



# REVISED NATIONAL TARGETS OF ARMENIA IN THE CONTEXT OF THE UNECE- WHO/EUROPE PROTOCOL ON WATER AND HEALTH



August 2019



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This document, the “REVISED NATIONAL TARGETS OF ARMENIA IN THE CONTEXT OF THE UNECE- WHO/EUROPE PROTOCOL ON WATER AND HEALTH IN ARMENIA”, was produced within the UNECE-led component of the EUWI+ with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of the European Union or the Governments of the Eastern Partnership Countries.

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## Note:

*During completion of this report, the governmental structure of departments has changed by the Law of May 8, 2019 on Amendments and Additions to the Law on Structure and Activities of the Government of the Republic of Armenia. The Water Committee of the Ministry of Energy Infrastructures and Natural Resources of the Republic of Armenia has been transferred and renamed to the Water Committee of the Ministry of Territorial Administration and Infrastructure of the Republic of Armenia. Furthermore, the Ministry of Nature Protection has been renamed to Ministry of Environment. While during the baseline analysis and the revision of targets the old structures were still in place, this report refers already to the new structures and names, as of May/June 2019.*

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# Acknowledgement

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The United Nations Economic Commission for Europe (UNECE) assisted the Republic of Armenia in the implementation of the project. The project was implemented in coordination with the Water Resources Management Agency of the Ministry of Environment of the Republic of Armenia (RA), the Water Committee of the RA Ministry of Territorial Administration and Infrastructure and the Ministry of Health and with the organizational support provided by the non-governmental organization (NGO) “Armenian Women for Health and Healthy Environment” (AWHHE). The report was prepared based on the technical paper prepared by the members of the National Working Group and adopted by the project’s Steering Committee.

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## Summary

The European Union Water Initiative (EUWI) was launched at the World Summit on Sustainable Development in Johannesburg in 2002 with the overriding aim to coordinate EU development assistance in the water sector.

In Armenia, the United Nations Economic Commission for Europe (UNECE) and the Organization for Economic Cooperation and Development (OECD) have been supporting the EUWI since 2006 through a National Policy Dialogue (NPD) on Integrated Water Resources Management (IWRM) and Water Supply and Sanitation (WSS) process. An NPD is a multi-stakeholder platform for discussing water policy reforms with key decisions taken at biannual Steering Committee meetings.

Currently, the Republic of Armenia is part of the EUWI+ programme for the Eastern Partnership countries, which addresses the existing challenges in both development and implementation of efficient water resources management. The project entitled “Revision of national targets in the context of the Protocol on Water and Health in Armenia and implementation of the Action Plan on equitable access to water and sanitation” is part of the EUWI+ programme with the aim to revise the national targets set in 2014 in the framework of the UNECE- WHO/Europe Protocol on Water and Health (Protocol on Water and Health) and assess the water legislation in the context of the equitable access to drinking water and sanitation.

The project has been implemented in close cooperation with the Ministries of Environment (previously Ministry of Nature Protection), Health and Territorial Administration and Infrastructure (previously Ministry of Energy Infrastructures and Natural Resources) of Armenia with the participation of the NGO Armenian Women for Health and Healthy Environment.

The project was guided by the Steering Committee of the EUWI NPD in Armenia, which was chaired by Mr. Edgar Pirumyan, Head of the Water Resources Management Agency (WRMA) under the RA Ministry of Environment, and whose other members were representatives of key Armenian entities covering issues of water resources management, water supply and sanitation, including health issues, with the involvement of NGOs. The 17<sup>th</sup> Meeting of the Steering Committee of the National Policy Dialogue (NPD) on Integrated Water Resources Management and Water Supply and Sanitation in Armenia in October 2018, facilitated a discussion on the revision of targets in the context of the Protocol on Water and Health and equitable access to drinking water supply and sanitation in Armenia. During this meeting the baseline information collected by the national experts (Project Working Group members) was presented and discussed.

The national consultants with expertise and experience in the main fields covered by the Protocol on Water and Health, compiled the information needed and produced the draft of the baseline analysis to be considered by the Steering Committee.

The National Stakeholder Consultation Meeting on the Protocol on Water and Health and Equitable Access to Water Supply and Sanitation in Armenia was held on 19 February 2019 and co-chaired by the Head of the Water Resources Management Agency of the RA Ministry of Environment (previously Ministry of Nature Protection), the Deputy Director of the “National Center for Disease Control and Prevention” SNCO of the RA Ministry of Health and the Deputy Chairman of the Water Committee of the RA Ministry of Territorial Administration and Infrastructure (previously Ministry of Territorial Administration and Infrastructure (MTAI)).

The aim of the Consultation meeting was to update and discuss the revised targets set in the context of the Protocol and the analysis of the water legislative framework to identify the legislative barriers to ensure equitable access to water supply and sanitation. Stakeholders were invited to submit written comments on the baseline analysis and the revised targets to the Ministry of Environment.

As of May 2019, the Working Group of national experts completed the work on the baseline analysis, and finalized the work on the draft targets and target dates under the Protocol based on comments received by stakeholders. The draft targets and target dates were submitted to the Ministry of Environment for further circulation among stakeholders for their comments and for further approval by the 5<sup>th</sup> Meeting of the Parties to the Protocol on Water and Health to be held in November 2019 in Belgrade.

# List of Acronyms

AWHHE	Armenian Women for Health and Healthy Environment
CJSC	Closed Joint Stock Company
DRC	Dispute Resolution Commission
EMIC	Environmental Monitoring and Information Center
EU	European Union
EUWI	European Union Water Initiative
IWRM	Integrated Water Resources Management
LLC	Limited Liability Company
MDGs	Millennium Development Goals
MES	Ministry of Emergency Situations
MoE	Ministry of Environment
MoH	Ministry of Health
MTAI	Ministry of Territorial Administration and Infrastructure
NAS	National Academy of Sciences
NCDCP	National Center for Disease Control and Prevention
NGO	Non - Governmental Organization
NPD	National Policy Dialogue
NWC	National Water Council
NWP	National Water Programme
OECD	Organization for Economic Cooperation and Development
PPP	Public-Private Partnership
PSRC	Public Services Regulatory Commission
RA	Republic of Armenia
RS	Rescue Service
SCWE	State Committee of Water Economy
SDGs	Sustainable Development Goals
SNCO	State non - commercial organization
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
USAID	United States Agency for International Development
WC	Water Committee
WHO	World Health Organization
WRMA	Water Resources Management Agency
WWTP	Wastewater Treatment Plant
WUA	Water Users Association

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# PART I

## THE TARGET SETTING PROCESS IN ARMENIA

### Introduction

In September 2012, the UNECE and the Government of Finland signed an agreement under the UNECE-FinWaterWei<sup>1</sup> project “Protocol on Water and Health – Improving health in Armenia through target setting to ensure sustainable water management, access to safe water and adequate sanitation” to support the target-setting process under the Protocol on Water and Health in Armenia.

The project mainly aimed at assisting Armenia in setting national and/or local targets and target dates and in facilitating the ratification of the Protocol on Water and Health by providing a forum for policy dialogue and decision-making on the issues covered by the Protocol. The project was implemented in close cooperation with the Ministries of Environment and Health with the participation of the Ministry of Territorial Administration and Infrastructure of the Republic of Armenia. The AWHHE NGO was responsible for the NGO coordination process to collect inputs from the NGO community at all stages of the target-setting process through consultation meetings.

In the context of the Protocol the national targets and target dates were set, as well as the Action Plan for their implementation and a Roadmap for the ratification of the Protocol were developed in the frame of the project. The draft targets were approved at the 12<sup>th</sup> meeting of the Steering Committee of the EUWI NPD on Integrated Water Resources Management (IWRM) in Armenia held on May 6, 2014. The targets have not been officially adopted.

The UNECE has also provided support for equitable access to water supply and sanitation in Armenia. In 2017, within the framework of a United Nations Development Account (UNDA) project, the “Action Plan for 2018-2020 for the Provision of Equitable Access to Water Supply and Sanitation in Armenia” was prepared. It was developed based on the self-assessment outcomes of the UNECE Equitable Access Score-card for Water and Sanitation, implemented in 2015-2016 by the AWHHE NGO. The project was supported by the Government of France. The Action Plan was approved on 4 August 2017 by the official Decree No. 130-A of the Chairman of the State Committee on Water Economy of the RA Ministry of Energy Infrastructures and Natural Resources.

Currently, the Republic of Armenia is part of the EUWI+ for the Eastern Partnership countries, which addresses the existing challenges in both development and implementation of efficient water resources management. The overarching objective of the EUWI+ in Eastern Europe and Caucasus countries for the period of 2016-2020 is to improve water resources management, in particular, the management of transboundary water resources. With financial support of the European Union for the EUWI+ (Delegation Agreement ENI/2016/381-404), the UNECE is working with the six countries in Eastern Europe and the Caucasus to achieve convergence of national policies and strategies with the principles of the EU Water Framework Directive, Integrated Water Resources Management (IWRM) and relevant Multilateral Environmental Agreements such as the Water Convention and its Protocol on Water and Health.

In the framework of the EUWI +, a Consultation Meeting on the Protocol on Water and Health and Equitable Access to Water and Sanitation was held in Yerevan on 5 December 2017 with support of the UNECE and the United Nations Development Programme (UNDP). During the meeting participants decided to revise the national targets under the Protocol, taking into account the recent national and global developments, such as the conclusion of the Comprehensive and Enhanced Partnership Agreement between Armenia and the EU and the adoption of the Sustainable Development Goals (SDGs). It was also decided to commence the implementation of the first measure under the Action Plan for Equitable Access to Water Supply and Sanitation

<sup>1</sup> FinWaterWei is the programme for Finland’s water sector support to the EECCA countries under the Wider Europe Initiative. The FinWaterWEI programme is managed on behalf of the Finnish Ministry for Foreign Affairs by SYKE ( <http://www.environment.fi/default.asp?contentid=405313&lan=EN>)



(measure No. 1: analysis of the water legislative framework and identification of the legislative barriers to ensure equitable access to water and sanitation).

## **METHODOLOGY**

According to Article 7 of the Protocol on Water and Health, each country that is a Party to the Protocol should periodically review the implementation of targets set by the country, assess and set new targets. Without being a Party to the Protocol, the Republic of Armenia set its initial targets in 2014. Within the framework of the EUWI+ programme, a decision was made at the Consultation Meeting on the Protocol on Water and Health and Equitable Access to Water Supply and Sanitation held in Yerevan on December 5, 2017 to revise the national targets set out under the Protocol.

The methodology for reviewing the targets was founded on the Guidelines on the Setting of Targets, Evaluation of Progress and Reporting developed by the UNECE and the Europe Regional Office of the World Health Organization (WHO).

### **Identification of key stakeholders and setting up a coordination mechanism**

- ✓ The project was governed through the Steering Committee of the National Policy Dialogue on Integrated Water Resources Management and Water Supply and Sanitation. The Steering Committee comprises representatives of ministries of the Republic of Armenia, academia and NGOs.
- ✓ Main outputs of the project were produced by the National Working Group consisting of experts covering main areas of the Protocol.
- ✓ The National Stakeholder Consultation Meeting aimed to update and discuss the revised targets set in the context of the Protocol on Water and Health.

