

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

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.

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

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.

Targets and target dates have been communicated to the Executive Secretariat of the UNECE on 19 September 2017.

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.

No specific arrangement has been established. Targets have been set under the coordination of the Ministry of the Environment, Climate and Sustainable Development and the Water Management Authority (Administration de la gestion de l'eau). Targets were set in conjunction with the Ministry of Health.

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.

Given that most of the targets are already included in other plans, namely, the River Basin Management Plan of the Water Framework Directive, or that they do not have a target date since they are carried out continuously, no additional action plan has been developed to support the achievement of the targets.

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?

Most targets for the purpose of article 6 of the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes are included in the River Basin Management Plan of the Water Framework Directive. During the development of River Basin Management Plan of the Water Framework Directive, a consultation with the public was carried out in accordance with article 14 of the Water Framework Directive. The consultation took place from 22 March 2015 to 22 August 2015. During this period, the draft management plan was published on the Water Management Authority's (Administration de la gestion de l'eau) website and all relevant parties were able to submit their comments to their communal administrations, which forwarded them to the relevant authorities on 22 September 2015 at the latest. In addition, public information meetings were organized on 30 and 31 March 2015.

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.

This report has been prepared by experts of the Ministry of the Environment, Climate and Sustainable Development and the Water Management Authority (Administration de la gestion de l'eau).

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.

In Luxembourg, apart from the national and communal levels, there is no regional, federal or decentralized decision-making structure. Communes are indeed responsible for ensuring their population's drinking water supply and State bodies are regulatory and monitoring authorities.

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 a.2 consists in constantly raising awareness on the importance of water among the population and actors involved in this field.

Since the total quantity of drinking water supplied in Luxembourg is sufficient, the adopted target a.1 consists in maintaining the good quality of the supplied water. In terms of quantity, Luxembourg has carried out studies which allow a more precise estimate of medium and long-term national needs in order to maintain a high level of supply. In terms of quality, it has to meet the criteria laid down in Council Directive 98/83/EC of 3 November 1998 concerning the quality of water intended for human consumption and the Grand-Ducal Regulation of 7 October 2002 on the quality of water intended for human consumption. Therefore, there is no target date to achieve, but the good quality of the supplied water should be maintained at all times.

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).

From a legal point of view, quality should meet the criteria laid down in Council Directive 98/83/EC of 3 November 1998 concerning the quality of water intended for human consumption and the Grand-Ducal Regulation of 7 October 2002 on the quality of water intended for human consumption.

From a financial point of view, article 9 of the Water Framework Directive on the recovery of the costs of water services should be applied.

Regarding information and education, article 55 of the amended law of 19 December 2008 on water provides for the establishment of river partnerships, that aim to involve water sector actors and the public in order to inform and build awareness about the water cycle integrated global management.

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

This objective was successfully achieved.

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 target set aims in particular to fulfill targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

The target set consists in maintaining the good quality of the supplied water, thus preventing outbreaks of water-related diseases.

In Luxembourg, there are no drinking water-related diseases epidemics. Indeed, infrastructure and standards established in Luxembourg prevent water-related disease incidents in the country. The rare cases of non-conformity with the microbiological quality guide values are closely monitored by State authorities in order to assist suppliers in improving their distribution network.

Therefore, there is no target date to achieve, but the good quality of the supplied water should be maintained at all times.

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).

From a legal point of view, quality should meet the criteria laid down in Council Directive 98/83/EC of 3 November 1998 concerning the quality of water intended for human consumption and the Grand-Ducal Regulation of 7 October 2002 on the quality of water intended for human consumption.

From a financial point of view, article 9 of the Water Framework Directive on the recovery of the costs of water services should be applied.

Regarding information and education, article 55 of the amended law of 19 December 2008 on water provides for the establishment of river partnerships, that aim to involve water sector actors and the public in order to inform and build awareness about integrated global management of the water cycle.

In accordance with Directive 98/83/EC, supplier shall inform its customers about the quality of the provided drinking water and notify them in case of non-compliance with defined requirements.

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

This objective was successfully achieved.

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 target set aims in particular to fulfill targets 3.3, 3.9, 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

In Luxembourg, 100 % of the population has access to drinking water of good quality and in sufficient quantities.

Therefore, there is no target date to achieve, but access for all to drinking water should be maintained at all times. In this regard, Luxembourg has carried out studies which allow a more precise estimate of medium and long-term national needs in order to maintain a high level of supply.

