

JOINT REPORT

on the Results of the Cooperative audit in relation to Goal 6
of the United Nations Sustainable Development Goals

2024



Ensure availability and
sustainable management
of water and sanitation
for all

PARTICIPATING SUPREME AUDIT INSTITUTIONS

STATE AUDIT OFFICE OF HUNGARY



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ACCOUNTING CHAMBER OF UKRAINE



The Accounting Chamber
Subordinate to the Institution of Audit

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BACKGROUND

The 2030 Agenda for Sustainable Development is an action plan for people, planet and prosperity. It assesses key vulnerabilities to which countries and economies are exposed in almost all fields. All of the Sustainable Development Goals (SDGs) are essential to protecting future generations, but United Nations (UN) Goal 6 is integral and interconnected to virtually all of them, as water is crucial for all forms of life on the planet, and for all spheres of human activity.

It is worth noting that, according to the UN¹, 3 out of 10 inhabitants on the planet do not have access to safe sources of drinking water, 6 out of 10 do not have access to sanitation services. For more than 40 percent of the population, the problem of water shortage is urgent. Forecasts also show that at the current rate of progress, by 2030, 1.6 billion people will lack safe drinking water, 2.8 billion people will lack safe sanitation, and 1.9 billion people will lack basic hand hygiene. To ensure drinking water, sanitation and hygiene by 2030, the current rate of progress must be quadrupled.

The International Science Council's (ISC) analytical note for the UN Water Conference 2023 is also disappointing, with the key message that **the world is not on track to achieve global water-related targets, as defined in Goal 6** and other relevant SDGs. **Water crises around the world threaten the achievement of key development** and environmental goals and, ultimately, all the SDGs, given the central role of water in social, political and economic affairs at all scales.

The above is also confirmed by the World Bank's 2022 Annual Report on the Global Partnership for Water Security and Sanitation², which, in particular, states that **investments in water supply and sanitation remain important** for eradicating poverty, overcoming the negative consequences of climate change, and building more inclusive and equitable societies. **However, progress towards achieving UN Goal 6 and other water-related SDGs is insufficient.**

Thus, the achievement of the SDGs, including Goal 6 on ensuring the availability and rational use of water resources and sanitation, should be a priority for governments of countries that have joined the global process of ensuring sustainable development. Humanity's activities must meet not only the needs of the current generation, but also those of future generations, including their needs for a safe and healthy environment.

This challenge is global and solving the problem of drinking water shortages requires joint efforts from all countries and the international community. Recognizing this, the Supreme Audit Institutions (SAIs) of the Republic of Croatia, Hungary (audit coordinator), the Republic of Poland, the Republic of Serbia, and Ukraine agreed to participate in the international coordinated audit on Goal 6 of the UN SDGs "Ensure availability and sustainable management of water and sanitation for all".

Overall, water and sanitation are at the very heart of sustainable development. Protecting water is a cornerstone of sustainable development. With only 0.007% of the planet's surface water suitable for human consumption, protecting it is a priority for national and international leaders. Supreme Audit Institutions pay special attention to issues related to water management and to the adequacy of public water management. They have in recent years increased their focus on issues that affect a wide range of society, with a particular emphasis on monitoring the performance of public tasks related to water management.

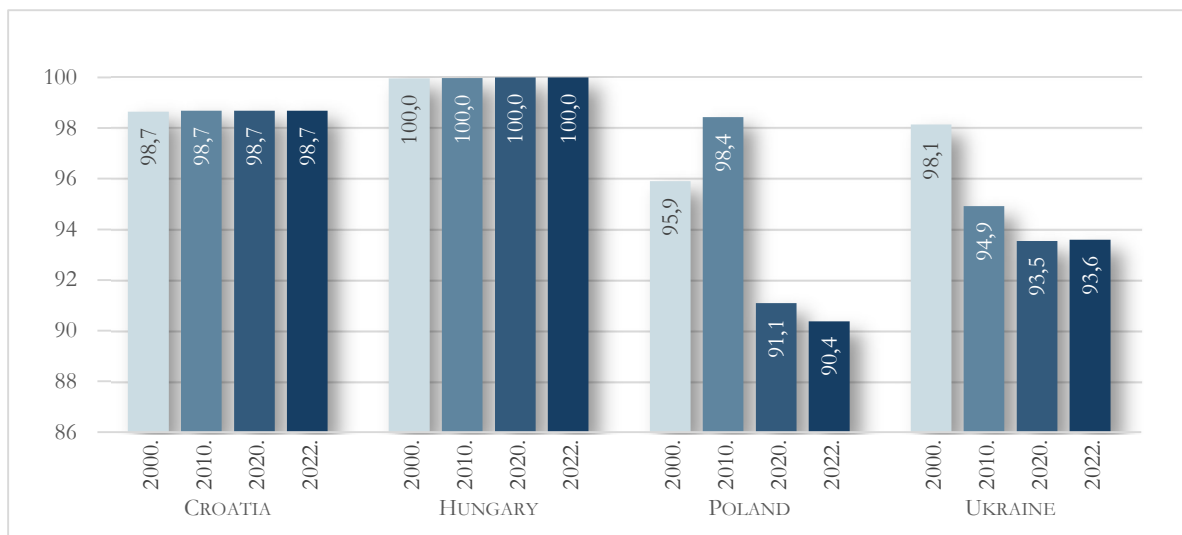
The UN has set the target 6.1 on Drinking water: "By 2030, achieve universal and equitable access to safe and affordable drinking water for all". Figure 1 and Graph 1 show access of the population to drinking water in the countries.

Figure 1: EUROPEAN COUNTRIES BY ACCESS TO DRINKING WATER (% OF POPULATION)



Data source: atlasocio.com

Graph 1 ACCESS TO DRINKING WATER (% OF POPULATION) IN COUNTRIES INVOLVED IN SDG 6.1 AUDIT

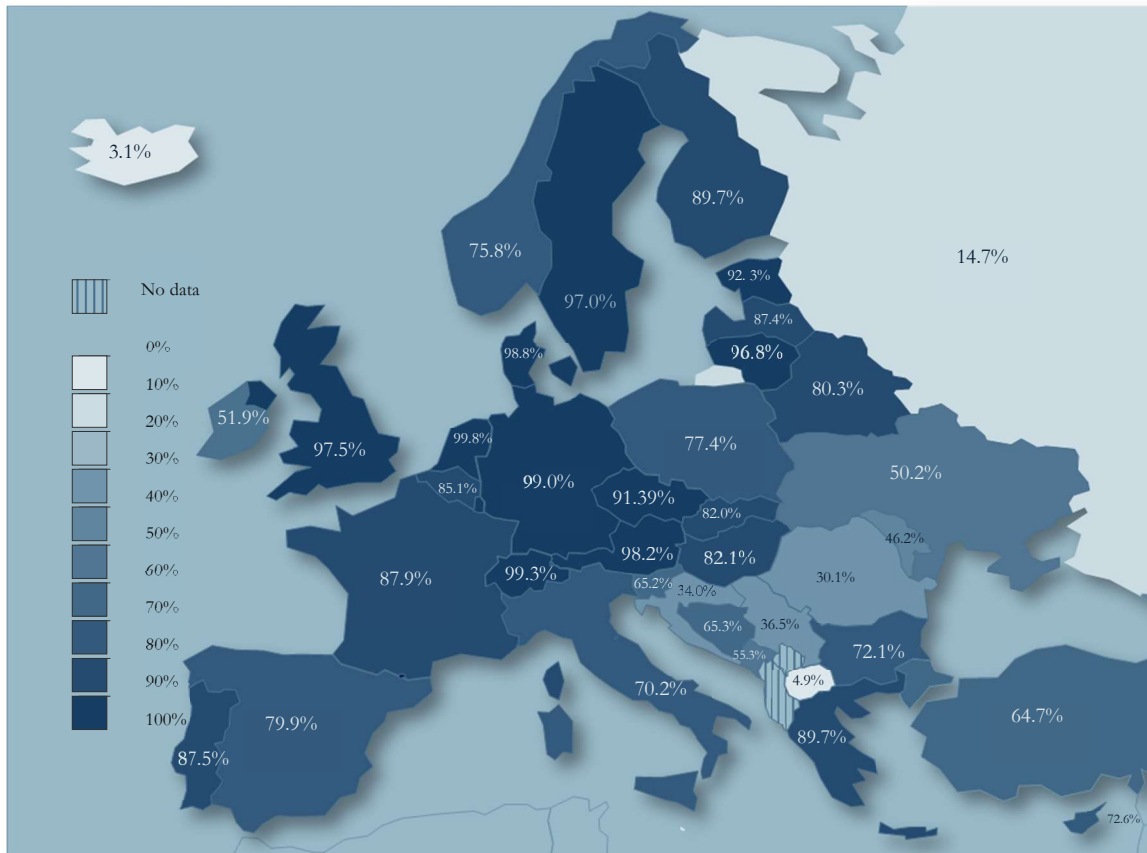


Source: atlasocio.com

The UN has set the target 6.3 on water quality and wastewater as follows: “By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials,

halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally”. Figure 2 represents the proportion of safely treated domestic wastewater.

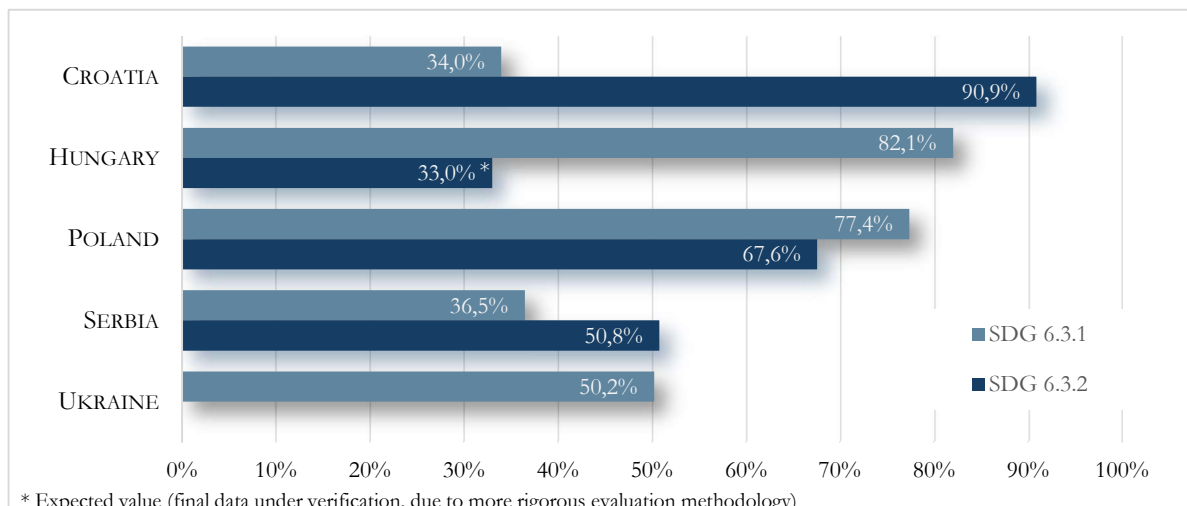
Figure 2: SHARE OF DOMESTIC WASTEWATER THAT IS SAFELY TREATED (2022)



Data source: World Health Organization

OurWorldInData.org/water-use-stress | CC BY

Graph 2: PROPORTION OF WASTEWATER FLOW (SAFELY) TREATED (2022) AND PROPORTION OF BODIES OF WATER WITH GOOD AMBIENT WATER QUALITY (2023) IN COUNTRIES INVOLVED IN SDG 6.3 AUDIT



* Expected value (final data under verification, due to more rigorous evaluation methodology)

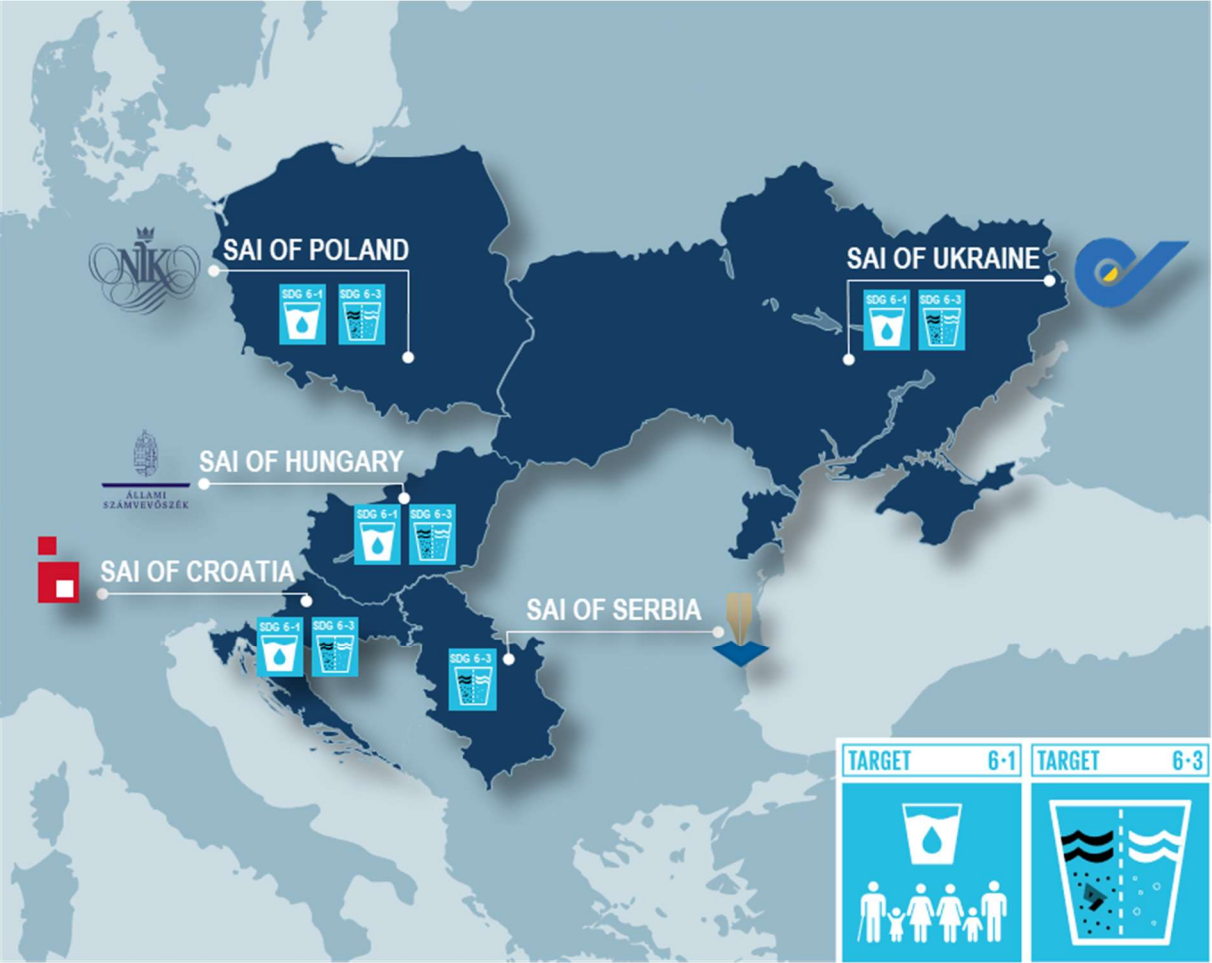
Data source: UN Water

<https://www.sdg6data.org/> (EN_H2O_WBAMBQ & EN_WWT_WWDS)

PARTICIPATING SUPREME AUDIT INSTITUTIONS

Supreme audit institutions play an increasingly important role in contributing to efficient and cost-effective policy implementation through their independent evaluation of government activities. SAIs of five countries – Croatia, Hungary, Poland, Serbia and Ukraine (see Figure 3) – agreed to participate in the coordinated audit in relation to Goal 6 of the UN SDGs "Ensure availability and sustainable management of water and sanitation for all".

Figure 3: PARTICIPATING SUPREME AUDIT INSTITUTIONS












Source: National reports

The cooperative audit assessed the achievement of SDG 6, as one of the 17 global goals, that were adopted by member countries of the United Nations in 2015. Goal 6 is about ensuring access to water and sanitation for all. National audits focused on target 6.1 “By 2030, achieve universal and equitable access to safe and affordable drinking water for all” and target 6.3 “By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally”.

The following table shows which Goal 6 targets were audited by each SAI.

Table 1: SAIS AUDITS IN RELATION TO GOAL 6 “ENSURE ACCESS TO WATER AND SANITATION FOR ALL”.

Supreme Audit Institution		Audit in relation to Goal 6: Ensure access to water and sanitation for all	
	Title of national report	6.1 Drinking water	6.3 Water quality
State Audit Office of the Republic of Croatia			
	Improvement of water quality and the availability of water for human consumption in the Republic of Croatia		
State Audit Office of Hungary			
	Audit of measures taken to implement the National Water Strategy (Drinking water management)		
	Wastewater and water pollution – social and environmental sustainability in the light of the UN Sustainable Development Goal 6 (Analysis)		
Supreme Audit Office of the Republic of Poland			
	Water resources management in rural municipalities		
	Wastewater collection and treatment		
State Audit Institution of the Republic of Serbia			
	The Effectiveness of Measures for Improving Water Quality related to Protection of Water from Pollution (SDG 6.3)	–	
Accounting Chamber of Ukraine			
	Report on the results of the performance audit of actions aimed at achieving Goal 6 " Ensure availability and sustainable management of water and sanitation for all" of the Sustainable Development Goals of Ukraine for the period up to 2030		

Source: National reports

This report summarises the findings, conclusions of 7 audits/analysis carried out by the participating SAIs. Part 2 presents our overall audit messages based on the conclusions of individual audit reports. The individual audits covered the monitoring of the different sub-targets of SDG 6, and thus the overall audit conclusions were drawn for the relevant targets.

Part 3 presents the main audit findings, illustrated with highlights from the national audit reports.

COMMON AUDIT FRAMEWORK

To collect and evaluate comparable information on national level strategic actions, the 5 SAIs prepared a common audit framework containing the main audit question, and - as in the Agreement of cooperation - related criteria to be addressed by the national audits.

The main question of the international coordinated audit concerning target 6.1 was:

What results did the responsible national institutions and service providers achieve in controlling the quality of drinking water and ensuring healthy drinking water?

The main question of the international coordinated audit concerning of target 6.3 was:

What results did the responsible national institutions and service providers achieve in improving water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, decreasing the proportion of untreated wastewater and increasing recycling and safe reuse?

The common audit criteria for both targets were:

- In order to achieve the target, a strategy was developed (including the case that the responsible organization already had a strategy setting such a goal before the SDGs were announced by the United Nations).
- Indicators were assigned, measured and evaluated related to the goals formulated in the strategies.
- The financial and human resources were available.
- Goals were achieved or progress was made to reach the aimed state.
- The implementation of the goals was monitored and in the event of a significant deviation from the plans, amendments and supplementary measures were taken.

CRITERIA-BASED EVALUATION

The following table shows countries' performances assessment in the areas for which criteria have been defined beforehand.

Table 2: PERFORMANCE ASSESSMENT ON AUDITED AREAS

	CROATIA		HUNGARY		POLAND		SERBIA	UKRAINE	
	6.1	6.3	6.1	6.3	6.1	6.3	6.3	6.1	6.3
In order to achieve the target, a STRATEGY was developed	✓	✓	✓	✓	✓	✓	✓	✓	✓
INDICATORS WERE ASSIGNED, MEASURED AND EVALUATED	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	✓
The financial and human RESOURCES were available	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
GOALS WERE ACHIEVED OR PROGRESS WAS MADE TO REACH THE AIMED STATE	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	✓
The implementation of the goals was MONITORED and in the event of a significant deviation from the plans, amendments and supplementary measures were taken	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️

✓ Established, results were achieved ⚙️ Partial progress has been made ✗ Not developed, no results were achieved

Source: National reports

STRATEGIES AND PLANS

Given that the focus of the audits was the SDG 6, it was considered important to summarise whether objectives were reflected in the individual strategy and plan documents. That required an assessment and review of existing strategies and plans. The audits have revealed that strategies were prepared/available during the audited period. The following graph represents the strategies and plans in place during the period audited, broken down by country.

Graph 3. STRATEGIC AND PLANNING DOCUMENTS IN FORCE FOR 2017-2022



Source: National reports

JOINT CONCLUSIONS

The following part of the report presents the common results using comparable criteria, data. The benchmark gives means of comparative evaluation between the different countries. While the individual national audits have, among other things, been assessed along common criteria, certain facts can be stated overall, even if the findings differ in some cases.

The world's water resources are dwindling, their conservation is of prime importance to humanity, and the state has a fundamental role to play in ensuring the economical and efficient use of existing water resources.

Based on the audits, the SAIs concluded that the sector strategies were in line with international objectives for drinking water supply and wastewater. However SAIs found that the achievement of strategic objectives is hampered by the lack of overall coordination at a strategic level and the absence of integrated databases to support decision-making processes. There were not sufficiently effective integrated approaches to the planning and implementation of specific goals and tasks. Without this conformity, water management areas may face a lack of coordination in actions, waste of resources, and lack of focus.

There were no systematic monitoring and reporting mechanisms established in the area concerned. Monitoring and feedback are also aimed at improving the efficiency and effectiveness on water management processes. At the same time SAIs have been exposed to the lack of reliable information, to the shortage of comprehensive data, to the absence of complete and extensive records of water supply projects.

A given proportion of the volume of water extracted was accounted for by losses of non-used utility water fed into the network. One of the reasons for the water loss is due to the deterioration of the assets and the lack of reconstruction. Financing needs for the reconstruction of water utility networks have continuously increased in the past years. In line with this, there was an absence of available data on the state of drainage systems, the condition of piped water systems is outdated and ageing.

