



Annex II

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.

The targets and target dates were shared with the UNECE Executive Secretariat 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 mechanisms were used. The targets were established in coordination with the Ministry of the Environment, Climate and Sustainable Development as well as the Water Management Administration. The targets were set in concert 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.

As most targets are already included in other plans, specifically the framework directive on water river basin management plan, or do not include a target date, as they are continuous in nature, no additional activities have been implemented to support reaching these 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 of the targets set by 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 part of the framework directive on water river basin management plan. A public consultation was held pursuant to article 14 of the framework directive on water while drafting the river basin management plan. That consultation was held from 22 March 2015 to 22 August 2015. During that period, the draft management plan was published on the Water Management Administration website, and all concerned parties were able to address their comments to their communal administration, which forwarded them to the appropriate authorities by 22 September 2015. Public information meetings were held on 30 March 2015 and 21 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 was completed by experts from the Ministry of the Environment, Climate and Sustainable Development, as well as the Water Management Administration.

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.

Luxembourg does not have any regional, federal or decentralized decision-making structure other than those at the national and communal level. Communes are responsible for ensuring drinking water supply for their populations, and state bodies provide regulation and control.

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 of constantly raising the awareness of the public and stakeholders working in the area of water with regard to its importance as a resource.

As the overall quality of Luxembourg's drinking water supply is sufficient, target a.1 consists of maintaining high quality drinking water. With regard to quantity, Luxembourg has conducted studies in order to obtain a more accurate estimate of national needs in the mid- and long-term, so as to maintain a high degree of supply. Quality should satisfy the parameters set by Council Directive 98/83/CE of 3 November 1998 on the quality of water intended for human consumption, as well as the Grand Ducal regulation of 7 October 2002 on the quality of water intended for human consumption. There is no target date to reach, but we must continuously maintain high quality drinking water.

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).

Legally, quality must satisfy the criteria set by Council Directive 98/83/CE of 3 November 1998 on the quality of water intended for human consumption, as well as the Grand Ducal regulation of 7 October 2002 on the quality of water intended for human consumption.

Financially speaking, article 9 of the framework directive on water regarding the recovery of costs related to water use must be applied.

With regard to informational/educational measures, in its article 55, the amended law of 19 December 2008 on water provides for watercourse partnerships which aim to bring together water sector stakeholders and the public so as to inform and raise awareness with regard to general and integrated management of the water cycle.

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

We were able to reach this target.

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 is notably aimed at targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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 of maintaining a high-quality water supply and preventing the emergence of water-related diseases.

Luxembourg does not have any epidemics of water-related diseases. Luxembourg's infrastructure and standards ensure that there are no water-related diseases or outbreaks in Luxembourg. Any rare occurrences of an excess in microbiological quality guidance values are closely monitored by government authorities in order to support suppliers as they improve their distribution network.

Therefore, there is no target date to reach. Instead, we must continue working to ensure high-quality drinking water.

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).

Legally, quality must satisfy the criteria set by Council Directive 98/83/CE of 3 November 1998 on the quality of water intended for human consumption, as well as the Grand Ducal regulation of 7 October 2002 on the quality of water intended for human consumption.

Financially, article 9 of the framework directive on water with on recovering costs related to water use must be enforced.

With regard to informational/educational measures, in its article 55, the amended law of 19 December 2008 on water provides for watercourse partnerships, with the aim of bringing together water sector stakeholders and the public so as to provide information and raise awareness regarding general and integrated water cycle management. Pursuant to Directive 98/83/CE, suppliers must inform clients about the quality of drinking water distributed and warn them in case of any noncompliance with the requirements in place.

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

This target was met.

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 is notably aimed at targets 3.3, 3.9, 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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 per cent of the population has access to sufficient quantities of high-quality drinking water.

Therefore, there is no target date to meet, but we must continuously maintain drinking water access for all. As part of this aim, Luxembourg has conducted studies in order to more accurately estimate national needs in the mid- and long term in order to ensure a high degree 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).

Pursuant to the provisions in article 42 of the amended law of 19 December 2008 on water, communes are required to ensure water supply for human consumption in urbanized zones or those to be urbanized, in line with the general development plan, as well as ensuring the water supply of isolated buildings and hamlets located outside of urbanized zones, and that this supply is provided by a commune.

