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## **National consultation on small-scale water supply and sanitation and assessing equitable access to water and sanitation in Armenia under the Protocol on Water and Health**

*15 December 2015  
Yerevan, Armenia*

### **Report**

#### **Background and objectives**

At the seventh meeting of the Working Group on Water and Health (Geneva, 26-27 November 2014), Armenia confirmed its interest to conduct a self-assessment of equitable access to water and sanitation using *The Equitable Access Score-card* and requested assistance from the joint United Nations Economic Commission for Europe (UNECE) and World Health Organization Regional Office for Europe (WHO/Europe) secretariat of the Protocol on Water and Health. In response to this request, a national consultation on small-scale water supply and sanitation and launching the self-assessment exercise of equitable access to water and sanitation and was held on 15 December 2015 in Yerevan. The workshop was organized back-to-back with the 14th meeting of the Steering Committee of the National Policy Dialogue on Integrated Water Resources Management (Yerevan, 14 December 2015).

The workshop was organized by the State Committee of Water Economy of the Ministry of Agriculture of Armenia in cooperation with the joint UNECE and WHO/Europe secretariat of the Protocol with support of by the nongovernmental organization (NGO) Armenian Women for Health and Healthy Environment.

A total of 27 participants representing the ministries of health, agriculture, urban development and nature protection, the State Committee of Water Economy, the Armenian Water and Sewerage Company, the National Center of Disease Control and Prevention, the State *Health Inspectorate*, the Human Rights Defender's Office, *the Yerevan State University*, the Sustainable Human Development Association, the NGO Armenian Women for Health and Healthy Environment, the water utility of the Garni community of Kotayk province, as well as staff and consultants of WHO/Europe and UNECE.

The consultation meeting was conducted under the framework of the United Nations Development Account (UNDA) project "Strengthening Governments' and water operators' capacity to ensure equity of access to water and sanitation in countries with economies in transition in the Economic Commission for Europe region, with a particular focus on small-scale water supplies and sanitation in rural areas".

The objectives of the meeting were to:

- review the available evidence and information on the situation of small-scale water supplies and sanitation in Armenia and identify knowledge gaps;
- review of existing and/or planned policies, programs addressing small-scale systems and regulatory requirements for public health surveillance of such systems;

- discuss key challenges, related to small-scale water supplies and sanitation, as well as the country action to improve the situation;
- introduce key provisions of the Protocol and discuss relevance of equitable access and small systems as target areas under the Protocol;
- raise awareness on the need to ensure equitable access to water and sanitation and to progressively implement the Human Right to Water and Sanitation;
- share experiences and lessons learnt from applying the *Equitable Access Score-card* in other countries; and
- explain the objectives, expected outcomes and steps of the self-assessment exercise using the *Equitable Access Score-card* and discuss the country implementation process and stakeholders to be involved;

### **Proceedings of the meeting**

In the opening session, Mr. Volodya Narimanyan, Deputy Chairman of the State Committee of Water Economy of the Ministry of Agriculture of Armenia, welcomed the participants of the workshop and introduced the objectives of the workshop. Complementary opening statements were made by Ms. Nune Bakunts, Deputy Director of the National Center of Disease Control and Prevention of the Ministry of Health, Mr. Oliver Schmoll, Programme Manager Water and Sanitation, WHO/Europe, and Mr. Peep Mardiste, National Policy Dialogue Regional Coordinator, UNECE.

The meeting consisted of a general introductory session, one part related to small-scale water supply and sanitation and one part related to equitable access to water and sanitation, as well as a concluding summary session.

The key provisions and priority activities under the Protocol and the main objectives and expected outcomes of the consultation were introduced by Mr. Oliver Schmoll.

### **Small-scale water supply and sanitation**

The session was moderated by Ms. Nune Bakunts and addressed the situation and challenges related to small-scale systems in the European Region as well as in the Republic of Armenia, including a special focus on the conditions in the rural community of Garni.