In the framework of the audits that have been completed, during the period audited access to safe and healthy drinking water in sufficient quantity and quality improved or, where it has reached a more advanced status, has not changed significantly.

The wastewater sector has spent many years refining and developing technologies to ensure high standards of wastewater treatment (primary, secondary and tertiary) so that wastewater does not pollute receiving waters. While most countries have shown improving performance in the safe treatment of wastewater, the water quality of the water bodies has not improved significantly in recent years everywhere. This is – among others - because countries with an industrial background have difficulties in meeting the biological and chemical limits set by the Water Framework Directive and amount of wastewater is still neither collected nor treated adequately.

The water quality data also highlight a potential ecological paradox of wastewater treatment: the more wastewater is collected in the public networks, the more the organic matter and nutrient load to surface waters increases due to the increase in discharges from wastewater treatment plants. In the case of groundwater, however, the improvement will only be seen decades after the load is removed. For wastewater treatment, the primary objective is to connect as many households as possible to the wastewater network. However, in some places, the capacity to treat wastewater may be less than the collection capacity.

Even though progress has been made, water quality is a complex area, where the impact of the resources invested on results is not just dependent on a single factor, therefore meeting SDGs 6.1 and 6.3 may be challenging due to the above considerations.

JOINT RECOMMENDATIONS

Based on the main message and conclusions, the following overall subjects for suggestions recommended for consideration are made to national governments and state bodies:

1. improving coordination between various state bodies and stakeholders in the field of water resources management and wastewater treatment;
2. clearly defining the role and responsibility of state bodies, in order to avoid duplication and ensure accountability;
3. creation of integrated databases and information systems for monitoring and improving decision-making in the field of water resources management and wastewater treatment;
4. improving mechanisms for regular monitoring and reporting on water quality and use, ensuring transparency and accuracy in data collection and dissemination;
5. giving priority to investments in maintenance and modernization of water supply and wastewater treatment infrastructure;
6. implementation of advanced technologies for water loss detection, wastewater treatment and pollution control;
7. increasing public awareness of water conservation, pollution prevention and sustainable use of water resources through educational and informational programs and developing specific and clear-cut instructions on motivating service recipients to use water rationally and reduce sewage pollution;
8. involving the population in water resource management practices and decision-making processes.

GOOD PRACTICES

The aim of the cooperative audit was not only to evaluate the achievement of the SDG targets 6.1 and 6.3 of the Sustainable Development Goal 6, but also to identify good practices.

CROATIA

In connection with the recommendation to determine the indicators on the basis of which the implementation of the Program for the reduction of losses in water supply systems (hereinafter: Loss Reduction Program) in the Republic of Croatia would be monitored and the achievement of the goals, i.e. the effectiveness of the implementation of measures from the Program, would be assessed, audited institutions state that water losses amount to about 50.0 % and represent a major problem in the financial and technical-technological sense. Funding of the Loss Reduction Program and associated projects is a priority in order to reduce pressure on water bodies and enable long-term establishment of sustainable management of water supply systems. Croatian Waters and the Ministry of Economy and Sustainable Development have been implementing a Loss Reduction Program since 2018, which is designed to enable public suppliers, especially those with larger losses in the network, to determine the zero state and, in addition to other programs, to actively start reducing losses and bringing the system to an appropriate level. During 2023, measuring devices were installed at all water intakes, as a basic measure. The Ministry of Economy and Sustainable Development and Croatian Waters are the beneficiaries of the project Support for the reduction of water loss within the framework of the water sector reform in the amount of EUR 600,000.00. The project is financed through the Instrument for Technical Support within the framework of the NRRP, and is implemented by the World Bank in cooperation with the Directorate - General for Structural Reform Support - of the European Commission. It is expected that the project will contribute to the sustainability and affordability of public water services as well as the security and resilience of the water sector, strengthen the capacity to reduce water losses and improve the efficiency of public suppliers' operations. The main expected result of the project is the creation of a National Action Plan for reducing water losses in public water supply systems by the end of June 2024, based on which integrated public suppliers will be able to create their own action plans for reducing losses by the end of 2025, and with quality management of the water balance determine the situation and qualitative analysis and determination of priorities for effective implementation of water loss reduction.

Furthermore, regarding the activities of encouraging public suppliers of water services to reduce losses by providing financial, administrative, technical, investment and operational assistance, audited institutions held 18 workshops in 2022 within the framework of the project Support for the reduction of water losses within the reform of the water sector in the Republic of Croatia and 2023 in order to strengthen the capacity of public suppliers. The European Commission also approved the project Support for the reduction of water losses within the framework of the reform of the water sector in the Republic of Croatia phase II, with which it is planned to help public suppliers in creating their own action plans for reducing losses, strengthening their capacities through workshops and strengthening the capacities of regulators Council for water services through assistance for the establishment of a national system for evaluating the efficiency of public suppliers' operations and regulatory accounting.

HUNGARY

The State Audit Office of Hungary (SAO) identified the followings as good practice because it has an indirect impact on sustainability. If costs can be reduced through efficiency investments, then more resources can be allocated to maintenance, renovation, investment, quantitative and/or qualitative water losses can be reduced, supply and sustainability can be further improved.

Water utility companies and those responsible for supply have made use of the possibilities to apply for grants to initiate investment in increasing efficiency. 29 companies indicated in their data that they planned

to invest in efficiency. 24 utilities have applied for individual grants to the consortium of local governments responsible for supply or the consortium of the water utility company to carry out the investment. The successful applications were either implemented or in the process of implementation as of 31 August 2023. The increased efficiency investments included the installation of a small solar power plant, the purchase of energy-saving tools and equipment, technological and mechanical renovation, improvements to management systems and resource efficiency, modernisation, and replacement of windows and doors.

The audit assessed the water utilities regarding the presence of programmes and projects promoting awareness raising, water conservation and a more environmentally conscious lifestyle. Three quarters of the water utilities carried out awareness raising activities related to water conservation and water use. 25 organisations, two thirds of the water utilities, benefited from EU Program, Awareness raising on water utility services. In 2020, a total amount of HUF 1715 million was awarded to applicants, water utilities for awareness raising projects promoting sustainability, environmental protection and water awareness.

POLAND

Organizational solutions used in the National Fund for Environmental Protection and Water Management - internal procedures containing guidelines and rules, among other specification of deadlines for proceeding applications for co-financing and financing and final settlements applications, that could promote transparency in working procedures of this Fund.

SERBIA

Establishment of working group for the adoption of the Action Plan for the implementation of the Water Management Strategy on the territory of the Republic of Serbia until 2034, which, apart from the Republic Directorate for Water, includes the Ministry of Environmental Protection, the Ministry of Construction, Transport and Infrastructure, the Ministry of Health, the Ministry of Finance, the Office for Management of public investments of public water management companies and other relevant institutions.

Establishment of working group to review project proposals, provide opinions and expert reasoning for the project rationale regarding construction of new wastewater treatment plants and related sanitary networks, in order to define the list of projects that will be implemented/ carried out/ completed from the program loan together with/ alongside the Development Bank of the Council of Europe. The working group should operate taking into account numerous factors, including the economic justification of the project, the urgency of the works, the number of users, the degree of preparedness of the projects for implementation, the equal territorial representation of the facilities and the municipalities' level of the development.

Making a correlation between the reduction of discharge of untreated wastewater in watercourses from the Action Plan for the implementation of the Government Program in the period from 2023 to 2026 and the achievement of the SDG sub-goal 6.3.

UKRAINE

The Accounting Chamber has identified the implementation of investment projects aimed at reducing the discharge of untreated wastewater, including the reconstruction of water supply and sewage systems and the disinfection of drinking water at a filtration station using electrolysis units for sodium hypochlorite production, as one of the best practices directed towards achieving Goal 6 of Ukraine's Sustainable Development Goals by 2030. This goal focuses on ensuring the availability and sustainable management of water and sanitation for all.

To implement these projects, Ukraine has attracted both domestic resources (the State Water Management Development Fund, the State Regional Development Fund) and loans from international financial organizations and credits from foreign companies. These include the International Bank for Reconstruction

and Development, the European Investment Bank, the German Government's state development bank (KfW), and the Government of the French Republic through the French Corporate and Investment Bank Natixis.

According to the audit, the measures taken in 2021 resulted in a 38% reduction in the volume of polluted wastewater discharges into water bodies compared to 2015, and their share was reduced by almost 5%.

This confirms that the implementation of innovative water treatment technologies can significantly improve the environmental situation by preserving water resources and reducing the negative impact on the environment. Such measures also contribute to public health by providing access to cleaner water and better living conditions.

MAIN AUDIT FINDINGS



STATE AUDIT OFFICE OF THE REPUBLIC OF CROATIA

IMPROVEMENT OF WATER QUALITY AND THE AVAILABILITY OF WATER FOR HUMAN CONSUMPTION IN THE REPUBLIC OF CROATIA

METHODOLOGY, TOOLS USED

In the implementation of the audit, the following methods of data collection and analysis were used in connection with the improvement of water quality and the availability of water for human consumption:

- analysis of the legal, strategic and planning framework
- analysis of reports on the implementation of goals, measures and activities
- insight into published reports and analysis of published data
- analysis of the documentation of audit subjects in order to verify the achievement of set goals and the implementation of activities
- insight into databases and analysis of data
- meetings / interviews / electronic correspondence with representatives of auditees
- comparison of data at the level of EU member states and UN members.

AUDITED INSTITUTIONS

Auditees were the Ministry of Economy and Sustainable Development and Croatian Waters. The Ministry of Economy and Sustainable Development is responsible for the water economy, is the holder of the water policy and is responsible for the implementation of the reform of the water utility sector. The implementing body at the national level is Croatian Waters, which is a body responsible for the implementation of water utility projects. Water utility projects in cooperation with the Ministry of Economy and Sustainable Development and Croatian Waters are carried out by public suppliers of water services, whose founders are local government units.

AUDIT PERIOD

2020, 2021, 2022, the second quarter of 2023

ABSTRACT OF THE NATIONAL REPORT

As one of the acts of strategic planning, which supports the implementation of the National Development Strategy, the Government of the Republic of Croatia adopted National Recovery and Resilience Plan 2021-2026 (hereinafter: NRRP), in which reforms and investments related to water are included in the Economy component, objective C1.3. Improvement of water management and waste management, measure C1.3. R1 Implementation of the Water management program. The Ministry of Economy and Sustainable Development is responsible for the implementation of the water management program. The target group is public suppliers of water services, consumers, the population and Croatian Waters. The estimated investment cost is HRK 5,250,116,802.00 and the implementation period is from February 2020 to June 2026.

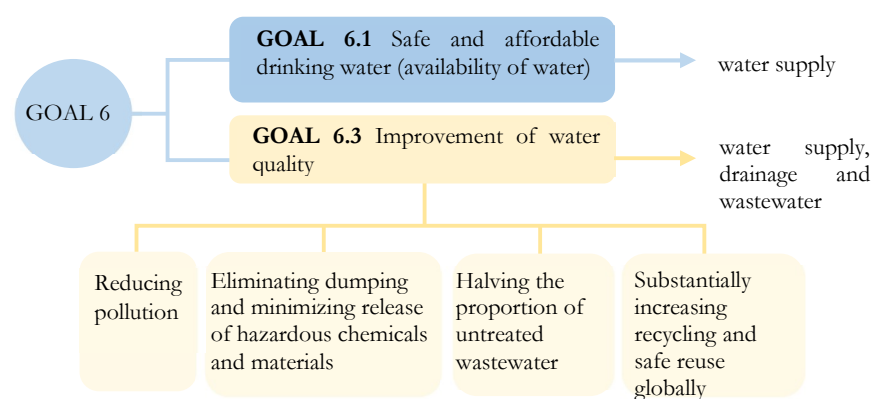
According to NRRP, the improvement of water management will be achieved through the implementation of three key water management programs: Public water supply development program aimed at ensuring access to safe and affordable water for human consumption, Public wastewater drainage development program with the

aim of improving water quality by reducing pollution and reducing the proportion of untreated wastewater and Disaster risk reduction program in the water management sector.

According to NRRP, the investments foreseen through three programs will contribute to the preservation of water resources with the aim of achieving greater resilience to climate change, while at the same time ensuring the availability of water for human consumption to all citizens, especially for vulnerable and marginalized groups, as well as in demographically endangered areas, reducing pollution of the environment and water resources by wastewater and the reduction of losses in water supply systems, which will reduce the pressure on water bodies and contribute to long-term sustainable water management, as well as reducing the risk of floods, i.e. contribute to the achievement of water protection goals (environmental goals), revitalization and protection of natural resources.

The goals and measures from the NRRP implemented within the Public water supply development program and the Public wastewater development program are directly related to the implementation of UN sub-goals 6.3 and 6.1 and are covered by this audit, which is shown in graphic representation.

Figure 4 CONNECTION OF THE WATER MANAGEMENT PROGRAM FROM NRRP WITH UN SUB-GOALS 6.3 AND 6.1



Source: National report

Audit area: legislative and institutional framework

The audit determined that the implementation of activities to improve the quality of water and the availability of water for human consumption, i.e. implementation of activities for the purpose of assessing the effectiveness of the achievement of UN sub-goals 6.3 and 6.1, is regulated by numerous regulations in the Republic of Croatia. Certain regulations have been amended and supplemented several times in previous years for the purpose of harmonizing with EU directives.

At the time of the audit, the Croatian Parliament passed the Law on Water for Human Consumption, which is in force since March 16, 2023. In the explanation of the Draft of the said Law, it is stated that the law is being passed because the provisions of the Law on Water for Human Consumption from 2013 have been amended four times due to the need to harmonize with EU regulations in the field of water quality for human consumption and due to the official notice sent by the European Commission to the Republic of Croatia on March 8, 2019, regarding the non-compliance of the regulations of the Republic of Croatia with the provisions of the Directive on the quality of water intended for human consumption (related to the healthiness and purity of water intended for human consumption free from any microorganisms and parasites and substances that in certain numbers or concentrations represent potential

danger to human health and compliance with the prescribed indicators of microbiological and chemical parameters).

During the audit, the Law on Amendments to the Law on Water (Official Gazette 47/23) was also adopted, and entered into force on May 4, 2023. The aforementioned changes refer, among other things, to the final harmonization with the Directive on the quality of water intended for human consumption.

According to NRRP, in order to achieve measure C1.3. R1 Implementation of the water management program, it is planned to adopt four by-laws by the end of the fourth quarter of 2022: Regulation on water service areas, Regulation on evaluating the efficiency of water service providers' operations, Regulation on the methodology for determining the price of water services and the Regulation on special conditions for the performance of water services.

At the end of December 2021, the Government of the Republic of Croatia adopted the Regulation on Water Service Areas (Official Gazette 147/21), which established 41 water service areas in the territory of the Republic of Croatia, certain borders and the acquiring company. Service area boundaries are the outer boundaries of local government units that border the neighboring service area. The said Regulation entered into force on January 8, 2022. However, during 2022, several proponents (local government units, public suppliers of water services, citizens' associations) submitted a proposal for the evaluation of the compliance of the Regulation with the Constitution of the Republic of Croatia and the law. The Constitutional Court of the Republic of Croatia initiated the procedure for assessing the compliance of the Regulation with the Constitution and the Law on Water Services and temporarily suspended the execution of all general and individual acts and actions undertaken on the basis of the Regulation. The proponents pointed out objections of a formal and material nature. The Constitutional Court established that the Government of the Republic of Croatia, in addition to the e-Consultation procedure, and independently of it, was obliged to attach an explanation in the process of adopting the Regulation that would show why the service areas were formed in the manner prescribed by the Regulation and that in each of service areas meet the criteria prescribed by the Water Services Act (e.g. that some public suppliers do not meet the legal requirements, that some are merged with over-indebted companies etc. Also it determined that additional criteria should have been prescribed for the establishment of the service area (e.g. criteria based on good management of water losses from the water supply system, the ability to use grants from EU funds and the future affordability of the water service price after the implementation of the EU project). During the audit implementation, a Draft Proposal for the Regulation on Water Service Areas was prepared, which, according to the Ministry's explanation, corrected all objections of the Constitutional Court. The Regulation on Water Service Areas (Official Gazette 70/23) entered into force on July 15, 2023. According to the explanation of the person responsible in the Ministry, final proposals were made for the mentioned three regulations, e-Consultations were conducted and the opinions of the relevant bodies were collected. Due to the additional requirements of the European Commission, the Ministry was in constant communication with the European Commission and harmonized certain details of the Regulation with the requirements of the European Commission without consequences for the payment of the next installment of financial resources from the NRRP.

The Regulation on the evaluation of the efficiency of water service providers' operations (Official Gazette 70/23), the Regulation on the methodology for determining the price of water services (Official Gazette 70/23) and the Regulation on special conditions for the performance of water services activities (Official Gazette 70/23) entered into force effectively in July 16, 2023.

According to the provisions of the Law on Water, the Government of the Republic of Croatia shall adopt regulations and other general acts determined by the said Law within one year from the date of entry into force of the said Law, or the minister within two years from the date of entry into force of the said Law. The audit determined that by the end of July 2023, a number of regulations were not adopted. According to the explanation of the responsible person of the Ministry, the regulations are harmonized with the acquis of the EU. As the drafting of the Water Area Management Plan until 2027 has started in the meantime, and the public has been given six months to submit remarks and comments on the draft Plan, it was not rational to change the regulations in the middle of the process. Given that the regulations are in force until new ones are adopted, there is no legal gap in that area. It also states that the regulations were not adopted because the Ministry focused on the adoption of higher-level regulations within its competence, as well as on regulations that needed to be adopted in order to harmonize with the EU acquis and on regulations in the field of water management based on the Action Plan for administrative relief of the economy for 2019.

The State Audit Office drew attention to the Ministry to timely undertake activities related to the adoption of regulations, which is particularly significant due to the fulfillment of the obligations assumed by the Republic of Croatia by concluding the EU Accession Treaty. According to the provisions of the Treaty on the Functioning of the European Union, if non-compliance with EU law is discovered, the European Commission can initiate proceedings against the Republic of Croatia before the Court of Justice of the European Union for not fully transferring its legislation all relevant provisions of the directives and can issue an official warning due to the incomplete transfer of EU law.

Furthermore, the audit found that the implementation of activities and individual tasks related to the improvement of the quality and availability of water for human consumption in the Republic of Croatia, that is, the achievement of UN sub-goals 6.3 and 6.1 under the jurisdiction of numerous bodies. The activities and responsibilities of the competent authorities are not determined by a separate document, except that for the implementation of the activities determined by the NRRP related to the reform of the water economy, the Decision on the management system and monitoring of the implementation of activities within the framework of the NRRP, it was determined that for objective C1.3. Improvement of water management, the competent body of state administration is the Ministry, and the implementing body is Croatian Waters.

The activities and responsibilities of the competent bodies can be seen from the description of the jobs and tasks of the mentioned bodies, prescribed by numerous laws and relevant regulations for water for human consumption.

Considering the large number of bodies participating in activities and tasks related to the improvement of water quality and the availability of water for human consumption, the State Audit Office is of the opinion that very good coordination is needed between the bodies participating in the realization of UN sub-goals 6.3 and 6.1 and more effective implementation of all activities in order to implement them by the end of 2030 and to effectively implement the water utility directives in practice, which the Republic of Croatia committed to by joining the EU.

Audit area: Implementation and financing of public water supply, drainage and wastewater treatment projects

The Ministry of Economy and Sustainable Development and Croatian Waters carry out the activities necessary for the implementation and financing of investments in projects related to the improvement of water utility infrastructure, i.e. water utility projects of public water supply, drainage and wastewater treatment, through the allocation of grants. The obligation to invest in water utility infrastructure stems from

the Treaty on Accession to the EU, which established transitional periods for harmonization with the Directive on the quality of water intended for human consumption and the Municipal Wastewater Treatment Directive.

According to the Multi-Year Construction Program, the total estimated costs of the development of water utility infrastructure amount to EUR 6.9 billion (HRK 52.8 billion) and are evenly distributed (51.0 % are the costs of the development of public drainage, and 49.0 % are the costs of the development of public water supply). The amount of financial resources available for the implementation of water utility projects until 2030 depends on the amount of allocation for water utility projects in Operational Program Competitiveness and Cohesion 2014-2020, on the amount of the remaining unspent allocation after December 31 2020, on the amount of allocation within the NRRP and on the amount of allocation in the Multiannual Financial Framework 2021-2027.

According to the explanation of the responsible person in Croatia Waters, the redistribution of funds, in order to ensure the smooth implementation of water utility projects, is mostly carried out due to the problems of users of funds for financing approved projects related to the implementation of public procurement, unforeseen circumstances caused by the epidemic, disruptions in the market of construction materials and products, problems in the delivery of the necessary equipment due to interruption of supply chains, later conclusion of the contract than planned, etc.

Water utility projects of public water supply, drainage and wastewater treatment are carried out by public water service providers, and financing is done through several financial packages. The largest part of water utility projects is financed from the funds of Environmental Protection Operational Program 2007-2013, Operational Program Competitiveness and Cohesion 2014-2020, NRRP and from the Swiss grant.

