

# **Template for summary reports in accordance with article 7 of the Protocol on Water and Health**

## **Executive summary**

*Please provide an overall evaluation of the progress achieved in implementing the Protocol in your country during the reporting period. Please provide a short description of the main steps taken and highlight important achievements, key challenges, success factors and concrete good practice examples.*

*Suggested length: maximum 2 pages*

## **Background**

Estonia ratified the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes on 9th September 2003. Starting that date Estonia has been guided by the Protocol. Estonia is a member of the European Union and must implement the EU policy. The aim and idea of the Protocol coincide a lot with the policy in the EU. Therefore most of our targets are based on EU relevant targets.

## **Drinking water**

Estonia transposed Commission Directive (EU) 2015/1787 of 6 October 2015 amending Annexes II and III to Council Directive 98/83/EC on the quality of water intended for human consumption which regulates the risk based approach concerning drinking water quality. It gave an option for Estonian water works to choose between regular monitoring of substances in DW or develop monitoring plan based on risk assessment. It gave our water suppliers a chance to optimize the sampling frequency and sampled parameters based on risk assessment and therefore focus resources on most critical points of the DW chain. In that process, Estonia gathered all the data of the ground water bodies and developed a estimation about substances occurrence in DW. Nevertheless, monitoring is expensive especially for small water suppliers and risk assessment approach at the moment is not widely used by water suppliers.

Since 16.12.2020 the DIRECTIVE (EU) 2020/2184 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the quality of water intended for human consumption (recast) entered in to force. Estonia is actively working on transposition this directive into our legislation.

In 2021 the new National Public Health Plan 2020-2030 developed by the Ministry of Social Affairs was adopted. which is a national strategy for public health inter alia environmental health adopted by the Government. In the beginning of that process public consultations were held in the ministry. In addition, local municipalities were visited by the Ministry and the plan was introduced and discussed in the local communities. There are different targets in the plan, from which the 7th is called "health supporting environment" and there is a solution 7.2.1 set for called "Reducing the health risks related to water". There are several priorities set under that solution, e.g: 1) Modernization of water status monitoring and making comprehensible information available to the consumer based on the results, 2) Increasing access to safe drinking water and updating risk assessment principles, and others.

Estonia has made an overview of water quality of individual water works (private wells), that are not under state surveillance and searched opportunities for them to connect to the public water supply or implement other measures for safe drinking water. Estonia made also guidelines for private well owners.

One of our target is increasing of the total number of persons who are supplied with safe drinking water (coming from the public water supply system) with target indicator percentage (%) of population supplied with drinking water conforming to requirements. In order to increase the total percentage of population who has access to safe and monitored drinking water, a lot of remedies have been implemented and investments have been made, including money from the state budget, EU funds, as well as drinking water producers themselves. The results are obvious – percentage of population supplied with drinking water by public drinking water supply conforming to requirements in 2020 was 99,15% and in 2021 98,76%.

### **Sanitation**

One of our target is ensuring appropriate sewage collection and treatment for all the residents with target indicator percentage (%) of population connected with public sewerage system or have appropriate own system. Percentage of people connected with public sewerage system risen to 83% in 2020 and 97% of the population is connected to the public sewerage system in agglomeration areas more than 2000 pe. 100% of WWTPs (*waste water treatment plant*) are in conformity with the UWWTD (*Urban Waste Water Treatment Directive*) requirements in the agglomeration areas more than 2000 pe. And even more, WWTPs fulfil the HELCOM convention requirements, which has much higher treatment standards than is set in UWWTD. New wastewater treatment plants have been built and existing ones have been reconstructed. Huge investments have been done to sanitation systems and therefore, all Estonian cities are covered with public sewerage systems and urban wastewater treatment plants. In future, more attention should be paid to sanitation systems in rural areas.

Since 2018 Ministry of the Environment launched a new measure to financing households for connecting to public water and sewerage system in agglomerations over 2000 pe, which turned out to be very popular. In 2018 – 2020 further investments were made.

### **Bathing water**

Most bathing waters have been classified as excellent or good.

### **COVID-19**

Government has developed a COVID-19 preparedness and response plan and Health Board also developed different guidelines for health care facilities, nursing homes and other premises: <https://www.terviseamet.ee/et/COVID-19-trukised>

Guidelines covered the following topics:

- Hand hygiene behaviour change
- Hand hygiene facilities in health care facilities
- Hand hygiene facilities in public places (i.e. markets, transportation hubs)

Among other had been developed guideline for water producers and spas.

“Preparedness of drinking water operators for a coronavirus pandemic and measures to control the situation”

[https://www.terviseamet.ee/sites/default/files/Nakkushaigused/Juhendid/COVID-19/ta\\_juhend\\_eesti\\_veekaitlejatele\\_24.03.2020.pdf](https://www.terviseamet.ee/sites/default/files/Nakkushaigused/Juhendid/COVID-19/ta_juhend_eesti_veekaitlejatele_24.03.2020.pdf)

„COVID-19 behavioral recommendations for spas and water parks“

[https://www.terviseamet.ee/sites/default/files/Nakkushaigused/Juhendid/COVID-19/kaitumissoovitused\\_spaadele\\_ja\\_veekeskustele\\_04.04.22.pdf](https://www.terviseamet.ee/sites/default/files/Nakkushaigused/Juhendid/COVID-19/kaitumissoovitused_spaadele_ja_veekeskustele_04.04.22.pdf)

Additionally to different kinds of guidelines there was remarkable increase of the assortment of biocides as well which have been approved by Health Board.

In public facilities hand decinfication possibilities was provided almost everywhere.

## Part one

### General aspects

1. Were targets and target dates established in your country in accordance with article 6 of the Protocol?

*Please provide detailed information on the target areas in part two.*

YES  NO  IN PROGRESS

*If targets have been revised, please indicate the date of adoption and list the revised target areas. Please provide detailed information in part two.*

In 2016 Estonia set three targets - those targets have not changed:

1. Increasing percentage of population supplied with drinking water conforming to requirements.
2. There are no outbreaks of diseases due to drinking water.
3. Ensuring appropriate sewage collection and treatment for all the residents.

2. Were targets and target dates published and, if so, how?

Targets were developed and published together with the following strategic documents:

- The National Health Plan 2020 – 2030 adopted by The Government of Estonia in 2021. This document is available to the public through following webpage of Ministry of Social Affairs: <https://www.sm.ee/et/rahvastiku-tervise-arengukava-2020-2030>
  - Besides other topics the topic 7.1.2 “REDUCTION OF RISKS RELATED TO WATER” is covered in the document. It has following overall targets:
    - Modernization of the water monitoring and from the received results making the information clear and easily available for the consumers.
    - Development of methodology for assessing the health risks of radionuclides in drinking water and improvement and implementation of the necessary evaluation skills.
    - Increasing access to safe drinking water and updating the principles of risk assessment.
- Estonian Environmental Strategy 2030 (<https://www.envir.ee/en/news-goals-activities/strategy-and-development>),
- In preparation: River Basin Water Management Plans for 2022-2027 (<https://envir.ee/veemajanduskavad-2022-2027-eelnou>).

*Please explain whether the targets and target dates were published, made available to the public (e.g., online, official publication, media) and communicated to the secretariat.*

3. Has your country established national or local arrangements for coordination between competent authorities for setting targets? If so please describe, including information on which public authority(ies) took the leadership and coordinating role, which public authorities were involved and how coordination was ensured.

Estonia has established arrangements for coordination for setting targets. In Estonia the responsibility for implementing Protocol on Water and Health is divided between the Ministry of the Environment and the Ministry of Social Affairs.

Under the authority of the Ministry of the Environment falls the responsibility for assuring and preserving the quality of the water as a resource (both groundwater and surface water), which is to be used as a source of drinking water. The Ministry of the Environment is responsible for the following government functions: protection of the national environment and of nature; maintenance of the land and spatial databases; natural resources including estimation of their quantities and regulation of their use, recycling, and protection; radiation safety; surveillance over the environment; organisation of meteorological, geological, cartographic, geodesic surveys and ecological/marine research; maintenance of the land and water cadastres; and drafting of legislation regarding these areas. In other words, the responsibility of the Ministry of the Environment is to organise and coordinate environmental policy.

Under the authority of the Ministry of Social Affairs falls the responsibility for protecting the health of the population and coordinating activities in this area. The Ministry drafts legislation aimed at assuring a healthful human environment, as well as strategies and policies to advance the same. The Health Board is a subsidiary agency of the Ministry of Social Affairs which is responsible for surveillance of drinking water and bathing water quality.

Despite the fact that there is no official coordination body for Protocol implementation, including target setting, co-operation between involved ministries and other competent authorities and stakeholders work well.

4. Was a programme of measures or action plan developed to support implementation of the targets? If so, please briefly describe that programme or plan, including how financial implications were taken into account.

Targets have been included in several national strategies and programmes: National Health Plan 2020 – 2030, Estonian Environmental Strategy 2030, River Basin Water Management Plans 2022 – 2027, Oil shale Development plan 2016 – 2030, Radiation Protection National Strategy 2018 – 2027.

Securing the population with safe and healthy drinking water is one of the priorities in the field of environmental health. For the implementation of The National Health Plan 2020-2030 there have been developed different programs. Among other programs is the “Environmental Health Program”. The objective of that program is following:

- The living environment of all Estonian residents has become more supportive of health, and information on possible health risks arising from the environment and ways to reduce them is readily available in a timely manner.

The program focuses on promoting environmental health and the program is funded from the state budget. The programme includes several water related targets, that are constantly being monitored:

- The percentage of the population provided with water from central water supply network that is conforming to all requirements: 98,76% (2021)
- Bathing water quality (percentage of bathing water that is classified as “excellent” or “good” according to the Bathing water Directive requirements): 87% (2021)
- The share of pools with quality water is increasing: 79% (2021)

River Basin Management Plans was developed to provide a thorough overview of the status of Estonian waterbodies and to plan activities to improve the status of rivers, lakes and coastal waters and the sea. The plan is drawn up for each river basin district for six years and then updated. Previous River Basin Management Plans had been prepared for the period 2015-2021. Concrete actions were set in Programmes of Measures under the River Basin Management Plans. The guidelines and restrictions in the River Basin Management Plans and the Programme of Measures must be taken into account in the elaboration of planning and development plans and in the granting of environmental permits. Actions were financed from the state budget, the local governments, the European Union and the private sector. Elaborating River Basin Management Plans is a public process, Environmental Board coordinates involvement of public and other stakeholders. New River Basin Management Plans 2022 – 2027 are under development.

