1.1 Geography, Population, History, and Economy

Geography

The republic of Armenia is a small, landlocked mountainous country located in the southern Caucasus Mountains in southwestern Asia. The country borders on Turkey to the west, Georgia to the north, Azerbaijan to the east, and Iran to the south. The area of the country is 29,743 square km, approximately 71 percent of which is agricultural land, 12 percent is forested, 8 percent is special protected territories, and 9 percent is uncategorized. In Armenia, the largest lake is Lake Sevan, which has a surface area of 1,271 square km. The longest rivers are the Akhuryan (186 km) and the Araks (158 km). The highest point in the country is the peak of Aragats (4,090 meters); the lowest point is the Debet River (375 m). The longest distance between the northwest and the southeast is 360 km, and the longest distance between west and east is 200 km. Armenia has a highland continental climate with cold winters and hot summers. The country is subdivided into 11 regions (marz), including the region of Yerevan, which is the capital city of Armenia (NSS, 2011c).

Population

The 2001 population census was the most recent official census to be conducted prior to the 2010 Armenia Demographic and Health Survey; it revealed a population of 3,212,900. The second census in Armenia took place after independence was implemented in October 2011, and data is currently being analyzed. Based on the 2001 population census quarterly updates, the current estimate of the de jure (resident) population as of the end of 2010 was 3,262,600, with an annual growth rate of 0.4 percent in 2009-2010. In 2010, 51.5 percent of the population was female, and 48.5 percent was male. The proportion of the population that lives in urban areas is 64 percent. The population density in the country as a whole is 110 people per sq km, with approximately 1.1 million inhabitants living in Yerevan. In 2010, life expectancy at birth was 77.2 years for females and 70.6 years for males. According to the National Statistical Service (NSS) of Armenia, in 2010 the average size of the Armenian household was 4.1 persons for the de jure population and 3.8 persons for the de facto (current) population. Literacy among women and men age 15-49 is universal, and 21 percent of males and 23 percent of females age 25-49 have attained higher education. Approximately one-third of the Armenian population lives below the poverty line. The global economic crisis had a serious impact on poverty incidence in Armenia; according to the NSS, poverty increased in Armenia from 28 percent of the population in 2008 to 34 percent in 2009 and 36 percent in 2010 (NSS, 2011b, and NSS, 2011c).

An Armenian diaspora has existed throughout the nation's history, with approximately two-thirds of ethnic Armenians living outside the country. The exodus of Armenians began during World War I, when the territory of Armenia was divided between the warring Ottoman and Russian Empires. The most recent large-scale migrations occurred as a result of interethnic fighting, the Karabakh crisis, a devastating earthquake centered in the north of the country, and post-Soviet political, social, and economic transitions. Since 2007, about 11 percent of household members age 15 and older have been internal or external migrants. The main reasons for leaving the country have been work related. Since 2007, nearly three quarters of household outmigrants age 15 and older have left for the Russian Federation. In recent years, however, large-scale labor emigration has declined. By 2010, the net migration rates had declined by more than 4 times compared with the 2000 rates and had declined by 33 percent compared with the 2009 rates (NSS, 2011b).
**History**

The republic of Armenia lies in the Armenian highlands surrounding the biblical Mount Ararat. Although currently located in Turkey, the snow-covered peak of Ararat dominates the skyline of Yerevan, the capital city of Armenia. Ararat is regarded as a symbol of Armenia and is a centerpiece of the Armenian Coat of Arms.