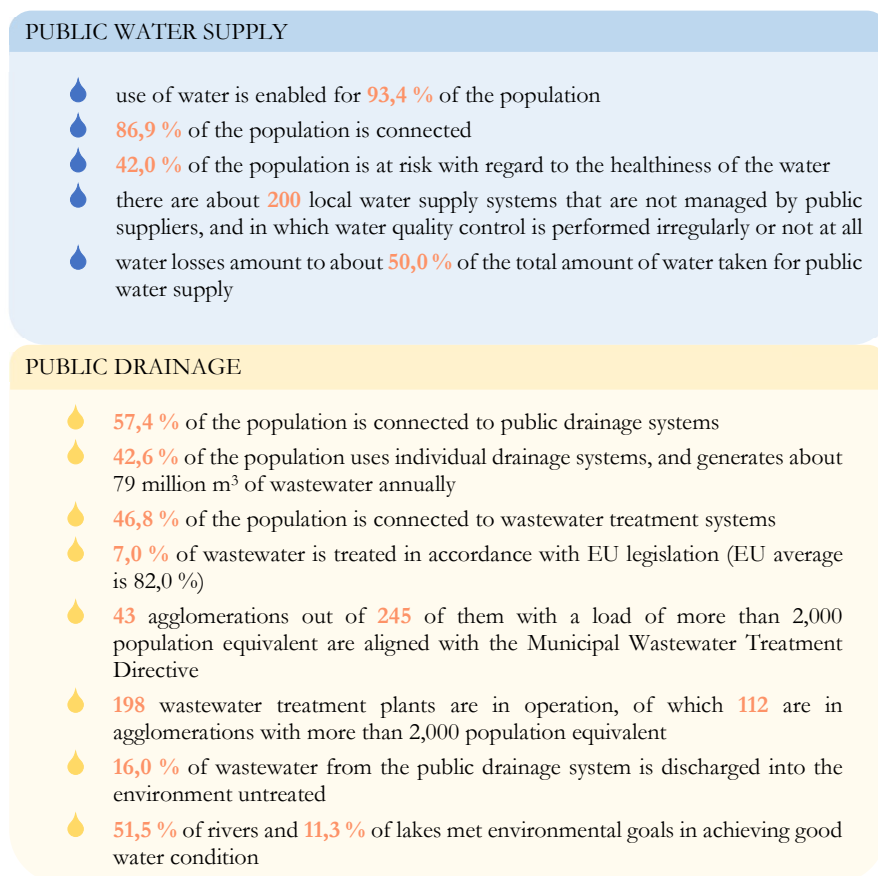
For the purpose of implementation and financing of water utility projects and the implementation of NRRP, the Ministry has published several public calls for co-financing. In November 2021, a limited call for financing the implementation of already started investment projects related to smaller parts of the public water supply and public wastewater drainage system was published. In December 2022, a limited call for financing the implementation of investment projects related to the improvement of the water utility infrastructure of agglomerations was published. In addition, a call for investment financing was published regarding the implementation of measuring devices at water intakes.

According to the explanation of the responsible person of Croatian Waters, which is also described in the Multi-Year Construction Program, there are three key risks that significantly affect the success of the implementation of water utility projects, and thus the effective implementation of the reform of the water utility sector. One of the basic risks, assessed as a very high risk, is the lack of reliable information about the current state of the water utility infrastructure. Also, a very high risk are the limitations of the construction sector, which is largely engaged in the reconstruction of earthquake-ravaged areas, limitations related to construction activities in urban areas and tourist areas, which is why it is estimated that it cannot currently fully support the timely and efficient implementation of projects. The third and very high risk in the implementation of water utility projects is a change in the financial framework, because the results of financial analyzes indicate that the Multi-Year Construction Program will be realized under conditions of extremely limited and, considering the ten-year implementation period, variable financial framework (for example, the introduction of the euro, the impact of the epidemic on the economy). The above could result in changes in labor, material and equipment prices and changes in the cost of capital.

Audit area: Achievement of goals related to the improvement of water quality and the availability of water for human consumption

The Ministry of Economy and Sustainable Development and Croatian Waters have identified problems that exist in the Republic of Croatia that need to be solved in order to ensure water availability and sustainable water management, which are related to water supply, drainage and wastewater treatment.

Figure 5 CURRENT STATE OF PUBLIC WATER SUPPLY AND PUBLIC DRAINAGE IN THE REPUBLIC OF CROATIA



Source: National report

The Ministry and Croatian Waters monitor the achievement of goals and indicators from the Multi-Year Construction Program through reports on the implementation. In this audit, the achievement of certain goals and indicators were checked, such as: a) access to water for human consumption for all residents, b) local water supply systems and the healthiness of water for human consumption in local water supply systems, c) capture of water for human consumption and losses from water supply systems, d) connection of the population to public drainage systems and municipal wastewater treatment, e) individual drainage systems and f) reduction of water load by discharging untreated or insufficiently treated wastewater in order to achieve good water condition.

MAIN FINDINGS (FINDING ON THE SDGS)

State Audit Office assessed that the Ministry and Croatian Waters undertook activities related to the adoption of regulations for the purpose of harmonizing with EU regulations, goals, measures and activities for improving water quality and the availability of water for human consumption, bodies responsible for the implementation of the activities and the sources of financing, the deadlines, target values and other indicators of the achievement of the goals, which are aligned with the sustainable development goals of the UN, have been determined, the bodies

responsible for the effective implementation of the activities have been determined, and the problems in the system of water supply, drainage and wastewater treatment have been identified. Within the NRRP, the Water Management Program is being implemented, within which a complete reform of the water-community sector has been initiated, which includes the adoption of a legislative framework and the implementation of investments, qualitative and quantitative indicators for the goal of Improving water management from the NRRP and their realization are being monitored, public water supply, drainage and wastewater treatment projects are implemented for which financial resources are planned and spent and their implementation is monitored, projects are financed from EU funds, NRRP, the state budget and other sources, public tenders are conducted for the purpose of implementing projects, the risks affecting the successful implementation of water utility projects were determined, activities were undertaken to establish legislative and institutional preconditions and financial mechanisms to encourage the reduction of water losses. A Multi-Year Construction Program and a The River Basin Management Plan until 2027 have been drawn up, activities necessary for the implementation and financing of investments in projects related to the improvement of water utility infrastructure are being carried out, the total value of planned investments in water utility infrastructure until 2030 has been estimated, The Multi-Year Construction Program defines individual public water supply and drainage projects, the method and period of implementation, participants, investment amounts and sources of funds, and the order of priority in implementation. The population's connection to water supply systems, including local waterworks, has increased, that is, the availability of water for human consumption to all residents has increased. Based on the monitoring results, the River Basin Management Plan analyzes the state of water for each water body, and the program of measures determines the measures that need to be implemented to achieve environmental goals. National indicators from the Multi-Year Construction Program and target values for public water supply and drainage have been established, and are linked to EU water directives. The achievement of goals is monitored according to established indicators related to the improvement of water quality and the availability of water for human consumption, and the competent authorities are reported on the achievement of goals and the activities carried out.

However, it was assessed that there are shortcomings related to not adopting a significant number of regulations for harmonizing the area of water quality improvement and the availability of water for human consumption with the EU acquis within the deadline, the lack of reliable information on the current state of the water utility infrastructure, the absence of a complete and comprehensive register of water supply projects, the achievement of goals and activities for the improvement of water quality and the availability of water for human consumption in full and on time, the absence of accurate and reliable data on the basis of which initial and target values should be determined and progress and goal achievement measured, as well as inconsistency in the presentation of individual data. Progress has been made in increasing the population's connection to public drainage systems, wastewater treatment facilities, and increasing the number of wastewater treatment facilities, but progress is slow and it is certain that the Republic of Croatia will not comply with the Urban Wastewater Treatment Directive within the deadline. Activities related to solving the problems of local water supply systems, i.e. their inventory, health condition and transfer to public suppliers, are carried out very slowly. The Program for reducing losses in water supply systems is being implemented, but no indicators have been established on the basis of which the results of the implementation of the mentioned Program would be monitored, the current calculation of water losses is not precise and does not give a true picture of real losses, and despite investments from EU funds and the Program for reducing losses, a positive shift in the reduction of water losses was not achieved. There are no comprehensive data on individual drainage systems, and it is not possible to provide a complete and reliable overview of the state of individual drainage systems, the way in which problems in the area of

individual drainage systems will be solved has not been fully designed, it is not known how many people are not connected to the public drainage system it cleans its wastewater, and how much it discharges into the aquatic environment without any pre-treatment. Almost half of rivers and most of the lakes do not have good water quality, that is, they can harm the function of the ecosystem and human health, which affects the achievement of good water condition, as one of the goals of the water policy in the Republic of Croatia and the Water Framework Directive.

On the basis of the above, the State Audit Office assessed that the activities and goals achieved in the Ministry and Croatian Waters in connection with the improvement of water quality and the availability of water for human consumption, i.e. by implementing activities for the purpose of achieving UN sub-goal 6.3 Improvement of water quality and sub-goals 6.1 Safe and affordable drinking water (availability of water), were partially effective.

RECOMMENDATIONS The following recommendations are given, according to the audit areas:

1. Implementation and financing of public water supply, drainage and wastewater treatment projects

1.1. Undertake activities to establish a complete and comprehensive register of water supply projects, with all recommended data, in the manner determined by the Multi-Year Construction Program. (Croatian Waters)

1.2. In cooperation with Croatian Waters, undertake more promptly undertake activities to design the methods and methodology necessary for the systematic and continuous collection of high-quality, reliable and comprehensive data on the state of the water utility infrastructure at public water service providers. The aforementioned data will also be used in planning, approving and determining the co-financing of individual projects of public water supply and public drainage and will be a quality basis for the implementation of the reform of the water utility sector. (Ministry)

1.3. In cooperation with Croatian Waters, encourage the activities of public suppliers of water services to establish a complete register of infrastructure with public suppliers, which would be one of the prerequisites for approving water utility projects and their co-financing. (Ministry)

1.4. Undertake activities to encourage the education of employees at local government units and public water service providers on actions necessary for the implementation of public water supply and drainage projects, so that public providers are ready to implement water utility projects and withdraw EU funds for their implementation in the coming years, and in order to actively participate in the effective reform of the water utility sector. (Croatian Waters)

1.5. Given that it is about the implementation of activities that last until the end of 2030, evaluate the impact of changes on the implementation of the Multi-Year Construction Program, i.e. water-utility projects, and elaborate measures to reduce risks in implementation in more detail, especially with regard to changes in the financial framework for implementation of projects for which, during the preparation of the aforementioned program, it was assessed that it would not be sufficient, limited administrative and technical capacities of the water utility sector, but also other risks in the implementation of water utility projects that were estimated to continue even after the implementation of risk reduction measures is high. (Croatian Waters)

2. Achievement of goals related to the improvement of water quality and the availability of water for human consumption

2.1. In cooperation with Croatian Waters, harmonize with Croatian Institute of Public Health the method of reporting data on the connection and the possibility of population connection to public water supply systems, i.e. the method of reporting the availability of water intended for human consumption for the purpose of monitoring the achievement of the goals of the Multi-Year Construction Program and UN sub-goal 6.1 Safe and affordable drinking water. (Ministry)

2.2. Undertake activities to determine the mandatory elements that would contain the list of local water supply systems managed by individual public suppliers, i.e. to issue an order on the list of local water supply services, so that public water service suppliers would be ready to provide quality and comparable data. (Ministry)

2.3. Encourage local government units and public suppliers of water services that manage local water supply systems in their territory, or whose local water supply systems will be transferred to management after the consolidation of public suppliers, to undertake the activity of listing local water supply systems with established mandatory elements, and to point out to them the possibility of co-financing water supply projects through the EU funds, with the purpose of including local waterworks in the system of organized management of public water supply and ensuring their health. (Ministry)

2.4. Given that in previous years, activities related to solving the problems of local water supply systems, i.e. their inventory, health condition, transfer to public suppliers, were carried out very slowly, that it is not possible to use EU funds for their development and improvement, because their current users and managers are not eligible investors for investments, and as it is expected that the implementation of public water supply projects (which includes local water supply systems) will last a long period, determine the need for financing, procurement and installation of chlorinators at water intakes of local water supply systems, and plan funds for the stated purpose and implement the project, in order to ensure the healthiness of water for human consumption in the water supply zones that were previously assessed as very high risk zones where it is not possible to permanently and continuously ensure the healthiness of water for human consumption. (Croatian Waters)

2.5. Determine the indicators on the basis of which the implementation of the Program for the reduction of losses in water supply systems that would be monitored and to evaluate the achievement of goals, that is, the effectiveness of the implementation of measures from the Program. The above could be used for better analysis, prioritization of financing, monitoring of the effectiveness of water loss reduction projects and comparison of water supply systems, especially with emphasis on good practice in the implementation of water loss reduction at individual public suppliers. (Croatian Waters)

2.6. Ensure effective application of legislative prerequisites in the field of water losses (for example, methodologies for precise calculation of water losses, models for calculating fees for the use of water in the public water supply for affected water volumes, implementation of the Regulation on service areas, etc.) and adoption and implementation of the National Action Plan for the reduction of water losses, in order to reduce the negative impact of water losses, i.e. the capture of unnecessarily large amounts of water in certain areas, which in the long run can lead to a change in the natural biological and hydrological balance, but also to a reduction in the capacity of certain sources, which can make the water supply of certain areas endangered. (Ministry and Croatian Waters)

2.7. Continue the activities of encouraging public suppliers of water services to reduce losses by providing financial, administrative, technical, investment and operational assistance, with the aim of reducing water losses at the national level and with the aim of establishing long-term sustainable management of water supply systems at public suppliers of water services. (Ministry and Croatian Waters)

2.8. Intensify activities on the implementation of water utility projects in order to improve the quality of water by the end of 2030 in such a way as to reduce pollution and halve the share of untreated wastewater, that is, to achieve progress towards the achievement of UN sub-goal 6.3 To improve the quality of water and to fulfill the obligations assumed from the Urban Wastewater Treatment Directive. (Ministry and Croatian Waters)

2.9. Undertake activities to establish a framework for keeping a register of individual drainage systems, as provided for in the Multi-Year Construction Program, which would be managed by public water service providers in a unique way, which would also improve the collection system, quality and reliability of data on municipal wastewater treatment in the area of the Republic of Croatia. (Ministry)

2.10. Encourage public suppliers of water services in their area to, in cooperation with the local government units in whose area they perform their activities, to supervise the connection of real estate to water utility structures, as well as the discharge of communal wastewater from individual drainage systems in the field at water service users and discharge whether legal and natural persons discharge wastewater into the public drainage system, through water stewards or in another appropriate way. The above is necessary considering that there is a significant share of the population that is connected to individual drainage systems, and for which a very small share of wastewater is transported to waste water treatment facilities, that it is not known whether they treat their own wastewater or to what extent they release into the environment without any pretreatment and that these are estimates and there are no reliable data. (Ministry)

2.11. Considering that almost half of rivers and most of the lakes in the Republic of Croatia do not have good water quality, that is, they can harm the function of the ecosystem and human health, in cooperation with the Josip Juraj Strossmayer Water Institute, to further undertake activities to improve the monitoring of the condition water, in order to achieve a good water status, as one of the goals of the water policy in the Republic of Croatia and the Water Framework Directive. (Croatian Waters)

2.12. When reporting to the UN on progress in achieving sustainable development indicators 6.3.2. Share of water bodies with good water quality, consider the possibility of applying the UN methodology so that the data are better aligned with the global framework for monitoring the goals of sustainable development and comparable with the data of other countries. (Ministry and Croatian Waters)

2.13. In cooperation with the Croatian Bureau of Statistics, consider the possibility of publishing indicators 6.3.2. Share of water bodies with good water quality on the Croatian SDGs Indicator Portal so that the public is aware of water quality and the achievement of progress towards the achievement of UN sub-goal 6.3 (Ministry and Croatian Waters)

Considering the large number of bodies participating in activities and tasks related to the improvement of water quality and availability of water for human consumption, the State Audit Office stated the opinion that very good coordination is needed between the bodies participating in the realization of UN sub-goals 6.3 and 6.1 and more effective implementation of all activities in order to implement them by the end of 2030 and to effectively implement the water utility directives in practice, which the Republic of Croatia committed to by joining the EU.



ÁLLAMI
SZÁMVEVŐSZÉK

STATE AUDIT OFFICE OF HUNGARY

SDG 6.1

AUDIT OF MEASURES TAKEN TO IMPLEMENT THE NATIONAL WATER STRATEGY (DRINKING WATER MANAGEMENT)

METHODOLOGY, TOOLS USED

The evidence necessary to answer the audit questions was obtained on the basis of documents and data provided by the auditees, through questioning (request for information), interviews and analytical procedures.

The sources of data used as audit evidence included the documents requested for the audit, as well as any documents containing information relevant to the audit that were revealed during the audit, and documents provided in preparation for the audit "Audit of water protection and the performance of water management tasks - Audit of the Water Utility Service".

The audited organisations provided data for the audit by filling in the declarations, sending documents, data and information requested by the SAO. The SAO also used the databases of the HUMVI system operated by the National Public Health Center to assess the annual drinking water quality of the communities.

The audit has interpreted the concept of sustainability, sustainable drinking water management in a complex way in line with the UN Sustainable Development Goals (see Annex I for details).

AUDITED INSTITUTIONS

Ministry of Interior, Ministry of Energy, Ministry of Construction and Transport, Hungarian Energy and Public Utility Regulatory Authority, National Public Health Center, General Directorate of Water Management, Waterworks and Water utility service provider companies (37)

AUDIT PERIOD

Years 2017-2022, with a view to 2023, covering processes up to the compilation of the SAO's report in September 2023

ABSTRACT OF THE NATIONAL REPORT

“Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such.” EU Water Framework Directive

Within the framework of an international cooperative audit, the SAO audited the results achieved in relation to Sustainable Development Goal No. 6 "Clean water and sanitation" regarding drinking water management and the safe and affordable drinking water service target.

The National Water Strategy, sectoral and local strategies, programmes and action plans have set long-term objectives for sustainable drinking water management in line with international and EU target frameworks. The programmes and projects for the actual implementation of the strategies and plans have been developed and

implemented by the different government officials and actors involved in drinking water supply.

The institutional system involved in the provision of public water services was structured according to the defined roles and responsibilities. The organisations responsible for the supply of drinking water ensured the organisational and legal management of the sector, but the integrated approach also formulated in the NWS was not applied, there was no overall, strategic level coordination, which posed a risk to the achievement of the NWS objectives. In view of this, the SAO proposed the creation of an institutionalised form of cooperation between the various sub-sectoral management bodies with governmental responsibilities and an integrated approach to strategic decision-making as defined in the NWS.

No comprehensive governmental assessment of progress towards the strategic objectives of the NWS was carried out, so it was not possible to review and, if necessary, refine the priorities and measures of the NWS for the next period. It is therefore justified to review the priorities and actions for the next period of the NWS.

Social inequalities in access to public services have reduced, with nearly half of households (47.8%) having increased access to safe and affordable water services. At the same time, the water tariff system presented a risk to the financial and technical sustainability of the sector and did not encourage consumers to use water in a saving and sustainable way. Average consumption has increased, with per capita water consumption up by 16 % compared to the period when water tariffs were fixed in 2012. Water companies had no specific legal obligation to promote the efficient use of water resources among their customers, but they did carry out awareness raising activities on water conservation and water use. In this context, the SAO considers that further awareness-raising tools should be used.

During the audited period, the proportion of households using safely managed, continuously monitored drinking water increased by 0.5%. The Environmental and Energy Efficiency Operational Programme (EEEOP) projects implemented to ensure the adequate quality of the water supplied were effective and thus contributed to the national and international objectives of ensuring access to safe drinking water for the population. The audit revealed that in the period 2017-2022, there was a decreasing frequency of water quality non-compliance with the parameters set by the EU Directive. The underground water resources available for drinking water supply did not always meet the water quality limits stipulated in the EU directive. As a result of the drinking water quality improvement programme, the water quality risk characterised by arsenic, boron, fluoride and ammonium parameters from primary source pollution has decreased or disappeared, however, the rate of secondary water quality pollution (pollution from ageing systems and technical problems in water treatment) has increased.

According to data of the Hungarian Energy and Public Utility Regulatory Authority (MEKH), by December 31, 2022, in the case of 12% of water utilities and supply network elements, the owners of the water utilities had not prepared an assessment of their assets based on the inventory, as required by law. The lack of network inventories and the absence of a uniform valuation of water utility assets did not allow for an accurate assessment of the state of the networks and the funds needed to upgrade the utility infrastructure. According to the rolling development plans (RDPs) of the responsible water suppliers and companies for the years 2023-2037, the financing needs for the reconstruction of the water utility networks are estimated at HUF 3 775 billion over the next 15 years. However, this amount is only an approximate figure, as a more precise calculation can only be made after the

completion of an asset valuation based on an inventory of all drinking water supply and wastewater treatment network elements.

In the audited period, with the exception of the year 2021, the companies' results in the drinking water sector, achieved without subsidies and owner contributions, deteriorated year by year. Furthermore, the calculation results of the audit showed a correlation between the deteriorating results of water utility companies with lower operating results and the higher water losses in the water utility systems they were managing.

The water utilities audited recorded 53 792 cases of burst pipes in the drinking water supply network in 2017 and 42 519 in 2022. One quarter of the extracted water volume was the uninvoiced water volume, the value of which was estimated by the SAO at more than HUF 17 billion annually. One of the many factors contributing to water losses is the increasing deterioration of assets due to the lack of reconstruction. The 15-year RDPs have included a higher reconstruction resource requirement year after year.

Part of the funding for the renovations came from the user charges paid, which have been fixed since July 2015 and cover less reconstruction than necessary. It was supplemented by subsidies from the owners of the utility companies and the central budget. During the period audited, the governing body responsible for the water utility service opened tender funds for efficiency enhancing investments, which were fully allocated, some of which had been implemented and others were still ongoing at the end of the audited period.