### **Baseline analysis**

A baseline analysis was conducted as a first step of the target setting process and included the analysis of existing legal frameworks (national and international), country institutional and financial settings and the current environmental and health situation in Armenia for all twenty areas of the Protocol on Water and Health. The developed technical report included the results of the baseline analysis, which later served as a basis for setting the new targets and target dates with measures to achieve them.

The baseline analysis was finalized in October 2018 and was presented at the 17<sup>th</sup> meeting of the EUWI NPD Steering Committee (October 2018). The technical report based on the baseline analysis was developed in both languages: Armenian and English.

### **Identification and prioritization of problems**

Out of twenty target areas of the Protocol, nine target areas were selected by the experts of the working group and presented during the National Stakeholder Consultation Meeting in February 2019. Participants of the meeting welcomed the presentations made and requested all key beneficiary institutions to submit written comments on the revised draft targets and actions. The National Stakeholder Consultation Meeting participants expressed their expectation that the experts under the EUWI+ would incorporate the comments from the stakeholder institutions and present the draft final version to the Ministry of Environment for further circulation among stakeholders and further official adoption.

## Agreement on draft targets, programme of measures and indicators

After circulation of the baseline analysis and targets and target dates among stakeholders, comments were received and incorporated in the document by the working group. The final version of the targets and target dates and measures to reach them have been submitted to the Ministry of Environment for further official adoption.

## Review and assessment of progress and reporting

Armenia continuously shows its intention to implement the principles of the Protocol on Water and Health. In April 2019, Armenia submitted its fourth official report to the UNECE Secretariat of the Protocol on Water and Health.

## FINDINGS OF THE BASELINE ANALYSIS

### LEGAL FRAMEWORK

At present, great attention is paid to the effective management, development and use of water resources in the Republic. In order to regulate this sphere, many laws, legislative acts, decisions and other documents have been adopted by the legislative and executive bodies of the country over the last several years, based on which a number of reforms have been implemented.

#### The main legal acts regulating the sector

Type of legal act	Title	Adoption year	Comment
Code	Land Code	2001	This Code lays down the legal grounds for improving state regulation of land relations developing various organizational and legal forms of land management, increasing land productivity and land use efficiency, preserving and improving an environment conducive to human life and health, protecting the land rights based on the environmental, economic and social importance of the land, due to which the land is used and preserved in the Republic of Armenia as a condition of people's vital activity. Article 26 of the Code defines the water lands and the land-use procedure.
Code	Water Code	2002	The Code is the main legal document defining and regulating the concepts and relationships of the water industry. The Water Code regulates the issues relating to the protection, use, distribution of water resources and systems, as well as defines the principles and forms of private sector involvement.
Law	On Provision of Sanitary-Epidemiological Security of the Population of the Republic of Armenia	1992	This law defines the legal, economic and organizational aspects of the sanitary-epidemiological security of the population of Armenia, as well as the safeguards envisaged by the State to prevent the impact of environmentally harmful and hazardous factors on the human organism and to ensure favorable conditions for the well-being of the population and future generations. The main requirements for water supply and water use are set out in Article 16 of the Law.

Type of legal act	Title	Adoption year	Comment
Law	On Medical Aid and Medical Services for Population	1996	This law defines the legal, economic and financial basis of medical care and service provision that implements the constitutional right of protection of human health. The right of a person suffering from a disease dangerous to the environment is reflected in Article 11 of the Law.
Law	On Population Protection in Emergency Situations	1998	This law defines the bases and organization of the protection of the population in emergencies, the rights and responsibilities of public administration and local self-governing bodies, enterprises, institutions, organizations, irrespective of their organizational and legal types, as well as officials and the citizens in this sphere.
Law	On Lake Sevan	2001	The law provides for the legal and economic bases of the State policy on normal development, rehabilitation, reproduction, maintenance and use of natural resources of Lake Sevan as a strategic eco-system of environmental, economic, social, scientific, historical, cultural, aesthetic, health, climatic, recreational and spiritual value of the Republic of Armenia. Lake Sevan is a strategic freshwater reservoir in the Republic of Armenia.
Law	On Approving Annual and Complex Programmes for Recovery, Conservation, Reproduction and Use of Lake Sevan Ecosystem	2017	The law provides for the provisions of the Lake Sevan ecosystem stability, the provision of a positive balance of water and the efficient use of natural resources, for the implementation of which the increase of the lake level by at least 6 meters is an urgent necessity.
Law	On Freedom of Information	2003	This law regulates the relations connected with freedom of information, defines the jurisdiction of the holders of information, as well as the procedures, ways and conditions to get information. The law applies to state and local self-governing bodies, state institutions, organizations financed from budgets, as well as to organizations of public interest and their officials.
Law	On Fundamental Provisions of the National Water Policy	2005	The law is a long-term development concept for the strategic use and maintenance of water resources and water systems. The purpose of this law is to ensure the availability and accessibility of water resources necessary for human well-being, for the development of the country's socioeconomic system and satisfaction of the economic and ecological needs in the present and future.

Type of legal act	Title	Adoption year	Comment
Law	On National Water Programme	2006	<p>The law is the main instrument for the development of water resources and water systems through which the objectives of the Water Code are implemented. This law regulates the relations associated with establishment and implementation of the National Water Programme of Armenia, including the assessment of national water resources, the strategic water reserve, usable water resources, and the demand for water supply, and the main issues and prospects of water sector maintenance and development.</p> <p>Activities under the Law are based on the scarcity of water, the consideration of water as one of the main means supporting human life and health, fauna and flora, and on the requirements for ensuring access to water.</p> <p>The overall goal of this law is to establish measures aimed at solving the problems related to the satisfaction of the needs of the population and economy, ensuring environmental sustainability, the creation and use of the strategic water reserve, the protection of the national water reserve, as well as the objectives of the RA Water Code and the RA Law “On the Fundamental Provisions of the National Water Policy” through efficient water resources management.</p>
Law	On Making Amendments and Supplements to the RA Water Code	2018	<p>Under this law, legal relationships in the sanitation sector are fully regulated, as well as the types of wastewater and drainage systems and the requirements for wastewater discharge, treatment and monitoring are defined. The law will enter into force on January 1, 2020. Meanwhile, the timing of the measures set out in the transitional provisions has been adapted to the target dates of the Sustainable Development Goals.</p>
Government Decision	On Approving the List of Diseases Dangerous for the Surroundings	2001	<p>The list includes all kinds of infectious diseases transmitted by water: intestinal infectious diseases (all forms), viral hepatitis, tularemia, etc. Treatment volumes are included in the annual state order criteria for infectious diseases.</p>
Government Decision	On the Establishment of State Land Management Authorities	2002	<p>According to this decision, the Ministry of Health is the state authorized body for establishing sanitary norms and restrictions in the use of sanitary protection zones.</p>

Type of legal act	Title	Adoption year	Comment
Government Decision	On Approving the Model Water Use Form and Water Use Permit Forms	2003	According to this decision, a relevant document (conclusion) is required issued by the Health Inspection Body of the Republic of Armenia in case of water use for communal - household, medical and health purposes.
Government Decision	On Approving the Procedures for the Use of Water Resources for Tourism, Sports and Recreational Needs	2003	This procedure regulates the use of water resources for tourism, sports and recreational needs within the territory of the Republic of Armenia.
Government Decision	On Approving the Procedures for the Free Use of Water	2003	<p>This procedure regulates the legal relationships related to the free use of water (except for the legal relationships regarding the use of water resources for tourism, sports and recreational needs), the use of groundwater on privatized land, and the use of water for fire-fighting purposes, which are regulated by separate procedures established by the Government of Armenia.</p> <p>6. The Ministry of Nature Protection, based on the information provided by the authorized healthcare body on the danger of water resources for human health, may limit or suspend free water use by water resource (s) or its (their) part (s) if:</p> <p>a) epidemic cases are reported in the region, and there is a danger of spread of waterrelated diseases;</p> <p>b) the water resource is polluted to the extent that could endanger people's lives and health.</p>
Government Decision	On Approving the Procedure for the Use of Absorbing Wells for the Acceptance of Wastewater and Drainage Water, the Consumed Mines, Mine Shafts and Open Mines and the Discharge Permit	2003	This decision approves and defines the procedure for the use of absorbing wells for the acceptance of wastewater and drainage water, the consumed mines, mine shafts and open mines, as well as for issuing a discharge permit.

Type of legal act	Title	Adoption year	Comment
Government Decision	On Defining the Rules for the Use of Sanitation Systems and Wastewater Treatment	2003	<p>The provisions set out in these rules apply to organizations using (exploiting) and managing drainage systems by the right of ownership or use.</p> <p>Sanitation systems may be used (exploited) by their owners or organizations that have a right to use (exploit) for a certain period in accordance with the legislation of the Republic of Armenia.</p>
Government Decision	On the Procedure for Establishing Emergency State Regimes for the Use and Protection of Water Resources, Instructions, the Minimum Quantities of Drinking Water Supplied to the Population, as well as the Compensation Procedure for Any Damage Caused to the Water System Operator	2005	<p>This decision establishes the procedure for establishing emergency state regimes for the use and protection of water resources, instructions, the minimum quantities of drinking water supplied to the population, as well as the reimbursement procedure for damage caused to the water system operator.</p>
Government Decision	On Regulations for Establishing Water Standards	2005	<p>This decision establishes the standards for water for the purpose of drinking, economic and cultural (household needs), irrigation, industrial water quality standards, as well as the rules for determining the standards for permitted pollutant discharge into surface water resources.</p>
Government Decision	On the Treatment of Wastewater from the Operation of Facilities in the Residences of Central and Immediate Impact Zones of Lake Sevan Basin and Outside Settlements	2006	<p>To restore the ecological balance of Lake Sevan, it was decided that the wastewater from the existing coastal facilities of Lake Sevan should be subjected to biological treatment before discharging into Lake Sevan in order to ensure the proper quality of water, to treat wastewater from individual facilities in the catchment basin, as well as to ensure a more efficient development of the recreation industry in the coastal area.</p>

Type of legal act	Title	Adoption year	Comment
Government Decision	On the Provision of Land Lease and Construction Rights and Implementation of Urban Development Activities in the Area of the Sevan National Park and Its Surrounding Areas	2008	This decision sets out the requirements for the organization of beaches of Lake Sevan, the specifications of beach area furnishing and parts of equipment.
Government Decision	On Approving the Norms for Mandatory Installation of Waste Water Treatment Plants for Newly-Designed Buildings in Communities Lacking a Centralized Sewerage System	2009	These norms regulate the requirements for mandatory installation of sewage water biological treatment plants for newly constructed facilities (multi-apartment, public and industrial buildings and structures) in communities lacking a centralized sewerage network.
Government Decision	On Defining the Standards for Water Quality of Each Water Basin Management Area Depending on Locality Characteristics	2011	This decision defines the proposed system of interconnections between target use of surface water or quality categories, the quality standards for the surface waters of the Republic of Armenia, water quality ecological standards for the rivers of 14 major river basins and separate sections of the rivers in the territory of the Republic of Armenia.
Government Decision	On Approving the Content of the Model Basin Management Plan	2011	This decision is the basis for developing technical specifications and drawing up plans for the management of six water basins.
Government Decision	On Making Amendments and Changes to the Government Decision No. 46-N of 14 January 2010	2012	By this decision a new national vaccination calendar was approved, according to which vaccination against rotavirus was introduced from November 2012.

