



Economic models for water management and pricing in Europe: the case of Latvia

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On behalf of Europa

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1. GENERAL INTRODUCTION

This document describes the situation in Latvia with regard to water management and pricing. It is part of a global project which includes the analysis of the situation in seven European countries (France, Ireland, the Netherlands, Romania, Germany, Spain and Latvia studied here) carried out with the aim of producing a publication for territorial decision-makers and whose subject is the following: "The management of economic models and the pricing of drinking water services in the face of the need to save water".

Latvia has an area of 64,570 km², with a population of 1,875,757 inhabitants and has a moderate population density, 29 people per km². The GDP per capita in 2021 is €17,450.

Latvia has considerable water resources and low and declining per capita water withdrawal levels. Indeed, the Latvians are among the Europeans who consume less than 130 m³ of fresh water per year and per inhabitant. According to the LUKA association, Latvians consume an average of 100 liters of water per day and per inhabitant.

Latvia's level of economic development remains below that of most EU Member States, although its economy is expected to experience strong growth in the coming years. Latvia's population is expected to decline over the next 30 years, affecting both rural and urban areas.

2. THE POLITICAL FRAMEWORK

2.1 Local institutional organisation in Latvia

Latvia has been a member of the European Union since May 1, 2004 and of the euro zone since January 1, 2014.

Latvia is divided into four historical regions which also have secondary administrative value:

- Zemgale to the South;
- Kurzeme to the West;
- Latgale on South East;

- Vidzeme to the North.



Figure 1: Secondary administrations and cities of Latvia

Different institutions are involved in the management of water resources:

The Ministry of Environment Protection and Land Use Planning (MoERD) is responsible for water resources and sanitation policy planning, implementation and supervision of water projects. improved drinking water and sanitation. He is also responsible for regional development and information and communication technologies. It ensures that natural resources are used efficiently and sustainably. Among others, the MoERD oversees the following institutions:

- Environmental State Bureau (ESB), which carries out environmental impact assessment of existing or proposed activities and planning documents.
- National Environment Service (SES), which must ensure the implementation of the legislative framework relating to the protection of the environment and natural resources.
- Nature Conservation Agency (NCA), which is responsible for the management of all protected areas in Latvia.
- The Latvian Ministry of Environment, Geology and Meteorology (LEGMC), which monitors water quality and quantity, as well as data quality control and data availability for the public, the management of river basins, the preparation of various reports for national and international institutions, as well as the calculation of flood-prone territories. It also carries out the development of PGRI (The flood risk management plan), PGDH (the hydrographic district management plans, corresponding to a requirement of the WFD) and the Programs of Measures and implementation of measures (DCE).

The Ministry of Health participates in the development of policy planning documents and legal acts. It supervises the Health Inspectorate responsible for controlling the public supply of drinking water from water points to the consumer.

The Ministry of Agriculture is, among other things, responsible for water resources and their protection. (FAO, 2016)

Organisations allowing advice, expertise and/or gathering for exchange around common interests and objectives:

- The Latvian Union of Heat, Gas and Water Technology Engineers (in Latvian LSGŪTIS): this brings together 355 specialists who carry out engineering work or teach at universities.
- Association of Latvian Water Supply and Sewerage Enterprises (LŪKA) uniting 48 industrial enterprises operating in the territory of Latvia (the last SIA "Rīgas ūdes" joining the association in July 2022), of which 37 (members) are public water service providers and 11 (associate members) companies provide services and goods related to the water supply and sanitation industry. (ūdes", 2022)

LŪKA unites companies in the sector to advocate water management in Latvia and jointly promote the development of water supply and sanitation companies. The association also provides industry representation outside Latvia, both in the Baltic region and in Eastern Europe, as well as in the European Union (member of the European Association of water (EWA).

According to the [Water Services Act](#) and the [Act About Municipalities](#), municipalities are responsible for:

- organize collective services for residents (water and sanitation; heating; management of household waste; collection, evacuation and sanitation of waste water) regardless of the location of the housing stock on the property;
- Local water protection
- The implementation of specific RBMP and FRMP measures

2.2 Institutional organisation for the small water cycle

2.2.1 *The public drinking water and wastewater service*

Water management in Latvia is composed of two levels: central management and local management.

The central government is responsible for the protection and development of water resources, the formulation and implementation of the national water policy and the national macro-management of water resources.

