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**Project: "Facilitating exchanges of experiences and best practices
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access to safe drinking water in frame of WHO/UNECE Protocol on Water
and Health"**

Equitable access to safe drinking water and sanitation in Armenia



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Acronyms

AMD	Armenian Dram
AWHHE	Armenian Women for Health and Healthy Environment
CJSC	Closed Joint Stock Company
EaP CSF	Eastern Partnership Civil Society Forum
EUWI+	European Union's Water Initiative Plus project
GDP	Gross domestic product
IWRM	Integrated Water Resources Management
MEAs	Multilateral Environmental Agreements
MTAI	Ministry of Territorial Administration and Infrastructure
NGO	Non-Governmental Organisation
PSRC	Public Services Regulatory Commission
RA	Republic of Armenia
UNDA	United Nations Development Account
UNDEF	United Nations Democracy Fund
UNECE	United Nations Economic Commission for Europe
WFD	Water Framework Directive
WHO	World Health Organisation
WSS	Water Supply and Sanitation

Introduction

The “Equitable access to safe drinking water and sanitation in Armenia” case study is developed by the non-governmental organisation (NGO) Armenian Women for Health and Healthy Environment (AWHHE) in the framework of the project entitled "Facilitating exchanges of experiences and best practices between Armenia, Georgia and the Republic of Moldova on equitable access to safe drinking water in frame of UNECE/WHO Protocol on Water and Health", funded by the Eastern Partnership Civil Society Forum (EaP CSF).

The main purpose of this case study is to analyze the problems of equitable access to safe drinking water in underserved rural settlements in Armenia. Since 1 January 2017, water supply and sanitation (wastewater treatment) services have been provided by "Veolia Djur" CJSC. About 579 rural settlements out of 1002 settlements are not provided with centralized water supply and sanitation services and not included in the service area of water and sanitation companies. Water supply of the mentioned settlements is performed by the village municipalities.

This case study includes an analysis of existing legal frameworks, institutional arrangements of the country, and situation in the drinking water and sanitation sector of the Republic of Armenia (RA), the current tariff policy, situation in target villages and recommendations to address the existing problems.

Armenia is a Signatory to the UNECE/WHO Protocol on Water and Health (Protocol) to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention). Armenia, while not yet being Party to the Protocol has both been actively involved in the work carried out under the Protocol framework, and gained valuable experience in using the tools under the Protocol without actually ratifying it. The implemented projects are:

- In September 2012, the United Nations Economic Commission for Europe (UNECE) and the Government of Finland signed an agreement under the UNECE-FinWaterWei 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 was implemented in close cooperation with the Ministries of Nature Protection and Health and with the participation of the Ministry of Territorial Administration of the Republic of Armenia. AWHHE 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 (2012-2014).
- In 2015-2016, the project titled "Assessment of Equitable Access through the Self-Assessment Card" was implemented within the framework of the Protocol supported by the UNECE / World Health Organization (WHO) European Regional Office and the Government of France. AWHHE implemented that project under the coordination of the State Committee on Water Economy of the Ministry of Agriculture (currently Water Committee of the RA Ministry of Territorial Administration and Infrastructure (MTAI)). The implementation of the project and application of the self-assessment card allowed to assess the situation in equitable access to water and sanitation in Armenia. The findings

were as follows: a better understanding of the situation and challenges related to equitable access to water and sanitation to facilitate the identification and prioritization of problems to be considered when setting targets under the Protocol; identification of relevant stakeholders and creation of links with them; raising awareness among stakeholders on equity issues and development of a comprehensive overview of the existing policy measures to address.