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

We were able to reach this target.

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 is notably aimed at targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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 of ensuring that 100 per cent of the population has access to a water treatment plant.

As of the baseline point in late 2021, Luxembourg had a total of 184 urban water treatment plants with varying capacities. The total purification volume is equivalent to a population of approximately 1,114,326. In all, 99 per cent of the population is connected to a public wastewater treatment network. The share of the population that is not yet connected to a public water treatment plant numbers 6,557. Sewage from these homes is in most cases pre-treated in private septic tanks before it is released into the public sewage system or a natural environment.

The target date set is late 2027 (in line with the framework directive on water river basin management plan timeline).

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 must respect the European directive targets on urban wastewater treatment (directive 91/271/CEE). The targets in this directive have been incorporated into Luxembourgish legislation via a Grand Ducal regulation (the amended Grand Ducal regulation of 13 May 1994 on urban wastewater treatment). In addition, any zone to be urbanized must be linked to a sanitation network, in line with articles 46 to 49 of the amended law of 19 December 2008 on water,

which include urban water treatment and the elimination of urban wastewater collected.

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

With the aim of improving wastewater treatment, financial participation by the Water Management Fund was granted for 218 projects in 2020 in an amount of 56 million euros.

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 is notably aimed at targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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 of maintaining a high-quality drinking water supply.

The quality of both surface water and groundwater is closely monitored with regard to qualitative parameters. Details on drinking water quality monitoring are established by Grand Ducal regulations. Early warning systems are in place in order to prevent drinking water production in cases of accidental pollution.

Therefore, there is no target date to reach, but we must continually ensure high-quality drinking water.

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 supplied in Luxembourg must satisfy standards set by the Council Directive 98/83/CE of 3 November 1998 on water intended for human consumption, which aims to protect the population's health from the negative effects of pollution in water for human consumption, by ensuring its hygiene and cleanliness.

Water supplied must also satisfy standards set by the amended law of 25 September 1953, which aims to reorganize the monitoring of foodstuffs, drinks, and standard goods, as well as standards set by the amended Grand Ducal regulation of 7 October 2002 on the quality of water intended for human consumption.

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

We were able to reach this target.

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 is notably aimed at targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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 of replacing all mechanical water treatment plants with biological water treatment plants. The target date set is late 2027 (in line with the framework directive on water river basin management plan timeline).

As of 2021, Luxembourg still has a total of 63 mechanical water treatment plants, which will either be replaced with new biological water treatment plants in the coming years or connected to existing biological water treatment plants or those currently being expanded.

Target e.3 consists of fulfilling directive 91/271/CEE. Luxembourg must comply with that directive's requirements. Currently, Luxembourg is in line with articles 3, 4 and 5 of that directive, but must improve its compliance with articles 4 and 5.

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 the aim of reducing wastewater pollution, the amended Grand Ducal regulation of 13 May 1994 on urban wastewater treatment sets standards for discharging wastewater from water treatment plants.

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

As of the baseline point, Luxembourg has 63 mechanical water treatment plants, which are being replaced by biological water treatment plants or connected to a biological water treatment plant. Currently, 35 plants are under construction and 54 are in the planning stages.

One of the main challenges to meeting this target is the lengthy process of planning, construction and implementing a new water treatment plant.

Since January 2018, Luxembourg has complied with the standards set by directive 91/271/CEE on urban wastewater treatment for all discharges from urban areas with a population of over 10,000. This allows us to satisfy 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 is notably aimed at targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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 of delineating the protection zones around groundwater catchment facilities used to extract water for human consumption. The target date is late 2021 (in line with the framework directive on water river basin management plan timeline).

In Luxembourg, nearly half of the water used for human consumption comes from groundwater. Regulation of protection zones is also an indispensable tool in improving the quality of groundwater and protecting it from nitrates or pesticide pollutants. Nearly 80 protection zones should be created throughout Luxembourgish territory, which represents about 10 per cent of Luxembourg's area.

Target f.2 consists of developing water safety plans ("Water Safety Plans") in order to ensure risk management for drinking water production and management. Government authorities have implemented an IT tool allowing water suppliers to ensure risk management for their raw resources, catchment infrastructure, processing and distribution. Using this tool will be mandatory in 2020. With proactive measures, recognizing the importance of estimating risk and adopting a risk management approach, major risk reduction in drinking water production and management should be feasible. 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).