The Armenian nation is one of the oldest in the world and has long been famous for its cultural and spiritual heritage. Its history dates back almost 5,000 years. The original Armenian name for the country was Hayk, currently Hayastan. In the ninth through the sixth centuries B.C., the Urartu (Ararat) Kingdom flourished in the Armenian highlands. At its height, under Tigran the Great (95-55 BC), Armenia extended its rule from “sea to sea” (the Caspian to the Mediterranean Seas). In AD 301, Armenia became the first country to adopt Christianity as a state religion. Throughout history, Armenia changed its territorial size many times, and between the 4th and 19th centuries it passed under the rule of Greeks, Romans, Persians, Byzantines, Mongols, Arabs, Ottoman Turks, and Russians. After World War I, the independent Democratic Republic of Armenia was established on May 28, 1918. That republic, which endured only two and a half years, was annexed by the Red Army on November 29, 1920. In 1922, the newly proclaimed Armenian Soviet Socialist Republic became part of the Soviet Union as one of three republics comprising the Trans-Caucasian Soviet Federative Socialist Republic. In 1936, after reorganization, the Armenian Soviet Socialist Republic became a separate constituent republic of the Soviet Union. On September 21, 1991, the Supreme Council of the Republic of Armenia declared independence from the Soviet Union.

Armenia is a sovereign, democratic country. The new constitution was approved in the July 1995 referendum, and the most recent amendments were made in November 2005. The president of Armenia is the head of state and is elected by the citizens for a five-year term of office. The most recent presidential election was held in 2008, and the next election is scheduled for 2013. State authority is implemented according to the constitution and laws and is based on the principle of distinguishing the legislative, administrative, and judicial authorities.

**Economy**

Since 2000, and particularly during 2001-2008, Armenia has experienced rapid economic growth (13 percent, on average), and its gross domestic product (GDP) per capita has tripled. Armenia has a lower middle-income economy; however, the country’s economy still relies on foreign investment, targeted grants, and support from Armenians working abroad. Economic growth and prudent fiscal policies have translated to stable employment, an increase in nominal wages, an increase in spending in social sectors, and a reduction in poverty in the past decade. Almost all sectors of the economy have contributed to economic growth, but the growth in construction has been particularly strong; in 2007-2008 its share of the GDP reached 25 percent. However, the recent global economic crisis had a strong negative impact on economic growth in Armenia, with a 14 percent decline in GDP observed in 2009, followed by only a 2 percent growth in GDP in 2010; this contrasts with the double-digit average growth rates during the early 2000s (NSS, 2011b).

The main economic activities in Armenia are manufacturing machinery of tools, chemicals, textiles, and jewellery; diamond processing; construction and mining (copper, gold, molybdenum, aluminium); agriculture; cognac (Armenian brandy) and wine factories; food processing; trade; sales; machinery repair; tourism and hospitality; real estate; and information technology. The structure of economic activities in Armenia recently has shifted from mostly heavy industrial production to other activities, particularly activities in the service and agricultural sectors that became substantial contributors to GDP and employment structures (NSS, 2011b).

In 2010, the main items exported abroad were ores; ferrous metals; copper, aluminium, and articles made of them; precious and semiprecious stones; alcoholic and non-alcoholic beverages; bituminous substances; and mineral waxes. The amount of imported goods, however, considerably exceeds that of exported goods ($3.75 billion versus $1.04 billion). The main items imported in 2010...
were nuclear reactors, boiler machinery and mechanical appliances, electrical machinery and equipment, vehicles, natural gas and other mineral fuels, mineral oils and products of its distillation, foodstuffs, chemicals, pharmaceuticals, and tobacco products. Major trade partners in 2010 were Russia, Bulgaria, Germany, Netherlands, USA, Iran, Belgium, Georgia, Turkey, Ukraine, UAE, China, and Canada (NSS, 2011c).

Armenia is a member of more than 40 international organizations, including the United Nations, the Council of Europe, the Asian Development Bank, the Commonwealth of Independent States, the World Trade Organization, the World Customs Organization, the Organization of the Black Sea Economic Cooperation, and others.