Type of legal act	Title	Adoption year	Comment
Government Decision	2014-2025 Strategic Programme on Prospective Development of the Republic of Armenia	2014	<p>The Programme envisages a continuation of the reforms of the drinking water systems with a view to increasing the reliability and efficiency of operation of the systems and improving the quality of water supply and sanitation services by focusing on the mitigation of regional disparities.</p> <p>Reconstruction of sewer systems of towns and large settlements and construction of removed wastewater treatment plants are also important in the field of sanitation.</p> <p>The tariff policy will be targeted at gradual increase in tariffs cost recovery for the project period, taking into account the affordability for households in the lowest income group. A maximum threshold for affordable tariffs for water supply and sanitation services will be established for water and sanitation services, and in case the services are rendered with higher tariffs, the State shall subsidize to cover the difference for poor families.</p>
Government Decision	On Approving the Monitoring Procedure in the Areas of the Republic of Armenia with High Level of Environmental Pollution (in Particular, in the Areas Adjacent to the Mines)	2015	<p>This procedure regulates the relations relevant to the effective monitoring mechanisms in the areas of the Republic of Armenia with a high level of environmental pollution (in particular, in the areas adjacent to mines).</p>



Type of legal act	Title	Adoption year	Comment
Government Protocol Decision	On Approving the National Immunization Programme for the period of 2016-2020, the Priority Measures of the National Immunization Programme, National Immunization Calendar, the Expected Results of the National Immunization Programme and the Form of the International Certificate of Vaccination or Prevention	2016	Immunization against rotavirus infection continues.
Government Decision	On Approving the Management Plan for the Period of 2016-2021 for the Ararat Basin Management Area and Priority Measures for Effective Management”  RA Government Protocol Decision No. 12 “On Approving the Programme of Measures for the Ararat Basin Management Area for the Period of 2016-2021	2016	By these decisions the Management Plan for the Period of 2016-2021 for the Ararat Basin Management Area and the Programme of Measures of the Plan were approved. The decisions provide definitions for the national, strategic water resources, the available water resources, the water supply and water demand, the water balance of the Ararat basin management area, etc.

Type of legal act	Title	Adoption year	Comment
Government Decision	On Approving the Management Plan for the Period of 2016-2021 for the Southern Basin Management Area and Priority Measures for Effective Management” and RA Government Protocol Decision No. 20 “On Approving the Programme of Measures for the Southern Basin Management Area for the Period of 2016-2021	2016	By these decisions the Management Plan for the Period of 2016-2021 for the Southern Basin Management Area and the Programme of Measures of the Plan were approved. The decisions provide for definitions for the national, strategic water resources, the available water resources, the water supply and water demand, the water balance of the Southern basin management area, etc.
Government Decision	On Approving the Procedure for Maintaining the State Water Cadastre and Revokingng the RA Government Decision No. 1060-N of 23 July 2003	2017	This decision regulates the procedure for maintaining the State Water Cadastre, as well as clearly defines what department and at what periodicity shall submit information to the Water Resources State Cadastre for Registration, as well as the structure, the contents of the Water Resources State Cadastre and information provision procedure.

Type of legal act	Title	Adoption year	Comment
Government Decision	<p>On Approving the Management Plan for the Period of 2017-2022 for the Akhuryan Basin Management Area and Priority Measures for Effective Management”</p> <p>RA Government Protocol Decision No.10 “On Approving the Programme of Measures for the Akhuryan Basin Management Area for the Period of 2017-2022</p>	2017	<p>The Management Plan for the Period of 2017-2022 for the Southern Basin Management Area and the Programme of Measures of the Plan were approved by these decisions. The decisions provide for definitions for the national, strategic water resources, the available water resources, the water supply and water demand, the water balance of the Southern basin management area, etc.</p>
Government Decision	<p>On Revoking the Decree No. 130-N of January 22, 2004 of the Republic of Armenia and Regulation of the Use of Drinking Water for Irrigation Purposes, and on Recording the Illicit Use of Drinking Water from Drinking Water Supply Systems and Illicit Utilization of Sanitation (Wastewater Treatment) Systems</p>	2017	<p>The decision provides for a definition of illicit consumption for recording the illicit utilization of sanitation (wastewater treatment) systems, the procedure for recording and calculating the daily amounts of removed (treated) wastewater.</p>

Type of legal act	Title	Adoption year	Comment
Government Protocol Decision	On Amendments and Changes to the Protocol Decision Approved by Point 5 of the Protocol No. 4 of the RA Government Session of February 3, 2011	2017	By this decision, the content of the Water Basin Management Plan has been aligned with the current Government policy and the EU Water Directive requirements.
Government Protocol Decision	On Approving the Method of Determination of the Water Balance of the River Basins of the Republic of Armenia	2017	This decision establishes the methodology of the calculation of the water balance.
Government Decision	On Making Amendment to the Government Decree No. 927-N of June 30, 2011	2018	According to this decision, while calculating an environmental flow, the river feeding and seasonal features are considered. The environmental flow is calculated according to months, thus, there are 12 values per year.
Government Protocol Decision	On Approving the Water and Sanitation Sector Strategy and Financing Programme for 2018-2030 and Revoking the Protocol Decision on Approval of the Water and Sanitation Sector Strategy and Financing Programme Approved by Paragraph 17 of No. 38 Protocol Decision of RA Government Session of August 13, 2015	2018	The RA Government Protocol Decision approves the Water and Sanitation Sector Strategy and Financing Programme for 2018-2030, sets out the main objectives of the strategy, current issues, proposed solutions, risks and expected outcomes. The main objective is to improve the water supply and sanitation services in the served and non-served areas, to improve the drainage and wastewater treatment sectors, which has not been viewed as a priority in the past.

Type of legal act	Title	Adoption year	Comment
Ministerial Decree	Order of the Minister of Health on Approving the Sanitary Rules and Regulations No. 2-III-A2-2 on Sanitary Protection zones for Household Drinking Water Supply and Water Supply Sources	2002	This order establishes the sanitary-hygiene and anti-epidemiological requirements for organization and operation of sanitary protection zones for household drinking water supply and water supply sources.
Ministerial Decree	Order of the Minister of Health on Approving Sanitary Rules and Regulations No. N2-III-A2-1 on Drinking water. Requirements Imposed on Water Quality for Centralized Systems. Quality Control	2002	This order establishes the hygienic requirements for drinking water quality, as well for drinking water produced and supplied to human settlements through water supply systems.
State Council on Statistics Decision	On Approving the "Fishing and Fish Farming" Form No. 1- Fish (monthly) State Statistical Report Form and Procedures for Its Completion	2003	This decision establishes the procedures for completing "Fishing and Fish Farming" Form No. 1- Fish (monthly) State Statistical Report Form.
Ministerial Decree	Order of the Minister of Nature Protection on Approving the Method of Calculation of Permissible Limits for Wastewater Discharge	2003	This order establishes the methodology for calculating the permissible limits for wastewater discharged to water resources.

Type of legal act	Title	Adoption year	Comment
Ministerial Decree	Order of the Minister of Health of on Approving the Sanitary-Epidemiological Rules and Norms N 2-III-2.2.4: Hygienic Requirements for the Structure, Operation and Water Quality of Swimming Pools	2006	The requirements of these State Sanitary and Epidemiological Rules (hereinafter referred to as sanitary rules) apply to the constructed, reconstructed or functioning sports and recreational swimming pools, including school and pre-school organizations, health care facilities, baths (saunas) in outdoor swimming pools. Hygienic requirements for the premises included in the pools (cloakroom, shower cabin, pool, bathroom, etc.) also apply to other similar public buildings (baths, saunas, sports halls, etc.), as well as sauna cooling basins.
Decision of the Public Services Regulatory Commission	On Establishing Exemplary Forms of Contracts for Drinking Water Supply and Sanitation (Wastewater Treatment) Services	2016	This decision establishes the exemplary forms of supplier-resident subscriber and supplier-non-resident customer service contracts for providing drinking water and sanitation (wastewater treatment) services.
Decision of the Public Services Regulatory Commission	On Establishing Rules for the Delivery of Drinking Water Supply and Wastewater Treatment Services	2016	These rules define the relationship between the provider and the subscriber, the supplier and the applicant related to the connection to the supplier's water supply and sanitation system, delivery of drinking water supply and sanitation (wastewater treatment) services to the customer.
Ministerial Decree	Order of the Minister of Health on Approving the Sanitary Rules and Norms N 2.1.5.001-18: Hygienic requirements for the quality of surface water resources in water use areas for recreational purposes	2018	These sanitary rules and regulations specify the surface water quality assessment by hygienic indicators, hygienic norms for the quality of surface water resources in water use areas for recreational (recreational, sports and swimming) purposes.

Type of legal act	Title	Adoption year	Comment
Ministerial Decree	Order of the Minister of Energy Infrastructures and Natural Resources on Approving the Charter of the Water Committee of the MEINR	2018	According to this order, the management and safe use of state-owned water systems, as well as ensuring the implementation of the National Water Programme within its competence are the goals and objectives of the Committee.

## International Obligations of the Republic of Armenia to Implement the International Environmental Regulations

The Republic of Armenia signed the **Protocol on Water and Health** to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes in London on 17 June 1999. However, Armenia has still not ratified the Protocol.

The Republic of Armenia ratified the **United Nations Framework Convention on Climate Change** (adopted in 1992) on 14 May 1993.

The Republic of Armenia ratified the **Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters**, usually known as the Aarhus Convention (signed in 1998) on 14 May 2001.

The **EU-Armenia Comprehensive and Enhanced Partnership Agreement** was signed in 2017. The Agreement includes commitments for Armenia in the water quality and resources management sector to approximating its legislation with the following five directives: Water Framework Directive, Floods Directive, Urban Wastewater Treatment Directive, Drinking Water Directive and Nitrates Directive.

## INSTITUTIONAL FRAMEWORK

According to the Water Code, the following authorities implement the management of the sector:

- The **Water Resources Management Agency of the Ministry of Environment of the Republic of Armenia** provides services in the field of water resources management (surface and groundwater) by the law, and, in some cases, as provided for by the RA legislation, acting on behalf of the Republic of Armenia.
- The **Water Committee of the Ministry of Territorial Administration and Infrastructure of the Republic of Armenia** is responsible for the organization of water supply and sanitation, water systems management, provision of security and protection thereof.
- The **RA Public Services Regulatory Commission** shall define tariff policy.

Key stakeholders in terms of the scope of the Protocol on Water and Health in Armenia are:

- a) Ministry of Environment;
- b) Ministry of Health;
- c) Ministry of Territorial Administration and Infrastructure.

