

1 Report with a robust analysis of the state of play

Guided by a questionnaire drafted by the OECD Secretariat, Lithuanian authorities collected data and information on the state of play for water supply and sanitation in the country. That background information provides the common knowledge on which to identify pending issues and areas for further work.

1.1. Background and objectives

The Ministry of the Environment of Lithuania jointly with other governmental bodies, the European Commission –DG Reform, and the OECD are partnering to enhance the sustainability of water supply and sanitation services in Lithuania. The Project will support the consolidation of the water utility sector, a requisite for improved services, a sustainable and socially acceptable financing strategy, and a broader water sector reform in Lithuania. See the Detailed Project Description, for more information on background, scope and process.

The specific objectives of this Project are:

- to support the initiatives of national authorities to design reforms according to their priorities, taking into account initial conditions and expected socioeconomic impacts
- to support the efforts of national authorities to define and implement appropriate processes and methodologies by taking into account good practices of and lessons learned by other countries in addressing similar situations
- to assist the national authorities and water utilities in enhancing the efficiency and effectiveness of human-resource management, inter alia, by strengthening professional knowledge and skills and setting out clear responsibilities.

The report presents background information compiled by Lithuanian authorities on the state of play, and on previous attempts to agglomerate water utilities in the country. Data and information were collected on the basis of a questionnaire developed by the OECD Secretariat (see Appendix), and then shared with the water utilities and national and local government bodies by the Ministry of Environment of Lithuania. The questionnaire covers the following areas:

- Legislation, institutional and regulatory framework
- The organisation of service provision
- The performance of service providers
- Tariff setting
- Inter-agency co-ordination and cooperation for WSS service provision
- Mapping WS service coverage and recent trends in service provision
- WSS strategic policy making and financing water supply and sanitation
- Experience with consolidation of municipalities and/or service providers.

Propositions unfold on key issues that deserve further analysis in the context of this project. The analyses are meant to document possible courses of action and options to facilitate agglomeration of water utilities in Lithuania. They were discussed with Lithuanian stakeholders at the kick-off meeting. The outcome of the discussions are reflected in an Issue paper (Chapter 3). The initially proposed programme of work for the project covers 12 months (in line with the Detailed Project Description) from 27/07/2020. Governmental changes in Lithuania in the autumn 2020 and a delay with collection of responses to the questionnaire triggered adjustments of the project implementation plan.

1.2. The state of play

Lithuania has implemented a massive investment programme over the past two decades to catch up with EU standards for water supply and wastewater collection and treatment. Progress is remarkable. More than 90% of the population is connected to safe water supply across the country, reflecting a high level of compliance with the Drinking Water Directive (DWD). However, there is room for improvement as regards the Urban Wastewater Treatment Directive (UWWTD). Moreover, recently built assets now need to be

properly operated and maintained, to ensure lasting service provision and performance and avoid costs related to premature decay of existing infrastructures.

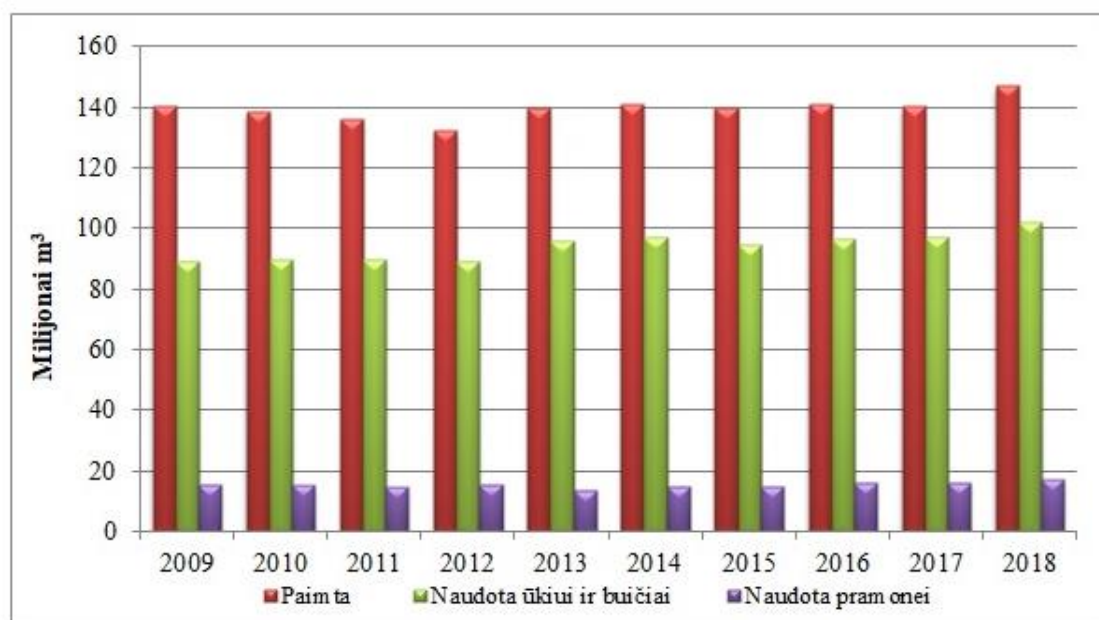
1.2.1. Access to water supply and sanitation services in Lithuania

Lithuania has undertaken significant investments to reach compliance with the EU water *acquis* on water supply and sanitation (WSS). The constructed public water supply and sewerage systems require consistent maintenance and new investments. Unfortunately, the present fragmentation of water companies, where the majority are micro-companies, prevents access to the funds required for investments and to the qualified workforce for maintenance of equipment while offering water services at affordable tariffs.

It should be noted that due to the infringement procedure on non-compliance with Directive 91/271/EEC on urban wastewater treatment (hereinafter – UWWTD) until 2023 the main priority is implementation of the requirements of the UWWTD construction of sewage networks infrastructure in the remaining non-compliant agglomerations; connection to existing centralized sewage infrastructure, reconstruction of Kėdainiai WWTP, improvement of planning, management and control of individual appropriate systems.

After setting the measures for full implementation of UWWTD, it is planned to focus on smaller agglomerations. Services provided in settlements of any size must meet environmental protection, water quality, service continuity and other requirements.

Figure 1.1. WSS services in Lithuania



Translation: Taken; Used for household; Used for industry; Millions

Source: <http://gamta.lt/cms/index?rubricId=4516f985-6445-4904-9192-db8999b6567d>.

1.2.2. Institutions in charge of policies that affect water supply and wastewater management

Institutions in charge of designing and implementing policies that affect water supply and wastewater management include the Government of the Republic of Lithuania, Ministries of Environment and Health of the Republic of Lithuania; the State Food and Veterinary Service; the State Energy Regulatory Council

and the State Consumer Rights Protection Service. Municipal authorities also take part in policy making for WSS management.

More specifically, the Government:

- formulates the policy of state regulation of drinking water supply and wastewater management;
- approves the licensing rules for drinking water supply and wastewater treatment;
- approves the standard terms and conditions of the public contract for the supply of drinking water and / or wastewater treatment;
- approves the description of the procedure for payment for the supplied drinking water and the provided wastewater treatment services;
- approves the description of the procedure for redemption of drinking water supply and wastewater treatment infrastructure objects.

The Ministry of the Environment:

- approves legal acts establishing environmental requirements for the extraction, use and treatment of drinking water, supervise the implementation of these requirements;
- approves the rules for the preparation of plans for the development of drinking water supply and wastewater treatment infrastructure;
- establishes the procedure for the accounting of extracted drinking water, discharged wastewater and pollutants;
- approves the rules for the preparation of activity plans of drinking water suppliers and wastewater managers;
- establishes quality requirements for drinking water supply and wastewater treatment services;
- approves the rules for the use and maintenance of the Drinking Water Supply and Wastewater Treatment Infrastructure;
- approves the Wastewater Management Regulation and the Surface Wastewater Management Regulation;
- establishes the requirements for the connection of new subscribers and consumers to the drinking water supply and wastewater treatment infrastructure;
- approves the description of the procedure for the installation, operation and control of sewage storage tanks and septic tanks;
- approves the description of the procedure for the design, installation, conservation and liquidation of wells for the supply of drinking water;
- co-ordinates the allocation of financial support from the state budget, European Union funds and other sources of financing for the renovation and development of drinking water supply and wastewater treatment infrastructure;
- co-ordinates the activities of other state and municipal institutions in order to implement the requirements of this Law;
- approves the criteria for the delimitation of agglomerations.

The Ministry of Health:

- establishes public health safety and quality requirements for drinking water.

The State Food and Veterinary Service performs state control of the safety and quality of drinking water in accordance with the procedure established by the Law of the Republic of Lithuania on Drinking Water Supply and Wastewater Management (further the Law on Water Supply). It also examines complaints of subscribers and consumers regarding the safety and quality of drinking water.

The State Energy Regulatory Council:

- approves the methodology for setting the prices of drinking water supply and wastewater treatment services and supervise its application;
- approves the methodology for setting the prices of surface wastewater treatment services and supervise its application;
- coordinates the prices of drinking water supplied by drinking water suppliers and wastewater managers and the wastewater treatment services provided and supervise the application thereof;
- coordinates the prices of surface wastewater treatment services and supervise their application;
- has the right to unilaterally set the prices of drinking water supply and wastewater treatment services, the prices of surface wastewater treatment services for the drinking water supplier and wastewater manager, the surface wastewater manager in the cases specified in Paragraphs 15 and 16 of Article 34 of the Law on Water Supply;
- approves the requirements and (or) method and (or) model and technical tasks of the regulatory accounting system;
- in accordance with the Licensing Rules for Drinking Water Supply and Wastewater Management, issues drinking water supply and wastewater treatment licenses, register them, warn of possible suspension and / or revocation of the license, revoke the licenses, suspend the validity of the licenses, revoke the suspension of the licenses, supervise , compliance with the conditions of the licensed activity;
- establishes the methodology for setting the prices of services for temporary disconnection from (connection to) drinking water supply networks and supervise the application;
- establishes rules for the imposition of sanctions, impose sanctions for violations of the provisions of this Law;
- approves the description of the procedure for assessment of the technological, financial and managerial capacity of service provider;
- approves the accounting separation rules for drinking water supply and wastewater treatment and the set of requirements related to accounting separation;
- approves the rules for the provision of information by the service providers;
- approves the description of the procedure and conditions for the performance of the drinking water supply and / or wastewater treatment;
- approves the description of the procedure for calculating the price of wastewater treatment for increased and specific pollution and supervise its application;
- approves the description of the comparative analysis of drinking water supply and wastewater treatment services;
- by 31 December each year, assesses whether the amount paid monthly by consumers for drinking water supply and / or wastewater treatment services after the establishment of new prices will not exceed 4 per cent of the average monthly family income;
- approves the methodology for calculating the fee for the acquisition, installation and operation of drinking water metering devices and supervise its application;
- performs inspections of the activities of drinking water suppliers and wastewater managers, surface wastewater managers;
- in accordance with the principles of transparency, objectivity and non-discrimination and criteria for assessment of investment efficiency, payback period and reasonableness, approve the

description of investment assessment and coordination procedures, coordinate investments (to be included in the tariff) of service providers.

Municipalities:

- Councils approve infrastructure development plans for the drinking water supply and sanitation;
- the directors of the administrations are in charge of the preparation of infrastructure development plans;
- when approving the infrastructure development plans, the councils should determine the boundaries of agglomerations and public drinking water supply territories by a decision;
- Councils appoint public service providers of drinking water supply and sanitation;
- Councils appoint rain water managers;
- Councils approve the action plans of public service providers;
- Councils, in accordance with the methodology for setting the prices of drinking water supply and wastewater treatment services established by the SERC, determine the prices of drinking water and wastewater treatment services supplied by public service providers;
- Councils, in accordance with the methodology for setting the prices of rain water management established by the SERC, shall establish the prices of rain water management services;
- Councils organize the redemption or use of drinking water supply and wastewater treatment infrastructure objects necessary for public drinking water supply and wastewater management;
- Councils, in accordance with the methodology for calculation of the acquisition, installation and operation fee for drinking water metering devices established by the SERC, approve the fee for the acquisition, installation and operation of drinking water metering devices;
- Councils or the institutions authorized by them, in accordance the Law on Water Supply and other legal acts, organize the supply of drinking water supply and sanitation, rainwater management services in the territory of the municipality;
- Councils perform the rights and obligations of the owner of the drinking water supply and wastewater treatment infrastructure needed for public drinking water supply and wastewater treatment;
- directors of administrations or their authorized persons supervise performance of public service providers and ensure the implementation of solutions of infrastructure development plans;
- directors of administrations or persons authorized by them shall coordinate and supervise the supply of drinking water, rainwater management services in the territory of the municipality;
- directors of administrations or persons authorized by them shall ensure the establishment of protection zones for wells in accordance with the procedure established by legal acts;
- directors of administrations or their authorized persons shall, during spatial planning procedures, ensure that the objects of drinking water supply and wastewater treatment infrastructure and their protection zones are located in communication corridors or that the right to exercise easement is required when maintenance, modification and other use of drinking water supply and wastewater treatment infrastructure facilities;
- directors of administrations or their authorized persons provide information on the implementation of the requirements of the Law on Water Supply and its implementing legal acts and inform the public service providers, rainwater managers, quality of supplied drinking water and wastewater (including surface wastewater) treatment services, conditions and prices.

1.2.3. Legislation and regulatory framework

The key pieces of legislation of Lithuania for WSS services are:

Law of the Republic of Lithuania on Drinking Water Supply and Waste Water Management

The purpose of this Law is to establish general requirements for the provision of drinking water supply and wastewater treatment services, organization and planning of drinking water supply and wastewater management in order to avoid adverse effects on human health and the environment, ensure uninterrupted provision of drinking water supply and wastewater management services, adequate development of drinking water supply and wastewater treatment infrastructure. The Law on Water Supply determines that the supply of drinking water and wastewater management, with the exception of storm water management and wastewater transportation is licensed.

In accordance with the provisions of the Law and the Law on Local Government drinking water supply and wastewater treatment services in the territories of municipalities are organized and coordinated by municipal institutions. Pursuant to the Law on Local Government provisions, organization of drinking water supply and wastewater management - independent (established (assigned) by the Constitution and laws) functions of municipalities, in the implementation of which municipalities have the freedom of initiative, adoption and implementation of decisions established by the Constitution and laws and are responsible for performing independent functions.

The Law on Water Supply establishes that a public drinking water supplier and wastewater manager is an enterprise controlled by the state or a municipality (municipalities). The public supply of drinking water and / or the treatment of wastewater (except surface water) is carried out by the public drinking water supplier and the wastewater manager. In the territory of the municipal public drinking water supply, another (non-public) drinking water supplier and / or wastewater manager may supply drinking water and / or provide wastewater treatment services in cases of exceptions provided for in the Law on Water Supply.

