
Template for summary reports in accordance with article 7 of the Protocol on Water and Health – The Netherlands

Executive summary

Overall The Netherlands complies with the majority of the requirements of the Protocol on Water and Health. Nearly everybody has access to drinking water and sanitation. Regulations with regard to drinking water quality, quality of drinking water resources, good status of waters, water management are in place and have been implemented throughout the institutional organisations responsible for water management. Public consultation with regard to water management issues and projects is an integral part of the Dutch legal and governance system. Despite the high level of achievement new challenges require further attention, for example with regard to climate change, emerging substances, pharmaceuticals, plastics, and microbial health issues. In addition to the second river basements management plans the national and regional water authorities, drinking water companies, and local authorities are working together to tackle new challenges. Examples are the recent Administrative Agreement on Climate Adaptation to work together on climate resilience of the water management, including climate resilient drinking water and sanitation provision and the Administrative agreement between authorities on cooperation in the whole water management to guarantee a sustainable and affordable water- and sanitation provision in the Netherlands in the future. Another example is the boost on the water quality via the Delta programme on water quality which also includes challenges with regard to pharmaceuticals and emerging substances. Also additional measures on nitrate in sources are foreseen.

With regard to international cooperation inter alia takes place in four international river basin commissions (Meuse, Ems, Scheldt and Rhine). The cooperation covers all water management issues like surface and groundwater quality, water ecology, flood protection, droughts (low waterlevel situations), and warning and alarm systems. The international commissions are platforms to coordinate the implementation of EU water Directives. The Ministries of Foreign Affairs; Economic Affairs; and Infrastructure and Watermanagement have joint their efforts in the field of international water cooperation. The collaborative goal is to increase the water security of urbanizing delta's and their supply systems over the time period 2016-2021. Besides bilateral activities NL also invests in multilateral cooperation. Within the Protocol on Water and Health NL was co-lead for workarea 5 on safe and efficient anegemnt of drinking water supplies and sanitation. In this area two workshops were funded and co-organized, one on climate resilient drinking water and sanitation planning, and one on sanitation in the Pan European region. Furthermore a study has been done by the RIVM on state of the art and challenges on sanitation in the Pan-European region in cooperation with WHO and UN-ECE. Furhermore NL supported capacity building activities under this work-area. The Netherlands supported also the work under the Water Convention inter alia by funding and as co-chair of the Task Force on Water and Climate and several activities in this area.

Although a lot of provisions of the Protocol on Water and Health have already been implemented in the Netherlands, there will be continuing challenges in the future as defined in the new water policy plans of the Netherlands. Several challenges will be dealt with and reported under EU Directives. Most of the current national targets under the Protocol are not always sensible for the Netherlands, or for the scope of the respective articles of the Protocol on Water and Health, and need to be reviewed. The coverage for drinking water and sanitation is almost 100%. The quality of drinking water supplied has already reached a high level. The quality of sewage water does already comply with the UWWT Directive. The current quality of all the bathing water complies with the Bathing Water Directive. A lot of current targets

are already extensively dealt with implementation of the Water Framework Directive. The Netherlands strives for keeping up the high level performance in the sanitation sector, drinking water sector, and overall water sector. The development of strategies to deal with upcoming issues and challenges are in hand. It is clear that the goals of the Protocol covers the Sustainable Development Goals 6 on sanitation and drinking water. Therefore currently work being done on review of the targets, in relation to water-related SDGs and the Ostrava Declaration.

Part one

General aspects

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

YES NO IN PROGRESS

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

The targets were established in 2011 according Art. 6 of the Protocol Water and Health and submitted to the secretariat (September 2011) and published on the UNECE Protocol's homepage.

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.**

The targets are in general adopted from targets set under European Directives such as the Water Framework Directive (2006/60/EC), the Bathing Water Directive (2006/7/EC), the Urban Waste Water Directive (98/15/EC) and the Drinking Water Directive (98/83/EC). There were no arrangements between authorities with regard to the target setting under the Protocol. However there are arrangements and working structures in place for target setting under the policy fields described, including strong involvement of the competent authorities for water management. The Ministry of Infrastructure and Environment has the leadership and coordination with respect to the national water system. In the Netherlands all bodies dealing with water are involved, including the Ministries, the National Water Authority and Regional Water Authorities, provinces, municipalities and drinking water companies.

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.**

Within the target setting of the described policy fields all relevant existing national, EU and international strategies and legislation were taken into account. Reference is made to existing policy plans and programmes. Important policy papers that time were the national policy plan on Drinking Water, Water management¹ and the River Basin Management Plans (RBMPs)². In these plans the international strategies of the International Committees for the four river basins of NL (Rhine³, Meuse⁴, Ems⁵ and Scheldt⁶) are taken into account. Drinking Water

¹ Nationaal Water Plan (<https://www.rijksoverheid.nl/documenten/brochures/2011/03/28/nationaal-waterplan>)

² River Basin Management Plans NL (http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm)

³ <http://www.iksr.org/en/international-cooperation/legal-basis/convention/index.html>

⁴ <http://www.meuse-maas.be/Accueil.aspx>

⁵ <http://www.ems-cems.nl/>

⁶ <http://www.isc-cie.org/NL/>

Protection Files consisting of measures to reduce risk to drinking water resources contribute to RBMPs. The plans are updated in the meanwhile or currently under evaluation.

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?

There was no specific public participation in the process of target setting under the Protocol. Public participation is part of the process of target setting within the framework of mentioned legislation and policy. There was extensive public participation in the process of target setting for several Dutch water plans through informing the public and by public consultation. The River Basin Management Plans (WFD implementation), National Water Plan and other Water Plans drafted by the Regional Water Authorities, provinces and national government were made available for public consultation.

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 is prepared by the Ministry of Infrastructure and Environment, the Ministry of Health, the National Institute for Public Health and Environment (RIVM), National Water Authority (Rijkswaterstaat (WVL). The report is send to the Ministry of Foreign Affairs, the Union of Regional Water Authorities, Union of Municipalities and Vewin (Association of Dutch Drinking water companies).