Other institutes, which have certain roles in different aspects covered by the Water and Health Protocol are:

- **The National Water Council**, chaired by the Prime Minister of the Republic of Armenia, is the highest inter-sectoral consultative body for the water sector that is responsible for making recommendations on the National Water Policy, National Water Programme and other related to the area legal acts.
- **The Dispute Resolution Commission** may resolve disputes related to water use permits.

To promote the more efficient, effective and decentralized management of water resources, six **territorial basin management divisions** were established in the composition of the Water Resources Management Agency: Northern, Akhurian, Araratyan, Sevan, Hrazdan and Southern.

The main subject and one of the objectives of the activity of the **“Environmental Monitoring and Information Center” (EMIC) SNCO of the Ministry of Environment of the Republic of Armenia** is to contribute to the provision of a high level protection of the environment and natural resources (excluding mineral resources) through implementation of environmental and natural resources monitoring, compilation of sufficient data on the assessment of the situation, the registration, analysis, provision and storage of these data. EMIC carries out monitoring, assessment and forecasting of the physical, chemical and biological impacts of waters, the spread of contaminants and their consequences as prescribed by law.

**The Bioresources Management Agency of the Ministry of Environment of the Republic of Armenia** is implementing the management and protection of bioresources of Armenia.

The **Ministry of Health of the Republic of Armenia** is responsible for providing sanitary and epidemiological safety of the population. Through its structural subdivisions, the Ministry elaborates and monitors the implementation of sanitary-epidemiological regulations and standards, including the drinking water sector. It also exerts control over the quality of water used for drinking purposes through observations.

The **“National Center for Disease Control and Prevention” SNCO of the Republic of Armenia** is responsible for: (i) implementation of integrated measures to prevent contagious and non-infectious diseases; (ii) disinfection of sources of infectious and parasitic diseases; (iii) capacity building and response capability in case of public security threats, (iv) sanitary-epidemiological surveillance of the population; and (v) public-hygienic monitoring of the environmental factors on the health of the population.

The **Ministry of Finance of the Republic of Armenia** is responsible for the sector-related budget and financial-credit policies.

The **Ministry of Economy of the Republic of Armenia** is a republican body of executive power that elaborates the policy of economic development of the Government of the Republic of Armenia.

The **Ministry of Emergency Situations of the Republic of Armenia** elaborates and implements the policy of the Government of the Republic of Armenia in the area under its management pursuant to the law of the Republic of Armenia, the main objectives of which are as follows: develop a unified state policy on civil defense and population protection in emergency situations, coordination, development of state regulation policies for displacement and sheltering processes and coordination of emergency response and disaster response measures, ensuring compliance with technical safety rules, coordination of those entities involved in international rescue operations in Armenia, development of a system of disaster medicine, relief of seismic risk reduction measures, ensuring the implementation of regular and special observations, studies and forecasts of hydro-meteorological phenomena; formation, maintenance and servicing of State reserve stocks, etc.

The main objective of the **Hydrometeorology and Monitoring Service of the Ministry of Emergency Situations of the Republic of Armenia** is the provision of hydro-meteorological services, as well as the implementation of hydro-meteorological programmes of national importance, study of spatial and temporal regularities of hydrological regime of rivers, lakes and reservoirs, and national registration of surface waters.

The **Health and Labor Inspection Body of the Republic of Armenia** carries out supervision and



(or) other functions prescribed by law. The Inspectorate can impose sanctions in the spheres of healthcare, workers' health and safety, acting on behalf of the Republic of Armenia in the manner established by law. In particular, (i) it ensures sanitary safety of population, (ii) implements state hygiene and anti-epidemic surveillance; (iii) organizes sanitary – hygienic and anti-epidemic measures, as well as preventive measures to combat contagious and non-infectious diseases, including water-borne diseases.

The ***Environmental Protection and Mining Inspection of the Republic of Armenia*** is a state body under the Government, which exercises oversight and other functions prescribed by law and take responsibility measures in the fields of nature protection and mining in a number of directions, including:

- ✓ maintenance of the limitations and norms set out to avoid excessive pollution of water resources and maintaining water regime restrictions in catchment basins;
- ✓ implementation of norms, i.e. quantities and restrictions for the protection and use of water resources set out by the National Water Programme;
- ✓ implementation of requirements for the protection and use of water resources (except for sanitary protection of water systems and inalienable zones).

The ***Urban Development, Technical Standards and Fire Safety Inspectorate of the Republic of Armenia*** is a subordinate body responsible for supervision and other functions prescribed by the law, which applies liability measures in the fields of urban development, technical and fire safety, transport, energy, national and local geodetic and cartographic works and land use, acting on behalf of the Republic of Armenia.

The ***local self-governing bodies*** are the community council and the community leader.

The ***Municipality of Yerevan*** is implementing community environmental programmes, environmental protection programmes, and the management and operation of infrastructure facilities in Yerevan, including storm water sewers and manholes.

Since 2004, ***Water Users Associations*** have been established which are responsible for the operation of irrigation systems. Currently, 15 Water Users Associations are operating in the republic.

The ***“Veolia Djur” CJSC*** is a specialized company providing water supply and sanitation (wastewater treatment) services in the centralized drinking water supply and sanitation sectors.

The ***Scientific Center of Zoology and Hydroecology of the National Academy of Sciences of the Republic of Armenia*** carries out scientific researches on problems of fish breeding and fishery, including shellfish.

## **AN OVERVIEW OF OTHER PROCESSES IN ARMENIA AND LINKAGES WITH THE PROTOCOL ON WATER AND HEALTH**

The Protocol on Water and Health has very close relation with the majority of the SDGs. The Protocol explicitly focuses on providing safe and sustainable drinking water and sanitation (Targets 6.1 and 6.2), as well as creating healthy environments for people and ecosystems (Target 6.6). It directly links with all aspects of the SDG target on water and sanitation, comprising the entire water cycle: from source to use (Targets 6.4 and 6.5) and to wastewater reuse (Target 6.3).

In September 2015, the Government of Armenia signed on to Agenda 2030 and its 17 Sustainable Development Goals. In May 2016, the Government launched the MDGs wrap-up report and formally kicked off the SDGs nationalization process with setting up also its architecture.

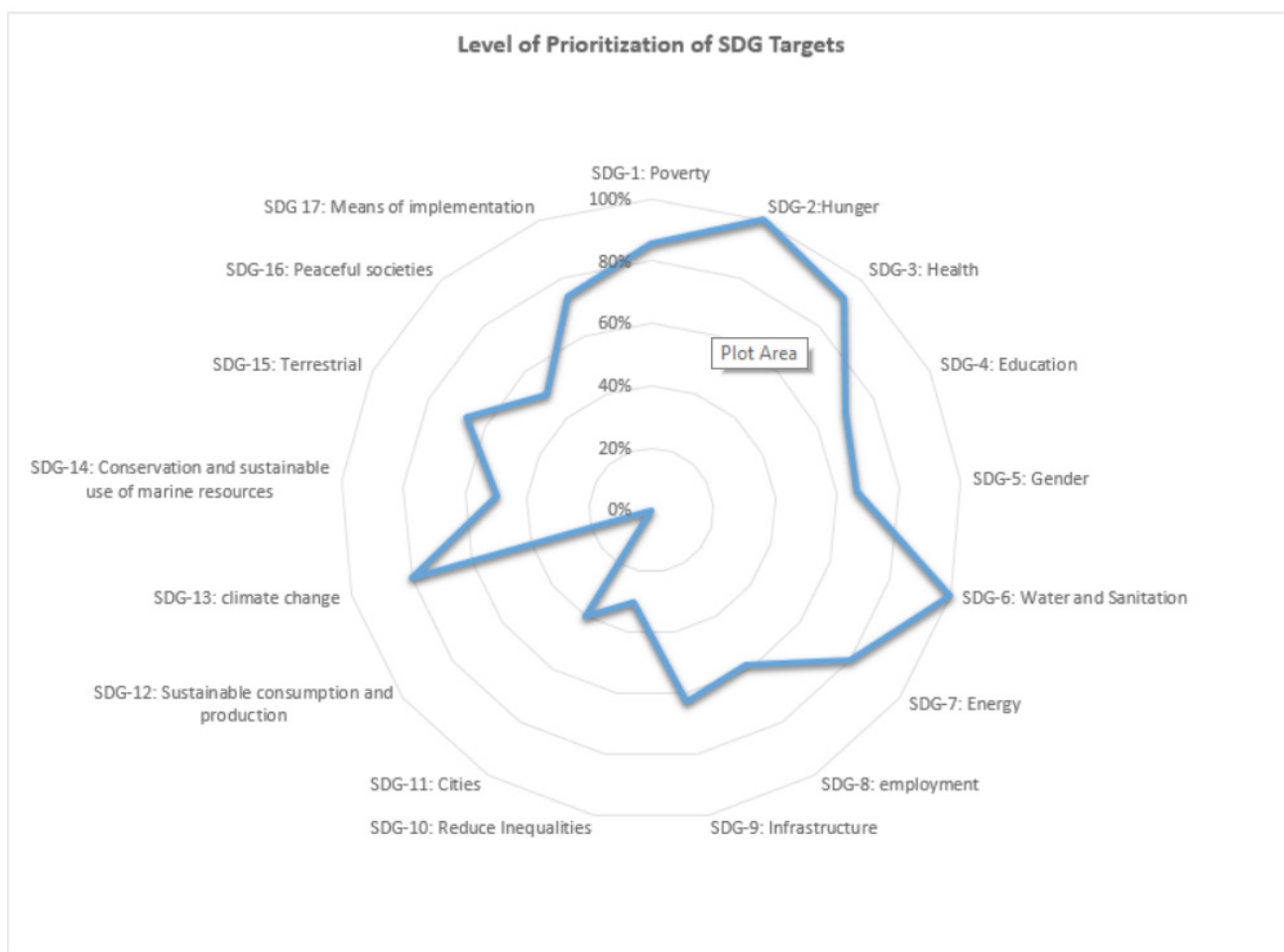
Since 2015, Armenia has created necessary infrastructure for the implementation of the SDGs, including the National Council on Sustainable Development under the Prime Minister of Armenia, SDG Nationalization Inter-agency Task Force and Armenia National SDG Innovation Lab. The SDG Innovation Lab is an innovation platform where the Government and the UN are joining forces to support the implementation of the SDGs in a country. Global metadata of relevant

documentation on all indicators has been developed by the National Statistical Committee<sup>2</sup> which will help to assess the current state of affairs with regard to the SDGs.

In May 2016, the Government started the SDGs nationalization process.

In June 2017, the Government prepared its medium-term development programme, which established strong synergies with the SDGs. Furthermore, the Center for Strategic Initiatives was tasked to revise and update the Armenia’s Development Strategy transforming it to a long-term strategic development framework until 2030, incorporating into it emerging priorities and needs, integrating crosscutting and innovative approaches as both a vision and a methodological tool. The Armenia’s Development Strategy 2014-2025 sets out the strategic goals, targets and indicators in multiple economic and social areas.

The figure below shows the level of prioritization of SDG targets. SDG 6 is considered a priority area for Armenia.