- In 2017, within the framework of the 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 on the basis of the self-assessment outcomes of the UNECE Equitable Access to Water and Sanitation Score-card. 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 Water Committee. Some of the measures presented in the Action Plan have been implemented, and the rest are being implemented within the framework of possible programmes.
- The Republic of Armenia implemented the European Union's Water Initiative Plus (EUWI+) project (2016-2020) which addressed the existing challenges in both development and implementation of efficient water resources management. With financial support of the European Commission for EUWI+ project (Delegation Agreement ENI/2016/381-404), the UNECE worked to achieve convergence of national policies and strategies with principles of the European Union Water Framework Directive (WFD), Integrated Water Resources Management (IWRM) and relevant Multilateral Environmental Agreements (MEAs) such as the Water Convention and its Protocol on Water and Health. In the framework of the EUWI+ project, the national targets and target dates were set in the context of the Protocol. In addition, the first measure under of the Action Plan for Equitable Access to Water and Sanitation (measure No. 1: analysis of the water legislative framework and identification of the legislative barriers to ensure the implementation of the Equitable Access Score-card) was implemented. Package of changes to the Water Code were developed and submitted for the adoption. The submitted changes and amendments were adopted on 7 July 2022. The amendments include definitions of “equitable access to water supply and sanitation” and “isolated and vulnerable groups from the point of view of ensuring equitable access to water and sanitation”.
- In 2018-2021, AWHHE implemented the project titled “Enabling Women to Participate in Sustainable Water Management in Armenia”. Within the framework of the UNDEF - funded (United Nations Democracy Fund) project, the tariff compensation mechanism for ensuring equitable access to water supply and sanitation for vulnerable and marginalized groups were reviewed. This activity was one of the measures of the Section III of the Action Plan on Equitable Access to Water Supply and Sanitation (2018-2020) for improving the existing tariff mechanism to protect vulnerable populations, particularly women.

With this case study, implementation of the equitable access to water at the local level was analyzed.

Background Information

Armenia is a unitary, multi-party, democratic nation-state. Modern Armenia occupies an area of 29 743 km² and, as of 1 April 2023, had a population of 2 981 200, of which the urban population is 1,899.9 thousand people (63.73%), and the rural population made 1,081.3 thousand people (36.27%) (Statistical Committee, 2023). Gross domestic product (GDP) per capita amounted to USD 4679. The population living below the poverty threshold constituted 26.5%; the unemployment rate was 15.5%; 64% of total population lived in urban areas and 36% in rural areas.

The basis of the administrative-territorial division in Armenia is the RA Law "On Administrative-Territorial Division of the RA" and "The Law of the RA on Local Self-Governance". According to the Law, the territory of the RA is divided into 10 marzes (regions) and the city of Yerevan.

Administrative and territorial division (marzes and Yerevan city)



Source: Statistical Committee of the Republic of Armenia

Since 1 January 2017, water supply and sanitation (wastewater treatment) services have been provided by "Veolia Djur" CJSC, in accordance with the Lease Agreement signed on 21 November 2016 between the State Water Committee of the Republic of Armenia (Lessor) and "Veolia Djur" CJSC (Lessee). The Contract is valid from 1 January 2017 to 31 December 2031.

According to the Decision No 519-N of 29 November 2022 of the RA Public Services Regulatory Commission (PSRC), the current single tariff for water is 208,419 AMD per 1 cubic meter, of which 7,949 AMD is subsidized by the state, according to the RA Government's Decision No 324 of 16 March 2023. Therefore, the tariff charged to subscribers is 200.47 AMD. At the same time, according to the RA Government's Decision No 1122-N of 3 November 2016, the tariff for the provision of retail services to socially disadvantaged consumers is 180.00 AMD.

Currently, "Veolia Djur" CJSC serves the capital Yerevan, 45 other cities, 334 settlements, in total 380 settlements. In addition, it provides wholesale water supply services to 59 settlements.

According to the 2022 annual report of "Veolia Djur" CJSC, the average water supply duration in Yerevan has reached up to 23.2 hours/day, in other urban settlements 20.5 hours/day and in rural settlements it is almost equal (about 20.2 hours/day).