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.

Part two

Targets and target dates set and assessment of progress

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.

National target NL: Reduce the number of instances of non-compliance with drinking water quality limit values (expressed as a % of non-compliance with limit values). For microbial parameters (WatSan_S2 indicator) and for chemical parameters (WatSan_S3), for public water supply serving over 5,000 inhabitants. Target date 31-12-2013. Target indicator: % non-compliance with limit values for the WatSan_S2 (0.5%) and WatSan_S3 (0.1%).

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

The baseline condition is to provide drinking water for the total population of a good quality (wholesome and clean), sufficient quantity and assurance of delivery based on EU DWD 98/83 EC and art 4 of the Dutch Drinking Water Act. In the Netherlands there is extensive legislation on drinking water (quality). Additional there are guidances on operational level. Safe water quality at the tap is guaranteed through a multi-barrier risk assessment/risk

management (RA/RM) approach. Remediation plans are in place in case of local outbreaks (boiling water decrees, emergency flushing/chlorination of distribution system). The source water is extensively monitored (for micro-organisms with the use of QMRA in 5 yearly cycles since 2005). The policy plan on drinking water describes further measures which have been taken or which are under development⁷. Threats concerning drinking water quality mainly arise on source water level. In order to define measures to improve the quality of the sources drinking water protection files were elaborated (see VII). For non-regulated substances and emergings substances special programme is established. Drinking water companies are working o improvement of risk-based monitoring inte alia on bass of the amended Annex III of the current Drinking Water Directive. Another issue of concern is the quality of materials and products used in the drinking water distribution, mainly the in-house installations. In this perspective work has been done on the policy and regulation of hygienic requirements for materials and products in contact with drinking water, such as a regulation on hygienic requirements. The Drinking Water policy plan is currently under evaluation.

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

Target is achieved and under review. Challenges are inter alia emerging substances and effects of climate change.

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 contributes to SDG 6.1, to achieve universal and equitable access to safe and affordable drinking water for all. The target gives an indication of total exceedences and trends over the years for choosen parameters. This gives information about the need for additional measures. The outcome strongly depends on the choosen parameters for WatSan S2 (selection of microbial parameters) and S3 (selection of chemical parameters).

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

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.

- National targets NL: Follow the results of the current national system reporting water-related diseases and epidemics (including Legionellosis and swimming water infections): Reporting Act Public Health. If possible improve the system. Deadline: 31.12.2013. Target indicator: methodological recommendation.
- Publish yearly an overview of reported water-related diseases. Deadline 31.12.2012. Target indicator: report issued (yes-no).

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

The RIVM annually reports on the number of recreational water, swimming pool related disease incidents and Legionella incidents. Data for these reports are obtained from the

⁷ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

authorities responsible for bathing water quality, i.e. the provinces and Regional Water Authorities, and from the Public Health Authorities (GGD).

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

The RIVM publishes yearly an overview of reported water-related diseases in the Infection diseases Bulletin. The annual number of Legionnaire's disease in the Netherlands was fairly constant the last decades. However the number is increasing the last years. In many cases, the source of the contamination is not known. Although the numbers of cases is low the Ministry of Health, Welfare and Sport (VWS), is funding a research project focused also on other sources of Legionellosis than drinking water⁸. In 2018 additional research is being done Ministry of Infrastructure and Watermanagement on Waste Water Treatment Plants (WWTP) after cases related to WWTP. For bathing waters the EU Bathing Water Directive parameters are incorporated in the reporting system. In EU Bathing Water Directive 2006/7/EC, no targets are set for cyanobacteria in bathing waters. Cyanobacteria cause water quality problems and are often the reason for closures to protect the public from being exposed. There is no official registration system for nuisance of cyanobacterial blooms, however authorities may report these in the aforementioned recreational water related disease incident registration. The targets are achieved and currently under review.

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

These target contributes mainly to SDG 3.3 End neglected tropical diseases and combat water-borne diseases and SDG 3.d. Strengthen early warning, risk reduction and management of health risks. An adequate registration systems makes it possible to have an overview of cases and trends, and is important to define possible measures to reduce cases.

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

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.

National NL: In the Netherlands the coverage for public drinking water supply is around 100%. The relative small number of private small supplies (f.i. camping grounds) is temporarily used. No target date is set. Target indicator: % of the population connected to public drinking water 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).

The target is based on the condition to provide drinking water for the total population of a good quality (wholesome and clean), sufficient quantity and assurance of delivery on basis of EU DWD 98/83 EC and article 4 of the Dutch drinking water Act. The Netherlands has a connection obligation for drinking water suppliers in the Drinking Water Act. The installation of a drinking water supply in homes is regulated through the Building Regulations. There are no specific groups that do not have access to clean drinking water. NL has a careful closing procedure and social policy legislation to support citizens with financial problems <https://wetten.overheid.nl/BWBR0031481/2018-07-01>. Assurance of delivery now and in

⁸ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

the future is an important goal; especially with regard to emerging threats like climate change and security issues. According to the Dutch drinking water Act it is mandatory to develop delivery plans including a paragraph on risk analyses on serious risk (security). These documents are approved by the Inspectorate. Assurance plans are partially derived from the EU Floods Directive; which demands the identification of vulnerable areas. More knowledge has been gained on severity of certain threats, making is preparedness and response plan better targeted. The Policy Paper on Drinking Water of 2014 also established to assign strategic water stocks and national reserves and promote cooperation in the water supply chain⁹. Another goal is to provide drinking water to a reasonable price. Municipalities and provinces are public shareholders. Dutch water companies have engaged in a voluntary exercise to benchmark their performance against each other, in order to improve their efficiency and increase transparency covering four areas: water quality, service, environment, and finance and efficiency¹⁰. Since 2011 this process is mandatory to our Drinking Water Act for all drinking water companies. Consumer satisfaction surveys are conducted every three year by the association of drinking water companies (VEWIN). See also under V.

