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Promoting Universal Access to **Clean Water**

POLICY BRIEF #3

Safety of Drinking Water in Kosovo

DISCLAIMER

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POLICY BRIEF

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August 2023

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ABBREVIATIONS

WSRA	Water Services Regulatory Authority
NIPH	National Institute of Public Health
RWC	Regional Water Company
MESPI	Ministry of Environment, Spatial Planning and Infrastructure
WHO	World Health Organization
UN	United Nations Organization
AWSC	Association for Water and Sewerage Companies
AI	Administrative Instruction

INTRODUCTION - WATER SAFETY

Water is essential for life. The safety and quality of water are of fundamental importance for the development and well-being of people. Ensuring access to clean and safe water is one of the most effective means in promoting health and reducing poverty. Consequently, the supply of sufficient, safe water and access to it must be made available to all.

Improving access to safe drinking water offers numerous health benefits. This is due to the importance of water for maintaining hygiene and, on the other hand, because many diseases are the result of drinking water contamination, which poses a significant problem for human health. The most vulnerable categories to these types of diseases are infants, children and the elderly.

Figure 1. Drinking water

Drinking water is supplied in different forms: from public water supply systems that are managed by public companies (RWCs), from rural water supply systems that are not managed by public companies, from individual systems (wells, springs, etc.).

Safe drinking water is water that does not pose any health risk even when consumed throughout life.

Water supply faces numerous risks, which cause significant problems for large and small water supply systems. Among these risks are contamination with pathogens, contamination with chemical products of agriculture, the appearance of algae as a result of high temperatures and eutrophication. The latter – eutrophication – is actually the 'aging' of an aquatic ecosystem such as a lake, which is the result of an increase in the concentration of organic matter (phosphorus and nitrogen), and which is manifested by the appearance of algae and microscopic organisms on the surface of the water which prevents the penetration of sunlight and the absorption of oxygen in the water.

The identification and management of these risks are extremely important to prevent and mitigate the negative consequences of these threats.

The quality and safety of drinking water supplied through public water systems managed by Regional Water Companies (RWCs) is generally good. Thus, in 2021, the vast majority of analyzed samples (99.16% in compliance with the microbiological parametric values, while

98.42% in compliance with the chemical parametric values) in the water supply systems which are managed by RWCs have been in compliance with the standards of the quality determined by the legislation in force[1], the same as in previous years (in 2021-98.1%, in 2020 it was 99.4%, in 2019 it was 98.8%, etc.)[2]

However, in some municipalities (such as the municipality of Klina[3]) and in some cases (as was the case in some villages of the municipality of Deçan[4] (Prilep, Irzniq, Gllogjan, Gramaqel, Baballoq, Rastavice), in July 2021 there were problems regarding the quality and safety of drinking water. In particular, the biggest problems regarding the quality of drinking water are in cases of water supply systems which are not managed by RWCs and in cases of individual wells.

LEGAL AND INSTITUTIONAL ASPECTS

The legal and institutional framework for the quality of drinking water in Kosovo is quite well consolidated.

The legal framework for *the quality of drinking water* is determined by Law No. 2/L-78 for Public Health approved by the Assembly of Kosovo in 2008 and the by-law (Administrative Instruction (AI) No. 10/2021 on the Quality of Water for Human Consumption) approved by the government in 2021, which in accordance with this law constitute the legislation with which regulates the quality of water in Kosovo. This AI has completely transposed the relevant EU directive on the quality of drinking water [5].

The relevant legislation for *the protection of water sources* used for water supply, meanwhile, consists of Law No. 04/L-147 for the Waters of Kosovo and the bylaw (Administrative Instruction (AI) No. 15/2017 for Criteria for Determining Sanitary Protected Areas of Water Resources) issued by the Ministry of Environment, Spatial Planning and Infrastructure in 2017.

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[1]According to *the ANNUAL REPORT OF THE DEPARTMENT OF HUMAN ECOLOGY FOR THE YEAR 2022*. Ministry of Health, February 2023.