In order to preserve water resources used for human consumption, protection zones are created around groundwater catchment facilities used for drinking water production. Boundaries around these protection zones are based on the demarcation of protection zones established by users of those catchment facilities following hydrogeological studies. The protection zones are established by 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 being examined in a public procedure. In all, 100 per cent of surface waters and 90 per cent of groundwater used for human consumption are protected or being delineated.

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 is notably aimed at targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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.

Objective f.3 consists of participating in micropollutant management research projects.

In order to develop a wastewater micropollutant management strategy, notably for wastewater from medical residue, several research programmes will be supported (PILLS, NO-PILLS, EmiSure...). The NO-PILLS project, for example, is a European cooperation project in several countries, with the aim of reducing water pollution caused by pharmaceutical waste and technical measures, specifically by reducing the share of medical components in wastewater by modifying consumer behaviour and sustainably eliminating unused medicines and potentially developing technological innovation.

There is no specific target date, as this research project is already underway.

Objective f.4 consists of implementing a bilateral convention between Luxembourg and the Walloon Region of Belgium.

In order to develop deeper cooperation between the Grand Duchy of Luxembourg and the Walloon Region of the Kingdom of Belgium, thereby ensuring better implementation of the directive 91/271/CEE of 21 May 1991 on urban wastewater treatment, the directive 91/276/CEE on protecting water from nitrate pollution caused by agricultural sources and the framework directive on water (2000/60/CE), a framework convention was established between the two partners, with the aim to jointly carry out sanitation projects (shared water treatment plants), groundwater protection projects (transboundary protection zones) and develop information exchange and collaboration for monitoring, production and the application of livestock manure on transboundary livestock farms.

The convention was signed on 9 April 2019 in Martelange and was approved by the law of 29 March 2021 approving the Convention between the Grand Duchy of Luxembourg and the Walloon Region of Belgium regarding wastewater treatment, the protection of catchment facilities for drinking water and monitoring the directive on nitrates, signed in Martelange on 9 April 2019.

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 project is underway.

Regarding target f.4, the draft Convention was finalized and approved by the Luxembourgish and Walloon governments. The final Convention was signed on 9 April 2019 and approved by the law of 29 March 2021 approving the Convention between the Grand Duchy of Luxembourg and the Walloon Region of Belgium on wastewater treatment, the protection of catchments for drinking water and monitoring the directive on nitrates signed in Martelange on 9 April 2019.

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

We were able to meet all of the targets.

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

This target is notably aimed at targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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 of connecting 100 per cent of the population to a water treatment plan. As of the reference date in late 2021, we had a total of 184 urban water treatment plants in Luxembourg with a wide variety of treatment capacities. The total purification volume is equivalent to a population of about 1,114,325.

In all, 99 per cent of the population is connected to the public wastewater treatment network. The share of the population that is not yet connected to a public water treatment plant is 6,557 inhabitants. In most cases, wastewater from these homes is pre-treated in private septic tanks prior to being discharged into the public sewage system or natural environment.

The target date established is late 2027 (pursuant to the framework directive on water river basin management plan timeline).

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).

When it comes to wastewater treatment, Luxembourg must respect targets from the European directive on urban wastewater treatment (directive 91/271/CEE). The targets of this directive were incorporated into Luxembourgish legislation via a Grand Ducal regulation (the amended Grand Ducal regulation of 13 May 1994 on urban wastewater 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, financial participation by the Water Management Fund was granted to 218 projects in 2020, for a total of 56 million euros.

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 is notably aimed at targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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

N/A

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 of building rainwater retention basins and storm drain systems.

The target date set is late 2027 (pursuant to the framework directive on water river basin management plan timeline).

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 is replacing rainwater overflow with storm drain systems, making it possible to store the first runoff from combined sewer lines with the largest pollution loads. Thus, Luxembourg is following the recommendation of the German Association for Water, Wastewater and Waste Management, ATV-DVWK, and specifically, the standards for sizing and designing rainwater structures in combined sewers (ATA-A 128). With a view toward better protection of drinking water resources, the storm drainage systems in protection zones must be equipped with a filtration basin or its equivalent in order to reduce the pollution load during discharge periods. Building rainwater retention basins, storm drainage systems and pumping stations makes it possible to manage rain periods, which run the risk of intensifying due to 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 sewage treatment, the Fund for Water Management participated financially in 218 projects in 2020, for a total of 56 million euros.