1.2 SYSTEMS FOR COLLECTING DEMOGRAPHIC AND HEALTH DATA

The NSS of Armenia is responsible for conducting censuses and for using data from the national registration system to provide information about the current population. The 2001 census results were published in 2002-2004. The 2011 census is currently being completed; the results will be published in 2012-2014. Births, deaths, marriages, and divorces are registered at the local administrative level by the civil registry departments of the Ministry of Justice, while population migration within the country and abroad is registered by the relevant subdivisions of the Armenian police, and aggregated statistics are forwarded through territorial offices of the Armenian police to the territorial statistical offices and then to the NSS. The NSS compiles and analyzes these data and issues annual reports entitled, Population of Armenia, Women and Men in Armenia, and Statistical Yearbook among others.

Health information is collected by the Ministry of Health (MOH) through special forms provided by the health facilities. Collected information is passed directly to the NSS. The NSS compiles and analyzes data for the country as a whole and issues annual reports as well as various analyses. Based on compiled health data, the Ministry of Health issues annual thematic reports and a bi-annual report entitled Health Indicators of the Population and Usage of Health Care Resources in Armenia. The national data are available at the WHO Website as part of the Health for All Database.

1.3 HEALTH CARE SYSTEM UPDATES IN ARMENIA

Armenia began to reform the health care sector soon after attaining independence. Recognizing health and health care as fundamental human rights, the country’s strategy identified the major components of health care reform: (1) a reorientation of health services towards a balanced partnership between primary and hospital care; (2) the promotion of health and prevention of disease through tackling the determinants of health; and (3) a shift from the narrow biomedical model towards a social, multiprofessional, and multisectoral approach to health and health care.

The main directions of health sector development in Armenia arose from the basic provisions of the government’s Action Plan and the document Health for All in the 21st Century, which was adopted by the World Health Organization. The main tasks of the health system reforms are—given available resources and potential—to ensure citizens’ constitutional right to health care, to improve access to state-guaranteed free medical care; and to initiate targeted balancing of the social and market values.

The government of Armenia approved the first strategy for primary health care (PHC) development in 1997. It identified PHC service delivery in Armenia as inefficient and poor in quality. As a result, the government decided to reorient the health care system towards PHC and to introduce family medicine as a strategic component to improve the quality of and access to PHC services. The government approved the follow-up PHC development strategy to scale up and complete the PHC reforms. Long-term objectives include integration of outpatient specialist services with hospitals; implementation of polyclinic reform; and creation of new cadres of physicians trained in family medicine and nurses trained in family and community nursing. The strategy also recognizes the need
for better integration of primary health care and social care services. It is estimated that 1,654 family doctors and 1,770 family nurses graduated by September 2011.

To improve access to essential services in rural areas, the government has run a Primary Health Care Development Program that was built on the successful Armenia Social Investment Fund experience. By mobilizing communities to develop their plans to improve local health care and to raise their own revenues to share service improvement costs, the program has improved PHC infrastructure in the villages. The program was closely linked with PHC training programs to ensure that the outfitted rural facilities were staffed with qualified individuals.

In January 2006, free access to polyclinic services for all Armenians was introduced. In 2007, the principle of free enrollment was incorporated into primary care. Also, regulations on establishment of independent solo and group family medicine practices were adopted by government decree. Criteria for conducting preventive health care visits by PHC doctors were developed and adopted by the government. On July 1, 2008, the government introduced vouchers that entitled pregnant women to receive free delivery care services. Additional financial resources from the government allowed the salaries of medical personnel to be increased.

The health care delivery system is divided between outpatient and inpatient care. Inpatient care is provided by multi- and single-service hospitals. There are separate hospitals for maternity care and for children’s care. Outpatient care is provided by urban polyclinics, rural health centers/ambulatories, and feldsher-accoucher health posts. At the end of 2010, there were about 140 ambulatory-polyclinic facilities in urban areas, 255 rural ambulatories, and 617 health posts in Armenia. Polyclinics provide primary care services through district internists and pediatricians, as well as outpatient specialist services, resulting in no clear separation between primary and secondary care services.