[2]Based on *the Annual Performance Reports of Water Service Providers* for the years 2021, 2020, 2019, published by the Water Regulatory Authority (ARRU). Taken from: http://www.arru-rks.org/monitorimi/374/raportet-vjetore-te-performances/374

[3] Annual-Report-Quality-of-drinking-water-in-Kosovo-2017.pdf (niph-rks.org) published by the National Institute of Public Health, June 2017.

[4] 2021 Service Provider Annual Performance Report published by ARRU.

[5]Directive (EU) 2020/2184 of the European Parliament and of the Council **on the quality of water intended for human consumption**, of 16 December 2020. Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020L2184&qid=1692617446411 .

The Law on Public Health defines the key role of the National Institute of Public Health (NIPH) for ensuring the quality of drinking water as the responsible authority that performs quality *analysis and assessment* as well as for *the supervision and control of drinking water.*

Figure 2. Logo of the National Institute of Public Health of Kosovo (NIPH)

On the other hand, with the IA for the quality of drinking water, all aspects related to the quality of drinking water are regulated in more detail, including the parametric quality values that must be met by the water used for drinking and cooking, water quality monitoring modalities, actions to be taken in case of endangerment of drinking water quality as well as institutional responsibilities for ensuring drinking water quality. With this AI it is determined that drinking water must be healthy and clean, which means that it:

(i) must not contain any micro-organism or parasite and any other substance that may pose a potential risk to human health, and
(ii) to fulfill the minimum requirements in terms of microbiological and physico-chemical quality defined by this AI.

With this AI, the obligation of water suppliers (RWCs) to develop *water safety plans is determined*. These plans must be developed based on the principle of risk assessment and management and on the guide prepared by NIPH. NIPH implements the legal responsibilities regarding the quality of drinking water through the Water Center, which is a unit within NIPH. The Water Center, according to the AI for drinking water quality, is responsible for taking the necessary measures to ensure that drinking water is healthy and clean.

The control and supervision of the quality of drinking water is carried out by NIPH through *compliance monitoring*, which includes all measures that verify that the water supplied to consumers meets the defined parametric values. When the drinking water does not meet the parametric quality values, the Water Center of NIPH must notify the relevant authorities (municipalities, Regulatory Authority for Water Services) and the water supplier about the non-

compliance of the water with the parametric values, as well to decide and recommend to water suppliers and relevant authorities corrective actions, including possible restrictions on water use that are necessary to protect human health.

The monitoring of radioactive parameters (Radon, Tritium and Indicative Dose) according to the AI for the quality of drinking water is the responsibility of the Agency for Radiation Protection and Nuclear Safety (ARPNS), which now operates within MESPI. The monitoring of these parameters is also a practice in EU countries and is regulated by the relevant EU directives on the quality of drinking water in order to assess whether the presence of radioactive substances in water intended for human consumption poses a risk for human health, which requires action and, when necessary, the undertaking of corrective actions to improve water quality to a level that is consistent with the requirements for the protection of human health.

CURRENT STATE AND CHALLENGES

The water of proper quality is a fundamental indicator for the health and well-being of a society and, consequently, of essential importance for the development of a country. Contaminated water not only poses an immediate threat to human health but also has an impact on the level of productivity of an individual and thus on the overall performance of society.

With the UN's 2030 Agenda for Sustainable Development, which Kosovo also adopted in 2018, 17 goals of sustainable development have been defined. Goal 6 (SDG 6) of this document states: *"water sustains life, but clean and safe water defines civilization"*. The first Target within this Goal (Target 6.1) is: *"Until 2030, achieve universal and fair access to safe and affordable drinking water for all".*

Figure 3. SDG 6 icon

Currently in Kosovo over 90% of the population is supplied with water from public water supply systems. Of this number, 79%[6] are supplied by public water systems managed by RWCs, while the rest from public systems not managed by RWCs (these systems are 'managed' by the community). The rest of the population, about 4%, are supplied with water from individual sources (wells).

It is estimated that in 2020, approximately 76%[7] of the world's population had access to safely managed drinking water.