The local government is responsible for supervising and managing water use and wastewater treatment. Indeed, according to Latvian law (Law on Local Governments of

1994), local authorities have in particular the obligation to manage the following public services:

- • The organisation of services related to water supply and sanitation, heating, collection and dumping of household waste (La démocratie locale et régionale en Lettonie, 2011)

The current model of water management in Latvia is then characterized by a large number of drinking water supply services and wastewater treatment services, which are very different in size and stage of development.

This situation is due to the strong decentralisation, going from a strongly centralized management controlled by the Soviet Governance to the current situation with local public services. Often, these services are not able to meet the water supply and sanitation needs of the communes. The latter do not allow a connection to all users and may present failures in the development of their infrastructures (insufficient treatment, aging installations). The services therefore encounter difficulties in offering all users optimal services and reducing the risks to human health.

An administrative territory can have several water management service providers. The local government is responsible for providing water management services within its administrative territory. The local government, when concluding a contract, delegates to a public service provider to provide water management services in a specific territory.

So each local government has contracted with a company that deals with this utility service, for example, Rigas Udens provides water for customers in Riga, Daugavpils Udens in Daugavpils, Liepajas Udens in Liepaja...

2.2.2 The private drinking water and wastewater service

The organisation of water supply and sewage treatment is the responsibility of the municipality in its territory; however, municipalities may encounter difficulties in performing it properly, in cases of lack of facilities, these being owned by companies or private individuals.

These owners may find it difficult to properly maintain their water facilities and provide services, particularly if their own consumption is different from household consumption (e.g. fish processing companies). This situation can pose different problems: damage to infrastructure (pipes, etc.), unsuitable water quality, etc. The owners of private water installations cannot or do not want to maintain them correctly, setting at the same time insufficiently high prices for their services.

The private sector presents wide disparities in terms of size and technological development, leading to widely varying services and prices.

2.3 Implementation of public water and sanitation services

2.3.1 The drinking water service

In Latvia, the total length of drinking water management networks in 2019, compared to 2018, increased by 2%.

The total length of water supply networks in Latvia is 6199 km, of which 3807 km are managed by members of the LUKA Association.

The volume of water distributed to users did not change much from 2018 to 2019. Users of water supply services consumed 0.4% less water. During this time, 0.5% more wastewater was collected from users of sewerage services.

The number of users of water services continues to grow. In 2019, water service providers served 6,108 more connections than in 2018.

This shows that users continue to connect to the infrastructures set up in previous years with European co-funding or restored. Municipalities are the entities that take the most water resources:

Water withdrawals for industrial use	30 millions m ³ /year
Water withdrawals for agricultural use	50 millions m ³ /year
Water withdrawals by municipalities	90 millions m ³ /year
Water withdrawals for industrial use (%)	13,91 %
Water withdrawals for agricultural use (%)	33,96 %
Water withdrawals by municipalities (%)	52,13 %
Prélèvements totaux d'eau	0,2 billion m ³ / year

Table 1: Water abstraction rates for different uses.. Source: (Lettonie, s.d.)

The country still faces some gaps in water supply coverage. Indeed, there are some small towns where the supply of fresh water is not sufficient for the local population because they are not equipped with an appropriate and sustainable structure (insufficient size, non-optimal technologies, etc.).

❖ Sources

Underground aquifers are the main source of water in Latvia, only SIA "Rīgas ūdes" takes part of its water from the Daugava River.

A total of 1,125 groundwater abstraction points are used to supply drinking water to the distribution networks.

The most used technology for the preparation of extracted water in Latvia is the oxidation of iron and manganese ions. On the other hand, in case of an increase in sulfate content, membrane filtration technologies are also applied. Also, for consumer safety, drinking water is disinfected using chlorination, ozonation or UV radiation treatment. Considering the peculiarities of drinking water, additional treatment methods can also be applied in its preparation process, for example: fluoridation, purification of nitrates... (Water supply and drinking water, 2015)

2.3.2 Wastewater service

Latvia has 74 settlements and for these, 71 treatment plants are in place, including 47 stations with primary and secondary treatment and 24 stations with more severe than secondary treatment. (OIEau, 2020)

Throughout the country, wastewater is transported to treatment plants through wastewater collection networks 5,167 km long. Among them, there are 3266 km of sewer pipes under the supervision of LŪKA members.