In the audited period, the use of the financial resources available to water utilities for development purposes focused on the repair and maintenance carried out and it was effective, in the face of decreasing number of human resources. The possibility to take preventive measures in relation to the condition of the pipeline network was limited and the measures taken were aimed at correcting specific errors and related consequences.

By the end of the audited period, no strategy had been prepared that formulated - in view of the ageing pipeline network - integrated goals and programmes for the reconstruction and investment of water utility systems, the sustainable operation and development of drinking water supply, considering the possibilities of replacing the shrinking EU funding in the 2021-2027 financing cycle. This meant a risk to service revenues and the foreseeability of the operation.

MAIN FINDINGS

1) Sectoral governance of the organisations responsible for drinking water supply, strategic and operational decision making

The organisations responsible for drinking water supply ensured the organisational and legal governance of the sector, but there was no overall coordination at strategic level, no integrated databases to support decision-making processes. The programmes carried out have contributed to the achievement of national, EU and international strategic objectives.

The legislative framework for public water utilities was diversified. During the period audited, there were no changes in the legislation relating to the system of public water utility services, the amendments affected the functions of the authorities, owners and service providers.

The provisions of the Water Framework Directive (WFD), i.e. Directive 2000/60/EC establishing a framework for Community action in the field of water policy and Council Directive 98/83/EC on the quality of water intended for human

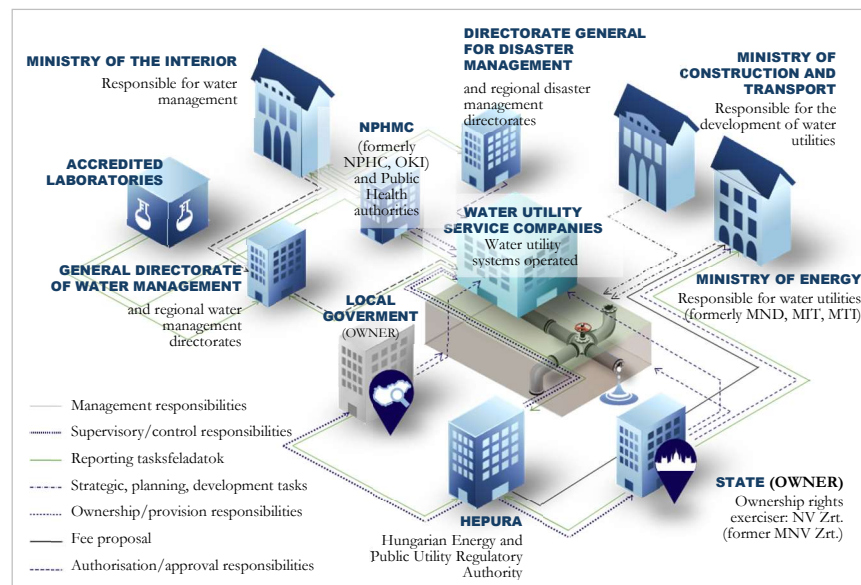
consumption, and subsequently Directive 2020/2184 EU, have been binding on Hungary since its accession to the European Union. In order to comply with the Member States' obligations laid down in the Directives, Hungary has regulated the implementation of the Directives by laws, regulations and instructions, and has prepared strategies, programmes and plans.

During the audited period, the legal environment for the provision of drinking water clearly identified roles, responsibilities and procedures. The legal environment for the provision of drinking water included a number of legal management instruments.

The institutional system involved in the provision of public water services was structured according to the tasks and responsibilities defined in the legal provisions. During the period audited, there was no organisation responsible for the strategic coordination of the overall management of the territorial and municipal water management and, more narrowly, of the entire system of organisations (also) responsible for the supply of drinking water.

The tasks and responsibilities of the institutional system involved in the provision of public water services were reflected in the internal regulations of the organisations. Figure 6 gives an overview of the main interconnections in the organisational system.

Figure 6 THE MAIN OPERATIONAL, MANAGEMENT AND LICENSING ORGANISATIONAL LINKS IN WATER MANAGEMENT

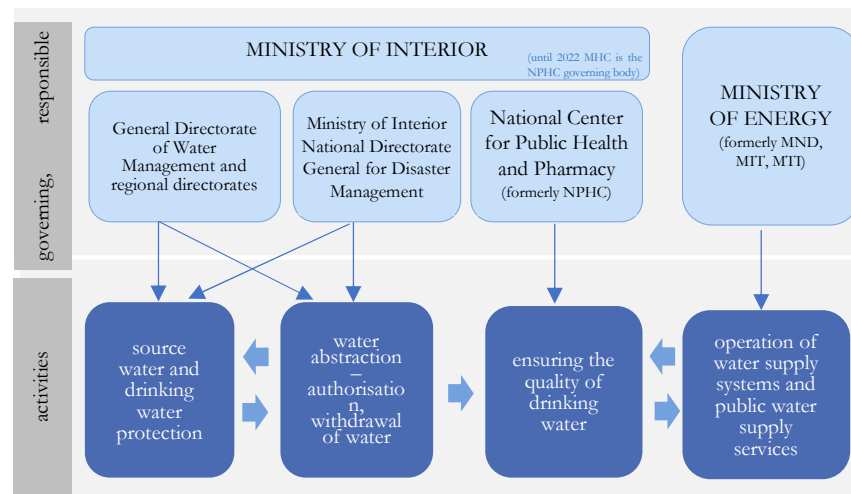


Source: Based on legislation, SAO own editing

Throughout the audited period, the Minister of Interior was the member of the government responsible for water management, and the member of the government responsible for water utilities changed in line with the restructuring of ministries.

The drinking water supply process starts with the abstraction of water from the drinking water source and ends with the delivery of drinking water through the water distribution system. The complexity of government management responsibilities for these activities and the changing roles of those responsible are illustrated in Figure 7.

Figure 7 MANAGING DRINKING WATER SUPPLY FROM DRINKING WATER SOURCES TO WATER UTILITIES



Source: Based on legislation, SAO own editing

There was a lack of a designated responsible, managing institution or institutionalised forum for coordinated strategic planning and coordination.

The national strategic documents on drinking water supply for the population were in line with international objectives and relevant EU directives.

The national strategies, concepts and policies for safe and affordable drinking water supply in the period under review explicitly referred to the UN 2030 Agenda for Sustainable Development international documents and the National Sustainable Development Framework Strategy adopted by the Resolution of the National Assembly 18/2013 (III.28). The set of goals and definitions for safe drinking water supply in these documents were in line with the internationally agreed set of goals and conceptions.

The national strategies, plans and concepts concerning the public provision of drinking water services contained, on the whole, sub-objectives, tasks and instruments formulated on the basis of the same situation analysis in order to achieve the same main goal.

The findings and key objectives of the situation assessments in the strategies for the provision of drinking water in place during the period audited were consistent.

The situation assessments in the strategy documents adopted before the start of the audited period identified drinking water quality problems as a risk and included a reference to financial affordability risk. The documents issued at the end of the audited period highlighted the network, quantity, technical and return on investment risks of safe drinking water supply. This is because programmes to improve the quality of drinking water have been effective in responding to risks, while the technical and economic sustainability of the service has not been addressed by previous strategies and programmes.

The documents prepared in the second half of the audited period (post-2020) built on the objectives of the previous strategy documents, the goals that have been achieved and those that are still relevant (not yet achieved). Virtually all strategies, concepts or plans set targets for the protection of water source and quality of drinking water.

In the individual documents, the situation assessment, risk and problem identification

related to the provision of drinking water were similar in content, reflecting the progress made, but also the escalating problems due to the lack of reconstruction during the period audited. While not yet identified as a risk in the strategies in force at the beginning of the audited period (National Development and Territorial Development Concept, National Environmental Programme 4 (NEP4), River Basin Management Plan 2 (RBMP2)), the problem of increasing water loss due to non-reconstruction was explicitly highlighted in the NWS and RBMP3.

As regards the technical problems of piped drinking water supply, the strategy documents, in the course of their preparation, have become more and more explicit in their chapters on the situation and risks. This trend reflected the deteriorating financing possibilities for maintenance and reconstruction.

Despite the fact that the strategies, programmes and plans indicated risks related to the quality, sustainability and financing of piped drinking water services, they did not contain concrete targets and tasks setting out expectations for results. At the same time, it was not the strategies, but the management, middle management, monitoring and implementing organisations involved in the provision of drinking water supply that defined the precise tasks of those involved in implementing the measures and the expected results.

While the problem of the affordability of drinking water was identified in several documents in the situation assessment, there was no related strategic goal. According to the RBMP3 situation assessment, "In 2018, the average rate of public water charges for drinking water services, based on average household water consumption and average household income, decreased to 1.65% of average income. However, the differences in charges between different income groups in society and between residents in different urban areas have not been levelled out." No strategic goal has been built into any strategy-level document for this risk.

With few exceptions, the strategic documents did not contain performance criteria with specific indicators, so monitoring could not be supported by data and information collection and analysis based on indicators.

With the exception of the annual report on the implementation of the NWS, the responsible parties identified in the national and policy strategies have completed their reports on time. The (strategic) reports prepared were only partially suitable for monitoring and evaluating the progress of the ongoing tasks, as not all strategic goals were reported on. Thus, the party responsible for the preparation of the strategic plan document had only a partial opportunity to correct the strategic objectives and identify shortcomings and gaps based on the reports.

RBMP3 included a report on the implementation of the tasks set out in RBMP2, as required by the WFD.

The achievement of the strategic goals has progressed through the separate programmes of the institutional system in a traceable and, for several programmes, monitored way.

The organisational system responsible for the management, licensing, ownership, supervision and operational management of public water utilities operated a number of databases and information systems, but their use was fragmented, which made it difficult to support informed decision-making with information.

2) Effectiveness of operational and development measures for the protection and sustainable use of water

In the period audited, access to safe and healthy drinking water was ensured in

sufficient quantity and quality, and the supply of drinking water as a public service was guaranteed.

Water quality upgrading and measures to improve the operation and development of water utility systems have been successful, as resources permitted. Secondary water pollution has increased significantly due to technical and water treatment problems in ageing systems.

There is a risk that the water utility service provided by the companies has been delivered by a decreasing number of staff with an increasing average age.

The number of employees working in water services and water utility companies was 14,100 in 2017, decreasing by 2.0% to 13,800 by 2022. Among employees, the number of intellectual workers stagnated, with the decrease being mainly due to a decline in the number of manual workers. The number of full-time employees fell by 3.3% and that of part-time employees by 0.7%. To fill the shortage, companies increased the number of retired employees, which increased steadily until 2022 (increasing the number of retired employees by 120.1% during the audited period). The shortage is reflected in the fact that the number of vacant posts increased by one and a half times over the period.

Personnel costs in the sector increased over the audited period, but despite the increases, the average wage of water utility service employees remained significantly below the national average by 15.2% in 2022. This has made recruitment and retention of staff more difficult. The audit documents and certifications show that service providers were able to perform their tasks with the staff available during the period audited, but the gradually and steadily decreasing number of employees and the increasing average age of employees may cause serious operational problems in the future.

During the period audited, the operating results of the water utility companies have gradually deteriorated year by year. Excluding ownership and budget subsidies, half of the companies registered a negative operating result in all the years audited over the period. The changes in the economic and operating environment in 2022 (including an increase in energy costs) have made the financing of companies more challenging than in previous years for the majority of water utilities.

During the audited period, there was a slight decrease in non-revenue water use and water losses.

The consequence of water losses is that the costs of producing drinking water fed into the water utility systems are not recovered, these costs increase the cost per volume of water sold.

According to the data published by the Hungarian Central Statistical Office, the domestic utility water loss in relation to the utility water production in Hungary was 27.5%, 27.4%, 27.9%, 28.0% and 25.0% per year in the period 2017-2021.

During the audited period, the demand for maintenance, reconstruction and investment resources, as indicated in the rolling development plans of water utility owners and water utility companies, and approved by the Hungarian Energy and Public Utility Regulatory Authority, increased year by year. This points the growing need for resources for the operation of the sectors (drinking water, waste water).

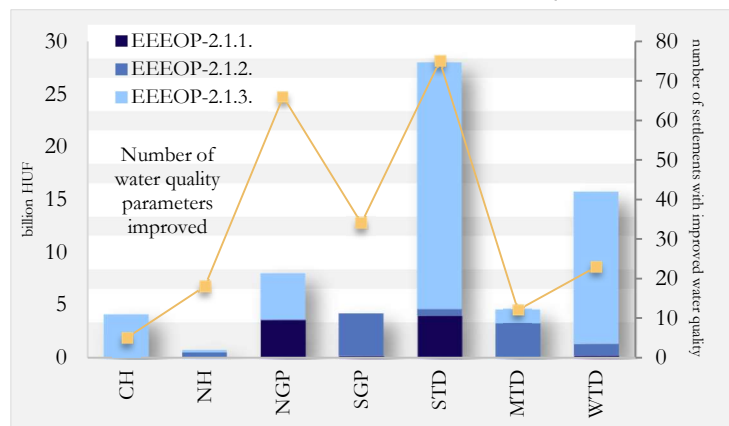
During the period audited, the monitoring system for the continuous control of water quality was effective and the safe supply of drinking water to the population was ensured in all settlements. However, despite the successful EEEOP drinking water quality improvement programmes, the number of settlements with drinking water of

substandard quality increased significantly by 35% due to secondary water treatment problems caused by an ageing network of pipelines.

The water quality control monitoring system was effective in predicting the increase in concentrations of parameters harmful to health in drinking water and the possible exceedance (or the extent of the exceedance) of the limits. Monitoring of drinking water parameters set out in the Government Decree was carried out with sufficient frequency. In case of unsatisfactory water quality, the necessary interventions were taken.

The annual water quality of the agglomerations was assessed on the basis of the median of the annual parametric measurements, according to the legal compliance rate, in line with EU standards. The water quality of the agglomerations is considered adequate if the median of the annual parametric values of all the annual water quality measurements does not exceed the threshold set in the legislation. The data from the water samples taken showed that, at national level, most water quality characteristics indicated adequate results in 99-100% of the tests.

Graph 4 THE DRINKING WATER QUALITY IMPROVEMENT PROJECTS IMPLEMENTED AND THE IMPROVEMENT IN WATER QUALITY



Source: www.palyazat.gov.hu based on published KEHOP project data, retrieved 30 June 2023, SAO own edit

In the aggregated assessment of drinking water quality improvement projects, the audit considered the baseline values of the derogation parameters (arsenic, boron, fluoride, iron, manganese, ammonium, nitrite) for the target areas of the projects and regional changes up to 2021. The statistical analysis showed that there is a detectable and significant statistical relationship between the EU funds used for water quality improvement and the improvement of water quality in the regions concerned. The amount of EEEOP funds disbursed explains 45.9% of the improvement in derogation water quality parameters over the period.

3) Sustainability of safe and affordable drinking water supply

In the period audited, the framework for the safe supply of drinking water to the population was largely determined by the government's social policy objectives, the reduction of utility bills in line with these objectives, and the stability of water utility tariffs for almost a decade (since 2013).

For the analysis, 2012 was taken as the base year, when water utility tariffs accounted for 5.2% of annual household consumption expenditure on average across the country. As a result of price-fixing, this share fell to 2.9% by 2017, the start of the audited period, and then shows the opposite trend between 2017 and 2020. By 2020, with prices unchanged, there was a slight increase of 0.3% on average due to rising water consumption.

The audit revealed that access to water utility services has improved nationally between 2017 and 2021, with regional disparities between regions have narrowed. Nationally, between 2017 and 2022, the share of dwellings connected to the water supply network increased by 0.5%. In the villages the number of dwellings with piped drinking water increased by 0.7%, above the national average between 2017 and 2022.

While the pricing policy has reduced social inequalities in access to public services, the water pricing system has not encouraged consumers to consume water economically and sustainably, and has jeopardised the long-term financial and technical sustainability of the sector.

RECOMMENDATIONS (ABSTRACT)

MINISTRY OF THE INTERIOR

1. Enforce the provisions of Article 23 (1) of Government Decree 38/2012 (III. 12.) on Government Strategic Management, for the revision of the strategic plan document, with regard to the long-term drinking water management objectives set out in the NWS and the means (action plan) that may be used to achieve them.
2. Initiate the creation of an institutionalized form designated for the cooperation of governing bodies in the various sub-sectors of water management and organizations with governmental responsibility, for strategic decision-making with an integrated approach defined in the NWS.

MINISTRY OF ENERGY

1. Undertake an analysis of how the resource requirements for renewals in water utility systems compare with the resource requirements calculated on the basis of the replacement cost for water utility system elements in the short, medium and long term, and what strategic intervention is required. Use the analysis results to prepare the decisions.
2. Initiate the assessment of the connection of information systems and databases that support drinking water management, which operate like islands, and its implementation in a project.
3. Consider further awareness-raising tools to promote sustainable, water saving use in the long term.

SDG 6.3 Wastewater

METHODOLOGY, TOOLS USED

WASTEWATER AND WATER POLLUTION – SOCIAL AND ENVIRONMENTAL SUSTAINABILITY IN THE LIGHT OF THE UN SUSTAINABLE DEVELOPMENT GOAL 6 (ANALYSIS)

The analysis reviewed the relevant national and foreign literature, data published by the UN, the Hungarian Central Statistical Office (HCSO), EUROSTAT, the OVF, government strategy documents and national and international surveys, reports, relevant EU and national legal sources. In order to prepare the analysis, the SAO requested data from the Deputy State Secretariat for the Implementation of Transport, Environment and Energy Efficiency Development Programmes of the Prime Minister's Office, and 8 interviews were conducted. The interviews were carried out with the aim of providing a nuanced analysis of the area under evaluation, based on first-hand information from the actors concerned. The results of the interviews, which highlight individual cases, are of course not representative of the country and are not in themselves suitable for drawing overall conclusions.

AUDITED INSTITUTIONS

8 interviews were conducted with the HCSO, the Ministry of Interior (BM), the General Directorate of Water Management, the National Directorate General for Disaster Management of the Ministry of Interior, the Laboratory Unit of the Public Health Department of the Government Office of the Capital City Budapest, the Laboratory Department of the Baranya County Government Office and the experts

of DAKÖV (the Dabas Region Water Management Limited Liability Company) as well as the Ludovika University of Public Service.

AUDIT PERIOD

2015 - 2023

ABSTRACT OF THE NATIONAL REPORT

The 2030 Agenda, adopted by the United Nations (UN) member states in 2015, sets out SDG 6 (“Clean water and sanitation”) that aims to ensure access to water and sanitation and sustainable water management. The related target 6.3 is, among others, designed to improve water quality, reduce pollution, halve the share of untreated wastewater and increase recycling. Two indicators are used to measure the achievement of the target:

6.3.1 Proportion of domestic and industrial wastewater flows safely treated

6.3.2 Proportion of water bodies with good ambient water quality

The analysis of the State Audit Office of Hungary (SAO) examined Hungary’s performance against the two indicators above, as well as the measurement and achievement of the national strategic objectives that were developed prior to the SDG framework and have the same content. The analysis details the functioning of the monitoring system for tracking targets and indicators and how resources have been made available.

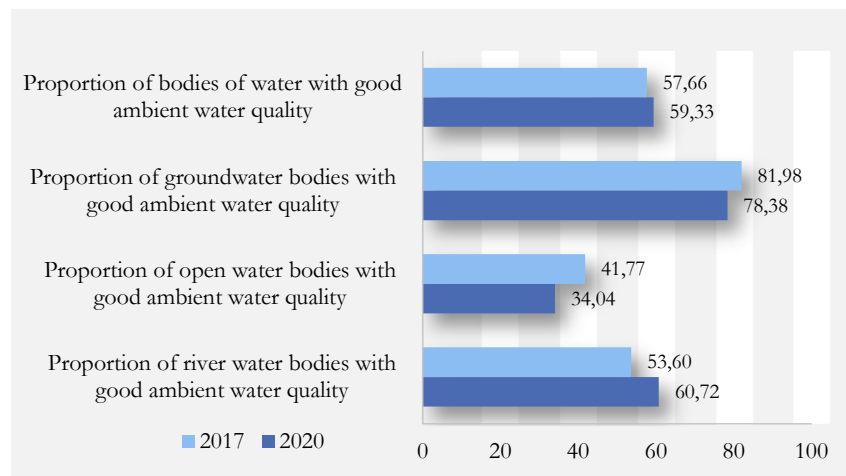
HAS ANY PROGRESS BEEN MADE?

While Hungary has performed well in the safe management of wastewater, the water quality of our water bodies has not improved significantly in recent years.

From 2017 to 2020, the share of good quality water bodies in Hungary increased from 57.6% to 59.3% in terms of SDG measurement parameters, this clearly indicates only a modest improvement. These results highlight that further efforts are needed to meet the water quality objectives of the European Union (EU) Water Framework Directive and the Jenő Kvassay Plan.