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

Target of 100 % connection is met for decades and under review to define more specific 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.**

The target contributes to SDG 6.1, to achieve universal and equitable access to safe and affordable drinking water for all, as it covers the percentage of people connected to drinking water premises.

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

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.**

National target NL: For sewerage and waste water treatment the coverage is around 100%. No target date is set. Target indicator: % of the population connected to sewers; % of treated waste 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).**

Access to sanitation in buildings is regulated in national Building regulations. Institutional sanitation in schools and healthcare facilities, including access to handwashing and hygienic care facilities is regulated in sectoral hygiene regulations and guidances¹¹. The focus of the target is sewerage and household waste water. In the Netherlands, the municipality is responsible for the collection and transport of urban waste water (Environmental Management Act), the Regional Water Authority, and when applicable the municipality, is

⁹ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

¹⁰ http://www.vewin.nl/SiteCollectionDocuments/Publicaties/English%20publications/Vewin_reflections_on_performance_2012.pdf

¹¹ <https://www.rivm.nl/landelijk-centrum-hygiene-en-veiligheid-lchv>

responsible for the transport and treatment of urban waste water (Water Act)¹². National waste- and water legislation define the duties of care to Regional Water Authority and municipalities. The municipal sewage plan (GRP) is the policy framework for the execution of the duties of care. This plan expires when the Environment and Planning Act enters into force, and will become part of a municipal environmental plan and vision document. Measures are inter alia based on the requirements of the EU Urban Waste Water Directive and the Water Framework Directive. For sewerage and urban/rural waste water treatment the covering is around 100%. Measures in the municipal sewerage and Regional Water Authority plans are focused on maintenance of the system and improvement, also in perspective of climate change.

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

See also under 2. Target is achieved. In relation to 2016 progress has been made. At this moment only 0.5 % of the households have no connection to Urban Wastewater Treatment Plants. Of these households 0.4% have individual treatment, 0.1% have no treatment (see also Part Thwo, under IX and X). Target is currently under review.

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 contributes to SDG 6.2 Achieve access to adequate and equitable sanitation and hygiene for all, end open defecation and pay special attention to the needs of women and girls and those in vulnerable situations and 6.3. Improve water quality by reducing pollution, halve the proportion of untreated wastewater and increase recycling and safe reuse.

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

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: For Drinking Water: performances as stated in the Drinking Water Act and Decree. No target date 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).

There are several legal instruments to secure good performance of the drinking water supply in the national Drining Water legislation. In the Netherlands performace comparison is mandatory. Every three year a performace comparison has to be done. In the Drinking Water Decree the performance indicators are set, which must at least appear in the performance comparison. The indicators have four perspectives: 1. quality of the drinking water supplied, 2. environmental effects, 3. customer satisfaction and 4. cost efficiency. Pursuant to the national Drinking Water Decree, the rates must be cost-effective, transparent and non-discriminatory. The drinking water companies must make it clear that their rates meet these requirements. Supervision of this lies with the Inspectorate, advised

¹² <https://circabc.europa.eu/sd/a/d423b03f-93c2-4fbc-9254-e0d23d587c53/Task%202%20EU%20Member%20States%20legislation> (see page 341-353)

by the Authority for Consumers & Market (ACM). To make the cost calculation the drinking water companies are obliged to use a cost price model. The cost price model is based on the integral budget of the company. The drinking water companies and their shareholders (public) are responsible for investments including investments for replacing the distribution network. They must ensure that the investments match the assignment so that none there is underinvestment and overinvestment and ensure investment statements fixed in multi-year investment plans. In addition the Inspectorate checks compliance with regard to security and continuity of the drinking water supply on basis of the so-called delivery plans of the drinking water companies.

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

Recent evaluation of efficiency shows points for improvement. New data follow in short notice. The target is currently under review.

- 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 contributes to SDG 6.1, to achieve universal and equitable access to safe and affordable drinking water for all.

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

- 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.**

National target NL: For treated waste water as stated in the permits issued by the authorities towards the Regional Water Authorities. No date set. Target indicator: standards UWWTP Directive

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

The Urban Wastewater Treatment Directive aims to protect the environment from the adverse effects of urban waste water discharges. To this end, the Directive stipulates which provide all agglomerations must be of a sewer system and thus collected sewage is adequately treated. The reduction of oxygen-binding substances in biological sewage treatment plants was already in place in the Netherlands. Netherlands applies Article 5.4 and 5.8 of the Directive to the whole territory. In addition the national Environmental Law is applicable for discharges. The sewerage charge is determined by the municipal council and provides for the financing of construction and management of the municipal sewerage system (WOZ). The treatment charge is set by the water board and finances the treatment of household waste water (VVEs). Agreements have been made in the Administrative Water Management Agreement for the efficient management of the water chain.

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

The EU UWWPT Directive according to article 5.4 states a goal of a reduction of N and P by 75%. The goal for total phosphorous was reached in 1996, the goal total nitrogen was

reached in 2006¹³. However the emissions are not restricted to N and P. The environmental objectives of inter alia the Water Framework Directive may give rise to regional take additional measures to increase the degree of treatment¹⁴. The 11th baseline report describes measures taken and the situation at end 2016¹⁵. In addition activities are in hand with regard to adaptation, inter alia based on Administrative Agreement on Climate Adaptation¹⁶ and a national programme on pharmaceuticals¹⁷ and action related to One Health approach against microbial resistance.

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 contributes to SDG 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations and 6.3. By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

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

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.

National targets NL: Drinking water sources according the Dutch Drinking Water Decree and Dutch Decree on Quality Requirements and Monitoring on Water BKMW (implementation of the WFD and of Directive 75/440/EEC); WFD especially article 7. 1 – 3.

1. 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).