1.6 million equivalent inhabitants of wastewater are produced each year (including 42% for the capital Riga). Population equivalent (PE): can be defined as the equivalent, in terms of fixed population, of a variable or transient population (e.g. restaurant or airport) based on a figure of 60 grams/BOD /inhabitant/day and 200 liters/inhabitant/day

If there is no sewerage system designed to carry sewage and rainwater through two separate pipes, rainwater may also be collected in the centralized sewerage system.

According to the Cabinet of Ministers on 22.03.2016, by Regulation no. 174 "Rules on the provision and use of public water management services" Article 49 states: if the user of the service drains rainwater from the territory of his real estate into the centralized sewage system, its amount is included in the total amount of discharged wastewater, and the amount of wastewater (cubic meters per year) is determined in accordance with the building code for structures.

Like drinking water service, rural areas have less access to sustainable sanitation services than urban areas.

Proportion of urban population served with at least basic sanitation	96,3 %
Proportion of rural population served with at least basic sanitation	84,2 %
Proportion of population served with at least basic sanitation	92,4 %

Table 2: Water abstraction rates for different uses. Source: (Lettonie, s.d.)

2.3.3 Management mode

In the water management sector, the PUC (Public Utilities Commission) or SPRK (in Latvian) regulates water supply services (water abstraction and preparation; water distribution) and water utilities. sanitation (wastewater collection and disposal; wastewater treatment) if the volume of services provided by a company exceeds 100,000 m³/year for at least one of the four types of services mentioned above.

Entrepreneurs in the water management sector, whose volume of public water management services in no way exceeds 100,000 m³ per year, are not regulated.

To benefit from water management services, a user of the public service must conclude a contract with the manager of a residential building (for an apartment building) or directly with a service provider (for a private dwelling).

When concluding contracts, regulations issued by local governments that determine the mutual relationship between providers and users of water supply and sewerage services in a specific administrative territory should be taken into account.

In order to provide water management services, a utility provider must be registered in the register of water management service providers and require a water management service tariff approved by the Regulator. The regulator's responsibility includes monitoring a utility provider for uninterrupted, safe and high-quality utility services up to the limit of the provision of water management services at water management service tariffs. water approved by the regulator.

At the end of 2020, 63 regulated companies were registered in the Register of Water Management Service Providers, which has been a constant number since the end of 2019.

2.3.4 Conformity

Compliance of the quality of drinking water with the requirements of regulatory acts in Latvia (Regulation of the Cabinet of Ministers of November 14, 2017 No. 671 "Mandatory safety and quality requirements for drinking water, monitoring and control procedures ") is controlled by the Health Inspectorate, which annually carries out planned checks in the water supply systems and examines the observations of citizens regarding compliance with the requirements for ensuring the safety of drinking water.

The most common reason for the inconsistency of water quality indicators is the saturation of Latvian groundwater with iron compounds, the separation of which from drinking water requires the use of special technologies that do not have not yet implemented in all Latvian municipalities

In cases where an inconsistency is detected in the water supply system in the section from the place of water production to the water metering node (including), which is established at the entrance to a building or a group of buildings, corrective measures are taken by the water management service provider .

Latvia shows very high compliance (99-100%) for microbiological and chemical parameters and 98.7% compliance for DWD (Drinking Water Directive) indicator parameters.

The utility provider must continuously develop a routine drinking water quality monitoring (inspection) program in accordance with regulatory enactments and must perform drinking water quality testing several times a year.

Latvia's access to drinking water for 2020 was 96.29%, an increase of 0.26% compared to 2019. (Macrotrends, 2022) Rural areas have less access to drinking water, in particular to quality drinking water and sustainable sanitation services. As a result, they are more prone

to waterborne diseases and reduced economic activity. There is a substantial gap (19%) between urban and rural areas in terms of the percentage of the population with access to safely managed sanitation (WHO-UNICEF, 2017).

For the UWWTD, Latvia has overall high compliance rates: 100% of its wastewater load is collected and 98.7% receives secondary treatment. Just over 10% of wastewater, however, is managed via individual or other systems.

In 2018, Latvia had 57 urban wastewater agglomerations with more than 2,000 population equivalent (PE). These agglomerations generated a total load of 1,474,348 PE, of which 96% of this load is connected to collection networks and 4% addressed by Individual and Appropriate Systems (storage or septic tanks, micro-stations, etc.) . These agglomerations are connected to 36 secondary treatment plants and 17 more severe treatment plants. All these treatment plants have a total design capacity of 2,102,358 pe. (UWWTD, s.d.)