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 is notably aimed at targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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

N/A

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 of monitoring wastewater discharge.

Therefore, there is no target date to reach, but it is worth maintaining ongoing monitoring of the quality of wastewater discharge.

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 annual compliance checks, as laid out by European directive 91/271/CEE on treating urban wastewater, which was adopted into national legislation by the amended Grand Ducal regulation of 13 May 1994 of the same name. These research campaigns were conducted in order to verify compliance with discharge standards, as well as minimum decontamination returns. The analytical programme is focused on 53 decontamination plants with a capacity greater than the equivalent of 2,000 inhabitants. Controls are based on cumulative sample collection over a 24-hour period taken at regular intervals over an entire year at the entrance and exit of wastewater treatment plants. This research was conducted quarterly in the case of plants for an equivalent population of greater than 2,000 inhabitants, monthly for plants handling an equivalent of 10,000 to 50,000 inhabitants, and bimonthly for plants handling an equivalent of greater than 50,000 inhabitants.

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

We conduct ongoing monitoring of wastewater discharge.

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 is notably aimed at targets 6.2, 6.3, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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) concerns the use of sewage sludge. However, in Luxembourg, the use of sewage sludge is governed by the Grand Ducal regulation of 23 December 2014 on sewage sludge, including its use for agriculture, and promoting its correct use. The Administration of the Environment issues an annual report on sewage sludge generated by municipal wastewater treatment plants. In 2020, the largest share of sewage sludge, 4,441 tons (46 per cent) was incinerated. Some of this was done abroad (BE, DE).

A total of 3,001 tons of sewage sludge was composted (32 per cent), and the remaining 2,060 tons (22 per cent) were reused in agriculture.

The target has already been reached.

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.

The target 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.

There is currently no demand for using wastewater for irrigation in Luxembourg. Following European-level negotiations on the implementation of a regulation setting quality criteria for irrigation waters (Draft Regulation of the European Parliament and Council on Minimum Requirements for Water Reuse), Luxembourg shall implement the appropriate legal framework.

Currently, 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).

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, there is no demand for reusing wastewater for irrigation in Luxembourg.

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 of delineating all protection zones around water catchments used for human consumption. Currently, 45 Grand Ducal regulations have been published on the creation of protection zones:

- **One Grand Ducal regulation on the creation of protection zones around the Upper Sure Lake,**
- **44 Grand Ducal regulations on the creation of protection zones around groundwater catchments,**
- **8 draft Grand Ducal regulations currently in regulatory procedure and about 30 delineation records being carried out, which should be finalized prior to beginning any regulatory procedures on the creation of protection zones.**

Initially, protection zones were expected to be finalized for all catchments prior to the end of 2021. The most realistic projection as of today is late 2027.

Target j.2 consists of closely monitoring providers who have obtained a waiver in order to reach the 100 ng/l maximum value as quickly as possible. The target date set is 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).

Regarding target j.1:

In order to preserve the water resources used for human consumption, protection zones are created around groundwater catchments used for producing drinking water. Delineating these protection zones is based on the protection zone delineation records established by the users of these catchments following a hydrogeological study. The protection zones are established via Grand Ducal regulation, pursuant to Article 44 of the amended law of 19 December 2008 on water.

Regarding target j.2:

A monitoring group consisting of biannual meetings with drinking water providers has been created.

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

j.1: Currently, 45 Grand Ducal regulations have entered into force and 30 Grand Ducal regulations are in public procedure¹. In all, 100 per cent of surface water and 90 per cent of groundwater used for human consumption is protected or currently being delineated.

j.2: Interim assessments have been carried out and many specific measures have been implemented by drinking water providers. For some providers, waivers have been lifted or should not be prolonged, as the measures implemented have been sufficient to attain concentrations below the threshold values. In other cases, the impact has not been seen immediately, as these are long-term measures.

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 is notably aimed at targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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.

Target j.3 consists of maintaining high quality bathing water in Luxembourg. No target has been established, as the bathing water is classified as being excellent, and we must continue to maintain this 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).