In Estonia there is the Foundation Environmental Investments Centre under the Ministry of the Environment. It is a financial institution, mediating state budget funds (revenues from environmental charges), EU funds, funds from foreign aid programmes and the Green Investment Scheme, and granting loans for the implementation of environmental projects. For example, water companies and local governments can apply for support from there for projects to meet the drinking water and wastewater related requirements.

5. What has been done in your country to ensure public participation in the process of target setting in accordance with article 6, paragraph 2, and how was the outcome of public participation taken into account in the final targets set?

Processes of developing and implementing Estonian Environmental Strategy, River Basin Water Management Plans and National Health Plan (and process of their development) have been public and therefore public participation was made available. Several targets are set as legal requirements in legal acts. Preparing legal act is a public process where stakeholders are involved.

Ministry of the Environment has worked out the first draft of Water Management Plans for the period 2022 – 2027. All the relevant stakeholders, also NGOs and other bodies who represent the people are invited and participated in the discussion. All information is available for public. Public participation is coordinated by Environmental Board.

Ministry of Social Affairs has adopted in 2021 the new National Health Plan 2020 – 2030. In the beginning of that process public consultations were held in the ministry. All the relevant stakeholders, also NGOs and other bodies who represent the people were invited and participated in the discussion. Also local municipalities were visited by the Ministry and the plan was introduced and discussed in the local communities.

6. Please provide information on the process by which this report has been prepared, including information on which public authorities had the main responsibilities and what other stakeholders were involved.

According to the responsibilities mentioned above under point 3, overview of drinking and bathing water quality, water related diseases and outbreaks was prepared by the Ministry of Social Affairs and Health Board. Remaining parts were prepared by the Ministry of the Environment. The Estonian Waterworks Association was also involved.

7. Please report any particular circumstances that are relevant for understanding the report, including whether there is a federal and/or decentralized decision-making structure.

There are not any federal decentralized structures in Estonia.

## Part two

### Targets and target dates set and assessment of progress

*For countries that have set or revised targets and target dates, please provide information specifically related to the progress towards achieving them. If you have not set targets in a certain area, please explain why.*

*For countries in the process of setting targets, please provide information on baseline conditions and/or targets considered under the relevant target areas.*

*Suggested length: one page (330 words) per target area.*

#### I. Quality of the drinking water supplied (art. 6, para. 2 (a))

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

- Target: The percentage of the population provided with water from central water supply network that is conforming to all requirements

At the end of year 2021, 86,7% of the total national population was connected to the water supplies, of whom 98,76% used water for which no microbiological, chemical and indicator values were not exceeded (except radiological indicators).

In the last 6 years this numbers have remained more or less stable between 98 – 99 %.

| Percentage of population supplied with drinking water conforming to requirements | Baseline 2006 | 2019   | 2020   | 2021   |
|--|---------------|--------|--------|--------|
|  | 73%           | 98,05% | 99,15% | 98,76% |

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

Drinking water related legislation in Estonia is intended to support the development and implementation of risk management strategies that will ensure the safety of drinking water supplies through the control of hazardous constituents of water.

Since Estonia is a member of the EU, the water quality must be in compliance with the Directive 98/83/EC. The Directive laid down the essential quality standards at EU level. A total of 48 microbiological, chemical and indicator parameters must be monitored and tested regularly. In general, WHO guidelines for drinking water and the opinion of the Commission's Scientific Advisory Committee are used as the scientific basis of the quality standards in the drinking water.

Requirements of Council Directive 98/83/EC of 3 November 1998 concerning quality of water intended for human consumption and WHO recommendations are transposed into the following Estonian legislation:

-Water Act (22 February 2019) adopted by the Estonian Government

-Regulation 61 (24 September 2019) of the Minister of Social Affairs: "Quality and control requirements for drinking water and methods for testing"

-Regulation 53 (8 October 2019) of the Minister of Social Affairs: "Areas of sampling to be assessed, requirements for the sampler, study program, procedure for assessment, form of assessment certificate and rules of procedure of the assessment committee"

-Regulation 6 (16 January 2020) of the Minister of the Environment: "Specified data composition of the water use report and procedure for submission of the report"

Estonia has implemented EU Directive 98/83/EC which sets limit values for different parameters.

Since 16.12.2020 the DIRECTIVE (EU) 2020/2184 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the quality of water intended for human consumption (recast) entered in to force. Estonia is actively working on transposition this directive into our legislation.

In order to increase the total percentage of population who has access to safe and monitored drinking water, a lot of remedies have been implemented and investments have been made, including money from the state budget, EU funds, as well as drinking water producers themselves.

Estonia has made significant investments to comply with drinking water and wastewater directives since 2004. Approximately 1,7 billion euros have been invested using EU funds, Estonian Environmental Investment Centre aid and water companies and municipalities own contribution. What's important to highlight is that close to 50% of the environmental funds money that have been available in Estonia, have been used to build and upgrade our water infrastructure. This has been possible as we have taken the achievement of compliance with drinking water and wastewater directives very seriously and this has been the priority of our government in the environmental sector since the accession to EU.

The results are obvious – pollution load have been decreased significantly, at the same time the amount of wastewater is relatively constant during this period.

However, achieving these goals has been very challenging as Estonia is very sparsely populated country. This results in very high investment and maintenance cost per capita.

Estonia has several future challenges related to sustainability and affordability issues in this sector. Water utilities efficiency must be raised through consolidation of smaller water companies to regional ones.

In 2004 Ministry of the Environment of Estonia took the initiative and restructured smaller water companies to regional companies, which serve several municipalities together, altogether 40% of the municipalities are operated by regional water companies. Regional water companies ensure better service quality and lower price of water, ensure efficient management and higher competence of water service. But not all water companies have yet joined into regional companies. Today we are convinced that regional water companies are the right solution for us to ensure sustainable water service in long term. Since the beginning of 2022 the Ministry of the Environment has changed the application rules for water companies for investments. The investment funds are applicable only for regional water companies.

To help the municipalities to tackle the environmental goals in water management, Ministry of the Environment has prepared guidelines for the municipalities how to regulate the supervision of the individual sewerage systems. Since 2018 Ministry of the Environment launched a measure to financing households for connecting to public water and sewerage system in agglomerations over 2000 pe, which turned out to be very popular.

The Estonian Water Works Association (EVEL) was founded in 1995 by 11 water companies. EVEL is a nationwide voluntary association of water companies providing the service of public water supply and sewerage and other business operators related to this area

of activity. EVEL comprises 45 water companies and 30 companies related to the field of water management. For its members EVEL is organizing information sharing, training programs and workshops related to the watersector's legislation and technical development.

Since 2017, EVEL in cooperation with the Järvamaa Vocational Education Center (JKHK) organizing workplace-based study program “Water Management Operator, Level 5”. The curriculum concerns the training of both drinking water and sewage treatment plant operators. After 2 years of study, the professional examination will take place and after successful completion of the exam the student will be awarded with the certificate of professional qualification “Water Management Operator, Level 5”.

The digitalisation of existing assets is an important area for making the water business sector effective. To this end, EVEL has launched a GIS project aimed at making better management decisions based on digital data.

Since year 2017 EVEL has been a partner in 5 Baltic Sea region Interreg projects (co-funded by the European Union). The topics of the project: sewage sludge management, industrial sewage water treatment, pharmaceuticals and stormwater solutions. Information about the project results is available in EVEL's webpage: <https://evel.ee/projektid/noah-jaanuar-2019-detsember-2021/>. A lot of information about best practices have been brought to EVEL's members through seminars and workshops.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Access to safe drinking water and sanitation is essential to health and environment, a basic human right and a component of effective policy for health protection. In 2006, 73% of the population in Estonia was supplied with drinking water that conformed with requirements. Today, we have reached approximately the level of 99%.

Still has remained one problem which is the plentiness of small water suppliers and the issues concerning their sustainability and water quality.

The fulfillment of the targets is influenced in some cases by the availability of funds (eg., the percentage of the population provided with water from central water supply network).

The results of the investments to the water infrastructure sector are obvious – pollution load have been decreased significantly, higher connection rates to drinking water and sewerage systems, conformity with environmental and health norms.

With the investments 83% of the population is connected to the public sewerage system. And 96% of the population is connected to the public sewerage system in agglomeration areas more than 2000 pe.

100% of WWTPs are in conformity with the UWWTD requirements in the agglomeration areas more than 2000 pe. And even more, WWTPs fulfill the HELCOM convention requirements, which has much higher treatment standards than is set in UWWTD.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The global indicator selected by UN Member States for monitoring SDG target 6.1 is **‘proportion of population using safely managed drinking water services’**.

One of the main aims for DW in the adopted National Health Plan till 2030 is to increase the percentage of population connected to the public water supply of which water is safe to drink. This target is inline with SDG 6.1 and 6.3.

At the end of year 2021, 86,7% of the total national population was connected to the water supplies. These are supplies that are under the Health Board supervision. Remained



population use not piped source drinking water (boreholes, wells). In 2019 was conducted large scale survey of individual drinking water wells (over 1000 wells over the country). Upon received data there were developed guidelines for individual drinking water wells users. (<https://envir.ee/keskkonnakasutus/vesi/uuringud-ja-aruanded#item-3>  
<https://envir.ee/media/4056/download>)

The overall aim is to connect them to the public water supply if possible or implement other remedies for water safety. These activities are in line with SDG 6.1.

5. If you have not set a target in this area, please explain why.

## **II. Reduction of the scale of outbreaks and incidents of water-related disease (art. 6, para. 2 (b))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

Target: There are no outbreaks of diseases due to drinking water. Target date: **2022**

Base value (2010): 0

Current value (2021): 0

Target is set on national level in National Health Plan 2020 – 2030 implementation program on Environmental Health in accordance with Council Directive 98/83/EC which determines that: quality of water intended for human consumption, Member States shall take the measures necessary to ensure that water intended for human consumption is wholesome and clean. For the purposes of the minimum requirements of this Directive, water intended for human consumption shall be wholesome and clean if it:

(a) is free from any micro-organisms and parasites and from any substances which, in numbers or concentrations, constitute a potential danger to human health, and

(b) meets the minimum requirements set out in directive Annex I, Parts A and B;

Due to implementation of improved methods and surveillance monitoring, there have been no outbreaks associated with drinking water during the past 29 years.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

Estonia has adopted Council Directive 98/83/EC and with surveillance monitoring performed by the Health Board and additional monitoring done by the water producers to have good overview of water quality in public water supplies. Operators of water supplies that do not meet the requirements for water quality are obliged to improve the water quality. There are no drinking water supply systems in Estonia which constantly fail to meet the requirements of microbiological parameters. Temporary deviations from required microbiological parameters have been noted in less than 0,006% of water works under surveillance.