Surface wastewater in the territory of the municipality is managed by a public drinking water supplier and wastewater manager or another enterprise managed by the municipality by a decision of the municipal council. Surface wastewater is treated in accordance with the Surface Wastewater Management Regulation.

The Law on Water Supply stipulates that the drinking water supply and wastewater treatment infrastructure for public drinking water supply and wastewater management must be owned by the municipality or the public drinking water supplier and wastewater manager, except for the cases specified in the Law on Drinking Water.

The surface water treatment infrastructure must be owned by the municipality or the surface water manager, except in the cases specified in this Law.

Drinking water supply and / or wastewater treatment infrastructure owned by others and necessary and appropriate for public drinking water supply and / or wastewater treatment and / or surface water treatment infrastructure owned and operated by others necessary and suitable for surface wastewater management, shall be transferred to the municipality or public drinking water supplier and wastewater manager or surface wastewater manager at the initiative of the municipal institution in accordance with the procedure established in the Description of Drinking Water Supply and Wastewater Management Infrastructure Redemption Procedure.

The competence and financing procedure of the State Energy Regulatory Council in the field of regulation of drinking water supply and wastewater management are established by law. The State Energy Regulatory Council approves the Methodology for Pricing Drinking Water Supply and Wastewater Treatment Services, the Methodology for Pricing Surface Wastewater Treatment Services and oversees their application; coordinates the prices of drinking water and wastewater treatment services provided by drinking water suppliers and wastewater managers, supervises, their application and performs other

functions. WSS services are licenced activity. The Council evaluates technological, managerial and financial capabilities of water utilities and if these capabilities meet the minimum criteria, the licence is issued. The Council has the right to take measures if the conditions of the licensed activity are not complied with.

The Law on Water Supply establishes the conditions for ensuring the safety and quality of drinking water supplied to the market, used in food enterprises and individually in private households by exercising the right of the residents of the Republic of Lithuania to consume healthy and clean drinking water and receive information on its safety and quality.

Law of the Republic of Lithuania on the Protection of Objects of Importance to Ensuring National Security

The purpose of this Law is to ensure that objects (enterprises, facilities and assets and economic sectors) important for ensuring the national security of the state and property and territory located in protection zones of enterprises, facilities and assets important for national security and critical information infrastructures the transactions of managers are protected from all risks that could jeopardize the interests of national security, and the causes and conditions of such factors are eliminated.

1.2.4. The organisation of WSS services. Accountability of municipalities

The Lithuanian Law on Water Supply provides that enterprises engaged in water, wastewater and storm water belong to local governments and are not privatized. Private enterprises can offer different water services only in limited cases. According to the Law on Water Supply, water companies owned by local governments must provide public water supply services to at least 95% of consumers in the service area. Therefore, private enterprises cannot provide services to more than 5% of consumers in areas with public water supply.

WSS infrastructure must be owned by a public service provider or a municipality, but a portion of the infrastructure is still owned by others or does not have owner.

Lithuanian municipalities are the main administrative-territorial unit in Lithuania after the restoration of independence in 1990. Since 2009 there are 60 municipalities. At the moment no change is foreseen.

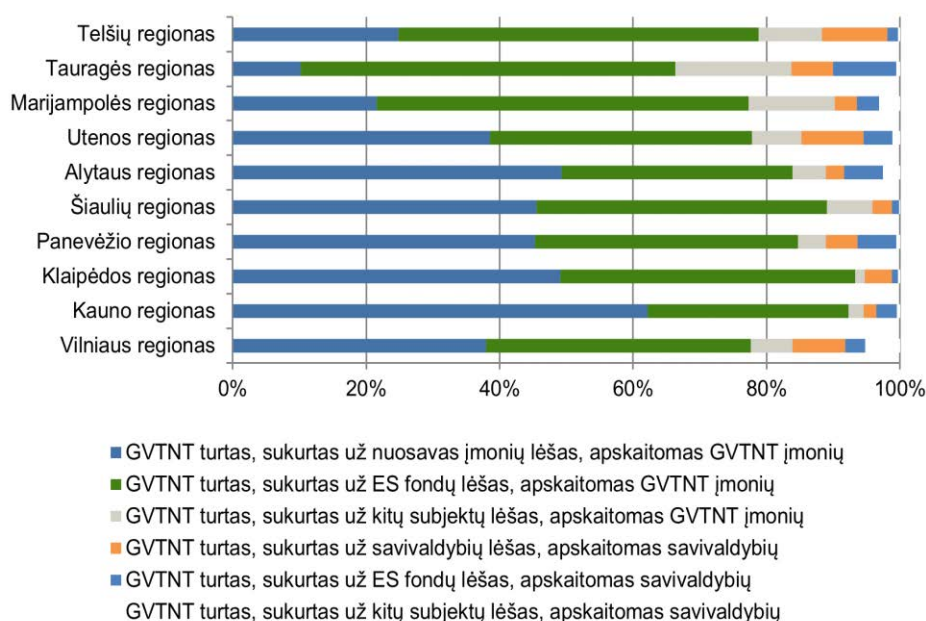
Figure 1.2. Map of municipalities of Lithuania



The Law on Water Supply stipulates that the public water supply and wastewater management infrastructure is owned by the municipality in the territory of which the public water supply and sanitation services are provided or by public service provider (Water Utility controlled by municipality). If the drinking water supply and / or wastewater treatment infrastructure required and suitable for public WS and WW treatment is necessary and suitable but is owned by others, it must be transferred to the municipality or the public supplier. If no agreement can be reached on the redemption and transfer of infrastructure, contracts must be concluded on the initiative of the municipal authority for the use of drinking water supply and / or wastewater treatment infrastructure (lease, use, joint activities) and the provision of drinking water supply and / or wastewater treatment services.

The process of taking the ownership of the infrastructure needed for the public services is quite slow. The Law on Water Supply also provides exception, that drinking water supply and wastewater management infrastructure may also be owned by other persons. If it is not clear what part of infrastructure is owned by others, or what infrastructure is needed for public services, an inventory should be performed.

Figure 1.3. Ownership for WSS infrastructure by regions



Source: Ministry of Environment of Lithuania

Translation:

GVTNT turtas, sukurtas už nuosavas įmonių lėšas, apskaitomas GVTNT įmonių, en. Drinking water supply and wastewater treatment assets created with the companies' own funds are accounted for by Drinking water supply and wastewater treatment companies;

GVTNT turtas, sukurtas už ES fondų lėšas, apskaitomas GVTNT įmonių, en. Drinking water supply and wastewater treatment assets created with EU funds are accounted for by Drinking water supply and wastewater treatment companies;

GVTNT turtas, sukurtas už kitų subjektų lėšas, apskaitomas GVTNT įmonių, en. Drinking water supply and wastewater treatment assets created at the expense of other entities are accounted for by Drinking water supply and wastewater treatment companies

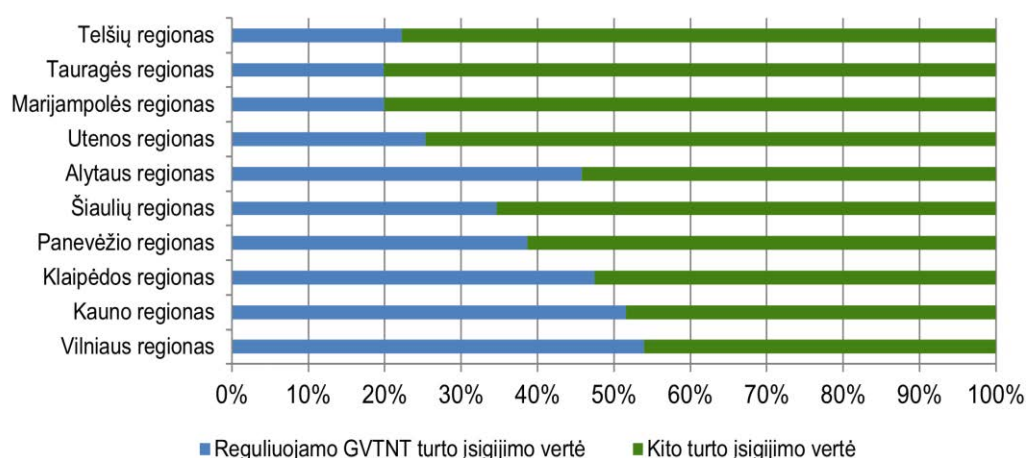
GVTNT turtas, sukurtas už savivaldybių lėšas, apskaitomas savivaldybių, en. Drinking water supply and wastewater treatment assets created with municipal funds are accounted for by municipalities;

GVTNT turtas, sukurtas už ES fondų lėšas, apskaitomas savivaldybių, en. Drinking water supply and wastewater treatment assets created with EU funds are accounted for by municipalities;

GVTNT turtas, sukurtas už kitų subjektų lėšas, apskaitomas savivaldybių, en. Drinking water supply and wastewater treatment. assets created at the expense of other entities are accounted for by municipalities.

Names of regions along the Y axis are provided in Lithuanian.

Figure 1.4. Acquisition value of WSS infrastructure by regions



Source: Ministry of Environment of Lithuania

Translation:

Acquisition value of regulated Drinking water supply and wastewater treatment assets; Acquisition value of other assets.

Note: names of Lithuanian regions are provided in Lithuanian.

Most Lithuanian water companies have one owner, which is a local authority. There are also exceptions to the system, and there are cross-local government water companies. For example, the owners of UAB "Vilniaus vandenys" are the city of Vilnius and the municipalities of Vilnius, Šalčininkai, and Švenčionys. The majority of the Lithuanian water and wastewater network is managed by the 50 largest water companies, with the number of inhabitants in their service areas varying from 3,000 to 500,000 (UAB "Vilniaus vandenys").

The management of water companies is organized through the general meetings of the owners, the supervisory board, the management board and the general director. Owners of water companies, i.e., municipalities, and cities, participate directly in the management of water companies by appointing their representatives to the general meetings of owners and the supervisory boards and management boards of enterprises. In addition to enterprises owned by local governments, Lithuania has a large number of smaller private water companies: water cooperatives, holding enterprises, agricultural enterprises, etc.

Municipal authorities are obliged to ensure that all residents of the municipality receive drinking water and sanitation services that meet safety and quality requirements or have access to individual drinking water and sanitation in accordance with the infrastructure development plan. In agglomerations, centralized drinking water supply and centralized sewage collection systems should be planned.

Individual Appropriate Systems (IAS) may be planned in exceptional cases where the environment does not benefit from the installation of centralized sewage collection systems or the installation of centralized drinking water supply systems and / or centralized sewage collection systems is not justified due to high cost of installation of such a system. IAS should insure the same level of environmental protection as it is required for the agglomeration.

"Agglomeration" means an area of public drinking water supply and sanitation in urbanized areas where population equivalent of 2 000 or more occurs and where drinking water is supplied or intended to be supplied by a centralized drinking water supply system or is extracted individually; the generated or potentially generated wastewater is collected by centralized wastewater collection systems or treated by wastewater treatment / storage facilities.

The municipal public drinking water supply and sanitation area includes the territory of the municipality which meets at least one of the following criteria:

- Drinking water supply and / or sanitation services are provided to at least 50 persons who have declared their place of residence in the area;
- There is a suitable drinking water supply and / or sanitation infrastructure belonging to the municipality or Water Utility managed by the municipality;
- Urbanized and planned to be urbanized areas identified in the special planning documents.

Designation of public drinking water supply and sanitation service providers

The municipal council appoints a public service provider in the area of the municipal public drinking water supply and sanitation and licences it to provide services.

The municipal council may - in agreement with other municipalities in one public drinking water supply region - merge the Water Utilities into a regional public drinking water supply and sanitation service provider through reorganization. It then licences it to carry out public services in the public drinking water supply areas of these municipalities. A regional public drinking water supplier established by way of reorganization may be designated as a regional public drinking water supplier.

Organization of drinking water supply and wastewater treatment

Drinking water supply, sanitation and rainwater management in the territory of the municipality and in the public drinking water supply area are organized by municipal institutions.

In the public supply area of a municipality the public drinking water supply and / or sanitation (except for rainwater) management shall be performed by the public service provider (Water Utility). In the municipal public drinking water supply area, another (non-public) drinking water supplier and / or wastewater manager may provide services only if it complies with the requirements of legal acts and it has a drinking water supply and wastewater treatment license issued in accordance with the requirements.

The public service provider is obliged to supply drinking water and provide wastewater treatment services in the municipal public drinking water supply area, except for parts where provider provides wastewater treatment services or performs individual extraction, use and / or individual wastewater treatment in accordance with the requirements of legal acts.

Since July 29, 2011, a quality assurance system for water companies has been set up with the aim of ensuring cost-effective, high-quality drinking water. In addition, all water companies in Lithuania must comply with the requirements (No. D1-639) for drinking and wastewater quality, established by the Ministry of the Environment and entered into force in 2016. The quality of drinking water must also comply with generally set quality requirements such as Hygiene Norm of Lithuania (HN 24: 2003 "Safety and quality requirements of drinking water"). If necessary, the water company does not have to monitor the water quality requirements during the maintenance period, but the customers must be informed thereof in advance. There are also nationally regulated codes of conduct in the event that consumers' water supply has been interrupted for more than 12 hours. In such situations, the water company must ensure that customers are supplied with 30 litres of water per day (for example, via mobile containers). Some Lithuanian water companies have themselves implemented environmental and quality assurance systems that comply with LST EN ISO 14001 and LST EN ISO 9001 standards.

Municipalities, implementing the provisions of the above-mentioned legal acts, are responsible for planning and organizing the drinking water supply and sanitation services throughout the territory of the municipality.

Municipal institutions are responsible for the planning of drinking water supply and sanitation, development of drinking water supply and sanitation infrastructure in their municipality's public drinking water supply areas by preparing drinking water supply and sanitation infrastructure development plans (Infrastructure development plan -spatial planning document). In those plans agglomerations and public drinking water supply and sanitation areas should be established with directions for the development of drinking water supply and sanitation infrastructure, indicating the stages of implementation (priorities, progress, and timing) and financing of the planned infrastructure. The development of rainwater infrastructure is planned and envisaged in the Infrastructure development plan or in another spatial planning document.

Regional Cooperation

Municipalities located in one public drinking water supply region (administrative region) may seek the appointment of a regional public service provider in the public drinking water supply region in accordance with the procedure established by the legal acts.

A municipal institution may initiate the merger of a Water Utilities managed by municipalities in the same region by reorganization when:

- the activities of public service provider do not comply with the criteria set out in the description of the procedure for assessment of technological, financial and managerial capacity of drinking water suppliers and sanitation providers approved by the State Energy Regulatory Council;
- the amount paid by consumers every month during a calendar year for drinking water supply and / or wastewater treatment services provided by a drinking water supplier and / or wastewater manager exceeds 4 per cent of the average monthly family income. Such an assessment is made taking into account the average monthly family income of persons living in the territory of the municipality and the amount of funds paid by consumers per month for drinking water supply and / or sanitation services provided by the public service provider.