Bathing water quality of regulated by the directive on bathing water (directive 2006/7/CE). The requirements of this directive have been adopted into national law via the amended Grand Ducal regulation of 19 May 2009 determining special protection measures and monitoring programmes for bathing water quality. According to its quality level, bathing water can be classified as insufficient, sufficient, good or excellent quality.

In Luxembourg, bathing water quality is determined by 12 monitoring stations. Over the last several years, bathing water has presented excellent quality in all 12 stations. The Water Management Administration publishes a bathing water list each year².

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

¹ Protection zones in public procedure: <http://g-o.lu/3/A3mR>

Protection zones created via Grand Ducal regulation: <http://g-o.lu/3/Ween>

² Bathing water list for 2019: <https://eau.public.lu/actualites/2019/04---Avril/Eaux-de-baignade/index.html>

The target was reached.

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 is notably aimed at targets 6.2, 6.3, 6.5 and 6.6 of the 2030 Sustainable Development Programme.

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.

There is no aquaculture or shellfish production or harvesting in Luxembourg. 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).

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.

There is no aquaculture or shellfish production or harvesting in Luxembourg. No target has been set.

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 of maintaining the quality of enclosed bathing waters.

Therefore, there is no target date to reach, but we must continue to monitor bathing water quality.

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 water (public pools) is monitored at least once per year by the Luxembourgish Sanitation Inspection. The monitoring is conducted pursuant to 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 target was attained with the exception of one measure in 2020 and 2021, as sanitation inspection teams were mobilized in response to the COVID-19 crisis.

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 is notably aimed at targets 6.2, 6.3, 6.5 and 6.6 of the 2030 Sustainable Development Programme.

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 (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.1 consists of voting on a law on soil protection.

There is no target date indicated, as the 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 being drafted, which would permit a systematic approach to the sanitation of contaminated sites. The targets will be set based on expected use of the sites and ensure that any activities conducted at the sites are safe and sustainable.

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

The draft law is currently 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 is notably aimed at targets 12.4, 15.1, 15.2 and 15.4 of the 2030 Sustainable Development Programme.

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 of developing measurement and cooperation programmes with the agriculture sector within protection zones.

Measurement programmes shall be developed in all protection zones surrounding drinking water catchments. The measurement programme shall also include cooperation between the drinking water provider and the agriculture sector, in order to raise awareness of agriculture stakeholders and conduct preventive activities with them.

The target date set is late 2021 (pursuant to the framework-directive on water river basin management plan timeline).

Target m.2 consists of developing Water Safety Plans.

The Water Safety Plans will make it possible to conduct risk management in drinking water production and management. Proactive steps and recognizing the importance of risk assessment, along with adopting a risk management approach should make it possible to greatly reduce risks in drinking water production and management.

The target date set is 2020.

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

The studies shall determine potential water savings feasible in Luxembourg. They shall also determine future drinking water needs, in order to ensure that policy decision-makers are able to make the best choice to guarantee the security of Luxembourg's drinking water supply.

The target date set is 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).

Regarding measure m.1:

In order to preserve water resources used for human consumption, protection zones are created surrounding groundwater catchments used for the production of drinking water. Delineating the protection zones is based on protection zone delineation records established by the users of these catchments, following hydrogeological studies. The protection zones are established via 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.

Concerning measure m.1:

Currently, 22 Grand Ducal regulations have entered into force and 30 Grand Ducal regulations are in public procedure³. In all, 100 per cent of surface water and 90 per

³ Protection zones in public procedure: <http://g-o.lu/3/A3mR>

Protection zones created via Grand Ducal regulation: <http://g-o.lu/3/Ween>

cent of groundwater used for human consumption is protected or currently being delineated.

Concerning measure m.2:

The measures will not be implemented until 2020.

Concerning measure m.3:

A study on potential water savings was conducted in 2018⁴. Various strategic axes were identified, and specific measures shall be implemented with all concerned stakeholders.

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 is notably aimed at targets 6.1, 6.4, 6.5 and 6.b of the 2030 Sustainable Development Programme.

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

N/A

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

N/A

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

N/A

⁴ https://environnement.public.lu/fr/actualites/2018/mars_2018/Weltwaasserdag.html

Part Three

Shared indicators⁵

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).

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.⁶

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 (2016)	Current value (2019)
<i>E. coli</i>	Total			
	Urban		0.45 %	0 %

⁵ 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.

