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**NATIONAL STRATEGIC
REVIEW
OF FOOD SECURITY AND
NUTRITION IN ARMENIA**

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ABBREVIATIONS

ADS	Armenia Development Strategy 2014-2025
AMD	Armenian Dram
CRRC	Caucasus Research Resource Center
CFSVNA	Comprehensive Food Security, Vulnerability and Nutrition Analysis
DHS	Demographic and Health Survey
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investments
FLSEB	Family Living Standards Enhancement Benefits Program
GDP	Gross Domestic Product
GFC	Global Financial Crisis
Ha	Hectare
IFPRI	International Food Policy Research Institute
ILCS	Integrated Living Conditions Survey
Kcal	Kilocalorie
MDGs	Millennium Development Goals
MOH	Ministry of Health
MTEF	Medium Term Expenditure Framework
NGO	Non-Governmental organization
NSR	National Strategic Review
NSS RA	National Statistical Service of the Republic of Armenia
PPP	Purchasing Power Parity
RA	Republic of Armenia
SDGs	Sustainable Development Goals
SFP	School Feeding Programme
SME	Small-Medium Enterprise
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNICEF	United Nations Children’s Fund
UNIDO	United Nations Industrial Development Organization
WFP	World Food Programme
WHO	World Health Organization

EXECUTIVE SUMMARY

SDG2 is one of the cornerstones of the 2030 Agenda. Improved food security and nutrition is a foundation for progress in health, education, employment, women’s empowerment, poverty and inequality reduction. As a signatory to the Sustainable Development Goals, Armenia marked its commitment to these ambitious goals, and the National Strategic Review (NSR) of Food Security and Nutrition in Armenia attempts to provide a comprehensive assessment of the current state of food security and nutrition in the country, revealing the underlying factors and key challenges, examining the policies and programmes being implemented and suggesting the necessary government actions required within the framework of the SDG2. The overarching goal of the NSR is to support and guide the Government and relevant stakeholders towards SDG2 fulfilment by 2030. The Review process was carried out under Government stewardship with the close collaboration of stakeholders from the international community and Armenian civil society. The Government of Armenia established an intergovernmental committee on the SDGs under which the Social Subcommittee covering SDGs 1, 2, 3 and 17 was formed. The Social Subcommittee formed an SDG2 Steering Committee chaired by Mr. Armen Harutyunyan, Deputy Minister of Agriculture. With the support of Dr. Armen Yeghiazaryan, Chairman of the National Centre for the Regulation of Legislation and the United Nations World Food Programme, AVAG Solutions provided research support and strategic analysis for the deliberation of the Committee, resulting in this comprehensive report validated by the SDG2 Steering Committee.

The Government-led strategic review process focused on the i) analysis of the food security and nutrition situation and trends in Armenia and identification of the main challenges; ii) analysis of the national response; iii) identification of gaps in ensuring food and nutrition security; iv) elaboration of recommendations that will be required to meet the response gaps and accelerate progress towards the SDG 2 achievement; and v) support nationalization of the SDG 2. The NSR report was developed through an interactive and consultative process during which the draft national framework on the SDG 2 “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” was elaborated. The food security situation and trends are analyzed based on the SDG 2 draft national framework. Taking into account that, on January 1, 2016 the 2030 Agenda already entered into force, 2015 has been taken as the baseline year for the situation analysis of the SDG 2 indicators. Four pillars that comprehensively define food security are taken as a base for analyzing the food security situation and identifying challenges and gaps that need to be addressed to achieve SDG2. These four pillars, contextualized below, are: food availability, access, utilization and stability.

Food Availability: Armenia’s relatively strong agricultural performance since 2001 has resulted in a substantial increase in self-sufficiency levels of main food products and overall food availability. The average dietary energy supply indicator has increased by nearly 30 percent since 2000, comprised of nearly 2,900 kcal/capita/day in 2015 and approaching the Food and Agriculture Organization’s (FAO) maximum dietary energy requirement level (3,217 kcal/ person/day). About 66 percent of the total dietary energy per person available for consumption comes from domestic production. However, the availability of food in Armenia highly depends on food imports, especially with regard to cereals and certain types of meat. Meanwhile, these products provide more than half of the available dietary energy in Armenia. The country still imports 50.5 percent of the supplied wheat, 42 percent of legumes, 78

percent of poultry, 42 percent of pork, and 92 percent of vegetable oil. This reflects the vulnerability of the country's population to foreign food markets and food price fluctuations.

Food Access: Armenia's economic growth, and growth in food availability and dietary energy supply, have led to a decline in the prevalence of undernourishment. The prevalence of undernourishment has dropped nearly four times between 2000 and 2016. Nevertheless, nearly 6 percent of the Armenian population (approximately 180,000 people) consume an inadequate amount of calories needed to maintain an active and healthy lifestyle and are undernourished. About 16 percent of households (approximately 480,000 people) are food insecure. There are significant differences between the availability of food and the actual food consumption of the population. The average Armenian consumes about 2,420 kcal of dietary energy per day, which is higher than the minimum dietary energy requirement in Armenia (1,886 kcal / day). However, about half (47 percent) of the actual food consumption pattern of an average Armenian consists of staples, which are mainly bakery products and potatoes. Vegetables and fruits consist of one third of the pattern while protein-rich meat, fish and eggs consist of 9 percent. Despite the growth in incomes and in food availability between 2008-2015, the food consumption pattern of an average Armenian did not show any significant diversification or increase in consumption of more nutritious food items. This shows the limited financial accessibility of nutritious foods for most of the population and the lack of healthy nutritional habits and lifestyle.

Food utilization: Utilization is closely linked to nutritional indicators, especially among children aged 0-5. The last ten malnutrition indicators among 0-5 years old children have indicated some improvements, but there is a double burden of child malnutrition in the country in terms of concurrent presence of stunting and overweight. The exclusive breastfeeding rate for children up to 6 months has improved since 2010 and has approached the target value set by the World Health Organization (WHO) for 2025. The same trend is observed for the prevalence of anaemia: the prevalence of anaemia among women of reproductive age has dropped by 38 percent and by 51 percent among children under five years of age between 2005-2015. In terms of these indicators, Armenia has approached the target values set by the WHO for 2025.

Food stability: Stability characterizes the ability of households to maintain their food security over time and stability of the three aforementioned pillars. Hence, it refers to the vulnerability of households related to food security risks, mainly caused by the external natural, economic and political disturbances and shocks.¹ The NSR found that despite agricultural production growth and self-sufficiency in several food commodities, there is still a high dependency on food imports in Armenia. The country relies on imports of basic food products, including cereals. The cereal imports dependency ratio is nearly 56 percent, and the trend is set to continue, leaving Armenians vulnerable to shocks in external food markets and food prices. The domestic food price volatility index,² which affects the stability of economic access to food by the population, stood at nearly 12 percent in 2014, according to FAO.³ This level was higher than in other lower middle-income economies (8.5 percent), low-income food-deficit countries (10 percent) and key economic partner countries, i.e. the Russian Federation (5.2 percent). Consequently, food prices in Armenia are rather volatile, which hamper the stability of food security.

1 "The State of Food Insecurity in the World", FAO, 2015

2 "Food Security Indicators", FAO, 2015; "The State of Food Insecurity in the World", FAO, 2015.

3 A higher percentage means food prices are more volatile.

Concerns and Challenges

Despite improvements in undernourishment and malnutrition over the past decade, a considerable part of the population in Armenia is still deprived and vulnerable. High levels of poverty, inequality, and unemployment, as well as low and instable incomes of population cause significant differences in food security, undernourishment and nutritional indicators among different population groups in various regions in the country.

The NSR has identified the most vulnerable group as the poor, the children, the unemployed, the informally employed, the large households with many children and households headed by women.

Poverty is highly correlated with food insecurity and malnutrition. The average daily dietary energy consumption of the poorest 20 percent of population comprises 80 percent of the national average daily dietary energy consumption and is very close to the minimum dietary energy requirement. Meanwhile, **the expenditures on food make up 59 percent of the total consumer expenditures of the poor.** High inequality is also reflected in the inequality of food security and nutrition indicators. The wealthiest 20 percent of population has more than two times higher average food energy consumption than the poorest 20 percent. At the same time, the poorest shares of population consume much less diverse and nutritious food. The food consumption pattern of the poorest quintile of population contains predominantly staple foods such as bakery goods and potatoes (56 percent), which, in addition to vegetables, consist of 73 percent of their diet. The food consumption pattern of the wealthiest quintile contains 1.3 times less staples, 2 times more fruit, 1.9 times more meat, fish, and eggs. Despite the fact that the poor spend most of their budget on food, the nutritional quality of food they consume is lower. The prevalence of under-five stunting, wasting, and overweight is about two times higher in the poorest quintile of population compared with the wealthiest quintile, while the prevalence of under-five anaemia is 1.6 times higher. The WHO's 2025 target values related to under-five stunting and wasting, low birth weight, as well as anaemia in women and exclusive breastfeeding are likely to be achievable. The percentage of overweight children requires the most progress in regards to reaching the WHO targets, which has to be cut approximately in half in order to reach the target value of 7 percent.

Drinking water availability and supply duration indicators have significantly improved compared to 2008. This is mainly due to improved governance as a result of the implementation of the public-private partnership mechanisms, as well as significant public investments in the water sector. However, there are about 600 rural communities whose population is not under the centralized supply of drinking water.

The food security and malnutrition situation in Armenia has severe territorial disparities which are conditioned by significant disparities in socio-economic development within Armenia, as well as natural, climatic, geographical and other differences. The food consumption pattern of an average Armenian does not significantly change; it is not diverse enough and predominantly consists of bakery products, potatoes, and some types of vegetables. This is partly explained by more rapid rise in prices of the high-quality food products such as meat and dairy products, compared to overall growth in

prices and food prices, which limits the access to these products for most of the population.

Small sizes and fragmentation of agricultural lands restrict the opportunities for agricultural productivity, sustainable agriculture, and sufficient agricultural incomes of agro-producers. The employment in the agricultural sector is steadily declining, and is not compensated by an increase in employment in the non-agricultural sectors which, in return, increases the number of vulnerable people who are food insecure.

The agriculture production and productivity in Armenia are vulnerable to climate change and extreme weather events. According to scenarios of climate change, it is projected that the yield of the main agricultural land will decrease by 8-14 percent by 2030. This will adversely affect the food security in the country unless certain measures are taken, such as: selection and introduction of drought-resistant, high-quality varieties and hybrids; reduction in the use of highland pastures; changes of fertilizer application norms and application of water-saving irrigation technologies. Over the past decades, extreme weather events have increased in frequency and severity. Armenia is mainly exposed to droughts, early spring freezing, hail, landslides, strong winds, and forest fires, which vastly affect agriculture. The climate change consequences in Armenia increase the risk of land degradation and decrease land productivity - contributing to a decline in farmers' incomes and overall availability of agricultural products. Agricultural producers face annual severe losses in income from extreme weather events and natural disasters. These events are disproportionately harmful for small farmers, who lack the means to mitigate these risks.

The structural causes of food security and malnutrition in Armenia are highly related to nutritional awareness and knowledge of the population, education level of the population, reproductive and breastfeeding behaviors, individual and household nutritional habits, and awareness on healthy lifestyle.

Recommendations

Based on a thorough analysis of food security, nutrition and agriculture in Armenia, the National Strategic Review of Food Security and Nutrition in Armenia suggests the following six recommendations for achieving the SDG2 Targets in Armenia by 2030.

1	Ensure programmatic synergies that cover all pillars of food security in order to guarantee access to nutritious food for everyone, throughout the country.
2	Apply well-targeted healthcare, social protection and territorial policies to reduce existing disparities in hunger and malnutrition throughout the country.
3	Revise social protection policy instruments to cover the most deprived.
4	Increase public awareness on healthy nutrition and SDG2 focus areas while building and maintaining a comprehensive evidence base.
5	Implement innovative approaches and schemes to increase the productivity and competitiveness of smallholder farms and mitigate the consequences of extreme weather and climate change.
6	Coordinate and manage the implementation and progress of policies related to food security and SDG2 on a sustainable basis.

INTRODUCTION

2030 Agenda for Sustainable Development and the SDGs

Armenia joined the United Nations 2030 Agenda for Sustainable Development at a historic UN Summit in September 2015. By signing the Declaration on the 2030 Agenda for Sustainable Development, the member states committed to eliminate all forms of poverty and inequality, fight against climate change and ensure that no one is left behind. The 2030 Agenda - which came into force on 01 January 2016 - is a global framework for development which aims to achieve 17 Sustainable Development Goals (SDGs) and 169 targets announced in the Declaration. The SDGs are the logical prolongation of the Millennium Development Goals (MDGs) but broader in scope emphasizing the economic growth, social inclusion and environmental protection as key pillars of sustainable development. The Armenian MDG framework included 16 national targets with 65 indicators which were not fully achieved by 2015 after the 2008 crisis and economic downturn in the Russian Federation⁴. Armenia achieved only half of the indicators under the MDG 1, highlighting substantial concerns related to hunger, poverty and nutrition situation in the country.

The Sustainable Development Goal 2 (SDG2) of the 2030 Agenda, “End hunger, achieve food security and improved nutrition and promote sustainable agriculture,” outlines five main and three supplementary global targets aimed at ending hunger and malnutrition in all its forms and achieving food security⁵.

SDG2 five main global (and three supplementary) targets

Target 1	End hunger and ensure access by all people , in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round
Target 2	End all forms of malnutrition , including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons
Target 3	Double the agricultural productivity and the incomes of small-scale food producers , particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment
Target 4	Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality
Target 5	Maintain genetic diversity of seeds, cultivated plants, farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge as internationally agreed

4 “Millennium Development Goals National Progress Report. Armenia 2015”. Government of RA, 2015

5 “Sustainable Development Knowledge Platform”, UN: <https://sustainabledevelopment.un.org/sdg2>

Supplementary target a	Increase investment, including through enhanced international cooperation , in rural infrastructure, agricultural research and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, in particular in least developed countries
Supplementary target b	Correct and prevent trade restrictions and distortions in world agricultural markets including by the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round
Supplementary target c	Adopt measures to ensure the proper functioning of food commodity markets and their derivatives, and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

Improved food security and nutrition, under the framework of SDG2, stands at the cornerstone for progress in health, education, employment, female empowerment, poverty and inequality reduction. The efforts aimed at achieving the SDG2 will strongly contribute to achieving the other SDGs. The list of the SDG2 global targets and progress monitoring indicators is presented in Annex 1.

Objectives and Methodology of the Strategic Review of Food Security and Nutrition

As a signatory to the Sustainable Development Goals, Armenia marked its commitment to these ambitious goals, and the NSR attempts to provide a comprehensive assessment of the current state of food security and nutrition in the country, revealing the underlying factors and key challenges, examining the policies and programmes being implemented and suggesting the necessary government actions required within the framework of SDG2. The overarching goal of the Review is to support and guide the Government in the nationalization of SDG2 and the elaboration of a roadmap to its fulfilment by 2030.

Specifically, the objectives of the National Strategic Review are to:

- Carry out a comprehensive analysis of the food security and nutrition status and the baseline situation towards the SDG2 targets and to identify the challenges;
- Investigate the policies and programs influencing food security and nutrition situation in the country and to reveal the gaps in policy response and implementation;
- Elaborate recommendations that will be required to meet the response gaps and accelerate progress towards the SDG 2 achievement;
- Support the nationalization of the SDG2 and draft an Action Plan.

Based on these objectives, the NSR was processed in four major phases: analysis of the food security and nutrition situation and identification of challenges of food security and nutrition in Armenia; analysis of the national response; identification of gaps in ensuring food and nutrition security; and elaboration of recommendations to improve food and nutrition security and achieve the SDG2 targets.

This strategic review process was carried out under Government stewardship with the close

collaboration of relevant stakeholders from the international community and Armenian civil society. In order to manage and regulate the process of nationalization of the SDGs, the Government of Armenia established an intergovernmental committee on the SDGs, under which the Social Subcommittee was formed, covering SDGs 1, 2, 3 and 17.



During the NSR process, the Social Subcommittee formed the SDG2 Steering Committee chaired by Deputy Minister of Agriculture, Mr. Armen Harutyunyan. With the support of the United Nations World Food Programme and the facilitation of Mr. Armen Yeghiazaryan, Chairman of the National Centre for the Regulation of Legislation and Lead Convener, AVAG Solutions provided research support and data for the deliberation of the Committee, resulting in this comprehensive

report. During NSR consultations the national framework on the SDG2 “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” was drafted. The framework includes 27 nationalized indicators for monitoring the five main and three supplementary targets of the SDG2. The SDG2 national framework and its monitoring indicators are presented in Annex 2. Throughout the NSR report, the food security situation is analyzed based on the SDG2 national framework and the four food security pillars. The term “food security” was formalized as a concept during the World Food Summit in 1996 and represented in the FAO publication “The State of Food Insecurity”. In the report, the food security is defined as “a situation that exists when all people, at all times, 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”.⁶ The nutritional dimension is integral to the concept of food security and is defined as “nutrition security exists when food security is combined with a sanitary environment, adequate health services, and proper care and feeding practices to ensure a healthy life for all household members”.⁷ Food security definition has four key pillars: food availability, accessibility, utilization and stability.⁸ An adequate supply of food at the national or international level does not guarantee food security since food security is multidimensional. A more comprehensive approach, covering all four pillars of food security and nutrition, is paramount.

Country Background

Armenia is a landlocked, lower middle-income, net food-importer country vulnerable to external shocks. Limited fiscal space and weakening economic growth have strained successive governments’ budgets, hindering implementation of adequate social safety nets and reducing investments in the education and health sectors to 2.4 and 1.7 percent of the Gross Domestic Product (GDP), respectively. Over the past three decades, about 800,000 Armenians have emigrated to various countries.⁹ Although this process continues, the intensity has weakened.

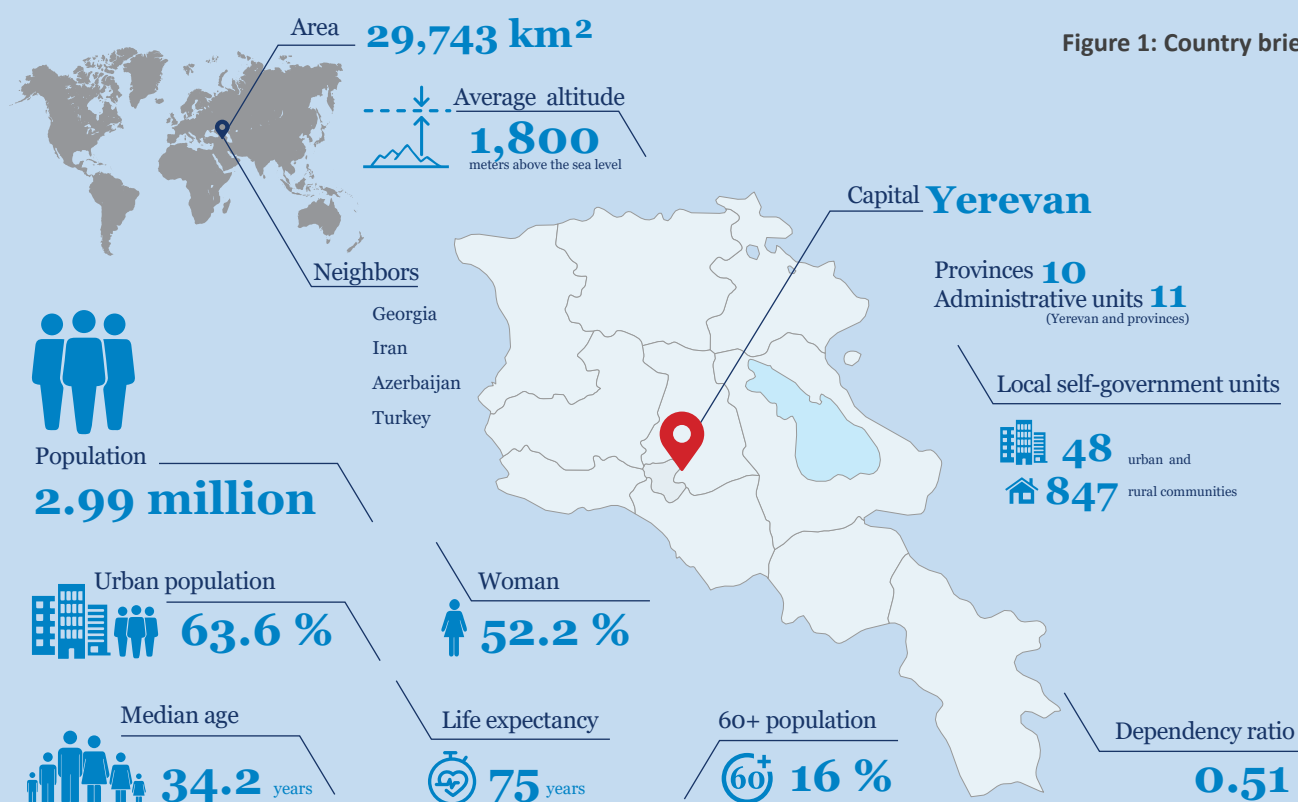
6 “The State of Food Insecurity in the World 2001”. FAO, 2002.

7 “Global Strategic Framework for Food Security and Nutrition”. Committee on World Food Security (CFS), 2011.

8 “Trade Reforms and Food Security. Conceptualizing the Linkages”. FAO, 2003.

9 “Migration and Remittances Fact book 2016”, World Bank, 2016.

Figure 1: Country brief



The predominant majority of lands in Armenia are mountainous or in high-mountainous zones, which determines the peculiarities of the agricultural production and food availability. The Ararat valley, plain and sub-tropical zones, have the most favorable conditions for crop planting, while the mountainous areas are more appropriate for animal husbandry. Agriculture in Armenia is focused mainly on crop planting, which makes up 61 percent of the total agricultural output. The agricultural lands are privately owned and 346,000 private family farms own 513,000 ha of agricultural lands and produce more than 95 percent of the total agricultural output.¹⁰ The average size of the agricultural land per farm is 1.48 ha, with the lowest sizes in Ararat (Ararat valley) province¹¹ (0.72 ha) and Tavush province (0.86 ha). The natural and climatic conditions of Armenia determine the high vulnerability of agriculture to various forms of natural disasters and shocks.

The country is vulnerable to hydro-meteorological hazards, partly related to climate change, including frost, drought, hail, and seasonal floods, which cause great damage to agricultural production. The average annual loss in agricultural output caused by natural hazards is estimated at USD 32-64 million.¹²

10 "Main Findings Agricultural Census 2014 of the Republic of Armenia", NSS RA, 2016.

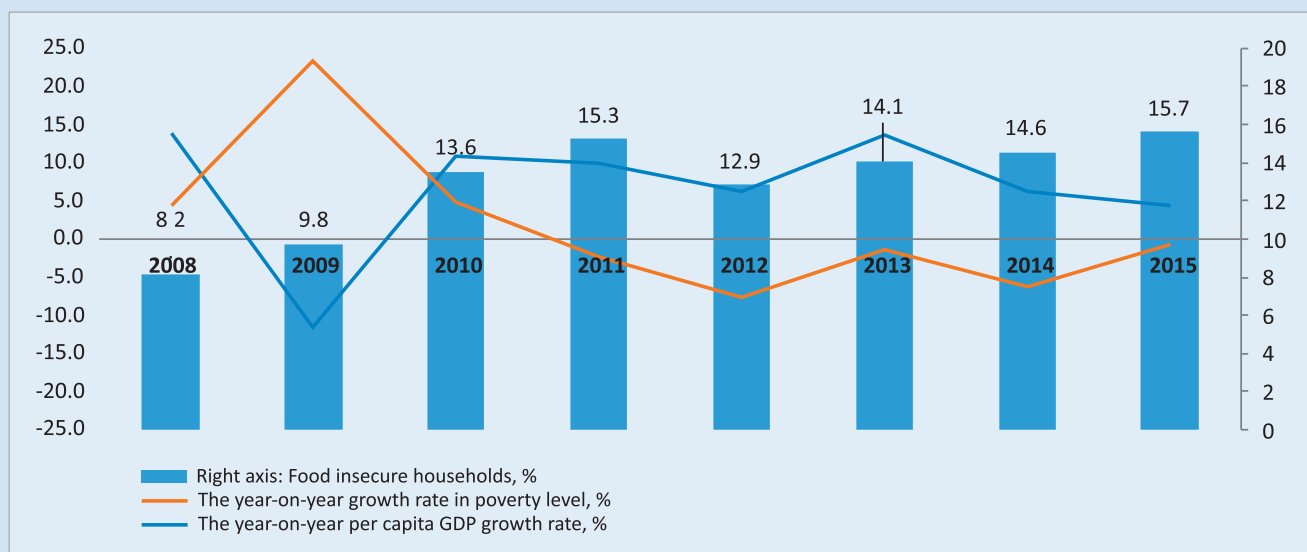
11 Armenia is divided into ten provinces (marzes, singular marz), with the city (kaghak) of Yerevan having special administrative status as the country's capital.

12 According to the "Concept of Prevention of Agricultural Damage from Climatic Disasters", adopted by the Government on April 2017.

Economy

Between 2002 and 2007, Armenia's economy grew consistently with an average annual economic growth rate at 13.1 percent.¹³ As a result of rapid economic growth, the per capita GDP increased, the unemployment and poverty rates decreased to 28.7 percent and 26.4 percent, respectively, in 2007.¹⁴ The World Bank compared Armenia's economic growth with Asian economies and linked its successful macroeconomic performance to the "steady pursuit of first-generation structural reforms, assisted by large external inflows".¹⁵ Economic growth slowed down during the financial crisis of 2008-2010, which diminished the wellbeing of the population and increased the poverty rate, inequality and unemployment. After 2010, moderate growth rates were recorded at an average annual growth rate of 4.4 percent between 2011 and 2015.¹⁶ In 2015, the per capita GDP comprised 8,744 PPP dollars,¹⁷ the unemployment rate was at 18.5 percent, and the poverty rate at 29.8 percent. The principal drivers of economic growth suffered a dramatic shift: from a pre-crisis dependency on growth in the non-tradable sectors to a post-crisis dependency on growth in the tradable sectors, such as agriculture and industry. Slow economic growth over the last eight years,¹⁸ in the aftermath of the global financial crisis, resulted in poverty reduction from an average 6.47 percentage points per year in 2004-2008 to an average 0.7 percentage points per year in 2009-2015,¹⁹ with a consequent negative impact on living standards, food security, and nutrition levels of the population. The share of food insecure households²⁰ increased significantly after the global financial crisis along with the economic decline and increase in poverty levels, and stagnated at 14-15 percent despite further moderate growth in the economy.

Figure 2: The after-crisis dynamics of economic growth, poverty, and food security in Armenia



Source: "Statistical Yearbook of Republic of Armenia", "Social Snapshot and Poverty in Armenia", NSS RA, 2016, "Armenia Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)", WFP, NSS RA, UNICEF, 2016 and CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017.

13 Calculated based on "Statistical Yearbook of Republic of Armenia" 2004, 2006, 2008, National Statistical Service of RA.

14 World Development Indicators Database, World Bank, 2015: <http://data.worldbank.org/data-catalog/world-development-indicators>.

15 Mitra, Saumya; Andrew, Douglas; Gyulumyan, Gohar; Holden, Paul; Kaminski, Bart; Kuznetsov, Yevgeny; Vashakmadze, Ekaterine. The Caucasian Tiger: Sustaining Economic Growth in Armenia. (Washington D.C., World Bank, 2007).

16 GDP growth rates are calculated based on "Statistical Yearbook of Republic of Armenia" 2014, National Statistical Service of RA.

17 The GDP per capita PPP is obtained by dividing the country's gross domestic product, adjusted by purchasing power parity, by the total population. Source: World Development Indicators Database, World Bank, 2015: http://databank.worldbank.org/data/reports.aspx?Code=NY.GDP.PCAP.CD&id=1ff4a498&report_name=Popular-Indicators&populartype=series&ispopular=y, derived in February 2018.

18 The average annual rate of economic growth in 2008-2016 comprised 1.9 % compared with the same indicator of 12 percent in 2003-2008.

19 The poverty headcount index comprised 53.5 percent in 2004 compared to 27.6 percent in 2008, while in 2009 it comprised 34.1 percent compared with 29.8 percent in 2015. The increase in poverty rate in 2009 was mostly due to the influence of the evolving global crisis, which resulted in the economic decline of 14.1 percent in 2009 and corresponding decline in incomes of population, including remittances from abroad. The slow recovery started in 2010.

20 "Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)", WFP, UNICEF, NSS RA, 2016.