The main findings and conclusions from the presentations and discussions are provided below.

#### ***Situation of small-scale water supply systems in Armenia***

Water supply and sanitation conditions are inadequate in many parts of rural Armenia. In many villages and rural communities, water is not provided by professional service providers.

*Definitions.* There are no clear national definitions of small-scale systems. Rural water supply systems are characterized by (a) type of technology – either centralized or non-centralized; and (b) type of management – either serviced by professional organizations/service providers, non-professional (local) authorities, and individual supplies managed by individuals (i.e. private wells or springs).

*Legislative requirements.* There are no specific regulatory requirements established for small-scale water supply systems in Armenia. The legislation addresses general requirements for all supply systems irrespectively of size, including on the protection of water sources and water quality. All requirements should apply for both large and small systems in order to provide safe services for the protection of health for all citizens. The use of individual supplies is not regulated at all.

*Surveillance.* The surveillance authorities undertake independent monitoring of centralized water supply systems. Monitoring frequencies differ by type and size of the supplies (i.e. more frequent for large supplies). Large utilities undertake internal quality control of water supply whereas this is uncommon for small systems. There was no clear information about the frequency and number of water quality testing for small systems. Systematic monitoring of non-centralized water supply systems is not in place. There are no surveillance requirements for individual supplies and thus no data is available.

Surveillance of waterborne disease covers all areas of the country. All cases should be identified, registered and reported. Reporting of diseases that could be attributable to water may not reflect a full picture, as people do not seek medical care when experiencing mild symptoms.

*Provision of water supply.* According to information provided by the National Committee for Water Economy, five major entities provide professional water supply services throughout the country. However, about 570 villages and communities, or about one fifth of the total population, are served by non-professional service providers (e.g. such as local administration). The average population number in these villages is 2,000 but can sometimes reach up to 5,000-6,000 people. Water supply and sanitation systems are inadequate in most of these villages and many communities do not have local water distribution networks. Several rural communities do not have access to centralized systems but rely on small on-site systems (i.e. individual small wells and springs); these are also frequently used as complementary source in situations where centralized water supply pipe is not sufficient or unreliable.

On average, water is delivered for 17.5-23.5 hours per day. Water losses in the distribution system are high, ranging from 54% to 78% in different areas. There are few communities with no local water supplies which solely rely on trucked water. About 5% of the population use surface (river) water which is at high risk of contamination due to lack of sanitary protection zones and discharge of untreated wastewater.

*Water quality.* Water quality data from official monitoring by health authorities could not be made available disaggregated for small-scale systems. Overall, non-compliance of microbiological quality parameters has been reduced in some regions whereas in others there is an increase. Chemical quality is not a major public concern in the country. Hardness levels are high in some areas. Health authorities report that 52% of small systems do not disinfect the water.

*Sanitation and wastewater treatment.* Poor sanitation service in rural areas is of major concern in Armenia. Poor sanitation facilities and lack of wastewater treatment create significant environment and health risks. In many areas, source water is at great risk of contamination due to lack of sanitary protection zones and uncontrolled discharge of wastewater. Wastewater treatment plants are in place only in 10 small communities which are used mostly for public buildings (i.e. schools and hospitals). Some participants stressed that wastewater treatment in big cities is also a major concern and addressing this situation should be a first priority before giving priority to small sanitation systems.

### ***Existing policies, programmes and planned measures***

The State Committee of Water Economy initiated the development of a strategic framework for water supply and sanitation for the period 2016-2030. It addresses improving the situation of water supply and sanitation in the country, including the rural villages and communities which lack adequate services. According to the first investment needs assessment, 600 million USD is required to implement the strategy. Resource mobilization plans still require discussion to identify the amount of government allocation and funds that need to be mobilized from donors.

The Government is currently undergoing the second phase of the water sector reform which is supported by the European Commission and coordinated by OECD and UNECE. In 2016, the Government plans to establish one general operator for water supply and sanitation services for the entire country, including the rural communities which are currently covered by the non-professional services. It will be a critical year and unified tariffs are envisaged to be applied for water and sanitation services.