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 accordance with the provisions of article 42 of the amended law of 19 December 2008 on water, communes shall ensure the supply of water intended for human consumption in urban areas or areas to be urbanized in accordance with the General Development Plan, as well as to isolated buildings or hamlets situated outside the urban areas and whose supply is ensured by a commune.

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

This objective was successfully achieved.

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 target set aims in particular to fulfill targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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 d.1 consists in connecting 100% of the population to a wastewater treatment plant.

In 2018, a reference date, Luxembourg had 212 urban wastewater treatment plants with a wide range of purification capacities. The total purification rate reaches about 1,043,445 population equivalent (p.e.). In total, 98 % of the population is connected to the public wastewater treatment plant. The share of the population that isn't connected to a treatment plant yet represents 8,636 inhabitants. In the majority of cases, wastewater from these dwellings are pre-

treated in private septic tanks before they are discharged in public sewage or in the natural environment.

The target date is set at the end of 2021 (according to the schedule of the Water Framework Directive's River Basin Management Plans).

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).

With regard to wastewater treatment, Luxembourg should respect the objectives of the European Urban Waste Water Treatment Directive (Directive 91/271/EEC). The objectives of this directive have been included in Luxembourg's legislation through a Grand-Ducal Regulation (amended Grand-Ducal Regulation of 13 May 1994 on urban waste water treatment). Moreover, any area to be urbanised should be connected to a sewage system, pursuant to articles 46-49 of the amended law of 19 December 2008 on water, which deal with urban sanitation and disposal of collected urban wastewater.

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

In order to improve wastewater treatment, a financial participation of 65 million euros of was allocated to 165 projects by the Water Management Fund (Fonds pour la gestion de l'eau) in 2018. This decreased the share of the population that is not yet connected to a treatment plant to 8,636 inhabitants¹.

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

Target e.1 consists in maintaining the good quality of the drinking water provided.

The quality of the water withdrawn from surface water and groundwater is closely monitored in regard to quality parameters. Details concerning the monitoring of the supplied drinking water are set by the abovementioned Grand-Ducal Regulation. Early warning systems have been established to stop drinking water production in case of accidental pollution. Therefore, there is no target

¹ https://eau.public.lu/publications/rapports_activite/rapport_activite_2018.pdf

date to achieve, but the good quality of the supplied water should be maintained at all times.

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 provided in Luxembourg should meet the standards established by Council Directive 98/83/EC of 3 November 1998 concerning the quality of water intended for human consumption, which aims at protecting human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean. Supplied water should also meet the standards set by the amended law of 25 September 1953 regarding the reorganization of food, drink and common products control, as well as those set by the Grand-Ducal Regulation amended on 7 October 2002 intended for human consumption.

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

This objective was successfully achieved.

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 target set aims in particular to fulfill targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/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.

Target e.2 consists in replacing all mechanical treatment plants by biological treatment plants. The target date is set at the end of 2021 (according to the schedule of the Water Framework Directive's River Basin Management Plans).

In 2018, Luxembourg still had 96 mechanical treatment plants. These will be either replaced in the coming years by new biological treatment plants or connected to existing biological treatment plants or biological treatment plants under expansion.

Target e.3 consists in complying with Directive 91/271/EEC. Luxembourg has to comply with the requirements of this Directive. Luxembourg is currently compliant with article 3 of this Directive but should improve its level of compliance with articles 4 and 5. The target date is set in December 2018.

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 reduce wastewater-related pollution, the Grand-Ducal Regulation amended on 13 May 1994 on urban wastewater treatment sets standards for the discharge of wastewater by treatment plant.

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

During the period set as baseline, Luxembourg had 96 mechanical treatment plants. These are being replaced by biological treatment plants or connected to one. 47 treatment plants are under construction and 44 are being planned.

The considerable amount of time needed for planning, constructing and putting into service a new treatment plant constitutes one of the main challenges encountered for achieving this target.

Since January 2018, Luxembourg meets the standards set by Directive 91/271/EEC concerning urban waste water treatment for all discharges from agglomerations of more than 10,000 population equivalent. This situation allows us to meet the conditions of target e.3.

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

Target f.1 consists in demarcating protection zones around groundwater catchment areas used for human consumption. The target date is set at the end of 2021 (according to the schedule of the Water Framework Directive's River Basin Management Plans).