Source: Rapid Policy Integrated Assessment in Armenia

<sup>2</sup> The structure of all the departments has changed by Decision N 580-A of the Government of the Republic of Armenia “On the Subordination of Subordinate Bodies to the Ministry” dated 22 May 2018. The RA National Statistical Service was renamed into the RA Statistical Committee.

### *Level of prioritization of SDG targets*

The RA Government presented the first Voluntary National Review (VNR)<sup>3</sup> in July 2018 at the UN High - level Political Forum (HLPF).

Several challenges were raised in the VNR, particularly the low level of access to sanitation services in rural areas; unequal access to safely managed sanitation services between urban and rural population; inefficient water use and the consequent water loss; lack of data, especially in communities where water supply and sanitation services are provided by the municipalities; etc.

Armenia started negotiations on a new **Comprehensive and Enhanced Partnership Agreement** with the European Union in December 2015. On November 24 2017, Armenia and the European Union officially signed the Comprehensive and Enhanced Partnership Agreement, which among other things, includes obligations for Armenia to approximate its legislation to the following five Directives in the field of water quality and resources management: Water Framework Directive, Floods Directive, Urban Wastewater Directive, Drinking Water Directive and Nitrates Directive.

<b>EU Directive</b>	<b>Obligations of the Republic of Armenia</b>
Water Framework Directive	<ul style="list-style-type: none"> <li>• Adoption of national legislation</li> <li>• Analysis of the characteristics of river basin areas</li> <li>• Establishment of water quality monitoring programmes</li> <li>• Development of river basin management plans, consultations with the public and publication of the plans</li> </ul>
Floods Directive	<ul style="list-style-type: none"> <li>• Adoption of national legislation</li> <li>• Implementation of flood risk initial evaluation</li> <li>• Preparation of flood hazard maps and flood risk maps</li> <li>• Development of flood risk management plans</li> </ul>
Urban Wastewater Treatment Directive	<ul style="list-style-type: none"> <li>• Assessment of the status of urban wastewater collection and treatment</li> <li>• Identification of vulnerable areas and agglomerations</li> <li>• Preparation of a technical and investment programme on implementation of municipal wastewater treatment requirements</li> </ul>
Directive on the protection of waters against pollution caused by nitrates from agricultural sources	<ul style="list-style-type: none"> <li>• Specification of polluted waters or waters at risk and designation of nitrate vulnerable zones</li> <li>• Establishment of codes of good agricultural practice and of measures to be implemented in action programmes for nitrate vulnerable zones</li> <li>• Establishment of monitoring programmes</li> </ul>

<sup>3</sup> Voluntary National Review is available at: [https://sustainabledevelopment.un.org/content/documents/19586Armenia\\_VNR\\_2018.pdf](https://sustainabledevelopment.un.org/content/documents/19586Armenia_VNR_2018.pdf)

<p>Directive on water quality intended for human consumption</p>	<ul style="list-style-type: none"> <li>• Establishment of drinking water standards</li> <li>• Establishment of a monitoring system</li> <li>• Establishment of a mechanism to provide information for consumers</li> <li>• Development of a roadmap for the implementation of the Comprehensive and Enhanced Partnership Agreement</li> </ul>
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Currently, Armenia is one of the target countries of the **EUWI Plus programme for Eastern Partnership Countries** with the aim to support Armenia in water sector reforms. By signing the Agreement on the Comprehensive and Enhanced Partnership, Armenia agreed to harmonize the national legislation with the EU legislation. The first step for the harmonization is to analyse national water legislation with regards to five EU Directives. This is supported by the UNECE in the frame of the EUWI+ programme through the development of a roadmap for harmonization of the national legislation and through suggesting amendments to national legislation such as the Water Code.

# PART II

## TARGETS, TARGET DATES, AND PROPOSED MEASURES TO ACHIEVE THESE TARGETS AND TARGET DATES

### INTRODUCTION

The present compilation presents one of the main outcomes of the EUWI+ programme regarding the revision of the targets and target dates in selected 9 target areas under the Protocol on Water and Health. The revised 28 draft national targets and target dates were introduced and discussed during the National Stakeholder Consultation Meeting held on 19 February 2019. The National Stakeholder Consultation Meeting participants requested that the final version of the draft targets and target dates be officially adopted. The presented targets and target dates have not yet been approved.

This technical compilation provides the following information for 9 target areas:

- ✓ Background rationale
- ✓ Current situation and issues
- ✓ Targets and target dates
- ✓ Proposed measures to achieve targets and target dates.

The sections on “current situation and issues” are based on the baseline analysis of the legislation, institutional structures, projects and programmes in the field and current situation.

Each target area is finalized by the section on targets and target dates, and measures to achieve them.

## Target Area I

### Article 6, 2 (a)

### Quality of the drinking water supplied

According to Article 6, paragraph 2 (a) of the Protocol, it is required to set targets and target dates regarding the quality of the drinking water supplied, taking into account the WHO Guidelines for Drinking-Water Quality.

#### CURRENT STATUS AND PROSPECTS

The quality of drinking water is monitored in accordance with the procedure established by sanitary rules and norms, particularly:

Production control and state hygiene and epidemiological surveillance should be carried out for drinking water quality.

The company operating the water supply system shall ensure production control of drinking water quality.

The number of drinking water samples and the frequency of sampling at water abstraction locations for laboratory analysis shall be defined in accordance with the following requirements:

Table 1. Requirements for defining the number of drinking water samples and the frequency of sampling at water abstraction locations for laboratory analysis

Types of parameters	The number of samples per year, not less than	
	For underground sources	For surface water sources
Bacteriological	4 (according to the seasons)	12 (monthly)
Parasitological	not conducted	-//-
Organoleptic	4 (according to the seasons)	12 (monthly)
Generalized parameters	-//-	-//-
Inorganic and organic substances	1	4 (according to the seasons of the year)
Radiological	1	1

Table 2. Chemical parameters

Substance	Maximum permissible concentration, mg/l	Detected deviations, %, 2012	Detected deviations, %, 2015
Fluoride	1.2-1.5	0	1346 samples /0 (0%)
Nitrate	45	0.47	24610 samples /0 (0%)
Nitrite	3.0	0	27958 samples /0 (0%)
Arsenic	0.05	0	588 samples /0 (0%)
Lead	0.03	0	404 samples /0 (0%)
Iron	0.3	0.51	4935 samples /4 (0.08%)
Residual chlorine free	0.3-0.5	22.9	34872 samples /3912 (11.2%)
Chloride	350	0.05	15616 samples 3 (0.01%)
Sulfate	500	0.12	2447 samples /0 (0%)
Total hardness	7.0	1.1	6335 samples /69 (1.1%)
Ammonia	3.0	2.04	25361 samples /154 (0.6%)

In recent years, overall, considerable positive shifts have been registered in the republic in terms of access to drinking water, continuity of water supply and increase of security level. Nevertheless, the duration of water supply in some areas is still low and characterized by significant regional disparities. Ensuring the quality and security of the water supplied is a serious problem in rural communities.

To prevent, control and reduce water-related diseases, it is necessary to continue the appropriate management, use and conservation of water resources and water systems by improving access to drinking water for all, especially, for rural areas and children's organizations ensuring the sustainable use of water resources, the required water quality for human health and hygiene, and preservation of aquatic ecosystems.

## TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators (by the end of the years indicated)	Proposed responsible organizations
1.1	Compliance of drinking water quality with national standards for chemical parameters (F, NO <sub>2</sub> , NO <sub>3</sub> , As, Fe, Pb)	at least 99% starting from 2020	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)
1.2	Level of non-compliance of drinking water quality with national standards for microbiological parameters	up to not more than 14% by 2020  up to not more than 10% by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)
1.3	Development and implementation of Water Safety Plans (WSP)	in 1 community by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Development of the “Water Safety Plan” methodology and setting a relevant legal framework based on WHO approaches	by 2025	RA Ministry of Health
2	Implementation of the Water Quality Directive requirements for water intended for human consumption: harmonization of national drinking water quality standards with the requirements of the EU Directive 98/83/ of 3 November 1998 on the quality of water intended for human consumption as well as WHO Guidelines on Drinking-Water Quality	by 2023*	RA Ministry of Health
3	Harmonization of the drinking water quality monitoring system with the EU Directive N98/83 of 3 November 1998 on the quality of water intended for human consumption	by 2023*	RA Ministry of Health

\* Within 5 years after the ratification of the Comprehensive and Enhanced Partnership Agreement signed between the Republic of Armenia and the EU on November 24, 2017



### Article 6, 2 (b)

#### Reduction of the scale of outbreaks and incidents of water-related diseases

According to Article 6, paragraph 2 (b) of the Protocol, it is required to set targets and target dates related to the reduction of the scale of outbreaks and incidents of water-related diseases.

#### CURRENT STATUS AND PROSPECTS

By the RA Government Decision No. 1285-N of 10 October 2012 “On Making Amendments and Changes to the Government Decision No. 46-N of 14 January 2010”, a new national vaccination calendar was approved, according to which vaccination against rotavirus has been introduced since November 2012. As of December 20, 2012, the coverage of children subjected to vaccination in the calendar time frame was 90 %. By Protocol Decision No. 10 of the Government of the Republic of Armenia of 17 March 2016 “On Approving the National Immunization Programme, the Priority Measures of the National Immunization Programme, National Immunization Calendar, the Expected Results of the National Immunization Programme and the Form of the International Certificate of Vaccination or Prevention”, immunization against rotavirus infection continues to be implemented and, as of 2017, the coverage of children subjected to vaccination in the calendar time frame made about 94 %.

To improve the epidemiological surveillance system for water-borne diseases in Armenia and contribute to the prevention and reduction of these diseases, a national workshop on strengthening epidemiological surveillance of water-borne diseases was held in Yerevan on June 4-6 with the support of WHO. More than 30 experts from the National Center for Disease Control and Prevention (NCDPC) SNCO participated in the workshop.

As a result of the workshop discussions, it was noted that:

- The legal basis for epidemiological surveillance and response to outbreaks is well developed and implemented in Armenia.
- Epidemiologists and public health professionals have a good level of epidemiological surveillance and outbreak response.
- Rapid response teams are available, inter-sector co-operation is provided at national and regional levels, as well as between the Ministry of Health, the NCDPC and the territorial health departments.
- The most common intestinal infection in Armenia is the shigellosis; the burden of hepatitis A has dropped significantly (only 1 outbreak in the last 10 years, with 19 cases). It should be noted, that the etiology of 50 % of the intestinal infections remain unknown, suggesting that the system needs further development and reinforcement.
- The duration of laboratory detection of the agents during the outbreak can cause problems, so the use of rapid tests becomes important.
- The outdated water supply system, especially in rural areas, the frequent accidents, lack of professional service and laboratory control pose a risk to the health of residents of these areas.

Under the Protocol on Water and Health, each country reports on the situation in the targeted areas and the work it has accomplished. The table below presents the number of water outbreaks included in the country report.