The global financial crisis exposed gaps in Armenia's economic growth model between 2003 and 2008. The pre-crisis growth model in Armenia was based on boosting domestic consumption, which relied largely on external financing (direct foreign investment, official and private transfers, with fast year-on-year growth), and was accompanied by constant appreciation of the Armenian Dram (AMD) to avoid inflation. As a result, imports grew rapidly, the competitiveness of local industrial products in the domestic market declined, non-agricultural employment rates stagnated, and the relative and absolute volumes of exports shrunk. The principal engine of economic growth in the country was the construction and services sectors; the combined GDP share of which increased from 50.1 percent to 59.3 percent (2003 and 2008, respectively). In the meantime, the combined GDP share of industry and agriculture declined from 44.0 percent to 29.6 percent (2003 and 2008, respectively).²¹

The share of the construction sector alone in GDP reached 25.3 percent in 2008 with an unprecedented average annual growth rate of 26 percent between 2003 and 2008. This increase was due to external private investments, mainly in housing construction. As a result of the significant decline in monetary remittances and foreign direct investments (FDI) in 2009, the construction sector recorded a sharp drop of 41.6 percent. After the crisis, the construction sector ceased to be the main driver of economic growth and its share in GDP shrunk to 8 percent in 2016. At the same time, the combined share of industry and agriculture in GDP increased from 29.6 percent in 2008 to nearly 34 percent in 2015.

Economic growth, both before and after the global financial crisis, ²² did not result in better employment rates. Between 2003 and 2015, jobs in the non-agricultural sector largely replaced those in the agricultural sector. The total number of the employed decreased by 3.16 percent, while the number of employees in non-agricultural sectors increased by 15.9 percent with an annual average growth rate of 1.23 percent. In the meantime, agricultural employment decreased by 25.5 percent with an average annual reduction rate of 1.28 percent. Growth in the non-agricultural sectors was intensive (only 20 percent of growth was determined by an increase in the number of employed, whereas 80 percent can be attributed to increased productivity). Job creation in the non-agricultural sectors of the Armenian economy was modest as it was not able to fully absorb the labour resources freed up by the agriculture sector due to its productivity increase - resulting in high levels of unemployment. Taking into account the growth of agricultural output with a concurrent decrease in agricultural jobs, it can be concluded that economic growth in the agricultural sector between 2003-2015 was driven purely through an increase in productivity as each percent of agricultural growth was combined with 0.228 percent decrease in agricultural employment. For non-agricultural employment, each percent of non-agricultural growth was combined with 0.208 percent increase in non-agricultural employment.

Unless inclusive and labour-intensive growth policies are introduced and implemented, unemployment rates will stagnate and remain high (18-20 percent). This is due to insufficient job creation in the non-agricultural sectors and shrinkage in agriculture sector employment.

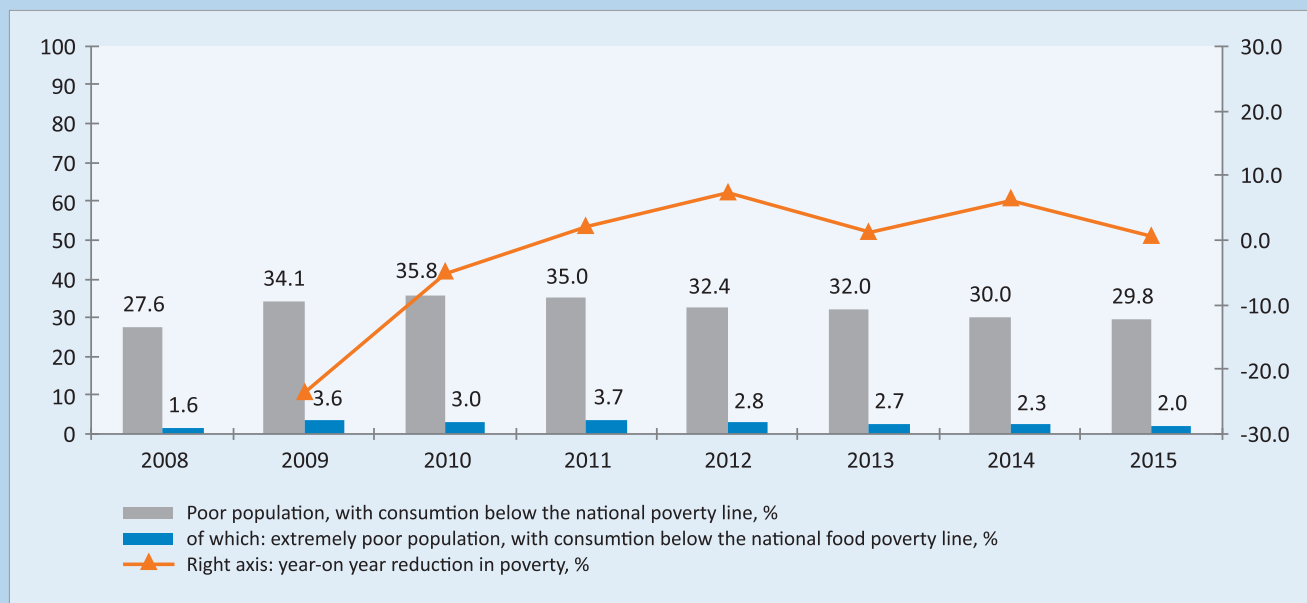
21 The contribution of non-tradable sectors (construction and services) to the average annual growth rate of 12 percent in 2003-2008 comprised on average 8.3 percent, or about 2/3 of the total economic growth.

22 In 2003, the total employment comprised 1,107.6 thousand persons (of which non-agricultural employment - 598.6 thousand, or 30 percent of all labour resources), in 2008 it comprised 1,192.5 thousand persons (of which non-agricultural employment - 624.1 thousand, or 28.5 percent of all labour resources), in 2015 - 1,072.6 thousand persons (of which non-agricultural employment 693.6 thousand, or 32.9 percent of all labour resources).

Poverty

After the financial global crisis, the proportion of the poor population increased by 8 percent, and the extremely poor population by 25 percent, comprising 29.8 percent and 2 percent of the population, respectively, in 2015.²³ The extreme poverty rate is determined as a percentage of population having consumption expenditures lower than the national food poverty line,²⁴ which is the Armenian local currency equivalent of the actual food basket of the relatively poorer shares of population and is determined through the Integrated Living Conditions Surveys (ILCS). Consequently, the extremely poor population is considered as undernourished.

Figure 3: The after-crisis dynamics of poverty in Armenia



Source: “Social snapshot and Poverty in Armenia”, 2008 and 2016 publications, NSS RA

While there is no significant difference in poverty rates among women and men, female-headed households are at a greater risk of becoming poor than male-headed households,²⁵ especially female-headed households with children under six years of age. The poverty rate among these households stands at 42.3 percent, and the extreme poverty rate at 2.5 percent. The most vulnerable groups of population in terms of poverty are large sized households with three or more children, unemployed persons, children, adults with low levels of education, and persons with disabilities.

Those living in small and medium regional cities are more vulnerable to poverty: 34.4 percent of their residents are poor while 2.4 percent are extremely poor. Armenia’s capital, Yerevan, has the lowest poverty rate (compared to other urban and rural areas; 25 percent), while in the rural area poverty and extreme poverty stand at 30.4 and 1.7 percent, respectively. Despite the seven-fold increase in average pensions since 2003 (although from a low baseline), more than one-third (32.7 percent) of pensioners were poor in 2015. The majority (61 percent) of pensioners in Armenia are women and their average pension consists of 91 percent of the average pension amongst males and 94 percent of the poverty line. Consequently, women

²³ “Social Snapshot and Poverty in Armenia”, NSS RA, 2016.

²⁴ “Social Snapshot and Poverty in Armenia”, NSS RA, 2016. In 2015, the national food poverty line or the food basket determined through the ILCS was AMD 24,109 or nearly 50 USD.

²⁵ The poverty rate among female-headed households amounts to 32.1 percent, and the extreme poverty rate amounts to 2.2 percent. Meanwhile, poverty amongst male-headed households amount to 28.9 percent and extreme poverty - 1.9 percent.

pensioners are more vulnerable in terms of poverty.

Some 29.1 percent of the population in Armenia were multidimensional poor or deprived in 2015.²⁶ About 64.5 percent of children under 18 years of age were deprived in two or more dimensions, in accordance with the *Multiple Overlapping Deprivation Analysis of the 2015 ILCS* data,²⁷ and some 5.9 percent were nutritionally deprived.²⁸ According to ILCS-2015, 33.7 percent of children under 18 years of age are poor (while the national average is 29.8 percent) and 2.5 percent are extremely poor (while the national average of extreme poverty is 2 percent). Thus, the children are one of the most deprived groups of the population in terms of monetary and multidimensional poverty.

Employment does not guarantee a decent living standard nor does it ensure that workers and their families will avoid remaining or dropping below the poverty line. While the average real salary between 2003-2015 increased 2.7 times,²⁹ some 24 percent of employed people were poor in 2015.

In addition, a significant percentage of the population occupies low-income or informal jobs, which results in low living standards. Some 15 percent of employed receive a salary that does not exceed the minimum wage level and 48 percent of the total number of employed were in the informal sector in 2015.³⁰ Approximately 76.3 percent of informal employment is in the agricultural sector. Informal employment in agriculture refers to farmers who are self-employed on their own lands. This form of employment is considered informal since the farms have no organisational and legal status in Armenia based on the International Labour Organisation standards. In the non-agricultural sectors, informal employment makes up 18 percent of the total employment.³¹ The informally employed are vulnerable in terms of stability of labour incomes, wealth, and consequently, food security. High unemployment levels dramatically affect the poverty rate, with 38.6 percent of the unemployed being classified as poor in 2015. The absence of both regular labour incomes and an unemployment insurance system (unemployment benefits) places the unemployed and their families at a higher risk of falling into poverty.

Widespread poverty in Armenia is largely related to the lack of inclusive growth, lack of well-paid jobs and labour market regulations targeting informal employment. The gains of economic development are not distributed proportionally and economic polarization is high. The Gini coefficient of income inequality mounted to 37.4 percent and the incomes of the poorest 10 percent of population were 16 times lower than the incomes of the wealthiest 10 percent in 2015.³¹ Existing instruments of growth redistribution are neither effective nor comprehensive in targeting the poor strata of the population.

26 Based on the human poverty concept. See “Social Snapshot and Poverty in Armenia”, 2016, NSS RA

27 “Child Poverty in Armenia”. NSS RA and UNICEF, 2016.

28 “Social Snapshot and Poverty in Armenia”, NSS RA, 2016.

29 With annual average growth rate of 8 percent.

30 “Labour Market in Armenia”, NSS RA, 2016.

31 Informal employment decreased during 2010-2015 by ten percentage points (28 percent in 2010), which was mainly conditioned by tax administration improvements, transition to the funded pension system, and more flexible norms regulating the relationships between employers and employees.

32 “Social Snapshot and Poverty in Armenia”, NSS RA, 2016.



FOOD SECURITY AND NUTRITION IN ARMENIA: SITUATION ANALYSIS IN THE CONTEXT OF THE SDGs

Hunger and Malnutrition

The global SDG2 indicator for the prevalence of undernourishment in Armenia has dropped nearly four times between 2000 and 2016. Nevertheless, 5.8 percent³³ of the population consumed an inadequate amount of calories needed to maintain an active and healthy lifestyle and were undernourished in 2014-2016. The level of prevalence of undernourishment is strongly and negatively correlated with the level of per capita GDP (Figure 4). At the same time, the extreme poverty ratio at household level, is negatively correlated to the household per capita incomes, which supports the assumption that increased household income leads to the decrease of the national proxy indicator of undernourishment (Figure 5).

Figure 4: The dynamics of undernourishment according to FAO and per capita GDP in Armenia in 2000-2015

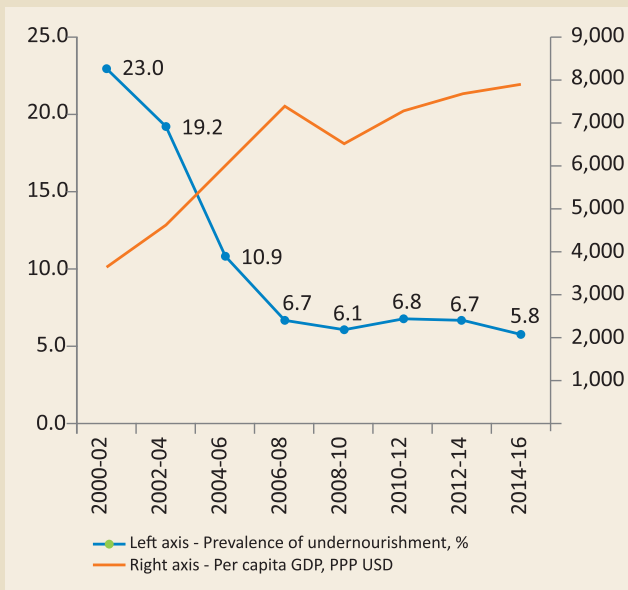
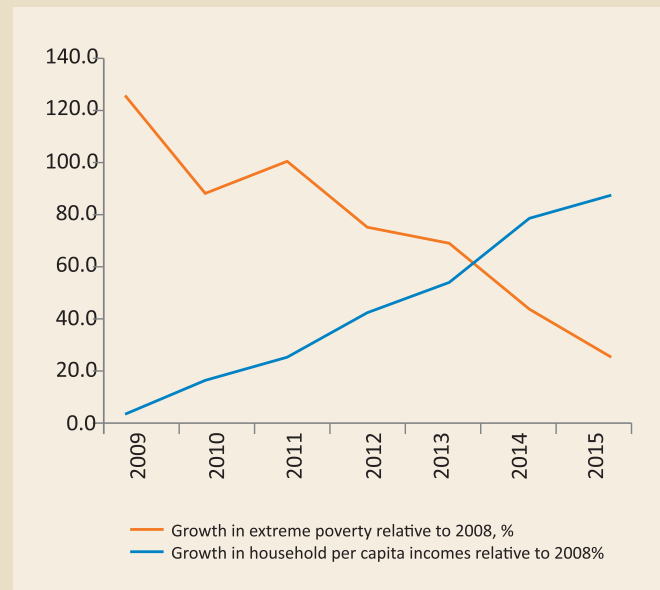


Figure 5: Growth in per capita incomes and extreme poverty in Armenia in 2008-2015



Source: “The State of Food Insecurity in the World”, FAO, 2015; “Food Security indicators”, FAO, February 2016, retrieved in July 2017; “Social snapshot and poverty in Armenia”, 2012, 2014 and 2015 publications, NSS RA.

The multidimensional Global Hunger Index³⁴, which incorporates undernourishment, child wasting, stunting and mortality, stood at 8.7 percent in 2016.³⁵ The prevalence of moderate and severe food insecurity stood at 15.5 percent in 2014.³⁶ The national proxy indicator of prevalence of undernourishment,

33 “The State of Food Insecurity in the World”, FAO, 2015. The 3-year average for 2014-2016.

34 International Food Policy Research Institute (IFPRI).

35 “2016 Global Hunger Index: Getting to Zero Hunger”. International Food Policy Research Institute (IFPRI), 2016. The index is for 2016. It is based on 2011-2016 data. Could be an approximate measure also for 2015.

36 Food Insecurity Experience Scale Survey global SDG2 indicator (FAO, 2016); “Voices of the Hungry.” FAO, 2016.

the extreme poverty rate, which comprised two percent in 2015, has increased after 2008 and despite its improvement since 2011, it has not yet reached the 2008 level. Residents of small and medium-sized cities in the regions of the country have the highest risk of falling into extreme poverty; the extreme poverty rate is 2.4 percent. Nearly one third of the extremely poor population are children under 18 years of age (10 percent of whom are children under 5 years of age), 13 percent are the elderly and 57 percent are working age adults. Over half of the extremely poor (57 percent) in the age group of 25-63 are unemployed; households of 67 percent of the extremely poor have five and more members.

The extreme poverty rate is determined based on the actual food consumption of the poor shares of the population, whereas the recommended minimum food basket, which corresponds to the standard requirements of consumption of healthy and nutritious food, is developed by the Ministry of Health (MOH). While the first one is estimated at 2,232 kcal per day, per capita³⁷ and consists of mainly bakery products, potato and other staples, the second one is defined at 2,412 kcal³⁸ and includes a diversity of products required for healthy and nutritious diet. The estimations show that some 6 percent of population in 2015 have had lower consumption expenditures relative to the minimum food basket recommended by the MOH, and can be considered as undernourished according to the MOH standards (See Table 1, “Extreme poverty and undernourishment within the different groups of population in Armenia in 2015”).

Identifying and targeting the most vulnerable population groups, predisposed to undernourishment, allows the Government to prioritise with specific actions. The poor are one of the most deprived groups of population with the highest levels of extreme poverty and undernourishment. Children under 2, 5 and 18 years of age, as well as unemployed, people living in large-sized families and female headed household members are the most deprived groups of population.³⁹



The food deficit depth indicator, which refers to the amount of calories needed to lift the undernourished from their status (everything else being constant), decreased during 2002-2015 by nearly 72 percent and consisted of 45 kilocalories per person per day in 2015.⁴⁰ This indicates that the difference between the average dietary energy requirement and the average dietary energy consumption of the undernourished population has significantly decreased. About 14.0 percent of households in Armenia had poor dietary intake in 2015 and lacked both dietary quality and quantity.⁴¹ The proportion of households with poor dietary intake has increased more than two-fold since the global financial crisis.

It is estimated that some 15.7 percent of households were classified as food insecure in 2015 and their proportion increased almost two-fold since the global financial crisis.⁴² Even for those not qualified as food insecure, the quality of food consumed is rather poor and some 26.5 percent of households have had a diet with a very high proportion of food energy from staples in 2015.

37 AMD 24,109 per month, per adult equivalent. See “Social Snapshot and Poverty in Armenia”, NSS RA, 2016, page 40.

38 AMD 30,742 per month, per adult equivalent. See “Socio-Economic Situation in RA in January-December 2015. NSS RA, 2016, page 254.

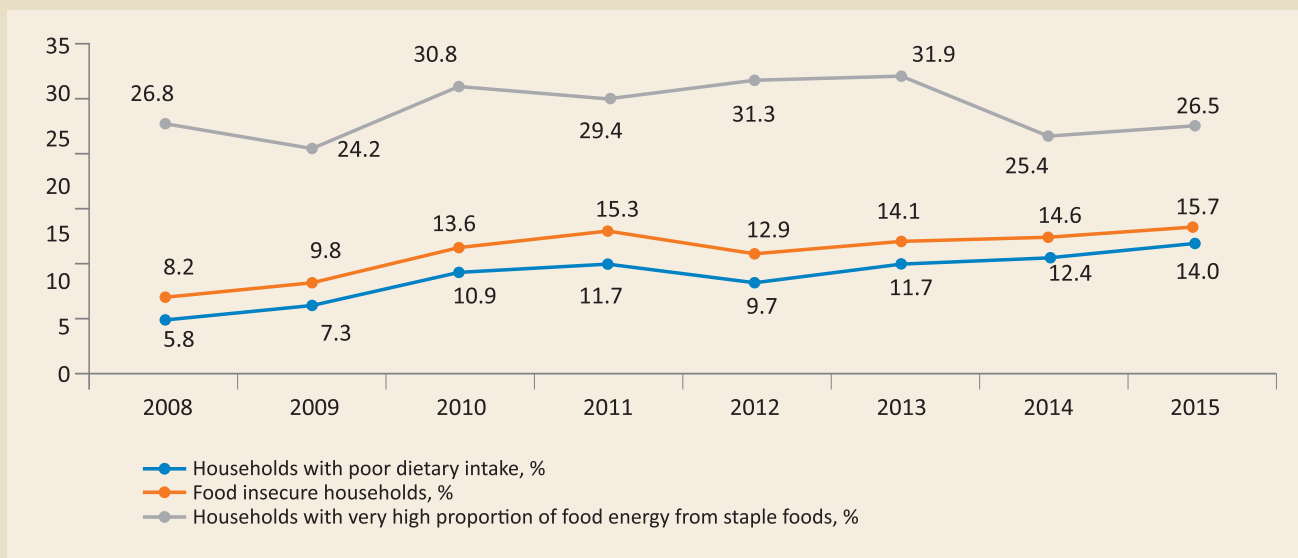
39 Table 1. Extreme poverty and undernourishment within the different groups of population in Armenia in 2015.

40 World Development Indicators Database-2016, The World Bank, retrieved in July 2017.

41 “Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)”, WFP, UNICEF, NSS RA, 2016 and CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017. Households who are both highly food energy deficient (consume less than the recommended daily intake of kilocalories) and who have a high consumption of staple foods (acquire more than 70 percent of their dietary energy from staple foods (cereals, roots and tubers)) are classified as having poor dietary intake in this research.

42 “Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)”, WFP, UNICEF, 2016.

Figure 6: Food security indicators in Armenia at household level, in 2008-2015.



Source: “Armenia Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)”, WFP, UNICEF, NSS RA, 2016 and CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017.

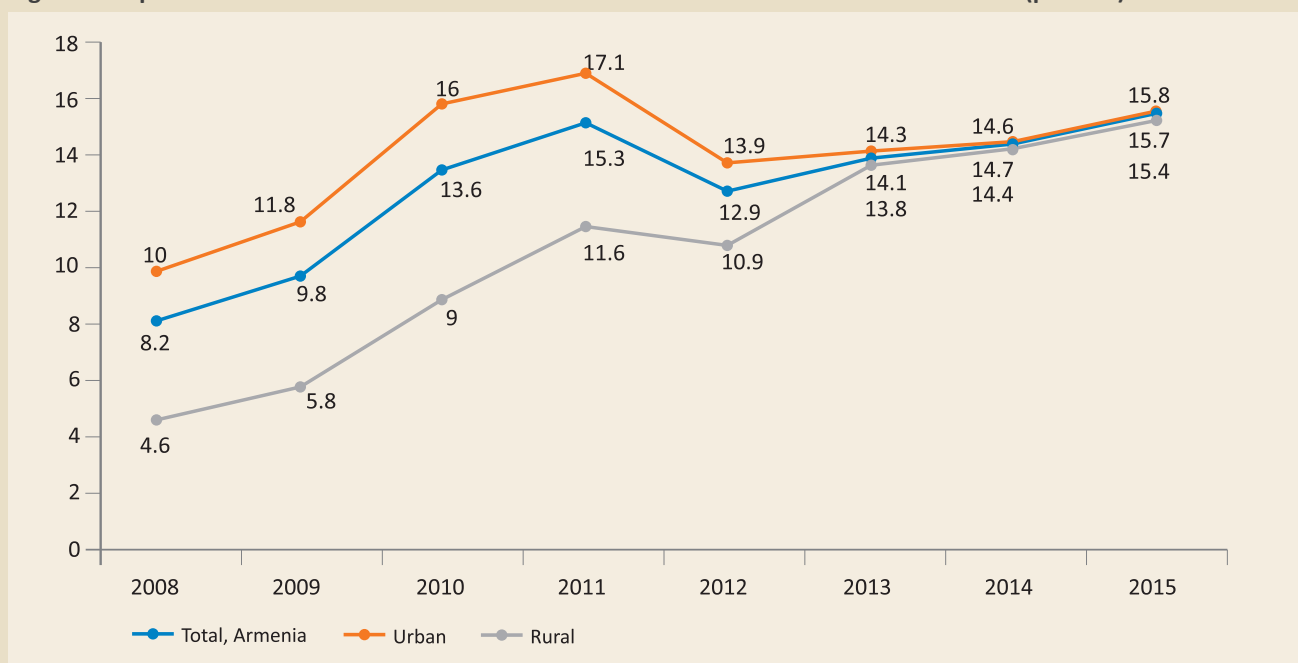
Urban-Rural Disparities

There are regional disparities in the prevalence of extreme poverty: 40 percent of extremely poor live in Shirak, Lori and Kotayk regions, while the population of these regions consists of 24 percent of the total population in the country.⁴³ (See Figure 9). There are considerable inequalities in the living standards of the population as well as disparities in the levels of socio-economic development within the country, which result in significant differences in the food security situation amongst different groups. The households with poor dietary intake are more prevalent in urban areas. Nevertheless, during 2008-2015, the representation of households with poor dietary intake increased in rural areas about 5.4 times and approached the country average (See Chart 1, “The dynamics of representation of households with poor dietary intake in urban and rural areas in 2008-2015”).

During 2008-2015, the representation of food insecure households in urban and rural areas approached Armenia’s average. Rural food insecurity has an apparent tendency for growth while the urban has started to drop since 2012 but has not reached the pre-crisis 2008 level.

43 “Social Snapshot and Poverty in Armenia”, NSS RA, 2016, and calculations based on the ILCS-2015 database.

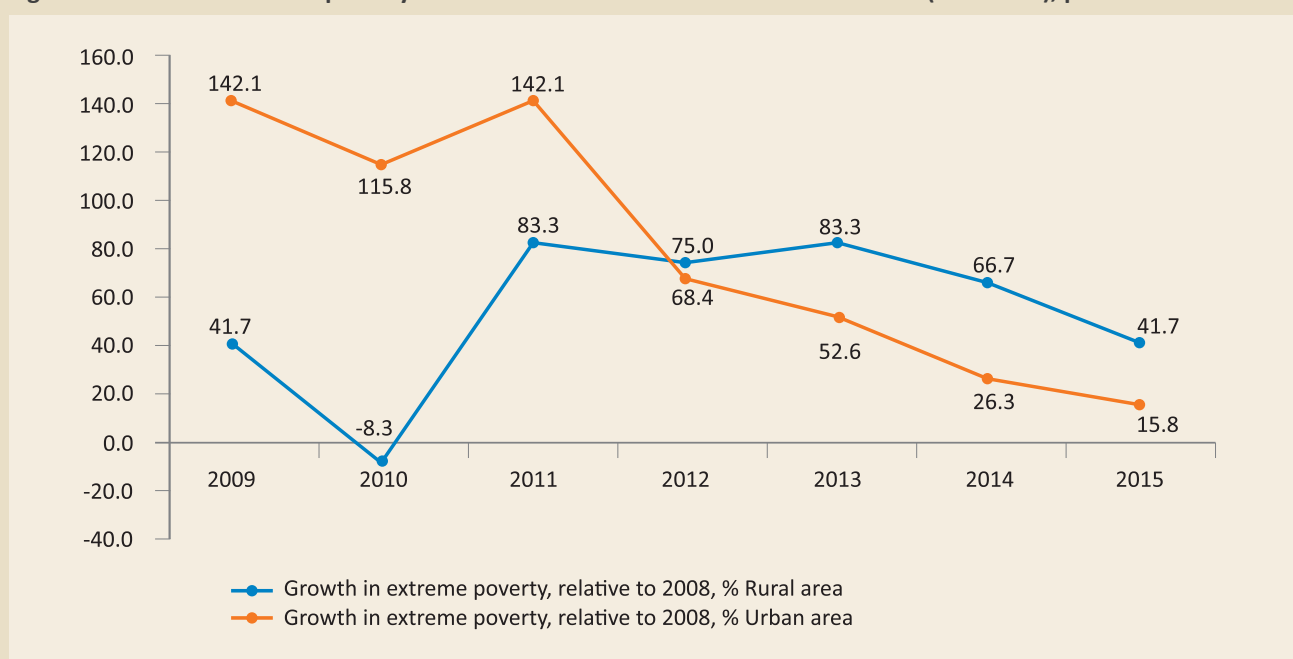
Figure 7: Representation of food insecure households in urban and rural areas in 2008-2015 (percent)



Source: "Armenia Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)", WFP, UNICEF, NSS RA, 2016 and CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017.

The increase in level of food insecurity during 2008-2015 among the rural households can be explained by the 5.4-fold increase in share of households with poor dietary intake (versus 1.9-fold increase in urban areas) and by 42 percent increase in rural extreme poverty rate (versus 16 percent increase in urban extreme poverty).