In Luxembourg, about 50 % of the water used for human consumption comes from groundwater. The regulation regarding the protection zones also constitute an essential tool to improve groundwater quality and protect it from pesticides and nitrate inputs. About 80 protection zones should be created throughout Luxembourg, which represents approximatively 10 % of its surface area.

Target f.2 consists in developing Water Safety Plans in order to establish risk management regarding production and management of drinking-water. State authorities have established an informatic tool allowing water suppliers to establish risk management for their raw resource, their catchment infrastructures, for treatment and distribution. The use of this tool will become mandatory in 2020. Significant risk reduction should be achievable through a proactive behaviour, by recognizing the importance of risk assessment and by adopting a risk management approach. The target date is 2020.

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).

Protection zones have been created around the groundwater catchment areas used for drinking-water production to preserve water resources intended for human consumption. The demarcation of protection zones established is based on protection zones demarcation files established by the operators of these catchments following the conduct of hydrogeological studies. The protection zones are established by a Grand-Ducal Regulation, pursuant to article 44 of the amended law of 19 December 2008 on water.

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

Currently, 22 Grand-Ducal Regulations have entered into force and 30 Grand-Ducal Regulations are in public procedure. In total, 100 % of surface water and 90 % of groundwater used for human consumption are protected or under demarcation.

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 target set aims in particular to fulfill targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

Target f.3 consists in participating in research projects on micropollutant management.

In order to develop a wastewater micropollutant management strategy, in particular for micropollutants produced by drug residues, several research

programs will be supported (PILLS, NO-PILLS, EmiSure...). For instance, the NO-PILLS project is a European cooperation project in several countries. The goal is to reduce water pollution from pharmaceutical residues through technical measures, but primarily by reducing the input of medical components in waste water, changing consumers' behaviour, through the sustainable disposal of unused medicine and through possible technological innovations.

No target date is specified as the project is already under way.

Target f.4 consists in establishing a bilateral convention between Luxembourg and the Walloon region.

A framework convention has been established between the Grand Duchy of Luxembourg and the Walloon region of the Kingdom of Belgium in order to develop an in-depth cooperation between these two partners and thus ensure a better application of Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment and Directive 91/276/EEC concerning protection of water against pollution by nitrates from agriculture and of the Water Framework Directive (2000/60/EC). The purpose of the convention is to conduct joint sanitation projects (common waste water treatment plants), groundwater protection projects (transboundary protection zones) and to enhance the exchange of information and collaboration for monitoring the manure production and application of transboundary livestock farms.

The convention was signed on 9 April 2019 in Martelange and will be ratified in the course of 2019 by the Luxembourg and Walloon parliaments

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).

Regarding target f.3, the research program is under way.

With regard to target f.4, the draft Convention is finalized and has been approved by the Luxembourg and Walloon Governments. The final agreement has been signed on 9 April 2019 and will be ratified during the course of 2019 by the Luxembourg and Walloon parliaments.

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

The set objectives were successfully achieved

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

Target g.1 consists in connecting 100 % of the population to a treatment plant.

In 2018, a reference date, Luxembourg had 212 urban wastewater treatment plants with a wide range of purification capacities. The total purification rate reaches about 1,043,445 population equivalent (p.e.). In total, 98 % of the population is connected to the public wastewater treatment plant. The share of the population that isn't connected to a treatment plant yet represents 8,636 inhabitants. In the majority of cases, wastewater from these dwellings are pre-treated in private septic tanks before they are discharged in public sewage or in the natural environment.

The target date is set at the end of 2021 (according to the schedule of the Water Framework Directive's River Basin Management Plans).

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 respect to wastewater treatment, Luxembourg should respect the objectives of the European Urban Waste Water Treatment Directive (Directive 91/271/EEC). The latter have been included in Luxembourg's legislation through a Grand-Ducal Regulation (amended Grand-Ducal Regulation of 13 May 1994 on urban waste water treatment).

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

In order to improve wastewater treatment, a financial participation of 65 million euros was allocated to 165 projects by the Water Management Fund (Fonds pour la gestion de l'eau) in 2018. This decreased the share of the population that is not yet connected to a treatment plant to 8,636 inhabitants².

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

² https://eau.public.lu/publications/rapports_activite/rapport_activite_2018.pdf

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.

Target g.2 consists in building rainwater retention basins and storm water basins.