Municipal institutions may initiate the merger of their Water utilities, if there are other circumstances related to the increase of the efficiency of drinking water supply and sanitation, by the decision of municipal councils.

There is currently no cooperation between municipalities in providing WSS, except in a few cases - the largest Lithuanian drinking water company UAB "Vilniaus vandenys", whose shareholders are four municipalities, therefore UAB "Vilniaus vandenys" operates in four municipalities. Also, AB "Klaipėdos vanduo" provides services in the city and district municipalities.

Currently public drinking water supply and sanitation services are state owned monopolistic services delegated by the Law to municipalities. Legal form of Water utilities can be described as follows:

- 58 Closed Stock Companies (whose shares belong to municipality);
- 2 municipal companies;
- 1 public institution (established by the municipality);
- 1 Joint Stock Company (whose shares belong to several municipalities).

There are some private companies that provide services (in very small area, not as public service provider), but this is a small part. As of 31 December 2018, there were 70 licensed drinking water supply and wastewater treatment companies. The distribution of companies by region is presented in the table below.

Table 1.1. Public service providers (Water utilities)

S. No.	Company name	Territory of licensed activity
1.	UAB „Visagino energija“	Visaginas municipality
2.	UAB „Ukmergės vandenys“	Ukmergė city ir Ukmergė disc. municipality
3.	UAB „Kelmės vanduo“	Kelmė city ir Kelmė disc. mun.
4.	UAB „Šiaulių vandenys“	Šiauliai city ir Šiauliai disc. mun.
5.	UAB „Jonavos vandenys“	Jonava city ir Jonava disc. mun.
6.	UAB „Druskininkų vandenys“	Druskininkai municipality
7.	UAB „Molėtų vanduo“	Molėtų city ir Molėtų disc. mun.
8.	UAB „Širvintų vandenys“	Širvintos city ir Širvintos disc. mun.
9.	UAB „Varėnos vandenys“	Varėna disc. mun.
10.	UAB „Šilutės vandenys“	Šilutė disc. mun.
11.	UAB „Zarasų vandenys“	Zarasai disc. mun.
12.	UAB „Dzūkijos vandenys“	Alytus disc. municipality
13.	UAB „Utenos vandenys“	Utena disc. mun.
14.	UAB „Kretingos vandenys“	Kretinga disc. mun.
15.	UAB „Aukštaitijos vandenys“	Panevėžys city ir Panevėžys disc. mun.
16.	UAB „Palangos vandenys“	Palanga city municipality
17.	UAB „Neringos vandenys“	Neringa municipality
18.	UAB „Tauragės vandenys“	Tauragė disc. mun.
19.	UAB „Švenčionių švara“	Švenčionys disc. mun.
20.	UAB „Kėdainių vandenys“	Kėdainiai disc. mun.
21.	UAB „Giraitės vandenys“	Kaunas disc. mun.
22.	UAB „Prienų vandenys“	Prienai disc. mun.
23.	UAB „Pasvalio vandenys“	Pasvalys disc. mun.
24.	UAB „Vilniaus vandenys“	Vilnius c., Vilnius disc., Šalčininkai disc. ir Švenčionys disc. municipalities
25.	UAB „Nemenčinės komunalininkas“	Vilnius disc. mun.
26.	UAB „Plungės vandenys“	Plungė disc. mun.
27.	UAB „Kuršėnų vandenys“	Šiauliai disc. mun.
28.	UAB „Šilalės vandenys“	Šilalė disc. mun.
29.	UAB „Joniškio vandenys“	Joniškis disc. mun.
30.	UAB „Biržų vandenys“	Biržai disc. mun.
31.	UAB „Ignalinos vanduo“	Ignalina disc. mun.
32.	UAB „Pakruojio vandentiekis“	Pakruojis disc. mun.
33.	UAB „Nemėžio komunalininkas“	Vilnius c., Vilnius disc., municipality
34.	UAB „Eišiškių komunalinis ūkis“	Šalčininkai disc. mun.
35.	UAB „Rietavo komunalinis ūkis“	Rietavas municipality
36.	UAB „Telšių vandenys“	Telšiai disc. mun.
37.	UAB „Didžiasalio komunalinės paslaugos“	Ignalina disc. mun.
38.	VšĮ Velžio komunalinis ūkis	Panevėžys disc. mun.
39.	UAB „Raseinių vandenys“	Raseiniai disc. mun.
40.	UAB „Anykščių vandenys“	Anykščiai disc. mun.
41.	UAB „Birštono vandentiekis“	Birštonas municipality
42.	UAB „Radviliškio vanduo“	Radviliškis disc. mun.
43.	AB „Klaipėdos vanduo“	Klaipėda c. ir Klaipėda disc. mun.
44.	UAB „Kupiškio vandenys“	Kupiškis disc. mun.
45.	UAB „Jurbarko vandenys“	Jurbarkas disc. mun.
46.	UAB „Vilkaviškio vandenys“	Vilkaviškis disc. mun.
47.	UAB „Kauno vandenys“	Kaunas r. ir Kaunas c. municipalities
48.	UAB „Sūduvos vandenys“	Marijampolė disc. mun.
49.	UAB „Lazdijų vanduo“	Lazdijai disc. mun.

S. No.	Company name	Territory of licensed activity
50.	UAB „Trakų vandenys“	Trakai r. ir Vilnius disc. mun.se
51.	UAB „Pabradės komunalinis ūkis“	Švenčionys disc. mun.
52.	UAB „Mažeikių vandenys“	Mažeikiai disc. mun.
53.	SĮ „Simno komunalininkas“	Alytus disc. mun.
54.	UAB „Kazlų Rūdos komunalininkas“	Kazlų Rūda municipality
55.	UAB „Kaišiadorių vandenys“	Kaišiadorys disc. mun.
56.	UAB „Akmenės vandenys“	Akmenė disc. mun.
57.	UAB „Tvarkyba“	Šalčininkai disc. mun.
58.	UAB „Elektrėnų komunalinis ūkis“	Elektrėnai municipality
59.	UAB „Rokiškio vandenys“	Rokiškis disc. mun.
60.	UAB „Skuodo vandenys“	Skuodas disc. mun.
61.	UAB „Šakių vandenys“	Šakiai disc. mun.
62.	UAB „Kalvarijos komunalininkas“	Kalvarija municipality
63.	UAB „Pagėgių komunalinis ūkis“	Pagėgiai municipality

Table 1.2. Private companies providing drinking water supply and/or sanitation service

S. No.	Company name	Territory of licensed activity
1.	Jotainių socialinės globos namai*	Panevėžys disc. mun.
2.	Prūdiškių socialinės globos namai*	Vilnius disc. mun.
3.	UAB „Didma“ *	Pakruojis disc. mun.
4.	UAB Gargždų plytų gamykla*	Klaipėda disc. mun..
5.	Pravieniškių pataisos namai – atviroji kolonija*	Kaišiadorys disc. mun.
6.	UAB „Baisogalos bioenergija“ *	Radviliškis disc. mun.
7.	Skemų socialinės globos namai*	Skemiai, Rokiškis disc. mun.

In 2010 in Lithuania, the management of the water supply and wastewater treatment sector was highly fragmented, with a total of about 460 companies providing services. In 2014, when the Law established the obligation to have a license in order to provide a service, the number of companies decreased significantly - from 359 to 64 public suppliers owned by municipalities, later it became 63 in 2018, and currently 62 public suppliers) or in total 70 licensed entities (public and private suppliers).

Voluntary consolidation of water utilities is almost non-existent, only the companies serving Klaipėda city and Klaipėda district have merged. Thus, there are several cases where the company operates in several municipalities, but has not fully taken over all activities (for example, UAB Viliaus vandenys operating in Vilnius city, Vilnius district, Šalčininkai, Švenčionys, Švenčionėliai, Pabradė, Širvintos municipalities; UAB Kauno vandenys operates in Kaunas city and Kaunas district municipality). There are also municipalities where two companies operate (e.g. Švenčionys and UAB „Vilniaus“).

1.3. Concerns about the sustainability of the state of play

While the quality of WSS services markedly improved over the last couple of decades, stakeholders share concerns about the sustainability of the current level of performance.

First, demographic trends affect the financing needs and capacities of water utilities. On the one hand, urbanisation drives investment needs in urban settlements. On the other hand, a decreasing population can affect the revenues of utilities and lead to oversized infrastructures, which will be costly to operate. These contrasted trends need to be properly reflected in infrastructure and service development.

Second, the economic and fiscal situation deteriorates. It is unlikely that public funds, which account for the lion's share of investment finance in the country, can be sustained in the long run. This calls for a

revision of financing models, which need to harness other sources of finance, including (but not limited to) revenues from tariffs.

Finally, cause and consequence of the concerns above, the performance of water utilities seems to be very fragile. Financing sustainability, in particular is an issue: capacity to finance the operation, maintenance, renewal and (potential) upgrade of existing services; creditworthiness and capacity to access commercial finance to cover investment costs. Other potential weaknesses reflect the lack of technical and financial capacities to cope with a range of operational and strategic issues (such as efficient use of water resources, or energy efficiency).

As a result, there is a risk that performance of the service to the population (or selected settlements) deteriorates in the coming years/decades. As an early signal, it is noteworthy that compliance with the EU acquis on water is lagging, in particular as regards the Urban Waste Water Treatment Directive.

1.3.1. Demographic trends

According to the data of the Lithuanian Department of Statistics and Eurostat, it is forecasted that in 2028 the Lithuanian population will be 11.5 percent or 332,000 people less than in 2018; and in 2050 - 22.5 percent or 633,000 less.

It is projected that in 2028, 2050 the largest part of the population will live in three regions: Vilnius, Kaunas and Klaipėda regions:

- In 2028, about 32 percent of the total population of Lithuania will live in the Vilnius region; this share is projected to reach 45% by 2050.
- In 2028, about 20 percent of the total population of Lithuania will live in the Kaunas region; 20.5% by 2050.
- In 2028, about 12 percent will live in the Klaipėda region, and about 12.5 percent in 2050.

Table 1.3. Population of Lithuania (2020 and historical)

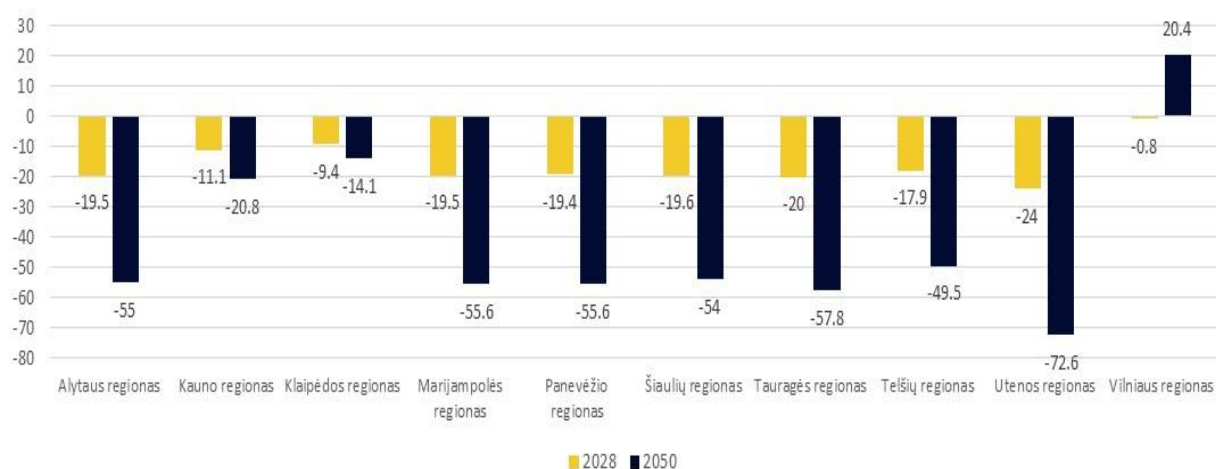
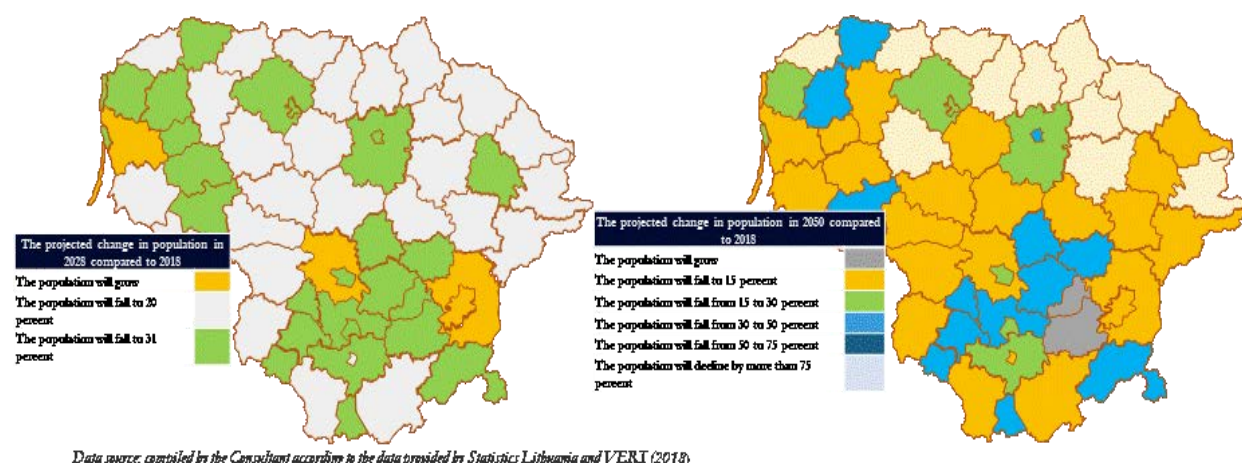
Year	Population	Yearly % Change	Density (P/km ²)	Urban Pop %	Urban Population
2020	2,722,289	-1.35 %	43	71.3 %	1,940,986
2019	2,759,627	-1.49 %	44	70.4 %	1,943,693
2018	2,801,264	-1.55 %	45	69.5 %	1,946,762
2017	2,845,414	-1.53 %	45	68.6 %	1,951,399
2016	2,889,557	-1.44 %	46	67.8 %	1,959,170
2015	2,931,880	-1.26 %	47	67.2 %	1,971,134
2010	3,123,816	-1.35 %	50	66.8 %	2,085,346
2005	3,344,268	-0.92 %	53	66.6 %	2,228,451
2000	3,501,839	-0.70 %	56	67.0 %	2,345,732

Table 1.4. Lithuania Population Forecast

Year	Population	Yearly % Change	Density (P/Km ²)	Urban Pop %	Urban Population
2020	2,722,289	-1.47 %	43	71.3 %	1,940,986
2025	2,591,273	-0.98 %	41	74.4 %	1,929,035
2030	2,484,803	-0.84 %	40	77.3 %	1,919,747
2035	2,381,867	-0.84 %	38	80.2 %	1,909,316
2040	2,284,293	-0.83 %	36	83.2 %	1,899,816
2045	2,197,745	-0.77 %	35	86.0 %	1,890,982
2050	2,121,397	-0.70 %	34	88.6 %	1,879,932

Source: Demographic trends since 2000: <https://www.worldometers.info/world-population/lithuania-population/>

Between 2028 and 2050, only one region will grow in terms of population - Vilnius, due to the capital. Given the trends in municipalities in 2011-2018, a population decline of more than 50% is forecasted for 6 regions: Alytus, Marijampolė, Panevėžys, Šiauliai, Tauragė and Utena.