2.4 Legal framework in the water management sector

Suppliers of public drinking water and sanitation services carry out other types of commercial activities provided for by their statutes; They must comply with the special regulatory acts of water management, construction, consumer rights protection, environmental protection, housing management and other fields, as well as the requirements of laws such as the law on public procurement of public service providers, the law on the processing of data of natural persons, the law on the prevention of waste of financial resources and property of public persons.

2.4.1 *Laws*

The Law on water management services, establishing in particular the competences of public establishments to ensure the availability of water management services, the general requirements and procedures for the provision and use of water management services Water... [Water Management Services Act \(2017\)](#)

2.4.2 *Minister's Office Regulations*

The procedure for determining, calculating and accounting for the payable share of each owner of a dwelling house for the services necessary for the maintenance of the dwelling house. [Determination procedure \(2015\)](#)

The Regulation on the provision and use of public water management services defining the means, procedures and requirements for this service. [Regulations on the Provision and Use of Public Services \(2017\)](#)

2.4.3 *Regulatory acts of the regulator*

The Methodology for calculating the tariffs for water management services setting out the general calculation rules, the costs to be included, the operating costs and the depreciation rules. [Tariff calculation methodology \(2018\)](#)

The General Rules for authorisation, registration and submission of information in the water management sector, presenting the procedures, organisation and related documents.
[General Rules \(2021\)](#)

2.4.4 Example of AIS "Rīgas ūdens"

From the framework above, the regulations followed by drinking water and sanitation service providers are enriched with additional text.

Rīgas ūdens, as a company with municipal capital, must also comply with the requirements of the law on the management of capital shares of public persons and capital companies in its operations.

- [Conformity Assessment Act \(2020\)](#)
- [Unit of Measurement Act \(2020\)](#)
- [Rules on metrological requirements for water consumption meters \(2016\)](#)
- ...
- Regulatory acts of the Riga City Council
 - [On the provisions of the water management public service contract, its terms of closure, modification and termination](#)
 - [About the co-financing of the Municipality of Riga for the connection of real estate to the centralized sewerage and water supply system](#)
 - ...
- Other regulatory acts can also be followed:
 - [Board of the Public Services Regulatory Commission 14.07.2010. Decision No. 1/12 "Rules for justifying the charges making up the tariffs";](#)
 - ...

3. THE ECONOMIC MODEL OF WATER SERVICES:

3.1 Funding

Latvia has benefited from significant EU funding for the construction and rehabilitation of environmental infrastructure, mainly related to drinking water and wastewater. Total funding of €588 million was provided over the period 2007-2013 to improve the quality and availability of centralized water supply and wastewater collection and treatment. (OECD, Latvia, 2020)

Currently, in the most urgent cases, water companies repair faulty parts of the systems using revenue from tariffs. There are a number of environmental taxes and charges related to water in Latvia (including abstraction and pollution charges and charges on water consumption and waste water), some of which allocate revenue to measures environmental protection (including rehabilitation and renovation of drinking water and wastewater infrastructure).

In 2022, the EIB (European Investment Bank) is granting a loan of 60 million euros to the public company SIA Rīgas ūdens, the largest water company in the Baltic States, to develop water management. This funding is in support of a major project to rehabilitate and expand water supply and sanitation infrastructure in Riga.

This investment loan will provide significant environmental benefits for some 620,000 people in the region, mainly: reduced groundwater and surface water pollution, more efficient use of water resources and increased energy efficiency and renewable energy production. Thanks to this direct loan from an international financial institution such as the EIB, SIA Rīgas ūdens will be able to diversify its sources of financing for the remaining cost of the project and use its own resources, EU structural funds and loans from commercial banks.

This EIB-financed water project in Latvia will connect more people to an improved water supply network and collect more wastewater and less rainwater at a station water treatment plant, which will significantly contribute to environmental protection and sanitation at the local level, as well as to climate action in the Riga region.

The key objective behind this EIB investment project is to provide water treatment, water supply, sewage collection and sanitation services that are cost effective, uninterrupted and safe, in line with the EIB's policy as a climate bank and with regulatory and environmental requirements.

4. PRINCIPLES OF WATER PRICING IN IRELAND FOR HOUSEHOLDS

Prior to 2010, all utility tariffs were set in accordance with Cabinet of Ministers regulations "Methodology for Calculation of Utility Tariffs in Municipally Regulated Areas". In 2010, the Commission approved the "Methodology for calculating water management service tariffs", which specifies the procedure for calculating water management service tariff proposals by water management service providers. The new methodology provides for a single tariff for natural and legal persons and clearly defines the costs that can be included in the tariff project. The components and formulas for calculating the tariff for drinking water and wastewater are thus brought together in the [Methodology for calculating tariffs for water management services](#).