Figure 8: Growth in extreme poverty in urban and rural areas relative in 2008-2015 (2008=100), percent



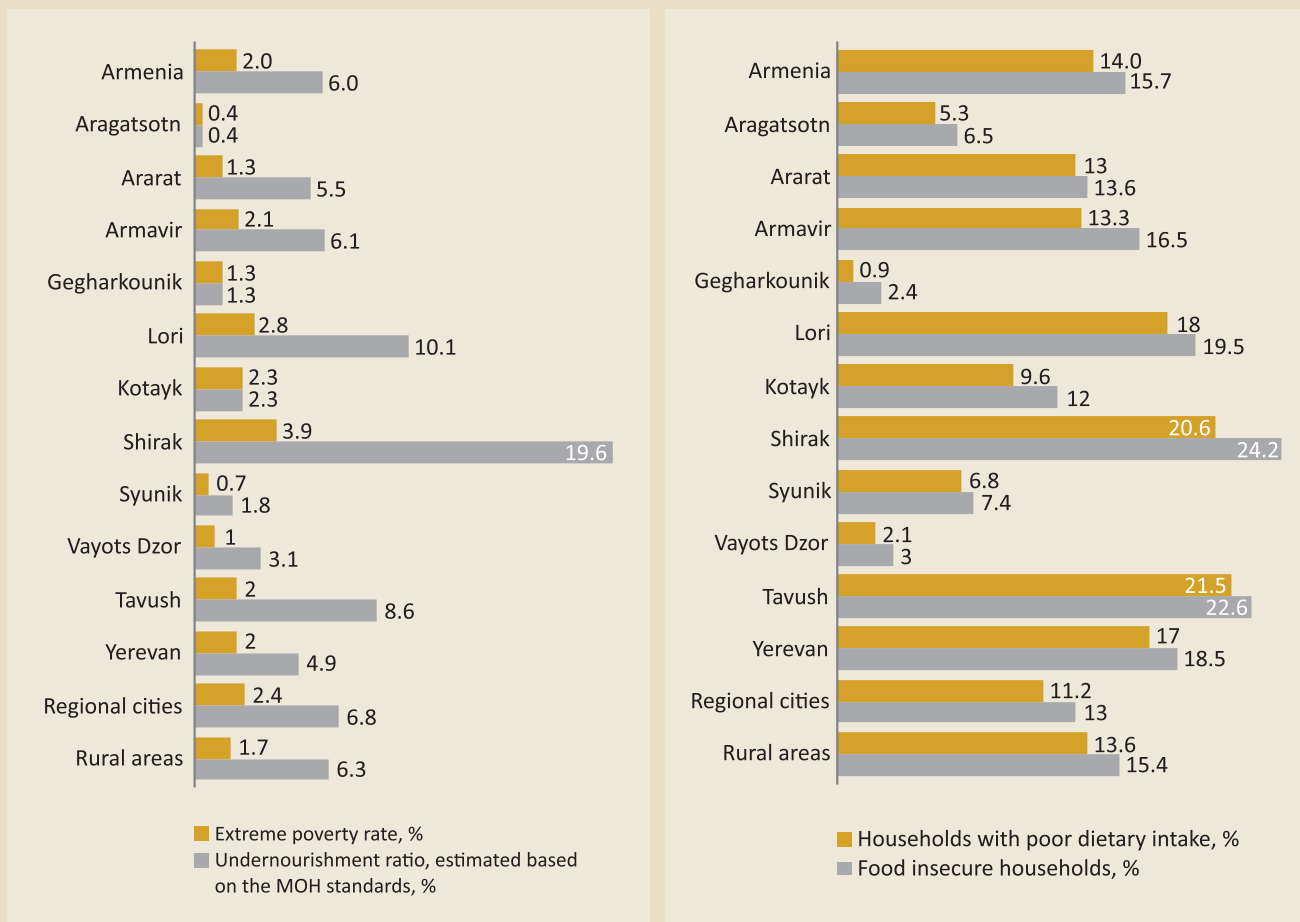
Source: "Social snapshot and poverty in Armenia", NSS RA, 2011, 2013, 2014 and 2016 publications.

Food insecure households are concentrated in Shirak, Tavush, Lori, provinces (can be explained by local economic development disparities, soil condition and climatic and agricultural characteristics) and in Yerevan (can be explained by high levels of unemployment and high food prices).

According to CFSVA, although the rural population is slightly less deprived in terms of food security compared to the urban population, the nutritional quality of food they consume is lower: 29.4 percent of rural households had a high proportion of food energy from staple foods in 2015, while in the urban area this indicator was 25.0 percent. In terms of the nutritional quality of consumed food, the most deprived are people living in Tavush Lori and Shirak provinces.

Territorial disparities in undernourishment and food security indicators of the population suggests the priorities of government development policies targeting territorial disparities regarding food security and achieving the SDG2 Target 1. Food security and undernourishment is worst in Shirak, Tavush, Lori and Yerevan. Figure 9 highlights regions where the levels are worse than national thresholds.

Figure 9. SDG2 Target 1 national framework baseline (2015) indicators in provinces, urban and rural areas

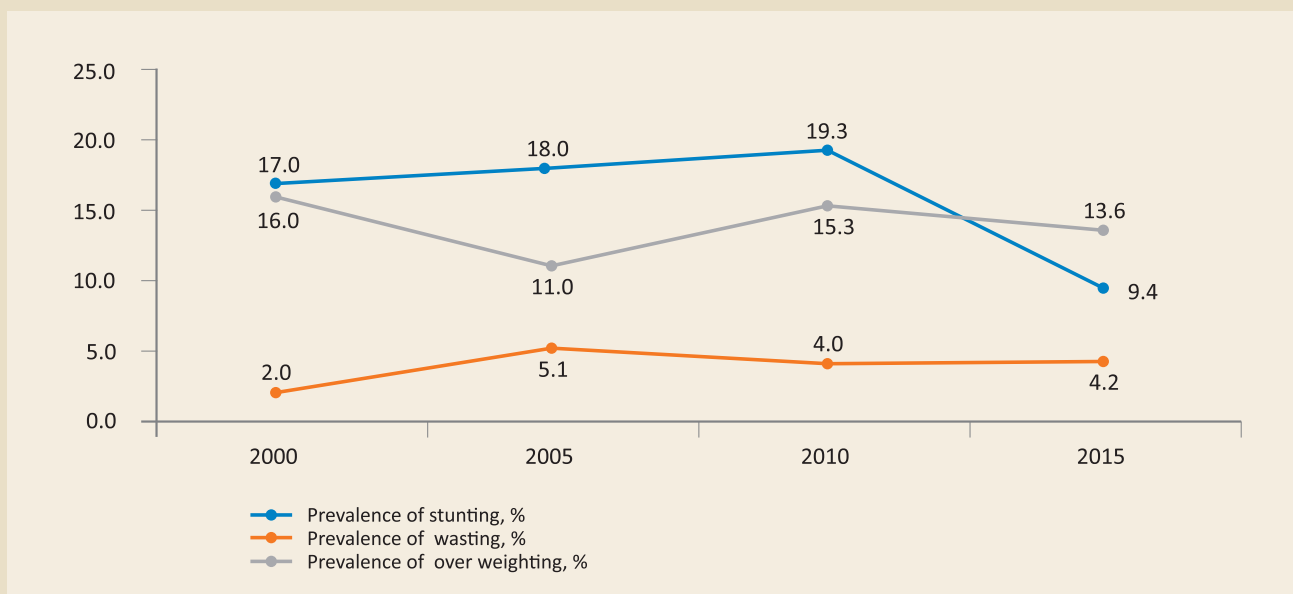


Source: "Social Snapshot and Poverty in Armenia", NSS RA, 2016; Armenia Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA), WFP, UNICEF, 2016 and CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017. Source for estimations: "Socio-Economic Situation in RA in January-December 2015", NSS RA- 2016 and calculations made based on the NSS RA ILCS-2015 database.

Malnutrition prevalence

The Integrated Living Condition Survey revealed that 19.4 percent of Armenian children under five years of age were stunted in 2014, 5.3 percent were wasted and 14.8 percent were overweight. There was a double burden of malnutrition in the country in 2014, a condition of concurrent presence of stunting and overweight.⁴⁴ The 2015 Demographic and Health Survey (DHS) suggests the decrease in child stunting prevalence to 9.4 percent⁴⁵ although there has been some improvement in child wasting and over-nutrition indicators (4.2 and 13.6 percent).

Figure 10: The dynamics of under-five child malnutrition indicators in Armenia in 2000-2015, percent



Source: Armenia DHS - 2000, 2005, 2010, 2015.

Severe regional disparities exist in the prevalence of under-five child malnutrition rates. The disparities in child malnutrition indicators point out the need to set territorial priorities in government policies aimed at reducing territorial disparities regarding child malnutrition and achieve the SDG2 Target 2.

Under-five stunting is more prevalent in Shirak, Aragatsotn, Ararat, Syunik and Vayots Dzor provinces reaching 19.5 percent in Shirak province. Under-five overweight children are more prevalent in Ararat, Shirak and Vayots Dzor provinces. Under five stunting, wasting and overweight levels are higher in rural areas. Under-five wasting is more prevalent in Aragatsotn, Ararat and Gegharkunik provinces (See Table 2, “SDG 2 Target 2 national framework baseline indicators in the provinces and age groups in Armenia in 2015”). The double burden of stunting and over-weight⁴⁶ is concentrated in Ararat, Shirak and Vayots Dzor provinces, while at least two under-five malnutrition indicators exceed the national level in the following five provinces: Aragatsotn, Ararat, Gegharkunik, Shirak and Vayots Dzor (See Figure 11). Thus, in these geographic areas the child malnutrition is most severe.

44 2014 ILCS data. “Social Snapshot and Poverty,” NSS RA, 2015.

45 This number has been disputable after the official launch and publication in August 29, 2017 within the Government and between donor community and civil society. The sharp decline (by 51.5 percent) in the indicator during one year has no explanations given the poverty and undernourishment trends and public expenditures on healthcare and social protection. However, taking into account that the DHS-2015 report has been endorsed by the Ministry of Health, the further analysis of child malnutrition indicators (stunting, wasting and overweight) in this report is based both on the 2014 ILCS and DHS-2015 data.

46 In this analysis, the double burden of malnutrition is considered as a situation, when both stunting and over-weight indicators exceed the national average level.

Figure 11: SDG-2 Target 2 national framework baseline indicators in the provinces



Source: Armenia DHS – 2015. See Table 2. SDG 2, Target 2 national framework baseline indicators in the provinces and age groups in Armenia in 2015.

Age disparity

The age breakdown of child malnutrition indicators shows that stunting is significantly more prevalent amongst 0-2 years old children; wasting in the group of 2-5 years old and overweight in the group of 1-2 years old children. The double burden of stunting and overweight is dominant in the 1-2 years old children, while children in the age group of 0-2 years have at least two indicators exceeding the national average level. This analysis is important in informing the Government of Armenia to realign its policies to improve the nutrition of under-five children in order to achieve the SDG2 Target 2. (See Table 2, “SDG2, Target 2 national framework baseline indicators in the provinces and age groups in Armenia in 2015”).

Low birth weight

Low birth weight (birth weight < 2,500 g) rates remain low in Armenia with nearly 6.2 percent of newborns. Newborns of mothers under age 20 and those born to mothers with only basic education were more likely than others to weigh less than 2.5 kg at birth. Nevertheless, there are significant differences in the representation of newborns with low birth weight in urban and rural areas and in regions. According to the 2015 DHS, the birth weight of seven percent of newborns in urban areas was less than 2.5 kilograms, while in rural areas it was five percent. The low birth weight is more prevalent in Lori, Shirak, Syunik and Vayots Dzor provinces. Taking into account that the risk of giving birth to low-

weight babies is higher among women of small stature, these differences are linked to the differences in nutritional status of women of reproductive age (See Chart 2, “Representation of thinness among women age 15-49 and the low birth (<2,500 g) rate in the provinces of Armenia in 2015”). In 2015, 3.6 percent of women of reproductive age were thin⁴⁷, while 45.0 percent were overweight or obese. In the urban areas and in the aforementioned provinces the representation of thin women was above the national average in 2015.

Breastfeeding and complementary feeding practices

Nutrition during the first two years of a child’s life is particularly important in terms of child morbidity and development. The WHO recommends breastfeeding within one hour of birth, exclusive breastfeeding for the first six months of life and nutritious complementary feeding after six months of child’s life. According to the DHS, 40.9 percent of newborns are breastfed within 1 hour after birth. In rural areas, the early start of breastfeeding is more prevalent – 48.7 percent



versus 35.3 percent in urban areas. Because of the *State Program on Breastfeeding*, initiated in 1993, this indicator significantly improved when compared to 2000 (comprised 25 percent). The DHS-2015 found that 45 percent of children under age 6 months are exclusively breastfed. The situation with exclusive breastfeeding expressively improved since 2010 when it comprised 35 percent, and approached the WHO benchmark of >50 percent.⁴⁸ According to the DHS, 43 percent of children in the age group of 0-2 years are given age-appropriate breastfeeding, including the exclusive breastfeeding for children under 6 months and continued breastfeeding with complementary feeding for children between 6 months and 2 years of age. In addition, 90 percent of children in the age group of 6-8 months are given a timely introduction of complementary foods. The proportion of infants aged 6-23 months, who consumed (during the day before the DHS survey interview) eggs is 16.4 percent, meat, fish, or poultry is 35.3 percent, fruits and vegetables rich of vitamin A is 44.1 percent, fruits and vegetables other than those rich in vitamin A is 63.2 percent, dairy products is 56.8 percent, legumes and nuts is 2.1 percent, food made from roots and tubers is 70.8 percent, foods made from grains is 80.5 percent. Foods made from grains, roots and tubers are the substantial part of the diet of children between 6 months and 2 years of age, and the minimum dietary diversity is low at 50.2 percent. The dietary diversity of infants increases with the increase in educational level of their mothers: among the infants with mothers having secondary education is 45.7 percent while among the infants having mothers with higher education is 59.2 percent.

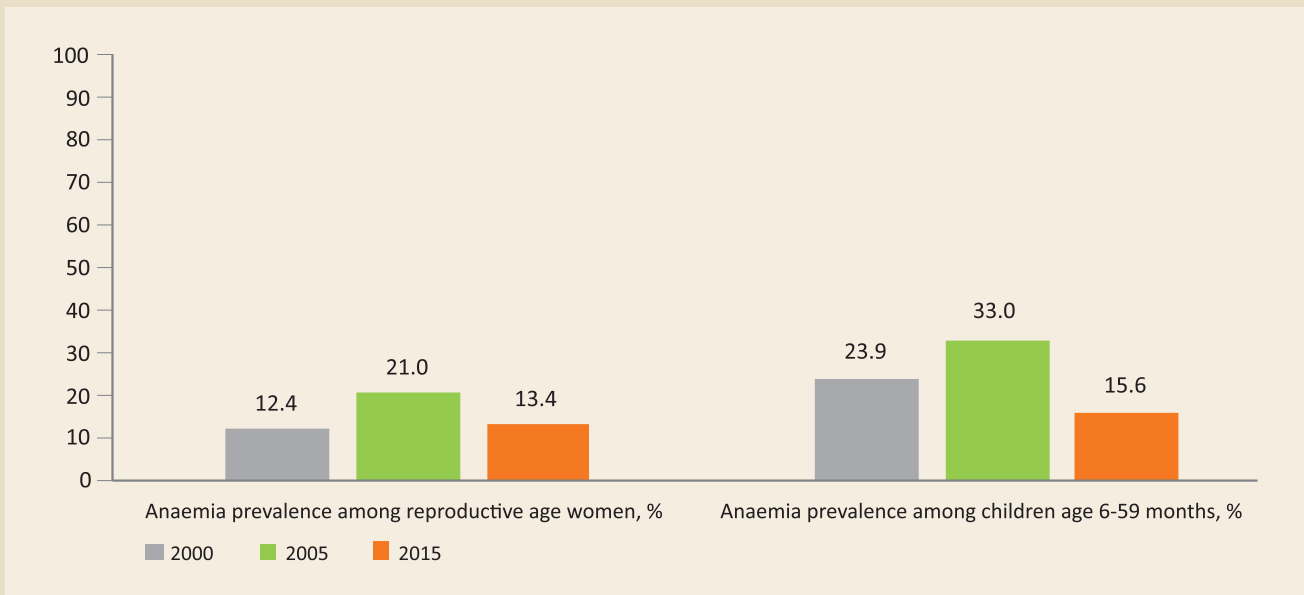
Micronutrient deficiencies

Micronutrient deficiencies among pregnant or lactating women and infants largely contribute to child health and malnutrition status. The DHS-2015 revealed the improvement in the intake of micronutrients among reproductive age women and under-five children (compared to 2010), and as an outcome, the significant improvement in prevalence of anaemia in both groups. In the recent

47 A BMI of less than 18.5 is used to define thinness in the DHS-2015.

48 “Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition”, WHO, 2014.

Figure 12: The dynamics of prevalence of anaemia among reproductive age women and under-five children in Armenia, percent.



Source: Armenia DHS –2015.

decade, the reproductive age women anaemia prevalence decreased by 36 percent, comprised 13.4 percent in 2015 and approached the WHO benchmark of <15 percent.⁴⁹ At the same time, the under-five anaemia prevalence declined by 53 percent.

Nevertheless, there are significant age-related and territorial disparities in the prevalence of anaemia among the children. Anaemia is most prevalent among children under one year of age (30 percent) and decreases with the age. In the age group of 0-2 years old children, it is almost 3 times higher than in the age group of 3-5 years (27.5 percent versus 9.9 percent). The prevalence of anaemia among the under-five children is especially high in Gegharkunik region, where it reaches nearly 49 percent. In addition, anaemia prevalence is higher than the national average in Lori, Shirak and Kotayk provinces (See Table 3, “Anaemia indicators in the provinces and special groups of population in Armenia in 2015”). The highest prevalence of anaemia among reproductive age women is also observed in Gegharkunik province (39.2 percent).

Anaemia is more prevalent among the breastfeeding women, with an average of 16.1 percent, which indicates the necessity to strengthen the policies aimed at iron supplementation amongst women during pregnancy and breastfeeding period. In Gegharkunik and Lori provinces and in rural areas there is a double burden of anaemia prevalence among under-five children and reproductive age women (See Table 3, “Anaemia indicators in the provinces and special groups of population in Armenia in 2015”). The prevalence of anaemia decreases with education: from 17.3 percent of women with basic education to 10.7 percent among those with higher education.

WHO suggests six Global Targets for maternal and child nutrition for monitoring the SDG progress.⁵⁰ The Government of Armenia has approved the “Concept on Improving Child Nutrition” where some of the WHO targets are reflected. The dynamics of the indicators corresponding to the WHO Global Targets in

49 “Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition”, WHO, 2014.

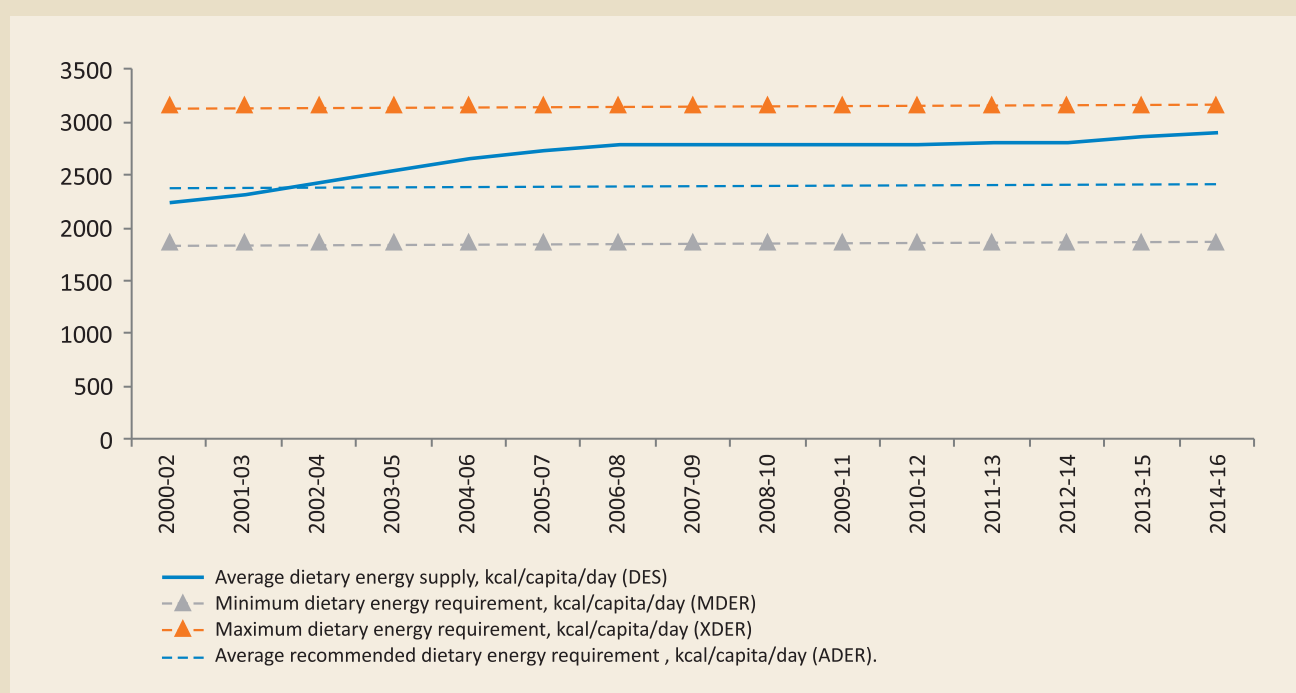
50 “Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition”, WHO, 2014.

Armenia shows that the WHO’s 2025 target values related to under-five stunting and wasting, low birth weight as well as anaemia in women and exclusive breastfeeding are likely to be achievable as long as more ambitious national target values are set in the SDG2 national agenda. The percentage of overweight requires the most progress in reaching the WHO targets (to be cut in half to reach the target value of 7 percent). The national 2020 target values of some of these indicators in the “Concept on Improving Child Nutrition” are already achieved. Nevertheless, the vulnerable areas and groups of population relative to all indicators have to be prioritized in further policy design in order to achieve the SDG2 targets. (See Table 4, “Achievability of the WHO Global Targets of Maternal, Infant and Young Child Nutrition in Armenia”).

Food Availability and Consumption

Armenia’s relatively strong agricultural performance since 2001 has resulted in substantial increase in overall food availability at the national level. The average dietary energy supply indicator have increased by nearly 30 percent since 2000⁵¹ and comprised nearly 2,900 kcal/capita/day in 2015. It exceeds the FAO’s minimum dietary energy requirement level for Armenia (1,886 kcal/person/day)⁵² by 54 percent and approached the FAO’s maximum dietary energy requirement level (3,217 kcal/ person/day).⁵³ The average dietary energy supply adequacy, which expresses the dietary energy supply as a percentage of the average recommended dietary energy requirement,⁵⁴ increased by 26.3 percent during the same period and comprised 120 percent in 2014-2016.

Figure 13: The dynamics of average dietary energy supply and recommended, minimum and maximum dietary energy requirements in Armenia.



Source: “Food Security indicators”. FAO, February 2016, retrieved in July, 2017.

51 “Food Security indicators”. FAO, February 2016. The DES is defined by FAO as a national average energy supply -the food available for human consumption (expressed in calories per capita, per day).
 52 MDER is the minimum amount of dietary energy per person that is considered adequate to meet the energy needs at a minimum acceptable BMI of an individual engaged in low physical activity. (FAO definition).
 53 Within each age and sex population group, the XDER is the maximum amount of dietary energy per person per day which is considered compatible with an active and healthy life. (FAO definition).
 54 The average recommended dietary energy requirement is a proper normative reference for adequate nutrition in the population (FAO definition).

The national self-sufficiency levels of main food products increased during 2008-2015; the self-sufficiency for potatoes, vegetables, fruits and berries, grapes, eggs, sheep and goat meat and fish is already reached (See Table 5, “The dynamics of self-sufficiency of key food products in Armenia, in 2004-2015”). Thus, these are the main types of food exports from Armenia. Nevertheless, Armenia still imports more than half (50.5 percent) of the supplied wheat, 42 percent of legumes, 78 percent of poultry, 42 percent of pork, 92 percent of vegetable oil.⁵⁵ The self-sufficiency of wheat increased in Armenia by 24 percent (from 39.8 to 49.5 percent) since 2008. Meanwhile, the sown area of wheat increased in the same period by 22 percent and covered 25 percent of total arable lands available in the land balance. The productivity of wheat per hectare increased by 40 percent since 2008.⁵⁶ There is a significant increase in lands covered by wheat and wheat productivity.

One third (33 percent) of the arable lands owned by farmers remains non-cultivated (Agricultural Census, 2014). If all arable land would be cultivated with wheat the domestic production would double and national self-sufficiency would be 80 percent.



Food supply in Armenia depends highly on food imports, especially with regard to cereals and certain types of meat. These products provide more than half of the available dietary energy in Armenia. According to the national food balance,⁵⁷ 2,846 kilocalories of dietary energy can be consumed daily from the available food for an average Armenian.⁵⁸ Cereals (mainly wheat) provide about 52

percent of the calories available for consumption while livestock products (including meat, milk, eggs and fish) provide nearly 20 percent. About 66 percent of the available for consumption dietary energy per person, which is about 1,870 kilocalories, is available from domestic production (See Table 6, “Total supply of food and the per capita daily energy availability for consumption in Armenia, in 2015”). On average, five percent of the available food is wasted in Armenia. The loss – due to lack of markets and storage facilities – is the highest for vegetables (21 percent), melons (15 percent) and potatoes (8.5 percent).

There is a significant discrepancy in the macro and household level data on daily energy consumption in Armenia. The quantities of food energy available for consumption and the actual food consumption by an average Armenian significantly differ. Based on the ILCS-2015, the average Armenian consumes approximately 2,420 kcal/capita/day.⁵⁹ The macro data provided in the food balance sheets (NSS RA) show that the average per capita daily energy available for consumption was approximately

55 “Food Security and Poverty”, NSS RA, 2005 and 2015 publications, January-December Issues.

56 “Statistical Yearbook of Armenia”, NSS RA, 2010, 2013 and 2016. “Food Security and Poverty in Armenia”, January-December 2008, 2010 and 2015 publications, NSS RA.

57 “Food Security and Poverty in Armenia”, January-December 2015, NSS RA.

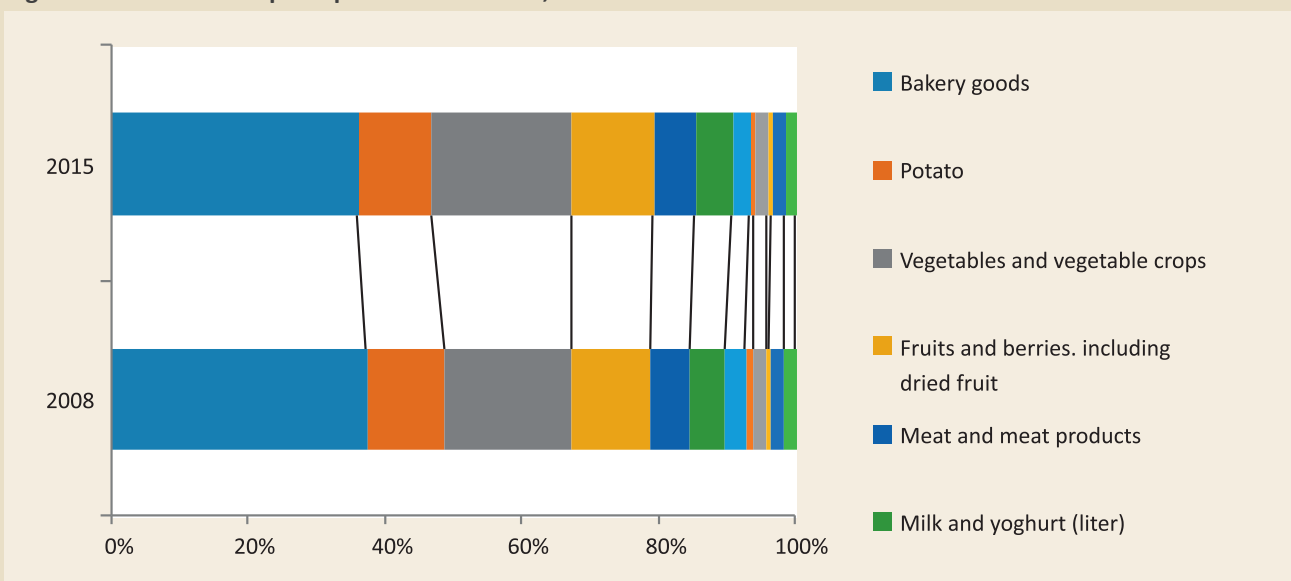
58 This is the supply less uses other than for consumption – for animal feeding, seeds, exports, as well as wasting and open stocks.

59 Measured in adult equivalent, CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017.

2,700-2,800 kcal/capita/day during 2005-2015 while the household level data obtained from ILCS is much lower. The data comparisons of daily energy consumption at different regional levels, as well as population group levels is possible only by using the micro level data.⁶⁰ The regional differences reveal that Tavush, Armavir, Syunik, and Shirak provinces and urban areas, including Yerevan, are the most deprived when compared to the national average. The poorest two wealth quintiles (poorest 40 percent of the population) are also deprived relative to the national average dietary energy consumption. The most vulnerable groups in this regard are households with an unemployed head, large households, households headed by women (See Table 7, “The per adult equivalent daily dietary energy consumption in Armenia, in 2015 by provinces and vulnerable groups”).

Besides the quantity, the quality of diet is equally or even more important. According to the ILCS household level data, about half (47 percent) of the actual food consumption pattern of an average Armenian consists of staples, mostly bakery products and potatoes. Vegetables and fruits comprise some one-third of the pattern, while protein-rich meat, fish and eggs are at 9 percent. Despite the growth in food availability during 2008-2015, the food consumption pattern was not changed significantly towards diversification or increase in consumption of more nutritious food items. This is mainly due to limited financial access of nutritious food, lack of healthy nutritional habits, awareness and lifestyle. See, Figure 14 .

Figure 14: Food consumption pattern in Armenia, in 2008 and 2015



Source: Calculated based “Social snapshot and poverty in Armenia”, NSS RA, 2016.

Agricultural Productivity and Sustainability

Sustainable availability of food largely depends on domestic agricultural production, which in Armenia is produced predominantly by family farms. Gross agricultural output in Armenia increased by 59 percent⁶¹ during 2008-2015 and the share of agricultural sector in GDP reached 17.2 percent in 2015. Family farms produced 97.2 percent of gross agricultural output in 2015.⁶² There is also a small sector

60 ILCS data served as a main basis for the analysis of dietary energy consumption after adjustment by the adult equivalent rate.