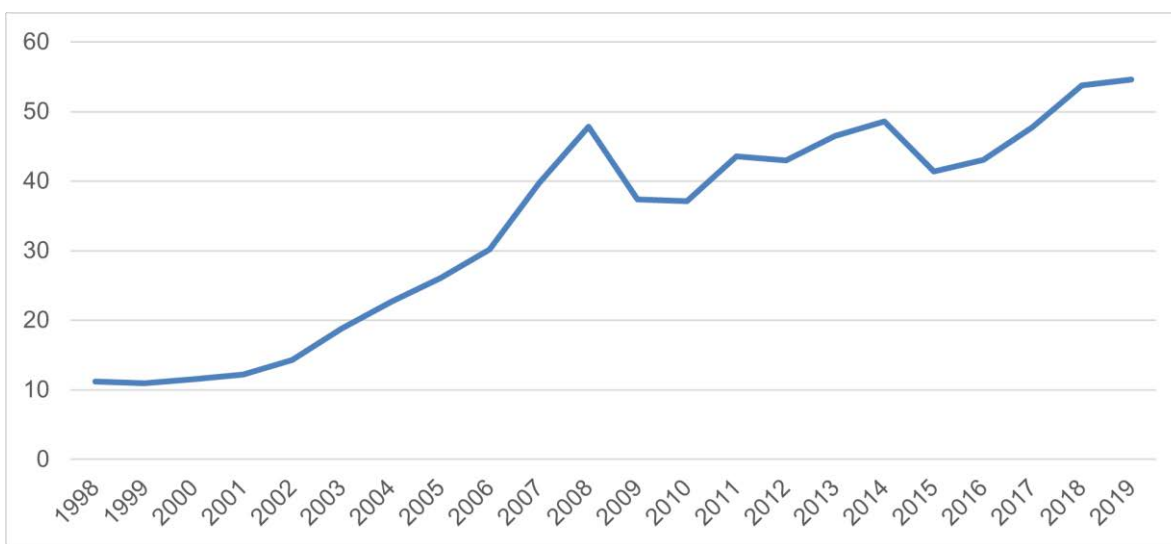
Figure 1.5. Population decline forecast by regions**Figure 1.6. Maps of population decline by regions by 2028 and 2050**

1.3.2. Economic and fiscal situation

In 2020, Lithuania is going through a health crisis with far-reaching economic effects, because of which the GDP is projected to decrease. As this crisis is more acute for population with lower incomes, the government ensures adequate social protection measures. As a consequence, COVID-19 created further stress on public budget expenditures.

The budget deficit of previous years has made it more difficult for the government to help the economic sectors. This affects provision of public budget guarantees and/ or direct financing of new investments in infrastructure.

Figure 1.7. Lithuania Gross Domestic Product (GDP, billion USD)



Data: <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2019&locations=LT&start=1999> .

GDP growth projections: https://www.lb.lt/uploads/publications/docs/25859_df03d2f842b2efeb19fefe204e73e4fe.pdf .

1.3.3. Accountability of local governments for local infrastructure

Decentralised ownership for local infrastructure creates issues with accountability for service provision. Water companies and local governments are responsible for the provision of water services in cities and settlements; the Ministry of the Environment is responsible for sustainable access to WSS services in the state as a whole. The allocation of tasks and responsibilities across institutions is blurred, on some issues. These institutional arrangements raise a few questions:

- Are responsibilities equally clear and understandable to each party?
- Do all of the parties agree to the performance of the functions and obligations assigned to them?
- How are some obligations and functions financed? Is this allocation fair from the viewpoint of all parties and does it treat all of them equally?

There may be disputes and misunderstandings between the Ministry of the Environment, the local governments and water companies about who should be responsible if a policy goal is not achieved. For example:

- Who should guarantee the WSS access in areas of over 2,000 p.e. to the sewerage system?
- Who should pay the fine for non-compliance with the EU directives, should it occur?

Questions also arise when major disruptions and problems occur in the provision of the water service in a densely populated settlement. For example, if a major problem occurs, and drinking water no longer complies with requirements, so that an advanced water treatment is to be put in place; or if treated wastewater does not comply with norms, and a solution requires major investments, and minor operational improvements cannot solve the problem. Who bears responsibility to the citizens and/or the Ministry of Environment – the local government or the water company?

In that context, the utilities boards' roles, responsibilities and capacity to deliver on the tasks devolved to them seem uneven across the country.

1.3.4. The performance of utilities

Water utilities' performance is measured and monitored by licenses. The licencing process provides some guidance on minimal requirement and capacities to operate water services.

According to the Law of the Republic of Lithuania on Drinking Water Supply and Wastewater Management:

- Article 24. Licensing of drinking water supply and wastewater treatment: Drinking water supply and wastewater treatment, with the exception of rainwater and wastewater transportation, are licensed.
- Article 25. Principles for issuing licenses for drinking water supply and wastewater treatment: Drinking water supply and wastewater treatment licenses are issued in accordance with the following principles:
 - security - this principle means that uninterrupted, stable and safe drinking water supply and wastewater treatment activities must be ensured, the health and safety of workers and bystanders must be ensured, and the negative impact of activities on the environment must be reduced;
 - reliability - this principle describes the frequency and duration of interruptions in the provision of drinking water and wastewater services to subscribers and consumers;
 - efficiency -this principle describes the amount of costs required for the provision of drinking water supply and wastewater treatment services and the ratio of the achieved result (EUR/m³);
 - non-discrimination -this principle means that it must be ensured that services are provided on equal terms and at the same prices to all subscribers and consumers in the same category.
- Article 26. Conditions for licensed activities for drinking water supply and wastewater treatment: The drinking water supplier and wastewater manager must comply with the following conditions of the licensed activity:
 - carry out the activities specified in the license;
 - to ensure the development of the used drinking water supply and / or wastewater treatment infrastructure, to connect the subscriber and consumer facilities located in the public drinking water supply area under its supervision to the drinking water supply and wastewater treatment networks in accordance with the Drinking Water Supply and Wastewater Treatment Infrastructure Use and Maintenance Rules requirements for the connection of new subscribers and consumers to the drinking water supply and wastewater treatment infrastructure;
 - to supply drinking water and provide wastewater treatment services at prices calculated in accordance with the procedure established in Article 34 of this Law;

- ensure that the inspection of the reports on regulated activities and the inspection of the regulatory accounting system are performed in accordance with the provisions of Paragraphs 9–15 of Article 33 of this Law;
 - to supply drinking water and provide wastewater treatment services in accordance with the quality requirements for drinking water supply and wastewater treatment services;
 - to provide state and municipal institutions with the information necessary for the performance of duties established by laws and other legal acts. The drinking water supplier and the wastewater manager must provide the necessary information within 10 working days from the date of receipt of the request, unless the drinking water supplier and the wastewater manager indicate reasonable reasons for state and municipal authorities to set a longer deadline for providing information;
 - to inform and consult subscribers and consumers in accordance with the procedure established by legal acts.
- Article 27. Conditions for issuing drinking water supply and wastewater treatment licenses: 1. Licenses for the activities referred to in Article 24 of this Law shall be issued for an indefinite period to legal persons who meet the requirements set out in Paragraph 3 of this Article. 2. One license shall be issued to a public drinking water supplier in the municipal public drinking water supply territory. Licenses shall also be issued to other legal persons entitled to carry out drinking water supply and / or wastewater treatment activities in accordance with Paragraphs 4 and 10 of Article 13 of this Law. 3. Licenses for the provision of drinking water supply and wastewater treatment services shall be issued to legal persons under 2 conditions. The person 1) does not have tax arrears to the budget of the Republic of Lithuania, municipal budget or funds to which taxes are administered by the State Tax Inspectorate (except in cases where payment of taxes, interest, fines to a legal person tax dispute is taking place) and are not indebted to the budget of the State Social Insurance Fund; 2) has the technological, financial and managerial capacity to supply drinking water and / or provide wastewater treatment services in a certain municipal territory in accordance with the requirements of legal acts, in compliance with the conditions of the licensed activity. Technological, financial and managerial capacities shall be assessed in accordance with the description of the procedure for assessment of technological, financial and managerial capacities of drinking water suppliers and wastewater managers in accordance with the criteria specified in paragraph 3 of Article 14 of this Law.

A legal person seeking to obtain a drinking water supply and wastewater treatment license shall, in accordance with the procedure established in the Drinking Water Supply and Wastewater Management Licensing Rules, apply to the State Energy Regulatory Council.

The State Energy Regulatory Council, in accordance with the Licensing Rules for Drinking Water Supply and Wastewater Management, issues licenses for drinking water supply and wastewater treatment, registers them, warns about possible suspension and / or revocation of the license, revokes the licenses, suspends the licenses, revokes the suspension of licenses, monitors compliance with the conditions of the licensed activity.

The performance of licenced service providers is monitored. In particular, pursuant to the Description of the Procedure for Assessing the Technological, Financial and Management Capacity of Economic Entities (hereinafter - the Description) approved on 29 January 2009 by Resolution No. O3-6, sub-clause 4.6, the Council conducts an annual assessment of the financial capacity of water utilities.

When assessing the total financial capacity of water utility, the Council determines and applies the lower value of the normative indicator of the financial capacity of the drinking water supply and wastewater treatment sector (Item 17 of the Description). Item 15 of the Description stipulates that the financial capacity of water utility is assessed as sufficient if (i) the overall financial capacity of water utility in the reporting

year is higher than the lower value of the normative indicator of financial capacity of the relevant sector set by the Council (Sub-paragraph 15.2.1); (ii) the ratio of the entity's equity to the authorized capital complies with the requirements of the Law on Companies (Sub-paragraph 15.2.2 of the Description).

According to the Law of the Republic of Lithuania on Drinking Water Supply and Wastewater Management - Inspections of drinking water supply and wastewater treatment and surface wastewater treatment companies, the State Energy Regulatory Council, in accordance with the provisions of this Law and the Law on Public Administration of the Republic of Lithuania, has the right to review the activities of a drinking water supplier and a wastewater manager, via operational inspections. Personal data must be processed and stored in accordance with the procedure established in the legal acts regulating the processing and storage of personal data.

When performing inspections, the State Energy Regulatory Council has the right to:

- receive all information, personal data, documents (regardless of the medium in which they are stored), copies and extracts thereof necessary for the inspection;
- receive oral and written explanations from persons related to the activities of the inspected drinking water supplier and wastewater manager, surface wastewater manager, to demand that they come to the premises of the State Energy Regulatory Council to provide explanations;
- receive information, personal data and documents necessary for the inspection, their copies on the assets and income of legal persons, economic, financial and other operations from state and municipal institutions, as well as from the Bank of Lithuania, commercial banks and other credit and financial institutions, auditors, other legal and natural persons, regardless of whether the information is considered confidential or not, to receive information from registers or databases managed or maintained by the state or other legal persons;
- obtain conclusions from the examination institutions in accordance with the inspection material;
- use specialists and experts to perform the inspection;
- enter into agreements with audit companies, other legal or natural persons whose services will be used by the State Energy Regulatory Council in performing inspections;
- when performing an inspection, use all information available to the State Energy Regulatory Council, including information obtained during other inspections;
- exercise other rights granted by law.

Civil servants and employees of the administration of the State Energy Regulatory Council authorized by the State Energy Regulatory Council, working under employment contracts, ensuring the performance of tasks and functions assigned to them during inspections, shall have the following rights exercised on behalf of the State Energy Regulatory Council:

- to freely enter the premises or territory used by the drinking water supplier and wastewater manager, surface wastewater manager and other legal persons and to perform inspection activities during the working hours of legal persons and not during working hours - if there are reasonable suspicions of violating the law in the presence of a legal person's representative, the owner of the premises, territory or his authorized representative. Civil servants and employees of the administration of the State Energy Regulatory Council authorized by the State Energy Regulatory Council and employed under employment contracts may enter the premises or territory used by other legal persons only with the permission of a court or with the consent of the legal person;
- to record factual circumstances;
- to use technical means during the inspection;
- to use the persons specified in items 5 and 6 of Paragraph 1 of this Article to perform inspection activities;

- to check the documents confirming the identity of persons;
- to use law enforcement institutions to perform their functions in accordance with the procedure established by legal acts.

The drinking water supplier and wastewater manager being inspected must:

- appoint authorized responsible persons who would participate in the inspection and co-operate with the State Energy Regulatory Council;
- submit to the State Energy Regulatory Council all information, data and documents necessary and necessary for the performance of the inspection (regardless of the medium in which they are stored), copies thereof and extracts thereof;
- provide oral and written explanations at the request of the State Energy Regulatory Council, to provide explanations to the State Energy Regulatory Council

1.3.5. Compliance with the EU *acquis* on water

Coherent implementation of the EU *acquis* on water would help to enhance cost effectiveness of new water investments. A comprehensive monitoring of water quality and setting treatment standards based on expected environmental impacts can better inform investment decisions by features of the receiving water body. A robust cost-benefit analysis (particularly, in case of diffuse pollution) can support agri-environmental actions to improve the ecological status of rivers.

Compliance with UWWTD, in particular, needs to be analysed in more details. Distance to compliance may depend in the size of the settlements and the status of receiving water bodies. In this context, prioritisation of new investment, taking into account the total cost for O&M costs over the lifetime of the investment, is to be done.

1.4. Pending issues

This section sketches issues that need to be analysed to address the concerns listed above on the sustainability of water supply and sanitation services in Lithuania.

Pending issues in the Lithuanian WSS sector include:

- in smaller towns and rural areas, many households are not connected to the public water supply and sewerage system. This is an issue as the quality of service may not be monitored properly. Moreover, this situation affects the utilities' revenues. The driver for such behaviour (e.g. the cost of connection, the structure of the tariff, or else) should be identified to consider appropriate responses
- many water companies (especially smaller ones) operate at a loss and cannot independently carry out investments. This issue will intensify as needs to renew and upgrade infrastructure grow; it will be exacerbated by demographic trends in municipalities where the population declines;
- WSS tariffs are very different from region to region. This is an issue if differences reflect more than differences in the capital and operating costs of the service;
- Affordability of water bills is an issue in several municipalities. Water companies in Lithuania are mandated to plan their investments in such a way that the price of water would be lower than 4% of households' net income. However, in certain regions, this criterion cannot be met without the support of local authorities.