Remediation measures have been formulated and implemented inter alia to the RBMPs¹⁸. Additionally, the national government together with provinces, water boards, municipalities, drinking water companies and stakeholders set up a ‘Delta approach’ to tackle issues that are not specifically elaborated in the RBMP’s. Especially, efforts are undertaken to meet challenges with emerging substances such as microplastics and pharmaceuticals. Specifically, for protection of drinking water resources *drinking water protection files* have been composed. These files hold a risk assessment for the abstraction sites. The experience with the drinking water protection files has raised awareness related to the protection of drinking water resources of authorities, but also to the fact that for an effective remediation of measures more insight is necessary in the relation between measures and water quality and an active enforcement from all stakeholders and actors at different policy levels. To realize these improvements a national working group has renewed the protocol.

¹³ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0045&from=EN>

¹⁴ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

¹⁵ <https://www.helpdeskwater.nl/onderwerpen/emissiebeheer/afvalwater/stedelijk-communaal/rapportage-eu/>

¹⁶ <https://www.rijksoverheid.nl/documenten/rapporten/2018/11/20/bestuursakkoord-klimaatadaptatie>

¹⁷ <https://www.rijksoverheid.nl/onderwerpen/geneesmiddelen/medicijnresten-in-water>

¹⁸ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

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

Programmes of measures has been defined for all water intake locations. Effects of measures are yet to be determined¹⁹. In the 2nd RBMPs and recent policy papers on (drinking) water management^{20,21} it is stated that even with measures already taken many drinking water companies will have to invest because of problems caused by pollutants²². The target of WFD article 7.3 with regard to lowering purification effort is not reached. Recently a national programme on non-regulated and emerging substances is established²³. The target is under review.

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 contributes to SDG 6.1, 6.2 and 6.3.

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

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.**

National target NL: Meet the requirements of the WFD and management of quality systems for sewage collection and waste water treatment systems. No target date set. Indicators standards BKMW and Drinking Water Decree.

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).**

See part two nr IV, VI, IX and X.

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

See part two nr IV, VI, IX and X. Target is currently under revision.

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 contributes to SDG 6.2 and 6.3.

¹⁹ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

²⁰ <http://www.helpdeskwater.nl/onderwerpen/wetgeving-beleid/nationaal/nationaal-waterplan/>. See brochure Our water in the Netherlands

²¹ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

²² http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

²³ <https://www.rijksoverheid.nl/documenten/rapporten/2018/11/19/bijlage-1-uitvoeringsplan-opkomende-stoffen-in-water>

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

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.

National target NL: Targets for these items are formulated in the Water Act. No date is set. Indicator is reduction of the number (or volume) of discharges of untreated waste water

- 1. 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).**

See part IV, VI, VIII and X.

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

Only 0.5 % of the households have no connection to Urban Wastewater Treatment Plants. Of these households 0.4% have individual treatment, 0.1% have no treatment. Progress has been made. Further measures are foreseen according to the River Basin Management Plans.

- 3. 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 contributes to SDG 6.2, 6.3 and 6.6.

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

- 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.**

National target NL: Targets for these items are formulated in the Water Act. No target date 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).**

The aim is to reduce storm water overflow as much as possible to avoid contamination of water with chemicals and pathogens. Waterboards and local authorities deliberate municipal sewage plans which contain targets for operation and maintenance of sewage systems and improvement plans (see Part Two, section IV). The plans contain at least 'a summary of the provisions for the collection and transport of urban waste water, the collection and treatment of rainwater and the locations of storm water outlets and overflows to the surface water present in the municipality. In addition, the proposed measures to prevent or minimize adverse effects on groundwater are described. Such measures may for example have the form of a public drainage system such as drainage pipes, drainage ditches, drainage crates or percolation facilities'. Since 2008, a specific duty of care for rainwater is established in article 3.5 of the Water act. Where appropriate, wastewater collection systems are equipped with settling tanks and other physical measures. Also, separated sewage systems are used where rainwater is separated from other wastewater. For a complete overview of measures see:

Assessment of impact of storm water overflows from combined waste water collecting systems on water bodies (including the marine environment) in the 28 EU Member States²⁴.

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

Between 2009-2015 95 discharges of untreated storm water overflows have been reduced (see summary of the RBMP's) and more was planned from 2016 – 2021. In total reductions of 152 discharges are planned (see Program of measures of RBMP's)²⁵. A challenge is more periods of heavy rain due to climate change. Agreements are made and work is being done on climate resilience²⁶. New data will become available for the third round of RBMPs.

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

SDG 6.2 and 6.3

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

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.**

National target NL: Targets for these items are formulated in the Water Act and worked out in the permits issued by the authorities. No target date 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).**

See information Part Two section VI, VII, VIII, IX and X.

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

See VI, VII, VIII, IX, X. Target is currently under review.

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

SDG 6.2 and 6.3

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

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.**

²⁴ <https://circabc.europa.eu/sd/a/d423b03f-93c2-4fbc-9254-e0d23d587c53/Task%20%20EU%20Member%20States%20legislation> (see page 341-353)

²⁵ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

²⁶ <https://www.rijksoverheid.nl/documenten/rapporten/2018/11/20/bestuursakkoord-klimaatadaptatie>

No target is 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).

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

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

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

The EU UWWT Directive sets restrictions on the use and disposal of sewage sludge. The sludge is incinerated for nearly 100% in the Netherlands. Stringent standards are laid down in the Decree on fertilizer use. On the other hand pilots are ongoing to abstract the phosphorus from the sludge as well as for producing biogas. On a national scale the Top Sector Water was established (PPP consortium lead by the Ministry of Economic affairs). One of the focus areas is water technology including resource efficiency. In 2016, 14 WWTPs were equipped with facilities for the recovery of raw materials, mainly phosphorus and cellulose. Biogas is produced at 77 WWTPs and there are now 12 so-called energy plants in operation; that is, WWTPs that are energy neutral or supplying. This number will increase to a few dozen in the coming years.

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.

No target is 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).