The draft targets prepared under the Protocol on Water and Health include a few targets related to small-scale systems. The Protocol targets and measures are linked with the priorities of the strategic framework for water supply and sanitation. However, the process of acceding to the Protocol and formal adoption of the targets has been delayed. The draft road map document for ratification of the Protocol was already prepared in 2014.

### ***Situation of water supply and sanitation in Garni***

The representative of the water supply company of Garni in the Kotyak province informed about the situation of water supply and sanitation from a local authority perspective. Garni is one of the largest villages in Armenia with a population of 8,000 and about 200 farms. The village is a tourist centre, and the population can reach up to 12,000 in the high season.

*Drinking-water supply.* The water supply network was built in 1960s and the latest renovation was in 1980s. During the Soviet time Garni water supply was not managed by a professional service. After the collapse of the Soviet Union, the local self-government faced serious challenges. A water supply company was established to provide services to the community and service fee had been introduced. However, due to managerial and financial constraints, in 2003, the water supply service was transferred to Yerevan Djur. In 2005, there was a decision to introduce gravity supply in Garni and the system was reconstructed in 2006-2007. In 2010, the local government made a decision to withdraw from the Yerevan Djur water service contract and operate the service itself. The gravity water is the main type of drinking-water supply in the village, however, the service provision is insufficient to meet the needs of the population and additional springs are used as complementary source of water. Current main problems include aging and deterioration of pipes and absence of disinfection of water due to failure of the chlorination station.

*Sanitation and wastewater.* Lack of wastewater treatment is a major problem in Garni. There is no centralized sewage network in the community (except for some schools and other buildings) and wastewater is discharged without any treatment in the community. This situation creates a high risk for public health to the local community and causes environmental contamination. Poor sanitation practices in Garni may also impact on Yerevan water supply as local sources of Garni are being employed for Yerevan water supply.

*Cost recovery.* According to the Water Code, local self-governments can set tariffs independently. Initially, the majority of community members had little interest to be covered by the professional (external) service provider due to the amount of tariff. Subsequently, the local authority reduced the fee which is sufficient to cover the basic service needs but not enough for needed reconstruction and renovation works.

### ***Summary of issues and challenges***

In the moderated roundtable discussion, participants identified issues and challenges related to small-scale systems in Armenia and discussed needs and required actions to improve the situation. The main points of discussion and outcomes of the session are summarized below.

- Sanitation is a critical problem in rural areas and poses significant public health risks due to number of factors, including lack of wastewater treatment facilities, uncontrolled wastewater discharge in the majority small communities and lack of water source protection zones. These conditions lead to environmental contamination and pose significant public health risks. Strengthening management of sanitation and wastewater, thus, requires urgent policy attention and action to protect public health.
- The provision of safe drinking-water supply is frequently hindered by the lack of qualified personnel, regular public health surveillance and regular maintenance. Additional common problems included poor enforcement of sanitary protection zones, insufficient technical conditions of water supply infrastructures, including poor conditions of distribution networks, illegal connections and intermittent supply.

Water supply of Yerevan is under threat due to poor management of sanitation and wastewater in the upstream areas (including Garni). Stringent enforcement of sanitary protection zoning regime and systematic risk management measures are required.

- Insufficient qualification of water operators is a problem. Qualified and skilled personnel are important backbone for safe management and operation of water supply in rural areas. Ongoing vocational training of operators is therefore essential and requires further attention. Finland, for example, included specific target on operator qualification and certification under the Protocol.
- Funds are insufficient to ensure adequate operation, maintenance and capital investment in small-scale water supply and sanitation due to lack of regulations and practical guidance on sustainable financing mechanism and poor financial planning.