A serious challenge is finding a solution to the problem relating to water supply of **579 rural settlements** out of 1002 settlements **that are not provided with centralized water supply and sanitation services and not served by water and sanitation companies**. Water supply of the mentioned settlements is performed by the village municipalities, according to the Law on Local Self-Government (adopted in 2002), from the springs located in the adjacent areas of these villages. Most of water supply systems of the mentioned villages are in poor technical conditions, the water losses remain high, and water is supplied according to a time schedule and very often without chlorination. There is no complete information on water tariffs, provision of water and sanitation services in these settlements. Information on the tariffs for the settlements outside the above-mentioned service area is also incomplete, as in these settlements, even access to water and sanitation is a common issue.

The problems of access equality of the above-mentioned settlements have been repeatedly discussed by the Government and are the center of attention, but the actions to overcome the problems are being implemented slowly.

The case study addresses 10 villages that are not provided with centralized water supply and sanitation services and not served by water and sanitation companies.

Legal framework

Currently, much attention is paid to the development of the drinking water and sanitation sector in Armenia. With the aim of regulating this sector, numerous laws, decisions, legal acts, etc. have been adopted by the legislative and executive bodies of Armenia, such as:

- Adoption of the Water Code in 2002 and its updates;
- Law on the Fundamental Provisions of the National Water Policy in 2005;
- Law on the National Water Programme in 2006;
- Establishment of the State Committee on Water Systems (2002);
- Decentralization of WSS sector and introduction of the Law on Local Self-Government (2002) that delegated responsibility for providing WSS services to local municipalities;

- Establishment of the Public Services Regulatory Commission (2002) to regulate public utilities and independently set tariffs;
- Corporatization and establishment of the 5 independent WSS companies (2003-2013);
- Introduction of a management contract since 2000;
- Introduction of a lease contract with an international water utility operator (Veolia, France) since 2006;
- Introduction of public–private partnerships (PPP) by Yerevan Water and Sewerage Company Lease Contract since 2005.

The new Water Code of Armenia was adopted on 4 June 2002. The Code contains an integrated water resource management in connection with water basin management concept, stimulates the decisions related to supply, rather than demand-driven water distribution, compels giving of water use permits based on the information, offers possibilities for the use of economic levers during the water resources management and cost recovery. Almost each year a new update was made to the Water Code, including

- 2015, definitions and amendments on licensing of activities in the water sector; tariffs, etc;
- 2018, a new chapter on sanitation is developed and added; and
- 2022, additions on equitable access to drinking water and sanitation.

The submitted amendments to the Water Code include definitions (Article 1) of “equitable access to water supply and sanitation” and “isolated and vulnerable groups from the point of view of ensuring equitable access to water and sanitation”:

equitable access to water supply and sanitation: such organization of water supply and sanitation services that will ensure equitable access to water users, including those included in vulnerable and isolated groups from the point of view of ensuring equitable access to these services;

isolated and vulnerable groups from the point of view of ensuring equitable access to water supply and sanitation: those groups that include individuals who have difficulties in exercising their rights to drinking water supply and sanitation.

The Water Code is the main document of the country of perspective development of management and conservation of water resources. The changes and amendments to this document means to further address the equitable access in relevant laws and legal acts for further implementation.

In 2005 the Republic of Armenia **Law “On Fundamental Provisions of the National Water Policy”** was adopted, which presents a long-term development concept for strategic use and protection of water resources and water systems.

The RA **Law “On National Water Programme”** (adopted on 27 November 2006) is the main document for the long-term 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. The measures will be updated by the Ministry of Environment of the Republic of Armenia.

The RA Law “**On Provision of Sanitary-Epidemiological Security of the Population of the Republic of Armenia**” (adopted on 16 November 1992) and updates define 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 of future generations.

The **2014-2025 Strategic Programme of Prospective Development** envisages the continuation of the improvements in drinking water systems in order to enhance the reliability and effectiveness of the operations of these systems and improve the quality of water supply and sanitation services, at the same time focusing on mitigation of regional disparities. For the entire period of the program, annual investments in the system will amount to 0.4% of the GDP.