Since 16.12.2020 the DIRECTIVE (EU) 2020/2184 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the quality of water intended for human consumption (recast) entered in to force. Estonia is actively working on transposition this directive into our legislation. The new directive has requirements for risk assessment and risk management of the catchment areas for abstraction points of water intended for human consumption, for risk

assessment and management of the supply system, risk assessment of domestic distribution systems.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

In period of 2019 – 2021 there were no water-related outbreaks. No outbreaks due to drinking water from water works have been registered for 29 years.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

These targets are in line with SDG 6.1, 6.2 and 6.3. Requirements also help to achieve SDG 3.2.

5. If you have not set a target in this area, please explain why.

### **III. Access to drinking water (art. 6, para. 2 (c))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

Target: Increasing percentage of national population connected to the water supplies

Base value (2006): 73%

Current value (2021): 86,7%

Target value (2022): 91%

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

Estonia has implemented EU Directive 98/83/EC which sets limit values for different parameters. In order to increase the total percentage of population who has access to safe and monitored drinking water, a lot of remedies have been implemented and investments have been made, including resources from the state budget, EU funds, as well as drinking water producers and local governments.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

According to the WHO, access to safe drinking-water is essential to health, a basic human right and a component of effective policy for health protection. In 2006, 73% of the population in Estonia was connected to the water supplies. Today, we have reached the level of 86,7% .

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

It is in line with SDG 1.4, 3.2, 3.8, 4.a and 6.1, 9.1 and 11.1.

5. If you have not set a target in this area, please explain why.

#### **IV. Access to sanitation (art. 6, para. 2 (d))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

Target: Ensuring appropriate sewage collection and treatment for all the residents.

Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities. The maintenance of hygienic conditions, through services such as wastewater disposal helps to protect public health and prevent diseases. According to WHO, management and investments in improvements on sanitation systems should be made based on adequate understanding of the actual health risks posed by the systems and how these risks might best be controlled. As waste water is the main source of point pollution to water bodies being therefore also environmental concern, it is essential to implement appropriate waste water collection and treatment requirements all over Estonia.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5 of the Protocol).

Estonia must ensure waste water treatment according to Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment and HELCOM recommendations.

The Ministry of the Environment is responsible for implementation of the directive and HELCOM recommendations for waste water treatment.

Requirements of Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment and HELCOM recommendations are transposed into Estonian legislation. Requirements are set in Water Act and also in Government and ministerial regulations issued under the Water Act. Sanitation issues are regulated by:

-Water Act

-Public Water Supply and Sewerage Act

-Regulation No. 61 (8.11.2019) of the of the Minister of the Environment of Estonia “Requirements for Waste Water Treatment and Discharge of Sewage, Precipitation, Mining, Quarrying and Cooling Water, Conformity Assessment Measures and Pollutant Limit Values”.

-Regulation No 29 (31.07.2019) of the Minister of the Environment “Limit values and requirements for the use of sewage sludge for landscaping, reclamation and agriculture”.

-Regulation No 24 (19.07.2017) of the Minister of the Environment “Requirements for the manufacture of sewage sludge products”.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

A lot of investments have made into sanitation systems and therefore, all Estonian cities are covered with public sewerage systems and urban wastewater treatment plants. In future, more attention should be paid to sanitation systems in rural areas.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Inadequate sanitation is a major cause for water bodies pollution being therefore high environmental concern. Inadequate sanitation is also major cause of diseases world-wide and

improving sanitation is known to have a significant beneficial impact both on environment and on health. The maintenance of hygienic conditions, through services such as wastewater disposal helps to protect environment and public health. Therefore it is fulfilling SDG 6.2 and 6.3 and also 3.2, 3.3, 3.8 and 3.9. Also SDG 1.4, ensure access to basic sanitation, is fulfilled. Activities concerning access to sanitation also helps to achieve SDG 4.a, 5.1, 9.1 and 11.1.

5. If you have not set a target in this area, please explain why.

## **V. Levels of performance of collective systems and other systems for water supply (art. 6, para. 2 (e))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5 of the Protocol).

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

5. If you have not set a target in this area, please explain why.

In Estonian legal system, collective systems are considered as water supply zones and therefore have to meet all the drinking water requirements on same basis as 6.2.(a).

## **VI. Levels of performance of collective systems and other systems for sanitation (art. 6, para. 2 (e))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

5. If you have not set a target in this area, please explain why.

Sewage collecting systems requirements and targets are covered with 6.2.(d). All Estonian sanitation systems must have also sewage collecting systems due to requirement that all generated waste water must be treated before discharging.

## **VII. Application of recognized good practices to the management of water supply (art. 6, para. 2 (f))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

Estonian Environmental Research Centre has conducted a research “Study on drinking water quality and systems in sparsely populated areas”

(Link to the survey: <https://envir.ee/media/4050/download>; Link to the guide:<https://envir.ee/media/4056/download>)

Additionally Health Board has prepared the guidelines for private well owners (Link to the guideline: <https://www.terviseamet.ee/et/valkonnad/keskkonnatervis/vesi/kaevuvesi>).

According to the regulation No. 61 (24 September 2019) of the Minister of Social Affairs: "Quality and control requirements for drinking water and methods for testing" paragraph 1 section 3 Health Board local regional services must advise private well owners concerning water quality.

## **VIII. Application of recognized good practice to the management of sanitation (art. 6, para. 2 (f))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenge.
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

Sanitation management is covered with 6.2.(d). All Estonian sanitation systems must have sewage collecting systems and all generated waste water must be treated before discharging according to the set quality standards.

## **IX. Occurrence of discharges of untreated wastewater (art. 6, para. 2 (g) (i))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

According to Water Act, discharging of untreated wastewater is prohibited. Detailed requirements for wastewater treatment are set in the regulation No. 61 (8.11.2019) of the Minister of the Environment “Requirements for Waste Water Treatment and Discharge of Sewage, Precipitation, Mining, Quarrying and Cooling Water, Conformity Assessment Measures and Pollutant Limit Values”. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

2. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Detailed requirement for wastewater treatment are set in regulation No. 61 (8.11.2019) of the Minister of the Environment “Requirements for Waste Water Treatment and Discharge of Sewage, Precipitation, Mining, Quarrying and Cooling Water, Conformity Assessment Measures and Pollutant Limit Values”. Wastewater shall be treated before discharging into a recipient up to the limits or treatment levels established by the regulation, on the spot, or transported or discharged into a wastewater treatment plant. According to Water Act a permit for the special use of water is necessary if effluent or other pollutants are discharged into a recipient. Permit for the special use of water is issued and inspected by the Environmental Board.

While discharging treated effluent and pollutants into a water body where the status class of its body of surface body is moderate, poor or bad, or where there is a risk of deterioration of the status class of the body of surface water, the issuer of the permit may reduce the emissions allowed for treated effluent and pollutants in the water permit or integrated permit, or establish more stringent limit values for pollutant concentrations than the limit values.

If the emissions of treated effluent and pollutants planned or determined by the water permit or integrated permit exceed the allowed annual combined emissions of pollutants established by the programme of measures of a river basin management plan for a water body or body of water, the issuer of the permit may reduce the emissions allowed for treated effluent and pollutants in all the water permits or integrated permits granted for the discharge of treated effluent or pollutants into that water body pro rata to the amount exceeding such emissions.

3. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Permit for the special use of water for wastewater discharge is issued by the Environmental Board. Concrete conditions for wastewater treatment and discharge are set in this permit for the special use of water. Inspection over the fulfilment of conditions set in permit are made by the the Environmental Board.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Requirements for wastewater treatment are in line with SDG indicator 6.3 and 6.6 by helping to improve water quality by reducing pollution and minimizing release of

hazardous chemicals and materials and halving the proportion of untreated wastewater and to protect and restore water-related ecosystems. Also requirements for wastewater treatment help to achieve SDG 3.3, 3.9, 11.b, 12.4.

5. If you have not set a target in this area, please explain why.

## **X. Occurrence of discharges of untreated storm water overflows from wastewater collection systems (art. 6, para. 2 (g) (ii))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

According to regulation No 61 (8.11.2019) of the Minister of the Environment "Requirements for Waste Water Treatment and Discharge of Sewage, Precipitation, Mining, Quarrying and Cooling Water, Conformity Assessment Measures and Pollutant Limit Values" from common sewerage system storm water overflows can be used only if the dilution rate of wastewater and stormwater is 1:4.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

The overflow of the combined sewer must be designed to work only if the effluent discharged contains one part of the wastewater and at least four parts of the rainwater. The ratio of wastewater and storm water flow rates is determined by the design project. Wastewater treatment limit values shall not apply to rainwater and sewage mixtures discharged through the overflow.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Permit for the special use of water for wastewater discharge is issued by the Environmental Board. Concrete conditions for wastewater treatment and discharge are set in this permit for the special use of water. Inspection over the fulfilment of conditions set in permit are made by the Environmental Board.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Requirements are in line with SDG indicator 6.3 and 6.6 by helping to improve water quality by reducing pollution and minimizing release of hazardous chemicals and materials and halving the proportion of untreated wastewater and to protect and restore water-related ecosystems. Also requirements help to achieve SDG 3.3, 3.9, 11.b, 12.4.