Table 3. The number of water-borne outbreaks

Disease	Incidence			Number of outbreaks		
	Baseline	Value reported in the previous reporting cycle	Current value	Baseline	Value reported in the previous reporting cycle	Current value
Cholera	0 (2010) 0 (2011) 0 (2012)	0 (2013 Jan-Feb)	0 (2016 Jan-Feb)	0(2010) 0 (2011) 0 (2012)	0 (2013 Jan-Feb)	0 (2016 Jan-Feb)
Bacillary dysentery (shigellosis)	728 (24.2) (2016 year) 682 (22.8) (2017 year) 1102 (33.1) (2018 year)	459 (15.2) (2013 year) 688 (22.8) (2014 year) 1181 (62.4) (2015 year)	83 (2.8) (2019 January-March)	1 outbreak 107 cases (2016 year) 1 outbreak 20 cases (2016 year) 1 outbreak 35 cases (2017 year) 1 outbreak 48 cases (2017 year) 1 outbreak 37 cases (2017 year) 1 outbreak 8 cases (2017 year) 1 outbreak 14 cases (2018 year) 1 outbreak 29 cases (2018 year) 1 outbreak 37 cases (2018 year) 1 outbreak 33 cases (2018 year)	1 outbreak 34 cases (2013 year) 1 outbreak 18 cases (2014 year) 1 outbreak 66 cases (2014 year) 1 outbreak 109 cases (2014 year) 1 outbreak 146 cases (2015 year) 1 outbreak 48 cases (2015 year)	0 (2019 January-March)

Enterohaemorrhagic E. coli.	5 (0.2) (2016 year) 18 (0.6) (2017 year) 44 (1.5) (2018 year)	15 (0.5) (2013 year) 9 (0.3) (2014 year) 35(0.5) (2015 year)	4 (0.1) (2019 January-March)	0 (2016 year) 0 (2017 year) 0 (2018 year)	0 (2013 year) 0 (2014 year) 0 (2015 year)	0 (2019 January-March)
Viral hepatitis A	24 (0.8) (2016 year) 34 (1.1) (2017 year) 24 (0.8) (2018 year)	71 (4.4) (2013 year) 73 (2.3) (2014 year) 88(2.9) (2015 year)	1 (0.03) (2019 January-March)	0 (2016 year) 0 (2017 year) 0 (2018 year)	0 (2013 year) 0 (2014 year) 0 (2015 year)	0 (2019 January-March)
Typhoid fever	0 (2016 year) 0 (2017 year) 0 (2018 year)	0 (2013 year) 0 (2014 year) 0 (2015 year)	0 (0) (2019 January-March)	0 (2016 year) 0 (2017 year) 0 (2018 year)	0 (2013 year) 0 (2014 year) 0 (2015 year)	0 (2019 January-March)

The local outbreaks in Armenia occur from time to time, but do not turn into an epidemic. Mainly water-related and food-related intestinal infections are being recorded (mainly accidents occurring occasionally in the water and sewerage networks).

## TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
2.1	Maintenance of the absence of water-related cases, outbreaks and epidemics of cholera, abdominal typhus and viral hepatitis A	continuous	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies
2.2	Continuous implementation of measures and development of new projects aimed at modernization and improvement of water supply systems to exclude possible causes of occurrences of water-related diseases or outbreaks	continuous	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Strengthen the system that controls the situations triggering the occurrence of water-borne diseases or outbreaks, and that responds to those diseases cases and outbreaks and their threats: the epidemiological surveillance and response capacity and efficiency of implementation, by introducing up-to-date epidemiological surveillance approaches.	2020-2025	RA Ministry of Health
2	Revision of the national guideline on outbreak management and inclusion of specific aspects related to surveillance and epidemiological investigation of waterborne outbreaks.	2025	RA Ministry of Health
3	Maintain the inclusion rate of children subject to vaccination against the rotavirus infection in accordance with vaccination schedule.	2020-2025	RA Ministry of Health

## Target Area III

### Article 6, 2 (c) Access to drinking water

Target area III of the Protocol sets targets and target dates for access to drinking water.

#### CURRENT STATUS AND PROSPECTS

There are about 570 settlements in the republic that are not serviced by specialized water supply and sanitation companies. Water supply is provided through local springs; water systems operate through a community or community residents. The Republic of Armenia 2014-2025 Strategic Programme of Prospective Development plans to continue the reforms of drinking water systems in order to enhance the reliability and effectiveness of the operations of those systems and improve the quality of water supply and sanitation services, at the same time focusing on mitigation of regional disparities. Drinking water systems will continue to remain a priority for public investment. The targets for the investment policy will be the duration of services provided (according to preliminary estimates, the proposed investment level will allow increasing the average republican water supply continuity index by 0.5 hours annually) and improvement of the quality of those services and mitigation of the existing regional disparities. The investment policy should also aim to enhance the efficiency of drinking water systems, focusing particularly on the issue of reducing water losses. The investment policy will adopt a special approach to the around 570 rural communities, where water supply and sanitation is not provided by specialized organizations possessing the relevant permits for water supply services provision. At the suggestion of the Water Committee of the RA Ministry of Territorial Administration and Infrastructure, in 2014, with the support of KfW the German "CES Consulting Engineers Salzgitter GmbH" and "Jrtuk" LLC were awarded the consulting services contract for the "Feasibility Study for Improvement and Development of Rural Communal Utilities System in Armenia", as a result of which a preliminary study of the communities not served by the company was carried out.

1. To continue the drinking water system reforms with a view to improving the reliability and efficiency of the systems operation and to match the quality of water supply and sanitation services to international standards by providing sustainable, safe and reliable services;
2. The continuity of the evaluation of water supply improvement works should be ensured for the settlements outside the water service company's service area;
3. Introduction of effective form / forms of Public-Private Partnerships (PPPs) in the settlements outside the service area.

According to the lease agreement, water treatment plants are located in the service area of "Veolia Djur" CJSC.

The "Armenian Water and Sewerage Company" CJSC service area

No.	Water treatment plants	Type	Capacity m <sup>3</sup> / day	Year
1	Berd	Quick-action filter	5200	1975
2	Golovino	Quick-action filter	5200	1962
3	Frolov	Quick-action filter	6900	1989
4	Bldan	Quick-action filter	5200	1971
5	Geghi	Quick-action filter	30 200	1980
6	Chanakhchi	Quick-action filter	5200	1973
7	Vachagan	Closed sand filter	1000	1974

8	Zvar	Quick-action filter	5600	1980
9	Agarak	Quick-action filter	3000	1972

The former “Lori-Water and Sewerage” CJSC service area

No.	Water treatment plants	Type	Capacity m <sup>3</sup> / day	Year
1	Drinking water treatment plant	Quick-action	22 464	1969

342 schools have been repaired over the past 6 years, with the number of schools without water supply decreasing almost by 50% and the number of schools with sanitation increasing by 37% (Table 4).

Table 4. The number of secondary educational institutions in Armenia by the condition of buildings and facilities (infrastructure) in the 2017-2018 academic year

Province	School conditions						
	building condition			water supply		sanitation	
	adequate	needs capital repair	needs current repair	available	lacking	available	lacking
Yerevan	180	63	15	258	0	257	1
Aragatsotn	79	22	21	107	15	97	25
Ararat	72	28	12	110	2	105	7
Armavir	98	19	5	114	8	106	16
Gegharkunik	64	50	12	113	13	104	22
Lori	106	36	21	153	10	145	18
Kotayk	68	23	12	102	1	101	2
Shirak	105	32	30	155	12	153	14
Syunik	69	33	16	110	8	104	14
Vayots Dzor	35	6	7	47	1	44	4
Tavush	52	18	12	80	2	68	14
<b>Total</b>	<b>928</b>	<b>330</b>	<b>163</b>	<b>1349</b>	<b>72</b>	<b>1284</b>	<b>137</b>

The Republic of Armenia Prospective Development Strategy for 2014-2025 envisages a continuation of the reforms in the drinking water system with a view to increasing the reliability and efficiency of the operation of the systems and improving the quality of water supply and sanitation services.

The sector of drinking water supply includes the relationship between the State, represented by the Government of the Republic of Armenia, the drinking water service provider, represented by the lessee and the subscriber. From the legislative point of view, the State-water supply company - subscriber framework, by powers and responsibilities, is enshrined in the legislation of the Republic of Armenia, in particular, in the Water and Sanitation Sector Strategy and the Financing Programme for 2018-2030.

## TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
3.1	Ensure access to safe and affordable drinking water for all (centralized water supply)	According to the SDG 6.1.1a target  By 2030, the specific weight of households with centralized water supply  up to 99%	RA Ministry of Territorial Administration and Infrastructure  Water Committee of RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies  Water supply and sanitation service provider (s)
3.2	Improvement of drinking water supply in general educational institutions (the institutions include kindergartens senior school and boarding schools)	in 30 institutions by 2025  in a further 30 institutions by 2030	RA Ministry of Education, Science, Culture and Sport  Local self-governing bodies  Water Committee of RA Ministry of Territorial Administration and Infrastructure
3.3	Improvement of the provision of safe and adequate drinking water supply in health care facilities	in 2 regional hospitals by 2025	RA Ministry of Health

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Improvement of access to safe drinking water in the non-serviced settlements by constructing and reconstructing the water supply systems	by 2030	RA Ministry of Territorial Administration and Infrastructure  Water Committee of RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies  Water supply and sanitation service provider (s)
2	Renovation of 5 drinking water treatment plants	by 2031	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)

3	Development and implementation of water supply improvement programmes for general education and pre-school institutions and improvement of monitoring and surveillance	Renovation / reconstruction in 30 institutions by 2025;  in a further 30 institutions by 2030	RA Ministry of Education, Science, Culture and Sport  Water Committee of RA Ministry of Territorial Administration and Infrastructure  RA Ministry of Territorial Administration and Infrastructure  RA Ministry of Health  Local self-governing bodies
4	Development and implementation of the water supply improvement programmes in health care facilities and improvement of the monitoring and surveillance	in 2 regional hospitals by 2025	Ministry of Health



## Target Area IV

### Article 6, 2 (d)

#### Access to sanitation

According to Article 6, paragraph 2 (d) of the Protocol, it is required to set targets and target dates related to the area of territory, or the population sizes or proportions, which should be served by collective systems of sanitation or where sanitation by other means should be improved.

#### CURRENT STATUS AND PROSPECTS

Starting from January 1, 2017, water supply and sanitation (wastewater treatment) services are provided by “Veolia Djur” CJSC, whose service tariffs have come into effect since January 1, 2018.

The towns and some major settlements of the republic have drainage systems. In general, there are a 3700 km long drainage network, a 350 km long surface water and rainwater drainage system, and 8 pump stations of the drainage system (see [www.veolia.am](http://www.veolia.am)).

There are 6 wastewater treatment plants (WWTP), located in the service area of the Lessee of the state-owned water supply and sanitation systems and other property “Veolia Djur” CJSC: Yerevan “Aeratsia”, the WWTPs of Martuni, Vardenis, Gavar, Dilijan and Jermuk towns with a capacity of 600,000 cubic meters / day, 9.5 thousand cubic meters / day, 9.5 thousand cubic meters / day, 19.0 thousand cubic meters / day, 19.0 thousand cubic meters / day and 9.5 thousand cubic meters / day, respectively. At present, the actual discharge of Yerevan “Aeratsia” WWTP is around 250.0 thousand m<sup>3</sup> / day. The Yerevan “Aeratsia” WWTP, as well as the above mentioned five WWTPs carry out only mechanical treatment.