The target date is set at the end of 2021 (according to the schedule of the Water Framework Directive's River Basin Management Plans).

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).

Luxembourg replaces rainwater overflows with stormwater basins, which allow intermediate storage of the first flush of the combined sewer with the highest pollutant load. In doing so, Luxembourg follows the recommendation of the German Association of Water Management, Sewage and Waste, ATV-DVWK and in particular the Standards for the Dimensioning and Design of Stormwater Structures in Combined Sewers (ATV-A 128). In order to better protect drinking water resources, storm water basins situated in protection zones should be equipped with a filtration basin or equivalent to reduce the pollutant load during discharge periods. Building rainwater retention basins, storm water basins and pumping stations helps managing rainy periods that are likely to intensify as a result of climate change.

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

In order to improve wastewater treatment, a financial participation of 65 million euros was allocated to 165 projects by the Water Management Fund (Fonds pour la gestion de l'eau) in 2018. This decreased the share of the population that is not yet connected to a treatment plant to 8,636 inhabitants³.

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

³ https://eau.public.lu/publications/rapports_activite/rapport_activite_2017.pdf

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.

Target h.1 consists in monitoring discharged waste waters.

Therefore, there is no target date to achieve, but the quality monitoring of discharged water should be maintained at all times.

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).

Luxembourg conducts conformity checks on an annual base, as provided for in Directive 91/271/EEC concerning urban wastewater treatment, transposed into national law by the homonymous amended Grand-Ducal Regulation of 13 May 1994. These investigation campaigns are conducted to verify compliance with safety standards and minimum pollution removal efficiency required. The analytical programme refers to 50 decontamination facilities with a capacity exceeding 2,000 population equivalent. Control is based on cumulated samples collected over a 24-hour period at regular intervals during an entire year on treatment plants' intake and output flows. These investigations are conducted quarterly for stations exceeding 2,000 population equivalent (p.e.), monthly for stations with a capacity between 10 000 and 50 000 p.e. and non-compliant, and fortnightly for stations exceeding 50 000 p.e.

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

The quality of discharged water is constantly monitored.

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

Target i) refers to the use of sewage sludge. In Luxembourg, the use of sewage sludge is regulated by the Grand-Ducal Regulation of 23 December 2014 on sewage sludge. It includes their use in agriculture and fosters their proper use. The Environmental Administration (Administration de l'environnement)

annually reports on sewage sludge generated by municipal wastewater treatment plants. In 2017, the largest part of the sewage sludge, 5.3 tons (62 %) was composted, and part of it abroad (France, Germany).

2.1 tons of sewage sludge have been incinerated (25 %) and the remaining 1.1 ton (13 %) was used in agriculture. ⁴

Thus, the objective has already been achieved.

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).

N/A

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

N/A

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

N/A

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

Thus, the objective has already been achieved

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.

Currently, in Luxembourg, there is no demand for the use of wastewater for irrigation purposes. Following the negotiations at European level concerning the establishment of a regulation laying down the irrigation water quality criteria (Regulation of the European parliament and of the Council on minimum requirements for water reuse), Luxembourg will have to establish the appropriate legal framework.

To date, no target has been set.

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).

⁴ « Jahresbericht der Kläranlagenspezifischen Abfälle 2017 », AEV
<https://data.public.lu/fr/datasets/boues-depuration/>

N/A

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

N/A

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

N/A

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

Currently, in Luxembourg, there is no demand for the use of wastewater for irrigation purposes.

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.

Target j.1 consists in demarcating protection zones around catchment areas used for human consumption. One protection zone is established around the Esch-sur-Sûre drinking water reservoir and a multitude of protection zones are established around groundwater catchment areas.

The target date is set at the end of 2021, according to the schedule of the Water Framework Directive's River Basin Management Plans.

Target j.2 consists in monitoring suppliers having obtained an exemption in order to reach again the maximum limit of 100 ng/l as soon as possible.

The target date is set in 2021.

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).

With regard to target j.1:

Protection zones have been created around the groundwater catchment area used for drinking-water production in order to preserve water resources intended for human consumption. The demarcation of protection zones established is based on protection zones demarcation files established by the operators of these catchments following the conduct of hydrogeological studies.

The protection zones are established by a Grand-Ducal Regulation, pursuant to article 44 of the amended law of 19 December 2008 on water.