5. If you have not set a target in this area, please explain why.

## **XI. Quality of discharges of wastewater from wastewater treatment installations (art. 6, para. 2 (h))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

According to regulation No. 61 (8.11.2019) of the Minister of the Environment “Requirements for Waste Water Treatment and Discharge of Sewage, Precipitation, Mining, Quarrying and Cooling Water, Conformity Assessment Measures and Pollutant Limit Values” all discharged wastewater must meet the quality standards set in the regulation.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

Detailed requirement for wastewater treatment are set in regulation No. 61 (8.11.2019) of the Minister of the Environment “Requirements for Waste Water Treatment and Discharge of Sewage, Precipitation, Mining, Quarrying and Cooling Water, Conformity Assessment Measures and Pollutant Limit Values”. Wastewater shall be treated before discharging into a recipient up to the limits or treatment levels established by the regulation, on the spot, or transported or discharged into a wastewater treatment plant. According to the Water Act a permit for the special use of water is necessary if effluent or other pollutants are discharged into a recipient. Permit for the special use of water is issued by the Environmental Board and meeting the permit requirements are inspected by the Environmental Inspectorate. When discharging effluent into a recipient whose status class is poor or bad, the issuing authority of permits for the special use of water may impose requirements that are up to 30 percent more stringent than those established by the regulation on effluent discharged to the recipient. When discharging effluent into a recipient whose quality indicators deteriorate due to discharging effluent to the recipient and there is a threat that the status class of the water body will deteriorate, the issuing authority of permits for the special use of water may impose requirements that are up to 15 percent more stringent than those established by the regulation.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Permit for the special use of water for wastewater discharge is issued by the Environmental Board. Concrete conditions for wastewater treatment and discharge are set in this permit for the special use of water. Inspection over the fulfilment of conditions set in permit are made by the Environmental Board.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Requirements for wastewater treatment are in line with SDG indicator 6.3 and 6.6 by helping to improve water quality by reducing pollution and minimizing release of hazardous chemicals and materials and halving the proportion of untreated wastewater and to protect and restore water-related ecosystems. Wastewater treatment requirements also help to achieve SDG 3.3, 3.9, 12.4

5. If you have not set a target in this area, please explain why.

## **XII. Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations (art. 6, para. 2 (i))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

Sewage sludge reuse and disposal are regulated by the Waste Act and regulation No 29 (31.07.2019) of the Minister of the Environment “Limit values and requirements for the use of sewage sludge for landscaping, reclamation and agriculture”.



2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

Detailed requirements for sewage sludge reuse and disposal are set in regulation No 29 (31.07.2019) of the Minister of the Environment “Limit values and requirements for the use of sewage sludge for landscaping, reclamation and agriculture”. The regulation regulates the use of sewage sludge in agriculture, landscaping and recultivation to avoid its adverse effects on surface and groundwater, soil, plants, animal and human health. Regulation set limitations on using sewage sludge in agriculture, landscaping and recultivation in the sense of heavy metals and hazardous substances concentrations in sewage sludge. Also there are restrictions to use sewage sludge in the areas where in the soil heavy metals are over set concentrations or where the pH is low or when there is a risk for flooding or erosion.

Taking into account accumulative properties of heavy metals there are also set limits for amounts of heavy metals that are carried to soil in 10 years perspective. Only stabilized or stabilized and hygienic sediments may be used for landscaping, re-cultivation and farming of short rotation coppice. The stabilized sediment deposited on the ground must be brought into the soil or covered with soil within two days after the start of application. It is forbidden to use sediment on land where vegetable or berry crops and herbs are grown.

The land on which the sewage sludge is laid shall not be used for the production of vegetable crops or herbs for food or feed within one year of application and grazing animals or stocking animals within two months of laying. Regulation foresees also several requirements for the user of sewage sludge.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Requirements are set since 2003, last update in 2019. Meeting the requirements are inspected by the Environmental Board.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Requirements are in line with SDG indicator 6.3 and 6.6 by helping to improve water quality by reducing pollution and minimizing release of hazardous chemicals and materials and halving the proportion of untreated wastewater and to protect and restore water-related ecosystems. Requirements also help to achieve SDG 3.3, 3.9, 12.4 and 15.1

5. If you have not set a target in this area, please explain why.

### **XIII. Quality of wastewater used for irrigation purposes (art. 6, para. 2 (i))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

5. If you have not set a target in this area, please explain why.

Wastewater is not allowed to use for irrigation purposes in Estonia. Treated urban waste water may be discharged to a body of water or into soil, but discharges into the soil are not considered to be irrigation activities. Discharge can take place on the basis of an environmental permit. In the Ministry of the Environment it is decided that in future water reuse must be allowed if it is economically sound and safe for the environment and human health, not only in agriculture but also in other areas. Development of legislation for that purposes is in its early stages, the analyses for the water reuse potential and impact to the environment has been started.

#### **XIV. Quality of waters which are used as sources for drinking water (art. 6, para. 2 (j))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

In Estonia, approximately 60% of public water supply consumers use groundwater and 40% use surface water.

Until October 2019 was valid the Water Act and under it regulation No 1 (2003) of the Minister of Social Affairs "Quality and control requirements for surface water and ground water to be used or potentially used for production of drinking water" where had been established the quality and control requirements for groundwater and surface water used or intended to be used as drinking water. According to that regulation the quality of water sources intended as drinking water needed to meet the requirements of at least third quality class.

Since 2019 is adopted new Water Act and in there are no source water quality requirements separately set. The next Water Act is taking into account Commission Directive (EU) 2015/1787 of 6 October 2015. According to the directive drinking water management is focusing on risk based approach and on the fact that water from tap has to be safe for health there is no need to set special requirements for source water that is used or is intended to be used as drinking water. However there are some requirements for monitoring raw water quality and volume set in the permits for water suppliers. Environmental permits are issued by Environmental Board.

The parameters to be monitored in drinking water shall be based on the result of the risk assessment, informed by the results of monitoring of sources of water intended for human consumption and confirming that human health is protected from the adverse effects of any contamination of water intended for human consumption. Therefore, the risk assessment gives input for some of the parameters to be monitored in drinking water, besides the compulsory parameters.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

Since 16.12.2020 the DIRECTIVE (EU) 2020/2184 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the quality of water intended for human

consumption (recast) entered in to force. Estonia is actively working on transposing this directive into Estonia legislation.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Since 16.12.2020 is valid DIRECTIVE (EU) 2020/2184, where in article nr 8 are set requirements for the risk assessment and risk management of the catchment areas for abstraction points of water intended for human consumption. Member States shall ensure that the risk assessment includes all the necessary elements that are given in the directive.

Currently Estonia is in adoption phase of DIRECTIVE (EU) 2020/2184 and new requirements concerning source for drinking water will be inline with this directive.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Requirements for quality of waters which are used as for a source for drinking water are in line with SDG indicator 3.9 and 6.3. 16.12.2020 Directive (EU) 2020/2184 article nr 8 has to be transposed by 12<sup>th</sup> of January 2023.

5. If you have not set a target in this area, please explain why.

## **XV. Quality of waters used for bathing (art. 6, para. 2 (j))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

Requirements for bathing water are set in the regulation of the Ministry of the Social Affairs No 63 “Requirements for bathing water and bathing places” (03.10.2019). The requirements of Directive 2006/7/EC are transposed in Estonian legislation by the Public Health Act, the Water Act, and regulations implementing them in 2008.

According to the Public Health Act the bathing water must be safe for the health. According to regulation No 63, bathing water shall be deemed to conform to the relevant parameters if the bathing water is classified as “sufficient”, “good” or “excellent”. Also Estonia has set national limits for Escherichia coli and intestinal enterococci in regulation No 63 for assessing every individual bathing water sample. Limit value for Escherichia coli is 1000 cfu/100 ml and for intestinal enterococci is 100 cfu/100ml.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

The requirements of Directive 2006/7/EC are promulgated in Estonian legislation by the Public Health Act, the Water Act, and regulations implementing them in 2008.

Quality and control requirements for bathing water are laid down in the regulation of the Ministry of the Social Affairs No 63 from 3rd October 2019 “Requirements for bathing waters and bathing sites”.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Quality of bathing water has been complied with the requirements in most of the places over the years. From year 2012 (the first year in which bathing water quality could be assessed in accordance with the requirements of the new BW Directive) most of the bathing waters are classified as “excellent” (62-67%) and “good” (16-22%), some are “sufficient” (5-13%) and some years there were 1-3 bathing places which are classified as “poor” (0-7%).

Short-term pollution event occurs usually once or twice during the bathing season in some bathing places.

Bathing water profiles are established and renewed if it is necessary. The water quality management measures are also part of River Basin Management Plans and local development plans. Places where short-term events take place and bathing water quality is “poor” then bathing place owner is trying to identify the causes of the pollutions and reasons of poor water quality. Where possible there have been pollution sources removed or their effects reduced (eg construction and renewal of sewerage routes, stormwater discharges management etc). Bathing place owners collaboration with scientists have also done some studies to identify the causes of the pollutions and reasons of poor water quality.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Bathing water requirements are in line with SDG. Requirements help to achieve SDG 11.7 to provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities and 3.9 to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. Requirements also help to achieve SDG indicator.

5. If you have not set a target in this area, please explain why.

## **XVI. Quality of waters used for aquaculture or for the production or harvesting of shellfish (art. 6, para. 2 (j))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

According to the Water Act permit for special use of water is necessary when cultivating fish with an annual increment of more than one tonne, or if from there wastewater is discharged. But no quality criteria for waters used for aquaculture or for the production or harvesting of shellfish.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

Permit for the special use of water is issued by the Environmental Board. Concrete conditions concerning cultivating aquaculture and discharge are set in this permit for the special use of water. Inspections over the fulfilment of conditions set in permit are made by the Environmental Board.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Regulation is in place since 1 January 2011. Inspections over the fulfilment of conditions set in permit are made by the Environmental Board.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Requirements for waters used for aquaculture are in line with SDG indicator 6.3 and 6.6 by helping to improve water quality by reducing pollution and minimizing release of hazardous chemicals and materials and halving the proportion of untreated wastewater and to protect and restore water-related ecosystems. Requirements also help to achieve SDG 3.3 and 3.9.

5. If you have not set a target in this area, please explain why.

## **XVII. Application of recognized good practice in the management of enclosed waters generally available for bathing (art. 6, para. 2 (k))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

In Estonia there are no enclosed waters (artificially created water bodies separated from surface freshwater or coastal water, whether within or outside a building) generally available for bathing.

The water source for all swimming pools is groundwater or water from drinking water supply. There is 225 swimming pools in Estonia. In Estonia we have a national regulation for swimming pools: Government regulation no 80 from 15 March 2007 “Health protection requirements for swimming-pools, pools and water-centres”. The regulation establishes requirements for the pool water quality, purification and disinfection of pool water and cleaning the pool house.

Bathing place is water body or part of it used for bathing and land along it. Requirements for bathing water are set in the regulation of the Ministry of the Social Affairs No 63 “Requirements for bathing water and bathing places” (03.10.2019). The requirements of Directive 2006/7/EC are transposed in Estonian legislation by the Public Health Act, the Water Act, and regulations implementing them in 2008.

## **XVIII. Identification and remediation of particularly contaminated sites (art. 6, para. 2 (I))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

In order to ensure good groundwater and surface water quality, contaminated sites must be remediated. In Estonia there are more than 340 sites where polluting activities have taken place. In the Environmental Register there is information of 75 particularly contaminated sites with national importance, inventoried sites beyond them are of local importance. There are shown locations on the map and described hazardousness of the contaminated sites to environment and human in the Environmental Register.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

In order to ensure good groundwater and surface water quality there was an investment plan for the years 2009 – 2015 which was approved by the Government of Estonia to remediate contaminated sites. During that period 16 most important contaminated sites were remediated. All these sites are on the list of 75 particularly contaminated sites.