The investment policy of the 2014-2025 Strategic Programme of Prospective Development is aimed at reducing the gap in access conditioned by the geographical location. The state strategy includes a special approach also to about 570 rural settlements, where water supply is not provided by specialized organizations. Limited data are available about the situation of these settlements.

The **Protocol Decision of the session of the RA Government “On the Water and Sanitation Sector Strategy and Financing Programme approved by Annex to the Protocol Decision No.38”** (adopted in 2015) sets the following targets: increase water supply, design and implement a reliable and affordable strategy for the purpose of ensuring a sustainable water supply and sanitation in the communities outside the service area, reduce water loss in water supply and sanitation, and use a single tariff in case the services improve.

In order to ensure the quality and safety of drinking water, the legislation of Armenia establishes sanitary protection zones, considering the type of water resources used for drinking purposes, and the hydrological, hydrogeological and hydrochemical conditions.

Basically, all legal documents include articles / items on water supply and sanitation services for vulnerable or marginalized groups, but information on drinking water supply and sanitation for separate groups is limited.

On 24 November 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.

Institutional Framework

Key stakeholders in the water sector governance are:

1. The Ministry of Environment of the Republic of Armenia, and its Water Resources Management Department, which manages and protects water resources;
2. The Ministry of Territorial Administration and Infrastructure of the Republic of Armenia, and its Water Committee, which implements the state management of water systems;
3. The Public Services Regulatory Commission (PSRC) of the Republic of Armenia, which implements tariff policy in the water sector.

The **Water Committee** functions as a state body of management, which develops and implements the Government's policy in the management and use of state-owned water and non-competitive water supply systems.

The **Public Services Regulatory Commission** regulates public utilities and independently sets tariffs in the energy, water, and telecommunications sectors.

Another key player in Armenia is the **Ministry of Health** with its “National Center for Disease Control and Prevention” SNCO, which is responsible for safeguarding the sanitary/epidemiological safety of the population. Through its structural sub-divisions, the Ministry develops and supervises the implementation of sanitary/epidemiological regulations and standards, including those for the drinking water sector. It also controls through inspections the quality of water sources that are used for drinking purposes.

Drinking water supply organisations are:

- The **local self-governing bodies** are the community council and the community leader. The Law on Local Self-Government (adopted in 2002) delegated responsibility for providing WSS services to local authorities, making municipalities and village administrations owners of water distribution networks within their administrative areas.
- The “**Veolia Djur**” **CJSC** is a specialized company providing centralized water supply and sanitation (wastewater treatment) services.

Drinking Water Supply Situation in the Target Villages: Main Findings

Access to available, accessible, affordable, acceptable and safe drinking water and sanitation is a human right. The United Nations General Assembly through Resolution 64/292 of 28 July 2010 recognized the human right to water and sanitation.

About 96% of the drinking water of Armenia is groundwater. “Veolia Djur” CJSC is the single operator in the country providing drinking water and sanitation (wastewater) services. There are about 579 settlements in the Republic which are not served by specialized water supply and sanitation companies. Water supply is provided through local springs; water systems operate through a community or community residents. There is no centralized information about the drinking water and sanitation situation in these 579 settlements.

Methodology: The primary and secondary sources of information were collected for the analysis. Information was collected from the key informants from the target villages (mayor or municipality staff) via semi-structured questionnaire (Annex 1). The comments from the Water Committee were incorporated in the report.

For this report, information was collected from the settlements of 6 marzes of Armenia. The names of the marzes and settlements and the population size of each settlement are introduced in the table below.

Marz	Settlement	Population
Ararat	Nizami	1300
	Sayat-Nova	2500
	Sis	1734
Aragatsotn	Kaqavadzor	1300
	Tlik	90
Armavir	Araks	2300
	Arshaluys	4172
Gegharkunik	Kakhakn	260
Shirak	Sarakap	622
Syunik	Nerkin Hand	70

The collected information is analyzed and summarized below.