The Lithuanian Ministry of the Environment emphasizes the importance of the formation of water companies with a larger customer base. According to the Lithuanian Ministry of the Environment, this would

stimulate the economy and prevent tariffs from rising. The new Water Law adopted in 2015 provided for the consolidation of water companies. However, merger is voluntary only and water companies have shown little appetite for agglomeration of water services. As a consequence, there has in fact been no consolidation. Therefore, Lithuania is expected to propose a number of steps to expedite consolidation of enterprises in the near future.

1.4.1. Access to WSS services

According to 2019 data, 83,1% of the country - nearly 2.890 million people - received drinking water supply services; and about 76,5% of the population - 2.670 million people – received wastewater collection and treatment services.

In order to achieve the goal of 95 per cent of the country's population having access to drinking water supply and wastewater treatment services, 274,000 inhabitants still need be connected to drinking water supply systems and 302,400 inhabitants to wastewater treatment systems (based on the 2018 population and the Environmental Protection Agency). According to the data of 2018, up to 50 percent of the population receives centralized drinking water supply services in 6 municipalities, and wastewater treatment services in 32 municipalities.

9 municipalities (Akmenė, Alytus, Kaunas, Klaipėda, Neringa, Palanga, Panevėžys, Vilnius, Visaginas) cover more than 95% of the population on their territory.

Table 1.5. Municipalities providing drinking water supply and wastewater treatment services for 95 percent and more population (2018, per cent)

	Availability of drinking water supply services 95%. and more	Availability of wastewater treatment services 95 percent. and more
Akmenės r. sav.	95%	no data
Alytaus m. sav.	95%	95%
Kauno m. sav.	100%	100%
Klaipėdos m. sav.	98%	98%
Neringos sav.	100%	100%
Palangos m. sav.	99%	99%
Panevėžio m. sav.	100%	100%
Vilniaus m. sav.	no data	98%
Visagino sav.	97%	97%

*Lithuanian Drinking Water Supply and Wastewater Management Company Management Improvement Plan

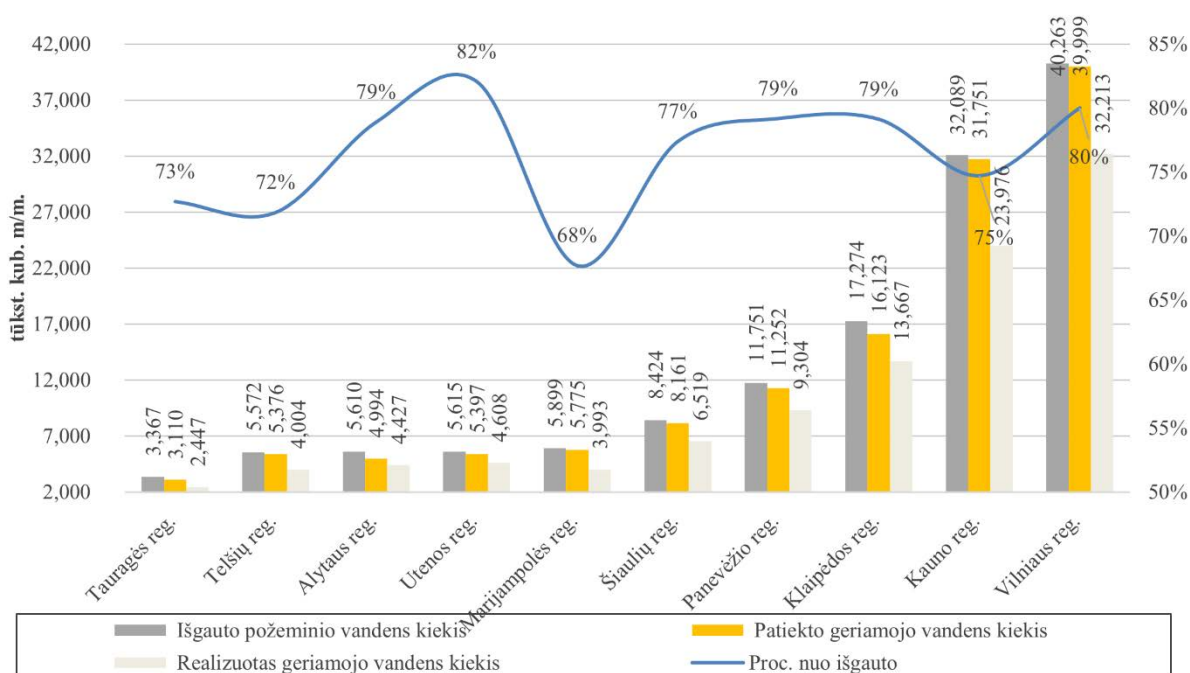
1.4.2. Water losses

According to the audited annual reports of licensed drinking water supply and wastewater treatment companies in 2018:

- 135,865 thousand cubic meters of groundwater was extracted;
- 131,938 thousand cubic meters of water were supplied;
- 105,158 thousand cubic meters of water were sold.

The amount of water sold averaged about 77 percent of the total amount of water extracted per year in the country. The national average masks regional discrepancies. The lowest amount of sold drinking water (compared to extracted) is in the Marijampolė region water supply and wastewater treatment company (44 percent) (see the figure below).

Figure 1.8. Drinking water production by regions

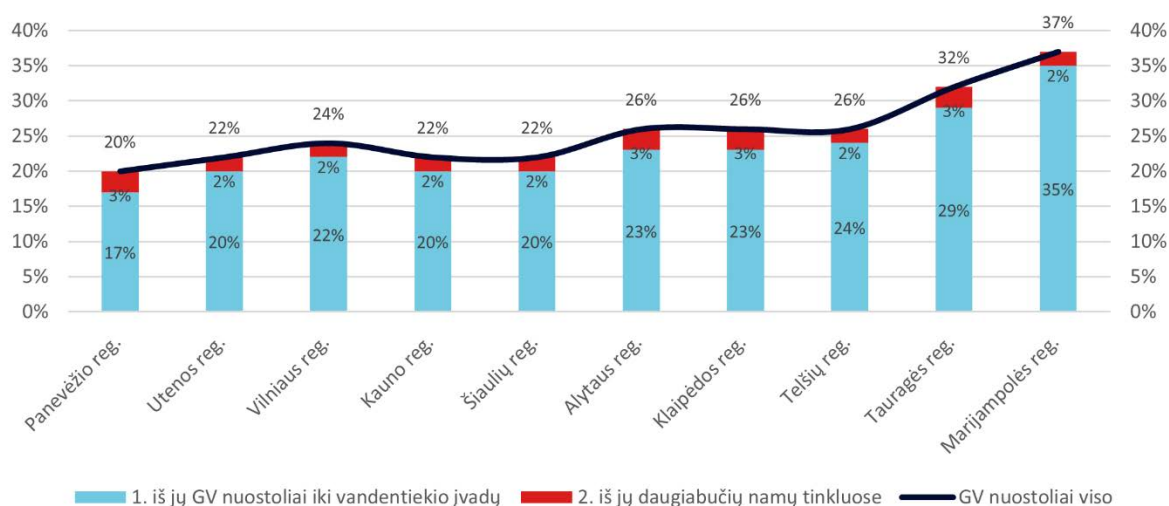


Source: Ministry of Environment of Lithuania

Translation: Amount of extracted groundwater; Amount of drinking water sold; Amount of drinking water supplied; Proc. from extracted.

According to available data, in 2018, licensed drinking water supply and wastewater treatment management companies experienced an average of 26 percent losses of drinking water (see figure below). The company's largest drinking water loss experienced for distributional networks. Regional performance varies from 20% (Panevėžys region), up to 37% (Marijampolė region).

Figure 1.9. Drinking water losses



Source: Ministry of Environment of Lithuania

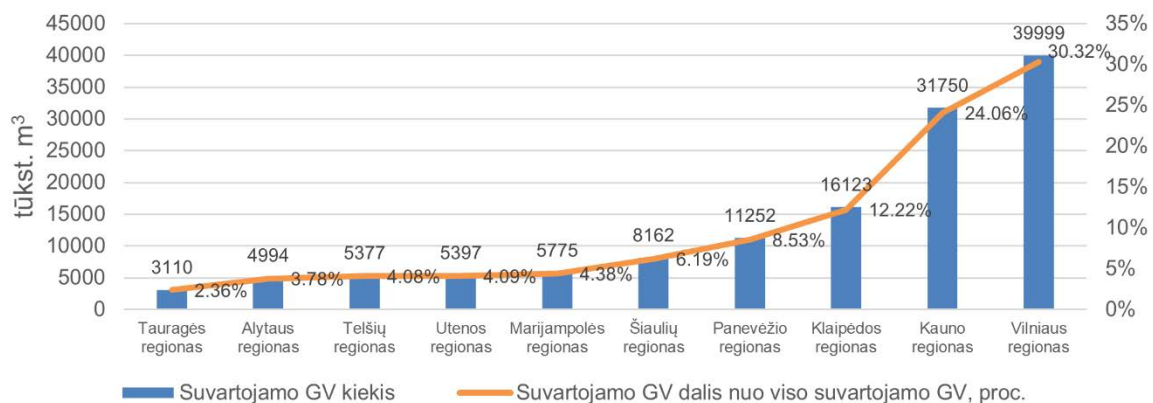
Translation: of which drinking water losses in distributional networks; of which in apartment house networks; total drinking water loss.

1.4.3. Regional disparities in water consumption and wastewater production

Drinking water consumption by municipality and consumption per consumer in selected municipalities for 2018 are shown below. The largest consumption of drinking water is in Vilnius (40 million m³), Kaunas (31.6 million m³) and Klaipėda (16.1 million m³) regions. The lowest consumption of drinking water is in the Tauragė region (3.1 million m³). Comparing the population share and the amount of drinking water consumed, the Tauragė region stands out - although the consumption is 2.4 per cent of the total drinking water but the share of the population in this region is twice as high - 5 percent of the entire population of Lithuania. The share of drinking water consumed in Šiauliai region is also significantly lower than the share of the population (drinking water consumption - 6.2%, and the share of the population - 9%).

A high share of drinking water consumption is in the Kaunas region - the share of consumed drinking water reaches 24 percent, and the share of the population - 20 percent from the entire population of Lithuania. Also, the share of drinking water consumed is significantly higher than the share of population in the Vilnius region (1.3 percentage points difference) and the Klaipėda region (1.2 percentage points).

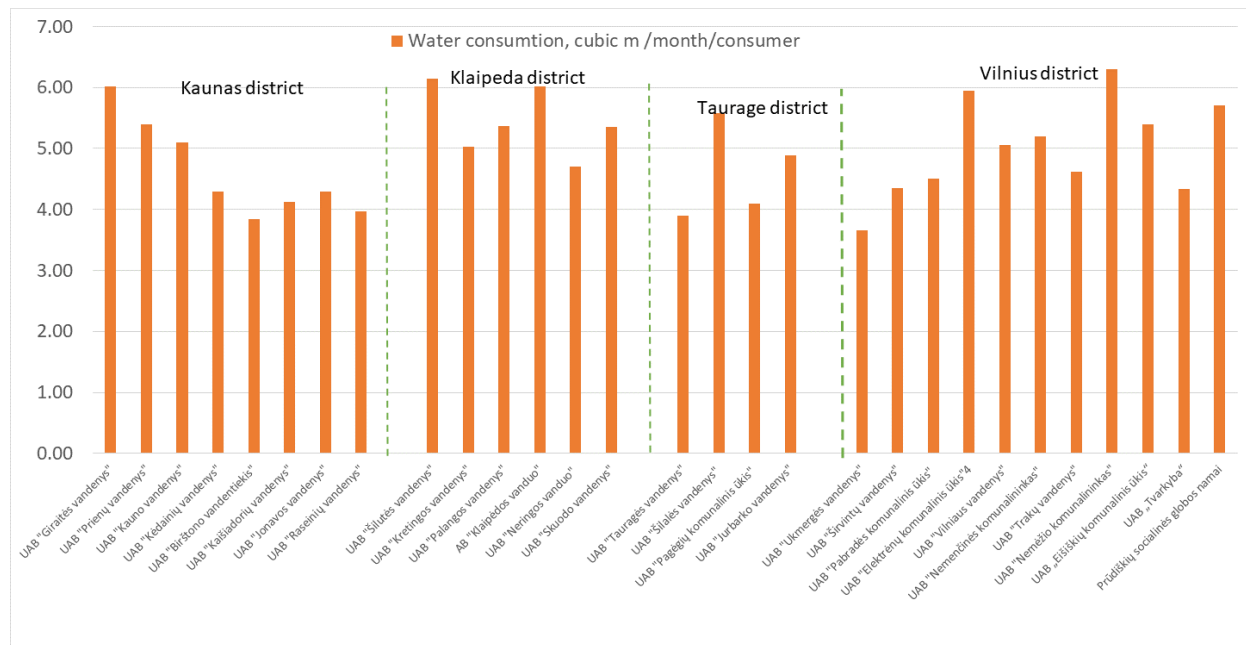
Figure 1.10. Drinking water consumption by municipality



Source: Ministry of Environment of Lithuania

Translation: Drinking water consumption; the share of drinking water consumed in total drinking water consumption

Figure 1.11. Drinking water consumption per consumer in selected municipalities

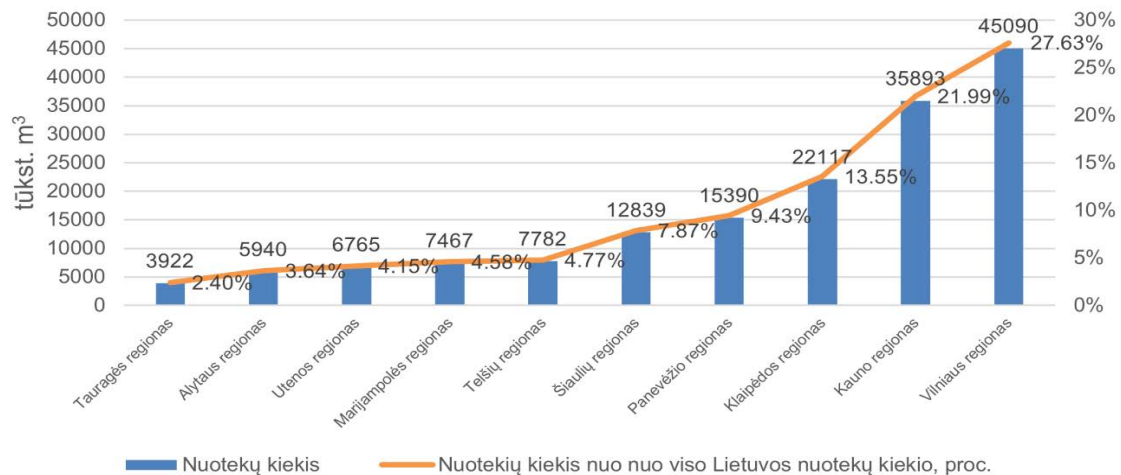


Source: Ministry of Environment of Lithuania

Note: Water companies' names are provided in Lithuanian.