The Ministry of the Environment has been using the finances of the European Cohesion Fund (period 2014 – 2020) for cleaning up former industrial areas. The Ministry implements several projects to remediate the most contaminated watercourses and former industrial sites which have inventoried to be a risk for the waterbodies. One project started in 2016 and will end before the end of 2022. The aim of the project is to clean up more than 30 ha contaminated sites. The investment cost of the project is more than 43 mln euros. The project is strongly linked with an integrated water project LIFE IP CleanEST. The budget of the LIFE IP CleanEST project is 16.7 mln euros and 10 mln euros of it is covered by European Commission through the LIFE Programme. LIFE IP CleanEST is bringing together the activities of river basin management plans and nature management plans in the Viru sub-basin of the East-Estonia river basin district, an area of nearly a quarter million hectares. The project period of LIFE IP CleanEST is 2019 – 2028 and it is coordinated by the Ministry of the Environment.

Besides EU finances, there is also possible to apply finances from Estonian Environment Investment Centre (EIC) to remediate contaminated sites. By the end of 2021 in total of 73 contaminated sites from the 75 particularly contaminated sites (97%) had had investments for remediation activities by EIC and EU funds and for that time 62 sites of them were cleaned up to be in totally safe or acceptably safe status.

After the remediation process, monitoring programme is implemented on the cleaned sites.

According to the Water Act, the status of polluted, or poor or bad, water shall be remediated by the polluter or, if it is not possible to determine the polluter, by the owner of the water body or, in the case of an aquifer, by the state.

Requirements for liquidation of polluted areas and monitoring requirements of these areas are stated in the Environment Liability Act.

The management of contaminated sites is a part of river basin management plans according to the Water Framework Directive. Estonia is updating the river basin management plans and their programmes of measures in 2021-2022. There are public consultations held until 2022 Q2.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

The Cohesion Fund implementation plan for 2014 – 2020 is approved by the European Commission. There is an extra focus set on water protection issues in the plan. Contaminated sites are a big issue for protecting waterbodies of Estonia. That's why the implementation plan foresees more than 36 mln euros for cleaning up contaminated sites. According to the plan 5 most important contaminated sites had to be cleaned up during 2014 – 2020. Besides this investment plan, there is also possible to apply finances from EIC to remediate contaminated sites. According to the plan our target was to clean up or make safer at least 58 sites from particularly contaminated sites by the end of the 2022. The Ministry of the Environment aschieved the goal (for the end 2021 in total 62 particularly contaminated sites were sanitised), but besides these particularly sites smaller sites with residual pollution also had to be remediated.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Globally the remediation activities of residually polluted sites support most of the SDG-s. In Estonian context there are strong links between the remediation works and SDG-s as follows:

Goal 3. Good health and well-being – Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination – direct link through the reduction of polluted sites;

Goal 6. Clean water and sanitation – Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate – strong links are being set by the ongoing work in the framework of the integrated water project LIFE IP CleanEST; Also 6.3 and 6.6 will be achieved.

Goal 11. Sustainable cities and communities – Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities... and Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces... – former polluted and abandoned sites will be cleaned up and taken into use, often as public green areas, parks or as transport land;

Goal 12.4 - Achieve environmentally sound management of chemicals and wastes, and reduce their release to water and soil in order to minimize their adverse impacts on human health and the environment - will be achieved

Goal 14. Life below water – Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution – several remediation activities have planned to implement on residually polluted rivers (Purtse, Kohtla and Erra rivers). Cleaning up the pollution from these rivers avoids the transfer of oil products into the sea;

Goal 15. Life on land – Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services... – residually polluted sites, which are considered to be environmental pressure for any water body are foreseen to be remediated in water management plans and appropriate action plans. The link with ecosystem services approach was further strengthened by the implementation of the integrated water project LIFE IP CleanEST. Ecosystem services were assessed for 20 bodies of water as a baseline of the project. After the intervention (remediation of residual pollution included) the change in ecosystem services will be evaluated;

Goal 17. Partnerships for the goals – Target 17.17: Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships – direct links with own financings of remediation projects, rules for permitting, stakeholder engagement activities and dissemination of the results of such projects.

5. If you have not set a target in this area, please explain why.

## **XIX. Effectiveness of systems for the management, development, protection and use of water resources (art. 6, para. 2 (m))**

*For each target set in this area:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

General framework for the water management is set in the Water Act and detailed requirements are set in regulations under the Water Act. The purpose of the Water Act is to guarantee the purity of inland and transboundary water bodies and groundwater, and ecological balance in water bodies. The Water Act regulates the use and protection of water, relations between landowners and water users and the use of public water bodies and water bodies designated for public use. The discharge of pollutants into surface waters shall be controlled in accordance with the combined approach pursuant to which the discharge of pollutants into surface waters is avoided or restricted at source through the implementation of environmental requirements, including best environmental practices, best available techniques and best available methods, setting and application of emission limit values and environmental quality standards.

If it is not possible to achieve the environmental objectives provided in this Act despite the environmental requirements, emission limit values and environmental quality standards, additional measures provided by law, including, where appropriate, more stringent environmental requirements, emission limit values and environmental quality standards, must be applied. The use and protection of surface water and groundwater shall be planned and organised on the basis of catchment areas in terms of river basins, taking into account the hydrological boundaries of catchment areas of water bodies.

Water use and protection shall be based on the principle of recovery of the costs of water services, environmental and resource costs and the polluter pays principle. For implementing polluter pays principle natural resource charges and pollution charges are determined in the Environmental Charges Act. According to the Water Act special use of water needs a permit that is issued by the Environmental Board and controlled by the Environmental Board. The public uses of a water body are water abstraction until certain amount, bathing, water sports, moving on water or ice and fishing to the extent provided for by law and these activities do not require permit. The provisions of law regulating the stay on the land of another shall not be violated by the public use of a water body. The status of surface water and groundwater shall not be deteriorated. Good status of surface water and groundwater, including good chemical status and good ecological potential of artificial bodies of water and heavily modified bodies of water shall be achieved. The status of surface water is good if both the ecological status and the chemical status of the body of surface water are at least good. The status of groundwater is good if both the chemical status and the quantitative status of the body of groundwater are at least good. To achieve these objectives, measures shall be applied that are foreseen in river basin water management plans. Water Act also regulates hydroenergy and damming issues, lowering of water level and liquidation of damming, water traffic, use of water for firefighting purposes, protection of water against wastewater and effluent pollution etc. It defines rights of water users and protection of rights and obligations of water users.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).



Modern Water Act is in place since 2019. Regulations are mainly based on the EU requirements and the HELCOM requirements. Water related obligations are set in permit of special use of water which are managed and controlled by the Environmental Board.

Public Water Supply and Sewerage Act is in place since 1999, last reduction in force from 1.01.2022. Regulations are mainly based on the EU and the HELCOM requirements.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Success can be assessed through several indicators that are described in part III of this report.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Water related requirements are in line with SDG-s. Requirements help to achieve SDG 6.1 to achieve universal and equitable access to safe and affordable drinking water for all and 6.2 to achieve access to adequate and equitable sanitation and hygiene for all. Requirements in the Water Act help to achieve SDG 6.3 to improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and also SDG 6.4 to substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater. Water Act is in line with SDG 6.5 to implement integrated water resources management at all levels, including through transboundary cooperation as appropriate. Water related activities help to achieve SDG 6.6 to protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes. Requirements also help to achieve SDG 3.3, 3.9, 6.6 a, 11.5, 15.1, 17.9.

5. If you have not set a target in this area, please explain why.

## **XX. Additional national or local specific targets**

*In cases where additional targets have been set, for each target:*

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

No additional targets.

## Part three

### Common indicators<sup>1</sup>

#### I. Quality of the drinking water supplied

##### 1. Context of the data

1. What is the population coverage (in millions or per cent of total national population) of the water supplies reported under sections 2 and 3 below?

*The rationale of this question is to understand the population coverage of the water quality data reported under sections 2 and 3 below.*

*Please describe the type of water supplies for which data is included in the following tables, and the population share covered by these supplies.*

*Please also clarify the source of the water quality data provided (e.g., data from regulatory authorities).*

At the end of year 2021, 86,7% of the total national population was connected to the water supplies, of whom 98,76% used water for which no microbiological, chemical and indicator values were not exceeded (except radiological indicators).

2. Please specify from where the water quality samples reported in sections 2 and 3 below are primarily taken (e.g., treatment plant outlet, distribution system or point of consumption).

*The rationale of this question is to understand where the samples were primarily taken from for the water quality data reported in sections 2 and 3 below.*

Depending on the sample taken (it can be treatment plant, distribution system or point of consumption), but most often point of consumption.

3. In sections 2 and 3 below, the standards for compliance assessment signify the national standards. If national standards for reported parameters deviate from the World Health Organization (WHO) guideline values, please provide information on the standard values.

*The rationale of this question is to understand any possible differences between the national standards for microbiological and chemical water quality parameters and the respective WHO guideline values.<sup>2</sup>*

National standards are currently being transposed from EU directives (EU) 2020/2184 (on the quality of water intended for human consumption) and 2013/51/EURATOM (laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption).

##### 2. Bacteriological quality

4. Please indicate the percentage of samples that fail to meet the national standard for *Escherichia coli* (*E. coli*). Parties may also report on up to three other priority microbial indicators and/or pathogens that are subject to routine water quality monitoring.

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<sup>1</sup> In order to allow an analysis of trends for all Parties under the Protocol, please use wherever possible 2005 — the year of entry into force of the Protocol — as the baseline year.

<sup>2</sup> The latest edition of the WHO *Guidelines for Drinking-water Quality* is available at: [http://www.who.int/water\\_sanitation\\_health/publications/dwq-guidelines-4/en/](http://www.who.int/water_sanitation_health/publications/dwq-guidelines-4/en/).

If possible, please provide segregated data for urban and rural areas in the table below. If this is not possible, please consider reporting by alternative categories available in your country, for example by “non-centralized versus centralized” water supplies or by population number-based categories. If you do so, please indicate the reported categories by renaming the rows in the column “area/category” in the table below accordingly.

If data can be reported neither for urban and rural areas nor for alternative categories, please report total (national) values only.