One of the primary goals of the Water and Sanitation Sector Strategy and Financing Programme for 2018-2030 aims at addressing the sanitation and wastewater treatment issues in the settlements of Armenia. At the same time, in order to reduce wastewater discharges in the waters within the scope of the Protocol on Water and Health, it is important to resolve the sanitation issues.

Implementation of sanitation and wastewater treatment activities will ensure modernization of sanitation and wastewater treatment systems, as well as addressing a number of environmental issues. One of the primary objectives of drinking water supply safety and security is the sanitation and wastewater treatment of the settlements located near drinking water sources.

According to a study conducted by the Organization for Economic Cooperation and Development (OECD) in 2014, 2.5 billion euros will be required to improve the sanitation systems in all settlements of Armenia.

## TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
4.1	Improvement of access to sanitation for all	by 2030 in accordance with the SDG Target 6.2  6.2.1.a Proportion of population using safely managed sanitation facility  6.2.1.b Proportion of population using hand-washing facility with soap and water	Water Committee of RA Ministry of Territorial Administration and Infrastructure  RA Statistical Committee  Water supply and sanitation service provider (s)  Local self-governing bodies
4.2	Strengthen sanitation and waste water treatment legislation, taking into consideration international requirements	Convergence to the EU Directives by 2023	Water Committee of RA Ministry of Territorial Administration and Infrastructure  RA Ministry of Environment  RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies
4.3	Improvement of access to sanitation in general educational and pre-school institutions	in 30 institutions by 2025  in a further 30 institutions by 2030	RA Ministry of Education, Science, Culture and Sport  RA Ministry of Territorial Administration and Infrastructure  Water Committee of RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies
4.4	Improve provision of adequate sanitation and hygiene in health care facilities	in 2 regional hospitals by 2025	RA Ministry of Health

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Review national legislation on sanitation and wastewater treatment and include requirements related to risk assessment and risk management on sanitation (wastewater treatment) systems		Water Committee of RA Ministry of Territorial Administration and Infrastructure  RA Ministry of Environment  RA Ministry of Health  RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies
2	Reconstruction and upgrading of “Aeratsia” wastewater treatment plant in Yerevan	Implementation of the 2 <sup>nd</sup> phase of “Aeratsia” WWTP by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)
3	Construction of wastewater treatment plants and improvement of sanitation networks	Renovation/construction of wastewater treatment plants in Sevan, Armavir and Kajaran cities by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)  Local self-governing bodies (city of Kajaran)
4	Construction / rehabilitation / restoration of new sanitation systems, including alternative wastewater discharge and cleaning systems	by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)  Local self-governing bodies

5	Development and implementation of programmes to improve sanitation in general educational and pre-school institutions	Renovation/ reconstruction:  in 30 institutions by 2025  in a further 30 institutions by 2030	RA Ministry of Education, Science, Culture and Sport  Water Committee of RA Ministry of Territorial Administration and Infrastructure  RA Ministry of Health  RA Ministry of Territorial Administration and Infrastructure  Local self-governing bodies
6	Development and implementation of targeted programmes to improve sanitation and hygiene in health care facilities	In 2 regional hospitals by 2025	Ministry of Health

## Target Area XI

### Article 6, 2 (h)

#### Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol

In accordance with Article 6, paragraph 2 (h) of the Protocol on Water and Health, it is required to set targets and target dates related to the quality of wastewater discharged from the wastewater treatment plants into the waters within the scope of the Protocol.

#### CURRENT STATUS AND PROSPECTS

Only 7 out of 20 wastewater treatment plants operate in the republic: the “Aeratsia” WWTP in Yerevan, WWTPs in Martuni, Vardenis, Gavar, Jermuk and Dilijan and the biological lake of Paraqar. The remaining WWTPs are not exploited, and the wastewater is discharged without undergoing treatment into surface waters. The treatment plant of Paraqar, which is managed by the community, carries out mechanical and partially biological cleaning.

A centralized sewerage system in Armenia is accessible only for 44 cities and 21 villages or only 70% of the total population. The existing sewerage systems serve for the disposal and treatment of residential, storm and industrial wastewater generated from apartments, public and utility buildings and manufacturing.

In Armenia, the industrial effluents after they undergo local treatment, are treated in municipal treatment plants along with communal and household wastewaters.

Since the discharge of untreated wastewater into open water bodies is prohibited by law, all sewerage networks were designed to deliver the wastewater from the sewerage systems to appropriate treatment plants. However, over the past 30 years, due to the lack of proper operation and finances and many other reasons, most of the planned treatment plants have become unfit for use, and the rest of plants have either not been constructed or have been left incomplete.

Information on the quality of wastewater discharged into open ponds is incomplete due to the poor condition of the majority of the treatment plants in the country, as well as the lack of adequate monitoring of wastewater from the operational wastewater treatment plants and the lack of sewerage networks in the majority of rural settlements.

#### TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
11.1	Development and definition of the quality norms and disposal procedure for discharges of wastewater from wastewater treatment installations to the open reservoirs taking into consideration WHO Guidelines on Sanitation and Health	by 2023	RA Ministry of Environment  Water Committee of RA Ministry of Territorial Administration and Infrastructure

11.2	Reduction in the discharges of untreated / insufficiently treated wastewater in the city of Yerevan	by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)
11.3	Reduction in the discharges of untreated / insufficiently treated wastewater in 4 other cities	Renovation/construction of wastewater treatment plants in Sevan, Armavir and Kajaran cities by 2025  Rehabilitation/ construction of at least another wastewater treatment plant by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)  Kajaran community (WWTP in Kajaran)

### PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Improve the legislative framework related to the quality of wastewater discharged from wastewater treatment plants into the open reservoirs	by 2025	RA Ministry of Environment  Water Committee of RA Ministry of Territorial Administration and Infrastructure
2	Implement water quality assessment according to the standards for maximum allowable concentrations for wastewater discharges into the open reservoirs	Implementation of the Pilot Programme for Sevan and Hrazdan Water Basins by 2020 and for another basin (Northern Water Basin) by 2022	RA Ministry of Environment
3	Reduction in the discharges of untreated / insufficiently treated wastewater in the city of Yerevan	Implementation of the 2 <sup>nd</sup> phase of the Yerevan "Aeratsia" WWTP by 2030	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)
4	Improvement of the system of monitoring and assessment of the quality of discharged wastewater	by 2025	RA Ministry of Environment  Water Committee of RA Ministry of Territorial Administration and Infrastructure

## Target Area XIV

### Article 6, 2 (j), first part

#### Quality of waters which are used as sources for drinking water

According to the first part of Article 6, paragraph 2 (j) of the Protocol, it is required to set targets and target dates related to the quality of waters used as sources for drinking water.

#### CURRENT STATUS AND PROSPECTS

Surface and groundwater before reaching the network need decontamination, and surface waters also need treatment, but some of the treatment facilities are not up to date, so equipping of treatment plants remains a problem.

In some cases no strict sanitary protection zones around water pipes and sources of drinking and household water supply are provided, and hydro-geological calculations of the second and third zones are not actually implemented in the Republic due to lack of appropriate methodology and resources. It is not ruled out that economic activity in the second and third zones will eventually lead to both bacterial and chemical contamination of drinking water.

According to expert evaluation, this area is considered a priority for the Republic of Armenia.

1. In some cases, the sanitary protection zones of water supply facilities are not provided.
2. The technological level of drinking water treatment and disinfection equipment is insufficient. Not all places are provided with continuous disinfection of drinking water. The water treatment facilities of water supply systems of open reservoirs need upgrading.
3. The boundaries of the second and third zones of water supply sources are not defined in some cases, which may cause chemical and bacterial pollution of water.

#### TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
14.1	Ensure the boundaries and regime of the first-level zones of sanitary protection of water supply sources and structures	Provision of zones for 60% of sources by 2025  Provision of zones for at least 95% of sources by 2030	Water supply and sanitation service provider (s)  Local self-governing bodies
14.2	Review and upgrade methodologies for the delimitation of the second- and third-level sanitary zones to protect water supply sources	by 2025	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)  Local self-governing bodies

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Construction and rehabilitation of treatment facilities of drinking water supplied from drinking water sources	Construction of 2 drinking water treatment facilities by 2020	RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)  Local self-governing bodies
2	Ensuring the quality of water, which is used as a source of drinking water for communities not serviced by water companies, in compliance with national standards	Continuous	Local self-governing bodies



### Article 6, 2 (I)

#### Identification and remediation of particularly contaminated sites

According to Article 6, paragraph 2 (I) of the Protocol, it is required to set targets and target dates related to the identification and remediation of particularly contaminated sites that adversely affect waters within the scope of this Protocol or are likely to do so, and that thus threaten to give rise to water-related diseases.

#### CURRENT STATUS AND PROSPECTS

The issues of raising the level of Lake Sevan and protection and management of natural resources of its catchment basin are currently priority for Armenia.

The increase of Lake Sevan level has brought problems connected with the cleaning of coastal forested wetlands. Large quantities of organic substances that are still under the lake, threaten the water in terms of pollution. Many buildings and infrastructures under the water also cause serious problems. At the same time, it is crucial to sharply improve the water quality due to the discharge of a large amount of untreated wastewater into the lake. None of the treatment facilities in the lake basin are currently operating.

The fish population of Lake Sevan has been distinguished by its originality. However, the reduction in water level in Lake Sevan, the overuse of resources and the lack of regular monitoring have led to changes in the lake's biodiversity, a sharp decline of fish stocks, disappearance of endemic species of fish, especially the sub-species of Sevan trout and a reduction in the whitefish production volumes. As a result of decline in fish species in the lake ecosystem, intensive accumulation of organic substances and acceleration of processes occur leading to bogging, which also negatively affects the water ecosystem of Lake Sevan.

The "Environmental Monitoring and Information Center" SNCO of the RA Ministry of Environment implements the monitoring of surface and groundwater quality.

In 2017, surface water monitoring was carried out at 131 observation points of 55 water objects of Armenia, including 48 rivers, 6 reservoirs and Lake Sevan. Surface water quality assessment is carried out in accordance with the RA Government Decision No. 75-N of January 27, 2011. The quality of the water is classified as "excellent", "good", "fair", "poor", and "bad".

In 2017, groundwater quality monitoring was carried out in 100 water sources. In 2017, 100 water samples were taken where 40 water quality indicators were determined. Overall, 4000 indicators have been determined.

Surface and groundwater quality estimates are published on the official websites of the EMIC SNCO ([www.armmonitoring.am](http://www.armmonitoring.am)) and the RA Ministry of Environment ([www.mnp.am](http://www.mnp.am)) and the Statistical Committee ([www.armstat.am](http://www.armstat.am)).