61 In current prices.

62 99.6 percent of plant growing and 93.6percent of animal husbandry.

of commercial agricultural organizations, producing about 2.8 percent of total output.⁶³

Several factors adversely affect the productivity and sustainability of the family farms. These issues, analysed below, are:

- land ownership and size - small and fragmented lands
- irrigation
- low mechanisation
- crop pattern
- access to financial resources
- climate change and extreme weather

Land ownership and size

Due to land reforms during 1991-1993, privatizing all lands cultivated by large collective farms and state farms in the Soviet period, land was allocated to rural families and plot size was determined by family size. In 2014, there were some 345,875 family farms and 342 commercial farms with agricultural lands present in the country, which operate in total 535,000 hectares of agricultural lands. Ninety percent of family farms own lands with land ownership



certificates. An average family farm in Armenia operates 1.48 ha of agricultural land, of which 1.1 ha are their own lands and 0.2 ha are leased (See Table 8, “Own and leased agricultural lands operated by family and commercial farms in Armenia, in 2014”). The crop production in Armenia is highly fragmented where agricultural lands are divided into 1.2 million land plots. The agricultural holdings of nearly half of producers are divided into three or more separate land plots, which reduces the effectiveness of crop production when taking into account the small size of land per farm.⁶⁴ Small plots and fragmentation of agricultural lands owned by farmers restrict the possibilities for sustainable agriculture and sufficient agricultural income generation. The net cash generation per average family farm amounts to 1.03 million AMD per year, or 86.17 thousand AMD per month (80.5 thousand AMD per one employee), or about 46.9 percent of the average monthly salary nationwide. Family farmers face the problem of financial instability due to the low cash flows, high levels of internal consumption and low level of marketability (See Table 9, “Average family farm and commercial agricultural organization in 2015”). The average level of marketability of agricultural output for family farms in Armenia in 2011-2015 remained stable in the range of 56.0 to 58.6 percent. In 2015, only 52.3 percent of output was sold for money, whereas 6.3 percent was bartered for goods or services.⁶⁵

63 “Statistical Yearbook of Republic of Armenia,” NSS RA, 2016.

64 “Main Findings Agricultural Census 2014 of the Republic of Armenia”, NSS RA, 2016.

65 “Agriculture in the Republic of Armenia, 2011-2015”, NSS RA, 2016.

Irrigation

Irrigation is essential for sustainable agriculture in Armenia. Water user associations operate the majority of irrigation infrastructure in Armenia and cover nearly 70 percent of rural communities. However, the efficiency of water and energy consumption by the water user associations needs substantial improvement. The irrigation system is rather deteriorated and needs rehabilitation to avoid losses. According to the macro level data, only



20 percent of total agricultural lands operated by family farms were irrigated in 2015, which shows insufficient coverage by the irrigation system. The micro data indicate that nearly half of farms in 2015 irrigated 75-100 percent of their agricultural lands, 18 percent irrigated 25-75 percent and one-fourth up to 25 percent.⁶⁶ Regions with the most favorable climatic conditions for agriculture - Ararat valley (Ararat, Armavir provinces) and Aragatsotn province - are the main consumers of irrigation water (See Table 10, “Crop pattern of Armenian family farms on irrigated and non-irrigated lands, 2015”). According to FAO,⁶⁷ the irrigation potential of Armenia in 2016 was estimated at 660,000 hectares but only 273,530 hectares were equipped for irrigation. The difference in productivity between irrigated and rain-fed agriculture is estimated at about USD 900 per hectare, without changing the crop pattern.

A 30 percent increase in irrigated land for an average farm would generate sufficient incremental net income to lift a family out of poverty - provided other sources of income remained unchanged.

However, information collected from 54 Water Users’ Associations, revealed that although irrigation in 2005 clearly improved in terms of reliability of supply, only 125,000 ha was irrigated out of the 228,000 ha available for irrigation.⁶⁸ As of 2014, the irrigated land comprised only 89,855 ha⁶⁹. This took place during the substantial subsidization of irrigation expenditures, which amounted to more than half of the total state budget subsidies to agricultural sector. However, the irrigation subsidization did not result in the increase of the volumes of irrigated land; on the contrary, the actual volume of irrigated land has decreased substantially over 10 years. This is mostly because of the unreliable supply of water, huge losses in the irrigation systems and fragmentation of the land plots (See Table 11, “State budget subsidies in agriculture and irrigation in 2012-2016”).

Low level of mechanization

Low level of mechanization of agriculture and limited use of modern technologies cause low labour productivity and low incomes of farmers which leads to farming being an unsustainable livelihood -reflected in high levels of poverty. As an example, in 2015, there were 41 tractors, 3.5-grain harvesters, 5.6 tractor-mowing machines, 5.0 tractor row sowing machines and 6.1 cultivators available per 1,000

66 “Social Snapshot and Poverty in Armenia”. NSS RA, 2016.

67 “Irrigation in the Middle East Region in Figures. Aquastat Survey – 2008”, FAO, 2009.

68 “Water Report 34”. FAO, 2009.

69 “Main Findings of 2014 Agricultural Census of the Republic of Armenia”. NSS RA, 2016.

farming farms in Armenia.⁷⁰ In 2014, only 2.8 percent of farmers had green houses and 0.4 percent had heated greenhouses.⁷¹

Crop pattern

The predominant majority (73 percent) of lands owned by family farms are arable lands, while orchards and vineyards cover 7 percent, grasslands cover 14 percent, and pastures cover 6 percent. The land is cultivated with grains (mainly wheat) and leguminous crops (57 percent), followed by forage crops (22 percent), potatoes and vegetables (9.5 and 8.3 percent).⁷² The crop pattern of family farms is highly distorted in Armenia from the monetary income generation point of view. Out of 346,041 hectares of arable land under cultivation,⁷³ about 37 percent is used for wheat and barley production, with the smallest monetary income generation and marketability (See Table 12, “Crop pattern of Armenian family farms, 2015”). The main grain production is consumed internally by the family farms.⁷⁴ One of the reasons for such high share of cereals is the low cost of production compared to other crops, in particular, (i) low volumes of inputs, needed for production, (ii) low labour involvement, (iii) no need of irrigation. However, out of 61,903 hectares of actually irrigated sown land, about 35.7 percent of it in 2014 was used for wheat and barley production. The other reason for such a high share of cereals in the current Armenian crop pattern is relative low cost of long-term storage of cereals and their use as an instrument for barter trade.⁷⁵



The policy of rationalization of the crop patterns should minimize wheat and barley production in irrigated lands and gradually replace them in the non-irrigated lands. On the other hand, the high share of wheat and barley in the crop pattern of the family farms indicates on the subsistence level type of agriculture, especially in the small farms possessing less than 2 hectares of land. The main reason is insufficient financial resources to change the crop pattern and produce cash crops. To change the crop pattern and increase the levels of marketization these farms will need access to financial resources, subsidies and efficient product marketing systems.

Access to financial services

Access to financial services is critical for commercialization of the family farms, including changing the crop patterns although some positive developments took place during 2007-2015. The ratio of credits to gross agricultural output, which is an indicator of credit accessibility increased about 3.9

70 “Agriculture in the Republic of Armenia, 2011–2015”, NSS RA, 2016.

71 “Main Findings of 2014 Agricultural Census of the Republic of Armenia”. NSS RA, 2016.

72 “Agriculture in the Republic of Armenia, 2011–2015”. NSS RA, 2016.

73 114,821 hectares were not used, according to 2014 Agricultural Census.

74 In 2015 Armenia imported cereals in the volume of about 94 million USD, of which 383,000 tons of wheat of about 77 million USD, and exported only 13,000 tons of wheat.

75 According to NSS (“Agriculture in the Republic of Armenia, 2011–2015”. NSS RA, 2016) about 6.3percent of gross agricultural output is used for barter trade for goods and services. Most of it according to expert estimates are cereals.

fold. Yet, the share of agricultural credits to total sectoral credits remains relatively stable. There was certain increase in the affordability of credits-indicator of average interest rate, which decreased from 19.1 percent in 2007 to 15.1 percent in 2015 (See Table 13, “Credits to Agriculture, 2007-2015”).

Current levels of access to agricultural credits is low, especially for small family farms. As of October 2013, 20.3 percent of active farms (64,431 family farms) and 25.1 percent of commercial organizations (67 commercial organizations) had credits from banks with the average credit size of 1.52 million AMD.⁷⁶ Taking into account that the annual monetary income for average family farm comprised about 1.47 million AMD in 2015, these volumes of credit are unaffordable for the average and small family farms. According to the existing interest rates, the amount of annual credit that an average family farm can take without substantial risks is about 500,000 AMD, which corresponds to the necessary volume of funding of inputs (about 440,000 AMD per year).

The Government started to subsidize the interest rate on agricultural loans in 2011. Between 2011 and 2016, the country’s farms were given 119.4 thousand agricultural loans amounting to 99.1 billion AMD (about USD 203 million). Financing was carried out at a rate of 14 percent per annum; 4 percent of the loan amount was subsidized by the state (in border villages it was 6 percent) with a grace period of 6 months in 2011-2014. Crediting was conducted in local currency (AMD) and the average loan size was 625,000 AMD. Since 2015, a subsidy of 6 percent is given to all farmers participating in the state program. In 2016, loans were granted to 20.4 thousand farmers in the amount of 15 billion AMD (in two stages with 7.5 billion AMD), for spring and autumn field work, out of which the subsidized amount was 1,163 million AMD. According to the household level data, in 2015, some 16 percent of rural households received loans for agricultural activities from banks (76 percent were non-poor, 22.5 percent were poor and 1.1 percent were extremely poor households).⁷⁷ Consequently, the agricultural loans were less accessible for poor and extremely poor households. Taking into account that the burden of loans and interests are hardly affordable for an average farm, the Government decided to issue agricultural loans under milder conditions since 2018.

Climate change and extreme weather

Cropping in Armenia highly depends on climatic shocks and hazards, including frost, drought, hail, seasonal floods, causing great damage to agricultural production and losses of the potential agricultural output of the producers.⁷⁸ The system of agricultural insurance does not exist and represents a major shortcoming. The productive potential of agricultural lands is affected also by inappropriate land-use practices: over-grazing of mountain pastures, lack of crop rotations, use of excessive irrigation, poorly maintained drainage systems. As a result, more than 60 percent of arable lands and 15 percent of pastures are subject to degradation and erosion.⁷⁹

Regional disparities in agricultural production

There are substantial regional differences in characteristics of the average family farm, which is shown in Table 14, “Average family farm characteristics at the Province level in 2015.” In order to summarize

76 “Main Findings Agricultural Census 2014 of the Republic of Armenia”. NSS RA, 2016

77 “Social Snapshot and Poverty in Armenia”. NSS RA, 2016

78 These issues will be analysed in detail in the separate paragraph in the next section.

79 “Armenia Agriculture and Rural Development Policy Note”. The World Bank, 2013.

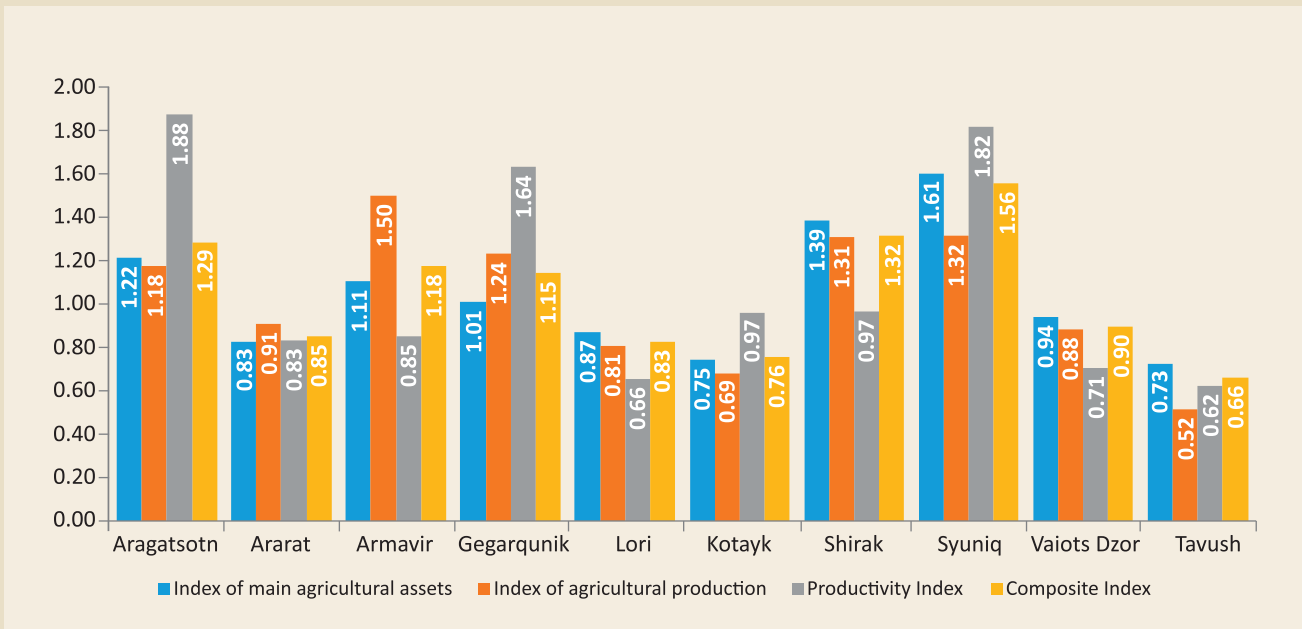
these disparities, special indices characterizing regional disparities in agricultural assets, production and productivity were calculated (See Figure 15).⁸⁰ The calculated indices are presented in the Table 15, “Regional disparity indices for family farms in Provinces of Armenia in 2015”. Analysis shows that the most important source of regional disparities is the volume of the main agricultural assets (land size and livestock) possessed by the family farm, which may be considered as an integral characteristic of the



size of the farm. The main direction of the agricultural policy nationwide, especially where the size of the family farm is lower than the national average, should be to increase the size of the average family farm. The second direction of the agricultural policy will be to increase the level of output, which is not directly connected to the size of the farm. This can be done by changing the crop pattern and livestock productivity; reaching more efficient use of the assets and main inputs, increasing the level of marketization through creation of required logistics networks, promotion of agricultural export, etc.

The favourable conditions for family farms are in the province of Syunik and the worst ones in the province of Tavush. Second best is the province of Shirak and the third one is the province of Aragatsotn. Second worst is the province of Kotayk and the third one is the province of Lori. See Figure 15 .

Figure 15: The indices of regional disparities for family farms in Armenia in 2015 (ratios to nationwide average)



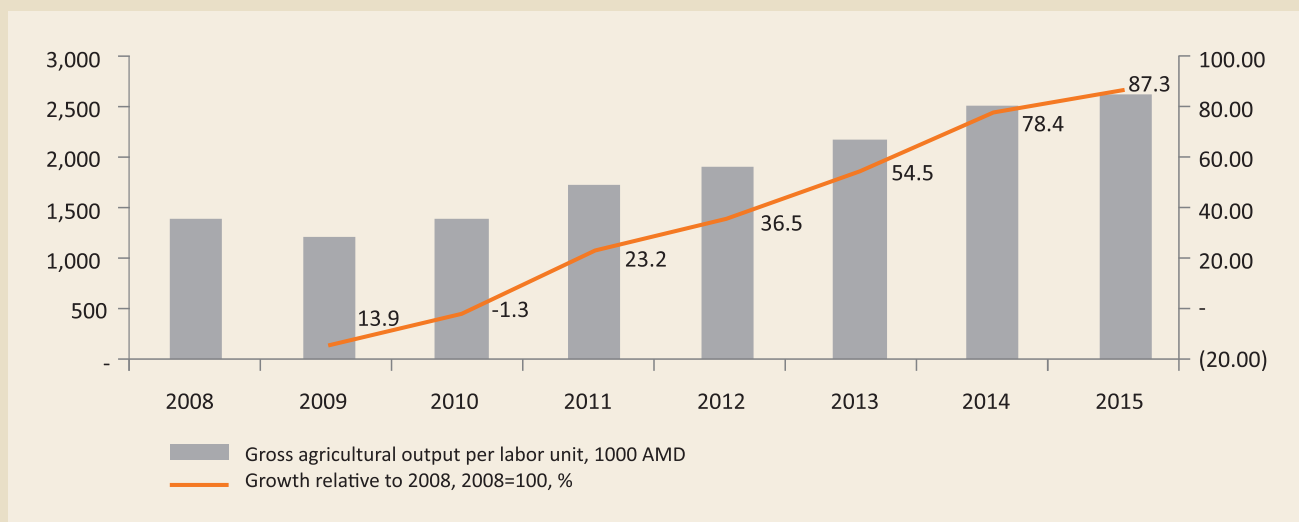
Source: Calculated based on “Statistical Yearbook of Republic of Armenia- 2016”, and “Main Findings Agricultural Census 2014 of the Republic of Armenia”, NSS RA, 2016.

⁸⁰ The indices were calculated based on the average family farm characteristics in the provinces (See Table 17 in the Annex 3)

Agriculture productivity and employment

The gross agricultural output in Armenia was accompanied with the decline in agricultural employment. While the absolute number of employed in agriculture sector decreased by nearly 15 percent, the output increased by 59 percent. Thus, the gross agricultural output per labour unit increased in 2008-2015 by 87 percent (See Table 16, “Gross agricultural output and agricultural employment in Armenia in 2008-2015”).

Figure 16: The after-crisis dynamics of agricultural productivity in Armenia



Source: “Statistical Yearbook of Republic of Armenia”, NSS RA, 2016.

There are still substantial regional differences in agricultural productivity. The highest level in 2015 was in the province of Aragatsotn, about 1.88 of the national average, and the lowest in the province of Tavush, about 0.62 of the national average - the difference between them was more than three fold. In the province of Syunik, the level of productivity was about 1.82 of the national average, three times higher than in Tavush (See Table 17, “Regional disparities in monetary incomes of family farms in Armenia in 2015”).

Taking into account that all employees in family farms are exempt from personal income taxes, the levels of average monetary net incomes in the provinces Aragatsotn, Syunik and Gegharkunik are comparable with the average yearly salary, which in 2015 comprised about 2 million AMD. This creates disincentives for the family farms sector because most of the formal and informal non-agricultural jobs generate income less than average salaries. The actual level of marketization in the provinces⁸¹ specialized in animal husbandry, such as Aragatsotn, Syunik and Gegharkunik, should be higher than in provinces specialised in plant growing.⁸² The levels of the net monetary income per employed in the family farms sector for the provinces with the low productivity (such as Tavush, Vayots Dzor and Lori) are on the level of the minimal salary (net of taxes comprised about 0.66 million AMD per year in 2015). See Table 17, “Regional disparities in monetary incomes of the family farms in Armenia in 2015”.

81 There is no aggregated data available on the marketization levels in the regions.

82 According to NSS RA, the marketability level of meat comprises in 2015 about 90 percent, milk – about 59 percent, whereas for grains it’s about 30.8 percent, for potatoes – 51.8 percent, etc. (See Agriculture in Armenia in 2011-2015, NSS RA, 2016).

Non-agricultural job creation in rural areas and in small provincial towns may create strong incentives for productivity increase in the provinces with low agricultural productivity. This needs to be coupled with policies to increase size of the family farm and increase of farm outputs in order to diminish the hidden agricultural unemployment which is one of the main causes of the low productivity.

The level of productivity in Armenian agriculture is rather high when compared with the world average and more than twice higher than in upper middle income countries. However, the level of agricultural productivity is about 2.4 times lower than the Russian Federation and about 8 times lower than in high income countries. Share of agriculture in GDP in Armenia corresponds to the average share of agriculture in the lower middle income group, to which Armenia currently belongs (See the Table 18, “Agriculture, international comparisons, 2015”). The processes of agricultural development will inevitably result in the steady diminishment of the share of agriculture in Armenian GDP.

The share of population engaged in agricultural activities in Armenia is relatively high, which is one of the indicators of hidden unemployment in agriculture. Agricultural employment in the future will depend on two factors: (i) internal processes of development and productivity increase in agriculture, which will push people out of the sector, and (ii) processes of development of non-agricultural sector of the Armenian economy to accommodate the potential outflow of the labour force from agriculture. From this point of view, the productivity gap between agricultural and non-agricultural sectors is relatively small, judging from the corresponding figures in Table 18. To accommodate potential outflow of labour from agriculture, the non-agricultural sector productivity should have higher growth rates than agricultural sector productivity.

Agricultural exports and growth

One of the key drivers of agricultural growth is agricultural export. Only a small portion of agricultural production (including fishing) is exported - in 2015, it was less than 4 percent of total agricultural production. The main exported agricultural products from Armenia are fruits and vegetables, and a small portion of live animals and meat. The main markets for agriculture products export are the markets of Commonwealth of Independent States countries with a major share (78 percent) attributed to agricultural exports to the Russian Federation (See Table 19, “Exports and imports of agriculture products in 2011-2015”).

Improved commercialization and increased exports of agriculture products are key priorities in the agenda of the Government of Armenia; critical importance should be given to targeted actions in short to medium-term outlook.

Armenia is a net agriculture product importing country. The large shares of agriculture product import attributed to cereals (mostly wheat) and meat (33 percent and 23 percent of total agriculture product imports in 2015). Food exports in Armenia are on the extremely low level, the lowest in the Eurasian Economic Union, and agricultural production is highly concentrated on internal consumption. Bringing Armenian agricultural and food exports even to the level of Kyrgyz Republic, which is rather low, will result in 2.3 times increase in agricultural exports and corresponding cash flows from exports to the family farms.

Gender Equality Issues

While the gender equality in Armenia is ensured by law, women traditionally have limited access to the agricultural assets in rural family farms. The registration of land ownership has been carried out mainly by the male household heads. Women are registered as co-owners of the land, being the wives or daughters of the family head, and usually they do not claim their ownership rights over land. According to DHS-2015, only 31 percent of rural women own land alone or jointly with other members of households, while among rural men of same age, this indicator is 64 percent. Housing ownership is more common among rural women: 52 percent own a house alone or jointly with other members of households. Among rural men this indicator is 75 percent. Among the women who own land (alone or jointly with other household members), 80 percent have land title or ownership certificate, seven percent have no land ownership certificate, 13 percent of women interviewed could not answer the question. This is related to traditions and stereotypes in Armenian families regarding roles of men and women within the household and society. Among men with land ownership, the representation of those with ownership certificates is 86 percent.⁸³ Thus, predominant majority of those who have land ownership also possess ownership titles. Women in rural areas have limited access to credit and entrepreneurship, markets and agricultural inputs, which limits their income earning opportunities.⁸⁴ According to the DHS-2015, only 21 percent of men (in the age group 15-49) and 19 percent of women have or use bank accounts. Among rural women this indicator is even lower - 12 percent.

Agricultural Productivity and Incomes of Small-scale Food Producers

While a definition for “smallholder farms” has not officially been determined in Armenia in order to elaborate and implement targeted policies, disaggregating agricultural data can provide a basis for recommending a constructive definition. Analysis suggests that small-scale food producers in Armenia are family farms that own or operate land plots from 0.2 to 2.0 hectares of agricultural land. According to SDG2 Target 3, the productivity and incomes of smallholders should be



doubled by 2030, which means that the average productivity of small scale food producers (2014 prices) should be no less than 1.670 million AMD, which can be achieved with an annual average productivity growth rate of no less than 4.7 percent. Preliminary agricultural data analysis⁸⁵ indicates that nearly 79 percent of all family farms in Armenia operate less than two hectares of agricultural lands per farm. These farms operate about one-third (35.5 percent) of agricultural lands operated by the family farms in the country and the remaining 21 percent of farms operate 64.5 percent of land.

83 “Armenia DHS – 2015-16”. NSS RA, MOH, 2017.

84 “Gender, Agriculture and Rural Development in Armenia”. FAO, 2017.

85 “Main Findings of 2014 Agricultural Census of the Republic of Armenia”. NSS RA, 2016.

Therefore, the average size of the land plot for the farmers, operating less than 2 hectares of land, amounts to 0.75 hectares per farm, and the average size of land plot for the farms, operating more than 2 hectares amounts to 5.14 hectares or 6.8 times more. Thus, substantial division in agriculture - based on the size of the land cultivated by the family farms, exists in Armenia. See Table 20, “Number of family farms by the size of operated agricultural lands in 2014.”

In addition, there are significant regional differences in land concentration and there is a strong correlation between monetary incomes, generated by family farms and the structure of the land size See Table 21, “Regional differences of the sizes of farms based on the operated agricultural land.” Although the production module was not included in the 2014 Agricultural Census, the values of agricultural production and productivity by farm land sizes were estimated based on combination of the data gained from the Agricultural census, official statistics and the ILCS. The labour productivity in the farms, operating two hectares and less, is lower than in bigger ones (more than 2 hectares) with the exclusion of the farms with land plot less than 0.1 hectares. This may be explained that most of these farms are actually homesteads, adjoining country houses and their crop patterns are very different from family farms. These farms do not cultivate cereals and beans and are concentrated on more commercially viable crops, mostly for their own consumption. This refers also to animal husbandry. This is partly true also for farms with land usage less than 0.19 hectares. For farms operating 0.2-2.0 ha of lands the average productivity in 2014 per labour unit was 1.8 times lower compared with the average productivity of farms with land plots, larger than 2 ha. See the Table 22, “Employment and productivity in family farms with different land plot sizes”. The analysis suggests, that small-scale food producers in Armenia currently are family farms, who own or operate land plots from 0.2 to 2.0 hectares of agricultural land.

There is a need to realign the current agricultural policy to target the needs of small-scale food producers, starting from access to quality irrigation and financial resources to promoting more income - generating crop patterns, knowledge dissemination and agricultural export promotion. New components of agricultural policies should be expanded and implemented, such as a comprehensive system of agricultural insurance and a system of decoupled agricultural subsidies.



STRUCTURAL CAUSES OF FOOD INSECURITY AND MALNUTRITION

The restricted access to food in Armenia is caused by the limited financial access to adequate food due to poverty, inequality, insufficient and unstable incomes, as well as by insufficient demand in the labour market. While the food supply and availability has increased in Armenia, the country largely depends on food imports and food price volatilities, which affect the sustainability of food security. Natural hazards affect farmers' productivity, and thus, food security. Nutritional habits, awareness and knowledge as well as the limited access to safe drinking water affect the utilization dimension of food security.

Poverty and Inequality

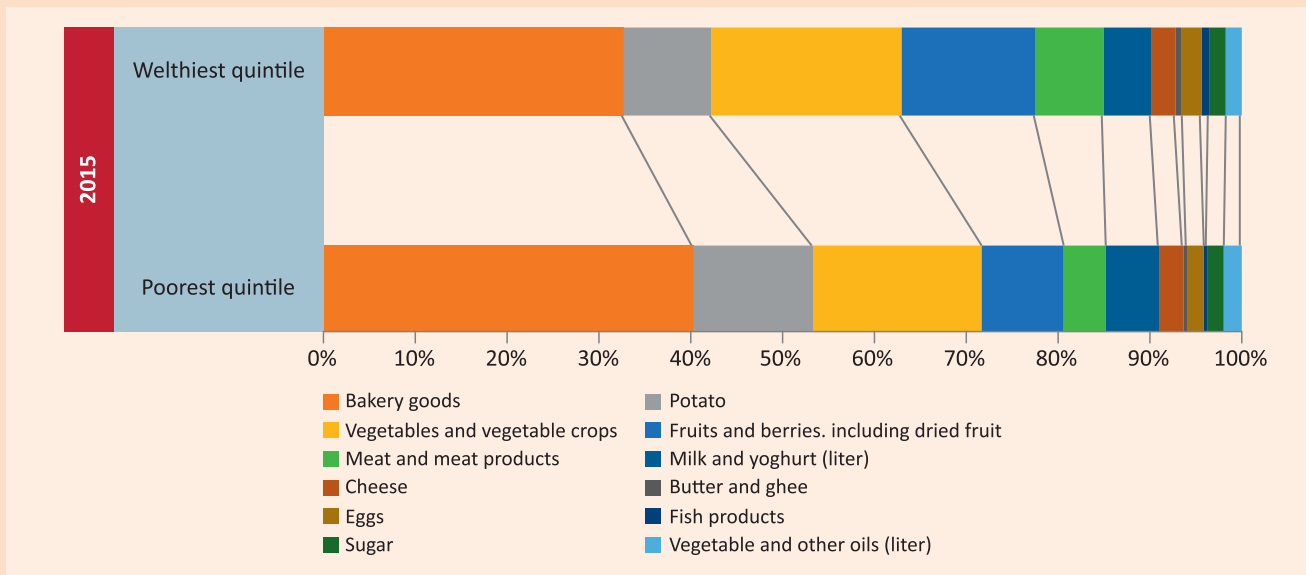
Poverty is highly correlated with undernourishment and food insecurity. For the poorest quintile of the population, average energy consumption was approximately 1,926 kcal/capita/day, indicating insufficient energy consumption amongst the poorest shares of the society.⁸⁶ Food expenditures encompassed the largest share of total household expenditure amongst the poor population: nearly 59 percent for the poor and 69 percent for the extremely poor, while the national average stands at 43.6 percent.⁸⁷ Since 2008, the share of expenditures on food in the total consumption expenditures of population declined in Armenia by 16 percent, while in the poorest quintile of population it declined at a lower rate (12 percent) compared to the wealthiest quintile (18 percent). See Table 23, “The dynamics of proportions of per capita expenditures on food in the total consumption expenditures of the poorest and wealthiest quintiles in Armenia, in 2008-2015, percent.”