Please comment on the trends or provide any other important information supporting interpretation of the data.

| Parameter                           | Area/category | Baseline value (2009) | Value reported in the previous reporting cycle (2018) | Current value (2021) |
|-------------------------------------|---------------|-----------------------|---|----------------------|
| <i>E. coli</i>                      | <b>Total</b>  | <b>1,5%</b>           | <b>0,13%</b>  | <b>0,32%</b>         |
|                                     | Urban         |                       |   |                      |
|                                     | Rural         |                       |   |                      |
| Additional parameter 1: Enterococci | <b>Total</b>  | <b>3,2%</b>           | <b>1,09%</b>  | <b>0,72%</b>         |
|                                     | Urban         |                       |   |                      |
|                                     | Rural         |                       |   |                      |
| Additional parameter 2:             | <b>Total</b>  |                       |   |                      |
|                                     | Urban         |                       |   |                      |
|                                     | Rural         |                       |   |                      |
| Additional parameter 3:             | <b>Total</b>  |                       |   |                      |
|                                     | Urban         |                       |   |                      |
|                                     | Rural         |                       |   |                      |

### 3. Chemical quality

5. Please report on the percentage of samples that fail to meet the national standard for chemical water quality with regard to the following parameters:

- (a) Arsenic;
- (b) Fluoride;
- (c) Lead
- (d) Nitrate.

6. Please also identify up to three additional chemical parameters that are of priority in the national or local context.

If possible, please provide segregated data for urban and rural areas in the table below. If this is not possible, please consider reporting by alternative categories available in your country, for example by “non-centralized versus centralized” sanitation systems or by population number-based categories. If you do so, please indicate the reported categories by renaming the rows in the column “area/category” in the table below accordingly.

If data can be reported neither for urban and rural areas nor for alternative categories, please report total (national) values only.

Please comment on the trends or provide any other important information supporting interpretation of the data.

The natural occurrence of fluorides in Estonian drinking water from ground water is fairly high. We have some problems with fluoride levels exceeding the limit value 1,5 mg/l (transposed to national legislation from the drinking water directive 98/83/EC) in drinking water in western part of the country. In these cases, necessary measures are applied (recommendations for public etc) and levels of fluorides in drinking water are decreased (water purification with mainly reverse osmosis).

Natural occurrence of arsenic in Estonia drinking water usually does not exceed WHO guideline and drinking water directive limit values (10µg/l), but during monitoring was once found local geological presence.

Natural occurrence of lead in Estonian ground water is also not exceeding WHO values. There are still some problems with old lead pipes, that take time to replace.

In the below table we have given the numbers on centralised water data.

| <i>Parameter</i>                   | <i>Area/category</i> | <i>Baseline value<br/>(2009)</i> | <i>Value reported in the<br/>previous reporting cycle<br/>(2018)</i> | <i>Current value<br/>(2021)</i> |
|------------------------------------|----------------------|----------------------------------|--|---------------------------------|
| Arsenic                            | <b>Total</b>         | <b>0%</b>                        | <b>0%</b>  | <b>0%</b>                       |
|                                    | Urban                |                                  |  |                                 |
|                                    | Rural                |                                  |  |                                 |
| Fluoride                           | <b>Total</b>         | <b>22,9%</b>                     | <b>5,09%</b>   | <b>5,1%</b>                     |
|                                    | Urban                |                                  |  |                                 |
|                                    | Rural                |                                  |  |                                 |
| Lead                               | <b>Total</b>         | <b>0%</b>                        | <b>0%</b>  | <b>0%</b>                       |
|                                    | Urban                |                                  |  |                                 |
|                                    | Rural                |                                  |  |                                 |
| Nitrate                            | <b>Total</b>         | <b>0%</b>                        | <b>1,93%</b>   | <b>0,3%</b>                     |
|                                    | Urban                |                                  |  |                                 |
|                                    | Rural                |                                  |  |                                 |
| Additional<br>parameter 1:<br>Iron | <b>Total</b>         | <b>37,96%</b>                    | <b>3,46%</b>   | <b>2,12%</b>                    |
|                                    | Urban                |                                  |  |                                 |
|                                    | Rural                |                                  |  |                                 |

## II. Outbreaks and incidence of infectious diseases related to water

In filling out the below table, please consider the following points:

(a) For reporting outbreaks, please report confirmed water-related outbreaks only (i.e., for which there is epidemiological or microbiological evidence for water to have facilitated infection);

(b) For reporting incidents, please report the numbers related to all exposure routes. In your response:

(i) Please report cases per 100,000 population;

(ii) Please differentiate between zero incidents (0) and no data available (-).

Please extend the list of water-related diseases, to the extent possible, to cover other relevant pathogens (e.g., enteric viruses, *Giardia intestinalis*, *Vibrio cholerae*).

Please indicate how the information is collected (e.g., event-based or incidence-based surveillance).

Please comment on the trends or provide any other important information supporting interpretation of the data.

Since 2009, the diagnosis of legionellosis and the advanced system of legionellosis have improved significantly. As a result, the number of cases has been diagnosed with a (continuous) growth trend. According to the Communicable Diseases Prevention and Control Act the information is collected for 56 communicable diseases. There is a registry for communicable diseases (NAKIS).

Other disease rates are stable.

| Disease  | Incidence rate per 100,000 population<br>(all exposure routes) |                                    |                         | Number of outbreaks<br>(confirmed water-borne outbreaks) |                                    |                         |
|--|--|------------------------------------|-------------------------|--|------------------------------------|-------------------------|
|  | Value reported in the  |                                    |                         | Value reported in the                                    |                                    |                         |
|  | Baseline<br>(2009)   | previous reporting<br>cycle (2018) | Current value<br>(2021) | Baseline<br>(2009)                                       | previous reporting<br>cycle (2018) | Current value<br>(2021) |
| Shigellosis                                    | 3,9  | 1,3                                | 0,2                     | 0  | 0                                  | 0                       |
| Enterohaemorrhagic<br><i>E. coli</i> infection | 1,2  | 0,6                                | 0,5                     | 0  | 0                                  | 0                       |
| Typhoid fever                                  | 0,1  | 0                                  | 0,1                     | 0  | 0                                  | 0                       |
| Viral hepatitis A                              | 1,4  | 1,1                                | 0,5                     | 0  | 0                                  | 0                       |
| Legionellosis                                  | 0,4  | 1,4                                | 0,8                     | 0  | 0                                  | 0                       |
| Cryptosporiosis                                | 0  | 0,2                                | 0,5                     | 0  | 0                                  | 0                       |
| Additional disease 1:<br>Cholera               | 0  | 0                                  | 0                       | 0  | 0                                  | 0                       |
| Additional disease 2:<br><i>Giardias</i>       |  |                                    | 3,3                     |  |                                    | 0                       |
| Additional disease 3:                          |  |                                    |                         |  |                                    |                         |

### III. Access to drinking water

*If possible, please provide segregated data for urban and rural areas in the table below. If this is not possible, please consider reporting by alternative categories available in your country, for example by “non-centralized versus centralized” water supply systems or by population number-based categories. If you do so, please indicate the reported categories by renaming the rows in the table below accordingly.*

*If data can be reported neither for urban and rural areas nor for alternative categories, please report total (national) values only.*

*Please comment on the trends or provide any other important information supporting interpretation of the data with regard to access to drinking water.*

| <i>Percentage of population with access to drinking water</i> | <i>Baseline value (2009)</i>                                   | <i>Value reported in the previous reporting cycle (2018)</i>      | <i>Current value (2021)</i>                                      |
|---|--|---|--|
| <b>Total</b>  | 100% (JMP)<br>Or<br>87% (Connected with public water supplies) | 100% (JMP)<br>Or<br>87,63% (Connected with public water supplies) | 100% (JMP)<br>Or<br>86,7% (Connected with public water supplies) |
| Urban   |  |   |  |
| Rural   |  |   |  |

- Estimates provided by the WHO/United Nations Children’s Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation. *JMP definitions are available at <http://www.wssinfo.org/definitions-methods/watsan-categories>.*
- National estimates. *Please specify how “access” is defined and what types of drinking-water supplies are considered in the estimates in your country.*  
*In particular, please specify if the above percentage on “access to drinking water” refers to access to (tick all applicable):*
  - Improved drinking water sources (as per JMP definition)
  - Supplies located on premises
  - Supplies available when needed
  - Supplies that provide drinking water free from faecal contamination

### IV. Access to sanitation

*If possible, please provide segregated data for urban and rural areas in the table below. If this is not possible, please consider reporting by alternative categories available in your country, for example by “non-centralized versus centralized” sanitation systems or by population number-based categories. If you do so, please indicate the reported categories by renaming the rows in the table below accordingly.*

*If data can be reported neither for urban and rural areas nor for alternative categories, please report total (national) values only.*

Please comment on the trends or provide any other important information supporting interpretation of the data with regard to access to sanitation.

| Percentage of population with access to sanitation | Baseline value (2009)  | Value reported in the previous reporting cycle (2017)           | Current value (2020)  |
|--|--|---|---|
| <b>Total</b>                                       | 100% (JMP)<br>Or<br>81 % (Connected with public sewerage system) | 100% (JMP)<br>Or<br>83% (Connected with public sewerage system) | 100% (JMP)<br>Or<br>83% (Connected with public sewerage system) |
| Urban  |  |   |   |
| Rural  |  |   |   |

- Estimates provided by JMP. *JMP definitions are available at <http://www.wssinfo.org/definitions-methods/watsan-categories>.*
- National estimates. *Please specify how “access” is defined and what types of sanitation facilities are considered in the estimates in your country.*
- In particular, please specify if the above percentage on “access to sanitation” refers to access to (tick all applicable):*
- Improved sanitation facilities (as per JMP definition)
  - Facilities not shared with other households
  - Facilities from which excreta is safely disposed in situ or treated off site

## V. Effectiveness of management, protection and use of freshwater resources

### 1. Water quality

1. On the basis of national systems of water classification, please indicate the percentage of water bodies or the percentage of the volume (preferably) of water<sup>3</sup> falling under each defined class (e.g., for European Union countries and other countries following the European Union Water Framework Directive<sup>4</sup> classification, the percentage of surface waters of high, good, moderate, poor and bad ecological status, and the percentage of groundwaters/surface waters of good or poor chemical status; for other countries, in classes I, II, III, etc.).

<sup>3</sup> Please specify.