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

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

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

Under review. Climate change will further increase the pressures on safe and adequate water supply and sanitation provision; therefore the practice of reuse is likely to increase. These water reuse activities and future trends require monitoring of potential health risks and safe management strategies. Waste water reuse can be used as a measure to reduce water scarcity. For the moment reuse for irrigation purposes is only taken up in pilot projects. As the pressure on safe and sufficient water supply might increase due to climate change, the interest in reuse might also increase. In order to stimulate the uptake of safe reuse for irrigation purposes the European Commission has proposed in 2018 a regulation setting minimum requirements for water reuse. This regulation is likely to come into force sometime between 2020 and 2023.

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.**

National target NL: Meet the requirements for achieving ‘good status’ for all waters as set out in the Water Frame Work Directive 2000/60/EC. Target date: 31-12-2017. Indicator Water quality standards.

- 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 WFD the Netherlands take measures the basis of generic policy for the production of drinking water and additional measures. See also the RBMPs of the Netherlands). In 2010 the drinking water protection files were introduced as a means for managing risks around drinking water abstraction points (catchment areas). In 2015, the drinking water protection files for all abstraction points have been completed and have been submitted as input for the WFD 2016-2021 implementation plan. A mid-term evaluation showed a skew towards the risks that were already on the spectrum whereas emerging risks could also be incorporated into the assessment. For instance to assess the effects of plans for urbanization, industrial activities that are underway or in a planning phase. See also Part Two section VII.

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

The combination of water quality of resources and the treatment facilities are sufficient to produce good quality drinking water that meets the objectives. The resources themselves however face water quality issues at about 50 % of the locations. For 25 % of the locations the WFD-objective Article 7.3 is not met . See also Part Three, section VII. The target and indicator “good status” is not suitable for human health and therefor under review. recent developments, in particular related to the nitrate problem (which was also emphasized in the EIR study by COM). Additional measures are taken for example in 2017 the 6th NAP, including the management agreements for the water catchment areas²⁷ and in 2018 the strengthened enforcement strategy of LNV²⁸

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

SDG 6.1 and 6.3.2 and 6.6

²⁷ see [https://www.rijksoverheid.nl/documenten/kamerstukken/2017/12/22/kamerbrief-aanbieding-zesde-actieprogramma-nitraatrichtlijn-2018-%E2%80%9C80%20\(93-2021\)](https://www.rijksoverheid.nl/documenten/kamerstukken/2017/12/22/kamerbrief-aanbieding-zesde-actieprogramma-nitraatrichtlijn-2018-%E2%80%9C80%20(93-2021))

²⁸ (<https://www.rijksoverheid.nl/documenten/kamerstukken/2018/09/28/kamerbrief-over-versterk-handhavingings-enforcement-manure-regulation>).

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.**

National target NL: For the defined bathing areas, draw up “bathing water profiles” as per Article 6 of Directive 2006/7/EC) characterising the given bathing water and identifying pollution risks, including corrective measures. Date: 31-12-2015. Indicator: water quality standards

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

The aim of the Bathing Water Directive is to protect the health of swimmers in surface waters (inland and coastal water), taking into account the preservation, protection and improvement of the quality of the environment. The Bathing Water Directive is implemented in the Law hygiene and safety bathhouses and bathing, and the Decree hygiene and safety bathhouses and swimming areas. It establishes goals to be met by the quality of bathing water. Water bodies designated as bathing waters are part of the register of protected areas. Netherlands has designated bathing waters. The responsible parties are the provinces and water managers. Their role is defined in the Water Act and Water Decree. One of the requirements is creating and updating bathing water profiles (including a description of the water, resources, risk analysis and measures including time schedule .

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

The target was reached in 2012. In 2017, a new bathing water report was released²⁹, indicating that water quality at 95% of the 719 identified bathing water locations in The Netherlands complied with the requirements for classification ‘sufficient or excellent’ as specified in the EU Bathing Water Directive 2006/7/EC; Only 2.8% out of 719 locations classified as poor. Overall the bathing water quality could therefore be considered quite good. Special attention is given for the occurrence of algal blooms and cyanobacteria in the Netherlands.

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

SDG 3.3 and 3.9

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**

²⁹ <https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/assessments/state-of-bathing-water/country-reports-2017-bathing-season/netherlands-2017-bathing-water-report/view>

national and international legislation) and justification for the adoption of the target.

National target NL. Meet the requirements for achieving 'good status' for all waters as set out in the Water Frame Work Directive 2000/60/EC. Target date: 31-12-2027 . No indicator defined.

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

The Shellfish Directive and Fish Directive are withdrawn in 2013. The implementation of the WFD will provide a level of protection which least equivalent to that provided by existing legislation. Additional environmental quality has been for shellfish in protected areas for bacteriological infection associated with risks for human consumption. For the actions taken to reach good status under the WFD reference is made to the second river basin management plans of 2016 - 2021.

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

The 2nd RBMP show that water quality has improved in recent years. The number of water bodies with healthy fish stock has increased. Surface water quality is adequate in most places for almost all uses. Nevertheless water quality is however good status is not reached. This sets a task for realizing a better hydromorphology of water bodies and reducing harmful substances, under which nutrients, plant protection products and emerging substances like medicines and (micro)plastics. Applicability of target to be reviewed inter alia with regard to EU directives EG 853/2004 and EG 854/2004 which give requirements for areas used for aquaculture and shellfish harvesting to be classified (A, B, C). It is known that the indicator organism *E. coli*, used to predict the faecal contamination of shellfish production waters, is not a reliable parameter in determining the Norovirus contamination of shellfish. Therefore an EFSA 2-year research programme was started in November 2016 to assess the proportion of EU classified production areas contaminated with Norovirus .The analysis of the samples has been realized in November 2018. A possible result of the study is that norovirus may be considered as a 5th parameter (next to *E.coli*, marine biotoxins and potentially harmful algae, and chemical contaminants). A recommendation on parameters will follow in the next years.

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

SDG 3.3 and 6.6.

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

For each target set in this area:

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

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

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

No target set. See XV

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.**

No specific target set. Reference is made to WFD goals.