4.1 Détermination of tariffs

The pricing model is based on the rate of return (similar to the concept of profitability ratio). Tariffs are set for water supply services and sewerage services.

Also, the suppliers accurately and transparently reflect the costs of the service in the draft tariff, including only the assets and activities related to the water management service concerned. Thus, the draft tariff only includes the technologically and economically justified costs necessary for the efficient provision of the water management services concerned. So it does not include:

- the costs related to the maintenance of the separate storm sewer systems in the proposed tariff.
- costs related to the maintenance of the internal networks of the properties
- costs related to water losses in the internal water supply of buildings or structures
- costs arising from direct settlements with apartment owners in multi-apartment buildings

According to the Methodology, the tariffs approved by the regulator should only contain the technologically and economically justified costs, which are necessary for the efficient provision of the relevant water management services.

This condition is drawn up in accordance with the Law on Water Management, where it is determined that natural and legal persons cover all costs of water management services justified as a result of economic analysis, as well as pay for water resources and for the damage caused to them. Since only costs related to the provision of services can be referenced, water management tariffs are considered to reflect costs.

In addition, since water management tariffs must cover all referable costs, the principle of cost recovery is also in force. (WAREG, 2019)

The average water management tariff in Latvia at the end of 2020 was €2.27/m ³ , €0.03/m ³ more than in 2019.

The lowest water management tariff was in Daugavpils (€1.46/m³), while the highest water management tariff in Latvia was in the Talsi region (€3.07/ m³).

Fares differ by locality, and these differences are determined by:

- the conditions for the provision of services,
- the technological solutions chosen for the water supply system,
- the compactness of the water supply system and its technical condition, as well as
- geographic, demographic, etc... conditions; characteristics of each agglomeration (relief, construction, number of users, density, etc.).

The costs of providing the service depend on these conditions, which are necessary to ensure the provision of the services.

The PUC provides an interactive map to visualize the great disparity in tariffs for water services: [Tariffs for water management services](#)

4.2 Formation of water tariffs

The price of water is set with a volumetric tariff, with water consumption paid based on the readings of water meters for the previous month.

The owners of the dwelling house must take the readings of the meters installed in the apartment, non-residential premises, and deliver them to the manager determining the tariffs. The deadlines as well as the procedure to be followed are determined by the amendments to the regulations of the Cabinet of Ministers approved at the April 21 meeting of the Cabinet of Ministers. 524 [“The procedure for determining, calculating and accounting for the payable share of each owner of a dwelling house for the services necessary for the maintenance of the dwelling house”](#).

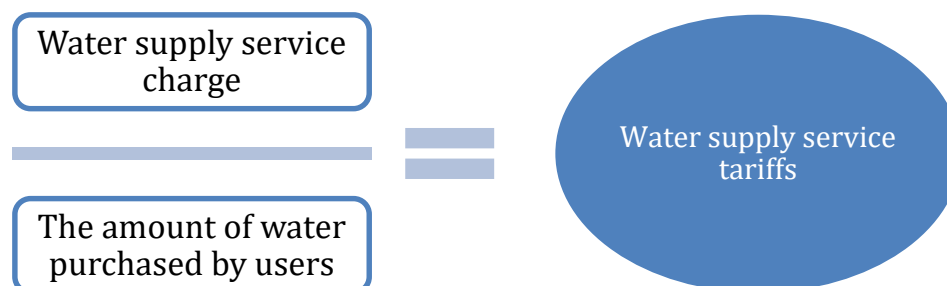


Figure 2: Formation of tariffs for the drinking water service. Adapted from source: (Prezi, s.d.)

