumption (g/person/day) | Average food carbohydrates consumption (g/person/day) | Average food fat consumption (g/person/day) |
|---|---|---|---|---|---|
| Nationwide | 2020 | 395.29 | 57.2 | 263.0 | 52.2 |
| Income level | | | | | |
| Quintile 1 | 1870 | 332.09 | 52.3 | 254.5 | 43.9 |
| Quintile 2 | 1940 | 352.68 | 54.5 | 262.5 | 46.0 |
| Quintile 3 | 1970 | 366.77 | 55.4 | 260.6 | 48.3 |
| Quintile 4 | 2050 | 406.39 | 58.2 | 265.0 | 54.0 |
| Quintile 5 | 2210 | 490.37 | 63.7 | 269.6 | 65.1 |
| Area | | | | | |
| urban | 2040 | 381.55 | 57.1 | 269.6 | 51.9 |
| rural | 2130 | 406.51 | 59.7 | 287.8 | 52.6 |
| Yerevan | 1870 | 394.89 | 54.2 | 226.3 | 52.0 |
| HH Size | | | | | |
| Less than 4 | 2460 | 499.60 | 68.7 | 306.4 | 72.1 |
| 4 to 5 | 2020 | 401.21 | 57.6 | 262.0 | 52.4 |
| More than 5 | 1810 | 340.55 | 51.5 | 244.2 | 42.8 |
| Gender of head of HH | | | | | |
| male | 2010 | 394.78 | 57.0 | 261.4 | 51.6 |
| female | 2060 | 396.75 | 57.7 | 267.9 | 54.0 |
| Age of head of HH | | | | | |
| <35 | 2030 | 420.97 | 57.7 | 255.1 | 57.2 |
| >=35and<45 | 2010 | 388.22 | 57.0 | 264.0 | 51.0 |
| >=45and<=60 | 2020 | 403.93 | 57.4 | 260.9 | 53.3 |
| >60 | 2020 | 387.20 | 57.1 | 265.6 | 51.1 |
| Economic activity of head of HH | | | | | |
| employee | 1990 | 403.72 | 56.7 | 251.6 | 53.3 |
| self-employed | 2090 | 405.02 | 59.1 | 280.2 | 52.6 |
| unemployed | 1970 | 374.09 | 55.5 | 256.7 | 50.0 |
| others | 2200 | 451.10 | 62.9 | 283.0 | 59.8 |
| Education | | | | | |
| less than tertiary or non education | 2010 | 382.68 | 56.7 | 265.1 | 50.4 |
| tertiary education | 2080 | 450.82 | 59.5 | 253.8 | 60.1 |
| Region | | | | | |
| Yerevan | 1870 | 394.89 | 54.2 | 226.3 | 52.0 |
| North | 2230 | 407.70 | 62.6 | 295.5 | 53.8 |
| Central North | 2020 | 395.37 | 57.2 | 262.5 | 51.4 |
| South | 2020 | 382.83 | 55.8 | 281.0 | 51.7 |

## *Table 10. Food consumption in quantity equivalent, monetary and nutrient values by food commodity groups*

***Food consumption in quantity equivalent, monetary and nutrient values by food commodity groups***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Food commodity group | Average food quantity consumed (g/person/day) | Average food consumption in monetary value (LC$/person/day) | Average food dietary energy consumption (kcal/person/day) | Average food proteins consumption (g/person/day) | Average food carbohydrates consumption (g/person/day) | Average food fats consumption (g/person/day) |
|---|---|---|---|---|---|---|
| CEREALS AND PRODUCTS | 415.5 | 118.93 | 1162 | 33.0 | 190.4 | 5.7 |
| ROOTS AND TUBERS AND PRODUCTS | 133.2 | 13.44 | 100 | 2.2 | 15.9 | 0.1 |
| SUGARS AND SYRUPS AND PRODUCTS | 19.4 | 6.10 | 74 | 0.0 | 19.2 | 0.0 |
| PULSES | 9.6 | 3.65 | 31 | 2.1 | 4.8 | 0.1 |
| TREE NUTS | 0.0 | 0.00 | 0 | 0.0 | 0.0 | 0.0 |
| OIL CROPS | 0.1 | 0.07 | 0 | 0.0 | 0.0 | 0.0 |
| VEGETABLES AND PRODUCTS | 173.7 | 50.42 | 41 | 2.3 | 5.9 | 0.4 |
| FRUITS AND PRODUCTS | 87.1 | 22.71 | 43 | 0.4 | 9.7 | 0.3 |
| STIMULANTS | 6.9 | 11.09 | 18 | 0.9 | 3.0 | 0.1 |
| SPICES | 16.1 | 3.91 | 4 | 0.2 | 0.5 | 0.1 |
| ALCOHOLIC BEVERAGES | 4.4 | 5.33 | 9 | 0.0 | 0.1 | 0.0 |
| MEAT | 39.6 | 47.65 | 95 | 5.5 | 0.0 | 7.9 |
| EGGS | 14.0 | 13.93 | 20 | 1.5 | 0.2 | 1.4 |
| FISH AND FISH PRODUCTS | 7.1 | 3.90 | 7 | 1.1 | 0.0 | 0.2 |
| MILK AND CHEESE | 93.3 | 38.44 | 110 | 6.0 | 3.9 | 8.1 |
| OILS AND FATS (vegetable oils) | 8.9 | 6.90 | 77 | 0.0 | 0.0 | 8.6 |
| OILS AND FATS (animal fats) | 19.5 | 21.82 | 148 | 0.1 | 0.0 | 16.4 |
| NON ALCOHOLIC BEVERAGES | 16.9 | 2.54 | 4 | 0.0 | 1.0 | 0.0 |
| MISCELLANEOUS AND PREPARED FOOD | 14.9 | 24.45 | 78 | 2.0 | 8.3 | 2.8 |