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).**

See section XIV and XV with regard to the WFD goals.

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

NL has specific legislation on soil protection in place. A covenant between governments for the remediation of contaminated sites that pose severe risks is in place (e.g. protected drinking water areas). Other less urgent contaminated sites are managed within de RBMP's. See program of measures as part of the RBMP's

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

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 NL: General WFD goals. On ongoing basis.

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).**

Regular monitoring and evaluation of policies and legislation takes place. On the basis of these evaluations, policies and/or legislation may be changed. See also under point 3 below. Also internationale evaluations are taken into account such as studies of EC and OECD. Recently OECD evaluated the extent to which Dutch water governance is fit for future challenges, and outlines an agenda for the reform of water policies in the Netherlands³⁰. The

³⁰ <http://www.oecd.org/governance/regional-policy/water-governance-netherlands.htm>

findings highlight the long-standing excellent track record of Dutch water governance in several areas: the system has managed to “keep Dutch feet dry” and to develop a strong economy and robust water industry. Yet the conclusion is that NL will need to adapt its water governance policies to meet the looming challenges of shifting demographics, regional development and climate change. Effectiveness is also part of studies of the Netherlands Environmental Assessments Agency ^{31,32}

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

The quality and quantity of water resources is under pressure. In recent decades, the chemical quality of Dutch surface water - ditches, ponds, canals, lakes, streams and rivers – has been improved. The load with toxic substances, as well as the load with fertilising substances is less. The current water quality is generally sufficient for user functions, such as the preparation of drinking water (although with purification), use in agriculture (drinking water livestock and irrigation) and swimming. The water applies to these functions must be in order at specific locations (such as bathing water locations or at drinking water extraction points) and for specific parameters. Nevertheless, there are also points for attention. For example, it has insufficient surface water quality in recent years led to a temporary cessation of drinking water intake. Every season it happens that there is swimming locations a swimming ban is imposed in connection with the flowering of blue-green algae. And most waters do not yet meet all quality elements of the desired chemical- and ecological quality according to the European Water Framework Directive (WFD). There are also developments that require attention. New substances such as medicines, microplastics and nanoparticles can cause cause problems for water quality. Effects of climate change, such as prolonged drought, an increase in the rainfall, increased peak discharges and rise in water temperature can lead to a lack of oxygen for fish, faster growth of algae in nutrient-rich waters, displacement of native aquatic plants by exotics and a stronger growth of pathogens. The presence in the surface water of substances derived from the human origin is a problem that, in the longer term, is groundwater quality threatens. Therefore new policy is being developed. In 2016, governments, civil society organizations and knowledge institutions jointly signed the Delta Declaration on Water Quality and Freshwater, with the aim of "giving a strong boost" to improving water quality. For example, analysis and research processes have evolved to policy on emerging substances and funding has been made available for source measures and additional treatment of wastewater ³³Furthermore agreements are made under the Climat Adaptation agreement to work together with several authorities on climate resilience, including sanitation and drinking water provisions. As 2018 lead to drought in the Netherlands a special programme on Drought should prepare the Netherlands for expected periods of drought in the future. Finally, in 2020 a new Policy Plan for drinking water will be established.

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

SDG6 as a whole and SDG3

³¹ <https://www.pbl.nl/publicaties/effectiever-beleid-meer-waterkwaliteit>

³² <https://themasites.pbl.nl/balansvandeleeftomgeving/wp-content/uploads/pbl-2018-balans-van-de-leeftomgeving-2018-3160.pdf>

³³ Ketenaanpak Medicijnresten (bijlage 846666 bij Kamerstuk 27625, nr. 434), een Uitvoeringsprogramma Aanpak Opkomende stoffen in water (bijlage 863036 bij Kamerstuk 35000J, nr. 7)

Part three

Common indicators³⁴

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 data reported under sections 2 and 3 give an overview of 2017. The total population in NL in 2017 was 17,08 million. The population coverage is almost 100% for central drinking water supplies. There are approximately 250 small water supplies (mostly recreational camp sites). For a consolidated overview see also the publication “Drinking water Fact sheet 2017” from the Association of the Dutch water companies (Vewin) (Dutch Drinking Water Statistics 2017).

The water quality data provided in tables below are based on reporting of RIVM (National Institute for Public Health and the Environment) and ILenT (Human Environment and Transport Inspectorate) and is based on information obtained from the individual drinking water suppliers.

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 samples taken for drinking water quality are taken by drinking water suppliers. They take samples at:

- The inlet points for surface water and groundwater used for the production of drinking water
- Several points during treatment (depending on the drinking water source and treatment process)
- The outlet of the drinking water treatment plants
- The distribution systems
- The user endpoint (consumers tap)

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

³⁴ 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.

Health Organization (WHO) guideline values, please provide information on the standard values.

The National standards are based on the European Drinking Water Directive (EU-DWD Council Directive 98/83/EC). Currently, the EU works on the revision of the Drinking Water Directive (6876/1/19 REV 1 of feb. 27 2019). Some of the national standards are lower than WHO guideline values as stated in the current revision of the EU DWD: acrylamide 0.10 µg/L, benzene 1.0 µg/L, benzo[*a*]pyrene 0.01 µg/L, chlorate 0.25 mg/L, chlorite 0.25 mg/L, chromium 25 µg/L, 1,2-Dichloroethane 3.0 µg/L, epichlorohydrin 0.10 µg/L, mercury 1.0 µg/L, nickel 20 µg/L, nitrite 0.5 mg/L, selenium 30 µg/L, tetrachloroethene 10 µg/L, trichloroethene 10 µg/L, trihalomethanes 100 µg/L.

Several standards are added in the revision of EU legislation: HAAs 60 µg/L, pesticides (single) 0.10 µg/L and pesticides (total) 0.5 µg/L, sum of PFASs 0.10 µg/L, polycyclic aromatic hydrocarbons 0.10 µg/L. The national standard for cadmium (5.0 µg/L) is higher in the current revision of the EU DWD than in the WHO guidelines.