In Riga, the amount of wastewater flowing into the sewage system is determined by the amount of water taken from the city water supply, based on the readings of water consumption meters, as well as by wastewater accounting systems. If there are no water consumption meters or wastewater metering devices, the amount of wastewater is determined according to the current water consumption standards and the information

provided by the Customer, but not longer than the time specified in the contract. The provisions are grouped in local regulatory act No. 39 "[Regulations for the operation, use and protection of water supply and sewerage networks and structures in Riga](#)"

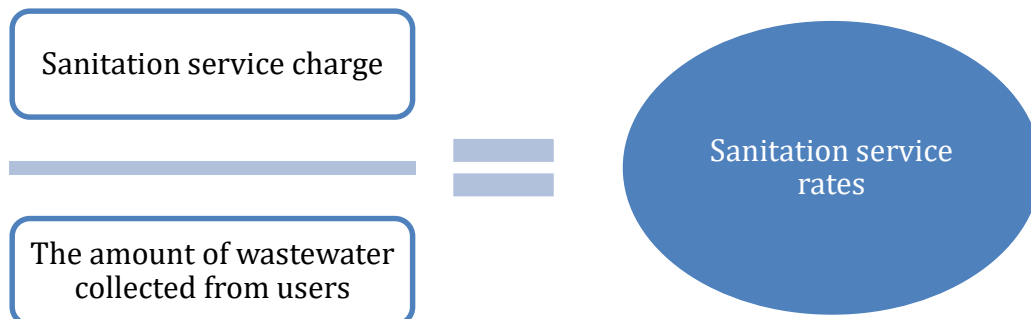


Figure 3: Formation of tariffs for the sanitation service. Adapted from source: (Prezi, s.d.)

4.3 Tariff for drinking water and sanitation services: Example of SIA Rīgas ūdens

SIA Rīgas ūdens is the largest water utility company in Latvia. It operates the water supply and sanitation infrastructure in the capital, Riga (with an area of 307.2 km² and a population of 632,614 in 2019), and some surrounding localities.

In 2021, its service area had 650,000 inhabitants, 98% of whom were connected to the water supply and wastewater collection networks.

The company currently provides running water supply and sewage collection for around 98% of the population in its service area in and around Riga. Annual water consumption in the service area amounts to approximately 33.7 million m³, and wastewater discharged via the Rīgas ūdens networks reaches volumes of around 50 million m³ per year.

4.3.1 Tariffs evolution

The Public Utilities Regulatory Commission (SPRK) approved new tariffs for water management services of SIA "Rīgas ūdes" on 08/29/2022, which will come into effect in October 2022.

The tariff for water supply services will be €1.20/m³ (excluding VAT), and the tariff for sanitation services will be €1.21/m³ (excluding VAT), i.e. **€2.41/m³** for combined services.

Compared to the current tariff, the tariff for water supply services of SIA "Rīgas udes" has been increased by 18 cents/m³, while the tariff for sewerage services has been increased by 30 cents/m³.

On June 1, 2022, the following tariffs for the following water management services had entered into force (According to Decision No. 65 of April 28, 2022 of the Board of the Utilities Regulatory Commission (SPRK) ([service tariffs](#)) :

For water supply services: €1.02/m³ and for sewerage services: €0.91/m³ (excluding VAT). That is a price of combined services of **€1.93/m³**.

Thus, the cost of a cubic meter for the two services combined, water supply and sanitation, increases by 24.8% or 48 cents: from 1.93 euros to 2.41 euros per cubic meter (excluding VAT). SIA "Rīgas ūdes" submitted the new draft water management tariff to PUK on August 1, while on August 24, in view of the rapid increase in energy price forecasts in the exchanges, it submitted a proposed revised tariff, updating included electricity and natural gas costs.

As of June 1, 2018, the following rates for water management services were established:

(According to Decision No. 48 of 26 April 2018 of the Council of the Public Utilities Regulatory Commission (PURC)): For water supply services: €0.85/m³ and for sewerage services: 0 €0.74/m³ (excluding VAT). That is a price of combined services of **€1.59/m³**.

4.3.2 *Operation costs*

The amount of rainwater to be discharged into the centralized sewage system is calculated using the formula included in the Latvian building code LBN 223-15 "Sewer constructions": Rainwater drainage systems are managed by the Riga City Council Traffic Department. In the event of a change in the drainage system of the property, the owner must request a new survey of the installation, on the basis of which the amount of rainwater will be recalculated according to the actual situation, a request must be submitted to SIA "Rīgas ūdes" regarding the changes made.

$W_{gada} = 10 \times H_{gada} \times F \times \Psi \times 0.7$, where:

W_{gada} - annual amount of rain and thaw water;

H_{gada} – Average precipitation level of 671 mm according to regulation no. 432 "Latvian Building Code Rules LBN 003-19 "Building Climatology"*;

Ψ – drainage coefficient corresponding to a certain type of surface coating, according to the Latvian building code LBN 223-15 "Sewer constructions";

F - runoff area of a certain type of cover of the total area of the territory (ha); 0.7 – additional coefficient of drainage, taking into account snow removal and partial snow removal, as well as other losses when calculating the total annual volume.