The total amount of wastewater generated is 23.7 percent higher than the amount of drinking water consumed. This difference, partly, could be explained by rainwater collected. Only major towns have large separate rainwater systems in Lithuania. Smaller cities have all public sewer systems. No investments have been made in the rainwater systems since the 1990s. To date, more than 30% of rainwater systems are too small and over 70% in unsatisfactory condition. The largest amounts of wastewater are generated in Vilnius (45 million m³), Kaunas (35.9 million m³) and Klaipėda (16.1 million m³) regions. The lowest amount of wastewater is generated in Taurage region (3.9 million m³).

Figure 1.12. Wastewater generated by regions



Source: Ministry of Environment of Lithuania

Translation: amount of wastewater; the amount of wastewater from the total amount of wastewater in Lithuania

1.4.4. Financial performance of water companies

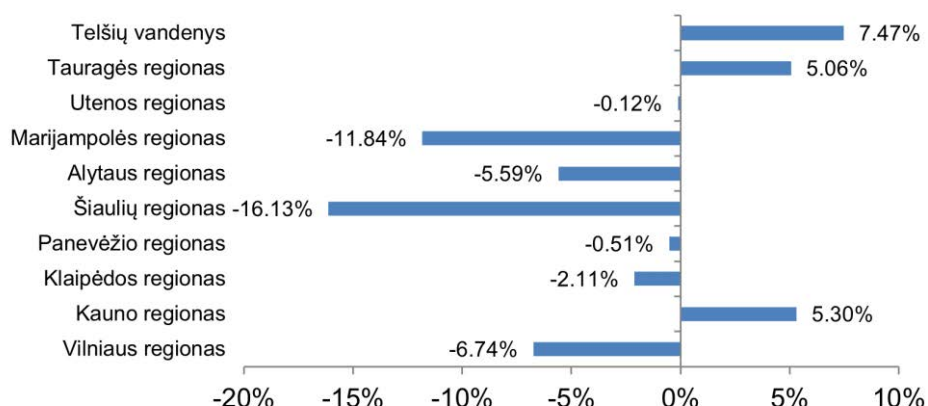
According to the 2018 reporting data of drinking water supply and wastewater treatment companies, about half of the companies operate profitably¹ and the costs of their drinking water supply and wastewater treatment activities are covered by revenues from the provision of drinking water supply and wastewater treatment services.

These companies include all the largest drinking water supply and wastewater treatment companies (9 out of 10 regional centers). An overall financial performance of the companies is also positive: in 2018 more than EUR 8.9 million profit generated (difference between drinking water supply and wastewater treatment income and drinking water supply and wastewater treatment costs). However, considering the data of the last 3 years, this amount is decreasing (in 2016 it amounted to EUR 10.3 million, and in 2017 - EUR 10.2 million).

Analysing the absolute values of the indicators of 2018, 7 regions of the country were assessed positively according to the accumulated profit of the companies operating in them, only the total financial result of Marijampolė, Alytus and Šiauliai regions was negative (companies in these regions generated EUR 51 thousand and a loss of EUR 337 thousand).

However, the assessment of the average profitability of companies in each region shows a significantly worse situation.

Figure 1.13. Average hypothetical profitability of companies in individual regions



Source: Ministry of Environment of Lithuania

According to the assessment of the hypothetical² profitability of an average company, in contrast to the assessment of absolute profit, only 3 regions (Telšiai, Kaunas and Tauragė) have a positive value of the indicator, while the average profitability of companies in other 7 regions is negative, i.e. there are more loss-making enterprises than profitable ones in the region and / or their loss is higher than the profitability of profitable enterprises. The worst average profitability is demonstrated by the companies of Šiauliai (-16.1%), Marijampolė (-11.8%), Vilnius (-6.7%) and Alytus (-5.6%) regions. Thus, large metropolitan companies often operate in regions without inefficient and financially unsustainable drinking water supply and wastewater treatment facilities.

It should be noted that, despite the total profit of the drinking water supply and wastewater treatment sector and relatively high hypothetical profitability, the income of drinking water supply and wastewater treatment activities of the majority of companies (39 out of 70 or 52.9%) does not cover the costs of services provision. This structure is accompanied by a deteriorating trend in overall indicators (overall hypothetical

profitability of the sector and a gradual decline in hypothetical profits) and clear concentrations of loss-making companies among the largest players in the drinking water supply and wastewater sector on a regional basis.

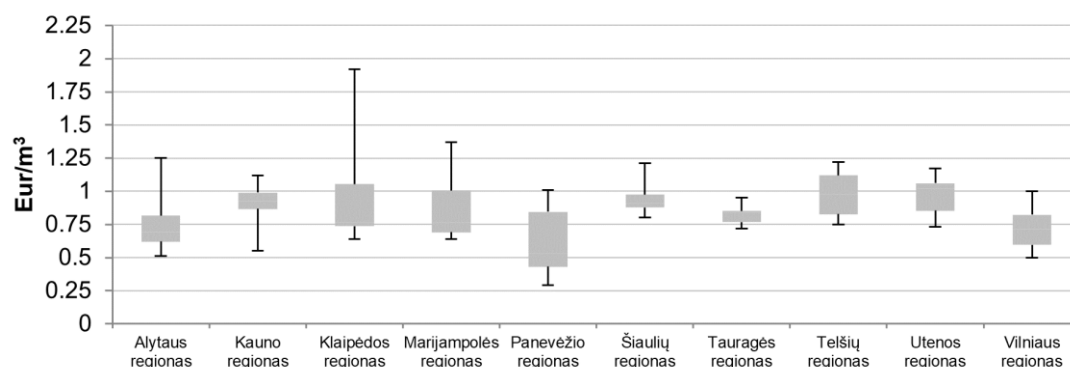
Assessing the direct and indirect subsidization of the price of drinking water supply and wastewater treatment by municipalities, it is noticed that only 3 municipalities directly subsidize the price of drinking water supply and wastewater treatment - Kelmė district, Neringa and Vilnius district municipalities.

1.4.5. Regional disparities in WSS costs

Tariffs for WSS services vary across and within regions. The most uneven drinking water supply prices per m³ are in Panevėžys, Marijampolė and Klaipėda regions, and the most even in Tauragė regions.

The largest absolute difference (in euros) between the highest and lowest drinking water supply prices per m³ is observed in Klaipėda region. The maximum price applied in the region is twice as high as the highest price applied in Tauragė region (see the figure below). However, when analyzing the relative difference, the biggest difference between the prices is in the Panevėžys region - here the minimum price is 3 times lower than the maximum one. The smallest relative and absolute differences are in the Tauragė region - the minimum and maximum price differ by only a quarter.

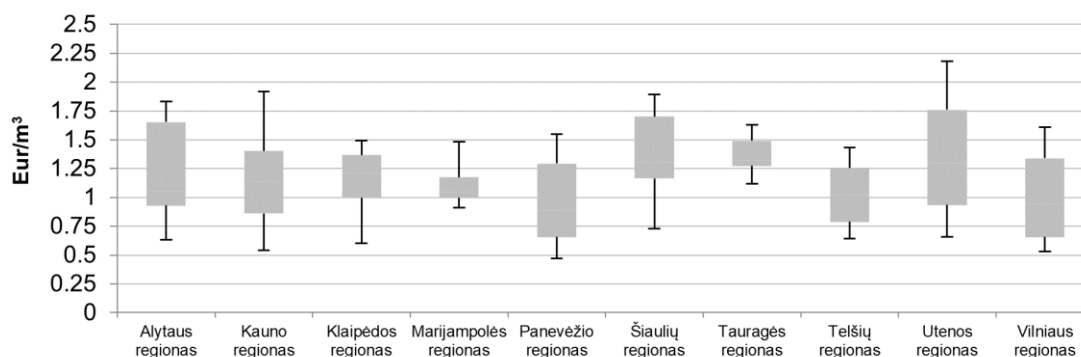
Figure 1.14. Difference (in EUR) between the highest and lowest water prices per m³



Source: Ministry of Environment of Lithuania

Wastewater treatment prices per m³ in the region differ the most between companies providing services in Utena, Alytus and Panevėžys regions, and the smallest price differences between companies in the region - in Marijampolė and Tauragė regions. The lowest wastewater treatment price per m³ (0.47 Eur / m³, excluding VAT) applies to companies operating in Panevėžys, and the highest - to companies operating in the Utena region (2.18 Eur / m³, excluding VAT) (figure below).

Figure 1.15. Difference between the highest and lowest wastewater prices per m3

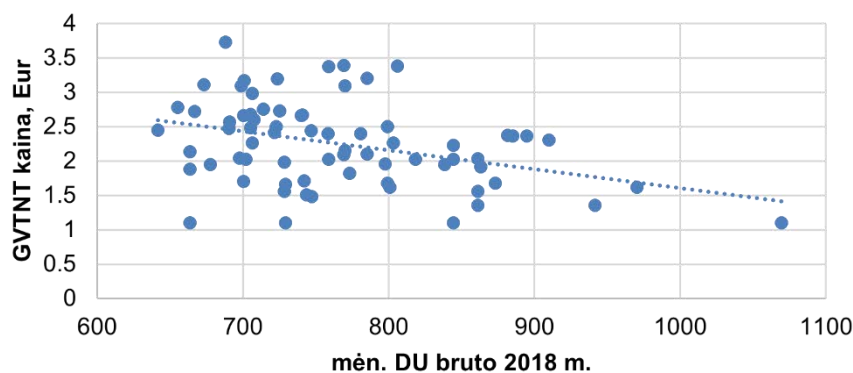


Source: Ministry of Environment of Lithuania

The price of drinking water supply per m3 applied by different companies to consumers and subscribers is 0.29 - 1.92 Eur without VAT. The most even drinking water supply prices (excluding the highest and lowest prices) are applied by companies operating in the region in Tauragė (0.75 - 0.89 EUR without VAT), and the most unequal - in Panevėžys regions (0.29 - 0.92 EUR without VAT).

Assessing the price of drinking water supply and wastewater treatment and the ratio of the average wage (gross) in regions and municipalities, the price of drinking water supply and wastewater treatment is highest in Šiauliai region (EUR 2.51) and Tauragė region (EUR 2.45), while the average labor salary (gross) in these regions is one of the lowest - in Šiauliai region (EUR 772.80), Tauragė region (EUR 731). The lowest price for drinking water supply and wastewater treatment is in the Vilnius region (EUR 1.25), while the average wage (gross) in this region is one of the highest (EUR 1034.60). This shows that residents from smaller municipalities (such as Kelmė district municipality, Pakruojis district municipality, etc.), where a lower average wage (gross) prevails, pay more for drinking water supply and wastewater treatment than those residents, whose average wage (gross) is higher (eg, Vilnius city municipality, Vilnius district municipality, etc.) (see the figure below).

Figure 1.16. Cost of WSS services and the ratio of the average wage (gross) in municipalities



Translation: cost of drinking water supply and wastewater treatment; eur/month; Gross monthly salary in 2018
Source: Ministry of Environment of Lithuania

The price of drinking water supply and wastewater treatment is indirectly subsidized by 38 municipalities. In most municipalities, social compensation is provided to cover the costs of drinking water supply and

wastewater treatment for indigent citizens. It should be noted that as the price of these services increases, it is likely that there will be more municipalities that will have to provide subsidies to cover prices.

1.4.6. WSS strategic policy making and financing water supply and sanitation

A National Progress Plan is the main forward-looking strategic document for the water management sector. The sixth goal of the Strategic Plan is to ensure good quality of the environment and sustainability of the use of natural resources, to protect biological diversity, to mitigate Lithuania's impact on climate change and to increase resilience to its impact. In order to achieve this goal, it is planned to improve the status of water bodies (Baltic Sea, surface and groundwater) - in particular to reduce diffuse pollution from the agricultural sector, ensure compliance with agri-environmental requirements, reduce point source pollution, and, most relevant for this project, ensure adequate quality of wastewater treatment. It is also planned to develop centralized drinking water supply and wastewater treatment systems, thus increasing the availability and safety of services and creating conditions for reducing environmental pollution and for the rational use of water resources.

A National Environmental Protection Strategy is also part of the strategic framework for the sector.

The Water Management Program 2017–2023, approved by the Government of the Republic of Lithuania in 2017 is a medium-term strategic document contributing to the National Environmental Protection Strategy approved by the Seimas of the Republic of Lithuania in 2015. The purpose of the program is to determine the goals, objectives and desired results of the Lithuanian water sector until 2023, which would be in line with other related policies based on the country's traditions, European Union (EU) legal norms, international conventions, resolutions, agreements and programs.

The program covers several areas of water management, one of which is drinking water supply and sanitation. The program identifies drinking water supply and wastewater services as services of general interest that determine the quality of life of citizens and the environment. These services must meet established safety and quality requirements, be affordable and implement the basic principles of cost recovery and polluter pays for the sector. Part of the EU funds for the period 2014–2020 is allocated to the development and renovation of drinking water supply and wastewater treatment infrastructure. In order to use these funds efficiently for the development of the drinking water supply and wastewater treatment farm, the development directions, goals and objectives of this sector have been established.

The Program consists of a description of the current situation (the state of river basins, the marine environment, floods, drinking water supply and wastewater management), objectives, tasks, evaluation criteria and their values.

The main objectives of the Program are to:

- to improve the status of surface and groundwater bodies;
- to achieve and / or maintain a good state of the Baltic Sea environment;
- to reduce the risk of floods and their consequences throughout the country;
- to provide the population of the country with high-quality public drinking water supply and wastewater treatment services and to reduce environmental pollution with wastewater;
- more effective implementation of water protection and use requirements.

The Program is implemented in accordance with a 7-year action plan, which includes measures for the implementation of all the objectives and tasks of the Program. The Action plan was approved in 2017, by an Order of the Minister of Environment of the Republic of Lithuania, Minister of Agriculture of the Republic of Lithuania. For each measure, a responsible executor is appointed and the time of its implementation is specified. The Minister of the Environment also approves water protection objectives, which define the target values for good status for each surface water body.

1.4.7. Investment needs, now and in the future

Over the last decades, investment in WSS infrastructure and household connection has been largely financed with EU support. Infrastructure development was essentially financed through international support (70% of funds came through the EU Cohesion and Structural funds or grants). New financing capacities are required to operate and maintain existing assets, adapting services to changing needs, driven by more stringent environment and health regulations, or a changing climate.