Several standards are added in national legislation: *Cryptosporidium*, enteroviruses, *Giardia* and campylobacter (together to be used for a Quantitative Microbial Risk Analysis, QMRA), polychlorobiphenyls, *Aeromonas* spp., temperature, hardness, oxygen. Signalling values of 1 µg/L are added for several parameters, e.g.: AOX, aromatic amines, chlorophenols, diglyme, ETBE, MTBE, halogenated monocyclic hydrocarbons, halogenated aliphatic hydrocarbons and other anthropogenic substances. Other anthropogenic substances are substances that are not mentioned otherwise as parameters in legislation but that can be a threat to the drinking water supply. The signal values are a trigger for toxicological evaluation when exceeded.

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.³⁵

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.

In 2017, 0.02% of the samples failed the national standard for *E. coli* (14 out of 57,466 samples). 0.04% of the samples taken for enterococci failed the national standard (1 out of 2,417). 2.27% of the samples taken for legionella failed the national standard (38 out of 1,670).

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.

³⁵ 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>
<i>E. coli</i>	Total	0.03 (2011)	0.04 (2014)	0.02 (2017)
Additional parameter 1: Enterococci	Total	0.20 (2011)	0.27 (2014)	0.04 (2017)
Additional parameter 2: Legionella	Total			2.27 (2017)

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 (specify year)</i>	<i>Current value (specify year)</i>
Arsenic	Total	0 (2011)	0 (2014)	0 (2017)
Fluoride	Total	0 (2011)	0 (2014)	0 (2017)
Lead ³⁶	Total	0 (2011)	0 (2014)	0 (2017)
Nitrate and nitrite	Total	0 (2011)	0 (2014)	0.03 (2017)

³⁶ Yearly average on basis of at random daytime monitoring

<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 1: pesticides	Total	0 (2011)	0 (2014)	0 (2017)
Additional parameter 2: nitrite	Total	0.03 (2011)	0.03 (2014)	0.06 (2017)
Additional parameter 3: manganese	Total	0.09 (2011)	0.78 (2014)	0.07 (2017)
Additional parameter 4: sulphate	Total	0 (2011)	0 (2014)	0 (2017)
Additional parameter 5: Other anthropogenic substances	Total			0.07 (2017)

II. Outbreaks and incidence of infectious diseases related to water

Data are obtained from the national database under the Public Health Act (Wet Publieke Gezondheid) and the State of Infectious Diseases 2017. The database contains the numbers of reported cases of diseases that are notifiable under the Public Health Act. A distinction between cases that were contracted in The Netherlands or abroad was not made.

<i>Disease</i>	<i>Incidence rate (cases per year) (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	714 (2011)	360 (2014)	510 (2018)			
Enterohaemorrhagic <i>E. coli</i> infection	842 (2011)	753 (2014)	485 (2018)			
Typhoid fever	16 (abroad (2008)	20 (abroad (2014)	20 (2018)			
Viral hepatitis A	120 (2011)	105 (2014)	187 (2018)			
Legionellosis	280 (2011)	370 (2014)	592 (2018)			

Cryptosporiosis No
data

Additional disease 1:

Additional disease 2:

Additional disease 3:

III. Access to drinking water

In the Netherlands, 10 publicly owned drinking water companies provide the population with drinking water. The number of people not served by these companies is marginal. Access to safe drinking water is a right on basis of the national constitution (art. 22): according to the national constitution 'the government will take measures to promote human health.' According to JMP, the access to drinking water is 100% of the population of the Netherlands by pipes into premises. Additional information on the statistics of the Dutch drinking water companies is provided by Vewin.

<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 (2011)	100 (2014)	100 (2017)
Rural	100 (2011)	100 (2014)	100 (2017)

- 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

Data are based on national estimates from the Rioned Foundation³⁷ and Statistics Netherlands.

³⁷ Het nut van stedelijk waterbeheer : monitor gemeentelijke watertaken 2016

Municipalities (355 as per January 1st. 2019) are responsible for sewage collection and maintenance of the systems, the Regional Water Authorities administer the wastewater treatment plants (326 plants in total (2017)).

<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			
Urban	99 (2011)	99 (2014)	99 (2018)
Rural	99 (2011)	99 (2014)	99 (2018)

- 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 water³⁸ falling under each defined class (e.g., for European Union countries and other countries following the European Union Water Framework Directive³⁹ 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.).

³⁸ Please specify.

³⁹ 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 classification⁴⁰

(i) Ecological status of surface water bodies

Percentage of surface water classified as:	Baseline value (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)
High status	0 / 0% (2009)	0 / 0% (2015)	0 / 0% (2018)
Good status	3 / 0.4% (2009)	3 / 0.4% (2015)	2 / 0.3% (2018)
Moderate status	249 / 34.8% (2009)	269 / 38.6% (2015)	259 / 37.2% (2018)
Poor status	315 / 44% (2009)	335 / 48.1% (2015)	332 / 47.6% (2018)
Bad status	149 / 20.8% (2009)	90 / 12.9% (2015)	101 / 14.5% (2018)
Total number/volume of water bodies classified	716	697	697
Total number/volume of water bodies in the country	719 (+ 5 Territorial Waters not counted)	711	708

(ii) Chemical status of surface water bodies

Percentage of surface water bodies classified as	Baseline value (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)
Good status	506 / 73.9% (2009)	278 / 40.2% (2015)	279 / 43.1% (2018)
Poor status	179 / 26.1% (2009)	413 / 59.8% (2015)	368 / 56.9% (2018)
Total number/volume of water bodies classified	685	691	647
Total number/volume of water bodies in the country	724	711	711

(iii) Status of groundwaters

Percentage of groundwaters classified as	Baseline value (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)
Good quantitative status	23 / 100% (2009)	23 / 100% (2015)	23 / 100% (2018)
Good chemical status	14 / 60.9% (2009)	20 / 87% (2015)	20 / 87% (2018)
Poor quantitative status	0 / 0% (2009)	0 / 0% (2015)	0 / 0% (2018)

⁴⁰ <https://www.eea.europa.eu/themes/water/european-waters/water-quality-and-water-assessment/water-assessments/groundwater-quantitative-and-chemical-status>

<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>
Poor chemical status	9 / 39.1% (2009)	3 / 13% (2015)	3 / 13% (2018)
Total number/volume of groundwater bodies classified	23 (2009)	23 (2015)	23 (2018)
Total number/volume of groundwater bodies in the country	23 (2009)	23 (2015)	23 (2018)

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).