* Cabinet of Ministers 21.09.2019 regulation n. 432 "Latvian Building Code Rules LBN 003-19 "Building Climatology"". (Udens, Storm Water Drainage, 2022)

The tariff for the evacuation and treatment of rainwater is the same as for wastewater.

4.4 Calculation and approval of tariffs

The tariffs for water management services are calculated by the public service provider in accordance with the decision of the Regulatory Council No. 1/2 ["Methodology for calculating tariffs for water management services"](#).

If the capital remuneration is included in the costs of the water management service tariff project, the capital remuneration rate is calculated in accordance with the decision of the Regulatory Board No. 1/23 "[Methodology for calculating the rate of return on capital](#)".

Tariffs must be determined in such a way that the tariff payments made by users cover the economically justified costs of public services and ensure the profitability of public services.

Within 10 days of submitting the project to the regulator, the utility provider publishes information about the calculated tariff project in the official publication "Latvijas Vēstnesis" and on its website, if it has one, and also sends them to the municipality concerned for residents' information and by posting it on its website.

The tariffs are approved for an indefinite period, until the utility or the regulator requests the launch of the tariff review procedure.

The PUC approved tariffs for 90% of regulated water companies; other companies apply tariffs or charges approved by municipal regulators.

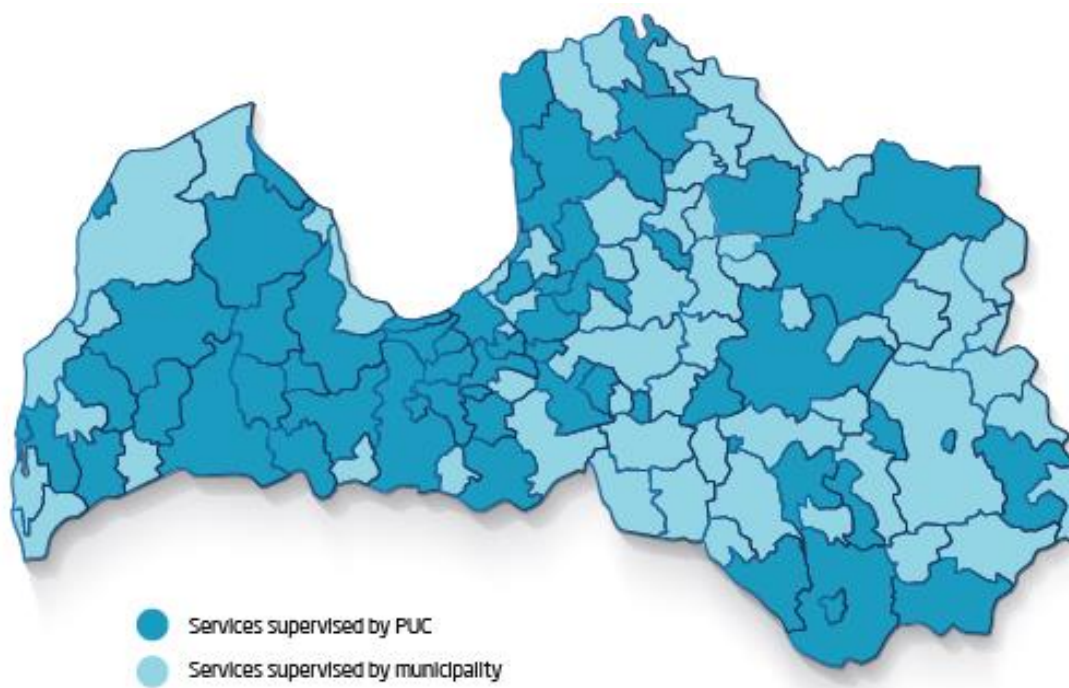


Figure 4: Regulators of tariffs for water management services according to locality. (PUC, 2022)

4.4.1 Investment and operating costs

In Latvia, service providers are required to provide information on their performance annually, including technical information and costs related to the provision of services. The regulator analyzes each year whether the service provider can continue to work with the approved tariff or must submit a new draft tariff proposal.

Most of Latvia's water supply and sewage collection infrastructure was built during the Soviet period, more than 30 years ago. Latvian water utilities overcame assets in disrepair in

the early 1990s and this legacy contributed to frequent leaks, seepage and breaks in supply and distribution infrastructure.