⁶ 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 (2016)</i>	<i>Current value (2019)</i>
	Rural			
Enterococci:	Total			
	Urban		0.64 %	5 %
	Rural			
Clostridium perfringens:	Total			
	Urban		0.37 %	0.36 %
	Rural			
Additional parameter 2:	Total			
	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.

<i>Parameter</i>	<i>Area/category</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (2016)</i>	<i>Current value (2019)</i>
Arsenic	Total			
	Urban		0 %	0 %
	Rural			
Fluoride	Total			
	Urban		0 %	0 %
	Rural			
Lead	Total			
	Urban		0 %	0%
	Rural			
Nitrate	Total			

<i>Parameter</i>	<i>Area/category</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (2016)</i>	<i>Current value (2019)</i>
	Urban		0.29 %	0 %
	Rural			
Additional parameter 1:	Total			
	Urban			
	Rural			
Additional parameter 2:	Total			
	Urban			
	Rural			
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	2015-0.52	2020-2.05	2020-2.05	0	0	0
Enterohaemorrhagic <i>E. coli</i> infection	2015-0.7	2020-0	2020-0	0	0	0
Typhoid fever	2020-0	2020-0	2020-0	0	0	0
Viral hepatitis A	2015-0.87	2020-1.74	2020-1.74	0	0	0
Legionellosis*	2010-1.97	2020-1.58	2020-1.58	0	0	0
Cryptosporiosis		2020-10.44	2020-10.44	0	0	0
Additional disease 1:						

Disease	Incidence rate per 100,000 population (all exposure routes)			Number of outbreaks (confirmed water-borne outbreaks)		
	Baseline (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)	Baseline (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year))
Additional disease 2:						
Additional disease 3:						

* Ten to 12 cases of Legionellosis were counted per year, but they were not categorized (patient diagnosis is most often limited to urinary antigen and cultures are not available for assessing genotype). Water-borne infections cannot be excluded from cases in which a water sample from the patient's environment is positive.

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.

Percentage of population with access to drinking water	Baseline value (specify year)	Value reported in the previous reporting cycle (2016)	Current value (2021)
Total			
Urban		100 %	100 %
Rural		100 %	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.

Percentage of population with access to sanitation	Value reported in the previous reporting cycle		
	Baseline value (2020)	(2017)	Current value (2020)
Total	99%	99 %	99%
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 water⁷ falling under each defined class (e.g., for European Union countries and other countries following the European Union Water Framework Directive⁸ 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.).

⁷ Please specify.

⁸ 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 (2015)</i>	<i>Value reported in the previous reporting cycle (2015)</i>	<i>Current value (2021)</i>
High status	0 %	0 %	0 %
Good status	3 %	3 %	0 %
Moderate status	23 %	23 %	51 %
Poor status	66 %	66 %	22 %
Bad status	8 %	8 %	20 %
Total number/volume of water bodies classified			98
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 (2015)</i>	<i>Value reported in the previous reporting cycle (2015)</i>	<i>Current value (2021)</i>
Good status	0 %	0 %	0 %
Poor status	100 %	100 %	100 %
Total number/volume of water bodies classified			
Total number/volume of water bodies in the country			

iii) Status of groundwaters

<i>Percentage of groundwater classified as:</i>	<i>Baseline value (2015)</i>	<i>Value reported in the previous reporting cycle (2015)</i>	<i>Current value (2021)</i>
Good quantitative status	100 %	100 %	100 %
Good chemical status	50 %	50 %	50 %
Poor quantitative status	0 %	0 %	0 %
Poor chemical status	50 %	50 %	50 %
Total number/volume of groundwater bodies classified	6	6	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</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 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 groundwater 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 (2017)</i>	<i>Current value (2020)</i>
Agriculture		290,000 m ³	650,000 m ³
Industry ^a		1,560,000 m ³	3,720,000 m ³
Domestic use ^b		43,100,000 m ³	42,800,000 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.

Additionally, monitoring and a response to extreme climate events is in place, in collaboration with the High Commission for National Protection and as part of the Health Directorate missions (health threat prevention missions).