The wealthiest quintile has more than two times higher average food energy consumption than the poorest quintile. The poorest shares of population consume much less diverse and nutritious food. The food consumption pattern of the poorest quintile of population contains predominantly staple foods –bakery goods and potato (56 percent) which, in addition to vegetables, comprise 73 percent of their diet. The structure of food consumption pattern of the wealthiest quintile contains 1.3 times less staples (42 percent), 2 times more fruit (15.2 versus 7.7 percent), 1.9 times more meat (8 versus 4.3 percent), fish and eggs. Despite the fact that the poor spend most of their budget on food, the nutritional quality of food they consume is lower.

⁸⁶ According to FAO, the Minimum Dietary Energy Requirement (MDER) for Armenia comprised 1,886 Kcal/capita/day, in 2014-2016.

⁸⁷ “Social Snapshot and Poverty in Armenia”. NSS RA, 2016.

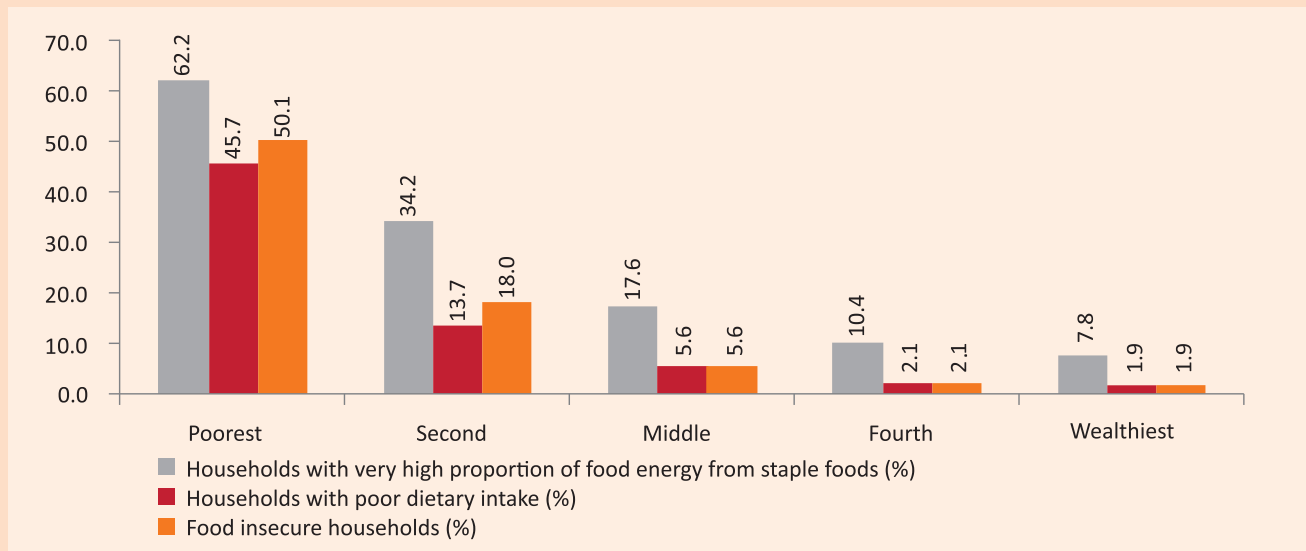
Figure 17: Food consumption patterns in the poorest and wealthiest quintiles of population in Armenia, in 2015



Source: "Social snapshot and poverty in Armenia", NSS RA, 2016.

Nearly 7 percent of population below the poverty line were extremely poor, while 20 percent of them were undernourished relative to the MOH standards in 2015.⁸⁸ In 2015, 47.6 percent of poor households were food insecure, 43.1 percent had poor dietary intake and 60.6 percent had very high energy consumption from staples.⁸⁹ The gains of economic development are not distributed proportionally and households with poor food security indicators are concentrated in the poorest shares of the society. The poorest quintile of the population has eight times more households with very high proportion of food energy from staples than the wealthiest quintile (62.2 percent versus 7.8 percent) meaning the nutrition quality of consumed foods amongst the poor is significantly lower.

Figure 18: Food security indicators by the wealth quintiles in Armenia, in 2015



Source: CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017

88 Calculated based on the ILCS-2015 dataset, NSS RA.

89 CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017. The definitions of food insecure households, households with poor dietary intake and with very high proportion of food from staples are provided in "Armenia Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)", WFP, NSS RA, UNICEF, 2016, footnotes 39 and 40.

Based on micro-level data, the nominal average per capita monthly income in Armenia increased between 2008 and 2015 by 87 percent, standing at AMD 55,309 (USD 116) in 2015, which exceeds the national poverty line by 32 percent.⁹⁰ Amongst the poorest quintile of the population, the average per capita monthly income is four times lower than the national average and eight times lower than the average income of the wealthiest quintile. This reveals a high level of economic polarization in the society. Inequalities in income distribution affect the distribution of food access, causing deprivation amongst the poorest shares of the population in terms of food security and malnutrition. According to the 2015 DHS, the prevalence of under-five stunting, wasting and overweight about two times higher in the poorest quintile of population compared with the wealthiest quintile. The under-five anaemia is 1.6 times higher, while the prevalence of anaemia amongst women of reproductive age is much closer with 1.2 times higher indicator in the poorest quintile (See Table 24, “Inequalities in nutrition indicators among the poorest and the wealthiest quintiles”).

Some nutrition indicators are equally distributed in the quintiles of wealth, which indicates the universal presence of the problem at the national level. For example, the prevalence of overweight (including obesity) among the reproductive age women comprises 45 percent, while there is no difference in the distribution of this indicator (44.3 and 44.7 percent in the poorest and wealthiest quintiles respectively).

Labour Market Participation

Participation in the labour market is a significant factor behind poverty and lack of access to adequate food. In Armenia, only 50.9 percent of labour resources are employed (employment to population ratio). Among those employed, 24.1 percent were poor, 1.3 percent - extremely poor and 3.8 percent were undernourished based on the MOH standards of nutrition in 2015.⁹¹ Thus, employment does not avoid undernourishment, although its prevalence is low compared to the national average of 6 percent.

Women in Armenia are generally more educated than men but their participation in the labour market is lower. The share of economically active women amounts to 54.3 percent compared to 72.6 percent for men. The employment rate among women is lower, standing at 43.8 percent compared to 59.8 percent among men. Women in Armenia are predominantly employed in the low-paid sectors (education, healthcare, public services, agriculture/farming) and they generally receive lower wages compared to men with the same qualification.

There is a horizontal and vertical gender imbalance in the labour market in Armenia which likely contributes to the undernourishment among employed women. About 23.8 percent of employed women were poor, 1.2 percent were extremely poor and 3.7 percent were undernourished based on the MOH standards of nutrition in 2015. The unemployment rate among women is higher, at 19.5 percent, compared to 17.6 percent among men. There is no significant difference in extreme poverty and undernourishment between the male and female unemployed. Thus, the unemployed are very vulnerable in terms of undernourishment.

90 ILCS 2008-2015, “Social Snapshot and Poverty in Armenia”, NSS RA, 2016.

91 Calculated based on the ILCS-2015 data.

The unemployment rate in Armenia is high, at 18.5 percent. The highest unemployment rates were observed in Yerevan and provinces with a predominantly urban population. The extreme poverty rate amongst the unemployed is 3.8 percent which is nearly twice as high as the national average. At the same time, 11.9 percent of unemployed were undernourished based on the MOH standards of nutrition in 2015, which is also nearly twice as high as the national average. Average food energy consumption in families headed by an unemployed person is lower than the national average, and food insecurity among these households is higher.

Socio-economic development disparities within the country partially reflected in disparities in labour force participation rates cause significant disparities in food security within the country. Informal non-agricultural employment is still widespread in Armenia and informal workers are vulnerable in terms of stability of labour incomes, wealth and thus, food insecurity.

Incomes of Population

The main sources of income for Armenians are labour incomes, which include incomes related to self-employment, hired labour and agricultural production, social transfers, including pensions and benefits, and private remittances. The share of labour incomes within total average per capita incomes reached 66 percent in 2015. Thus, inclusion in the labour market is a significant source for poverty alleviation and improvement of hunger and malnutrition indicators. Decent employment is equally important for poverty reduction and improvement of food security in the country. The average monthly nominal income per hired worker in Armenia was nearly AMD 171,000 (USD 359) in 2015 exceeding the national food poverty line seven-fold. Nevertheless, nearly 15 percent of hired workers earn a monthly salary which is less than or equal to the minimum salary of AMD 55,000. The burden of living costs for people receiving the minimum salary often results in food insecurity for their households, despite being employed.

Without the social protection system, the share of the extremely poor population would increase nine-fold (to 18.2 percent), while the share of the poor would increase by 47 percent (to 44 percent). Thus, state social transfers have a significant impact on reducing poverty and food insecurity in the country.

Despite agricultural self-production ensuring comparatively high levels of sustainable access to a diversity of food in rural areas, incomes from agricultural production have had a small contribution to the overall growth in the incomes of the rural population. Between 2008 and 2015, the per capita monthly incomes of rural inhabitants increased by 80 percent and amounted to AMD 47,791 (USD 100) in 2015. Incomes related to agricultural production (sale of crops and livestock and consumption of agricultural goods produced in rural households) amounted to only 26 percent of the per capita incomes of rural inhabitants while incomes from social transfers made up 17 percent, and migrant remittances eight percent. In absolute terms, per capita incomes related to agricultural production in rural areas increased by 19 percent between 2008 and 2015, while total per capita incomes increased by 80 percent. In addition, there is a high dependency amongst the poorest shares of the population on social transfers. The social transfers make up about 26 percent of the per capita monthly incomes of the poor and 42 percent of the extremely poor population, while in the non-poor share of the population it amounts to only 14 percent.

Migrant remittances have a significant influence on reducing poverty and food insecurity in the country-comparable with the influence of state social transfers. Migrant remittances make up about 12 percent of the per capita monthly incomes of the non-poor population, 8 percent of the incomes of the poor and 5 percent of the extremely poor. Without remittances, 11 percent of the non-poor population would fall into poverty or extreme poverty. Ten percent of the poor population would fall into extreme poverty and the extremely poor population would increase 4.5 times (to nine percent), and the share of the poor would stand at 38 percent.

At the same time, the volume of migrant remittances depends on the economic situation in hosting countries (mainly in the Russian Federation) and fluctuates in accordance with economic fluctuations abroad. The dependence of incomes on unstable migrant remittances negatively affects income sustainability and living standards and food security.

External dependency on food imports and food prices

Despite agricultural production growth and self-sufficiency in several food commodities, there is still a high dependency on food imports in Armenia. The country relies on imports of basic food products, including cereals. The cereal imports dependency ratio is nearly 56 percent and the trend is set to continue, leaving Armenians vulnerable to shocks in external food markets and food prices. The domestic food price volatility index⁹², which affects the stability of economic access to food by the population, stood at nearly 12 percent⁹³ in 2014, according to FAO. This level was higher than in other lower middle-income economies (8.5 percent), low-income food-deficit countries (10 percent) and key economic partner countries, e.g. the Russian Federation (5.2 percent). Consequently, food prices in Armenia are rather volatile, which hampers the stability of food security.

The food prices increased significantly in Armenia during the global financial crisis. In 2008, the overall prices increased by 17 percent compared to 2005, while the food prices by 22.5 percent. As of 2015, the prices increased in general by 39.7 percent compared to 2008, while the food prices increased by 37.8 percent.⁹⁴ Thus, the food prices increased by nearly 38 percent since 2008; at the same time, per capita average incomes increased two times faster, by 87 percent.⁹⁵ A more rapid increase in incomes of population compared to rising prices made it possible to reduce the proportion of undernourished even with increasing food prices.

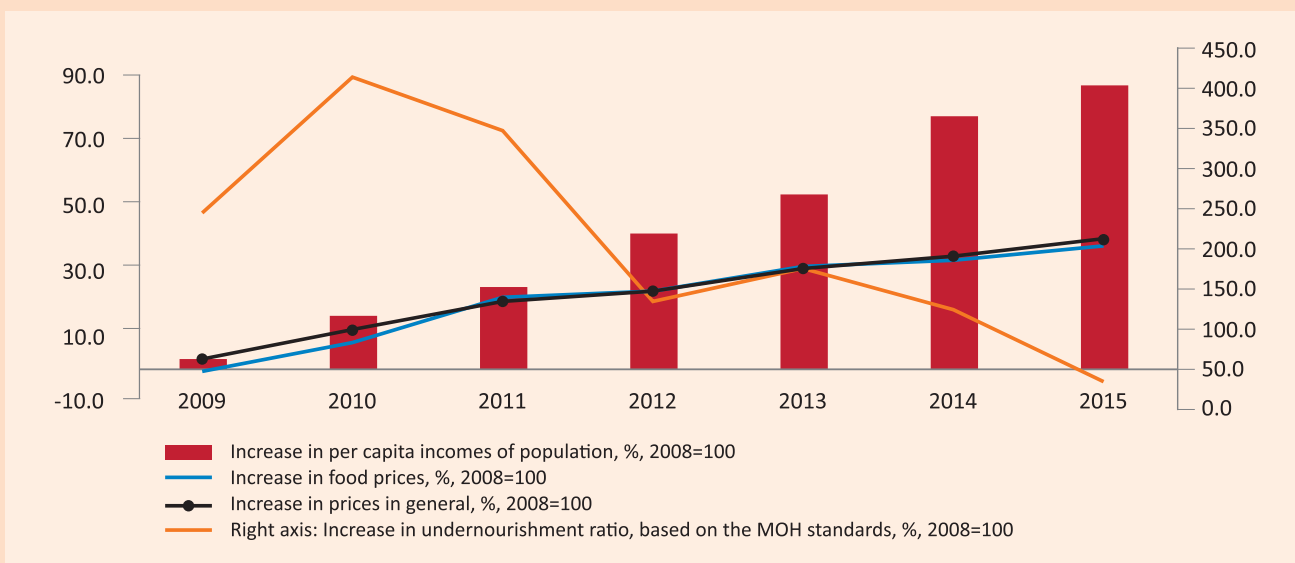
92 The domestic food price volatility index measures the variability in the relative price of food in a country. FAO Food Security Indicators, 2015; The State of Food Insecurity in the World, FAO, 2015.

93 A higher percentage means food prices are more volatile.

94 Calculated based on “Prices and Price Indexes in the Republic of Armenia”, NSS RA, 2016, 2012 and 2009 publications.

95 ILCS-2015. See “Social Snapshot and Poverty in Armenia”. NSS RA, 2016.

Figure 19: Dynamics of prices, incomes of population and undernourishment in 2008-2015.

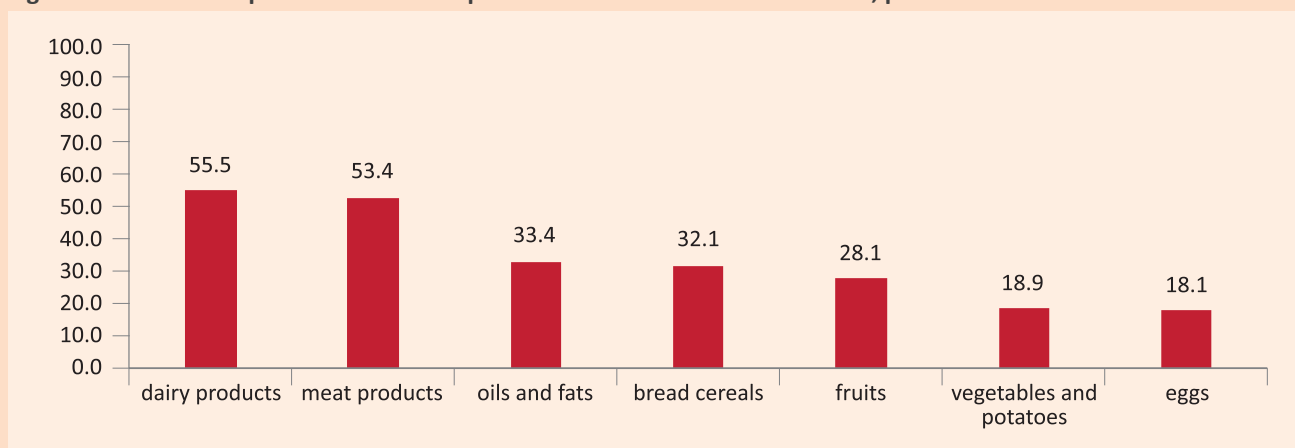


Source: Calculated based on official statistics (“Prices and Price Indexes in the Republic of Armenia”, NSS RA publications and ILCS 2008-2015 data).

Food prices affect access to nutritious and healthy foods in the vulnerable and poor shares of the society.

The poorest people spend most of their income on food, and higher food prices can lead to a shift in their food intake to less nutritious and less expensive diets although they will spend the same or larger amount of money on food. While the overall food price increased by nearly 38 percent in 2008-2015, the prices for protein-rich meat and dairy products increased by 53.4 and 55.5 percent respectively, making them less accessible for the poor. According to the “Cost of the Diet” assessment,⁹⁶ in provinces such as Tavush and Armavir, two out of three households cannot afford the cost of a nutritious diet.⁹⁷

Figure 20: Increase in prices of main food products in Armenia relative to 2008, percent



Source: Calculated based on official statistics (“Prices and price Indexes in the Republic of Armenia” and “Statistical Yearbook of Armenia”, NSS RA publications).

96 Armenia Cost of the Diet, NSS RA, WFP, 2017

97 The lowest cost diet that meets the average energy and the recommended nutrient requirements of the household, with a minimum constraint of one serving per person per day on the commonly eaten staple foods such as bread and potato.

Another indicator that shows when the stability of food security is at risk is the low indicators of financial inclusion of the population, which is an important channel to reduce the vulnerability of households to price or supply shocks. According to the World Bank,⁹⁸ 69 percent of adults in Armenia rely on family and friends as a source of emergency funds; six percent rely on savings and only 0.5 percent rely on financial institutions. The bank account penetration rate⁹⁹ is 18 percent - comparable to Benin, Congo, Haiti and the Kyrgyz Republic.

Drinking water availability

Availability and access to safe drinking water is an important determinant of good nutrition. Clean water prevents diseases from forming and spreading and allows the body to better absorb food nutrients, and facilitates the maintenance of sanitary environments and practices. Recently, considerable improvements have been made in the reliability of the water supply and water quality in Armenia. According to ILCS, the share of households with access to a 13 to 24-hour daily water supply increased from 39.4 percent in 2008 to nearly 72.9 percent in 2015. Moreover, in 2015, only 2.7 percent of households in Armenia concurred that they were relying on alternate sources other than the centralized water delivery system (including spring water, well, own system of water supply, etc.). In 2004, this proportion was 11.1 percent (with 4.5 percent of the total number of households who relied mostly on delivered water).¹⁰⁰ Similar improvements may be observed while considering data obtained from water utilities. These improvements are largely attributable to improved management through the introduction and implementation of public-private partnership schemes, combined with a considerable number of public investments within the water sector. Although there are no major differences between households in different wealth quintiles, there are disparities between households residing in urban and rural areas. According to the 2015 ILCS, the proportion of urban households with a 24-hour daily drinking water supply was 73.3 percent while in rural communities was 51.1 percent.

Rural Infrastructure: roads and markets

Road density and quality has a direct impact on the access to markets, agricultural production and marketability of small farmers and their produce. Although 62 percent of national roads are in fair condition, local roads are in poor condition and approximately 61 percent need to be improved. Since the main means of transportation nationally are various types of motor vehicles, disparities in regional infrastructure exacerbate the inability of many in remote or rural communities to improve production, marketability and sale of rural produce. One potential source of affordable and reliable



98 “The Global Financial Inclusion Database 2014, Measuring Financial Inclusion around the World”. World Bank Group, 2015.

99 Percentage of adults with an account (self or together with someone else) at a bank, credit union, another financial institution (e.g., cooperative, microfinance institution), or the post office (if applicable) including adults who report having a debit card to total adults.

100 ILCS 2004 and 2015. See “Social Snapshot and Poverty in Armenia”. NSS RA, 2006 and 2016

transportation could be the Soviet era railway system, which was designed to handle large traffic volumes and is wholly electrified. Currently, less than two thirds of the network have been rehabilitated. The system is thus deteriorated and under-loaded; the share of railway passenger turnover is only 1.7 percent of overall yearly turnover of passengers, while the share of cargo turnover - 17.1 percent of the total yearly cargo turnover.¹⁰¹ Inter-community motor transportation means are available in the predominant majority of communities. In 2015, about 27.7 percent of rural households perceived roads-market-city centre linkages to be good; 62.8 percent perceived the road system as average and only 9.2 percent as bad.¹⁰² For 62.0 percent of rural households the nearest agricultural market is 10+ km distance; for 13.6 percent up to 4.5 km; and for 24.3 percent about 6-10 km. More than half (53.8 percent) of rural households reach agricultural markets by bus or minivan while 39.4 percent use cars. The condition and density of roads are different across regions and sub-regions. The average accessibility of inter-community roads is the lowest in Syunik, Tavush, Vayots Dzor, Lori and Shirak communities, which affect the agricultural production and marketability (See Table 25, “Average accessibility of inter-community roads in the provinces of Armenia in 2014, municipalities”).

In addition, the network of storage and refrigeration facilities is under-developed in rural communities, which leads to waste of some types of agricultural products, including 21 percent of all produced vegetables.¹⁰³

Vulnerability to natural hazards and climate change



According to the World Bank,¹⁰⁴ Armenia is in the top 60 countries exposed to multiple hazards, including technological and natural disasters and hazards. Over the past decades, meteorological hazards have increased in frequency and severity. Armenia is mainly exposed to droughts, early spring freezing, hail, landslides, strong winds and forest fires, which affect agriculture. One third of Armenia’s territory is located on landslide-prone area, where 15 percent of population lives. Landslide-

prone areas are mainly located on pre-mountainous and mountainous zones.¹⁰⁵ While landslides are rare in Armenia, they are typically caused by floods; the latter occur once in 6.5 years approximately and cause on average USD 0.7 million of annual losses.¹⁰⁶ The magnitude of lands at risk for flooding is estimated at 20-30 percent.¹⁰⁷ About 15 percent of agricultural lands in Armenia is prone to droughts,¹⁰⁸ worsening erosion and salinity of lands. The average annual losses related to droughts in Armenia are estimated at USD 6.0 million.¹⁰⁹

101 “Statistical Yearbook of Armenia – 2016”. NSS RA, 2016.

102 “Social snapshot and poverty in Armenia”. NSS RA, 2016.

103 21 percent of the total produced vegetables, 15 percent of melons, 8.5 percent of potatoes.

104 “Natural Disaster Hotspots: A Global Risk Analysis”, The World Bank, 2005.

105 “Disaster Risk Management National Strategy of the Republic of Armenia”. Approved on 6 April, 2017.

106 “Central Asia and Caucasus Disaster Risk Management Initiative”. World Bank, 2011.

107 “Disaster Risk Reduction and Emergency Management in Armenia”. World Bank, 2009

108 “Disaster risk reduction and emergency management in Armenia”. World Bank, 2009.

109 “Central Asia and Caucasus Disaster Risk Management Initiative”. World Bank, 2011.

The annual temperature has increased by 1.03°C and the precipitations have decreased by 8 percent compared to the average during 1961-1990.¹¹⁰ According to the “Second National Communication on Climate Change” document, “as a result of climate change, the soil moisture content will decrease by 10-30 percent, moisture content in various agricultural crops by 7-13 percent, water shortage in soil will increase by 25-30 percent. The mountainous and lower mountainous belt of Armenia will become more vulnerable.”

By 2030, it is projected that the yield of the main agricultural land will decrease by 8-14 percent.¹¹¹ This will affect the food security in the country unless the following measures are taken: drought-resistant, high-quality varieties and hybrids are introduced; the use of highland pastures is reduced; fertilizer application norms are changed; water-saving irrigation technologies will be applied. According to the Ministry of Agriculture,¹¹² some 10-15 percent of orchards are damaged annually by hailing. In 2013, nearly 11,000 hectares of cropping



area owned by private farmers were damaged from hails in Armavir region with losses estimated at USD 61 million. In 2014, the hails damaged 15,000 hectares of cropping area in Lori and Shirak provinces, causing damages to farmers estimated at USD 15 million. In 2016, the area damaged by hailstorms mounted up to 23,000 while the related losses reached USD 71 million. Overall, losses in agriculture caused by any type of natural hazards in 1995-2015 are estimated at the annual amount of USD 32-64 million.¹¹³ The climate change consequences in Armenia increase the risk of land degradation, decrease land productivity, decline farmers' incomes, availability of agricultural products, and as a result, increase the vulnerability to food insecurity. New approaches are needed to mitigate the risks associated with climate change and extreme weather events. Two types of approaches are recommended: development of infrastructures aimed at preventing these risks and mitigating their impact and applying modern models of agricultural insurance schemes. A combination of both options would have the largest impact in a country like Armenia.

Education and social, cultural norms

Behavioural change: The structural causes of food security and malnutrition are highly related to the individual nutritional awareness and knowledge, education levels, reproductive and breastfeeding behaviours, individual and household nutritional habits, lifestyle traditions and awareness on healthy lifestyles. While the quantitative data on nutritional habits and awareness amongst different groups of the population are limited in Armenia, some studies indicate low levels of awareness and show the importance of behaviour change in order to improve the nutritional status of individuals and households in Armenia.

On average, an adult Armenian eats 2.5 times per day and one third of adults usually adds salt to food

110 “Disaster Risk Management National Strategy of the Republic of Armenia”. Approved on 6 April, 2017.

111 “Second National Communication on Climate Change under the UN Framework Convention on Climate Change”, Government of Armenia, 2010.

112 “Concept on Prevention of Damages in Agriculture Caused by Natural Disasters”. Adopted April 13, 2017.

113 “Disaster Risk Management National Strategy of the Republic of Armenia”. Approved on 6 April, 2017.

prior to testing the food. On average, adults consume five categories of food products per day and the diversity of the diet is highly positively correlated with the education level. The main information sources of population regarding healthy nutrition are the TV broadcasts and the family (nearly for 60 percent of adult population). Women are more aware on healthy diets and nutrition than men. The level of awareness increases parallel to the rise in the education level.¹¹⁴ Nutritional awareness and knowledge and implementation of healthy lifestyles are important factors affecting child malnutrition indicators and general nutritional outcomes of the population. While there is a lack of data on awareness and knowledge on healthy nutrition, there is a strong correlation between the nutritional indicators and educational levels of populations (See Table 26, Nutritional indicators by educational levels”).



114 “Report On the Research Regarding Nutritional Status of RA Population”. OXFAM, 2015

RESPONSE ANALYSIS

National Policy Framework

Food security concerns and root causes have been the focus of the Government's attention; however, there is a notable focus on food availability and self-sufficiency issues with far less attention being paid to food access, utilisation and overall stability. This thinking is mirrored in the list of strategy documents, policies and programs analysed below. The general framework policies, related to the issues of agricultural and rural development, poverty and inequality reduction, food accessibility and availability, social protection and social safety nets, which are fundamental for fighting hunger and malnutrition, consists of the following documents:

The “**Law on Survival Minimum Expenditure Basket and Minimum Survival Budget**” was adopted in 2004 and it defined the minimum food and consumption basket based on nutritional and health requirements of population.

The “**Law on State Benefits**” and the “**Law on Social Assistance**” were adopted in 2013 and 2014. These laws established the regulatory framework for state social assistance system - provision of state benefits and pensions to socially vulnerable, persons with disabilities and people in need.

The “**Family Living Standards Enhancement Benefits**” programme aimed at poverty alleviation, and especially extreme poverty reduction, has been operational since 1999 (formerly known as the “Paros” programme). Taking into account the important role of the social protection system in protecting and promoting food security, the main responses of this system and its components will be analyzed in detail below.

The Armenia Development Strategy (ADS) 2014-2025 is the main cross-government, cross-sectoral strategic framework for Armenia's development, setting national targets for sustainable and inclusive growth. The overarching goal of the strategy is to promote productive and well-compensated job creation in all sectors of the economy, which is intended to reduce unemployment, poverty, inequality, regional socio-economic development disparities as well as increase accessibility to adequate education and healthcare services. The strategy is aimed at increasing output in all sectors of the economy by raising productivity, competitiveness, quality of the business environment and investments. Food security issues are not addressed in the document directly, however, the availability pillar is addressed mainly through defining the development priorities in the agricultural sector while the accessibility pillar is reflected through the policies aimed at poverty reduction, social protection, job creation, health, education and drinking water supply. Agriculture is targeted to grow at an average of four percent through diversification into higher value production, increased yields and the commercialization of small-scale farms, which are the main agricultural producers in Armenia.¹¹⁵ The ADS also sets the priorities of the social protection system, addressing policies aimed at increasing pensions and social assistance benefits.