Concluding the discussion, the Vice Chair of the State Committee for Water Economy stressed that political will, commitments and sufficient funds are essential prerequisites for addressing above challenges and shortcomings. This view was broadly supported and workshop participants expressed the need to raise recognition of the importance of small-scale systems in the country. In addition, recommendations were made to clarify roles and responsibilities of the institutions, allocate sufficient funds, and improve enforcement of legislation and intersectoral coordination in order to ensure provision of safe and sustainable services for rural population.

### ***Recommendations***

The meeting participants identified the following actions to improve the management of small-scale water supply and sanitation in Armenia:

1. Create political attention on the challenges faced by small-scale systems in rural areas and small towns and political will in addressing the prevailing issues. The health sector should play a leading role in raising profile of the issue in the country.
2. Improve the evidence base related to small-scale systems in the country through a systematic situation assessment, including a review of water quality, prevailing sanitary risks, technical conditions of supply systems (i.e. water treatment, disinfection, distribution) and prevailing operational practices. This systematic review is an important basis for identifying and prioritizing improvement interventions and respective investment needs. A review of the health evidence related to small-scale systems is also recommended.
3. Review the existing legislation and regulations in terms of their adequacy to address effectively challenges related to small-scale systems. Consider introducing requirements to align with the WHO-recommended water safety plan (WSP) approach as the most effective way of managing drinking-water safety.
4. Develop a financing plan and increase resource mobilization efforts to improve infrastructures and technical conditions of small-scale systems, and most importantly to sustain operation and maintenance to ensure safe and continuous services.
5. Identify rural communities that can be connected to centralized services and take step-by-step measures to connect them through implementation of the national rural water supply and sanitation strategy.
6. Define minimum education requirements for operators of small-scale water supplies and develop a strategy for ensuring ongoing vocational training and certification of operators.

### ***Recommendations related to the Protocol on Water and Health***

1. Review and update the road map document towards ratification of the Protocol and intensify the accession process through leadership of the health and environment ministries and improved in-country multi-stakeholder coordination.

2. Review the draft targets prepared in the Protocol context and include specific targets related to small-scale systems, such as improving the regulatory framework, introducing systematic risk-based surveillance of drinking water quality in rural areas, setting minimum qualification requirements and training programmes for operators and/or introducing community education and hygiene promotion programmes.
3. Take progressive measures for formal adoption of the Protocol targets.
4. Explore the possibility of organizing a workshop dedicated on management of small-scale water supply and sanitation systems in 2016 with the support of the WHO/Europe secretariat.

### **Equitable access to water and sanitation**

The *second session on the Self-assessment of equitable access to water and sanitation* was facilitated by Ms. Emma Anakhasyan, Head of the Environmental Health Department of the NGO “Armenian Women for Health and Healthy Environment”. Mr. Roberto Martin Hurtado, Consultant to UNECE, introduced the obligation to provide equitable access to water and sanitation under the Protocol on Water and Health, other related international obligations and main challenges to achieve it. He introduced *the Equitable Access Score-card*, and its implementation in Ukraine, the city of Paris and Portugal, as well as lessons learnt and benefits from applying the *Equitable Access Score-card*. Ms. Armine Arushanyan, State Committee of Water Economy of the Ministry of Agriculture, described the situation of equitable access to water and sanitation in Armenia. Ms. Emma Anakhasyan described the plan for the equitable access self-assessment exercise in Armenia, main steps of the proposed study, timeframe and the expected outcomes.

The participants discussed the objectives and expected outcomes of the equitable access self-assessment exercise, possible sources of information and stakeholders to be involved.

The discussion uncovered that very few people in the Armenian water sector were familiar with the Human Right to Water and Sanitation. The discussion helped to convey to participants why special attention needs to be paid to vulnerable and marginalized groups. One of the conclusions was that there was a need to make an effort to identify which of the potential vulnerable and marginalized groups were relevant in the Armenian context.

While the water and health sectors were well represented at the meeting, more efforts be needed to engage other sectors (such as education or social protection) during the implementation of the Score-card.