During the EU funding period 2007-2013, the national and EU subsidies for water companies amounted to a maximum of 95% of the total cost of the projects. In the period 2014-2020, subsidies for water companies have been somewhat reduced, and they can range from 50-80% of the total cost of a project, depending on the size of the enterprise's service area. In the case of water companies with a service area between 200-2000 inhabitants, the support rate for projects is up to 80%, and for larger service areas (more than 2,000 inhabitants), water companies can receive support up to 50% of the total value of the investment. Water companies operating in service areas with the population of less than 200, do not qualify for support.

In the event that water tariffs do not cover the enterprise's actual costs or the water company's efficiency is low, water companies can also receive subsidies from local governments. As water companies in Lithuania are national monopolies, subsidies granted to them are not considered state aid.

Local authorities are drawing up and confirming plans for developing drinking water and wastewater infrastructure. These plans, among other things, determine which areas should be covered by the public water supply and in which areas the service must be provided by local authorities (so-called 95% consumer coverage).

At the beginning of 2020, the Ministry of Environment collected information from municipalities and drinking water supply and wastewater treatment companies on the current need for funds. The survey showed that the need for municipal funds for various activities in the water management sector in this sector amounts to EUR 127.17 million. An Investment Plan for the Lithuanian Water Management Sector is currently being prepared, which aims to more accurately assess the financial needs of the water management sector.

Table 1.6. Levels of investments for WSS (2017-2019)

Capital Investment in WSS (million EUR)	2017	2018	2019
National budget (or government organizations)	0.7	1	0.9
IFIs, EU and donors	15.4	30.8	42.5

In 2019, EUR 103.4 million was invested in drinking water supply and wastewater treatment infrastructure, of which 40 percent was allocated from the EU Structural Funds. Investments were made to develop services, increase quality of services, security of supply, etc.

During the financial periods 2007-2013 and 2014-2020, municipalities were able to benefit from European Union investments. In order to solve the problem of connecting the population to centralized wastewater management systems, the Ministry of Environment in 2017–2018 allocated EUR 2.35 million a grant to municipalities from the Environmental Protection Support Program and 2018–2019. EUR 4.2 million from the Lithuanian Environmental Investment Fund (hereinafter - LEIF) to finance the construction of sewage networks up to the dwellings of the population. The Water Management Fund (hereinafter - VF), financed from the Cohesion Fund, was established in 2018. VF provides soft loans together with a repayment subsidy to water management companies for the development of wastewater collection networks in agglomerations > 2000 p.e. (population equivalent). It is planned that fund will continue to provide loans for public service providers.

1.4.8. WSS pricing

Lithuanian water companies can make a profit, but prices for services are regulated and based on the principle that all costs must be covered by water tariffs. The reasonable profitability of water companies is calculated in Lithuania, applying the reasonable cost of capital on regulatory asset base (RAB), when the reasonable cost of capital equals the weighted average cost of capital (WACC). As stated earlier, the necessary costs, depreciation, and profits are taken into account when determining water tariffs. Despite the inclusion of depreciation costs, it is not possible to take into account at today's water tariff the depreciation costs of assets financed by EU funds. The calculation of the corresponding depreciation costs would increase the average price of drinking water and sewage by 18%.

In Lithuania, the water price is calculated using the nationally approved pricing methodology approved by the European Commission. The Water Law states that water tariffs must be based on two principles: "polluter pays" and "full coverage of costs by water tariffs." The Lithuanian National Regulatory Commission will ensure that these principles are taken into account when setting the water tariff.

In Lithuania, a water company is not allowed to differentiate the price based on the location of the consumer. However, it is possible to set different prices by customer segments.

1.4.9. Social consequences of water tariffs

Affordability of water tariffs is monitored. According to the Law of the Republic of Lithuania on Drinking Water Supply and Wastewater Management, after setting new prices, the amount paid by consumers each month for drinking water supply and / or wastewater treatment services should not exceed 4 percent of the average monthly family income. The State Energy Regulatory Council when adjusting the base prices of drinking water supply and sanitation services, recalculates the base prices of drinking water supply and sanitation services annually, assesses whether the monthly price paid by consumers will exceed 4 percent monthly family income. In cases where price for service exceeds 4 percent of the average monthly family income the SERC may require the submit a plan setting out specific actions how the costs of services should be reduced that the amount paid by consumers for its drinking water supply and sanitation services does not exceed 4 percent of the average monthly family income.

In Lithuania, drinking and wastewater costs account for 1.7% of the average household member's net income (varying from 1.24% to 5% for different segments of the population). If the water price exceeds 4% of the net income of the household, the water company must submit to the Commission a plan on how to get the price of the water under 4%.

1.4.10. Lessons from previous attempts with agglomeration of utilities

In Lithuania, there are no mandatory requirements for the development of regional water companies. At the same time, the Union of Lithuanian Water Companies points out that the merging of water companies would help keep water tariffs at the current level or even lower.

The goals set by the state are to reduce the differences in the prices of centrally provided drinking water supply and wastewater treatment services in municipalities, to ensure the implementation of national and EU obligations (to provide quality drinking water supply and wastewater treatment services to the population) and to achieve greater efficiency (reduce operating costs, change cost structure, implement the principle of cost recovery) and to enhance sustainability of the sector.

The Ministry of Environment, implementing the Program of the Government of the Republic of Lithuania approved in 2017 and Objective 4 of the Water Development Program for 2017–2023 - "to increase the efficiency of drinking water supply and wastewater treatment companies, improve the quality of services provided" - developed a model aimed at consolidation of water utilities to achieve operational efficiency (reduce operating costs), change the cost structure, fully implement the principle of cost recovery, reduce

inequalities in service prices in municipalities, improve the quality and accessibility of services and the implementation of the environmental requirements and goals set by the state. The model was prepared in accordance with the report “Lithuanian Drinking Water Supply and Wastewater Management Company Management Improvement Plan”.

The key objectives pursued of WSS consolidation in Lithuania are:

- to enhance sustainability of WSS services in the country;
- to ensure higher operational efficiency;
- to reduce the disparity in prices for WSS services.

Three pairs of municipalities are considering consolidation of their water utilities. In all cases, these are neighbouring, contiguous municipalities; each pair consists of a stronger company (regional leader) and a weaker one. Reorganization by consolidation would reorganize municipality-owned companies that are financially weak (failing to meet national and EU obligations, failing to achieve efficiency criteria, incurring losses in drinking water supply and wastewater treatment activities) by merging them with financially strong companies. It is planned to reorganize companies that have voluntarily submitted applications to participate in the reorganization process. Such companies would be eligible for funding from the Water Fund, from which companies could receive loans and grants at a very favourable rate. It is planned to amend the Law on Water Supply and Wastewater Management.

In essence, a larger, more capable company joins a small company, takes over its responsibilities and rights, serves the existing customers of that company, invests, expands the infrastructure and services throughout the territory served by the consolidated companies.

To date, the law provides for the possibility for municipalities to voluntarily merge (consolidate) water companies. Experience shows that such a consolidation is practically non-existent, only Klaipėda city and district companies have joined. At the moment, AB “Klaipėdos vanduo” provides services in the city and district municipalities. That voluntary consolidation of Klaipėda city and Klaipėda district water management companies provides a useful reference. After the reorganisation, the tariff of services for urban residents slightly increased, while for the district, the tariff decreased by almost 50%. Currently, the company is financially sustainable and invests in the district. UAB “Vilniaus vandenys” is the largest water utility in Lithuania. It is owned by four municipalities, where it operates.

With the introduction of a more favourable EU funding mechanism, more municipalities are interested in consolidating water management companies.

A reform of the water sector is currently being proposed, which will encourage the consolidation of companies, monitor their performance more closely and take timely action if companies fail to meet their obligations to ensure high-quality and uninterrupted provision of essential drinking water and wastewater services. It is planned to promote the consolidation of water management companies through the Water Management Fund (for companies that will carry out consolidation actions, to apply an attractive ratio of preferential loans to repayable subsidies).

Another effective means of ensuring the quality of water management services and promoting operational efficiency is the licensing of companies. Therefore, it is planned to amend the Law on Water Supply and Wastewater Management by establishing:

- additional licensing criteria - number of users, service development (to perform a certain percentage of development within a certain period of time), infrastructure renewal (to allocate a certain percentage of the company's turnover for renewal), financial licensing criteria;
- a new mechanism of the guarantee water supplier, i.e. instead of the currently guaranteed drinking water supplier (director of the municipal administration), if the company's operating license were suspended or revoked, the functions of the guaranteed drinking water supplier would be performed by the strongest company operating in the region;

- pricing measures for transitional period, i.e. the price of the consolidated companies would not be equalized immediately, but after a certain period, for example after 3 years; efficiency measures would be implemented in the weaker company during that time. A higher return on investment was set for the regional company to meet the increased investment needs. Separate pricing for subscribers (consolidated companies) should be considered, so that during the reorganization of consolidated companies, industrial enterprises would not have a financial incentive to disconnect from centralised infrastructure and supply water, treat wastewater individually.

The main challenges associated with implementation of WSS consolidation in Lithuania are the lack of motivation and willingness to implement the proposed reform (consolidation of water management companies).

Municipalities consider that they will have less influence in the management of consolidated water company as the decisions will have to be coordinated among at least two municipalities. Also there are fears that part of employees will have to leave consolidated water utility. The fact that tariff will likely increase for the consumers of the stronger water utility is politically sensitive. Also the strong water utility will bear additional financial burdens for implementation of necessary actions in the territory of former financially weak water utility.

1.5. Suggestions for further work

Background information on the state of play and preliminary understanding of concerns about its sustainability and pending issues help characterise a list of topics that deserve further attention, as they can support reforms that effectively encourage agglomeration of water utilities and put water supply and sanitation services in Lithuania on a sustainable basis.

The proposed topics for further investigation are listed below. This list is destined to ignite a discussion with Lithuanian authorities and stakeholders. A fine-tuned programme of work in the context of this project will unfold, in line with the detailed project description and with the experience and ambition of Lithuanian counterparts.

A preliminary list of topics for further analysis includes:

- Make the case for change. Explain that business as usual is not an option and the national and local governments and water users will be affected by the unsustainable management and operation of WSS services.
- Consider a range of options for agglomeration, which are flexible and can adjust to local contexts. They are not based on geographical scale only. They may vary according to functions (planning; programming expenditure; technical skills; relationship with users; billing and tariff collection).
- Address practical issues to expedite consolidation, using an example of 1-2 pilot regions (to be selected in consultations with the Ministry of Environment)
- Further strengthen the role and capacities of the economic regulator. This would cover WSS tariff setting as a policy instrument to drive investment and utilities' performance; benchmarking the performance of utilities on multiple relevant dimensions. The strengthening would explore options regarding the status, skills and governance of the economic regulator.
- Clarify and address other regulatory and legal issues related to asset ownership. Explore options to transfer ownership to entities operating at larger geographical scales, or to combine local ownership with operation at larger geographical scales.

Annex 1.A. Operational and financial performance of WSS operators (2019)

Annex Table 1.A.1. Indicators of operation and financial performance

Municipality	Water Company/ Operator	Cost Coverage Ratio 3	Total Debt (short term +long term liabilities) / Revenues	Non- Revenue Water 4	CAPEX / Total Costs 5
Kauno c. mun.	Kauno vandenys	92,22%	21,85%	26,37%	60,47%
Klaipėda c. mun.	Klaipėdos vanduo	94,96%	52,16%	16,08%	78,04%
Vilnius c. mun.	Vilniaus vandenys	100,73%	45,37%	16,34%	86,33%
Alytus c. mun.	Dzūkijos vandenys	125,61%	58,13%	19,65%	63,84%
Marijampolė mun.	Sūduvos vandenys	86,98%	34,90%	35,39%	69,40%
Panevėžys c. mun.	Aukštaitijos vandenys	92,65%	53,68%	15,94%	14,46%
Šiauliai c. sav.	Šiaulių vandenys	117,78%	104,17%	15,03%	108,13%
Mažeikiai c. mun.	Mažeikių vandenys	92,57%	53,61%	29,95%	51,88%
Utena c. mun.	Utenos vandenys	105,48%	51,12%	7,31%	76,06%
Druskininkai sav.	Druskininkų vandenys	98,13%	51,73%	15,21%	113,50%
Kėdainiai d.mun.	Kėdainių vandenys	99,59%	68,39%	28,40%	33,92%
Palanga c. mun.	Palangos vandenys	104,28%	12,38%	22,27%	12,80%
Pasvalys c. mun.	Pasvalio vandenys	97,64%	78,25%	31,58%	112,41%
Kaišiadorys c. mun.	Kaišiadorių vandenys	93,42%	70,47%	26,43%	-40,01%
Rokiškis c. mun.	Rokiškio vandenys	118,29%	99,79%	18,88%	97,64%
Šilutė c. mun.	Šilutės vandenys	102,95%	106,89%	20,97%	36,79%
Ukmergė c. mun.	Ukmergės vandenys	95,50%	18,79%	23,34%	27,05%
Telšiai d. sav.	Telšių vandenys	95,70%	95,34%	22,83%	112,57%
Jonava c. mun.	Jonavos vandenys	99,91%	70,88%	19,51%	129,79%
Kaunas c. mun.	Giraitės vandenys	99,70%	76,62%	25,08%	205,01%
Plungė c. mun.	Plungės vandenys	87,40%	56,90%	22,20%	64,18%
Tauragė c. mun.	Tauragės vandenys	94,67%	63,51%	22,45%	-35,30%
Jurbarkas c. mun.	Jurbarko vandenys	97,70%	13,43%	21,24%	-10,58%
Kretinga c. mun.	Kretingos vandenys	93,28%	45,24%	37,57%	11,90%
Radviliškis c. mun.	Radviliškio vanduo	99,95%	30,13%	23,54%	-36,34%
Raseiniai c. mun.	Raseinių vandenys	91,69%	57,71%	34,73%	137,45%
Šakiai c. mun.	Šakių vandenys	108,12%	49,70%	32,73%	-63,19%
Trakai c. mun.	Trakų vandenys	109,55%	76,77%	41,60%	7,35%
Varėna c. mun.	Varėnos vandenys	109,67%	134,09%	27,34%	41,47%
Vilkaviškis c. mun.	Vilkaviškio vandenys	139,58%	40,81%	23,95%	7,66%
Prienai c. mun.	Prienų vandenys	102,36%	29,42%	21,77%	79,86%