¹¹⁵ According to Agricultural Census of 2014, there are about 360 000 family farms; of which 317 000 with the average land plot of 1.48 hectares and 342 commercial farms with average land plot 62.5 hectares.

It also sets clear policies and targets aimed at ensuring access to safe drinking water and irrigation. The document contains the budgetary framework with the planned government financial inputs and donor funding requirements in the aforementioned fields. Policy and regulatory frameworks, which were intended to be used as instruments for achieving the targets, are also included in the ADS.

The “Program of the Government of Armenia 2017-2022” emphasizes the goals of development of agriculture, which are directly co-related to food security issues and SDG2 targets – “to increase the gross product of the sector by at least 5 percent annually, to enhance the level of food security (the self-sufficiency level of the main food, assessed by energy value, will reach around 75 percent in 2022), to develop high value agriculture, to introduce modern technologies, to substitute imports, as well as to increase export volumes and to create favorable conditions for the activities of economic entities in the agricultural sector.” In the plant growing sector the Government is intended to implement projects aimed at increasing sustainability of the sector through strengthening the capacities of seed breeding, seed production and seed selection stations, implementing plant protection measures and insuring the accessibility of a wide variety of fertilizers for agricultural land users, and the cultivation of intensive orchards through modern technologies. In the animal husbandry sector, the Government is planned to support the pedigree reproduction with the target of doubling the supply of pedigree heifers of local reproduction by 2022, and to support animal vaccination and veterinary measures. It is envisaged in the Government program to provide state support for the modernization of the farm machinery stocks and creation of farm machinery stations. In order to mitigate hailstorm damages, it is planned to implement a state support program for introduction of anti-hail networks. It is also planned to support directly agricultural producers through provision of different subsidies.

The “Agricultural and Rural Sustainable Development Strategy 2010-2020” was adopted in 2010. The main goal of the strategy is to contribute to the modernization of the agricultural sector and increase its competitiveness. The targets of the strategy are related to food security and are focused on, i) increasing cropping and livestock production competitiveness through increase in land use efficiency, introducing progressive agro- and breeding technologies and organic agriculture, implementing agricultural risk mitigation and subsidization schemes, ii) enhancing food security by ensuring self-sufficiency of basic food products, iii) and ensuring food safety. The Strategy targets mainly the availability pillar of food security and the SDG2 Target 2, focused on productivity and incomes of farmers.

Based on the Strategy, several programmes supporting the increase in incomes of small-scale food producers and promoting productive and sustainable agriculture have been carried out under the supervision of the Ministry of Agriculture. The programmes include the provision of agricultural subsidies to farmers (mainly for obtaining seeds, seedlings, livestock and fertilizers), provision of agricultural loans, development of some schemes for agro-insurance systems, implementation of an agricultural machinery leasing system and hailstorm damage mitigation mechanisms, promotion of organic agriculture and drip irrigation, etc. While there is no official impact evaluation of the Strategy, the agricultural output and self-sufficiency of many basic food products has increased in Armenia since 2010.

The “**Concept of Agriculture Subsidizing Directions in Armenia**” was adopted in December 2016 to support the “Agricultural and Rural Sustainable Development Strategy.” The Concept aims to improve subsidy mechanisms in agriculture in order to increase agricultural production and raise the competitiveness of the industry through various schemes including, i) the production of strategic basic food products with low self-sufficiency such as wheat, beef, pork and poultry; ii) cropping and livestock breeding in near-border and high-mountainous communities, iii) production of agro-products ensuring higher value added, iv) procurement of high productive seeds and breads by farmers, v) greenhouses, vi) organic fertilizers and diesel oil. It is expected, that as a result of implementation of the Concept, the incomes and productivity of farmers will increase, rural poverty will decrease, domestic agricultural output will grow, self-sufficiency of basic agro-products will increase and food security situation will be improved. Although the Concept has been only recently approved, some subsidizing schemes are already being applied. The Ministry of Agriculture is managing the implementation of this Strategy. It can be assumed that the implementation of the mentioned directions will improve the situation with dependency on food imports and the sustainability pillar of food security, along with the other outcomes.

The “**Territorial Development Strategy of Armenia 2016-2025**” was adopted in July 2016 and aims to reduce territorial disparities in socio-economic development and increase the competitiveness of regions. The analysis of food security situation revealed that there are huge territorial disparities in the food security situation in the country. These disparities are caused by the economic, financial, social and infrastructural as well as climatic and cultural disparities between the regions of the country. The Strategy has two main targets; i) by 2025, increase the regional per capita GDPs in all regions of Armenia up to 60 percent of the national per capita GDP; ii) by 2025, in all regions of Armenia increase the number of population having any level of tertiary education, number of people employed in non-agricultural sector and number of functional businesses by 10 percent. Although the impact of implementation of this Strategy is intended to be achieved by 2025, its targets will contribute largely to increase in the i) labor market participation of regional population, ii) non-agricultural jobs created in rural and urban communities, iii) incomes of regional population, iv) living standards in regions, v) marketing of agricultural products caused by the investment in regional infrastructures, vi) knowledge and awareness of regional population; and to decrease regional poverty and undernourishment levels. These results will improve food availability and utilization pillars of food security in the country. In the Medium Term Expenditure Framework (MTEF) 2015-2017, the financial means allocated to the Strategy are estimated at EUR 100-120 million annually.

In 2011, the “**Strategic program of gender policy 2011-2015**” was adopted to ensure the gender equality in all spheres of socio-economic life, including increase in women’s participation in labour market, support women’s small-medium enterprise (SME) development and financial inclusion especially in rural areas, and reduce rural poverty amongst women.

With regards to **specific issues of food security and food accessibility**, the following policies and programmes are currently in place in Armenia:

In 2002, the “**Law on Ensuring the Food Security of the Republic of Armenia**” was adopted and in 2005, the “**Policy for Ensuring Food Security in the Republic of Armenia**” was developed and adopted by the Government of Armenia. The Law established the regulatory framework for implementing measures aimed at improving the economic situation in order to expand the purchasing power of the population, promote local food production, ensure food quality standards in accordance with the existing norms and create storage of state food reserves as well as improve data collection and analysis of the food basket. The Policy envisages elimination of food insecurity in the country through balanced regional socio-economic development, effective use of the potential of the agro-industrial sector in order to ensure food-appropriate self-sufficiency, creation of a favourable business and investment environment, agricultural SME promotion, state protection of local food producers and the domestic food market, adequacy of nutrition and food safety for consumer health, targeted assistance of vulnerable groups, reduction of social polarization, and efficient use of natural resources. The Policy does not have a separate action plan and monitoring mechanism are reflected in the “Poverty Reduction Strategy Paper” action plan and its monitoring framework.

In 2011, the “**Concept on Ensuring Food Security in the Republic of Armenia**” and its action plans (for 2012-2015 – in 2011, and for 2017-2021 – in 2016) were elaborated and adopted. The Concept and the Action Plans are mainly aimed at increasing agricultural productivity, self-sufficiency and sustainability of crop and livestock production and food safety, mostly focusing on the availability dimension of food security. Some aspects of food accessibility are also covered in the document, for example, actions aimed at the promotion of seasonal employment in cropping and livestock breeding among the rural poor. Nutrition-specific actions focus on the reduction of iodine deficiency. The 2017-2021 Action Plan envisages implementation of programs mainly aimed at i) increasing productivity and competitiveness of agricultural farms, ii) implementing programs aimed at increasing the level of self-sufficiency of basic food products and promoting primary seed breeding and high reproduction, iii) preventing possible food crisis in emergencies and protection of agricultural crops from natural disasters, ensuring food security in case of natural and manmade disasters.

In 2014, the “**Healthy Lifestyles Promotion Strategy**” and its action plan were adopted by the Government and is currently managed by the inter-ministerial steering committee and the Working Group established for the coordination and implementation of the Strategy. The Strategy aims to increase awareness and knowledge of people on healthy lifestyles as well as elaborating a regulatory framework for promoting healthy lifestyles. The Strategy includes more than 20 projects and targets nutritional and nutritional education issues as well. For example, it includes the development and improvement of the regulatory framework on foodstuff supplied for children and adolescents in the educational and healthcare institutions and unhealthy food advertisements; implementation of public awareness campaign and education of parents on infant and early childhood nutrition issues; development of guides aimed at teachers and pedagogues on healthy nutrition and unhealthy nutritional habits among the school and kindergarten children. The impact of the Strategy will be measured by 2020, mainly using two indicators - decrease in prevalence of overweight in 20+ years old population by 50 percent and increase in knowledge on importance of breastfeeding.

The “**Concept on Improvement of Child Nutrition**” and the action plan for its implementation for 2015-2020 was adopted in 2014. The overarching goal of this Concept is the implementation of appropriate child nutrition practices. The action plan envisages implementation of a series of programs aimed at improving early and exclusive breastfeeding, under-five stunting, wasting, anaemia, low-birth rate, mothers’ knowledge on child nutrition, healthy nutrition in the schools, healthy lifestyle and nutrition education among school children, healthcare providers and teachers, etc. The Targets in the Concept are set for the main nutritional indicators for 2020, and a considerable part of them are almost achieved.

The “**Concept for Sustainable School Feeding**” was developed and adopted by the Government in 2012 and the “**Sustainable School Feeding Programme (SFP) Strategy**” and its action plan were developed and adopted in 2013. The SFP Strategy has been developed and implemented with technical and financial support from WFP. In late 2016, the Government established the “Sustainable School Feeding Foundation” in order to ensure the continued implementation of the “Sustainable School Feeding Programme.” To ensure effective implementation of the Programme, its training arm—the Republican Training Centre—was created and is aimed at capacity building amongst individuals implementing the programme. The SFP Strategy implementation in the long term (10-15 years) is aimed at increasing efficiency in education and healthcare, addressing hunger and poverty reduction issues, as well as promoting local food production through creation of new jobs and increase in agricultural production of farmers. School feeding is being considered as an integral part of education, child health and nutrition. At the same time, it supports local communities, local producers and small farmers to increase their business capacities.

The School Feeding Programme (SFP) was launched in 2010 thanks to a constructive partnership of WFP Armenia and the Government of Armenia and the generous contribution of the Russian Federation. The project has a two-fold objective: 1) to improve the food security and education of primary school children and, 2) to support the Government in establishing a sustainable, cost effective and nutrition -sensitive



National School Feeding Programme. WFP aims to gradually handover to the Government through a transitional model which includes policy advice, institutional capacity building, and technical support. As of 2017, the Government funds and manages the Programme in four provinces (Ararat, Syunik, Vayots Dzor and Tavush) covering around 30,000 children. In the remaining six provinces, WFP continues to provide hot, nutritious meals on 180 days of the school year to around 60,000 children and to distribute take-home entitlements to 1,700 kitchen staff involved in meal preparation. WFP

will continue supporting the Government of Armenia to own a comprehensive and Sustainable School Feeding Programme.

Social Protection

Social protection and safety net programmes can be an important instrument for promoting food security and nutrition. Armenia has a well-developed, comprehensive social protection system. It includes social insurance and social assistance transfers, social services, and active labour market policies. Remittances from migrant workers play a role as informal safety nets. Due to its unique position at the nexus of food security, nutrition, rural development and social protection, school feeding became a major contributor to the system, playing a critical role in the food security of children and their families.

The social protection system is centrally funded and locally implemented - the **Ministry of Labour and Social Issues** drives the social protection programmes. The Government has proven its commitment and the social protection and social assistance programs make up large components of the government budget: their share in public expenditures in 2015 comprised 27.2 percent.¹¹⁶

The pension system is the largest component of the social protection system in Armenia in terms of coverage and budget. At the end of 2015, 15.5 percent of the total population were recipients of some type of labour pension and 15.7 percent of public expenditures (4.4 percent of GDP) were allocated to labour pensions. However, the pensions are far from being adequate. The average monthly pension was nearly AMD 41,000 (USD 85) in 2015. This amount covers 132 percent of the recommended by MOH minimum food basket and nearly 97 percent of the general poverty line. The average pension is four times lower than the average nominal wage, which means that a retired person, who relies solely on the pension, has to cut consumption by four.

The biggest state social assistance program in Armenia is the “Family living standards enhancement benefits” (FLSEB) program. It provides three types of social assistance to families: family benefits, social benefits and emergency assistance to families in need¹¹⁷. The FLSEB’s main objective is to contribute to poverty reduction in the country. Through this program, the state provides cash assistance to poor families and the most vulnerable and economically inactive. Along with the pension system, the program is a major part of state social transfers and plays a key role in poverty, and especially extreme poverty reduction. Public expenditures on FLSEB comprise 9.5 percent of the expenditures on social protection and 2.7 percent of overall budget expenditures. In 2015, 17 percent of families in Armenia applied to the FLSEB program and registered in the system, and 13 percent of total number of families (105,400 families) were recognized as very poor and vulnerable and received benefits.¹¹⁸ The FLSEB contributes predominantly to extreme poverty reduction in the country. In 2015, without the FLSEB, the poverty rate would be 31.1 percent and the extreme poverty rate would be 4.2 percent. Thus, due to the FLSEB the poverty rate decreased by 4.4 percent, while the extreme poverty rate decreased by about two times. The FLSEB covers the vast majority of extremely poor families, allowing them to meet minimum food requirements and emerge from extreme poverty, although they still remain the poor.

116 WFP, UNU-MERIT/MGSOG, CRRCA-Armenia. (2017). Scoping Study on Social Protection and Food Security: Country report Armenia

117 The FLSEB is using a proxy means-test based on a vulnerability concept. The eligibility for the program, is determined based on vulnerability score assigned to the family, which is determined according to the vulnerability assessment procedure and approved by the Government Decree # 145-N (adopted June 2014).

118 Report of the Ministry of Labour and Social affairs, 2015. http://www.mlsa.am/?page_id=4405

Taking into account the SDG2 targets, child poverty and malnutrition indicators and social assistance programs aimed at children, have particular importance in Armenia. The main instruments of social assistance targeting children are a lump-sum childbirth benefit, a childcare benefit for children under age of 2 years for working mothers, and a motherhood benefit for both working and non-working mothers.

Child-birth benefit: Given the trends in poverty, the problems of young families as well as demographic trends and projections, the child support grants (as one of the instruments of social protection) have the potential of being important instruments for preventing child malnutrition even though they are not directly aimed at child nutrition. However, the child birth benefit, which comprises AMD 50,000 (approximately USD 110) for delivery of the first and second child, covers the recommended minimum food basket equivalent for one person for 1.5 months only and cannot play a sustainable role in mitigating food insecurity. Therefore, it solves only immediate and short-period emergency problems, and helps to cover some additional expenses related to childbirth. The lump-sum benefit for delivery of the third and fourth child comprises AMD 1 million (approximately USD 2,000) for the fifth and the next child amounts to AMD 1.5 million. However, since 2014 the family capital concept has been introduced and families receive only AMD 500,000 while the remaining amount remains frozen in a special bank account until the child reaches 18 years of age. This allowance can improve the food security situation and the living standards of families that have at least three children. However, taking into account the small number of beneficiaries (8,000 out of 42,000 children delivered yearly in total), the overall impact of this program on the food security of families with children remains uncertain.

Childcare benefit for working mothers having children up to 2 years old consists of a transfer of AMD 18,000 per month. This amount covers nearly 59 percent of the recommended MOH minimum food basket, which indicates that food security issues for these children are supported in those families with working mothers. Nevertheless, it should be mentioned that the number of children under two in Armenia is nearly 126,000. Due to the high unemployment rate among young women (28.5 percent in the age group of 25-34, 19 percent in the age group of 35-44) and the low labour participation rate, only about 12,611 women receive this allowance.

Motherhood benefit for non-working mothers delivering a child is a transfer of AMD 126,600 in total, paid over 4.6 months, thus it comprises AMD 27,500 per month during this period. This amount does not cover the recommended minimum food basket for one person. The motherhood benefit combined with the lump-sum childbirth benefit is the only state childcare assistance to families with children under two where the mother is unemployed. The number of such families was nearly 30,000 in 2015. Meanwhile, the families of working mothers with children under two receive a lump-sum childbirth benefit, the childcare benefit and the motherhood benefit (amount of the latter depends on the average salary of the mother). The aforementioned laws, strategies and programs represent a solid base to increase agricultural self-sufficiency, productivity, and incomes of the population, reduce rural and urban poverty and eliminate hunger and malnutrition aligned with SDG2 targets. However, there are certain gaps that must be addressed in these policies and considerable gaps in the actual implementation of existing policies, affecting SDG2 achievement.

Institutional Framework

This section outlines the national institutional framework directly and indirectly responsible for food and nutrition security in the country. As it could be driven from the list of policies being implemented, the key role in ensuring food security is played by the **Ministry of Agriculture** which is responsible for overall development of the sector, domestic food production and imports, growth in self-sufficiency levels of main food products, increase in agricultural output and productivity, provision of state support to farmers, food safety, etc. Thus, the Ministry is dealing with the food availability and sustainability pillars of food security.

The **Ministry of Labour and Social Issues** implements the social protection and social assistance and labour market policies, which are related to food accessibility pillar of food security. It deals with vulnerable groups of population, unemployed and elders, poor and undernourished, providing them with social assistance. The **Ministry of Healthcare** is responsible for implementation of national policies related to nutrition, reproductive and breastfeeding policies, promotion of healthy lifestyles and nutrition, elaboration of nutritional standards and recommended minimal food basket, monitoring food security related healthcare outcomes regarding women, adolescents, young children and infants and provision of the data related to the mentioned issues. Thus, the Ministry is dealing mainly with the utilization pillar of food security. The **Ministry of Economic Development and Investments** deals with the SME development, particularly in the agricultural production and processing. Thus, it supports by a bulk of projects to increase the agricultural productivity and incomes of small and medium rural agricultural businesses. The **Ministry of Education** is currently implementing the SFP and the projects aimed at raising the knowledge about healthy nutrition among schoolchildren and pedagogues. The **Ministry of Territorial Administration and Development** is responsible for reduction of territorial disparities in social and economic development between regions and communities. Thus, it is not directly, but deals with territorial disparities in prevalence of poverty, undernourishment, unemployment, incomes of population, agricultural productivity, and all other structural causes of food security. The **Ministry of Emergency Situations** is responsible for disaster risk management, implementation of early warning systems. The **Ministry of Finance** allocates finances to different programs and projects, based on the national priorities of development, envisaged in the MTEF. Although some inter-ministerial committees were formed in order to cover food security related concerns, there is no special coordination body formed within the Government aimed at creating synergies across all policies.

International and National Actors

Within the United Nations System, the WFP, FAO, UNICEF, UNDP, UNIDO and other UN agencies collaborate with the Government on food and nutrition security issues and provide technical and financial assistance according to the UN Development Assistance Framework (UNDAF). The 2016-2020 UNDAF determines four key areas of collaboration of UN family with the Government, including equitable sustainable development, democratic governance, social services and inclusion, and environmental sustainability and resilience -building. WFP implements a comprehensive SFP in partnership with the Government and other actors coupled with capacity strengthening activities. UNICEF's assistance focuses on young child and adolescent health and development, basic

education, and child protection, with an emphasis on institutional support, social policy analysis, and communication for development that brings change in values, attitudes and perceptions and creates an environment conducive for the realization of children's rights. Overall, UNICEF's assistance aims to contribute at improving health and nutrition indicators of infants, children and women in the country.

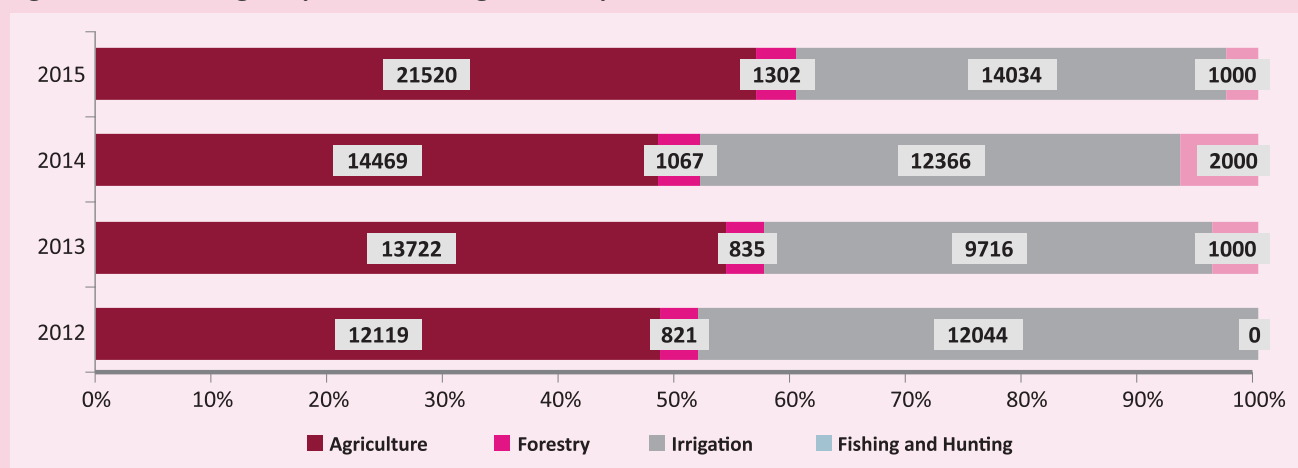
The Government of Armenia and FAO collaborate in six priority areas: livelihoods and competitiveness for small-scale farmers, animal health and production, crop production and plant protection, forestry, fisheries and aquaculture development, and agricultural statistics. UNDP contributes largely to poverty reduction in Armenia, through different projects, as well as to disaster management and seismic safety improvement. With the financial support from the European Union and Austrian Government, UNIDO is providing technical assistance to the producer groups aiming to establish and develop agro-processing and production capacities in remote and marginalized regions by supporting the creation of cooperatives and promoting agricultural production export. From the food security point of view, the World Bank continues its Country Partnership Strategy aimed at supporting competitiveness and job creation, particularly in rural and peri-urban areas, improvement of efficiency and sustainability of irrigation and pasture-land as key inputs to rural economy, improvement of rural roads, as well as refinement of coverage and targeting of social assistance programs. The WHO contributes to the improvement of maternal and child health, to the development of efficient and effective health system responding to the needs of the Armenian population, as well as to the control Non-Communicable Diseases. In addition, there are numerous national and international civil society organizations active in Armenia, supporting agriculture in remote rural areas, providing consultancy and training in the field of plant protection, animal husbandry and income generation. The Center for Agribusiness and Rural Development (CARD) foundation, Swiss Development Agency and the German Corporation for International Cooperation (GIZ) have implemented several projects to support the organic producers' marketing activities. The NGO network of the Ministry of Labour and Social issues works with extremely poor and vulnerable population. Also, there are many NGOs dealing with food safety issues.

Fiscal framework

The macro level policies, affecting food security and the SDG2, are related to the supply and demand sides of food security. The policies related to agriculture production can be viewed as direct drivers for food supply side of food security, while the policies in social protection, education and healthcare are drivers for the demand side of food security. The food security is influenced also by framework policies, such as policies of overall economic development, trade, price, climate change, research and development, etc. Thus, the predominant part of policies directly related to food security and SDG2 are currently being implemented in spheres of agriculture, social protection, healthcare and education. State budget expenditures in the agriculture sphere increased by 34 percent during 2012-2014¹¹⁹. In 2015, the budget expenditures on the agricultural sphere comprised some 1.5 percent of the State budget expenditures. See Figure 21 below.

119 At 2012 constant prices.

Figure 21: State budget expenditures on agriculture sphere in 2012-2015, million AMD



Source: Calculated based on the Annual Budget Execution Reports for 2012-2015.

The agriculture sector currently is tax exempted and this can be considered as an implicit government support to the sector in form of tax expenditure. According to the Government estimates,¹²⁰ in 2015 and 2016, tax expenditure in agriculture were 107-115 billion AMD annually. In 2015, the estimated tax expenditure was nearly 4 times higher than the direct expenditures in the budget. A considerable share of state budget expenditure in the agricultural sphere were directed to subsidies and grants. In 2012-2015, the Government allocated to subsidies and grants on average 40 percent of the State budget expenditure and 1.2 percent of gross agricultural output. These are predominantly input subsidies paid to the suppliers. The only payments directly transferred to the farmers are the subsidies for agricultural loan interests (See Table 27, “State budget subsidies in agriculture sphere in 2012-2015, million AMD”).

Social protection system is one of the main instruments to provide the direct support to the vulnerable groups of population, including also the poor and undernourished. The Government spends nearly one-third of the consolidated budget on social protection. The predominant majority – about 70 percent of these expenditure goes mostly to pensions. Although the social protection system is one of the instruments of growth redistribution and covers nearly 30 percent of all public expenditures, poverty, undernourishment and inequality remains acute in the country (See Table 28, “Consolidated budget expenditures on social protection in 2012-2015, million AMD”). The FLSEB is one of the most important instruments to fight hunger and malnutrition, enhance the access to nutritious food and achieve the SDG2 Target 1 and 2. The Government spends nearly 3 percent of the consolidated budget to FLSEB, which comprises on average 10 percent of its spending on social protection (See Table 29, “Consolidated budget expenditures on FLSEB in 2012-2015, million AMD”).

Another programme related to food access and utilization among children is the School Feeding Programme. The Government allocated finances to the National School Feeding Programme comprising 0.04 percent relative to the total consolidated budget expenditures in 2015. It comprised 0.011 percent of the GDP (See Table 30, “Consolidated budget expenditures on National SFP in 2012-2015, 1,000 AMD” and Table 31, “Fiscal allocations directly affecting food availability, accessibility, utilization and stability in 2012-2015, million AMD”).

120 Starting in 2015, the Government submits to the National Assembly estimations of tax expenditures as an annex to the Explanatory Note of the Annual State Budget.

GAPS AND OPPORTUNITIES IN THE FOOD SECURITY AND NUTRITION RESPONSE

Gaps in Policy Framework

In general, policies and action plans specific to food security and nutrition are predominantly focused on agriculture as well as on food availability and self-sufficiency issues. Major gaps in terms of food accessibility and utilization remain at both the policy and implementation levels. Food insecurity in Armenia is not caused primarily by food availability concerns but is significantly linked to issues surrounding access to nutritious food which can be explained by the lack of financial means, non-agricultural incomes of the population, inequality, limited opportunities in the labour market, limited economic access to healthy diets, and low awareness and education on nutrition.

The main policy documents directly related to food security are the “Policy for Ensuring Food Security in the Republic of Armenia” (2005) and the “Concept on Ensuring Food Security in the Republic of Armenia” (2011). While the first one determines the strategic view in coherent manner covering all pillars of food security, the second one is predominantly focused on agriculture production and food



availability. Consequently, the plan of action mainly covers issues related to food availability and stability and the rest of food security pillars are missing from the main document focused on food security. This severe programmatic gap should be addressed in order to achieve all dimensions of food security and all targets of the SDG2.

While some policies and programmes related to nutrition and food utilization are in place, synergies are missing. Although issues affecting the food supply are well addressed in the various policies, these are not linked to the policies affecting the food demand to gain the desired synergy. While the social protection and economic policies mainly link their targets to the poverty and extreme poverty alleviation (except for the ADS), the alleviation of undernourished (according to the MOH recommended minimum basket) is neither targeted nor linked to these policies. Therefore, in order to achieve SDG2 Target 1, it is essential to link the existing policies to undernourishment (determined based on the recommended minimum food basket). Although the food security of the country is a

priority for the Government, the most deprived groups of population and areas with lower access to food are not defined in the policies directly aimed at food security. Hence, targeted support and the application of well-targeted policies aimed at elimination of hunger and malnutrition needs to be strengthened. In order to achieve the SDG2 Target 1 and 2, it is essential to support the increase in accessibility of nutritious food through general economic, labour market and social protection policies as well as targeted policies aimed at the most food insecure and vulnerable population and areas. The NSR found that children under-five, unemployed, poor, large-sized families are more prone to be undernourished. On the other hand, there is a tendency of increasing food insecurity in rural areas. While hunger and malnutrition in rural areas could partially be solved through improved agricultural policies, there is a need to tailor assistance for the most vulnerable groups through well-targeted policies.

Although the maternal and child health indicators related to the SDG2 Target 2 are already in the Government healthcare policies and seem achievable by 2030 at the national level, there are significant differences at various disaggregation levels of these indicators, with areas and groups having radically high levels and double burden of some indicators. Thus, the policies should go beyond the national average values when targeting and monitoring the implementation and should have tailored and well targeted sub-national policies for the most deprived in order to achieve the SDG2 Target 1 and 2 throughout the country.

Existing policies predominantly use monetary instruments for increasing the accessibility of nutritious food that do not necessarily lead to improvements in food utilization (use of healthy, diversified and quality food). Meanwhile, combining monetary instruments with provision of food supplements or unconditional in-kind transfer schemes will ensure the diversity and nutritional value of consumed food. Taking into account overweight indicators, there is a need for increased public awareness on healthy nutrition and clear regulations on food advertisement and food sales in and near educational institutions. While some instruments of public awareness and nutrition education are present in the healthcare and education policies, the data shows that the nutritional habits and preferences of population are a subject of continuous improvement. Hence, in order to achieve the SDG2 Target 2, the related activities should be more intensive and sustainable. As for mentioned regulations, their implementation should be monitored at sustainable basis.