With regard to target 2:

A monitoring group meeting **twice** a year with relevant drinking water suppliers has been established.

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

j.1: Currently, 22 Grand-Ducal Regulations have entered into force and 30 Grand-Ducal Regulations are in public procedure⁵. In total, 100 % of the surface water and 90 % of the groundwater used for human consumption are protected or under demarcation.

j.2: Intermediary assessments have been undertaken and many temporary measures have been established by drinking water suppliers. For some suppliers, exemptions have been successfully lifted or will not be extended since the adopted measures have been sufficient to reach concentrations below the threshold values. In other cases, with long-term measures, the effects cannot be observed immediately.

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 target set aims in particular to fulfill targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

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.

Targets j.3 consists in maintaining the quality of waters for bathing in Luxembourg. No target date has been established because bathing waters are all classified as being in perfect condition and this state should be maintained at all times.

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).

Bathing water is regulated by the Bathing Water Directive (Directive 2006/7/EC). The requirements of the Bathing Water Directive have been transposed into

⁵ Protection zones in public procedure (Zones de protection en procédure publique) : <http://g-o.lu/3/A3mR>
Protection zones created by Grand-Ducal Regulation (Zones de protection créées par règlement grand-ducal) : <http://g-o.lu/3/Ween>

national law by the Grand-Ducal Regulation of 19 May 2009, defining special protection measures and the bathing water state monitoring programme. Depending on their level of quality, bathing waters are classified as being of poor, sufficient, good or excellent quality.

In Luxembourg, the quality of bathing waters is defined from 12 monitoring stations. In the past years, bathing waters have been of excellent quality in all 12 stations. The Water Management Authority (Administration de la gestion de l'eau) publishes annually a list of bathing waters⁶.

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

The objective was successfully achieved.

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.5 and 6.6 of the 2030 Sustainable Development Agenda.

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

N/A

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.

In Luxembourg there is no aquaculture, nor shellfishery. Therefore, no targets have been set in this regard.

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).

N/A

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

N/A

⁶ List of bathing waters for 2019: <https://eau.public.lu/actualites/2019/04---Avril/Eaux-de-baignade/index.html>

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

N/A

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

In Luxembourg there is no aquaculture nor shellfishery. Therefore, no targets have been set in this regard.

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.

Target k.1 consists in maintaining the quality level of enclosed bathing water. Therefore, there is no target date to achieve, but quality monitoring of bathing waters should be maintained.

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).

All enclosed bathing waters (public swimming-pools) are inspected at least once a year by the Luxembourg Health Inspection (Inspection sanitaire luxembourgeoise). Controls are carried out in accordance with German standards and recommendations "DIN 19643".

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

This objective was successfully achieved.

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 target set aims in particular to fulfill targets 6.2, 6.3, 6.5 and 6.6 of the 2030 Sustainable Development Agenda.

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

N/A

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

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 I.1 consists in having a law on soil protection passed.

No target date is specified since a draft law is already in regulatory procedure.

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).

A law on soil protection is currently under development, which will allow a systematic approach of the contaminated sites' sanitation goals. Targets will be set according to the intended use of the sites and will ensure sustainable and safe activities on the sites.

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

The draft law is in regulatory procedure.

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 target set aims in particular to fulfill targets 12.4, 15.1, 15.2 and 15.4 of the 2030 Sustainable Development Agenda.

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

N/A

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.

Target m.1 consists in developing a programme of measures and cooperation with the agricultural sector in protection zones.

Programmes of measures should be developed in all protection zones situated around drinking water catchments. The programme of measures should also include cooperation between the drinking water supplier and the agricultural sector in order to raise awareness among agricultural stakeholders and undertake preventive actions with the agricultural sector.

The target date is set at the end of 2021 (according to the schedule of the Water Framework Directive's River Basin Management Plans).

Target m.2 consists in developing Water Safety Plans risk management regarding production and management of drinking-water. Significant risk reduction should be achievable through a proactive behaviour, by recognizing the importance of risk assessment and by adopting a risk management approach.

Water Safety Plans will allow the establishment of risk management

The target date is set in 2020.

Target m.3 consists in conducting studies on potential savings and future needs for drinking water.

Studies should thus determine the water-saving potential still achievable in Luxembourg. They should also determine future needs for drinking water to enable policy makers to take the best possible decisions to ensure security of supply in the country.

The target date is set in 2018.

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).