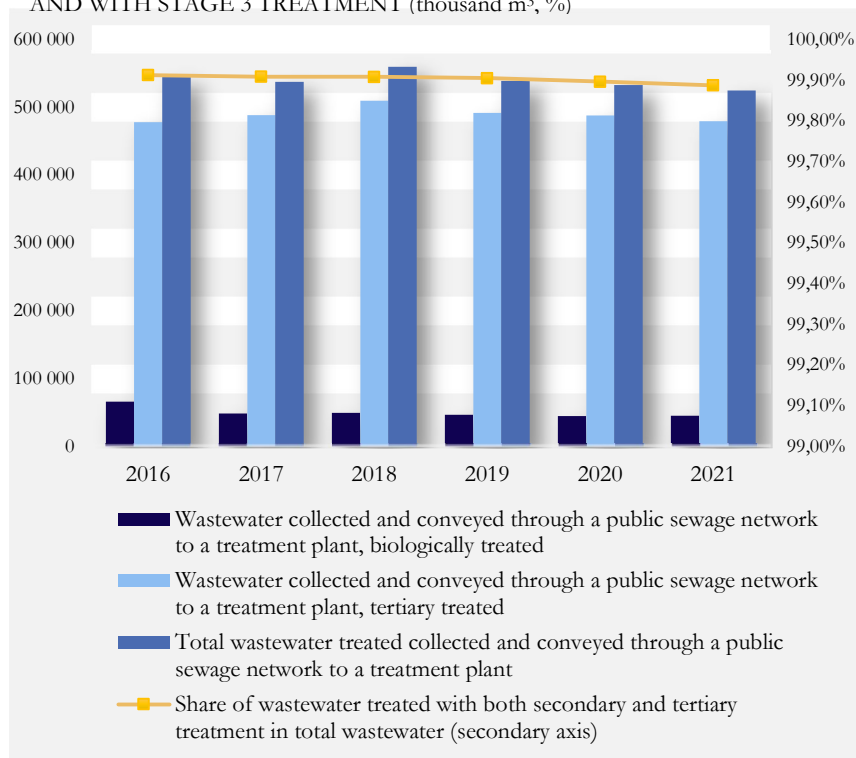
During the same period, the proportion of households connected to the public sewerage network increased from 81.4% to 83.0%, and the proportion of wastewater treated to the highest treatment level increased from 90.9% to 91.6%. As Hungary started from a high baseline, the slight increase also means that the targets for improving the quality of wastewater treatment have been essentially met.

Graph 5: PROPORTION OF BODIES OF WATER WITH GOOD AMBIENT WATER QUALITY (%)



Source: SAO edit based on UNSD databased

Graph 6: VOLUME OF WASTEWATER TREATED BOTH BIOLOGICALLY AND WITH STAGE 3 TREATMENT (thousand m³, %)



Source: SAO edit based on HCSO 15.1.1.27

WHAT IS IN THE BACKGROUND?

On the one hand, countries with an industrial background have difficulties in meeting the biological and chemical thresholds set in the Water Framework Directive. This is also the case in Hungary. In addition, it is important to see that the quality of domestic surface water is crucially determined by the fact that 95% of the country's water resources come from abroad. Also, low water yields in recent years have also hampered the achievement of water quality objectives.

Domestic water quality data also highlight the ecological paradox of wastewater treatment: the more wastewater is collected in the public networks, the more the organic and nutrient load to surface waters increases due to the increase in wastewater treatment plant discharges. In the case of groundwater, however, improvements will only be seen decades after the pressure has ceased.

For wastewater treatment, the primary objective is and has been to connect as many households as possible to the sewerage network. However, in some places, the capacity to treat wastewater may be less than the collection capacity, as shown by the fact that water utilities are sometimes forced to refuse connection requests that exceed their capacity.

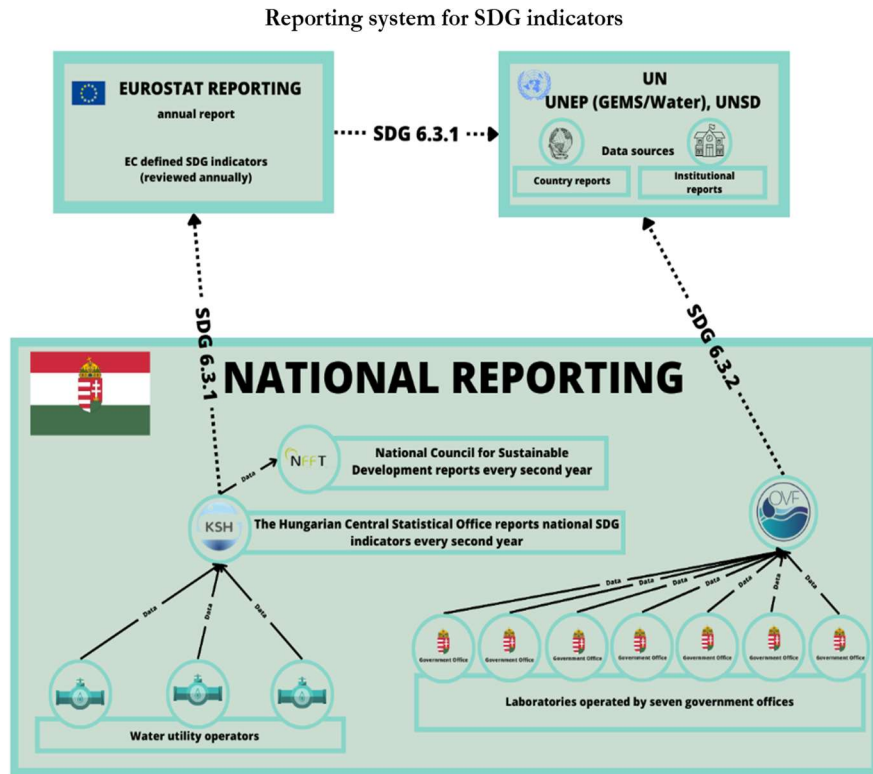
HOW WERE THE INDICATORS MONITORED?

Hungary monitors the two SDG indicators by measuring water quality in accordance with the Water Framework Directive and national regulations, reporting bodies accomplished reporting to the UN on the two indicators. Each country has the option to develop specific indicators reflecting its own development. Hungary has done the same, but this does not help to navigate between national and international data.

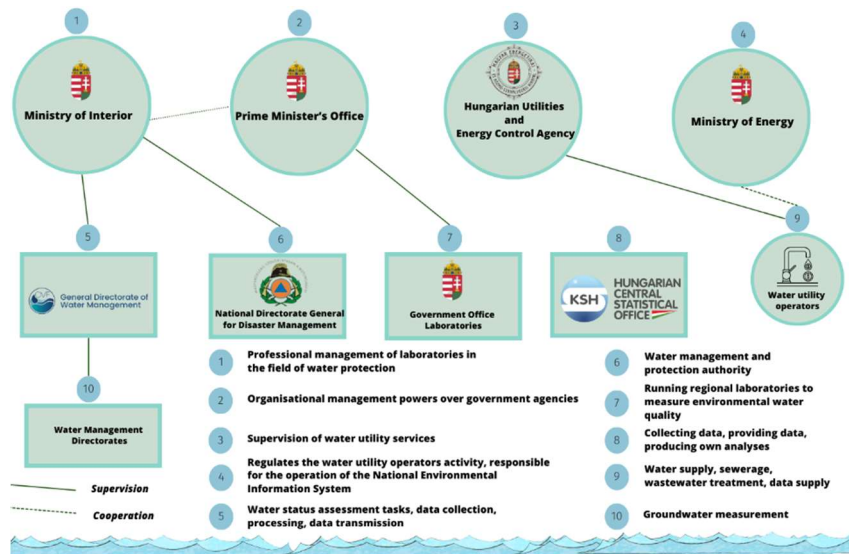
A fragmented institutional system

The maintenance and operation of a water monitoring system to monitor indicators is split. The previously unified management of water is now the responsibility of several ministries, including the Ministry of Interior, the Ministry of Energy and the Ministry of Agriculture, while the laboratory network is maintained by the Prime Minister's Office under the government agencies. Institutional fragmentation can hamper the optimal functioning of the water quality monitoring system.

Graph 7



Graph 8: Organisations involved in monitoring activities



Source: SAO own edit

Laboratories: understaffed and under-resourced

A key role in assessing water quality is played by 7 accredited laboratories nationally, all of which are part of a government agency. The measurement plan prepared by the General Directorate of Water Management (OVF) is sometimes not able to be implemented by this laboratory network due to resource constraints, and the sampling plan is prepared by the OVF in advance taking into account the limited capacity. There have also been cases where the accreditation of a government laboratory has been temporarily withdrawn due to a lack of resources. All this suggests that the current laboratory system is both understaffed and underfunded due to its limited capacities, showing that there is no national laboratory organisation implemented.

Level of detail and completeness of wastewater data could be improved.

A shortcoming in the data on wastewater is that the data do not cover stand-alone, industrial treatment plants and do not show the level of treatment of wastewater by dischargers not connected to the public wastewater network (e.g. septic tanks, treatment tanks).

Legislative anomaly

The amendments to Ministerial Decree 31/2004 (XII.30.) KvVM, which determines the assessment of surface water bodies, and Ministerial Decree 10/2010 (VIII. 18.) VM on the limit values of surface water pollution and the rules of their application, in compliance with the revised river basin management plan (RBMP), have not been prepared. It is therefore possible that the water quality standard set out in the RBMP may differ from the requirements in the relevant legislation, so that there may be questions about what thresholds a water body should meet.

There are risks associated with waste treatment plants

There is a risk that water utility operators dealing with wastewater treatment may face funding and human resource problems, which increases the likelihood of technical incidents and accidents. In addition, there may be a difference between the reported data on the quality of wastewater discharged by wastewater treatment plants and the actual environmental impact of treatment plants. This is evidenced by the fact that the sludge volume data led the OVF to conclude that a higher rate of sludge discharge to rivers may be occurring than official data would suggest. There is also a risk in relation to compliance with discharge limits of wastewater treatment plants, as the legislation provides that the quality of treated wastewater is fundamentally monitored on the basis of the principle of self-monitoring, and the legislation provides that the Disaster Management Authority, which is responsible for official monitoring, will, as a rule, announce the date of the monitoring in



SUPREME AUDIT OFFICE OF THE REPUBLIC OF POLAND

SDG 6.1

METHODOLOGY, TOOLS USED

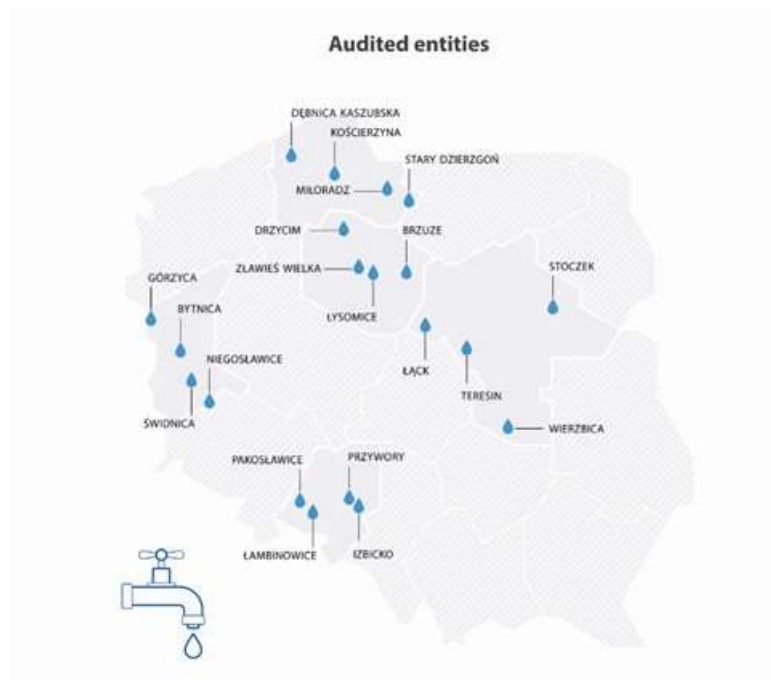
WATER RESOURCES MANAGEMENT IN RURAL MUNICIPALITIES

The main audit question was to determine if the water management in rural municipalities was efficient.

The audit scope covered 5 voivodships (out of 16 in Poland) where activities of 20 water supply companies were subject to audit. In particular, the audit aimed to answer: if the water supply companies had properly prepared human and organisational resources and financial resources sufficient to perform their tasks; whether the water management was performed correctly; if the supervision over the collective water supply and waste water management was sufficient.

Pursuant to the Act on the Supreme Audit Office, the audit data was collected from every rural commune, including those not covered by the audit, located in the voivodeships included in the audit. The audit data was collected also from the Province Sanitary Inspectors located in the Kujawsko-Pomorskie, Pomorskie, Lubuskie, Masovian and Opolskie voivodeships; from the Chief Inspector of Environmental Protection and from the Polish Waters State Water Management Company. Upon request of the Supreme Audit Office, the District Construction Supervision Inspectorates performed out ad hoc inspections of 41 water treatment plants and 59 sections of the water supply networks regarding technical condition and suitability for use.

Graph 9 Map of audited water supply companies



As a result of discovered irregularities the NIK notified proper authorities about suspected construction laws offenses, related to: the failure to maintain proper technical condition of water networks or devices protecting water from contamination and also regarding failures to perform periodic inspections of the technical condition of buildings and missing construction facility books.

AUDITED INSTITUTIONS

The audit was carried out in 20 sample water supply companies located in five voivodships. Companies were selected after taking into account the water consumption in rural households per capita and the size of population using the water supply networks, in voivodships: Lubuskie, Opolskie, (lowest value); in Kujawsko-Pomorskie, Pomorskie (average), Mazowieckie (above average). The audit was conducted on the Supreme Audit Office's own initiative by five regional branches of the NIK: in Bydgoszcz, Gdańsk, Opole, Warsaw and Zielona Góra (the audit coordinator).

AUDIT PERIOD

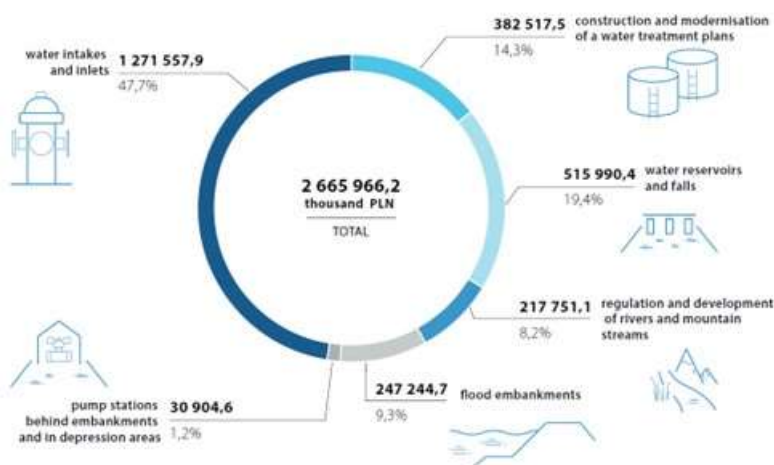
The audit covered period from 1 January 2019 to 30 September 2021 with the use of evidence produced earlier and later which was relevant for the audit.

ABSTRACT OF THE NATIONAL REPORT

The water supply companies in rural communes inefficiently managed water resources and a significant part of their activities was incorrect. Supervision over the collective water supply was inefficient. Limited financial resources or insufficient organizational and staff preparation have often resulted in the lack of effective actions aimed at eliminating significant number of failures to prevent water losses, to improve the water quality, or to reliably perform obligations related to carrying out periodic inspections of construction facilities.

Graph 10

Capital formation structure for fixed assets for water management in 2020

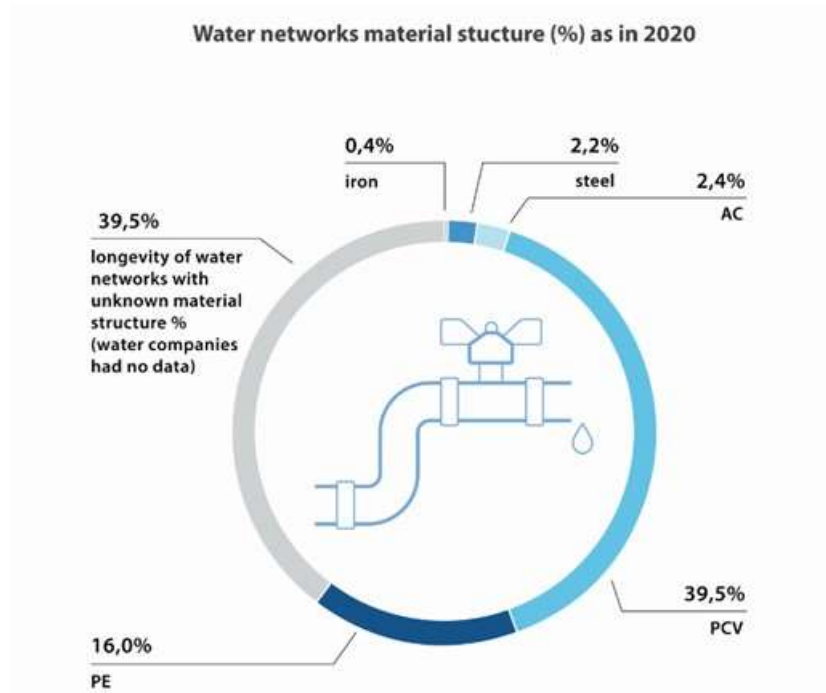


Lack of current water use licences was revealed in seven out of 20 audited water supply companies. Non-compliance with restrictions regarding the water consumption was revealed in 25% of audited units. Irregularities related to the development of regulations for water supply and sewage disposal were disclosed in 20% of audited companies, what proves improper tasks' performance.

Auditors revealed also insufficient approach to obligations related to the operation of protection zones water intakes. Irregularities were disclosed in almost half (8 out of 20) of the audited water companies, mainly consisting in improper protection or marking of the area for direct protection of water intakes, or the use of land for purposes unrelated to the operation of the water intake. Also regularities related to

the lack of periodic inspections of construction facilities were found in almost all of the inspected buildings. Only two units, out of 20, fulfilled their obligations under the Construction Law. $\frac{3}{4}$ of audited companies did not commission obligatory periodic inspections of water supply networks. The failure to fulfil above obligations in connection with old age of the networks and their poor technical condition, could translate in particular into significant number of failures resulting in, among others: water losses and water quality parameters violations. NIK states, that the activities of water companies cannot be limited only to liquidation of failures or taking actions to restore the quality parameters of the supplied water, but should also be aimed at taking preventive actions. However, apart from the lack of timely periodic inspections or constant network monitoring, even employees of 40% of companies did not know the actual age of water networks, and 39% did not know the material structure of the used water supply networks.

Graph 11



In audited companies in total, approx. 1.8 thousand cases occurred of water supply networks failures, and water losses were estimated at over PLN 21 million – which was $\frac{1}{3}$ of the volume of produced water. There were unjustified water losses not only a waste of scarce water resources. The losses should have been considered in the economic aspect, especially in the context of the lack of necessary financial resources indicated by the audited entities for the proper implementation of tasks. Also the information activities carried out by audited companies were insufficient and reporting on water resources was unreliable in many cases.

Almost 40% of companies units obliged to provide information on water services referred to in the Quality Regulation of water, did not fulfil their obligation. Only seven, of the 20 audited units timely and reliably met their obligations and provided statistical obligations to the Central Statistical Office. Auditors revealed also lack of reliability in completing reports submitted to the Environment Protection Inspectorates and Water Management Company Polish Waters.

Activities carried out to ensure the required proper quality of supplied water were not fully effective. The audit revealed that in 2019–2021 (1st half) in 80% of the audited companies occurred cases of water insufficient with parameters required by

the Regulation on Water Quality. In one company only 50% of certificates issued by the Province Sanitary Inspector, determined that the water was suitable for drinking. In audited companies were disclosed cases of water not being suitable for consumption even for 153 days, exceeding its parameters for a period of up to 227 days, or conditional suitability of water for consumption for eight years (since 2013).

The NIK audit findings confirmed the inappropriate way of tasks implementation in case 25% of the audited companies regarding missing or insufficient monitoring of the water contamination by radioactive substances..

MAIN FINDINGS

Despite the fact that in Poland during the last decade some promising trends in access to basic and securely managed drinking water and sanitation services have been reported, indicating some progress in achieving Sustainable Development Goals 6.1 and 6.2, this progress is uneven and mainly concentrated in urban areas. Unfortunately rural residents are in a much less favourable situation. For example disparities in access to basic drinking water and sanitation services between urban and rural populations may be as much as fourfold.

RECOMMENDATIONS

To the Minister of Infrastructure – to amend the Act on collective water supply by adding among others the following provisions on water companies' obligations:

-to reduce prices of water delivered to consumers in case the quality or the pressure of water does not comply with binding regulations;

-technical data on the water system used should be included in the tariff approval request.

To the Minister of Agriculture and Rural Development: to intensify efforts to develop the water and sewage infrastructure in rural areas as part of relevant domestic programmes and programmes co-funded by the EU.

To the Chief Environment Protection Inspector: make sure the Environment Protection Inspectorate bodies take effective steps to establish higher fees under the Water Law Act.

To the State Water Management Company Polish Waters: to develop specific and clear-cut instructions on motivating service recipients to use water rationally and reduce sewage pollution, as mentioned in the tariff ordinance.

SDG 6.3 Wastewater

WASTEWATER COLLECTION AND TREATMENT

METHODOLOGY, TOOLS USED

The main audit question was to determine if the activities of public administration bodies and their subordinate entities ensured comprehensive collection of municipal sewage and its proper treatment.

The audit scope covered the whole Poland. Regular planned audit procedures were performed in every voivodship, by the Department of Environment and NIK's regional branches in each administrative region of Poland. Additionally, on the basis of Article 12 of the Act on the NIK, the Environmental Protection Inspection was requested to perform ad-hoc audits in 44 companies treating waste water, regarding the correctness of functioning of municipal sewage treatment plants.

As a result of discovered irregularities the NIK notified 3 district prosecutor's offices about suspected crime offenses related to: failure to maintain proper technical condition of devices protecting water from contamination and for

providing statistical data inconsistent with the actual situation and also 5 notifications to district construction supervision inspectors regarding failures to perform periodic inspections of the technical condition of buildings and missing construction facility books.