Security issues: In the fall of 2020, the war between Azerbaijan and Armenia escalated again resulting in changes of Armenian borders. The village of Kakhakn has 3 drinking water supply lines. The problem is the wear and tear of the pipes. The pipes left over from the times of the Soviet Union need replacement. The 3rd water line is the largest (about 6 km long) and meets the drinking water demand of 70-75% of the local population. Water flows by gravity. In order to reduce the flow of water, 10 catchments are installed, 5 of which are under the observation of Azerbaijan, 1 is in the neutral zone, and 4 are located in the upper part of the village.

As a result of the military operations by Azerbaijan in September 2022, the sources of drinking water of Nerkin Hand remained under the control of Azerbaijani forces. A spring water memorial has been built on the bank of the river, from which filtered water flows, but in small quantities. Residents either use river water for drinking, boiling it beforehand, or bring water from neighboring settlements.

The Subsidy Programme (Grant-in-Aid) aimed at developing the economic and social infrastructures of the communities is implemented by the Government and is considered as a new format of horizontal cooperation between the community and the state. 2021 was a successful year in terms of the implementation of subvention programmes in the regions of Armenia. Thus, in 2021, 678 programmes, including programs on water and sanitation, were approved for a total amount of 48.5 billion AMD. In the period of 2018 - 2020, around 136 water and sanitation programmes were implemented and the amount of financing was around 4,3 billion AMD. The Government subsidized about 30-70% of the total cost. The funding of subsidy programmes will increase tenfold in 2023. However, after the implementation of these programmes, the property is transferred to the community and the information base on the water supply and drainage systems of the settlements is not updated. Following settlements benefitted from such programmes:

- Araks: There are 3 deep wells in the settlement. The pumps are operated for 5-6 hours a day. The general internal network is old and demolished. In order to have an internal water supply network, the municipality applied to the government for a subsidy. The subsidy application is approved. It is expected that the overhaul works will begin in 2024.
- Kakhakn: In 2021, asbestos pipes were replaced with plastic pipes for 7 households. In 2022, 50 mm diameter pipes were laid in another district (1.6 km long).
- Kaqavadzor: In 2022, a project for the construction of a 2600 m water pipeline was presented to the government. The project has been approved and work is expected to begin in the spring of 2024, given the region's harsh winter.
- Nerkin Hand: The municipality developed a project according to which up to 50-100 m of sand should be filled next to the river in order to filter the water before it reaches the village. The project envisages the construction of an internal network, which should also include a chlorinator. There is a reservoir with a capacity of 200 tons in the settlement, which needs partial repair. The water must be filled in the reservoir, chlorinated and distributed among the households. The project was submitted to the government. It is expected that tender will be announced, and the construction of the internal network may begin in 2024.

Distribution networks: The water distribution networks are very old and demolished in the settlements of Araks, Arshaluys and Kakhakn.

- There are no networks in Kaqavadzor, Sarakap, Sis and Tlik. Previously, there was a water pipeline from Hako village to Getap, and from there to Tlik, but in 2013, the water pipeline was destroyed and the pipes were taken away.
- Arshaluys: In 2019-2020, the internal drinking water supply network was restored by 30% with the support of the community members. The settlement is served by "Veolia Djur" company. In recent years, partial replacement of pipes with new ones has been carried out. Households that are not connected to the water pipeline use 3 taps installed in the streets for drinking purposes, 24 hours a day.

Drinking water quality: Water from the deep wells or artesian wells is used in several villages for drinking purposes. Although it is suitable for drinking, but is not intended for such use. The water is hard and pH is high. This practice is common for the settlements of Nizami, Sis, Sayat-Nova.

Duration of water supply: The duration of water supply in the villages is different depending on different factors, such as, the gravity flow of water or the use of expensive energy for pumps, availability of water, etc. For example, water supply in Araks is available for 5-6 hours per day, in Kaqavadzor 1.5-2.5 hours per day.