With regard to measure m.1:

Protection zones have been created around the groundwater catchment area used for drinking-water production in order to preserve water resources intended for human consumption. The demarcation of protection zones established is based on protection zones demarcation files established by the operators of these catchments following the conduct of hydrogeological studies. The protection zones are established by a Grand-Ducal Regulation, pursuant to article 44 of the amended law of 19 December 2008 on water.

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

With regard to measure m.1:

Currently, 22 Grand-Ducal Regulations have entered into force and 30 Grand-Ducal Regulations are in public procedure⁷. In total, 100 % of the surface water and 90 % of the groundwater used for human consumption are protected or under demarcation.

With regard to measure m.2:

The measures will only be put into effect in 2020.

With regard to measure m.3:

A study on water-saving potential was conducted in 2018⁸. Various strategic areas of focus have been identified and concrete measures should now be implemented with all relevant actors.

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 target set aims in particular to fulfill targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Agenda.

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

N/A

⁷ Protection zones in public procedure (Zones de protection en procédure publique) : <http://g-o.lu/3/A3mR>
Protection zones created by Grand-Ducal Regulation (Zones de protection créées par règlement grand-ducal) : <http://g-o.lu/3/Ween>

⁸ https://environnement.public.lu/fr/actualites/2018/mars_2018/Weltwaasserdag.html

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.

N/A

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).

N/A

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

N/A

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

N/A

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

N/A

Part three Common indicators⁹

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.

⁹ 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.

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

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.

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.¹⁰

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.

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 (specify year) | Value reported in the previous reporting cycle (specify year) | Current value (specify year) |
|-----------------------------|---------------|----------------------------------|---|---------------------------------|
| <i>E. coli</i> | Total | | | |
| | Urban | | 0,35 % | 0,45 % |
| | Rural | | | |
| Enterococci: | Total | | | |
| | Urban | | 0,37 % | 0,64 % |
| | Rural | | | |
| Clostridium perfringens: | Total | | | |
| | Urban | | 0,34 % | 0,37 % |
| | Rural | | | |
| Total | | | | |

¹⁰ 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/.

| <i>Parameter</i> | <i>Area/category</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|----------------------------|----------------------|--|--|---|
| Additional parameter 3: | 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; 0 %
- (b) Fluoride; 0 %
- (c) Lead 0 %
- (d) Nitrate. 0,29 %

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.

| <i>Parameter</i> | <i>Area/category</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|------------------|----------------------|--|--|---|
| Arsenic | Total | | | |
| | Urban | | 0 % | 0 % |
| | Rural | | | |
| Fluoride | Total | | | |
| | Urban | | 0 % | 0 % |
| | Rural | | | |
| Lead | Total | | | |
| | Urban | | 0,08 % | 0 % |
| | Rural | | | |
| Nitrate | Total | | | |
| | Urban | | 0,6 % | 0,29 % |

| <i>Parameter</i> | <i>Area/category</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|-------------------------|----------------------|--|--|---|
| | Rural | | | |
| Additional parameter 1: | Total | | | |
| ... | Urban | | | |
| | Rural | | | |
| Additional parameter 2: | Total | | | |
| ... | Urban | | | |
| | Rural | | | |

| <i>Parameter</i> | <i>Area/category</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|-------------------------|----------------------|--|--|---|
| Additional parameter 3: | Total | | | |
| ... | 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.

| <i>Disease</i> | <i>Incidence rate per 100,000 population (all exposure routes)</i> | | | <i>Number of outbreaks (confirmed water-borne outbreaks)</i> | | |
|--|--|--|---|--|--|---|
| | <i>Baseline (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> | <i>Baseline (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
| Shigellosis | | | | | | |
| Enterohaemorrhagic <i>E. coli</i> infection | | | | | | |
| Typhoid fever | | | | | | |
| Viral hepatitis A | | | | | | |
| Legionellosis | | | | | | |
| Cryptosporidiosis | | | | | | |
| Additional disease 1: | | | | | | |
| Additional disease 2: | | | | | | |
| 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 (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|---|--------------------------------------|--|-------------------------------------|
| Total | | | |
| Urban | | | 100 % |
| Rural | | | 100 % |

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.

| <i>Percentage of population with access to sanitation</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|---|--------------------------------------|--|-------------------------------------|
| Total | | | 98 |
| 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 water¹¹ falling under each defined class (e.g., for European Union countries and other countries following the European Union Water Framework Directive¹² 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.).