AUDITED INSTITUTIONS

Ministry of Infrastructure, the National Board for Water Management of the State Water Holding Polish Waters, the National Fund for Environmental Protection and Water Management, 16 regional funds for environmental protection and water management (operating at a voivodship’s level) as well as 44 municipalities and 44 waste water and sewage treatment companies.

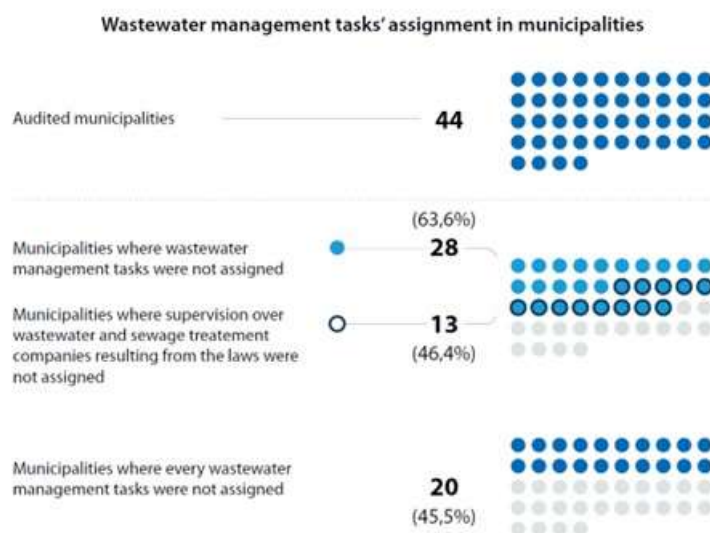
AUDIT PERIOD

The audit procedures were performed from 7 October 2020 to 26 May 2021. The audit covered period from 1 January 2018 to 30 September 2020 with the use of evidence produced earlier and later.

ABSTRACT OF THE NATIONAL REPORT

NIK issued a negative opinion on the activities of public administration bodies and their subordinate entities, regarding the collection of municipal sewage and wastewater treatment. At the national level they did not ensure proper planning and monitoring of wastewater management. However the obligatory regulations contained in the EU directive 91/271/EEC were introduced into national law, the requirements were not efficiently implemented. Not every municipal governing bodies ensured proper collection and treatment of municipal sewage and the management of municipal sewage was not supervised or was insufficiently supervised, as a result of errors and omissions of the audited entities and due to inadequate legal regulations.

Graph 12 Missing wastewater tasks assignment



The minister in charge of the water management issues did not ensure proper and timely implementation of the provisions of the Accession Treaty, what should have been done by the end of 2015 in the area of all wastewater agglomerations and should have included all the provisions related to collection and treatment of municipal sewage, specified in Directive 91/271/EEC.

Only 337 agglomerations with population equivalent of 8,124,258, out of 1,584 agglomerations with population equivalent of 38,793,049, fulfilled every condition of compliance with the above-mentioned directive, after 4 years from the deadline for its implementation, what was only 21.0% of the population equivalent in agglomerations.

At the same time draft of the sixth update of the National Municipal Wastewater Treatment Programme prepared in August 2020, forecasted that in 2027, i.e. after 12 years from the above deadline date specified in the Accession Treaty just 1,344 agglomerations would meet the requirements in question, of 1,463 agglomerations included in this project.

As a result, the European Commission initiated proceedings against Poland regarding the failure to fulfil Member State's obligations concerning correct implementation of Directive 91/271/EEC.

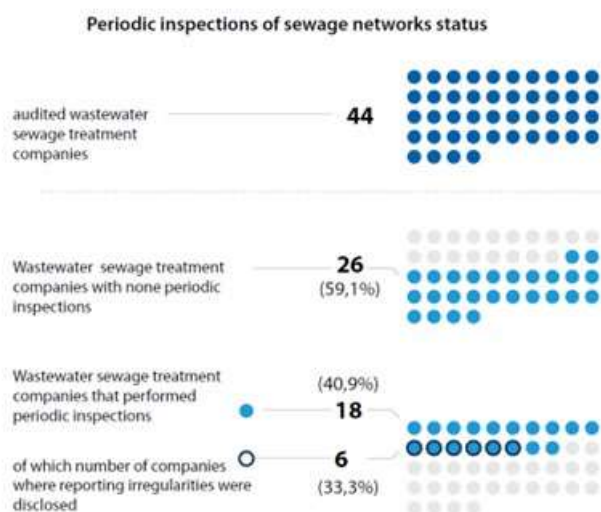
Audited activities of the minister in charge of water management issues and President of Polish Waters and previously, his predecessor the President of National Water Management Board, related to the preparation of subsequent updates of the National Municipal Wastewater Treatment Program, being the basic instrument for the implementation of the EU regulations in the field of municipal sewage disposal and treatment in Poland, had a negative impact on the correctness of implementation of Directive 91/271/EEC.

The assumptions adopted at the stage of preparation of drafts of the fifth and sixth updates of the Municipal Wastewater Treatment Programme did not guarantee every designated agglomeration above 2,000 population equivalent to be included in it. Moreover, those assumptions specified conditions for equipping agglomerations with a sewage network in a manner inconsistent with the practice of the European Commission, as was confirmed by the case law of the Court of Justice of the European Union.

The NIK issued also a negative opinion concerning the implementation of investments in the field of wastewater collection and treatment in audited agglomerations. In 31 out of 44 audited agglomerations the implementation of projects indicated in the fifth update of the National Municipal Wastewater Treatment Programme was delayed. Moreover, only in 4 out of 44 audited agglomerations, the conditions were fully compliant with specified in Directive 91/271/EEC.

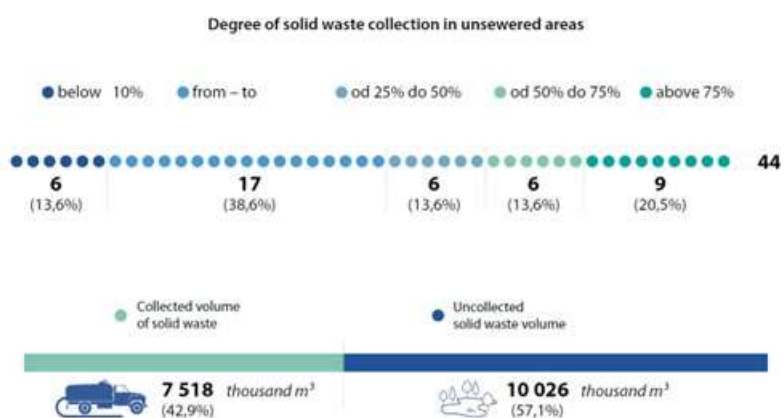
In the opinion of NIK, the supervision exercised by municipalities' executive bodies over the sewage management in audited communities was insufficient. The auditors discovered failures to provide information, or providing incomplete information on how residents dispose their liquid impurities; missing records of septic tanks and home sewage treatment plants or keeping unreliable evidence; missing monitoring of the frequency of emptying septic tanks and sludge removal from home sewage treatment plants or conducting insufficient monitoring; missing data or incomplete data regarding the properties that should be connected to the sewage networks, and not enforcing the obligation of property owners to connect them to the existing sewage networks. Despite the provisions of the construction law concerning the duty to carry out periodic inspections of sewage networks at least once every 5 years (consisting of technical condition verification and suitability for use of the building objects, the aesthetics of the building object and its surroundings, electrical and lightning protection installations in terms of condition of the efficiency of connections, equipment, safeguards and means of protection against electric shocks, insulation resistance of cables and grounding of installations and devices) no such inspections were carried out in as many as 26 wastewater companies. The reasons given included: performing daily network reviews; wrong law interpretation and non-identification of the sewage network as building structure and finally lack of knowledge about the obligation.

Graph 13



Inadequate supervision in the indicated scope resulted among others in a low level of collection of liquid waste from areas without sewage, where in the case of 2/3 of municipalities, even half of the liquid waste generated from these areas was not collected.

Graph 14



Water supply and sewage companies operating in the audited municipalities, in general, correctly fulfilled their obligations regarding collection and treatment of municipal sewage and handling of sludge. The discovered irregularities in some of the audited entities had an impact on the correctness of the performance of collection and management of municipal sewage.

Financing the collection and treatment of municipal sewage from national and foreign funds did not ensure the implementation of all planned tasks in the field of sewage management. Failure to provide financial resources for above-mentioned tasks in some communities restricted their implementation or limited scope of required investments.

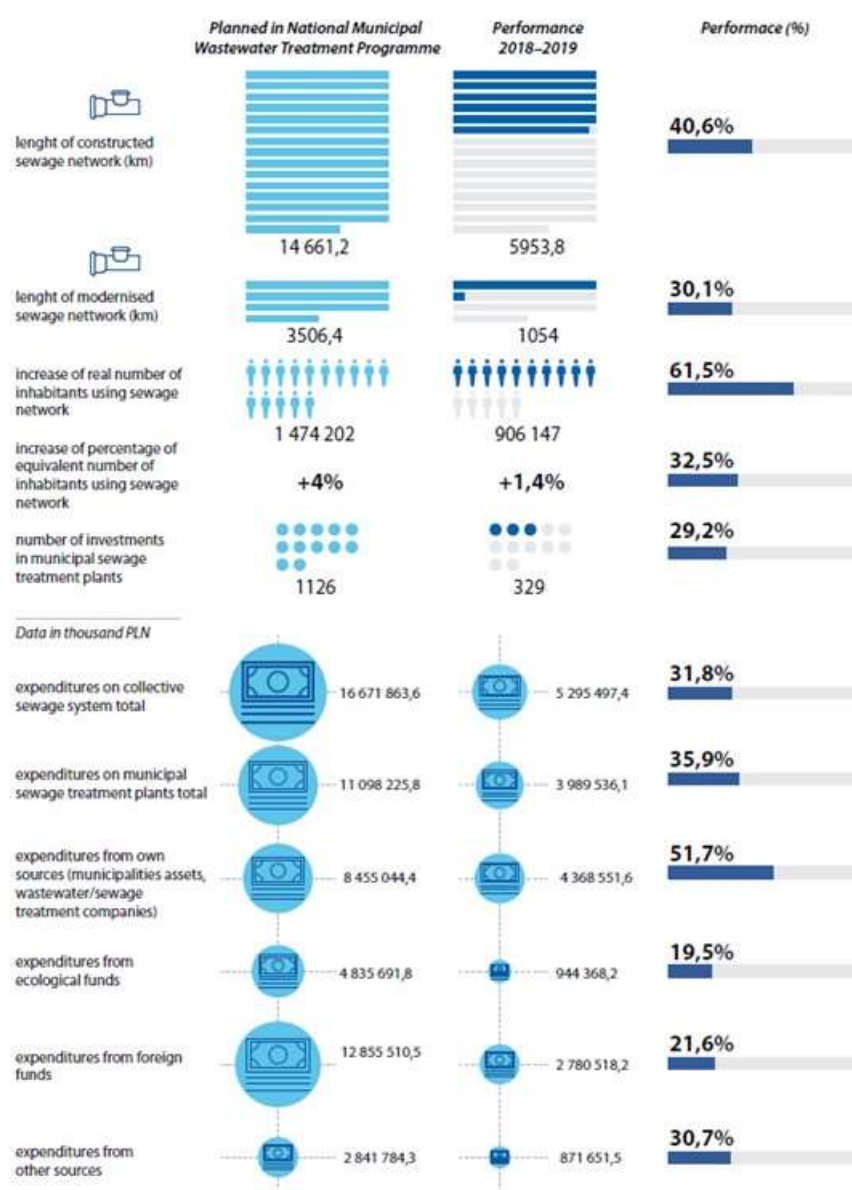
However, the NIK positively assessed the activities of the National Fund for Environmental Protection and Water Management and the regional funds for environmental protection and water management, regarding planning and co-

financing the implementation of wastewater management projects in agglomerations, also taking into account the activities of the National Fund for Environmental Protection and Water Management and some of the regional environmental protection and water management funds – recognition of the need to co-finance projects enabling proper management of municipal sewage in areas outside of the agglomeration boundaries.

Nevertheless, it should be noted that the scale of co-financing of the projects included in the National Municipal Wastewater Treatment Programme on a non-refundable basis by ecological funds, was considerably small, which did not allow some municipalities to benefit from funding despite their efforts in this area. This form of funding was particularly important in case of municipalities that were unable to meet requirements for obtaining repayable financing.

Graph 15

Performance of tasks planned in adopted National Municipal Wastewater Treatment Programme – based on reports for years 2018–2019



Source: own elaboration of NIK

MAIN FINDINGS

The regulations of the European Union impose concrete responsibilities on the Member States related to treatment of urban wastewater. As Poland has not been meeting them, in February 2022 the European Commission started appropriate proceedings. The NIK recognised this threat already in 2012. Still, the latest audit indicates that, although more than a decade has passed since then, municipalities usually do not have data on the number of inhabitants using their sewage systems, nor on those using onsite treatment systems, or drainless reservoirs. Also, municipalities do not measure the waste water produced in their area.

RECOMMENDATIONS

To the Minister of Infrastructure - to introduce changes in the Act on maintaining cleanliness and order in municipalities that would allow, among others, on determination by the minister responsible for water management of the required scope of data necessary to keep records of septic tanks and home sewage treatment plants; to introduce obligations for the commune head, mayor or city president to verify quarterly reports submitted by businesses emptying septic tanks and transporting liquid waste; to obtain from the above quarterly reports information enabling effective supervision of liquid waste management; to introduce sanctions for failure to submit a quarterly report; to introduce fines for failure to connect real estate to the existing sewage system or for the lack of a septic tank for liquid waste or a home sewage treatment plant; to introduce fines for failure to use substitute wastewater disposal.

To the President of Polish Waters - to ensure effective verification of data provided by individual reports on the implementation of the Municipal Wastewater Treatment Programme for a given year.

To the Presidents of the Management Board of the National Fund for Environmental Protection and Water Management and the management boards of the Voivodship Funds for Environmental Protection and Water Management - to consider increasing level of co-financing for tasks related to wastewater management on a non-refundable basis in the areas covered by the Municipal Wastewater Treatment Programme.

To municipalities' executives, mayors and city presidents – to introduce tasks related to performing this function in the organisation of the leading community office; to introduce reliable preparation of reports on the implementation of the Municipal Wastewater Treatment Programme, including verification of the correctness of drafts prepared by other units; to introduce ongoing verification of quarterly reports submitted by businesses emptying septic tanks and transporting liquid waste; to obtain all necessary data and balancing the amount of wastewater generated and treated in the community (to identify irregularities in the treatment of wastewater by properties' owners) and enforcing properties' owners to properly collect and dispose of liquid wastewater; to identify all properties that should be connected to the sewage network and effectively enforce the obligation to connect properties to the network by their owners.



STATE AUDIT INSTITUTION OF THE REPUBLIC OF SERBIA

METHODOLOGY, TOOLS USED

THE EFFECTIVENESS OF MEASURES FOR IMPROVING WATER QUALITY RELATED TO PROTECTION OF WATER FROM POLLUTION (SDG 6.3)

The following was used in the audit:

- Document review

Key documents were reviewed relating to laws, strategies, other planning acts and by-laws that regulate water management and protection of water from pollution, as well as documents related to SDGs. In the implementation phase, the collected documentation on the activities of the auditees was reviewed in connection with the implementation, monitoring and reporting of water protection activities against pollution, planned by the Action Plan for the implementation of the Water Management Strategy in the Republic of Serbia for the period 2021 - 2023.

- Content analysis

The mutual compatibility was analyzed regarding goals of the previous (expired) and current strategies, action plans for their implementation, indicators established for monitoring realization thereof and sustainable development indicators.

- Quantitative analysis

Analyses were made whether there are any deviations, amount of deviations if any, between the planned, ensured and realized amount of funds for the implementation of the activities, planned and actual dynamics of the implementation of the activities, planned and realized values of performance measurement indicators. Also, data on changes in the values of the indicators, on the basis of which the values of the indicators of the sustainable development goals are determined, were collected and analyzed. Based on the available data, where possible, achieved results were measured in relation to the goals set by the Action Plan for the implementation of the Strategy and the data were presented regarding the overall changes. Based on the available data on the values of national and global indicators for monitoring SDG Target 6.3 of the 2030 Agenda, an overview was presented of the progress achieved since 2030 Agenda entered into force.

- Interviews

Officials were interviewed within the auditees, including those responsible for planning and monitoring the implementation of activities and reporting on the results achieved.

AUDITED INSTITUTIONS

The auditees were selected based on their competence and responsibilities regarding the implementation of the Action plan of Water Strategy and their mandate and possible contribution in prevention of water from pollution, namely:

- Ministry of Agriculture, Forestry and Water Management - Republic Water Directorate (RWD)
- Ministry of Environmental Protection (MEP)
- Ministry of Construction, Transport and Infrastructure (MCTI)

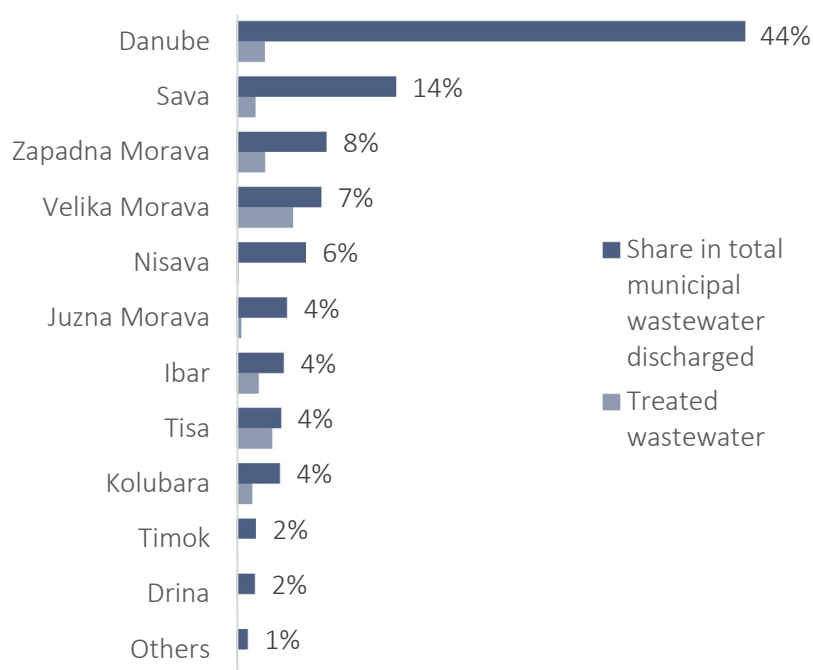
AUDIT PERIOD

The Audit covered the period from January 1st 2021 until June 30th 2023.

ABSTRACT OF THE NATIONAL REPORT

At the time of entry into force of the SDGs of Agenda 2030 in the Republic of Serbia, 60 percent of settlements were connected to the public sewage network, and the public sewage system collected about 72 percent of the total waste water of settlements. 84.7% of the total waste water discharged from public sewers was not previously subjected to any purification treatment. Official statistical data for 2021 show that in over 70% of cities and municipalities in the Republic of Serbia, wastewater is discharged without prior treatment.

Graph 16 Share of purified and total discharged wastewater from settlements in 2021, by watershed



*Source: SAI Serbia, based on data from Eco bulletin 2021 - Statistical Office of the Republic of Serbia.

The State Audit Institution of Serbia conducted a performance audit "Effectiveness of Measures to Protect Water from Pollution in order to Improve Water Quality (SDG 6.3)", with the aim of evaluating the results achieved in improving water quality through reducing pollution, eliminating disposal and reducing release of dangerous chemicals and substances to the minimum possible measure, reduction of the release of untreated waste water, its recycling and reusage (SDG 6.3). The conducted audit determined the following:

1. The established water protection goals against pollution support the achievement of SDG Target 6.3, but it has not been ensured that measures and activities are carried out on the basis of a comprehensive plan and monitored through coordinated and quantitatively established indicators that determine the planned dynamics of goal achievement.

- The Water Management Strategy on the territory of the Republic of Serbia until 2034 was adopted in December 2016, and the first action plan for its implementation was adopted after more than four years. The first water management plan on the territory of the Republic of Serbia was adopted in April 2023, and the water protection plan against pollution was not adopted. Due to the fact that certain planning and by-laws have not yet been adopted or their provisions cannot be applied, the existing planning and by-law framework in the field of water

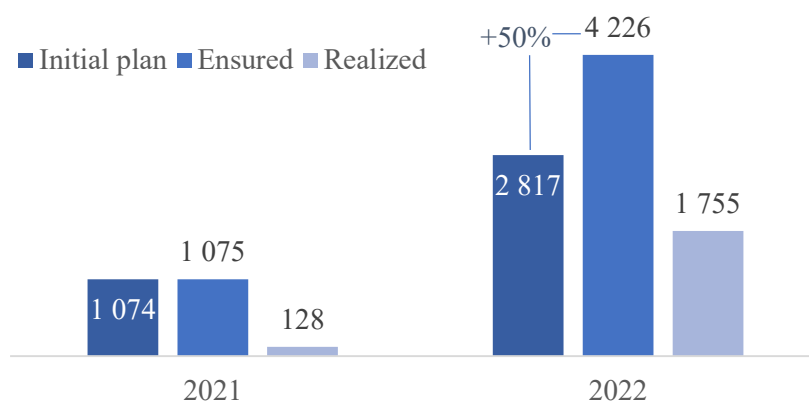
protection against pollution did not provide a complete, single and harmonized basis for planning measures and activities to protect water from pollution at all levels;

- The strategic goal in the field of water protection from pollution in the Republic of Serbia is to achieve and maintain a clean status and good ecological potential of water bodies of surface water and underground water. According to the number of planned activities and the amount of funds, the most significant planned measures for the period from 2021 to 2023 relate to the reduction of pollution intake from concentrated sources of pollution for municipal wastewater. The Action Plan for the implementation of the Strategy includes specific activities, responsible authorities, deadlines and means for the planned measures to protect water from pollution, but quantitative indicators, their initial and target values, have not been determined for all goals and measures to protect water from pollution. The Action Plan for the implementation of the Strategy was not supplemented in accordance with the approved implementation of new activities and does not include all the activities that were implemented, which is why it does not provide complete information about the planned scope and dynamics of activities. The established objectives of measures to reduce the intake of pollution from concentrated sources of pollution are not determined for the period covered by the 2030 Agenda and they are not expressed through single and comparable indicators, which is why, although they support the achievement of SDG Target 6.3, they do not provide information on the overall planned progress and dynamics in the realization thereof.