Anykščiai c. mun.	Anykščių vandenys	124,13%	65,23%	20,36%	27,98%
Birštonas sav.	Birštono vandentiekis	86,83%	13,39%	20,32%	23,29%
Šilalė c. mun.	Šilalės vandenys	105,89%	87,61%	22,21%	144,58%
Joniškis c. mun.	Joniškio vandenys	103,29%	78,36%	28,36%	97,88%
Kupiškis c. mun.	Kupiškio vandenys	114,11%	56,95%	51,75%	18,42%
Molėtai c. mun.	Molėtų vanduo	105,41%	125,12%	19,31%	36,46%
Neringa mun.	Neringos vanduo	96,49%	9,70%	20,26%	-8,72%
Pakruojis c. mun.	Pakruojo vandentiekis	93,33%	105,61%	16,05%	123,82%
Širvintos c. mun.	Širvintų vandenys	96,56%	74,03%	15,42%	14,77%
Skuodas c. mun.	Skuodo vandenys	105,77%	117,95%	40,94%	-18,83%
Zarasai c. mun.	Zarasų vandenys	98,46%	59,12%	20,46%	51,06%
Ignalina c. mun.	Ignalinos vanduo	105,61%	43,74%	42,99%	3,60%
Biržai c. mun.	Biržų vandenys	107,60%	8,85%	37,49%	-74,13%
Akmenė c. mun.	Akmenės vandenys	99,30%	41,38%	10,99%	-3,41%
Kelmė c. mun.	Kelmės vanduo	99,48%	1081,72%	29,74%	82,55%
Šiauliai disc. mun.	Kuršėnų vandenys	129,39%	73,38%	43,40%	34,73%
Lazdijai c. mun.	Lazdijų vanduo	100,44%	94,43%	29,63%	450,93%

Annex 1.B. Population forecast by region

Annex Table 1.B.1. Population forecast by 2028 and 2050

Region	Municipality	Population 2018 year	Population 2028 year	Change, per cent., 2028 year	Population 2050 year	Change, per cent., 2028 year
Alytus reg.	Alytus c. mun.	51534	39897	-23	17130	-67
	Alytus disc. mun.	26077	23279	-11	20791	-20
	Druskininkai mun.	19605	16635	-15	12164	-38
	Lazdijai disc. mun.	19115	14686	-23	5508	-71
	Varėna disc. mun.	21764	16700	-23	6555	-70
Kaunas reg.	Birštonas mun.	4168	3621	-13	2929	-30
	Jonava disc. mun.	42052	35487	-16	26248	-38
	Kaišiadorys disc. mun.	30257	25176	-17	17066	-44
	Kaunas c. mun.	288363	250514	-13	204600	-29
	Kaunas disc. mun.	92644	101649	10	151938	64
	Kėdainiai disc. mun.	46626	36250	-22	16187	-65
	Prienai disc. mun.	26492	21908	-17	14188	-46
	Raseiniai disc. mun.	32510	25764	-21	12880	-60
Klaipėda reg.	Klaipėda c. mun.	148908	131140	-12	111341	-25
	Klaipėda disc. mun.	56131	61992	10	94633	69
	Kretinga disc. mun.	37945	33214	-12	27705	-27
	Neringa mun.	3224	4136	28	7660	138
	Palanga c. mun.	15381	15073	-2	17790	16
	Šilutė disc. mun.	38749	30169	-22	13264	-66
	Skuodas disc. mun.	16914	11700	-31	194	-99
Marijampolė reg.	Kalvarija mun.	10776	9077	-16	6305	-41
	Kazlų Rūda mun.	11764	9931	-16	6973	-41
	Marijampolė mun.	54600	45380	-17	30180	-45
	Šakiai disc. mun.	28039	21972	-22	9987	-64
	Vilkaviškis disc. mun.	36108	27443	-24	9233	-74
Panevėžys reg.	Biržai disc. mun.	23778	17780	-25	5097	-79
	Kupiškis disc. mun.	17097	12748	-25	3573	-79
	Panevėžys c. mun.	88678	74375	-16	50081	-44
	Panevėžys disc. mun.	35734	31311	-12	26434	-26
	Pasvalys disc. mun.	23967	17992	-25	5404	-77
	Rokiškis disc. mun.	29472	22059	-25	6472	-78
Šiauliai reg.	Akmenė disc. mun.	19606	14377	-27	3385	-83
	Joniškis disc. mun.	21583	15240	-29	1167	-95
	Kelmė disc. mun.	26778	18815	-30	1138	-96

	Pakruojis disc. mun.	19546	13767	-30	956	-95
	Radviliškis disc. mun.	36170	27389	-24	9703	-73
	Šiauliai c. mun.	100575	87485	-13	72956	-27
	Šiauliai disc. mun.	41209	36367	-12	32812	-20
Tauragė reg.	Jurbarkas disc. mun.	26043	20320	-22	9016	-65
	Pagėgiai mun.	7793	5433	-30	61	-99
	Šilalė disc. mun.	23060	18577	-19	10122	-56
	Tauragė disc. mun.	38921	32306	-17	21235	-45
Telšiai reg.	Mažeikiai disc. mun.	52208	44222	-15	31717	-39
	Plungė disc. mun.	33707	27932	-17	17866	-47
	Rietavas mun.	7542	5936	-21	2866	-62
	Telšiai disc. mun.	40682	32071	-21	15291	-62
Utena reg.	Anykščiai disc. mun.	24149	17942	-26	4786	-80
	Ignalina disc. mun.	15366	11089	-28	1896	-88
	Molėtai disc. mun.	17856	13928	-22	6195	-65
	Utena disc. mun.	37914	30561	-19	17278	-54
	Visaginas mun.	18686	13052	-30	1033	-94
	Zarasai disc. mun.	15668	11934	-24	4284	-73
Vilnius reg.	Elektrėnai mun.	23724	21778	-8	21880	-8
	Šalčininkai disc. mun.	31265	26472	-15	19575	-37
	Širvintos disc. mun.	15570	12639	-19	7769	-50
	Švenčionys disc. mun.	23881	18193	-24	6781	-72
	Trakai disc. mun.	32492	29596	-9	28698	-12
	Ukmergė disc. mun.	34376	26295	-24	10378	-70
	Vilnius c. mun.	547484	566590	3	750683	37
	Vilnius disc. mun.	96575	97366	1	123703	28

Annex 1.C. Questionnaire for data collection on the state of play

Legislation, institutional and regulatory framework

1. Please briefly describe the key pieces of legislation (e.g. water law/code, acts defining WSS assets ownership) and the regulatory framework (e.g. water quality standards, permitting/licensing) for WSS services provision.
2. Is the WSS services consolidation envisaged in the legal or regulatory frameworks? If yes, is it a mandatory or voluntary process, please describe the mandatory provisions and the legal forms that consolidation may take place.
3. Which institutions are in charge of setting WSS policies, development planning?
4. Characterise the main priorities (access in cities; access in rural areas; health or environmental standards; quality of service; adaptation to climate change; energy efficiency; connection to existing infrastructures; else).
5. Characterise the main drivers for change
 - Demographic trends since 2000; projections to 2030, or 2050; regional disparities; urban/rural; trends in size of households, ageing;
 - GDP growth since 2000; projections for the next 5 years.

The organisation of service provision

6. Which institution is accountable for service provision (central government; municipalities; other)? Has the WSS assets ownership been transferred from the central governments to municipalities? When? To what extent?
7. How is service provided?
 - Please describe WSS services provision at local level. Please describe modalities of inter-municipal cooperation for WSS provision (e.g. agreements on cooperation between municipalities) if it takes place.
 - Role and status of utilities, public or private (e.g. what legal forms (delegation, lease, management contracts) it can take between municipalities and water companies). In case of municipal public utility for WSS - are revenues from water supply and sanitation service earmarked for water-related expenditure only? Or any share of revenues accrue to other types of expenditures at local level?
8. How many municipalities exist in Lithuania? Changes since 2010 (any trend towards consolidation)?
 - Please provide a map of municipalities in Lithuania
 - Population by municipality.
9. How many entities/utilities provide services for water supply? For sanitation? Changes since 2010 (any trend towards consolidation)? Are there any municipalities with 2 or more WSS utilities?

The performance of service providers

10. Who sets objectives for service quality (e.g. continuity)?
11. How is performance measured (key indicators) and monitored?
12. Has the oversight of utility performance been a responsibility of central or local governments (municipalities)? Report any major change in the devolution of responsibility over the last 5-10 years/ or planned reforms in this area. Is an independent regulator involved in setting targets, monitoring performance, benchmarking service providers?

Tariff setting

13. Have a specific/dedicated tariff regulation for WSS services (or WSS and other communal services) been adopted in Lithuania? When? By which part of the government?
14. Please describe the WSS tariff regulation process.
15. Have professional regulatory bodies regulating tariffs for WSS services (or WSS and other communal services) been established? When? What is their status vis-à-vis the government?
16. Please describe the access (if any) to water utility data, potential gaps in monitoring water utilities performance.
17. Are public budget subsidies envisaged to compensate water utilities for difference between tariff and cost?
18. Has an affordability check become a part of the tariff setting procedure for WSS? Please provide the information on the recent affordability ratio for different municipalities (if available).
19. How do water users participate in tariff revision (public hearings, consultations)?
20. How is information collected and shared, on the performance of service providers, and tariffs for services?

Inter-agency co-ordination and cooperation for WSS service provision

Please briefly describe and provide information on the following items.

21. Institutions in charge of designing and implementing policies that affect water supply and wastewater management (departments in charge of Health; Environment; Urban development; Infrastructure; Investment and finance; else).
22. Arrangements in place for co-ordination and co-operation among the institutions listed above.
23. Arrangements in place for ensuring effective multilevel governance (co-ordination and co-operation among different levels of government) involved in policies that affect drinking water supply and wastewater management (authorities at national, local or other sub-national levels, such as catchments or river basins).

Mapping WS service coverage and recent trends in service provision

24. Volume of drinking water produced and wastewater collected, treated (by municipality).
25. Share of the population with access to safe water and sanitation by municipality? Please describe distinction between urban/rural areas.
26. Age of assets and main periods for the construction of existing networks for water supply? For sanitation?

27. Rate of water losses and recent trends.

28. Please provide information on regional and social differences or disparities in WSS services provision:

- regional disparities: e.g. access, challenges, state of the infrastructure, performance
- social disparities: e.g. access, affordability; lack of access to water supply and sanitation services, wastewater and rainwater collection and treatment.

WSS strategic policy making and financing water supply and sanitation

29. Please describe roles and responsibilities for WSS strategic development and investment programming in Lithuania.

30. Please indicate and summarise strategic planning documents (e.g. national financing strategies) for the WSS sector in Lithuania. Are these plans backed by financing strategies? If yes, please characterise these financing plans:

- Investment needs, now and in the future
- Projected sources of finance (share of revenues from water tariffs; domestic public funds; EU financial support; else).
- Please describe public budget allocations to the WSS sector (if any). Are budget transfers from national governments earmarked for water supply and sanitation services?

31. If inter-municipal cooperation/aggregation of WSS services was considered in these documents, please describe key recommendations or planned actions. Is the WSS consolidation incentivized? If yes, please explain how?

32. Please characterise past (factual) WSS financing since 2000, and provide more specific information for the last 3 years:

- Levels of investment

Annex Table 1.C.1. Capital Investment in WSS

Capital Investment in WSS (million EUR)	2017	2018	2019
Total investment			
Total investment in fixed assets for WSS			
as % of GDP			
Total investment in fixed assets for water supply			
Total investment in fixed assets for sanitation			
Sources of finance			
Public budget, total			
National budget (or government organizations)			
Regional budget			
Municipal budget			
IFIs, EU and donors ⁶			
Water utilities own funds			
Private sources, total (incl. private operators)			

- Operation and maintenance costs (total)
- Any dedicated mechanism (such as a national water/environment/climate fund) in place or considered?

Experience with consolidation of municipalities and/or service providers

33. What are the key objectives pursued of WSS consolidation in Lithuania (e.g. improvement of service provision, financial sustainability, economic efficiency, capacity, environmental benefits; else)?

34. Has consolidation/aggregation of municipalities already been considered for implementation of the EU Water Directives? If yes, how did it influence service provision, investment and WSS tariffs in those municipalities?

35. What are the key drivers and objectives pursued by WSS consolidation in Lithuania, e.g. improvement of service provision, financial sustainability, economic efficiency, capacity, and environmental benefits?

36. Please describe key dimensions of consolidation under consideration, or already taking place:

- Geographical scale (administrative, watershed or regional boundaries)
- Functional scale (investment and service coverage; operation and maintenance; administration & customer relationships)
- Scope of service provision (provision of raw water; water supply; wastewater collection; wastewater treatment; pluvial and storm water collection; else)

37. Please describe:

- The potential for WSS consolidation in Lithuania
- Possible scenarios (from a legal, financial, technical, social or political perspectives)
- The main challenges associated with implementation of WSS consolidation in Lithuania.

Operational and financial performance of WSS operators

Please provide information by municipality/service provider (2019 or most recent year).

Annex Table 1.C.2. Indicators of operational and financial performance

Municipality	Water Company/ Operator	Cost Coverage Ratio ⁷	Total Debt (short term + long term liabilities) / Revenues	Non- Revenue Water ⁸	CAPEX/ Total Costs
XX	...	%	%	%	%
...					

Please provide information on WSS tariffs rates, revenues from user charges and affordability ratio (2019 or most recent year).

Annex Table 1.C.3. WSS tariffs, revenues and affordability ratio

Municipality	Water Company/ Operator	Household WSS tariff, applied by water operator	WSS tariff for other consumer (EUR/m ³ on average)	WSS tariff collection rate for households	Revenue from user charges (households) EUR	Revenue from user chargers (other)	Affordability ⁹ for households (if estimated)

		(EUR/m3, on average)				consumers) EUR	
XX	...			%			%
...							

In 2017-2020 what was the level of public operational subsidies* to the utilities providing WSS services? (if relevant)

Annex Table 1.C.4. Public budget subsidies

WSS, EUR	2017	2018	2019
Public operational subsidies to water utilities*			

Notes

¹ Note that this assessment does not reflect the amortisation of investments that was covered by EU funding, which is a predominant share of the total capital expenditure of the sector in Lithuania. See below.

² Evaluated during the study carried out by economists (Lithuanian Drinking Water Supply and Wastewater Management Company Management Improvement Plan)

³ Cost coverage ratio: $\text{visos sąnaudos} / \text{visos pajamos}$;

⁴ Unaccounted for water: $(\text{amount of groundwater extracted} - \text{amount of drinking water sold} - \text{amount of water consumed through hydrants for firefighting}) / \text{amount of groundwater extracted} * 100$;

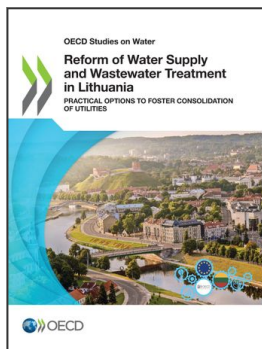
⁵ The Council does not collect CAPEX data for the performance of its functions, the indicators are calculated according to the formula: $((\text{residual value of fixed assets in 2019} - \text{residual value of fixed assets in 2018} + \text{depreciation of fixed assets in 2019}) / \text{total costs})$, estimating preliminary data provided by enterprises.

⁶ Please specify if development finance is channelled through public budgets, to avoid double counting

⁷ Defined as the share of total costs covered by revenues

⁸ Defined as the share of water that is losses through leakages + bills that are not recovered

⁹ Defined as a share of disposal income



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