1. Safety of water supplied by public water supply systems managed by RWCs

Most of the public water supply systems that supply the vast majority of Kosovo's population (79%, according to WSRA) are managed by the seven RWCs. The quality of water supplied through these systems is controlled by the water supplier (respective RWC) as well as by NIPH. It is worth emphasizing that according to NIPH reports, in the last 6-7 years, over 98% of the samples tested have been in compliance with the legal parameter values.

Figure 4. One of the 7 Regional Companies responsible for supply with drinking water in Kosovo

Furthermore, in order to achieve the safety of drinking water, the legislation requires water suppliers (respective RWCs) to develop *water safety plans* based on risk assessment and risk management principles for all components in the water supply chain, from the water source to the consumer's tap. This approach to ensuring the quality of drinking water through water safety plans, is a universal approach that is now applied almost all over the world and is

[6]According to *the Annual Performance Report of Water Service Providers for 2021*, developed and published by WSRA- http://www.arru-rks.org/assets/cms/upload/Annual ReportPerformancesService Providers_05.09.2022.pdf

[7]According to the WHO report: *State of the World`s Drinking Water: An urgent call to action to accelerate progress on ensuring safe drinking water for all* – https://www.who.int/publications/i/item/9789240060807

recommended by the World Health Organization (WHO). The RWCs, through the Association for Water and Sewerage Companies (AWSC), have already begun work on drafting water safety plans, which must be completed by the end of 2025.

As a conclusion, the safety of drinking water which is supplied through water supply systems managed by RWCs is **at a satisfactory level,** given that:

- The water supplied through these systems *is treated and controlled by the water supplier* and *supervised by NIPH*. The monitoring results show that the quality of this water is good – there is a high degree (over 98%) of compliance with the parametric quality values;
- The water sources from which these systems are supplied have defined *sanitary protection zones* in which prohibitive and restrictive measures are applied in accordance with the law, in order to protect the source from pollution;
- Water suppliers (RWCs) are in the process of *developing water safety plans* that will address all potential harmful substances and possible harmful situations (hazards) that could potentially jeopardize the quality of the water supply are addressed. The development and subsequent implementation of these plans will enable the achievement of a very high level of water safety.

2. Safety of water supplied by water supply systems that are not managed by RWCs

A number of water supply systems are not under the management of RWCs. This includes a significant number of rural water supply systems, but also some municipalities (e.g. Parteshi, Shtërpca). The water supply systems in the four northern municipalities are also not managed by RWCs (they are managed by municipal enterprises which are not licensed by WSRA in accordance with the legislation in force).

According to WSRA (annual report for 2021[8]), a significant number of these water supply systems, 93 in total, are expected to be taken over by RWCs.

The water supplied through these systems *is not controlled by the water supplier* (since there is no licensed water supplier as is the case with RWCs), and *is not supervised by NIPH*. Consequently, there is no information on the quality of the water supplied by these systems. Additionally, the water sources from which these systems are supplied do not have defined protected areas of water sources and, consequently, no protective measures are implemented for these water sources as required by the legislation in force for the protection of water sources.

[8] Report on the Level of Services 2021.pdf (arru-rks.org)

In conclusion, the safety of the water supplied by the water supply systems which are not managed by the RWCs **is not at the appropriate level** since it is not subject to any control and supervision by the relevant institutions and protective measures are not applied to the water sources from which these systems are supplied. Therefore, the issue of the safety of drinking water supplied by these water supply systems must be addressed with due seriousness by the responsible authorities in order to prevent endangering the health of the population as a result of possible contamination of the drinking water supplied by these systems.

3. Safety of water supplied by individual water sources (wells, etc.)

The part of the population (about 4%) that is supplied by individual water supply systems (wells, springs) is the most vulnerable in terms of water safety. Based on NIPH's numerous public statements, most cases of water-borne diseases (such as *diarrhea*) are from areas supplied by individual water supply systems. This is because the wells from which this category of population is supplied are often shallow and consequently unprotected from pollution coming from the surface of the earth (organic and inorganic pollution) and they have almost no protective measures that should be applied in these cases.