2. Out of a total of nine activities to reduce the discharge of untreated wastewater, three were implemented, and due to deviations in the dynamics of the implementation of the activities set out in the Plan, the deadlines for the implementation of the remaining activities were postponed, thus delaying their effects.

- In addition to the originally planned funds, additional funds and sources of financing were engaged for the implementation of the activities, but their availability and utilization was not carried out in accordance with the planned dynamics.

Graph 17 Overview of the planned, ensured and realized amount of funds (in million dinars)



**Source: SAI Serbia, based on data from the Action Plan for the implementation of the Strategy and data on the ensured and realized amount of funds in 2021 and 2022.*

In 2021, 12% of the originally planned amount of funds was actually used, while in 2022, 42% of the ensured amount of funds was used for the implementation of activities.

- Action Plan for the implementation of the Water Management Strategy on the territory of the Republic of Serbia for the period from 2021 to 2023 envisages a plan to implement nine activities of construction, reconstruction or extension of wastewater treatment plants, with expansion and reconstruction of the sewage network. In the course of 2021 and 2022, three activities were completed, for two activities the implementation was not planned, and the implementation started later than expected for three activities, while the goals were changed regarding one activity, i.e. the activity was postponed for the period after 2023. Due to the fact that during 2021 and 2022, a number of the activities was not carried out in accordance with the planned dynamics, the planned deadlines for their completion were postponed and the effects of the implemented activities were reduced or postponed.

Due to the postponement of the planned deadlines for the realization of the activities, the planned increase in the constructed capacity of the wastewater treatment plant of 474,000 PE was postponed by one year, while the increase in capacity of 286,000 PE and the connection of 20,000 new users to the already constructed wastewater treatment plant was postponed by two years.

In 2022, the utilization of the constructed capacities of the municipal wastewater treatment plant stood at between 35% and 90%, which is why the total effective increase in capacity compared to the plan at the end of 2022 was 54%.

- Due to the use of different performance indicators, absence of annual target values of the planned activities and different treatment when evaluating the achieved result, the status for some of the activities, presented in the annual report on the implementation of the Strategy Action Plan, does not adequately reflect the actual status of the implementation of the capital projects that are included in them, i.e. their contribution to the result regarding the measure they refer to.

Although there has been an increase in the share of the population whose wastewater is treated, treated wastewater discharged from settlements and water bodies with a clean status, the achieved result and recorded progress in achieving the SDG Target 6.3 do not reveal to what extent the planned goals of water protection against pollution have been achieved.

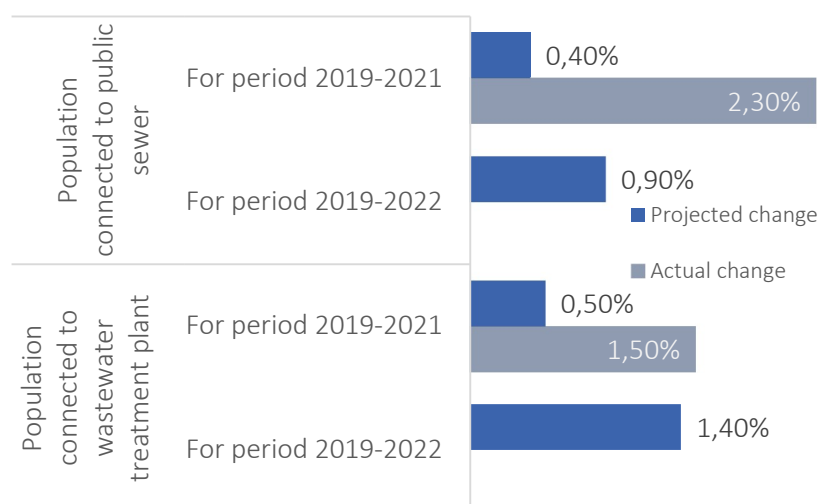
- Regarding goals and measures to protect water from pollution, data on the achieved values of the established indicators were not provided in a timely manner, which is why the annual reports on the implementation of the Action Plan of the Strategy do not contain information on the achieved results. During the preparation of the annual reports, the achieved values were determined for three out of a total of ten indicators defined for monitoring the implementation of measures and goals in the field of water protection from pollution. No additional activities were undertaken in order to determine the value of the established indicators that were not available in a timely manner from the planned sources of verification. For this reason, a report was submitted to the Government of the Republic of Serbia that does not contain all the necessary information for adequate monitoring and analysis of progress in achieving the planned goals, measures and activities to protect water from pollution.

- The resulting changes in the values of the established indicators do not realistically reflect the extent to which the planned objectives of water protection against pollution were achieved, because a number of the established objectives was achieved before the start of the implementation of the Action Plan for the implementation of the Strategy and before the completion of the planned activities.

The determined initial values of the indicators for monitoring the development of

communal infrastructure, which refer to the connection of the population to the sewage network and waste water treatment plants, do not correspond to the data of the official statistics on the values of those indicators for the specific year. The determined target values of the indicators for 2022, i.e. 2023, are less than the actual values of those indicators in 2019, in relation to which the result is measured and, according to official statistics, the number of the population connected to the sewage network and treatment plants of waste water in the period from 2019 to 2021 is higher than planned one for the period from 2019 until 2022, although some of the activities were not implemented in accordance with the plan, so their effect was also delayed.

Graph 18 Overview of the relations between projected and actual changes



*Source: SAI Serbia, based on the data on the initial and targeted values of the indicators of the Action Plan for the implementation of the Strategy and the data of the Statistical Office of the Republic of Serbia for the period 2019-2021.

Due to the inconsistency of the established initial values of the indicators and the lack of data on the expected impact of individual activities, despite the fact that in the period from 2019 to 2021 the achieved growth in the population's connection to the sewage network and wastewater treatment plants was higher than planned, it is not possible to confirm that the changes in relation to 2019 adequately reflect the realization of the planned goals of water protection against pollution, aimed at improving the water quality.

MAIN FINDINGS

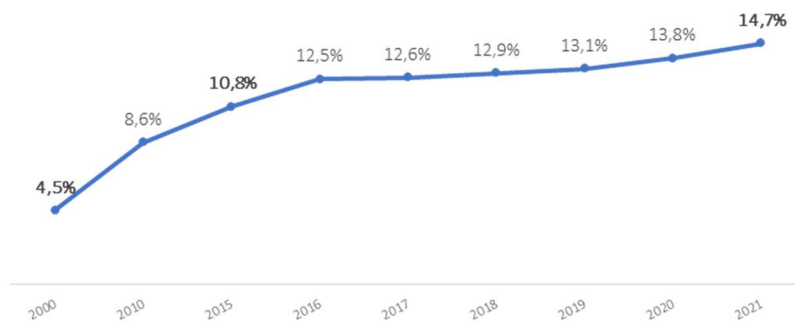
The indicators of SDG Target 6.3 show that progress has been achieved since the adoption of the 2030 Agenda in the Republic of Serbia, but due to absence of nationally determined goals and differences in the scope and values of the indicators, which are published by the Republic Bureau of Statistics and the United Nations Statistical Unit, the assessment of the progress depends on the indicators used.

The Republic of Serbia has not yet determined national sustainable development goals, in accordance with the 2030 Agenda, which is why the achievement of SDG Target 6.3 depends on the realization of goals, measures and activities in the field of water protection from pollution.

Progress in reducing discharged untreated wastewater in the Republic of Serbia is monitored through an indicator that shows the share of residents connected to urban wastewater treatment with at least secondary treatment. This indicator

records constant growth, and in the period from 2016 to 2021, it was increased from 10.8% to 14.7% (by 3.85%).

Graph 19 National SDG indicator 6.3.1 - population connected to wastewater treatment with at least secondary treatment in Republic of Serbia, for period 2000–2021.



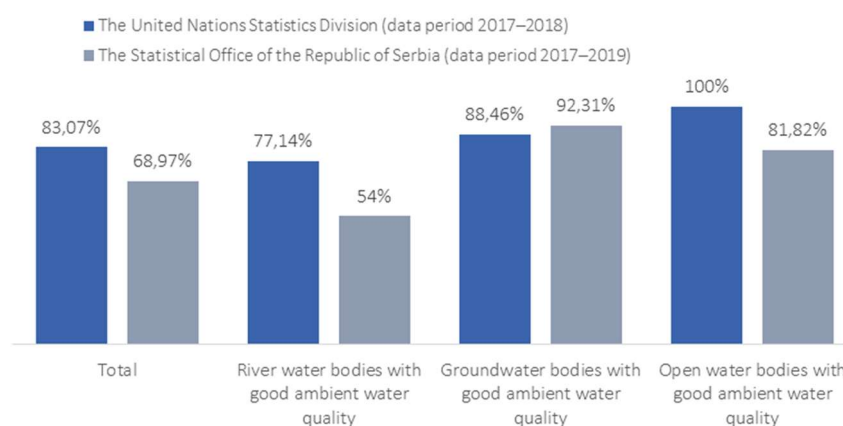
*Source: Statistical Office of the Republic of Serbia, <https://sdg.indikatori.rs>.

According to data published by the Statistical Unit of the United Nations, the share of household wastewater flows that are safely treated in the Republic of Serbia was 36.48% in 2022, which is 9.42% more than the published data for 2020.

According to the data of the Environmental Protection Agency of Serbia, the share of water bodies with clean water quality in surrounding (good ambient water quality) for the period 2017-2019 stood at 69%, which is 1.6% higher than the data for the period 2014-2016.

Data on the share of water bodies with clean water status on the United Nations Statistical Unit Portal are available only for 2020.

Graph 20 Comparative overview of the values of sdg indicator 6.3.2 for 2020 on the portal of the United Nations Statistical Unit and on the portal of the Statistical Office of the Republic of Serbia



* Source: SAI Serbia, based on data on the value of indicators derived from the databases of the UN Statistical Unit and the Statistical Office of the Republic of Serbia

There are differences in values of this indicator for 2020 on the Portals of the Statistical Unit of the United Nations and the Statistical Office of the Republic of Serbia, which are most evident when it comes to the participation of river water bodies with clean water status.

Since the entry into force of Agenda 2030 in the Republic of Serbia, there has been

an increase in the percentage of the population whose wastewater is treated at least through secondary treatment, an increase in the share of treated municipal wastewater, as well as the share of water bodies with clean water status.

Figure 8 Overview of progress regarding protection of water from pollution and improving water quality in the Republic of Serbia



Source: SAI Serbia

On the other hand, the data of the official statistics for 2021 reveal that over 70% of cities and municipalities did not ensure treatment of municipal waste water before discharge.

Based on all of the above and having conducted the audit, State Audit Institution of the Republic of Serbias concluded that, although the Republic of Serbia is making progress in achieving Sustainable Development Goal -Target 6.3, it is necessary to improve the planning and ensure adequate monitoring and reporting on achieved results for a realistic assessment of the effectiveness of measures and activities aimed at protecting water from pollution, in order to improve water quality.

RECOMMENDATIONS

State Audit Institution of the Republic of Serbia issued the following recommendations to the auditees:

- to define the necessary measures and activities, deadlines and authorities in order to achieve the objectives of water protection against pollution at all levels (Ministry of Agriculture, Forestry and Water Management - Republic Water Directorate),
- to determine quantitative indicators for goals and measures in the field of water protection against pollution, taking into account indicators of sustainable development target 6.3 (Ministry of Agriculture, Forestry and Water Management - Republic Water Directorate).
- to determine the target values of the indicators based on the expected contribution of the planned activities and provide data on the achieved amounts (Ministry of Agriculture, Forestry and Water Management - Republic Water Directorate),
- to determine the quantitative indicators and their values for the planned activities on an annual basis (Ministry of Environmental Protection and Ministry of Construction, Transport and Infrastructure),
- when reporting on activities, to determine their status taking into account the achieved results, established indicators and prescribed scope of the capital project implementation phase (Ministry of Environmental Protection and Ministry of Construction, Transport and Infrastructure).

ACCOUNTING CHAMBER OF UKRAINE

REPORT ON THE RESULTS OF THE PERFORMANCE AUDIT OF ACTIONS AIMED AT ACHIEVING GOAL 6 "ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL" OF THE SUSTAINABLE DEVELOPMENT GOALS OF UKRAINE FOR THE PERIOD UP TO 2030

METHODOLOGY, TOOLS USED

The audit uses such audit methods as comparative analysis, analysis of the use of funds and control systems, verification of compliance with legal requirements, data analysis, and interviews, either individually or in combination with other methods, to assess the effectiveness of spending state budget funds.

AUDITED INSTITUTIONS

Ministry of Environmental Protection and Natural Resources of Ukraine; State Agency of Water Resources of Ukraine; Ministry for Communities, Territories and Infrastructure Development of Ukraine (until 17.12.2022 - Ministry of Communities and Territories Development of Ukraine); Ministry of Reintegration of the Temporarily Occupied Territories of Ukraine; Sudovyshnya City Council of Yavoriv District of Lviv Region; State Enterprise "Khmelnyskyi Regional Single Customer Service"; Municipal Enterprise Polonne Heat and Water Supply; Private Joint Stock Company "Joint Stock Company "Kyivvodokanal"; Department of Housing and Communal Services of Mykolaiv City Council; Department of Housing and Communal Services of Pervomaisk City Council; Chop City Council of Zakarpattia Oblast.

AUDIT PERIOD

Sending requests for information (including as part of the preliminary study of the audit subject): Ministry of Finance of Ukraine; Ministry of Economy of Ukraine; Ministry of Healthcare of Ukraine; State Statistics Service of Ukraine; Vinnytsia, Volyn, Dnipropetrovs'k, Donetsk, Zhytomyr, Zakarpattia, Zaporizhzhia, Ivano-Frankivsk, Kirovohrad, Kyiv, Luhansk, Lviv, Mykolaiv, Odesa, Poltava, Rivne, Sumy, Ternopil, Kharkiv, Kherson, Khmelnytskyi, Cherkasy, Chernivtsi, Chernihiv regional state administrations (for the period of martial law - military administrations).

2019–2022

ABSTRACT OF THE NATIONAL REPORT

Providing the population with high-quality and safe drinking water and proper sanitary conditions is one of the most urgent tasks for Ukraine. Drinking water in Ukraine is supplied by almost 80% from surface sources and only 20% from underground sources. However, their environmental condition is deteriorating every year. The Russian aggression against Ukraine has brought numerous environmental and humanitarian disasters of varying scale to the territory of Ukraine, which have had a negative impact on meeting the population's needs for high-quality drinking water.

Ukraine is a participant in the global process of sustainable development. Taking into account the national conditions and guided by the requirements of the Agenda, Ukraine has developed a national SDG system. The national SDG system includes 17 goals, 86 targets and 172 indicators for their monitoring. To achieve Goal 6, the national SDG system defines 5 targets and 13 indicators for their implementation, as well as target values for the indicators for 2015-2030.

The Decree of the President of Ukraine No. 722/2019 "On the Sustainable Development Goals of Ukraine for the period up to 2030" dated 30 September 2019 supports the achievement of the global sustainable development goals by 2030 and the results of their adaptation taking into account the specifics of Ukraine's development, and identifies the need to ensure compliance with the SDGs of Ukraine, in particular, to ensure accessibility and sustainable management of water resources and sanitation.

The Resolution of the Government of Ukraine No. 1285 dated 16.12.2020 amended the Rules of Procedure of the Cabinet of Ministers of Ukraine with a provision that the need to achieve the SDGs is taken into account in the process of formulating and implementing state policy. The Government Order No. 686-p of 21.08.2019 regulates the collection of data to monitor their implementation.

However, Ukraine still does not have a national SDG action plan, which makes it difficult to assess the effectiveness of the use of funds for SDG measures and the efficiency of the implementation of such measures. Assessment of the effectiveness of executive authorities in ensuring the legality, timeliness and completeness of their management decisions as participants in the budget process when using budget funds for SDGs is also complicated.

The effectiveness of the implementation of measures aimed at achieving Goal 6 could have been improved if they had been properly coordinated and an action plan had been developed and approved as provided for in the Agenda.

Ukraine is currently developing a number of projects and programme documents aimed at ensuring the sustainable economic, social and environmental development of the country. Measures are being taken to adapt Ukrainian legislation to EU environmental legislation, in particular to Council Directive 91/271/EEC on urban wastewater treatment, Council Directive 98/83/EC of 03.11.1998 on the quality of water for human consumption and the new Directive (EU) 2020/2184 of 16.12.2020 on the quality of water for human consumption, the provisions of the Water Framework Directive and the Floods Directive.

In order to ensure the achievement of Goal 6 and the goals of integrated water resources management, the Law of Ukraine No. 2697-VIII "On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period up to 2030" was adopted on 28 February 2019, and the Water Strategy of Ukraine for the Period up to 2050 was approved in 2022 (Resolution of the Cabinet of Ministers of Ukraine No. 1134-r dated 09 December 2022), which includes updated national targets for the Protocol on Water and Health aligned with the SDGs as an annex.

MAIN FINDINGS

However, Ukraine has not yet approved either the Sustainable Development Strategy of Ukraine until 2030 or the relevant national action plan to achieve the SDGs. This makes it difficult to assess both the effectiveness of the use of funds for SDGs and the efficiency of the implementation of such measures. Assessing the effectiveness of executive authorities in ensuring the legality, timeliness and completeness of their management decisions as participants in the budget process when using budget funds for SDGs, and thus achieving the indicators set for Goal 6 in 2019-2022, is also difficult.

There is also no single document in the field of centralised water supply and sewerage that would combine the technical and economic components, define the directions of its development and the powers of all parties, which directly affects the achievement of Goal 6.

To achieve the SDGs by 2030, Ukraine has developed a system for monitoring and evaluating their implementation. In order to achieve Goal 6, the Order of 21.08.2019 No. 686-r defines 12 indicators, which are used to collect data to monitor the implementation of 5 tasks.

The monitoring system includes indicators that reflect the state of implementation of each of the goals and their tasks, but currently does not reflect the actual state of achievement of Goal

6, which makes it difficult to assess the achievement of individual indicators by its tasks.

There has been some progress in achieving the indicators set to assess the implementation of Goal 6, but a number of unresolved problems remain to ensure access to quality drinking water for the population of Ukraine and quality services for the supply of safe drinking water, construction and reconstruction of centralised drinking water supply and sanitation systems using the latest technologies and equipment in rural areas and remote regions. The situation is further complicated by the military aggression of the Russian Federation against Ukraine.

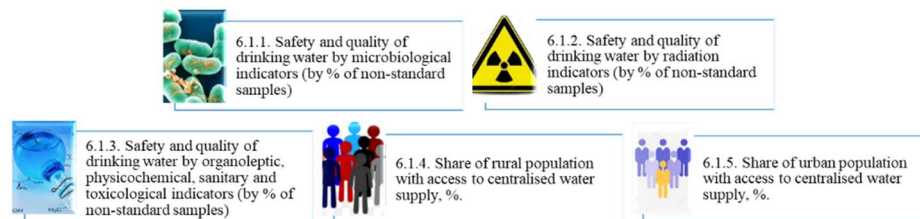
Target 6.1.

The results of the audit showed that the population of Ukraine has limited access to quality drinking water. Centralised water supply covers approximately 65.2% of the country's population (only a quarter of villages and 98 % of cities). Monitoring data show that the proportion of non-standard samples of drinking water from centralised and non-centralised water supply that do not meet the standards for microbiological, organoleptic, physicochemical and sanitary and toxicological indicators has been clearly increasing since 2015, which means that epidemic water safety is deteriorating every year, and that Target 6.1 "Ensure the availability of quality services for the supply of safe drinking water, construction and reconstruction of centralised drinking water supply systems using the latest technologies and equipment" of Goal 6 is not being met.

Ensuring universal and equitable access to safe and affordable drinking water for all is one of the most important targets of the UN SDGs, namely Target 6.1. National governments should implement policies and programmes that ensure access to drinking water for all, including those living in remote and hard-to-reach areas. Therefore, Target 6.1 of Goal 6 is to ensure the availability of quality safe drinking water services and the construction and rehabilitation of centralised drinking water supply systems using the latest technologies and equipment.

To monitor the progress of Target 6.1. Goal 6, 5 indicators have been defined (Figure 9).

Figure 9 INDICATORS FOR TARGET 6.1 "ENSURE ACCESS TO QUALITY SAFE DRINKING WATER SERVICES, CONSTRUCTION AND RECONSTRUCTION OF CENTRALISED DRINKING WATER SUPPLY SYSTEMS USING THE LATEST TECHNOLOGIES AND EQUIPMENT"



Source: SAI own edit

Of course, in order to ensure the safety of drinking water, it is necessary to control the quality of water from the water supply source to the consumer's tap. After all, drinking water intended for human consumption must meet the following hygienic requirements: it must be safe in terms of epidemics and radiation, have favourable organoleptic properties and a harmless chemical composition.