## *Table 11. Nutrient costs by food commodity groups*[4]

**Nutrient costs by food commodity groups**

**Region: Countries in Transition  Country: Armenia  Year: 2004**

| Food commodity group | Average Dietary Energy Unit Value (AMD/1000kcals) | Proteins Unit Value (AMD/100g) | Carbohydrates Unit Value (AMD/100g) | Fats Unit Value (AMD/100g) |
|---|---|---|---|---|
| CEREALS AND PRODUCTS | 102.31 | 360.22 | 62.45 | … |
| ROOTS AND TUBERS AND PRODUCTS | 133.82 | 619.00 | 84.56 | … |
| SUGARS AND SYRUPS AND PRODUCTS | 81.95 | … | 31.76 | … |
| PULSES | 117.67 | 175.65 | 75.71 | … |
| TREE NUTS | 0.00 | … | … | … |
| OIL CROPS | 192.83 | 400.22 | 862.26 | 216.45 |
| VEGETABLES AND PRODUCTS | 1244.16 | … | 848.72 | … |
| FRUITS AND PRODUCTS | 530.16 | … | 233.61 | … |
| STIMULANTS | 625.88 | … | 366.05 | … |
| SPICES | 1005.76 | … | 756.93 | … |
| ALCOHOLIC BEVERAGES | 600.66 | … | … | … |
| MEAT | 502.41 | 868.23 | … | 602.59 |
| EGGS | 701.35 | 930.76 |  | 976.39 |
| FISH AND FISH PRODUCTS | 556.69 | 364.63 | … | … |
| MILK AND CHEESE | 350.93 | 640.97 | 980.29 | 475.20 |
| OILS AND FATS (vegetable oils) | 89.52 | … | … | 80.58 |
| OILS AND FATS (animal fats) | 147.23 | … | … | 133.05 |
| NON ALCOHOLIC BEVERAGES | 678.29 | … | 250.72 | … |
| MISCELLANEOUS AND PREPARED FOOD | 314.29 | 1234.37 | 294.61 | 876.11 |

[4] High and/or absent values of unit cost for certain food commodity groups mean that the food commodity group has a very low content of that nutrient (for example protein, carbohydrate, fat) low content of that nutrient and the unit cost is extremely high. For example protein from alcoholic beverages has a very low content of protein, so the cost of having 100 gm of protein could be 137762.72 drams.