The prioritized rights of mother and child are set forth in the constitution of Armenia as well as in other laws. In particular, maternal and child health issues and future strategies of the main provisions were established in Maternal and Child Health Strategy:2003-2015. In addition, in the main strategic planning document of the country (known as the Program of Sustainable Development), maternal and child health represents a priority program area.

During recent years, mother and child health issues have become a priority for the government of Armenia. For example, the government has approved National Strategy, Program and Actions Timeframe on Reproductive Health Improvement for 2007-2015, as well as National Strategy for Child and Adolescent Health and Development and Thereof Plan of Actions for 2010-2015. These documents reflect reproductive, maternal, and child health problems associated with the current situation in the country and define goals and strategies aimed at improving women's and children's health and nutrition while reducing infant and maternal mortality. The maternal and child health protection plans of action are high priorities of the MOH.

**Health Care Financing**

Historically, the state budget was the primary funding source for health care. Currently, the health system is financed both from local and from international sources. The main local sources are the state budget and direct out-of-pocket payments by the population. International financing sources are general humanitarian donations and project-specific support.

Grants and credit projects financed by foreign governments and international and multilateral organizations are now the most substantial form of external support in areas of immunization,

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1 A feldsher is a health professional trained in nursing and midwifery with extended training in clinical diagnosis and pharmacology. Feldshers are authorized to provide basic treatment and to prescribe a restricted number of drugs at feldsher-accoucher posts (FAPs) with no assigned doctor.
maternal and child health, reproductive health, adolescent health, iodine deficiency, and HIV/AIDS prevention (with emphasis on prevention of mother-to-child transmission of HIV).

The state budget remains the main formal source of financing. State funds are derived from general tax revenues. State expenditures for health care are not sufficient to support the core system and to meet the health needs of the population.

Each year Armenia increases its donations to the health sector. In coming years, the government’s most valuable and important project will be obligatory health insurance, which will improve the quality of health services as well as the health of the population.

Family Planning Policies

The main objectives of family planning programs in Armenia are to ensure safe motherhood among women of reproductive age, to decrease health risks during pregnancy, and to reduce reliance upon abortion as a method of family planning while promoting more modern and effective methods of contraception. Currently, abortion is legal during the first 12 weeks of pregnancy. In some cases, an abortion may be performed until 22 weeks of gestation if there is a medical or social justification.

In the programs related to the improvement of reproductive health, contraceptive methods are provided free of charge, but before 2006, there was a fee for the necessary examinations. After implementing PHC in 2006, the gynecological services were included among the free services.

For many years, oral contraceptives were not commonly available in Armenia due to a directive titled “Side Effects and Complications of Oral Contraceptives,” enacted by the MOH of the former Soviet Union in 1974. Today, in Armenia there is no barrier to contraceptive use because in 2002, a new law allowed oral contraceptive use. Moreover, in 2005, the government of Armenia adopted new regulations for performing abortions.

1.4 Objectives and Organization of the Survey

The 2010 Armenia Demographic and Health Survey (2010 ADHS) is the third in a series of nationally representative sample surveys designed to provide information on population and health issues. It is conducted in Armenia under the worldwide Demographic and Health Surveys program. Specifically, the 2010 ADHS has a primary objective of providing current and reliable information on fertility levels, marriage, sexual activity, fertility preferences, awareness and use of family planning methods, breastfeeding practices, nutritional status of young children, childhood mortality, maternal and child health, and awareness and behavior regarding AIDS and other sexually transmitted infections (STIs). The survey obtained detailed information on these issues from women of reproductive age and, for certain topics, from men as well.

The 2010 ADHS results are intended to provide information needed to evaluate existing social programs and to design new strategies to improve health of and health services for the people of Armenia. Data are presented by region (marz) wherever sample size permits. The information collected in the 2010 ADHS will provide updated estimates of basic demographic and health indicators covered in the 2000 and 2005 surveys.