Causes of drinking water shortage:

- Kaqavadzor: There is a spring in the settlement. The catchment was built during the years of the Soviet Union. Through pipes, the water reaches two reservoirs in the upper part of the village. Because of some reasons the treatment system has not been used for the last 10-15 years. Dirt accumulated in the reservoir is not removed. However, it should be noted that chlorination works are being carried out.
- Nizami: There were artesian wells in the past, but these wells can no longer be used, because the water pressure has dropped due to the operation of the fish farms. At the moment, only one artesian well is operated by pump, which meets the needs of about 20 households. The mentioned farms agree with each other on the hours of operation of the pump. That water is not intended for drinking. About 1.5 years ago, a project of the internal water supply network was presented to the municipality. The "Veolia Djur" CJSC presented its opinion that the project cannot be implemented due to the impossibility of ensuring technical conditions.
- Sarakap: Previously, there were no deep wells in the settlement. Currently, there is a 120 m deep well. The well is located in the territory of Aghin village, far from Sarakap. In 2022, the construction of the drinking water pipeline was started with the subsidy programme of 75 million AMD, which has not yet been fully completed. To date, about 2 km of water pipeline has been laid, while more than 3 km of water pipeline has to be built to reach from the well to the reservoir. There are 2 reservoirs, one of which has a capacity of 400 tons. Both reservoirs are not in use yet, because although the pump is installed in the deep well, the issue of electricity has not yet been resolved.
- Sayat-Nova: The water from the deep well is also used for irrigation purposes in summer which results in drop of water pressure. The community municipality ordered the design of the internal network of drinking water supply. To date, no donor organisation has been found to make the project a reality as serious financial investments are needed. The population is increasing. The solution of this problem has become a matter of great urgency.
- Sis: There are 26 gravity artesian wells in the settlement. The houses are connected to the wells with pipes. Water is used without chlorination. In the past, that water was used for both irrigation and drinking purposes. As of now, since the water pressure in the wells has decreased quite a bit, the residents use it only for drinking. They applied to Masis municipality (center of the enlarged community) with a request to have an internal water supply network. The "Veolia Djur" CJSC company considers that the construction of a 16

km water line will require a lot of expenses, and they are afraid that the money collected in the future will not cover the expenses.

Water supply by mobile cisterns/tanks: Water is provided via mobile cisterns/tanks in Sayat-Nova twice per week, in Nizami three times per week, and in Tlik once per week.

There are also water tanks where you can buy water from a private entrepreneur. The cost for a liter is 10 AMD (equal to 0.024 EUR). People from Nizami and Sis buy water from these tanks.

Tariffs: In some settlements people do not pay for drinking water, like Araks, Kakhakn, Kaqavadzor.

- The fee for households not connected to the distribution network is a fixed sum, which is charged based on the number of family members.

Summary of key findings: Issues related to water resources management, water supply, sanitation and health in Armenia are shared between different policy areas and require close cooperation between different bodies at both the policy and management levels.

However, stakeholders in Armenia are not fully aware of the situation of equitable access to water and sanitation and do not have sufficient capacity to respond to the challenges of access to potable water and sanitation.

The establishment of mechanisms for ensuring equitable access to water supply and sanitation services for disadvantaged consumers and for isolated and vulnerable groups in terms of ensuring equitable access to water supply and sanitation, as well as the procedure for providing subsidies, will be developed by May 2025.

One of the major challenges in the field of water supply and sanitation is the solution of the drinking water issue of around water self-supplied 579 settlements. Issues of equitable access due to geographical location have been discussed many times and are in the spotlight, but problem-solving activities are slow.

Ensuring the quality and security of the water supply is a serious problem in rural communities.

Water supply is performed by pumps in, both inside and outside of the networks, which leads to the increase in system's electricity costs and, consequently, to great maintenance costs.

Recommendations

It is recommended to continue the implementation of the provisions of the Protocol on Water and Health in the Republic of Armenia.