Inconsistencies and contradictions in the evidence base is a specific gap hindering food security and nutrition policy formulation. In order to make valuable changes in policy and policy instruments to successfully fight undernourishment, eliminate hunger and malnutrition and achieve SDG2, the methodology and resources for data collection and monitoring, including nutrition and micronutrient-specific information, need to be improved. Rural and agricultural development is a key focus of the Government. The main goal of agricultural development is the creation of the conditions for sustainable development by increasing productivity and commercialization of family farms, the extension of agricultural value chains and gradual elimination of subsistence farming to ensure food availability and fight rural poverty. In the context of SDG2 achievement, the definition of small-scale food producers has to be made in order to provide targeted support in the sector.

There is a contradiction between the overall economic strategy aimed at export promotion and competitiveness rising, and the food security related policies focused on increasing the domestic production and sustainable self-sufficiency of basic and low-value food products, such as wheat and cereals. This contradiction can be solved by increasing productivity of these products through a combination of the existing practice of input subsidies and income-based direct producer support subsidies. This approach will be useful also to fill another major policy gap: current agricultural support is predominantly provided through broad market interventions (input and credit subsidies for all) and is not targeted towards small-scale food producers. While, the gradual shift to income-based subsidies to smallholder farms will help to decrease rural inequalities and increase competitiveness of smallholders. The issue of policy redesign through the introduction of policies meant to benefit small-scale food producers has become more evident, taking into account that, according to the latest agricultural census, five percent of landholders effectively control more than 31 percent of agricultural land. While designing such policies, there is a need to take into account that any targeted support can be distortive to agricultural markets, and certainly will require more administration, meaning that policy initiatives need to be based on clear and limited policy objectives, and take into account all associated direct and indirect costs.

Annually, agricultural producers face losses in income from extreme weather and natural disasters. These events are disproportionately harmful for small farmers, as they most often have no means to mitigate these risks. Important tools such as agricultural insurance, productive and protective assets and technologies, and access to credit all serve to help mitigate the risk of losses or manage their consequences in a sustainable manner. Smallholders/subsistence farmers are at a particular risk of falling into poverty and food insecurity in the event of natural disasters. In this regard, Government current policies are limited to (i) the provision of emergency support to farmers in order to partially cover incurred losses from natural disasters and (ii) the provision of public funds for the operation of hail protection systems. In terms of the latter, there is no statistical proof of the effectiveness of these systems. Thus, policies targeted at mitigating risks from extreme weather and natural disasters are required, and in particular tailored for small farmers. Mostly, two types of approaches can be used – one related to the development of infrastructures aimed at preventing these risks and mitigating their impact and one related to the application of modern models of agricultural insurance. In practice, their reasonable combination gives the greatest impact. Another policy gap is related to the absence of agricultural insurance system. The NSR found that it is of paramount importance to elaborate and implement efficient and transparent system of agricultural insurance based on Private-Public Partnership principles.

Agricultural development will inevitably result in additional shrinking of agricultural employment, putting additional pressure on labour markets and potentially increasing unemployment. The promotion of non-agricultural job creation in rural settlements is a policy option of paramount importance. This would be coupled with other measures such as the creation and development of co-operatives, serving farmer needs in the fields of quality input provision, aggregating agricultural product supply, disseminating knowledge and technologies and providing extension of the value chains may be an efficient instrument for additional job creation and increasing the efficiency of farms.

Taking into account widespread unemployment and the vulnerability of the unemployed to food

insecurity, the unemployed should be a priority group in achieving SDG2 in Armenia. There are nearly 244,000 unemployed persons in Armenia, of which nearly 20,000 are covered by the FLSEB. An unemployment benefits programme was eliminated in 2015. While some limited support schemes are provided to those who have registered as unemployed (provision of seasonal employment opportunities as well as small some livestock support programs), passive schemes of assistance (such as unemployment insurance/benefits) are absent other than the very limited coverage of the FLSEB. This is an immediate policy gap that can directly affect the food security amongst the unemployed. Provision of passive schemes of assistance to the unemployed (unemployment allowances, food stamps, etc.) along with expansion and development of active support schemes and with the assistance provided by the FLSEB can be a policy option to avoid undernourishment of unemployed and families headed by the unemployed.

Children under five years of age are a priority in terms of achieving SDG2. The analysis of current policies revealed that the majority of children under two years of age are not covered by any sustainable or efficient state child support grants/assistance program. At the same time, there are large disparities in state allowances for children in families with working and unemployed mothers. Taking into account the undernourishment and poverty indicators among the under –five children, in order to achieve the SDG2, Target 1 and 2, this policy gap has to be addressed. The suggested solution is to cover all 0-2 years old children by childcare benefits. The support schemes could be various such as implementing monetary and supplementary feeding provision schemes for children under two with non-working mothers and income tax



credits for working mothers with children under two. Children in the age group of three to five are not covered directly by any social assistance program with the exception of the FLSEB.¹²¹ To fill this policy gap, feeding programs in community kindergartens can be considered as an option for those who are enrolled - linking this program to the social protection system. Food stamps or supplementary feeding can be provided to those who are not enrolled.

Although the FLSEB aims to reduce extreme poverty, the decrease in effectiveness of the system to some extent and the inclusion-exclusion errors of the system require improvement of targeting mechanisms/criteria. The system covers approximately 76 percent of the poorest 40 percent of families. The effectiveness of the FLSEB with regards to extreme poverty reduction significantly decreased after 2010, despite an increase in average size of benefits in nominal terms.¹²² Therefore, the FLSEB policy needs refinement in order to achieve the SDG2. A partial transfer from monetary

121 In 2015, the FLSEB covered nearly 42,500 children under the age of 5, of which nearly 22,000 were between three and five years of age.

122 See the ADS, page 119-120. In 2010 the FLSB contributed to a decrease in the extreme poverty rate by 3.5 percentage points, while in 2015 only 2.2 percentage points.

transfers to voucher or unconditional in-kind transfer schemes may be considered as an option for assuring the right and sufficient dietary intake of the beneficiary families. In addition, this will serve as a growth factor for domestic agricultural and food producers, provided that only local agricultural and food products are used in the voucher scheme. However, creation and development of these instruments will demand a serious regulatory and distribution framework to be in place to guarantee efficient and transparent distribution.

Drinking water availability: The Government of Armenia committed to continue deepening reforms in the water sector by consolidating the efforts of the public and private sectors to improve service delivery and to address existing disparities in the access and availability of water in both urban and rural areas. In 2016, a 15-year lease contract with properly defined performance indicators (including maintenance of water supply and water quality) was signed with a reputable operator to provide water and sewerage services to an estimated 2.3 million Armenians. However, there are nearly 600 rural communities that are outside of the operator's service area under the national lease contract; steps need to be taken to address these gaps adequately.

Gaps in Institutional Implementation

Gaps related to the ADS implementation strongly influence the food security and nutrition situation in the country. Economic growth rates and patterns projected in the ADS have not yet been achieved, which has resulted in a reduction in the rates of per capita income growth, unemployment and poverty as well as the fiscal space for implementation of adequate social protection programs aimed at poverty reduction and the elimination of hunger and malnutrition. Implementation gaps in framework policies at national and sectoral levels as well as labour market and territorial development policies addressed in the ADS, negatively affect the increase in employment and reduction of instability in household incomes caused by the significant role of migrant remittances.

The ADS targets related to the unemployment rate, poverty reduction, minimum salary and the average pension have not been achieved. It was envisioned in the ADS that the unemployment rate would reach 16.9 percent in 2015 and 16.0 percent in 2017 while the actual rate was 18.5 percent in 2015. Consequently, the 2017 target will likely not be achieved. The ADS sought to reduce the poverty rate to 24 percent in 2017, while it stood at nearly 30 percent in 2015 and the macroeconomic developments in 2015-2017 show that this target is also unlikely to be achieved. The minimum wage should have increased to 160 percent of the general poverty line in 2017 in order to prevent food insecurity of people having low paid jobs. In 2015, the minimum salary amounted to 132 percent of the general poverty line. Taking into account that the minimum wage (AMD 55,000) remained constant between 2015 and 2017, this target is unlikely to be achieved too.

The ADS implementation gaps in the social protection system affecting food security are mainly related to gaps in the achievement of targets related to pensions and social assistance programs. The ADS aimed that the average pension would amount to 125 percent of the general poverty line in 2017 in order to achieve decent living standards of pensioners, while it actually reached 97 percent only in 2015 and the real value of the average pension did not change in 2016, which points to a low

likelihood of achieving this target. Despite the fact that nearly 75 percent of state social transfers (which account for one-third of public expenditures in Armenia) goes to the pension system, about 33 percent of pensioners were poor, and nearly 17.5 percent of them were food insecure in 2015. The implementation gaps in the FLSEB are linked to the low level of coverage of the extremely poor and very poor population. There is a need to eliminate inclusion and exclusion errors and increase the transparency of the system, placing it under community and public control and simplifying procedures in order to mitigate risks. These gaps could be filled through monitoring and evaluation activities as well as an efficient management of the system.

Increasing the scope of the School Feeding Programme (SFP) can serve as a capable instrument to improve nutrition amongst school age children provided that healthy diets and food safety are ensured. On the other hand, the financing of the program raises sustainability concerns. A policy option would be to embed the SFP into the social protection system to ensure sustainability. Since the SFP is moving towards a sustainable and country-wide program, the Government of Armenia adopted a Decree in December 2016 to establish the Sustainable School Feeding Foundation. This was an important achievement in strengthening governance and ensuring the continuation and development of the National School Feeding Programme. Although much progress has been made, continuous collaboration with line Ministries, local administrations, and UN agencies is needed to ensure a smooth handover to the Government.

Lack of effective inter-agency coordination mechanisms are probably the most important institutional gaps in most of the policies related to food security. There is a need to share knowledge, skills and resources amongst partners as well as enhance the involvement of stakeholders at policy and implementation levels to increase coherence and coordination. Stakeholders would include communities, civil society groups, the private sector and farmer organizations. In order to fight malnutrition and hunger, a combination of policy-implementation instruments and public awareness campaigns to advocate for healthy diets and lifestyle, is needed.



RECOMMENDATIONS

Based on the thorough analysis of food security and SDG2 related situation and trends in Armenia, the Strategic Review offers the following recommendations for achieving the SDG 2 Targets in Armenia by 2030.

1

Ensure programmatic synergies that cover all pillars of food security in order to guarantee access to nutritious food for everyone, throughout the country.

Review and update the *Concept on Ensuring Food Security in the Republic of Armenia* based on SDG2 targets to include all pillars of food security.

Review the approach applied to the Action Plan of the *Concept on Ensuring Food Security in the Republic of Armenia*, in order to include actions aimed at food accessibility and utilization in addition to the planned actions on food availability and self-sufficiency.

Synchronize policies and programs aimed at agricultural development, agricultural subsidies, territorial development and social protection in order to achieve mutually reinforcing and synergistic effects.

2

Apply well-targeted healthcare, social protection and territorial policies to reduce existing disparities in hunger and malnutrition throughout the country.

Review and update healthcare policies and action plans regarding maternal, infant and young child nutrition prioritizing and targeting the most deprived territories and population groups.

Review and update social protection and social assistance policies and action plans prioritizing and targeting the most deprived territories and population groups in terms of undernourishment and food insecurity.

Review and update territorial development policies and action plans to support the reduction of territorial disparities in undernourishment and food insecurity.

Review and update the Regional Development Plans prioritizing and targeting the most deprived territories and population groups in terms of undernourishment and food insecurity.

Review and consider combined usage of monetary and non-monetary (food stamps, unconditional food transfers, food supplements, etc.) instruments of social assistance to enhance food accessibility and utilization in the most deprived groups of population.

3

Revise social protection policy instruments to cover the most deprived.

Develop and expand the existing limited active support schemes to unemployed, combining them with the provision of passive schemes of assistance—unemployment allowances and food vouchers to the unemployed.

Consider revision of the childcare allowance system in order to cover all children under two through different kinds of child assistance grants, regardless of their mothers' status in the labour market.

Elaborate social assistance schemes for all children in the age group of 3-5, combining monetary and non-monetary instruments of grant provision.

Revise and update the Family Living Standards Enhancement Benefits (FLSEB) policy instruments, combining monetary and non-monetary schemes of assistance provision to ensure nutritious food utilization amongst beneficiary families, and especially those with children under five.

Improve the FLSEB targeting mechanisms to enhance efficiency of the system.

4

Increase public awareness on healthy nutrition and SDG2 focus areas while building and maintaining a comprehensive evidence base.

Revise existing public awareness programs to disseminate and promote SDG2 and its targets amongst the population.

Organize public awareness and public education campaigns at the regional level to reach remote areas and communities.

Develop and implement Social and Behaviour Change Communication approaches and tools aimed at prevention of malnutrition and undernourishment.

Develop, improve and synchronize the methodologies and resources for food security data collection and monitoring on a sustainable basis, including nutrition and micronutrient-specific information.

Ensure the elaboration of SDG2 and food security indicators on a sustainable basis and at different disaggregation levels, including territorial and population group levels.

Ensure elaboration of the undernourishment prevalence indicator at sustainable basis, on the different disaggregation levels and based on the minimum food basket recommended by the MOH.

Improve the Agricultural Census methodology in order to have production module and information on productivity increase among smallholders.

5

Implement innovative approaches and schemes to increase the productivity and competitiveness of smallholder farms and mitigate the consequences of extreme weather and climate change.

Develop an official definition of “small-scale food producers”.

Elaborate and implement approaches and system for provision of targeted support to small-scale food producers through income-based direct producer support subsidies.

Elaborate and implement schemes for combining the existing practice of input subsidies with income-based direct producer support subsidies.

Elaborate and implement innovative policies to support food producers mitigate the risks from extreme weather and natural disasters, with a particular focus on small farmers.

Elaborate and implement an efficient and transparent system of agricultural insurance based on Private-Public Partnership principles.

Elaborate and implement schemes for promotion of non-agricultural job creation in rural settlements.

Promote and support development of organic agriculture, particularly, in smallholder farms.

Promote and support implementation of drip irrigation practices, particularly, in smallholder farms.

6

Coordinate and manage the implementation and progress of policies related to food security and SDG2 on a sustainable basis.

Create an inter-agency working group on SDG2 and food security, with participation of NGO sector and private sector.

Create working groups on SDG2 and food security, with participation of NGO sector and private sector at the regional level.

Ensure effective collaboration of these working groups between regional and national levels.

Ensure collaboration of national working group with policymakers and responsible authorities at the national level.



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Annexes

Annex 1. SDG2 Global Targets and Indicators

Sustainable Development Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Targets	Indicators
<p>2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.</p>	<p>2.1.1 Prevalence of undernourishment.</p> <p>2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES).</p>
<p>2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.</p>	<p>2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age.</p> <p>2.2.2 Prevalence of malnutrition (weight for height $>+2$ or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight).</p>
<p>2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.</p>	<p>2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size.</p> <p>2.3.2 Average income of small-scale food producers, by sex and indigenous status.</p>
<p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p>	<p>2.4.1 Proportion of agricultural area under productive and sustainable agriculture</p>

Sustainable Development Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Targets	Indicators
<p>2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.</p>	<p>2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium or long-term conservation facilities.</p> <p>2.5.2 Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction</p>
<p>2.a.n Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries</p>	<p>2.a.1 The agriculture orientation index for government expenditures.</p> <p>2.a.2 Total official flows (official development assistance plus other official flows) to the agriculture sector.</p>
<p>2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.</p>	<p>2.b.1 Agricultural export subsidies.</p>
<p>2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.</p>	<p>2.c.1 Indicator of food price anomalies.</p>

Annex 2. Draft national framework for monitoring the SDG2 targets

Sustainable Development Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Targets	Indicators
<p>2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.</p>	<p>2.1.1 Prevalence of undernourishment, percent.</p> <p>2.1.1.a. Extreme poverty rate, percent.</p> <p>2.1.1.b. Proportion of population with consumer expenditures less than the minimum food basket determined by the Ministry of Health, percent.</p> <p>2.1.1.c. Proportion of households with poor dietary intake, percent.</p> <p>2.1.2 a. Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES).</p> <p>2.1.2 b. Proportion of food insecure households, percent.</p>

Sustainable Development Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Targets	Indicators
<p>2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.</p>	<p>2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age.</p> <p>2.2.2.a. Prevalence of wasting (weight for height <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age.</p> <p>2.2.2.b. Prevalence of overweight (weight for height >+2 or standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age.</p> <p>2.2.3. Prevalence of anaemia among reproductive age (15-49) women, percent.</p>
<p>2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.</p>	<p>2.3.1 Gross agricultural output per labour unit employed in the agricultural sphere.</p> <p>2.3.2.a. Average monthly per capita total income in rural households having up to two hectares of agricultural lands.</p> <p>2.3.2.b. Average monthly per capita total income in rural female headed households.</p>

Sustainable Development Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Targets	Indicators
<p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p>	<p>2.4.1.a. Share of rural households included in agricultural insurance systems, percent:</p> <p>2.4.1.b. Average annual damage to agricultural production as a result of natural disasters.</p> <p>2.4.1.c. Share of rural households with drip irrigation systems installed, percent:</p> <p>2.4.1.d. Growth rate in pedigree stock, percent.</p> <p>2.4.1.e. Share of rural households using organic agriculture, percent:</p> <p>2.4.1.f. Share of the lands irrigated with the irrigation network in the total agricultural lands (own and leased) of rural households, percent.</p>
<p>2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.</p>	<p>2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium or long-term conservation facilities.</p> <p>2.5.2 Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction</p>
<p>2.an Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries</p>	<p>2.a.1 Ratio of public expenditures on agriculture in relation to the agricultural value added, percent.</p> <p>2.a.2 Total official flows (official development assistance plus other official flows) to the agriculture sector.</p>

Sustainable Development Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Targets	Indicators
<p>2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.</p>	<p>2.b.1 Agricultural export subsidies <i>(Note: currently is not applicable for Armenia)</i></p>
<p>2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.</p>	<p>2.c.1 Food price volatility index.</p> <p>2.c.1.a. The ratio of consumer price index for food and non-alcoholic beverages to the overall consumer price index.</p> <p>2.c.1.b The ratio of consumer price index for bakery and cereals to the overall consumer price index.</p> <p>2.c.1.c. The ratio of consumer price index for beef to the overall consumer price index.</p> <p>2.c.1.d. The ratio of consumer price index for dairy, cheese and eggs to the overall consumer price index.</p> <p>2.c.1.e. The ratio of consumer price index for potato to the overall consumer price index.</p>

Annex 3. Tables and Charts

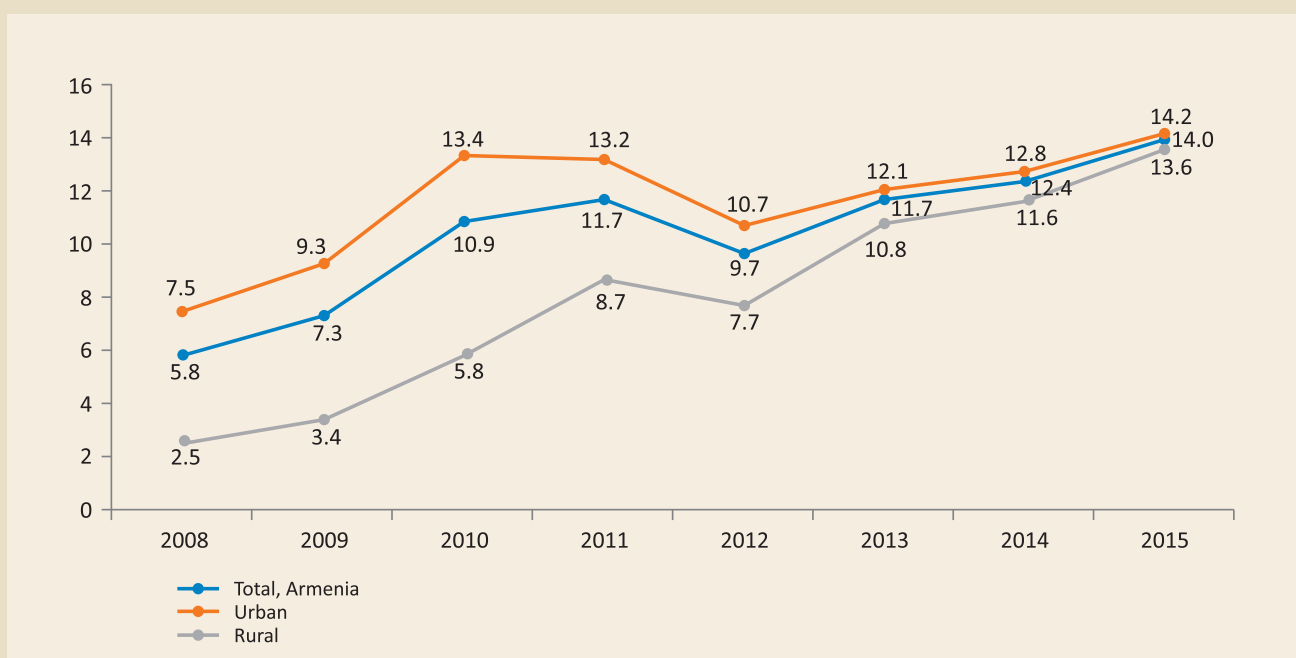
Table 1. Extreme poverty and undernourishment within the different groups of population in Armenia in 2015

Groups of population	Extremely poor,%	Undernourished based on MOH standards, %*
Poor	6.7	20.0
Children under 2 years of age	1.0	6.9
Children under 5 years of age	2.2	9.6
Children under 18 years of age	2.5	7.6
Elders (65 + years old)	1.5	3.7
Unemployed	3.8	11.9
Members of large-sized households (6+ members)	3.4	10.7
Members of female-headed households	2.2	5.6
Total population	2.0	6.0

Source: calculations made based on the NSS RA ILCS-2015 database.

* For estimation MOH standards based minimum food basket was applied to per adult equivalent consumption in ILCS-2015 database.

Chart 1. The dynamics of representation of households with poor dietary intake in urban and rural areas in 2008-2015, %.



Source: "Armenia Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA)", WFP, UNICEF, NSS RA, 2016 and CFSVA Update, WFP, NSS RA, CRRC-Armenia, 2017.

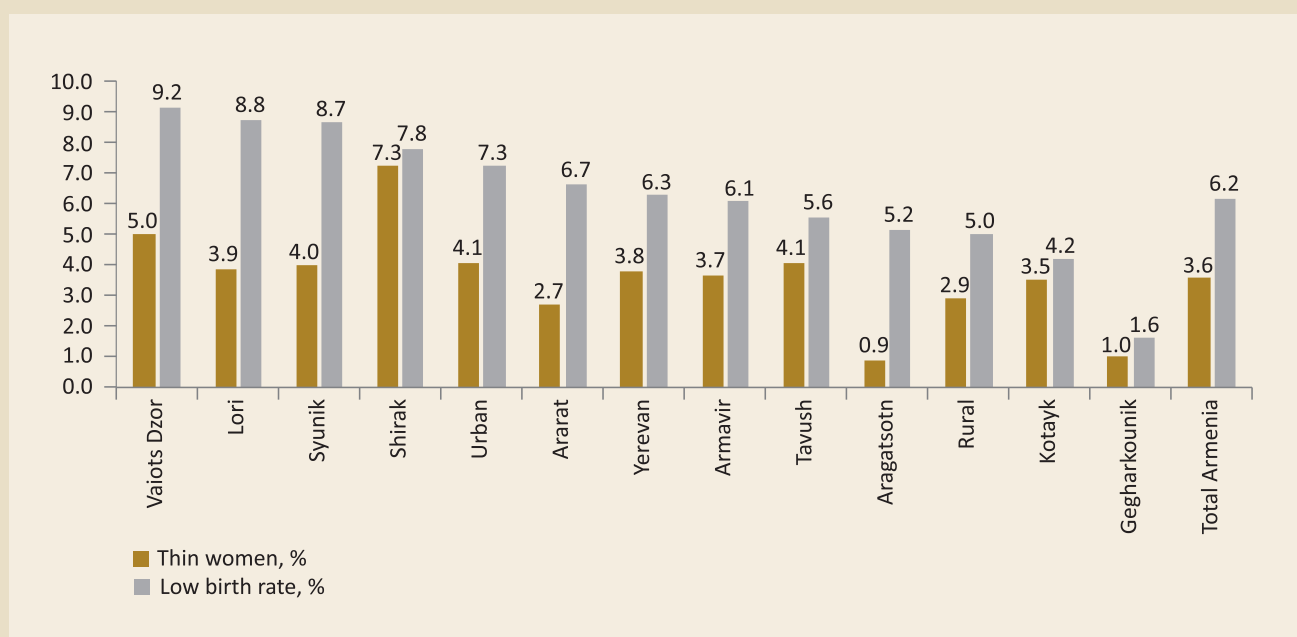
Table 2. SDG 2 Target 2 national framework baseline indicators in the provinces and age groups in Armenia in 2015

	Under-five stunting, %	Under-five wasting, %	Under-five over-weighting, %	Double burden of malnutrition**	At least two indicators exceed the national average level
Regions of Armenia					
Aragatsotn	18.1	22.9	10.3		✓
Ararat	13.7	13.4	35.9	✓	✓
Armavir	9.7	2.2	13.1		
Gegharkounik	9.9	10.6	12.3		✓
Lori	5.6	1.2	10.8		
Kotayk	7.7	1.1	4.9		
Shirak	19.5	5.1	18.4	✓	✓
Syunik	12.3	2.6	12.2		
Vayots Dzor	11.5	2.2	18.9	✓	✓
Tavush	7.4	0.0	7.8		
Areas					
Yerevan	3.5	1.4	11.4		
Urban areas	6.2	3.3	11.5		
Rural areas	13.4	5.5	16.4	✓	✓
Age groups					
0-1 years old	14.7	4.4	12.0		✓
1-2 years old	11.2	1.1	17.6	✓	✓
2-3 years old	5.4	5.1	11.9		
3-5 years old	7.9	5.2	13.5		
Armenia	9.4	4.2	13.6		

Source: Armenia DHS – 2015.

** Stunting and over-weighting indicators exceed the national average level.

Chart 2. Representation of thinness among women age 15-49 and the low birth (<2,500 g) rate in the provinces of Armenia in 2015, percent.



Source: Armenia DHS – 2015.

Table 3. Anaemia indicators in the provinces and special groups of population in Armenia in 2015

	Under-five anaemia, %	Reproductive age women anaemia, %	Double burden of child and women anaemia prevalence*
Regions of Armenia			
Aragatsotn	11.5	14.2	
Ararat	10.3	9.0	
Armavir	7.4	7.4	
Gegharkunik	48.8	39.2	✓
Lori	33.6	13.8	✓
Kotayk	20.2	12.6	
Shirak	21.4	11.3	
Syunik	9.8	10.4	
Vayots Dzor	15.1	9.6	
Tavush	11.2	9.5	
Areas			
Yerevan	10.4	11.9	
Urban areas	13.6	12.9	
Rural areas	18.0	14.2	✓
Age groups			

0-1 years old	30.0	X	
1-2 years old	26.3	X	
2-3 years old	13.0	X	
3-5 years old	8.3	X	
Maternity status			
Pregnant	X	11.2	
Breastfeeding	X	16.1	
Neither	X	13.3	
Armenia	15.6	13.4	

* Under-five and reproductive age women anaemia prevalence indicators exceed the national average level. Source: Armenia DHS – 2015.

Table 4. Achievability of the WFO Global Targets of Maternal, Infant and Young Child Nutrition in Armenia.

WHO Global Targets	2005	2010	2014	2015	Global WHO Target Value for 2025, %	National Target Value, %
Global Target 1. By 2025, a 40% reduction of the global number of children under five who are stunted.	18.0	19.3	19.4	9.4	<15.0	<15 (2020)**
Global Target 2. By 2025, a 50% reduction of anaemia in women of reproductive age.	24.6		...	13.4	<15.0	
Global Target 3. By 2025, a 30% reduction of low birth weight.				6.2	<10.0	<6 (2020)**
Global Target 4. By 2025, no increase in childhood overweight.	11.0	15.3	14.8	13.6	<7.0	...
Global Target 5. By 2025, increase the rate of exclusive breastfeeding in the first six months up to at least 50%.		35.0	43.5	45.0	>50.0	>45 (2020)**
Global Target 6. By 2025, reduce and maintain childhood wasting to less than 5%	5.1	4.0	5.3	4.2	<5.0	...

*State "Concept on Improving Child Nutrition" (Adopted: September 25, 2014).