[Law of 21 November 1980 on organization of the Health Directorate - Legilux \(public.lu\)](#)
[Law of 17 March 2016 amending the amended law of 21 November 1980 on the organization of the Health Directorate; amended law of 3 August 1998 creating special pension regimes for state and commune civil servants and for officers of the Société Nationale des Chemins de Fer Luxembourgeois;- amended law of 31 May 1999 on the creation of a Grand Ducal police force and general police inspection;- law of 25 March 2015 creating a special transitional regime for state and commune civil servants as well as officers of the Société Nationale des Chemins de Fer Luxembourgeois;- law of 25 March 2015 determining the salary system and benefits for government employees;- amended law of 25 March 2015 setting the salary system and conditions and terms of advancement for state civil servants \(public.lu\)](#)

Some procedures have not yet been formalized and assessed, and communication with the public is currently being improved. The Gouvalert system sends text messages to the population in case of potential disasters related to climate change, such as the recent flooding.

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.

Since 2019, a new Grand Ducal regulation on diseases subject to obligatory declaration has entered into force, allowing the use of an online declaration (for both physicians and laboratories). This new system improves efficacy as well as health inspection reaction time.

Additionally, digitalization is in progress for managing declarations and surveys, as well as reporting (Sormas) to authorities, and eventually the public.

The High Commission for National Protection manages alerts, especially those related to climate events or other disasters and coordinates stakeholders who intervene in case of alert.

[Law of 23 July 2016 on the creation of a High Commission for National Protection and amending a\) the amended law of 23 July 1952 on military organization; b\) the law of 8 December 1981 on requisitions in case of armed conflict, serious international crisis or disaster; c\) the amended law of 2 August 2002 on the protection of persons with regard to personal data management; d\) the amended law of 25 June 2009 on public markets; e\) the amended law of 9 December 2005 determining the conditions and modes of nominating some civil servants holding director positions in government administration and services; f\) the amended law of 25 March 2015 setting the salary system and conditions and modes of advancement for government civil servants. – Legilux](#)

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

Luxembourg interacts within the EWRS (Early Warning and Response System), which is a communications tool for monitoring and preventing disease. Through the EWRS, Luxembourg communicates with foreign authorities in cases of incidents concerning public health. In this context, any case of epidemic infection with an impact on other countries will be reported. Conversely, we also receive reports from other countries in cases of incidents that may have an impact on our population.

The WHO's IHR (International Health Regulation) provides for various communication channels in cases of incidents concerning public health. Any alert with a potential impact on public health is reported to the WHO, and governments must implement a response in order to monitor the health threat. Like all other countries, Luxembourg is involved in the IHR, and the focal point (health inspection) is responsible for implementing appropriate health responses and issuing alerts.

Luxembourg also collaborates with the ECDC (European Centre for Disease Prevention and Control) to monitor any diseases reported, particularly water-borne diseases. In case of an alert, for example, over the summer of 2021 when flooding led to a potential risk of water contamination in several European countries, Luxembourg contributed to the rapid risk assessment published by the ECDC (<https://www.ecdc.europa.eu/en/publications-data/rapid-risk-assessment-extreme-rainfall-and-catastrophic-floods-western-europe>)

Other water systems? See water management?

Other administrations and Ministry of Communications and DISA

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 healthcare facility;*

(b) *Basic drinking water service: Water from an improved source (according to JMP definition) is available at the school or healthcare 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	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).

Directive (EU) 2020/2184 of the European Parliament and Council on the quality of water intended for human consumption is being adopted into Luxembourgish legislation. This directive ensures close monitoring of legionella in healthcare facilities.

Legionella in healthcare facilities European directive

Hospitals are currently monitoring legionella. Reconstruction of new hospitals is also planned for existing old buildings, which will make it possible to remove any facilities that may have been contaminated.

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>Percent 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: Bruno Alves

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

Telephone: (+ 352) 2478-6864

Name and address of national authority:

Ministère de l'Environnement, du Climat et du Développement Durable

4, place de l'Europe, L-1499 LUXEMBOURG

Signature:



Date: 27.04.2022

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.

Joint Secretariat to the Protocol on Water and Health

United Nations Economic Commission for Europe
Palais des Nations
1211 Geneva 10
Switzerland
(E-mail: protocol.water_health@unece.org)

World Health Organization Regional Office for Europe
WHO European Centre for Environment and Health
Platz der Vereinten Nationen 1
53113 Bonn
Germany
(E-mail: euwatsan@who.int)