The long-term objective of the survey includes strengthening the technical capacity of major government institutions, including the NSS. The 2010 ADHS also provides comparable data for long-term trend analysis in Armenia because the 2000, 2005, and 2010 surveys were implemented by the same organisation and used similar data collection procedures. It also adds to the international database of demographic and health–related information for research purposes.

The 2010 ADHS was conducted by the National Statistical Service (NSS) and the MOH of Armenia from October 5 through December 25, 2010. ICF International provided technical support for the survey through the MEASURE DHS project. MEASURE DHS is a worldwide project,
sponsored by the United States Agency for International Development (USAID), with a mandate to assist countries in obtaining information on key population and health indicators. USAID/Armenia provided funding for the survey, while the United Nations Children’s Fund (UNICEF)/Armenia, the Joint United Nations Programme on AIDS (UNAIDS)/Armenia, and the United Nations Population Fund (UNFPA)/Armenia supported the survey through in-kind contributions.

Sample Design and Implementation

The sample was designed to permit detailed analysis—including the estimation of rates of fertility, infant/child mortality, and abortion—at the national level, for Yerevan, and for total urban and total rural areas separately. Many indicators can also be estimated at the regional (marz) level.

A representative probability sample of 7,580 households was selected for the 2010 ADHS sample. The sample was selected in two stages. In the first stage, 308 clusters were selected from a list of enumeration areas in a subsample of a master sample derived from the 2001 Population Census frame. In the second stage, a complete listing of households was carried out in each selected cluster. Households were then systematically selected for participation in the survey.

All women age 15-49 who were either permanent residents of the households in the 2010 ADHS sample or visitors present in the household on the night before the survey were eligible to be interviewed. Interviews were completed with 5,922 women. In addition, in a subsample of one-third of all of the households selected for the survey, all men age 15-49 were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey. Interviews were completed with 1,584 men. Appendix A provides additional information on the sample design of the 2010 Armenia DHS.

Questionnaires

Three questionnaires were used in the ADHS: a Household Questionnaire, a Woman’s Questionnaire, and a Man’s Questionnaire. The Household Questionnaire and the individual questionnaires were based on model survey instruments developed in the MEASURE DHS program and questionnaires used in the previous 2005 ADHS. The model questionnaires were adapted for use by NSS and MOH. Suggestions were also sought from a number of nongovernmental organizations (NGOs). The questionnaires were developed in English and translated into Armenian. They were pretested in July 2010.

The Household Questionnaire was used to list all usual members of and visitors to the selected households and to collect information on the socioeconomic status of the household. The first part of the Household Questionnaire collected for each household member or visitor information on their age, sex, educational attainment, and relationship to the head of household. This information provided basic demographic data for Armenian households. It also was used to identify the women and men who were eligible for an individual interview (i.e., women and men age 15-49). In the second part of the Household Questionnaire, there were questions on housing characteristics (e.g., the flooring material, the source of water, and the type of toilet facilities), on ownership of a variety of consumer goods, and on other aspects of the socioeconomic status of the household. In addition, the Household Questionnaire was used to obtain information on each child’s birth registration, ask questions about child discipline and child labor, and record height and weight measurements of children under age 5.

The Woman’s Questionnaire obtained information from women age 15-49 on the following topics:

- Background characteristics
- Pregnancy history
- Antenatal, delivery, and postnatal care
- Knowledge, attitudes, and use of contraception
Introduction

- Reproductive and adult health
- Childhood mortality
- Health and health care utilization
- Vaccinations of children under age 5
- Episodes of diarrhea and respiratory illness of children under age 5
- Breastfeeding and weaning practices
- Marriage and recent sexual activity
- Fertility preferences
- Knowledge of and attitudes toward AIDS and other sexually transmitted diseases
- Woman’s work and husband’s background characteristics

The Man’s Questionnaire, administered to men age 15-49, focused on the following topics:

- Background characteristics
- Health and health care utilization
- Marriage and recent sexual activity
- Attitudes toward and use of condoms
- Knowledge of and attitudes toward AIDS and other sexually transmitted diseases
- Attitudes toward women’s status

Training of Field Staff

The main survey training, which was conducted by NSS, MOH, and ICF International staff, was held during a three-week period in September and was attended by all supervisors, field editors, interviewers, and quality control personnel, a total of 104 people (83 females and 21 males). The training included lectures, demonstrations, practice interviews in small groups, and examinations. All field staff received training in anthropometric measurement and participated in two days of field practice.