In 2017, surface water quality in 22% of monitoring points were assessed as "poor", in 15% of monitoring points "poor", in 37% "fair", and in 26% "good". It should be taken into account that these estimates have been given only by the use of the water quality physico-chemical parameters. As compared to 2016, the quality of surface water resources has deteriorated. In 2016, water quality was evaluated as "poor" at 15% of observation points, as "bad" in 11% of observation points, as "fair" in 30% of observation points, and as "good" quality in 44% of observation points.

In 2017, "poor" levels of surface water resources (4<sup>th</sup> grade) and "bad" (5<sup>th</sup> grade) levels were recorded in the Debed, Tashir, Akhtala, Shnogh, Getik, Akhuryan, Karkachun, Metsamor, Kasakh, Gegharot, Hrazdan, Aparan, Marmarik, Masrik, Vardenik, Gavaraget, Arpa, Karchevan, Voghji, Artsvanik (Norashenik), Gorisget (Vararak) rivers and in Yerevan Lake.

In general, the pollution of rivers is caused by the impact of untreated communal - household wastewaters and wastewaters from mining and agriculture.

## TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
18.1	Identification / classification of water bodies at risk	by 2023	RA Ministry of Environment
18.2	Development of a programme of measures to reduce pollution	by 2024	RA Ministry of Environment
18.3	Carrying out an assessment according to MAC standards for wastewater discharged into the open reservoirs	Implementation of the pilot programme for Sevan and Hrazdan River Basins by 2020 and for another basin (Northern River Basin) by 2022	RA Ministry of Environment
18.4	Capacity building of water monitoring system, including hydro-biological	by 2025	RA Ministry of Environment

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Establishment of Permitted Discharge Standards (PDS) for wastewater discharged into the open reservoirs according to water resources	Availability of establishment of Permitted Discharge Standards (PDS) for wastewater discharged into the open reservoirs	RA Ministry of Environment Water Committee of the RA Ministry of Territorial Administration and Infrastructure
2	Determination of nitrates vulnerable zones and specification of contaminated / threatened waters (in accordance with the requirements of the EU Nitrates Directive)	by 2023	RA Ministry of Environment
3	Setting water quality norms for maintaining the ecosystem of Lake Sevan	by 2020	RA Ministry of Environment

## Target Area XIX

### Article 6, para. 2 (m)

#### Effectiveness of systems for the management, development, protection and use of water resources

According to Article 6, paragraph 2 (m), it is required to set targets and target dates related to the effectiveness of systems for the management, development, protection and use of water resources.

### CURRENT STATUS AND PROSPECTS

#### State Water Cadastre

According to Article 19.2 of the RA Law “On Making Amendments and Supplements to the RA Water Code” (adopted on December 21, 2015), which regulates the procedure for maintaining the State Water Cadastre, the procedural norms defined by the Decision No. 1060-N of the Government of the Republic of Armenia of 23 July 2003 “On Approving the Procedure for Registering the Documents in the Water State Cadastre and Providing Information” did not meet the new requirements of the Code.

Taking into account the above-mentioned, on February 2, 2017, the Government of the Republic of Armenia adopted the Decision No. 68-N “On Approving the Procedure for Maintaining the State Water Cadastre and Revoking the Decision No. 1060-N of July 23, 2003” developed by the RA Ministry of Nature Protection (since June 2019 Ministry of Environment). This Decision clarified the process of information exchange between concerned departments of the water sector and provision of information. In accordance with the requirements of the Decision, the technical task of improving and upgrading the Water Resources State Cadastre Database has been elaborated and work is being carried out to update the database of the Water Resources State Cadastre Database within the framework of the USAID-funded “Advanced Science and Partnerships for Integrated Resource Development” and the EU Water Initiative Plus Programme.

#### Water Basin Management Plans

The Araratyan, Southern and Akhuryan basin management plans have been selected from the 6 water basin management plans of the Republic. The Ararat Water Basin Management Plan has been developed by “ArmHydroEnergyProject” CJSC with the state budget financing of AMD 71 million. The Southern plan has been developed with the support of the USAID Clean Energy and Water Programme, and the Akhuryan’s Basin Management Plan within the framework of the European Union’s Environmental Protection of International River Basins (EPIRB) programme.

Within the framework of the EU Water Initiative Plus programme, the development of the Hrazdan and Sevan basin management plan has been launched in 2018, pursuant to Government Protocol Decision No. 45 of October 26, 2017.

### CURRENT MEASURES

Despite substantial improvements in the legislative and institutional reforms in Armenia’s water sector, there are still many challenges to be addressed. To that end, an interdepartmental working group was formed pursuant to the Decision No. 600-A of June 20, 2017 of the Prime Minister, within the framework of which the RA Law on Amendments to the RA Law on the National Water Programme was elaborated. According to the draft, the phase programme of the legislative measures was clarified, as well as the new key issues related to the sector with the relevant stage-by-stage measures were included based on the current situation in the water sector.

Within the framework of the EU Water Initiative Plus programme, a roadmap for implementing the

Comprehensive and Enhanced Partnership Agreement, in the area of water quality and resources management, signed between Armenia and the EU on 24 November 2017 has been worked out, the purpose of which is among others to harmonize the RA Water Code with EU legislation.

## TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
19.1	Development of 3 river basin management plans	For Hrazdan and Sevan River basins by 2020  For Northern River Basin by 2022	RA Ministry of Environment
19.2	Biodiversity monitoring capacity building and strengthening	by 2025	RA Ministry of Environment
19.3	Classification of water resources by water bodies	by 2023	RA Ministry of Environment
19.4	Improvement of the water quality management strategy in accordance with EU WFD requirements	by 2023	RA Ministry of Environment

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Improvement of the Water Quality Management Strategy in accordance with EU WFD requirements	by 2023	RA Ministry of Environment
2	Establishment of a legal basis for the activities and powers of the River Basin Management Councils	by 2025	RA Ministry of Environment
3	Institutional and Technical Strengthening of Territorial Divisions of River Basin Management	by 2025	RA Ministry of Environment
4	Hydrological Evaluation of Groundwater Resources	For Ararat valley by 2020  For the whole country by 2023	RA Ministry of Environment  Water Committee of RA Ministry of Territorial Administration and Infrastructure
5	Strengthen the management functions of the River Basin Management Authorities by building their capacities. Development of a plan of measures to improve water ecosystems	by 2030	RA Ministry of Environment

### Article 6, 2 (n)

#### Frequency of publication of information on the quality of drinking water supplied and on other waters relevant to the Protocol

Countries shall set the frequency of the publication of information on the quality of the drinking water supplied and other waters related to the established targets on information collection, evaluation of progress and deadlines for achieving targets. Such publication should take place every three years, as decided by the Meeting of the Parties to the Protocol.

#### CURRENT STATUS AND PROSPECTS

The Law on Freedom of Information of the Republic of Armenia applies to state and local self-governing bodies, state institutions, organizations financed from budgets, as well as organizations of public interest and their officials.

The RA MEINR Water Committee provides information on its website ([www.scws.am](http://www.scws.am)) about the work done in the water sector, particularly on drinking water supply, sanitation and irrigation.

“Veolia Djur” CJSC provides information on its website on drinking water supply and sanitation services, water quality, consumer rights and responsibilities. Although the organization carries out daily water quality surveys, it places limited information on its website ([www.veolia.am](http://www.veolia.am)) in the form of reports.

Information on drinking water about 570 communities that are not served by a water supply and sanitation service provider is not available.

The “Environmental Monitoring and Information Centre” of the Ministry of Environment presents detailed data on water basin pollution on its website on a monthly and annual basis ([www.armmonitoring.am](http://www.armmonitoring.am)). In 2017, surface water monitoring was carried out at 131 observation points of 55 water objects of Armenia, including 48 rivers, 6 reservoirs and Lake Sevan. In the samples taken for the determination and evaluation of surface water pollution, up to 60 indicators (basic hydrochemical components, heavy metals, organochlorine pesticides, etc.) are determined. The Ministry of Environment ([www.mnp.am](http://www.mnp.am)) also presents the elaborated version of the same information. The RA Statistical Committee ([www.armstat.am](http://www.armstat.am)) also provides information on the pollution of the water basin annually on its website.

Human health indicators are available on the websites of the Ministry of Health ([www.moh.am](http://www.moh.am)) and the Health Information Analytical Center ([http://nih.am/am/subdivisions/health\\_analytical\\_center](http://nih.am/am/subdivisions/health_analytical_center)). Information on health is also provided by the RA Statistical Committee in the form of various publications and on the website ([www.armstat.am](http://www.armstat.am)).

Public and international organizations also place information on the implemented projects on their websites. For example, the Aarhus Centers Network provides information on the environment through its website ([www.aarhus.am](http://www.aarhus.am)).

The “Armenian Women for Health and Healthy Environment” NGO has participated in a number of projects under the Protocol on Water and Health. Information on these projects is available on the organization’s website ([www.awhhe.am](http://www.awhhe.am)).

A number of programmes were implemented in the Republic of Armenia under the Protocol on Water and Health. The RA Ministry of Environment or the Water Committee with the support of the UNECE coordinated the programmes. The Ministry of Health supported the programmes. Those programmes are as follows:

- Awareness raising on the UN Convention on the Protection and Use of International Lakes and Transboundary Watercourses and the Protocol on Water and Health and the Role of

Civil Society Organizations in the Promotion and Implementation of the Convention, 2012;

- Target Setting Process under the Protocol on Water and Health in Armenia, 2012-2014;
- Self-assessment of Equitable Access to Water and Sanitation in Armenia, 2016;
- Development of an Action Plan for Equitable Access to Water Supply and Sanitation in Armenia, 2017;
- Revision of National Targets in the Context of the Protocol on Water and Health in Armenia and Implementation of the Action Plan on Equitable Access to Water Supply and Sanitation, 2018-2019.

The Republic of Armenia signed the UNECE / WHO Europe Protocol on Water and Health to the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) on 17 June 1999 in London, but has not yet ratified it. The Parties to the Protocol shall submit a report every three years to the Secretariat of the Protocol on the work and progress made by the country under the Protocol. Although Armenia is not a Party to the Protocol, nevertheless, it has submitted the Country Reports for 2010, 2013, 2016 and 2019.

## TARGETS AND TARGET DATES

No.	Targets	Target dates and indicators	Proposed responsible organizations
20.1	Publishing the annual report on the quality of drinking water	Continuous	Water Committee of RA Ministry of Territorial Administration and Infrastructure  Water supply and sanitation service provider (s)  RA Ministry of Health
20.2	Publishing the national report under the Protocol on Water and Health	every 3 years from 2019	RA Ministry of Environment  RA Ministry of Health  Water Committee of RA Ministry of Territorial Administration and Infrastructure
20.3	Inclusion and regular update of information on target areas of the Protocol on Water and Health in the State Water Cadastre	by 2021	RA Ministry of Environment

## PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

No.	Measures and activities	Terms	Responsible organizations
1	Ensure access of the public to the national reports under the Protocol on Water and Health and publications on drinking water quality	continuous	RA Ministry of Environment  Water Committee of RA Ministry of Territorial Administration and Infrastructure  RA Ministry of Health