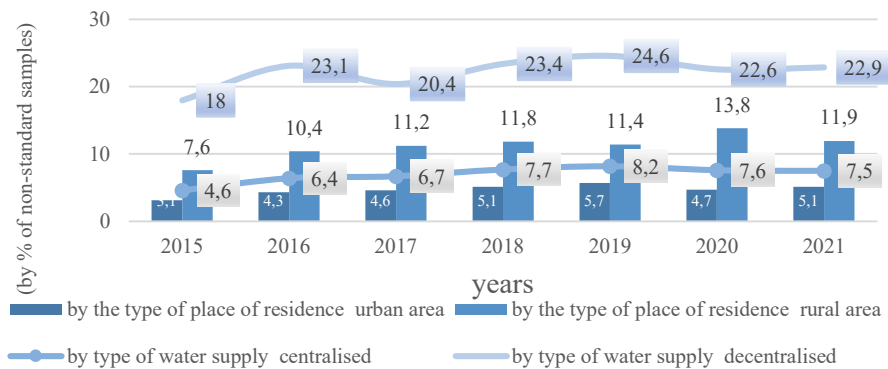
Indicator 6.1.1 "Safety and quality of drinking water by microbiological indicators (by % of non-standard samples)"

Microbiological indicators are indicators of the epidemic safety of drinking water and include the content of bacteria, fungi, simple and complex viruses, the excess of which can lead to the

occurrence of infectious diseases in humans.

At the same time, according to the monitoring indicators for achieving this indicator, the proportion of non-standard drinking water samples from centralised and non-centralised water supply that do not meet the microbiological standards has been showing a clear upward trend since 2015, increasing by 4.9% in the decentralised and 2.9% in the centralised water supply system, 4.3% in rural areas and 2% in urban areas (Figure 10), which leads to a deterioration in epidemic water safety.

Figure 10 SAFETY AND QUALITY OF DRINKING WATER BY MICROBIOLOGICAL INDICATORS



Source: SAI own edit

The target benchmarks for achieving this indicator, as well as the indicator itself, are not defined in the National Report "Sustainable Development Goals: Ukraine" (here and after – National Report), which makes it impossible to assess the state of their achievement and does not contribute to the protection of public health.

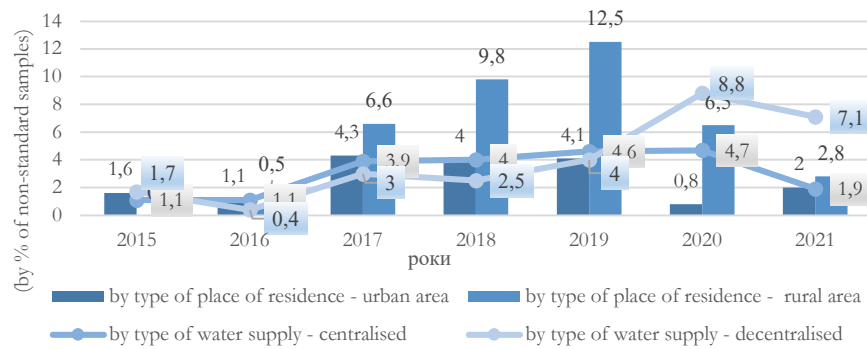
Indicator 6.1.2 "Safety and quality of drinking water by radiation indicators (by % of non-standard samples)

Radiation indicators are indicators that characterise the property of water caused by the presence of radionuclides. During the hygienic assessment of radiation safety of drinking water at water intakes from surface and groundwater sources, specific total alpha and beta activities are preliminarily determined by certain indicators. These can be radioactive isotopes of both natural origin (e.g. radon) and artificially produced radionuclides (e.g. iodine-131, cesium-137).

According to the monitoring indicators for achieving this indicator, in 2021, compared to 2015, the proportion of non-standard drinking water samples from centralised and non-centralised water supply that did not meet the radiation standards increased by 0.8% in the centralised and 5.4% in the decentralised water supply system, by 0.4% in urban areas and up to 2.8% in rural areas (Figure 11).

Targets for achieving this indicator, as well as the indicator itself, are not defined in the National Report. At the same time, contamination of drinking water with radionuclides can have serious consequences for human health, in particular, increase the risk of cancer. Therefore, it is important to ensure the safety of drinking water in terms of radiation indicators and take the necessary measures to reduce the level of radionuclides in water to acceptable levels.

Figure 11 SAFETY AND QUALITY OF DRINKING WATER BY RADIATION INDICATORS



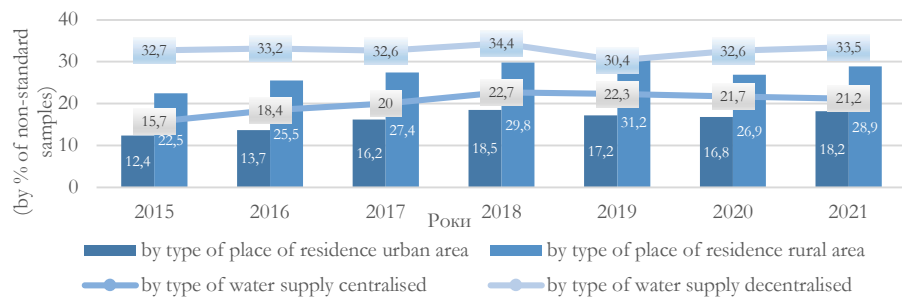
Source: SAI own edit

Indicator 6.1.3 "Safety and quality of drinking water by organoleptic, physicochemical and sanitary-toxicological indicators (by % of non-standard samples)"

The safety and quality of drinking water in terms of organoleptic, physicochemical, sanitary and toxicological indicators must comply with the hygiene standards set out in Annex 2 of the Sanitary and Epidemiological Norms 2.2.4-171-10.

The audit found that, according to the monitoring indicators for achieving this indicator, the proportion of non-standard drinking water samples from centralised and non-centralised water supply that do not meet the standards for organoleptic, physicochemical and sanitary and toxicological indicators also increased in 2021 compared to 2015, namely by 5.5% in the centralised and 0.8% in the decentralised water supply system, by 5.8% in urban areas and by 6.4% in rural areas (Figure 12).

Figure 12 SAFETY AND QUALITY OF DRINKING WATER BY ORGANOLEPTIC, PHYSICOCHEMICAL AND SANITARY-TOXICOLOGICAL INDICATORS



Source: SAI own edit

The targets for achieving this indicator, as well as the indicator itself, are not defined in the National Report, which does not allow assessing the state of their achievement and does not contribute to ensuring an adequate level of public health protection.

It should also be noted that, according to the National Report on Drinking Water Quality and the State of Drinking Water Supply in Ukraine in 2021, Ukraine's drinking water supply is almost 80% provided by surface water. At the same time, most river basins can be classified as polluted and highly polluted according to the hygienic classification of water bodies, but the composition of treatment facilities and water treatment technologies have not changed. At the same time, the existing treatment facilities and technologies for purifying and disinfecting drinking water are not capable of purifying it to the level of safety indicators.

At the same time, monitoring of the water quality of surface water bodies shows that their ecological condition is not improving. The audit found that, according to the results of state water monitoring, the quality of surface water in the Dnipro River basin, which provides 70%

of the total water intake, is satisfactory. At the same time, the Dnipro River basin is characterised by regional aspects of water quality. The waters in the upper reaches of the Dnipro River are characterised by a high content of natural compounds of humic and fulvic acids, iron and manganese compounds.

The content of pesticides, polyaromatic hydrocarbons, volatile organic compounds and heavy metals was detected in the surface waters of the Dniester River basin. In particular, these massifs also exceeded the environmental quality standards for the average annual concentration (AAC) of pesticides, polyaromatic hydrocarbons, and volatile organic compounds. Also, the content of heavy metals was exceeded: cadmium, mercury and nickel .

Accordingly, the current state of surface water bodies requires stimulating the use of modern water treatment and surface water purification technologies to ensure the safety and quality of drinking water.

It should also be noted that, according to the National Report on Drinking Water Quality and the State of Drinking Water Supply in Ukraine for 2021, groundwater in Ukraine, including artesian water, in many regions (Crimea, Donbas, Dnipro) does not meet the standards for water supply sources in terms of quality, which is due not only to the natural conditions of its formation but also to anthropogenic pollution and therefore needs to be treated. At the same time, only a few artesian water supply systems have water treatment facilities. Along with contamination, the lack of compliance with regulatory requirements is one of the reasons for the spread of diseases such as gallstones and stomach ulcers in the country.

At the same time, the military aggression of the Russian Federation against Ukraine leads to additional pollution of surface and groundwater. In the areas of hostilities, water bodies are contaminated with remnants of military equipment, various types of ammunition, and leaks of fuels and lubricants. Thus, according to the EcoThreat app, as of 19.04.2023, more than UAH 106 billion in damages were caused as a result of the spillage of more than 11,000 tonnes of oil products into water bodies.

In some regions, the issue of supplying the population with drinking water is acute, not only in terms of quality but also in terms of quantity. Scheduled water supply and its prolonged absence in water supply networks contribute to bacterial contamination of drinking water.

At the same time, the quality of drinking water in centralised water supply systems is adversely affected by the unsatisfactory sanitary condition of water supply facilities and networks, with the percentage of their wear and tear ranging from 30% to 70% in different regions, as well as untimely capital and routine preventive maintenance and emergency repairs.

Indicator 6.1.4 "Share of the rural population with access to centralised water supply, %"

According to the World Health Organisation, the proportion of the rural population with access to centralised water supply is quite low. In many countries, the water supply infrastructure in rural areas is very limited, and a significant proportion of the population is forced to use water from reservoirs, wells or other sources.

The availability of a centralised water supply is essential to ensure the safety and quality of drinking water, as well as access to sufficient water for domestic and other needs.

The audit found that the monitoring indicators for the achievement of this indicator provide data on the provision of centralised water supply to rural settlements, but not to the rural population, as defined by the indicator, which does not allow assessing the achievement of the target.

At the same time, according to the data presented, only almost a quarter of Ukrainian villages are provided with centralised water supply (16,989 rural settlements do not have it), and the share of rural settlements with access to centralised water supply decreased by 2% in 2021 compared to 2015 (Figure 13).

Figure 13 PROVISION OF RURAL SETTLEMENTS WITH ACCESS TO CENTRALISED WATER SUPPLY



Source: SAI own edit

At the same time, the state of water supply to the rural population is of particular concern: in 2021, the share of rural water supply systems with laboratory test results that do not meet the standards was 38.3% out of 3,351 rural water supply systems tested.

The rest of the rural population consumes water from wells and individual boreholes, which are mostly in poor sanitary condition.

In addition, according to the National Report on the Quality of Drinking Water and the State of Drinking Water Supply in Ukraine, in 2021, 171.2 thousand people were provided with imported drinking water (2% of the total number of people in the regions where imported water was used and 0.6% of the total population in Ukraine, excluding the population of those regions that could not provide information).

Indicator 6.1.5 "Share of urban population with access to centralised water supply, %"

Providing urban populations with access to centralised water supply is important for sustainable urban development, as it helps to reduce the use of natural water sources, preserve them for future generations and reduce environmental impact.

The audit found that the monitoring indicators on the achievement of this indicator provide data on the provision of centralised water supply to urban settlements, but not to the urban population, as defined by the indicator, which does not allow assessing the achievement of the target.

At the same time, according to the presented indicators, the level of centralised water supply in cities in 2021 was 98% (absent in 4 cities), and decreased by 1% compared to 2015 (Figure 14).

Figure 14 PROVISION OF URBAN SETTLEMENTS WITH ACCESS TO CENTRALISED WATER SUPPLY



Source: SAI own edit

It should be noted that, according to the National Report, in 2021, in general, centralised water supply systems provided approximately 19 million people or 65.2% of the total population of settlements, which is extremely low.

In addition, the full-scale military aggression of the Russian Federation against Ukraine has led to significant, and sometimes irreparable, damage to the critical infrastructure of centralised water supply and sewage in cities.

According to a preliminary assessment by the KSE Institute, as of 24.02.2023, more than 1,046 linear kilometres of water supply networks were destroyed, and 12 water treatment plants were partially damaged or completely destroyed. In addition, 82 water pumping stations were destroyed or damaged. In addition, 40 wells have been destroyed or damaged. Laboratories that analysed the state of the water supply in the region were also destroyed or damaged. Thus, preliminary estimates show that about 3 such facilities were destroyed/damaged. This exacerbates the problem of access to water resources.

According to the World Bank's updated assessment "Rapid Assessment of Damage and Needs in Ukraine", as of 24.02.2023, direct losses from damage to water supply and sanitation facilities amounted to USD 2.2 billion. (this figure is approximate, the actual damage may be 30% higher), and losses in the water supply and sewerage sector amounted to approximately USD 7.5 billion.

Target 6.3.

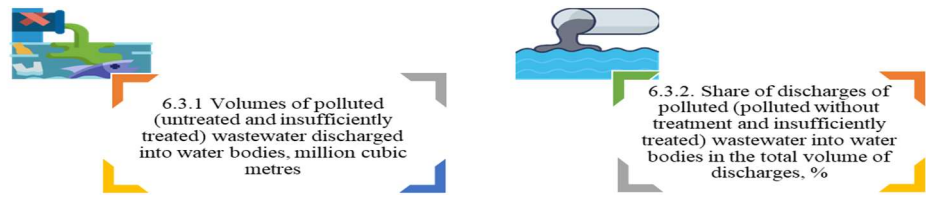
The results of the audit showed that Ukraine is working to reduce the amount of untreated wastewater discharged. Reducing the volume of such water discharges is important for protecting the environment and public health. In 2021, the volume of polluted wastewater discharged into water bodies decreased by 38% compared to 2015, and their share decreased by almost 5%. At the same time, in 2020, the achievement of these indicators amounted to 71.5% and 77.3% of the set targets for the year, respectively, which indicates a positive trend in the implementation of Target 6.3 "Reduce the volume of untreated wastewater discharges, primarily through the use of innovative water treatment technologies at the state and individual levels" of Goal 6 and ensuring the improvement of water resources, public health and the need for clean drinking water.

The main causes of surface water pollution are the discharge of contaminated municipal and industrial wastewater directly into water bodies and through the municipal sewage system, as well as the flow of pollutants into water bodies through surface water runoff from built-up areas and agricultural land.

Based on the results of the summary of state water accounting data, in 2021, 4,684.6 million cubic metres of wastewater was discharged into surface water bodies, including 541.5 million cubic metres (11.6%) of polluted water, 1,430 million cubic metres (30.5%) of standard-purified water and 2,712.9 million cubic metres (57.9%) of standard-purified water without treatment.

To monitor the progress of Target 6.3 of Goal 6, are define 2 indicators (Figure 15). Reducing the volume of polluted water discharges into water bodies is a very important task in terms of environmental protection and human health.

Figure 15 INDICATORS OF TARGET 6.3 "REDUCE THE VOLUME OF UNTREATED WASTEWATER DISCHARGES, PRIMARILY THROUGH THE USE OF INNOVATIVE WATER TREATMENT TECHNOLOGIES AT THE STATE AND INDIVIDUAL LEVELS"

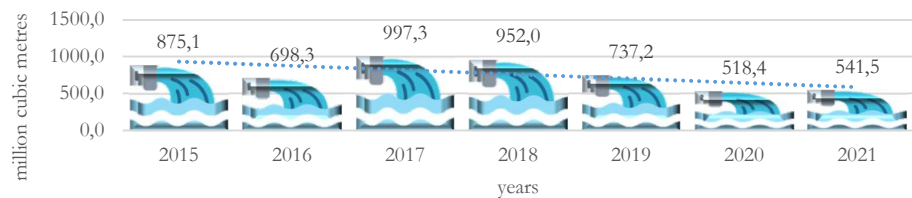


Source: SAI own edit

Discharges of polluted water can contain a variety of harmful substances that cause serious human health problems and threaten the ecosystem of water bodies.

According to the monitoring indicators for achieving indicator 6.3.1, the volume of discharges of polluted (untreated and insufficiently treated) wastewater into water bodies in 2021 decreased by 38% compared to 2015 (from 875.1 million cubic meters in 2015 to 541.5 million cubic meters in 2021) (Figure 16).

Figure 16 VOLUMES OF POLLUTED (UNTREATED AND INSUFFICIENTLY TREATED) WASTEWATER DISCHARGED INTO WATER BODIES

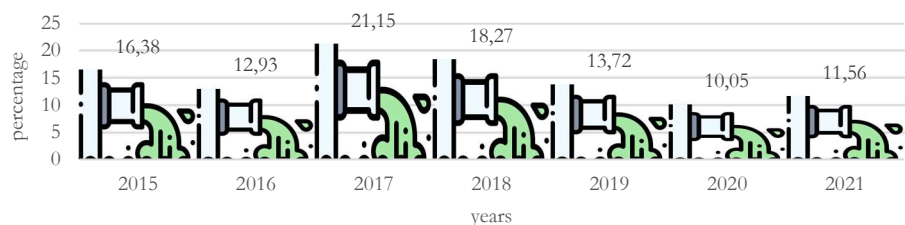


Source: SAI own edit

At the same time, in 2020, this volume amounted to 71.5% of the target set for 2020 (725.0 million cubic metres), which had a positive impact on the provision of clean water for drinking and maintaining the proper condition of aquatic ecosystems.

According to the monitoring indicators for achieving indicator 6.3.2, the share of polluted (untreated and insufficiently treated) wastewater discharges into water bodies in 2021 compared to 2015 in the total volume of discharges decreased by almost 5% (from 16.38% of total discharges in 2015 to 11.59% in 2021) (Figure 17).

Figure 17. SHARE OF POLLUTED (UNTREATED AND INSUFFICIENTLY TREATED) WASTEWATER DISCHARGES INTO WATER BODIES IN TOTAL DISCHARGES



Source: SAI own edit

In 2020, this share was 10.05% and exceeded the target (13.0%), which ensured not only an improvement in the state of water resources but also the preservation of public health and the need for clean drinking water.

State Audit Institution issued the following recommendations to the auditees:

- Develop and approve the Sustainable Development Strategy of Ukraine until 2030 and the National Action Plan for achieving the SDGs, as envisaged in the Agenda.

-Amend the Resolution of the Cabinet of Ministers of Ukraine of 21.08.2019 No. 686-r "Issues of data collection for monitoring the implementation of the Sustainable Development Goals" in terms of defining:

- targets for indicators against which data is collected to monitor the implementation of the SDGs;
- those responsible for calculating and providing data on the achievement of Goal 6, taking into account organisational changes in the system of central executive authorities;
- responsible coordinators for the implementation of the SDGs, in particular Goal 6, to ensure proper coordination of the activities of executive authorities to fulfil the tasks and achieve the indicators set for Goal 6 and timely management decisions;

RECOMMENDATIONS

- Develop and approve an action plan to ensure the availability of quality services for the supply of safe drinking water, construction and reconstruction of centralised drinking water supply systems using the latest technologies and equipment.

- Take measures to define target benchmarks for assessing the achievement of drinking water safety and quality indicators in terms of microbiological, radiation, organoleptic, physicochemical and sanitary-toxicological indicators.

- Take measures to determine indicative indicators of the share of rural and urban population with access to centralised water supply.

- Develop and approve an action plan to reduce the volume of untreated wastewater discharges, primarily through the use of innovative water treatment technologies, at the state and individual levels.

- Take measures to ensure proper operation and maintenance of the wastewater treatment facilities. Such measures will help to reduce the amount of polluted wastewater discharged into water bodies and preserve the environment.

ABBREVIATIONS, UNITS, ENDNOTES

¹ <https://www.un.org/sustainabledevelopment/goal-of-the-month/>
² Executive-Summary-GWSP-Annual-Report-2022 [Electronic resource] Available from:
<https://thedocs.worldbank.org/en/doc/809d91e114ae0e2243571e9e79891375-0320082022/related/Executive-Summary-GWSP-Annual-Report-2022.pdf>.

AAC	average annual concentration
EU	European Union
HRK	Croatian Kuna (Hrvatska kuna)
HUF	Hungarian Forint
NIK	Supreme Audit Office of the Republic of Poland
NRRP	National Recovery and Resilience Plan 2021
NWS	National Water Strategy
OECD	Organisation for Economic Co-operation and Development
PE	Population Equivalent
PLN	Polish zloty
RBMP	River Basin Management Plan
SAI	Supreme Audit Institution
SAO	State Audit Office of Hungary
SDG	Sustainable Development Goal
UN	United Nations
USD	United States dollar

Access to the national reports

State Audit Office of the Republic of Croatia
<https://www.revizija.hr/UserDocsImages/Dokumenti/Improvement%20of%20water%20quality%20and%20the%20availability%20of%20water%20for%20human%20consumption%20in%20the%20Republic%20of%20Croatia.pdf>

State Audit Office of Hungary
<https://www.asz.hu/dokumentumok/24004.pdf>
https://www.asz.hu/dokumentumok/Elemzes_szennyviz-es-vizszennyezes.pdf

Supreme Audit Office of the Republic of Poland
<https://www.nik.gov.pl/plik/id,26438,vp,29229.pdf>
<https://www.nik.gov.pl/kontrola/P/20/046/>

State Audit Institution of the Republic of Serbia
<https://www.dri.rs/izvestaj/12552>

Accounting Chamber of Ukraine
https://rp.gov.ua/upload-files/Activity/Collegium/2023/12-7_2023/Zvit_12-7_2023.pdf