*Table 12. Nutrient density per 1000 kcal*

**Nutrient density per 1000 kcal**

**Region: Countries in Transition  Country: Armenia  Year: 2004**

| Food commodity group | Average food dietary energy consumption (kcal/person/day) | Protein consumption (g/1000kcal) | Carbohydrates consumption (g/1000kcal) | Fats consumption (g/1000kcal) |
|---|---|---|---|---|
| Nationwide | 2020 | 28.3 | 130.2 | 25.8 |
| Income level | | | | |
| Quintile 1 | 1870 | 28.0 | 136.4 | 23.5 |
| Quintile 2 | 1940 | 28.1 | 135.5 | 23.7 |
| Quintile 3 | 1970 | 28.1 | 132.5 | 24.6 |
| Quintile 4 | 2050 | 28.3 | 128.9 | 26.3 |
| Quintile 5 | 2210 | 28.8 | 121.9 | 29.4 |
| Area | | | | |
| urban | 2040 | 28.1 | 132.4 | 25.5 |
| rural | 2130 | 28.1 | 135.2 | 24.7 |
| Yerevan | 1870 | 29.0 | 120.8 | 27.8 |
| HH Size | | | | |
| Less than 4 | 2460 | 27.9 | 124.4 | 29.3 |
| 4 to 5 | 2020 | 28.5 | 129.6 | 25.9 |
| More than 5 | 1810 | 28.4 | 134.5 | 23.6 |
| Gender of head of HH | | | | |
| male | 2010 | 28.4 | 130.2 | 25.7 |
| female | 2060 | 28.1 | 130.2 | 26.3 |
| Age of head of HH | | | | |
| <35 | 2030 | 28.5 | 125.9 | 28.3 |
| >=35and<45 | 2010 | 28.3 | 131.2 | 25.4 |
| >=45and<=60 | 2020 | 28.4 | 128.9 | 26.4 |
| >60 | 2020 | 28.2 | 131.4 | 25.3 |
| Economic activity of head of HH | | | | |
| employee | 1990 | 28.5 | 126.4 | 26.8 |
| self-employed | 2090 | 28.2 | 133.9 | 25.1 |
| unemployed | 1970 | 28.2 | 130.5 | 25.4 |
| others | 2200 | 28.6 | 128.8 | 27.2 |
| Education | | | | |
| less than tertiary or non education | 2010 | 28.2 | 132.1 | 25.1 |
| tertiary education | 2080 | 28.6 | 122.1 | 28.9 |
| Region | | | | |
| Yerevan | 1870 | 29.0 | 120.8 | 27.8 |
| North | 2230 | 28.1 | 132.7 | 24.2 |
| Central North | 2020 | 28.4 | 130.3 | 25.5 |
| South | 2020 | 27.7 | 139.4 | 25.6 |

## *Table 13. Share of each nutrient in total dietary energy consumption by food commodity groups*

***Share of each nutrient in total dietary energy consumption by food commodity groups***

***Region: Countries in Transition  Country: Armenia  Year: 2004***

| Food commodity group | Share of dietary energy of each nutrient Total Energy Consumption (%) | Share of protein consumption in Total Protein Consumption (%) | Share of carbohydrates Consumption in Total Carbohydrates Consumption (%) | Share of Fats Consumption in Total Fats Consumption (%) |
|---|---|---|---|---|
| CEREALS AND PRODUCTS | 57.5 | 57.7 | 72.4 | 11.0 |
| ROOTS AND TUBERS AND PRODUCTS | 5.0 | 3.8 | 6.0 | 0.2 |
| SUGARS AND SYRUPS AND PRODUCTS | 3.7 | 0.0 | 7.3 | 0.0 |
| PULSES | 1.5 | 3.6 | 1.8 | 0.3 |
| TREE NUTS | 0.0 | 0.0 | 0.0 | 0.0 |
| OIL CROPS | 0.0 | 0.0 | 0.0 | 0.1 |
| VEGETABLES AND PRODUCTS | 2.0 | 3.9 | 2.3 | 0.7 |
| FRUITS AND PRODUCTS | 2.1 | 0.7 | 3.7 | 0.5 |
| STIMULANTS | 0.9 | 1.6 | 1.2 | 0.3 |
| SPICES | 0.2 | 0.3 | 0.2 | 0.1 |
| ALCOHOLIC BEVERAGES | 0.4 | 0.0 | 0.0 | 0.0 |
| MEAT | 4.7 | 9.6 | 0.0 | 15.1 |
| EGGS | 1.0 | 2.6 | 0.1 | 2.7 |
| FISH AND FISH PRODUCTS | 0.3 | 1.9 | 0.0 | 0.3 |
| MILK AND CHEESE | 5.4 | 10.5 | 1.5 | 15.5 |
| OILS AND FATS (vegetable oils) | 3.8 | 0.0 | 0.0 | 16.4 |
| OILS AND FATS (animal fats) | 7.3 | 0.2 | 0.0 | 31.4 |
| NON ALCOHOLIC BEVERAGES | 0.2 | 0.1 | 0.4 | 0.0 |
| MISCELLANEOUS AND PREPARED FOOD | 3.9 | 3.5 | 3.2 | 5.3 |

*"The content of this publication is the sole responsibility of the National Statistics Service of the Republic of Armenia and can in no way be taken to reflect the views of the European Union".*