Table 5. The dynamics of self-sufficiency of key food products in Armenia, in 2004-2015

	2004	2008	2010	2013	2014	2015
Wheat	41.6	39.8	33.5	46.8	48.7	49.5
Barley	...	...	76.3	93.1	95.1	96.6
Oats	...	...	89.7	90.2	92.1	93.4
Other cereals	...	...	62.7	92.3	95.8	91.7
Potatoes	99.7	99.9	100.2	105.2	103.8	102.1
Vegetables	102.2	99.5	98.3	99.5	99.1	100.0
Fruits and berries	86.5	93.4	79.8	99.6	93.8	102.0
Legumes	63.4	57.9	41.7	54.3	51.9	58.2
Vegetable oil	2.9	1.7	4.1	15.1	13.2	7.8
Sugar	0.9	3.4	35.8	92.6	93.1	89.6
Eggs	108.4	99.7	99.2	96.3	97.2	99.5
Milk	98	97.6	87	85.0	84.2	93.0
Beef	73.9	72.6	85.1	86.2	87.9	92.3
Pork	54.8	31.4	41.1	46.0	54.2	57.8
Sheep and goats meat	100.0	100.0	100.0	100.0	103.4	107.7
Poultry	24.3	14.0	12.4	19.8	20.0	21.8
Fish	...	...	80.0	130.0	124.0	114.2
Grapes	98.0	100.6	101.1	102.0	101.9	101.2

Source: "Food security and poverty", NSS RA - 2005 and 2015.

Table 6. Total supply of food and the per capita daily energy availability for consumption in Armenia, in 2015

	Total supply, 1000 tons	Of which: from domestic production	Per capita daily dietary energy available for consumption, kcal *	Of which: from domestic production	Share of dietary energy from domestic production, %
Cereals, of which:	1,688.6	930.4	1,466	807.8	55.1
Wheat	1,310.6	648.7	1,152	570.2	49.5
Barley	246.8	238.4	91.4	88.3	96.6
Potatoes	1,112.5	1,112.5	143.4	143.4	100.0
Vegetables	1,662.4	1662.4	137.1	137.1	100.0
Melons	286.9	286.9	16.4	16.4	100.0
Fruits and berries	503.6	503.6	152.9	152.9	100.0
Grapes	318.8	318.8	8.6	8.6	100.0

	Total supply, 1000 tons	Of which: from domestic production	Per capita daily dietary energy available for consumption, kcal *	Of which: from domestic production	Share of dietary energy from domestic production, %
Legumes	13.0	7.6	27.9	16.2	58.2
Vegetable oil	29.4	2.3	223.6	17.4	7.8
Sugar	78.0	69.9	112.3	100.6	89.6
Eggs	37.3	37.1	17.8	17.7	99.5
Milk	936.3	870.8	282.4	262.6	93
Meat, of which:	153.70	101.1	240.8	168.3	69.9
Beef	69.3	64.0	119.7	110.5	92.3
Pork	30.7	17.7	61.7	35.7	57.8
Mutton and goat meat	9.8	9.8	13.9	15.0	107.7
Poultry	43.9	9.6	45.5	9.9	21.8
Fish	29.3	29.3	16.5	16.5	100
Total			2,845.6	1,868.3	65.7

Calculated based on Food Balance Sheet.

Source: "Food security and poverty in January-December 2015", NSS RA, 2015.

* The dietary energy supply available for consumption is the total supply less uses other than for consumption – for animal feeding, seeds, exports, as well as wasting and open stocks.

Table 7. The per adult equivalent daily dietary energy consumption in Armenia, in 2015 by provinces and vulnerable groups

	Per adult equivalent daily dietary energy average actual consumption, kcal	Deprived: the dietary energy consumption is less than the national average
Provinces of Armenia		
Aragatsotn	2,586	
Ararat	2,427	
Armavir	2,312	✓
Gegharkounik	2,537	
Lori	2,657	
Kotayk	2,545	
Shirak	2,367	✓
Syunik	2,379	✓
VaiotsDzor	2,804	
Tavush	2,239	✓

	Per adult equivalent daily dietary energy average actual consumption, kcal	Deprived: the dietary energy consumption is less than the national average
Areas		
Yerevan	2,317	✓
Urban areas (including Yerevan)	2,378	✓
Urban areas (except Yerevan)	2,446	
Rural areas	2,488	
Wealth quintiles		
Poorest	1,926	✓
Second	2,287	✓
Third	2,539	
Fourth	2,697	
Richest	2,921	
Vulnerable groups		
Large-sized households with 6 and more members	2,344	✓
Households headed by women	2,392	✓
Households with unemployed head	2,298	✓
Armenia	2,420	

Source: "Armenia Comprehensive Food Security, Vulnerability and Nutrition Analysis (CFSVNA) Update", WFP, NSS RA, CRRC-Armenia, 2017.

Table 8. Own and leased agricultural lands operated by family and commercial farms in Armenia, in 2014

	Family farms	Commercial farms
Farms present in the country	345,875	342
Total agricultural lands operated, ha	513,000	22,113
<i>Average operated agricultural land per farm, ha</i>	<i>1.48</i>	<i>64.66</i>
<i>Of which:</i>		
Total own agricultural lands, ha	388,698	12,766
<i>Average own agricultural land per farm, ha</i>	<i>1.1</i>	<i>37.3</i>
Total leased agricultural lands, ha	70,001	9,347
<i>Average leased agricultural land per farm, ha</i>	<i>0.2</i>	<i>27.3</i>
Other lands	54,301	...
<i>Average other agricultural lands per farm, ha</i>	<i>0.2</i>	<i>...</i>

Source: Main Findings Agricultural Census 2014 of the Republic of Armenia. NSS RA, 2016.

Table 9. Average family farm and commercial agricultural organization in 2015

	Family farms	Commercial organizations
Number or units	345,875	453
Average land plot per unit, hectares	1.48	64.66
Cattle	2.19	14.58
of which cows	0.99	9.85
Pigs	0.46	21.46
Sheep	2.28	15.64
Poultry	7.90	5,560.00
Gross Agricultural production per unit, million AMD	2.81	61.37
Of which:		
Plant growing	1.74	5.08
Animal Husbandry	1.07	56.29
Agricultural Value added per unit, million AMD	2.38	51.82
Average number of employed	1.07	5.81

Source: "Statistical Yearbook of Republic of Armenia- 2016" and "Main Findings Agricultural Census 2014 of the Republic of Armenia", NSS RA, 2016.

Table 10. Crop pattern of Armenian family farms on irrigated and non-irrigated lands, 2015

	Crop pattern total, %	Crop pattern actually irrigated, %	Crop pattern non-irrigated, %	Area under culture, total, hectares	Area under culture, irrigated, 1000 hectares	Area under culture, non-irrigated, hectares
Wheat	28.48	20.78	31.89	83,452	18,668	64,784
Barley	15.38	3.52	20.62	45,057	3,165	41,892
Potatoes	7.35	4.69	8.53	21,537	4,210	17,327
Cabbage	0.76	0.90	0.70	2,239	811	1,428
Cucumber	0.58	0.94	0.42	1,694	843	852
Tomato	1.20	2.57	0.59	3,510	2,311	1,199
Obergine	0.48	0.76	0.36	1,416	68 2	734
Carrot	0.22	0.16	0.25	648	147	501
Onion	0.40	0.80	0.22	1,175	721	454
Garlic	0.18	0.02	0.24	519	21	497
Green Beans	0.47	0.20	0.60	1,390	177	1,213
Watermelon	1.13	3.60	0.03	3,297	3,235	63
Mellon	0.31	0.94	0.03	918	848	70

	Crop pattern total, %	Crop pattern actually irrigated, %	Crop pattern non-irrigated, %	Area under culture, total, hectares	Area under culture, irrigated, 1000 hectares	Area under culture, non-irrigated, hectares
Apple	2.59	4.70	1.66	7,589	4,223	3,366
Pear	0.33	0.27	0.36	976	245	731
Apricot	3.17	8.07	1.00	9,293	7,253	2,041
Peach	1.37	3.44	0.45	4,000	3,093	906
Cherries	0.51	0.51	0.52	1,508	458	1,050
Plum	0.68	0.99	0.54	1,985	891	1,094
Nuts	0.44	0.17	0.55	1,279	156	1,123
Grapes	4.83	12.18	1.57	14,138	10,942	3,195
Total				292,971	89,856	203,115

Source: "Main Findings Agricultural Census 2014 of the Republic of Armenia", and "Agriculture in the Republic of Armenia, 2011–2015", NSS RA, 2016.

Table 11. State budget subsidies in agriculture and irrigation in 2012-2016, million drams

	2012	2013	2014	2015
Agriculture	3,556	5,409	5,776	3,795
Irrigation	4,534	6,342	8,318	7,299
Support to Water Users Associations (grants)	3,950	5,563	5,535	5,581
Support to Water Supply Agencies (subsidies)	584	779	2,783	1,718
Total subsidies (grants)	8,090	11,751	14,094	11,093

Source: Calculations based on data from the Annual Budget Execution Reports for 2012-2015.

Table 12. Crop pattern of Armenian family farms, 2015

	Lands under cultivation, 1000 ha	Average harvest per ha, ton	Price per unit, AMD 1,000	Total income per ha, AMD 1,000	Marketability, %	Monetary income per ha, AMD 1,000	In % to Wheat	Total monetary income million AMD
Wheat	83,451.9	3.4	118.0	405.9	0.308	125.0	100.0	10433.4
Barley	45,056.9	2.9	121.0	346.1	0.308	106.6	85.3	4802.5
Potatoes	21,536.5	22.9	140.0	3204.6	0.518	1660.0	1327.7	35750.3
Cabbage	2,239.0	38.1	78.0	2974.9	0.829	2466.2	1972.6	5521.8
Cucumber	1,694.4	31.1	151.0	4690.1	0.829	3888.1	3109.9	6588.0

	Lands under cultivation, 1000 ha	Average harvest per ha, ton	Price per unit, AMD 1,000	Total income per ha, AMD 1,000	Marketability, %	Monetary income per ha, AMD 1,000	In % to Wheat	Total monetary income million AMD
Tomato	3,510.3	42.9	89.0	3817.2	0.829	3164.5	2531.1	11108.1
Obergine	1,416.3	29.7	94.0	2793.7	0.829	2316.0	1852.4	3280.2
Carrot	648.0	26.9	191.0	5145.5	0.829	4265.7	3411.9	2764.1
Onion	1,174.8	25.5	136.0	3468.0	0.829	2875.0	2299.5	3377.4
Garlic	518.8	13.4	1014.0	13607.9	0.829	11280.9	9023.1	5852.1
Green Beens	1,389.6	8.8	356.0	3143.5	0.829	2605.9	2084.4	3621.1
Water melon	3297.2	42.3	60.0	2540.4	0.931	2365.1	1891.7	7798.2
Melon	917.6	42.3	99.0	4191.7	0.931	3902.4	3121.4	3581.0
Apple	7588.7	10.5	191.0	1999.8	0.645	1289.9	1031.7	9788.3
Pear	976.2	10.5	291.0	3046.8	0.645	1965.2	1571.8	1918.5
Apricot	9293.2	10.5	220.0	2303.4	0.645	1485.7	1188.3	13806.8
Peach	3999.6	10.5	210.0	2198.7	0.645	1418.2	1134.3	5672.0
Cherries	1507.7	10.5	243.0	2544.2	0.645	1641.0	1312.6	2474.2
Plum	1984.9	10.5	132.0	1382.0	0.645	891.4	713.0	1769.4
Nuts	1278.5	10.5	1101.0	11527.5	0.645	7435.2	5947.1	9505.9
Grapes	14137.6	18.8	156.0	2935.9	0.9	2645.3	2115.8	37397.8

Source: "Main Findings Agricultural Census 2014 of the Republic of Armenia", and "Agriculture in the Republic of Armenia, 2011-2015", NSS RA, 2016.

Table 13. Credits to Agriculture, 2007-2015

	2015	2014	2013	2012	2011	2010	2009	2008	2007
Credits to Agriculture, billion AMD	137.69	117.39	98.56	91.89	73.44	52.37	44.18	36.47	22.38
of which									
Average interest rate	15.14	15.90	16.56	18.45	19.32	16.53	18.28	14.92	19.14
In % to:									
Gross agricultural output	13.80	11.8	10.7	10.9	9.2	8.2	8.5	5.8	3.5
Share to total sectoral credits	6.74	5.53	5.59	6.06	6.13	5.91	6.32	5.90	5.43

Share of Agriculture to GDP	17.22	18.07	18.43	17.91	20.33	16.76	16.69	16.11	18.20
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Source: Statistical Yearbooks, 2009 – 2016, NSS RA, Statistical Yearbooks 2015 – 2009, Central Bank of Armenia

Table 14. Average family farm characteristics at the Province level in 2015

	Number or units	Average land plot per unit, hectares	Cattle	of which Cows	Pigs	Sheep	Poultry	Gross Agricultural production	of which Plant growing	Animal husbandry	Average number of employed	Productivity
Armenia	345,875	1.48	2.19	0.99	0.46	2.28	7.9	2.81	1.74	1.07	1.07	2.63
Yerevan	7,262	0.04	0.62	0.49	0.28	0.99	4.34	2.24	1.36	0.88	0.05	44.22
Aragatsotn	30,919	1.99	3.07	1.42	0.46	3.46	6.64	3.24	1.87	1.37	0.66	4.94
Ararat	48,024	0.72	1.12	0.45	0.49	2.17	9.14	2.81	2.21	0.6	1.28	2.19
Armavir	39,491	1.44	1.66	0.59	0.63	2.58	10.59	4.57	3.5	1.07	2.03	2.25
Gegharkunik	53,356	1.69	2.59	1.27	0.33	2.44	7.6	3.58	2.4	1.17	0.83	4.3
Lori	35,712	1.68	2.41	1.15	0.41	1.04	6.25	2.05	0.83	1.22	1.19	1.73
Kotayk	36,211	1.21	1.7	0.76	0.41	1.16	5.9	1.69	0.58	1.11	0.67	2.54
Shirak	30,926	2.54	3.86	1.72	0.47	3.13	8.58	3.52	1.84	1.68	1.39	2.54
Syunik	20,251	2.01	3.34	1.59	0.63	6.34	8	3.4	1.51	1.89	0.71	4.79
Vayots Dzor	9,969	1.76	2.59	1.08	0.19	1.86	8.84	2.15	0.66	1.48	1.16	1.86
Tavush	33,755	0.86	1.19	0.53	0.58	0.5	8.26	1.36	0.64	0.72	0.83	1.64

Source: Calculated based on “Statistical Yearbook of Republic of Armenia- 2016”, and “Main Findings Agricultural Census 2014 of the Republic of Armenia”, NSS RA, 2016.

Table 15. Regional disparity indices for family farms in Provinces of Armenia in 2015

	Aragatsotn	Ararat	Armavir	Gegharkunik	Lori	Kotayk	Shirak	Syunik	Vayots Dzor	Tavush
Average land plot per unit, hectares	1.34	0.48	0.97	1.14	1.13	0.82	1.71	1.36	1.19	0.58
Cattle	1.40	0.51	0.76	1.18	1.10	0.78	1.76	1.53	1.18	0.54
Pigs	0.98	1.06	1.35	0.72	0.89	0.89	1.02	1.36	0.42	1.26
Sheep	1.52	0.95	1.13	1.07	0.46	0.51	1.37	2.78	0.81	0.22
Poultry	0.84	1.16	1.34	0.96	0.79	0.75	1.09	1.01	1.12	1.05

Sub-Index of main agricultural assets	6.08	4.16	5.55	5.07	4.37	3.74	6.95	8.04	4.72	3.65
Gross Agricultural production Plant Growing	1.07	1.27	2.01	1.38	0.48	0.33	1.05	0.87	0.38	0.37
Gross Agricultural production Animal Husbandry	1.28	0.56	1.00	1.10	1.14	1.04	1.58	1.77	1.39	0.67
Sub-Index of agricultural production	2.35	1.83	3.01	2.47	1.62	1.37	2.63	2.63	1.77	1.04
Sub-Index of Agricultural Productivity	1.88	0.83	0.85	1.64	0.66	0.97	0.97	1.82	0.71	0.62
Total, composite index	10.31	6.82	9.41	9.18	6.64	6.07	10.54	12.49	7.19	5.31

Source: Calculated based on "Statistical Yearbook of Republic of Armenia- 2016", and "Main Findings Agricultural Census 2014 of the Republic of Armenia", NSS RA, 2016.

Table 16. Gross agricultural output and agricultural employment in Armenia in 2008-2015.

	2008	2009	2010	2011	2012	2013	2014	2015
Employed in the agriculture, 1000 people	445	455	457	457	437	422	395	379
Gross agricultural output, bln. AMD	628.1	552.1	636.7	795	841.5	919.1	993.5	1,001.2

Source: "Statistical yearbook of Armenia", 2013 and 2016 publications, NSS RA.

Table 17. Regional disparities in monetary incomes of the family farms in Armenia in 2015

	Monetary gross income generated for employee	Funding of inputs	Monetary net income generated for employee	Parameters	
				Level of marketization of agricultural production	Share of inputs in gross agricultural production
Armenia	1.38	0.41	0.97	0.523	0.16
Aragatsotn	2.58	0.77	1.82	0.523	0.16
Ararat	1.15	0.34	0.81	0.523	0.16
Armavir	1.18	0.35	0.83	0.523	0.16
Gegharkunik	2.25	0.67	1.58	0.523	0.16
Lori	0.9	0.27	0.63	0.523	0.16
Kotayk	1.33	0.4	0.93	0.523	0.16
Shirak	1.33	0.4	0.93	0.523	0.16
Syunik	2.51	0.75	1.76	0.523	0.16
Vayots Dzor	0.97	0.29	0.68	0.523	0.16
Tavush	0.86	0.26	0.6	0.523	0.16

Source: Calculated based on "Statistical Yearbook of Republic of Armenia- 2016", and "Main Findings Agricultural Census 2014 of the Republic of Armenia", NSS RA, 2016.

Table 18. Agriculture, international comparisons, 2015

	Agricultural value added per worker, 1000 USD	Agriculture, % of GDP	Agricultural employment, % of total	Non-agro value added to worker, 1000 USD	Ratio of non-agricultural productivity to agricultural
Armenia	4.80	17.3	34.5	9.57	1.99
Georgia	3.25	9.1	50.9	18.18	5.59
Russian Federation	11.54	4.5	6.7	17.18	1.49
World	2.18	4			
Europe and Central Asia	14.31	2	8.3	59.38	4.15
Low Income	0.50	30			
Lower middle income	1.61	17			
Upper middle income	2.22	7	24.1	7.65	3.44
High income	39.26	1	3.2	125.62	3.20

Source: "World Development Indicators", The World bank, 2016 and NSS RA of the Republic of Armenia.

Table 19. Exports and imports of agriculture products in 2011-2015

	2011	2012	2013	2014	2015
Exports of agriculture products, thousand USD	53,413	67,114	104,235	87,345	81,659
Ratio of exports of agriculture products to total agricultural production, %	2.5	3.1	4.5	3.6	3.8
Imports of agriculture products, thousand USD	348,844	377,874	369,626	360,787	267,092
Ratio of imports of agriculture products to total agricultural production, %	16.1	17.6	16.1	14.7	12.4

Source: Calculations based on the National Statistical Service data.

Table 20. Number of family farms by the size of operated agricultural lands in 2014*

	Total	0.1 and less	0.1-0.2	0.2-0.5	0.5-1.	1-2	2-3	3-4.99	5-10	10-20	20-50	50-100	100-200	200 and more
Number of family farms	345,875	78,447	24,461	41,391	61,971	69,878	31,217	22,295	12,359	2,857	829	119	37	13
Number of farms in plant growing	305,395	62,692	20,604	37,699	56,443	63,645	28,720	20,512	113,70	2,714	829	119	37	13

	Total	0.1 and less	0.1-0.2	0.2-0.5	0.5-1.	1-2	2-3	3-4-99	5-10	10-20	20-50	50-100	100-200	200 and more
Land operated, thousand ha	513	3.67	3.93	16.53	51.05	10.68	79.86	89.45	84.55	37.73	22.2	8.55	4.21	4.49
% of farms	100.0	20.5	6.7	12.3	18.5	20.8	9.4	6.7	3.7	0.9	0.3	0.039	0.012	0.004
% of farms cumulative	100.0	20.5	27.3	39.6	58.1	78.9	88.3	95.1	98.8	99.7	99.9	100.0	100.0	100.0
% of lands	100.0	0.72	0.77	3.22	9.95	20.81	15.57	17.44	16.48	7.35	4.33	1.67	0.82	0.88
% of lands cumulative	100.0	0.72	1.48	4.70	14.66	35.47	51.04	68.47	84.95	92.31	96.64	98.30	99.12	100.0
Average land per farm, ha	1.48	0.05	0.16	0.40	0.82	1.53	2.56	4.01	6.84	13.21	26.78	71.58	115.27	348.19
Average land per farm in plant growing, ha	1.68	0.06	0.19	0.44	0.90	1.68	2.78	4.36	7.44	13.90	26.78	71.58	115.27	348.19

Source: "Main Findings of 2014 Agricultural Census of the Republic of Armenia". NSS RA, 2016.

* Own and leased lands operated by family farms.

Table 21. Regional differences of the sizes of farms based on the operated agricultural land

	Armenia	Aragatsotn	Ararat	Armavir	Gegharkunik	Lori	Kotayk	Shirak	Syunik	Vayots Dzor	Tavush
% of farms less than 2 hectares	75.47	71.04	95.56	89.42	73.67	74.33	85.40	59.76	65.83	74.10	88.34
% farms more than 2 hectares	24.53	28.96	4.44	10.58	26.33	25.67	14.60	40.24	34.17	25.90	11.66
Average land plot for farms less than 2 hectares	0.75	0.86	0.50	0.77	0.82	0.66	0.60	0.83	0.41	0.75	0.60
Average land plot for farms more than 2 hectares	5.15	4.77	5.34	7.12	4.13	4.62	4.78	5.07	5.09	4.64	2.87
Average land plot	1.68	1.99	0.72	1.44	1.69	1.68	1.21	2.54	2.01	1.76	0.86
Ratio of land plots*	6.82	5.57	10.60	9.24	5.03	7.01	7.97	6.12	12.34	6.19	4.80
Ratio of lands**	1.82	2.27	0.49	1.09	1.80	2.42	1.36	4.12	6.40	2.16	0.63

Source: Calculated using "Main Findings Agricultural Census 2014 of the Republic of Armenia". NSS RA, 2016

* Ratio of the average land plot for farms with land more than 2 ha to the land plots for farms less than 2 ha

** Ratio of lands operated by farms with land plots more than 2 ha to the lands operated by farms with land plots less than 2 ha.

Table 22. Employment and productivity in family farms with different land plot sizes

	less than 0.1	0.1-0.19	0.2-0.49	0.5-0.99	1-1.99	2-2.99	3-4.99	5-9.99	10-19.99	20 and more	Total
Employment, thousand	8.91	11.06	37.48	95.80	124.2	58.46	42.22	27.08	8.21	4.30	417.48
Per farm	0.11	0.45	0.91	1.55	1.78	1.87	1.89	2.19	2.87	4.31	1.21
Per 1 hectare	2.42	2.81	2.27	1.88	1.16	0.73	0.47	0.32	0.22	0.11	0.81
Production per farm, 1000 AMD	136.9	437.5	872.6	1237.2	1464.3	2138.6	2026.9	4663.7	4909.5	7503.7	1149
Productivity per employed, 1000 AMD	1205.9	967.9	963.3	800.3	823.6	1142.0	1070.4	2128.2	1709.1	1740.2	951.9

Source: Calculated using "Main Findings Agricultural Census 2014 of the Republic of Armenia". NSS RA, 2016 and data from ILCS 2015

Table 23. The dynamics of proportions of per capita expenditures on food in the total consumption expenditures of the poorest and wealthiest quintiles in Armenia, in 2008-2015, percent

	2008	2010	2013	2014	2015
Poorest quintile	67.4	64.1	60.7	58.7	58.8
Decrease compared to 2008, %	NA	4.9	9.9	12.9	12.8
Wealthiest quintile	43.7	45.2	40.6	38.3	35.8
Decrease compared to 2008, %	NA	-3.4	7.1	12.4	18.1

Source: "Social snapshot and poverty in Armenia", NSS RA, 2016.

Table 24. Inequalities in nutrition indicators among the poorest and the wealthiest quintiles

	Poorest quintile to wealthiest quintile (times higher in the poorest quintile)
Percentage of children under 5 years of age who are stunted	2.03
Percentage of children under 5 years of age affected by wasting	2.18
Percentage of children under 5 years of age who are overweight	1.98
Percentage of low-birth infants	1.04
Anaemia among reproductive age women	1.22
Anaemia among children under 5 years of age	1.62

Source: DHS Armenia-2015

Table 25. Average accessibility of inter-community roads in the regions of Armenia in 2014, minutes

Regions	Average accessibility of inter-community roads, minutes
Aragatsotn	30
Ararat	35
Armavir	62
Gegharkounik	74
Lori	92
Kotayk	46
Shirak	88
Syunik	249
Vayots Dzor	101
Tavush	110

Source: "Armenia regional development strategy 2016-2025".

Table 26. Nutritional indicators by educational levels

	Basic and secondary	Tertiary
Low-birth rate, (mother's education), %	8.1	5.5
Food diversity among 6-23 months children, (mother's education), %	42.2	53.8
Prevalence of anaemia among reproductive age women, %	16.1	12.0
Prevalence of anaemia among children under 5 years of age (mother's education), %	17.8	13.0

Source: Armenia DHS-2015

Table 27. State budget subsidies in agriculture sphere in 2012-2015, million AMD

	2012	2013	2014	2015
Agriculture	3,556	5,409	5,776	3,795
State support to agricultural land users for purchases of fertilizers at affordable prices	1,030	2,294	2,477	2,631
State support to agricultural land users for purchases of diesel at affordable prices	1,948	1,865	1,261	--
Development of grain and other fodder crop production	--	616	1,166	--
Subsidization of interest rates on agricultural loans	578	634	872	1,163
Irrigation	4,534	6,342	8,318	7,299
Support to Water Users Associations (grants)	3,950	5,563	5,535	5,581

	2012	2013	2014	2015
Support to Water Supply Agencies (subsidies)	584	779	2,783	1,718
Total subsidies/grants	8,090	11,751	14,094	11,093
<i>Total subsidies as % to total expenditure on agriculture sphere</i>	<i>32.4</i>	<i>46.5</i>	<i>47.1</i>	<i>29.3</i>
<i>Total subsidies as % to gross agricultural output</i>	<i>0.96</i>	<i>1.28</i>	<i>1.42</i>	<i>1.11</i>

Source: Calculated based on the Annual Budget Execution Reports for 2012-2015.

Table 28. Consolidated budget expenditures on social protection in 2012-2015, million AMD

	2012	2013	2014	2015
Social protection expenditures in the consolidated budget, million AMD	294,124	300,662	346,083	387,032
Programs				
Ill health and disability	1,250	1,224	1,241	1,244
Old age	198,981	199,965	240,512	283,198
Persons who lost relatives	4,893	4,875	4,966	5,028
Family members and children	47,172	50,974	57,340	59,332
Unemployment	2,837	2,307	1,537	1,566
Habitation securing	4,764	2,643	500	501
Special social privileges (not belonging to other classes)	12,493	11,583	12,748	15,346
Social protection (not belonging to other classes)	21,733	27,091	27,238	20,816
<i>As % of consolidated budget expenditures</i>	<i>28.4</i>	<i>25.7</i>	<i>27.3</i>	<i>27.5</i>
<i>As % of GDP</i>	<i>7.4</i>	<i>6.6</i>	<i>7.2</i>	<i>7.7</i>

Source: Calculated based on the Annual Budget Execution Reports for 2012-2015.

Table 29. Consolidated budget expenditures on FLSEB in 2012-2015, million AMD

	2012	2013	2014	2015
Consolidated budget expenditures on FLSEB, million AMD	33,100	34,578	35,427	36,575
<i>As % of consolidated budget expenditures</i>	<i>3.2</i>	<i>3.0</i>	<i>2.8</i>	<i>2.6</i>
<i>As % of social protection expenditures</i>	<i>11.3</i>	<i>11.5</i>	<i>10.2</i>	<i>9.5</i>
<i>As % of GDP</i>	<i>0.8</i>	<i>0.8</i>	<i>0.7</i>	<i>0.7</i>

Source: Calculated based on the Annual Budget Execution Reports for 2012-2015.

Table 30. Consolidated budget expenditures on National SFP in 2012-2015, 1,000 AMD

	2012	2013	2014	2015
Consolidated budget expenditures on SFP, 1000 AMD	72,116	-	120,081	565,660
<i>As % of consolidated budget expenditures</i>	<i>0.01</i>	<i>...</i>	<i>0.01</i>	<i>0.04</i>
<i>As % of GDP</i>	<i>0.002</i>	<i>...</i>	<i>0.002</i>	<i>0.011</i>

Source: Calculated based on the Annual Budget Execution Reports for 2012-2015.

Table 31. Fiscal allocations directly affecting food availability, accessibility, utilization and stability in 2012-2015, million AMD

	2012	2013	2014	2015
Agriculture	24,983	25,273	29,902	37,856
Social protection	294,124	300,662	346,083	387,032
SFP	72.1	...	120.1	565.7
Nutritional Awareness raising	-	-	82.10	94.00
Total	319,179	325,935	376,187	425,548
<i>As % of GDP</i>	<i>8.0</i>	<i>7.2</i>	<i>7.8</i>	<i>8.5</i>

Source: Calculated based on the Annual Budget Execution Reports for 2012-2015.