<sup>4</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

(a) **For European Union countries and other countries following the European Union Water Framework Directive classification**

(i) *Ecological status of surface water bodies*

| <i>Percentage of surface water classified as:</i>         | <i>Baseline value (2009)</i> | <i>Value reported in the previous reporting cycle (2017)</i> | <i>Current value (2020)</i> |
|---|------------------------------|--|-----------------------------|
| High status   | 8                            | 5  | 1                           |
| Good status   | 521                          | 384  | 407                         |
| Moderate status   | 191                          | 294  | 258                         |
| Poor status   | 28                           | 63   | 73                          |
| Bad status  | 0                            | 3  | 5                           |
| <b>Total number/volume of water bodies classified</b>     | 748                          | 749  | 744                         |
| <b>Total number/volume of water bodies in the country</b> | 750                          | 750  | 744                         |

(ii) *Chemical status of surface water bodies*

| <i>Percentage of surface water bodies classified as</i>   | <i>Baseline value (2009)</i> | <i>Value reported in the previous reporting cycle (2017)</i> | <i>Current value (2020)</i> |
|---|------------------------------|--|-----------------------------|
| Good status   | 99%                          | 89%  | 89,8%                       |
| Poor status   | 1%                           | 11%  | 10,2%                       |
| <b>Total number/volume of water bodies classified</b>     | 750                          | 37   | 144                         |
| <b>Total number/volume of water bodies in the country</b> | 750                          | 750  | 744                         |

(iii) *Status of groundwaters*

| <i>Percentage of groundwaters classified as</i>                 | <i>Baseline value (2009)</i> | <i>Value reported in the previous reporting cycle (2017)</i> | <i>Current value (2020)</i> |
|---|------------------------------|--|-----------------------------|
| Good quantitative status  | 96%                          | 97%  | 94%                         |
| Good chemical status  | 96%                          | 79%  | 74%                         |
| Poor quantitative status  | 4%                           | 3%   | 6%                          |
| Poor chemical status  | 4%                           | 21%  | 26%                         |
| <b>Total number/volume of groundwater bodies classified</b>     | 25                           | 39   | 31                          |
| <b>Total number/volume of groundwater bodies in the country</b> | 25                           | 39   | 31                          |

(b) **For other countries**

(i) *Status of surface waters*

| <i>Percentage of surface water falling under class<sup>a</sup></i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|--|--------------------------------------|--|-------------------------------------|
| I  |                                      |  |                                     |



| <i>Percentage of surface water falling under class<sup>a</sup></i> | <i>Baseline value<br/>(specify year)</i> | <i>Value reported in the<br/>previous reporting<br/>cycle (specify year)</i> | <i>Current value<br/>(specify year)</i> |
|--|--|--|---|
| II   |  |  |   |
| III  |  |  |   |
| IV   |  |  |   |
| V  |  |  |   |
| <b>Total number/volume of water bodies classified</b>              |  |  |   |
| <b>Total number/volume of water bodies in the country</b>          |  |  |   |

<sup>a</sup> Rename and modify the number of rows to reflect the national classification system.

(ii) *Status of groundwaters*

| <i>Percentage of groundwaters falling under class<sup>a</sup></i> | <i>Baseline value<br/>(specify year)</i> | <i>Value reported in the<br/>previous reporting<br/>cycle (specify year)</i> | <i>Current value<br/>(specify year)</i> |
|---|--|--|---|
| I   |  |  |   |
| II  |  |  |   |
| III   |  |  |   |
| IV  |  |  |   |
| V   |  |  |   |
| <b>Total number/volume of groundwater bodies classified</b>       |  |  |   |
| <b>Total number/volume of groundwater bodies in the country</b>   |  |  |   |

<sup>a</sup> Rename and modify the number of rows to reflect the national classification system.

2. Please provide any other information that will help put into context and aid understanding of the information provided above (e.g., coverage of information provided if not related to all water resources, how the quality of waters affects human health).

A total of 31 groundwater bodies have been formed in Estonia, the status of which is assessed separately on the basis of data collected for each body.

The poor chemical status of groundwater is caused by very different indicators, for example: The growth trends of chloride (Cl<sup>-</sup>), ammonium (NH<sub>4</sub><sup>+</sup>) and sulphate ion (SO<sub>4</sub><sup>2-</sup>) concentrations are a problem in North-East-Estonia. Higher chemical oxygen demand (COD) readings have been measured from the monitoring wells of the Ida-Viru oil shale basin, and the concentrations of 1-basic phenols exceeded the threshold value established for them in several places. The growing trend of barium (Ba<sup>2+</sup>) in groundwater also needs further investigation. In the Matsalu region of West-Estonia, the problem is the increased COD readings, which indicates a higher than permitted content of organic matter in groundwater. The poor chemical status of groundwater in the Pandivere region of Central Estonia is mainly due to elevated levels of nitrates (NO<sub>3</sub><sup>-</sup>), pesticides and petroleum products.

The reasons for the growth trends of different pollutants can be very different. On the one hand, it may be a naturally occurring phenomenon, for example the deep aquifers of Cambrian-Vendian Voronka may mix with saltier aquifers, resulting in an increase in the concentration of chloride ions in the groundwater. At the same time, the intensive pumping of groundwater in coastal areas causes a large-scale lowering of the groundwater level, which

in turn promotes any intrusion of saline water into groundwater (including seawater). Various organic compounds may be of natural origin, such as higher levels of  $\text{NH}_4^+$  and  $\text{SO}_4^{2-}$  and COD in groundwater may be due to the anaerobic environment of the groundwater or the preferences in the area. Therefore, it is often difficult to determine the extent of the absorption of these compounds on groundwater quality indicators. On the other hand, the increase in indicators for organic and inorganic compounds ( $\text{NO}_3^-$ , phenols, pesticides and their degradation products) may indicate intensive activities of agriculture in, for example, the Central Devon region of Central, South-East and South-Estonia, where groundwater is either karstic or too close to the surface – vulnerable to the spread of pollutants. The problem of 1-basic phenols in groundwater seems to be solved with the remediation of contaminated sites and the introduction of more accurate determination methods (which distinguish anthropogenic phenols from natural humic substances or other similar substances).

## 2. Water use

3. Please provide information on the water exploitation index at the national and river basin levels for each sector (agriculture, industry, domestic), i.e., the mean annual abstraction of freshwater by sector divided by the mean annual total renewable freshwater resource at the country level, expressed in percentage terms.

| <i>Water exploitation index</i> | <i>Baseline value (2009)</i> | <i>Value reported in the previous reporting cycle (2017)</i> | <i>Current value (2020)</i> |
|---------------------------------|------------------------------|--|-----------------------------|
| Agriculture                     | 0,206%                       | 0,0412%  | 0,037%                      |
| Industry <sup>a</sup>           | 0,177%                       | 0,3334%  | 0,485%                      |
| Domestic use <sup>b</sup>       | 0,259%                       | 0,3819%  | 0,328%                      |

<sup>a</sup> Please specify whether the figure includes both water abstraction for manufacturing industry and for energy cooling.

<sup>b</sup> Please specify whether the figure only refers to public water supply systems or also to individual supply systems (e.g., wells).

## Part four

### Water-related disease surveillance and response systems

1. In accordance with the provisions of article 8 of the Protocol:

Has your country established comprehensive water-related disease surveillance and early warning systems according to paragraph 1 (a)?

YES  NO  IN PROGRESS

Has your country prepared comprehensive national or local contingency plans for responses to outbreaks and incidents of water-related disease according to paragraph 1 (b)?

YES  NO  IN PROGRESS

Do relevant public authorities have the necessary capacity to respond to such outbreaks, incidents or risks in accordance with the relevant contingency plan according to paragraph 1 (c)?

YES  NO  IN PROGRESS

2. If yes or in progress, please provide summary information about key elements of the water-related disease surveillance and outbreak response systems (e.g., identification of

water-related disease outbreaks and incidents, notification, communication to the public, data management and reporting). Please also provide reference to existing national legislation and/or regulations addressing water-related disease surveillance and outbreak response.

Health Board is a Competent Authority in the field of communicable disease control, surveillance, prevention and in epidemiological risk analysis in Estonia.

Duties of Health Board:

- 1) conduct epidemiological investigations with the aim of ascertaining the circumstances under which persons suffering from a disease became infected and of determining the circumstances of the spread of the communicable disease, contact the persons suffering from a communicable disease and persons who have been in close contact therewith, and, in the event of clusters of disease, shall provide instructions for the application of disease control measures;
- 2) inform the population through the media of the occurrence of a communicable disease and the measures taken to control the outbreak of the disease;
- 3) organise the distribution, the storage and transport of immunological preparations procured on the basis of Public Procurement Act and functioning of the cold chain;
- 4) collect, analyse and publish data concerning immunisations;
- 5) organise the surveillance of communicable diseases, including the sentinel surveillance, according to the relevant legislation of the European Union and recommendations of the World Health Organisation.

Health Board is also competent authority in the area of epidemiological risk analysis and risk assessment of communicable diseases and shall determine and assess:

- 1) tendencies of spread of communicable diseases;
- 2) immunisation coverage.

Health Board handles the early warning and response system of the European Centre for Disease Prevention and Control in Estonia and is the liaison body authorised by the World Health Organisation and European Commission concerning biological agents in connection with the application of international health regulations.

The Health Board participates as the competent authority in the disease-specific epidemiological activities of the World Health Organisation and the European Centre for Disease Prevention and Control, including in the international disease control programmes by performing the role of the national reference laboratory in the relevant testing areas of communicable diseases.

In performing the functions prescribed, the Health Board co-operates with local authorities for the prevention, surveillance of communicable diseases and to prevent and control the spread of communicable diseases.

When participating in the international control of communicable diseases, the Health Board informs other states of the occurrence of a communicable disease and the measures taken to control the outbreak of the disease.

According to the Communicable Diseases Prevention and Control Act, cases of communicable diseases shall be registered in the Estonian Communicable Diseases Register (hereinafter the register), which is maintained in order to register the cases of communicable diseases, to determine the tendencies of their spread, prevent communicable diseases, organise the control and health services, develop the health policy, analyse the communicable diseases morbidity, spread and mortality, to evaluate the diagnostics and treatment, organise statistics and scientific research, including epidemiological research.

According to this act there are 56 diseases for registering. Information on all diseases must be reported into national electronic register NAKIS. National reports are available on Health Board webpage (<https://www.terviseamet.ee/et/nakkushaigused-menuu/tervishoiutootajale/nakkushaigustesse-haigestumine>).

In addition to Communicable Diseases Department, Health Board has four regional departments. The regional departments conduct surveillance and provide enforcement in the following areas: preservation of the cold chain for vaccination coverage in the population, outbreak investigation, drinking water and natural mineral water, swimming pools and natural bathing waters, schools, pre-school establishments, and childrens camps.