Fieldwork and Data Processing

Thirteen teams collected the survey data; each team consisted of four female interviewers, a male interviewer, a field editor, and a team supervisor. Fieldwork began in early October 2010 and was completed by December 25, 2010. Senior ADHS technical staff visited teams regularly to review the work and monitor data quality. MOH, UNICEF/Armenia, UNFPA/Armenia, and USAID/Armenia representatives also visited teams to monitor data collection on child discipline and child labor modules and to observe the height and weight measurements of children under age 5.

The processing of the ADHS results began shortly after fieldwork commenced. Completed questionnaires were returned regularly from the field to NSS headquarters in Yerevan, where they were entered and edited by data processing personnel who were specially trained for this task. The data processing personnel included a supervisor, a questionnaire administrator (who ensured that the expected number of questionnaires from all clusters was received), several office editors, 12 data entry operators, and a secondary editor. The concurrent processing of the data was an advantage because the senior DHS technical staff were able to advise field teams of problems detected during the data entry. In particular, tables were generated to check various data quality parameters. As a result, specific feedback was given to the teams to improve performance. The data entry and editing phase of the survey was completed in March 2011.
1.5 **Response Rates**

Table 1.1 shows response rates for the 2010 ADHS. A total of 7,580 households were selected in the sample, of which 7,043 were occupied at the time of the fieldwork. The main reason for the difference is that some of the dwelling units that were occupied during the household listing operation were either vacant or the household was away for an extended period at the time of interviewing. The number of occupied households successfully interviewed was 6,700, yielding a household response rate of 95 percent. The household response rate in urban areas (94 percent) was slightly lower than in rural areas (97 percent).

In these households, a total of 6,059 eligible women were identified; interviews were completed with 5,922 of these women, yielding a response rate of 98 percent. In one-third of the households, a total of 1,641 eligible men were identified, and interviews were completed with 1,584 of these men, yielding a response rate of 97 percent. Response rates are slightly lower in urban areas (97 percent for women and 96 percent for men) than in rural areas where rates were 99 and 97 percent, respectively.

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<th>Residence</th>
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<td></td>
<td>Urban</td>
<td>Rural</td>
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<td><strong>Household interviews</strong></td>
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<td>Households selected</td>
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<td>Households occupied</td>
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<td>2,010</td>
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<td>Households interviewed</td>
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<td>1,947</td>
<td>6,700</td>
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<td>Household response rate(^1)</td>
<td>94.4</td>
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<td><strong>Interviews with women age 15-49</strong></td>
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<tr>
<td>Number of eligible women</td>
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<tr>
<td>Number of eligible women interviewed</td>
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<td>1,956</td>
<td>5,922</td>
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<td>Eligible women response rate(^2)</td>
<td>97.4</td>
<td>98.5</td>
<td>97.7</td>
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<tr>
<td><strong>Interviews with men age 15-49</strong></td>
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<tr>
<td>Number of eligible men</td>
<td>1,105</td>
<td>536</td>
<td>1,641</td>
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<tr>
<td>Number of eligible men interviewed</td>
<td>1,063</td>
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<td>1,584</td>
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<tr>
<td>Eligible men response rate(^2)</td>
<td>96.2</td>
<td>97.2</td>
<td>96.5</td>
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</tr>
</tbody>
</table>

\(^1\) Households interviewed/households occupied  
\(^2\) Respondents interviewed/eligible respondents