According to information collected in 2015 from the Latvian water utilities in large communities (agglomerations with more than 2,000 population equivalents), the investment needs for the renovation and reconstruction of sewerage systems amount to more than 204 millions of euros. The Ministry of Environmental Protection and Regional Development is currently updating estimates of investment needs.

Foreign investment in Latvia has been very important in developing the water sector. The Nordic Environment Finance Corporation (NEFCO) has notably invested 5 million euros to modernize wastewater treatment plants in Latvia (NEFCO, 2008).

However, investment needs remain high. Municipalities are responsible for providing water services through municipally owned utilities, but they face significant financial constraints. There is a need to find more innovative and sustainable financing approaches in the water sector.

4.4.2 Costs evolution

In general, the costs of water management services in Latvia tend to increase, this is explained by investments in improving equipment: large-scale repairs of water pipes and sewage networks in the streets of Riga, renovation of sections of the supply network... (Udens, 2021), which can be assessed positively. Thus, the quality and availability of the service are improved, the risks of environmental pollution are reduced. This of course requires significant financial resources. Costs are also rising across the country, which also affects the costs of providing water management services, such as average salaries, electricity costs, fuel costs and taxes.

The largest part: 61% of the costs included in the tariff still consists of the operating costs (staff costs, electricity costs, repairs, and material costs) of the regulated companies.

5. ACTIONS TO BE TAKEN

5.1 The renewal of hydraulic infrastructures

Currently, in the most urgent cases, water companies repair faulty parts of the systems using revenue from tariffs, however, these revenues alone cannot ensure qualitative and sustainable operation of the systems in the long term.

In addition, Latvia is facing a strong demographic decline, having had the highest population loss in Europe since 1990. The country's population fell from 2.2 million in 2000 to 2 million in 2011. According to a government forecast, the Latvian population could fall to 1.6 million in 2030. The main cause of this decrease is a strong emigration of young Latvians. In fact, about 80% of emigrants are under 35, resulting in a more rapid aging of the local population.

Also, affordability is an issue in rural areas. However, it affects a relatively limited number of inhabitants, 7% of households in the poorest quintile (about 30,000 inhabitants) devote more than 3% of their total expenditure to water and sanitation services. On average, for the poorest 10% of households, expenditure on water and sanitation represents about 2.1% of their income (OIEau, 2020). The small proportion of the population concerned leaves room for tariff increases likely to partly finance the renewal of infrastructure.

5.2 Avenues for a possible change in water pricing

Like the vast majority of countries in Europe, Latvia has an aging infrastructure which represents one of the main challenges for the country in order to comply with the DERU. The change in the current tariff is thus partly linked to the renovation and operation of water management infrastructure, in particular with the increase in the cost of depreciation and maintenance of fixed assets. (udens, 2021)

Latvia needs to focus its efforts on different points:

- Identify sources of financing and complement EU funds with national public and private investments to modernize wastewater treatment and water supply infrastructure and thus comply with the new drinking water directive and the DERU and facilitate the implementation of WFD objectives;
- Also improve small-scale water supply systems (eg wells) to extend access to good quality drinking water with currently a tendency to improve health monitoring (by controlling suppliers, etc.);

Moreover, with the demographic decline (mainly due to strong emigration), the country will have to find pragmatic solutions to provide the necessary services at the right price: choices will have to be made for maintaining, extending or abandoning drinking water and sanitation networks: better sanitary control of wells used for drinking water and individual sanitation systems, etc.

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6. POSSIBLE ACTIONS FOR LIMOGES MÉTROPOLE

The Latvian pricing system is similar to the French system: a service tariff comprising a fixed part as well as a variable (volumetric) part.

The country has initiated a dynamic of renewal of these facilities and equipment for water services which leads, with the increase in gas and electricity supply costs, to an increase in tariffs.

Also, Latvia has the particularity of obtaining drinking water readings from user declarations (obligation agreed from contracts). This system allows monthly monitoring of the quantity of water consumed for each dwelling (or group for buildings).

The measurement of the quantity of water consumed each month, with the contribution of the users, can be a track for a more in-depth monitoring of Limoges (the current readings being once or twice a year currently). This is in order to identify consumption trends (by type of accommodation, by seasonality, etc.) and potentially change its pricing system accordingly.

The transfer of information relating to connector statements can be envisaged with the development of an application allowing a quick and simplified transfer of these to suppliers.