(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 (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|---|--------------------------------------|--|-------------------------------------|
| High status | 0% (2015) | 0% (2009) | 0% (2015) |
| Good status | 3% (2015) | 8% (2015) | 3% (2015) |
| Moderate status | 23% (2015) | 29% (2015) | 23% (2015) |
| Poor status | 66% (2015) | 53% (2015) | 66% (2015) |
| Bad status | 8% (2015) | 10% (2015) | 8% (2015) |

¹¹ Please specify.

¹² 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.

| <i>Percentage of surface water classified as:</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|---|--|--|---|
| Total number/volume of water bodies classified | 102¹³ | 91¹³ | 102¹³ |
| Total number/volume of water bodies in the country | | | |

(ii) *Chemical status of surface water bodies*

| <i>Percentage of surface water bodies classified as</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|---|--|--|---|
| Good status | 0% (2015) | 30% (2009) | 0% (2015) |
| Poor status | 100% (2015) | 70% (2015) | 100% (2015) |
| Total number/volume of water bodies classified | 110¹⁴ | 102¹⁴ | 110¹⁴ |
| Total number/volume of water bodies in the country | | | |

(iii) *Status of groundwaters*

| <i>Percentage of groundwaters classified as</i> | <i>Baseline value (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|---|--|--|---|
| Good quantitative status | 100% (2015) | 100% (2009) | 100% (2015) |
| Good chemical status | 50% (2015) | 60% (2009) | 50% (2015) |
| Poor quantitative status | 0% (2015) | 0% (2009) | 0% (2015) |
| Poor chemical status | 50% (2015) | 40% (2009) | 50% (2015) |
| Total number/volume of groundwater bodies classified | 6 | 5 | 6 |
| Total number/volume of groundwater bodies in the country | | | |

(b) **For other countries**

(i) *Status of surface waters*

| <i>Percentage of surface water falling under class^a</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 | | | |
| II | | | |
| III | | | |
| IV | | | |

¹³ Le nombre indiqué se réfère au nombre de masses d'eau de surface naturelles définies conformément aux dispositions de la directive-cadre sur l'eau. Les masses d'eau de surface fortement modifiées, pour lesquelles il convient d'évaluer le potentiel écologique, ne sont pas pris en compte.

¹⁴ Le nombre indiqué se réfère au nombre de masses d'eau de surface naturelles et fortement modifiées définies conformément aux dispositions de la directive-cadre sur l'eau.

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

^a Rename and modify the number of rows to reflect the national classification system.

(ii) *Status of groundwaters*

| <i>Percentage of groundwaters falling under class^a</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 | | | |
| II | | | |
| III | | | |
| IV | | | |
| V | | | |
| Total number/volume of groundwater bodies classified | | | |
| Total number/volume of groundwater bodies in the country | | | |

^a 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).

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 (specify year)</i> | <i>Value reported in the previous reporting cycle (specify year)</i> | <i>Current value (specify year)</i> |
|---------------------------------|--|--|---|
| Agriculture | 298.000 m ³ | 290.000 m ³ | |
| Industry ^a | 1.250.000 m ³ | 1.560.000 m ³ | |
| Domestic use ^b | 42.400.000 m ³ | 43.100.000 m ³ | |

^a Please specify whether the figure includes both water abstraction for manufacturing industry and for energy cooling.

^b 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.

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.

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

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 (specify year)</i> |
|-------------------------------|-------------------------------------|
| <i>Schools</i> | |
| Basic sanitation service | |
| Basic drinking-water service | |
| Basic hygiene service | |
| <i>Health-care facilities</i> | |
| Basic sanitation service | |
| Basic drinking-water service | |
| Basic hygiene service | |

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).

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.

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

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

| <i>Percentage of population</i> | <i>Current value (specify year)</i> |
|---------------------------------|-------------------------------------|
| Total | |

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).

Part seven

Information on the person submitting the report

The following report is submitted on behalf of **the Grand Duchy of Luxembourg** in accordance with article 7 of the Protocol on Water and Health.

Name of officer responsible for submitting the national report:

E-mail: bruno.alves@mev.etat.lu

Telephone number: +352 24786864

Name and address of national authority: Ministry of the Environment, Climate and Sustainable Development

Signature:

Date: 23 April 2019

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.

Joint Secretariat to the Protocol on Water and Health

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