The water supplied by these systems is not subject to systematic control by the relevant institutions - except for the rare control that can be done at the initiative of the user of the well. As a result, the risk of drinking water contamination in these cases is almost permanent and **the safety of the water supplied through individual water supply sources is minimal**. Therefore, the responsible institutions should, as a priority, engage in:

(i) investing in the construction of public water supply systems in areas where they do not exist, and

(ii) to create a system of effective supervision of water quality control in cases of supply from wells and other individual water sources and the implementation of standards for the protection of these sources (wells).

Figure 5. Water well in the village of Polac, Skënderaj

RECOMMENDED POLICY

Kosovo is committed to achieving the goals of the 2030 Agenda, including the achievement of Target 6.1 of the sustainable development goals, which means ensuring **access to safe drinking water for the entire population**. On the other hand, with the Revised Strategy for Water 2023-2027[9] approved by the Government of Kosovo in May 2023, among the defined objectives are also:

(i) increasing the compliance of water quality supplied by public water supply systems – to the level of 99.5% (from the current state of 98.1%) until 2027;

(ii) increasing the coverage of the population with public water supply systems managed by RWCs – to the extent of 90% by 2027 (from 79% as it is currently).

Bearing this in mind, as well as the importance of access to safe drinking water for the health and well-being of the population and also the economy of the country, it is recommended that the responsible institutions address the problem of water safety through the following actions:

1) **The development of water safety plans by RWCs.**

   NIPH should create a guideline to serve as a tool for RWCs for the development of water safety plans for all water supply systems they manage. For the design and implementation of these plans, which are essential for water safety, RWCs should create their own teams for the design and implementation of water safety plans.

2) **Effective protection of drinking water sources** in accordance with the legislation in force[10].

   Since, for the majority of sources of drinking water that are used by RWCs, from 2013 onwards, sanitary protection zones have been defined by Government decisions along with the measures that must be applied to each of the 3 sanitary zones, these measures must be fully implemented by the RWCs, MESPI, and municipalities, each according to their respective responsibilities as stipulated by the law.

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[9] Government of Kosovo (2023). Review of the State Water Strategy 2023-2027 and Action Plan 2023-2025, Pristina – https://mmphi.rks-gov.net/MMPHIFolder/DocumentsFiles/2023_d8a77e4b-0cdc-4825-964b-b42d6466fd9e.pdf

[10] *Law No. 04/L-147 for Kosovo Waters* approved by the Assembly of Kosovo in April 2013, and *Administrative Instruction No. 15/2017 on Criteria for Determining Sanitary Zones of Water Resources* approved by the Ministry of Environment and Spatial Planning in 2017 and amended and supplemented by *Administrative Instruction MMPHI No. 11/22.*

3) **Integration of all urban and rural water supply systems under the management of RWCs.**

Given that the seven RWCs are public enterprises licensed by WSRA that have professional and financial capacity for the proper management of water supply systems, including water quality control and the provision of drinking water safety, it is of fundamental importance that all urban and rural systems which are currently not managed by the RWCs are brought under their management. This is considered to be the best option for the safety of drinking water supplied through public water supply systems.

4) **Development of technical standards for the construction and protection of individual well systems for water supply.**

Considering the fact that there are still (and will continue to be for some time) households that are supplied with water from individual wells, it is recommended that NIPH develops a document – technical standards for construction, drilling and maintenance and that is implemented in cooperation with municipalities. It is also recommended, that the NIPH together with the municipalities conducts the inventory (registration) of individual wells and the monitoring of water quality in these wells, taking into account the responsibility of the NIPH in protecting public health.

5) **Construction of public water supply systems in areas where they are absent.**

Considering the problems that follow the water quality in cases of supply from individual water supply systems, such as: lack of systematic control of water quality, lack of measures to protect individual sources/wells, priority should be given to planning and constructing water supply systems in all areas where they are missing, as well as to integrate them under the management of the respective RWCs in accordance with the service areas that have them.

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