3. Please describe what actions have been taken in your country in the past three years to improve and/or sustain water-related disease surveillance, early warning systems and contingency plans, as well as to strengthen the capacity of public authorities to respond to water-related disease outbreaks and incidents, in accordance with the provisions of article 8 of the Protocol.

In the past years a lot of attention was paid to the COVID-19 pandemic. During previous two years have been developed many guidelines for managing pandemic. Since 2020 august Estonia started wastewater-based surveillance of SARS-CoV-2.

## **Part five**

### **Progress achieved in implementing other articles of the Protocol**

Please provide a short description of the status of implementation of articles 9 to 14 of the Protocol, as relevant.

*Suggested length: up to two pages*

Estonia ratified the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes on 9th September 2003. Starting that date Estonia has been guided by the Protocol. According to Article 6 Estonia has set national targets in order to ensure implementation of the Protocol. Estonia as a member of the European Union must implement the EU water policy. The aim and idea of the Protocol coincide a lot with the water policy in the EU. For several issues targets are set as legal requirements in legal acts. One of the main target is ensuring appropriate sewage collection and treatment for all the residents. During the reporting period a lot of success has been achieved to reach the target. Percentage of people connected with public sewerage system rised to 83% in 2017 and stayed at that level til 2020. 100% of WWTPs are in conformity with the UWWTD requirements in the agglomeration areas more than 2000 pe. And even more, WWTPs fulfill the HELCOM convention requirements, which has much higher treatment standards than is set in UWWTD.

We have made significant investments to comply with drinking water and wastewater directives since 2004. Approximately 1,7 billion euros have been invested using EU funds, Estonian Environmental Investment Centre aid and water companies and municipalities own contribution. What's important to highlight is that close to 50% of the environmental funds money that have been available in Estonia, have been used to build and upgrade our water infrastructure. This has been possible as we have taken the achievement of compliance with drinking water and wastewater directives very seriously and this has been the priority of our government in the environmental sector since the accession. By the end of year 2021 86,7 % of population was connected to the water supplies.

The results are obvious – pollution load have been decreased significantly, at the same time the amount of wastewater is relatively constant during this period.

In 2004 Ministry of the Environment of Estonia took the initiative and restructured smaller water companies to regional companies, which serve several municipalities together, altogether 40% of the municipalities are operated by regional water companies. Regional water companies ensure better service quality and lower price of water, ensure efficient management and higher competence of water service. But not all water companies have yet joined into regional companies.

To help the municipalities to tackle the environmental goals in water management, Ministry of the Environment has prepared guidelines for the municipalities how to regulate the supervision of the individual sewerage systems.

Since 2018 Ministry of the Environment launched a measure to financing households for connecting to public water and sewerage system in agglomerations over 2000 pe, which turned out to be very popular.

In 2012 the Water and Health Safety Information System (<https://vti.sm.ee/>) was launched. The system was developed and taken into use out by the Ministry of Social Affairs and the Health Board. The system allows water and mineral water producers, pool and bathing water owners to send data about their water quality via internet to the Health Board inspectors. Health Board uses this system to create reports about waterworks. The public and consumers have access to data on their water quality via Health Board's homepage linked to the Water and Health Safety Information System ([vtiav.sm.ee](http://vtiav.sm.ee)). Health Board is using this information system for risk based approach and by the Ministry of Environment for planning financial support for drinking water producers.

## **Part six**

### **Thematic part linked to priority areas of work under the Protocol**

#### **1. Water, sanitation and hygiene in institutional settings**

1. In the table below, please provide information on the proportion of schools (primary and secondary) and health-care facilities that provide basic water, sanitation and hygiene (WASH) services.

*Basic services refer to the following:*

(a) *Basic sanitation service: Improved facilities (according to JMP definition), which are sex-separated and usable at the school or health-care facility;*

(b) *Basic drinking water service: Water from an improved source (according to JMP definition) is available at the school or health-care facility;*

(c) *Basic hygiene service: Handwashing facility with water and soap available to students (schools) or patients and health-care providers (health-care facilities).*

*If the above definitions/categories do not apply in your country, please report for alternative categories for which data are available. In this case, please indicate the reported categories by renaming the rows in the table below accordingly.*

*Please indicate the source of data. If data is not available, please put (-).*

| <i>Institutional setting</i> | <i>Current value (2021)</i> |
|------------------------------|-----------------------------|
| <i>Schools</i>               |                             |

| <i>Institutional setting</i>  | <i>Current value (2021)</i> |
|-------------------------------|-----------------------------|
| Basic sanitation service      | 100%                        |
| Basic drinking-water service  | 100%                        |
| Basic hygiene service         | 100%                        |
| <i>Health-care facilities</i> |                             |
| Basic sanitation service      | 100%                        |
| Basic drinking-water service  | 100%                        |
| Basic hygiene service         | 100%                        |

2. Has the situation of WASH in schools been assessed in your country?

YES  NO  IN PROGRESS

3. Has the situation of WASH in health-care facilities been assessed in your country?

YES  NO  IN PROGRESS

4. Do approved policies or programmes include actions (please tick all that apply):

To improve WASH in schools

To improve WASH in health-care facilities

5. If yes, please provide reference to main relevant national policy(ies) or programme(s).

Regulation under which the surveillance is conducted in schools - <https://www.riigiteataja.ee/akt/128082013010>

In 2016 the Health Board carried out a study "Conditions for Personal Care in Schools". The summary of the study is available only in Estonian on Health Board website:

<https://www.terviseamet.ee/sites/default/files/isiklikuhuegieenitagamisetingimused.pdf>

As our targets are achieved, there are no special activity in this area in period of 2019-2021.

## 2. Safe management of drinking-water supply

6. Is there a national policy or regulation in your country, which requires implementation of risk-based management, such as WHO water safety plans (WSPs), in drinking water supply?

YES  NO  IN PROGRESS

7. If yes, please provide reference to relevant national policy(ies) or regulatory documentation.

Regulation 61 (24 September 2019) of the Minister of Social Affairs: "Quality and control requirements for drinking water and methods for testing" - <https://www.riigiteataja.ee/akt/126092019002>

Water Act - <https://www.riigiteataja.ee/en/eli/ee/506102021002/consolide/current>

National Public Health Plan 2020 – 2030 - <https://www.sm.ee/et/rahvastiku-tervise-arengukava-aastani-2030>

Estonia is transposing Commission Directive (EU) 2020/2184 (on the quality of water intended for human consumption). Articles 8 and 10 to Council Directive 2020/2184 on the quality of water intended for human consumption that regulates the risk based approach on the catchment area and domestic distribution systems. Risk based approach on the supply system has been implemented since 2017 and at the moment approximately 5 waterworks have applied risk-based approach. The largest waterwork is AS Tallinna Vesi, that supplies drinking water to about 480 000 consumers (which is 36% of the population).

8. In the table below, please provide information on the percentage of the population serviced with drinking-water under a WSP.

According to the amended drinking water directive it is possible to implement risk-based approach.

*Please indicate the source of data. If data is not available, please put (-).*

| <i>Percentage of population</i> | <i>Current value (2021)</i> |
|---------------------------------|-----------------------------|
| <b>Total</b>                    | 36%                         |

### 3. Equitable access to water and sanitation

9. Has the equity of access to safe drinking-water and sanitation been assessed?

YES  NO  IN PROGRESS

10. Do national policies or programmes include actions to improve equitable access to water and sanitation (please tick all that apply):

- To reduce geographical disparities
- To ensure access for vulnerable and marginalized groups
- To keep water and sanitation affordable for all

11. If yes, please provide reference to main relevant national policy(ies) and programme(s).

In Estonia there are no disparities between different population groups and the access to drinking water and sanitation is both 100% in Estonia.

According to the Local Government Organisation Act (02.06.1993) the functions of a local authority include the organisation, in the rural municipality or city, the supply of water and sewerage unless such functions are assigned by law to other persons.

According to the Public Water Supply and Sewerage Act (10.02.1999) the prices for water services shall not be discriminatory with regard to different clients or groups of clients.

The Estonian Competition Authority implements price regulation (including approving the prices) and market supervision in the fields of public water supply and sewerage. The Competition Authority is in the area of government of the Ministry of Justice. The Competition Authority worked out the recommended principles for calculation of prices for water services and these are prepared and published on its website.

In Water Act § 88 “Right of local authority to limit use for purposes other than domestic needs of water which is used for production of drinking water” is given the following point:

- If there is insufficient supply of drinking water to satisfy the needs of drinking and preparing food, a local authority has the right to limit the use for any other purpose of water that is used for production of drinking water until the water resources have recovered to the required level.

According to the Building Code and its regulation nr 85 (02.07.2015) of Minister for Economic Affairs and Infrastructure:

- A dwelling shall be equipped with a toilet or, in the absence thereof, the possibility of using the toilet in the same building or in an area designated for servicing the building shall be ensured.

- At least the possibility of obtaining cold water must be ensured in the dwelling or, in the absence thereof, the possibility of obtaining cold water must be ensured in the same building or in the area designated for servicing the building.

Building Code - <https://www.riigiteataja.ee/en/eli/507012022002/consolide>

Water Act - <https://www.riigiteataja.ee/en/eli/506102021002/consolide>

Minister of Social Affairs regulation nr 61 (24.09.2019) “Quality and control requirements for drinking water and methods for testing” - <https://www.riigiteataja.ee/akt/126092019002>

National Public Health Plan 2020 – 2030 - <https://www.sm.ee/et/rahvastiku-tervise-arengukava-aastani-2030>

## Part seven

### Information on the person submitting the report

The following report is submitted on behalf of Mari-Anne Härma in accordance with article 7 of the Protocol on Water and Health.

Name of officer responsible for submitting the national report: Leena Albreht

E-mail: [leena.albreht@terviseamet.ee](mailto:leena.albreht@terviseamet.ee)

Telephone number: +372 794 3525

Name and address of national authority: Health Board, Paldiski road 81, Tallinn 10617

Signature:



Date: 6. May 2022

#### Submission

1. Parties are required to submit their summary reports to the joint secretariat, using the present template and in accordance with the adopted guidelines on reporting, 210 days before the next session of the Meeting of the Parties. Submission of the reports ahead of this deadline is encouraged, as this will facilitate the preparation of analyses and syntheses to be made available to the Meeting of the Parties.

2. Parties are requested to submit, to the two addresses below, an original signed copy by post and an electronic copy by e-mail. Electronic copies should be available in word-processing software.



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