It is recommended to review the “Action Plan for 2018-2020 for the Provision of Equitable Access to Water Supply and Sanitation in Armenia” which was approved on 4 August 2017 by the official Decree No. 130-A of the Chairman of the Water Committee.

The NGOs are recommended to be involved in the development of mechanisms for ensuring equitable access to water supply and sanitation services for disadvantaged consumers and for isolated and vulnerable groups in terms of ensuring equitable access to water supply and sanitation, as well as the procedure for providing subsidies.

The provision of specialized water supply and sanitation services in the self-supplied settlements is of primary importance for the improvement of drinking water supply in the above-mentioned settlements. Such services can be carried out by both the company and the communities, because the quality of the supplied water is considered an important factor for drinking water supply. For the implementation of specialized services, it is recommended that the service personnel undergo training.

As a priority, it is possible to ensure the access to drinking water of the border settlements, to consider the nearest water sources and the construction of a more efficient and less expensive water system for the population, although it is also possible for the state to subsidize or set privileges for these settlements.

Water cost and water tariff, water production and distribution costs vary very much according to local conditions. Water service cost analysis needs to be done very carefully, with reliable local data. It is recommended to distinguish upfront investment costs, running costs and expansion costs. The water tariff should reflect the water costs in order to achieve coverage (most customers having access to proper water services) and to guarantee service reliability. Nevertheless, the water tariff is not equal to the water costs, as it considers subsidies as well as profits and losses.

Increasing public awareness, because it is necessary to pay for the services provided, so that it is possible to operate and maintain the existing system.

Subsidizing of the water sector is generally implemented for the purpose of sustainable management of services, which should mainly be aimed at providing access for the population as a fundamental human right.

Annex1.

Questionnaire

1. Settlement, province:
2. Population:
3. Are there any springs or deep wells from which it would be possible to supply drinking water?
4. What is the condition of the head structures of the water supply, if any?
5. What is the condition of the internal water supply system of the settlement, if it is available. If it is not available, how is the water supply carried out?
6. If water is provided according to schedule, then what is the frequency of water supply?
7. How do residents pay for drinking water and how much?
8. Was the construction/reconstruction of the drinking water supply system carried out by any program (be it a subvention, charitable or other program)? If so, what works have been done, to what extent and when?
9. Is water quality control being implemented or not? If yes, how often and by whom?
10. Have there been outbreaks of waterborne intestinal disease? If yes, how many people got sick and when did it happen?

References

Ministry of Environment, 2018. Technical report: The baseline analysis of legal, institutional and substantive aspects related to target-setting process under the Protocol on Water and Health in Armenia.

Protocol on Water and Health. Accessed August 25 2023: <https://unece.org/environment-policy/water/protocol-on-water-and-health/about-the-protocol/introduction>

Public Services Regulatory Commission of the Republic of Armenia. Accessed August 18 2023: www.psrc.am

Republic of Armenia 2014-2025 Strategic Program of Prospective Development. Accessed August 18 2023: <https://www.gov.am/en/prsp/>

Statistical Committee. Accessed August 25 2023: <https://armstat.am/en/?nid=82&id=2572>

UNECE and WC project (2016). Self-Assessment Score-Card: Equitable Access to Water and Sanitation. Armenia Country Report prepared within project “Assessing equitable access to water and sanitation in Armenia” supported by UNECE, WHO-Europe and the Government of France. Accessed August 28 2023: https://unece.org/DAM/env/water/activities/Equitable_access/Armenia_Country_report_EqAccAssessment_08.11.2016_partI.pdf

UNECE and WHO-Europe (2006). Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Geneva: United Nations Economic Commission for Europe and WHO Regional Office for Europe. Accessed August 28 2023: (<http://www.euro.who.int/en/publications/policy-documents/protocol-on-water-and-health-to-the-1992-convention-on-the-protection-and-use-of-transboundary-watercourses-and-international-lakes>)

Water Code of the Republic of Armenia. Accessed August 29 2023: http://www.parliament.am/law_docs/290602HO373eng.pdf?lang=eng