These classification results have in general no meaning with regard to the overall water quality status and cannot be compared between member states. The methodology behind 'one-out-all-out' (the worst parameter determines the score for a water body) implies that the more parameters are observed, the lower the percentage. NL has an almost complete monitoring program. As an example: where 60% of the surface water bodies is in poor chemical status, only 5% of the individual chemical assessments does not meet the objective. Finally, for the assessment of 2015, NL used already the new (more stringent) targets of the Priority Substance Directive of 2013. Therefore, the improvement of the water quality (that can be observed) is not reflected with these data. Member states and the European Commission accept the drawbacks of the methodology (see several documents of the Strategic Coordination Group and Water Directors meeting). Therefore, NL does not accept to use these data in comparison between member states and as a basis for conclusion of national performance.

The classification of surface water bodies and groundwater bodies is in general not only based on human health criteria but mostly on ecology related criteria. The qualifications are in general not directly relevant for human health. The quality of water sources in relation to human health is however under pressure, including with regard to chemical substances like pesticides, nitrate, old contaminants and emerging substances like drugs and cosmetics and microbiological challenges like antimicrobial resistance and increasing occurrence of pathogens. There are also challenges to face with regard to climate change demanding even more attention to the protection of (drinking) water sources.

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 (2011)</i>	<i>Value reported in the previous reporting cycle (2011)</i>	<i>Current value (2016)⁴¹</i>
Agriculture	0.1%	0.1%	0.1%
Industrial activities, Mining and Energy sector ^a	9.6%	9.6%	7.2%
Domestic use ^b (Public water supply systems)	1.3%	1.3%	1.4%

⁴¹ Data on 2017, 2018 are not available yet.

^a All activities in NACE /ISIC classes 05-39, including (energy) cooling.

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

The data in the table on the water exploitation index (WEI) has been changed compared to the previous report. In the previous report the figures of 2011 were not representing the water exploitation index but the share of each sector in the total freshwater abstraction. For 2011, the data in the table now also represent the WEI. The WEI is calculated as the annual abstraction of water (per sector) divided by the long term annual average of the total renewable freshwater resource at the country level. The value for industrial activities decreased significantly from 2011 to 2016 because some powerplants using freshwater for cooling were replaced by new powerplants located at the Northsea coast. These plants use marine water for cooling.

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.

In the Netherlands there is no specific system for water-related infectious disease surveillance. There are however, several systems that support the signaling or registration of incidences. Among which are:

- Bathing/recreational water diseases can be reported to the National Institute for Public Health and the Environment directly or via the municipal health services. Recreational water related diseases incidence is being registered by RIVM and is yearly reported on (https://www.rivm.nl/Onderwerpen/Z/Zwemwater/Zwemwaterenqu_te).
- Clusters of (water-related) disease incidences could be registered by the weekly meeting for signaling of infectious disease at RIVM, which may lead to prompt further source investigation and attribution in relation to water (<https://signalen.rivm.nl/>). However, when it concerns common infectious diseases and the number of patients is small, such a cluster will not be taken into account in the signaling meeting.

- Early warning and communication system to the public related to drinking water. Drinking water companies report to the inspectorate in case of non-compliant measurements in the source water of chemical and microbiological water safety.

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.

- RIVM has been involved in Legionella research for many years. Regulation and legislation is focused on drinking water, bathing water and cooling towers. In relation to waste water there is no legionella legislation. Recent development in research and technologies for treatment of waste water show that favorable conditions for Legionelle growth are being created. That has resulted in legionella infections in people living near water treatment plants, near multiple locations. Yet, other sources of legionella have also been discovered. Continued research is warranted, especially also in relation to climate change effects. (<https://www.rivm.nl/legionella>)
- To prevent water related disease caused by unboiled drinking water consumption, in the Dutch Drinking Water Act a health-based norm is prescribed of 10^{-4} cases of infection that are allowed with regard to drinking unboiled water produced from surface water. In Guidance document 5318 of the Inspectorate (<https://library.wur.nl/ebooks/hydrotheek/1798751.pdf>) a guidance on quantitative microbial risk assessment (QMRA) is provided for drinking water companies. This Guidance is currently under review.
- A protocol on cyanobacteria for bathing/recreational water sites is currently under development.

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.

6.5.a National or local measures to coordinate the competent authorities

Target NL: Included in the coordination of the WFD and the national Water Act

Progress: Part of the government structure in the Netherlands. Please see also descriptions above and in Part I. Further agreements are made in so-called Administrative Agreements on performance of the watermanagement, and Administrative Agreements on Climate Resilience and the Deltaplan on Waterquality and Waterquantity.

6.5.b. Water management plans

Target NL: According the WFD catchment areas management plans are made for the national parts of transboundary catchment areas of the rivers Rhine, Meuse, Scheldt and Eems. Target date 2015.

Progress: Plans for national parts of transboundary catchment areas are available. Plans have been subject to public consultation and submitted to the EC.

9.1 a; Improving public awareness regarding the importance of water management and public health and their interaction;

Target NL: Improving the population's awareness through publications and web sites.

Progress: going concern, some examples:

Zwemwater.nl, the website that allows people to see whether swimming in natural water is safe. Since a year, there also is a free app, called "Zwemwater". Information on bloom of algae is also available via the website of the waterboards: <https://waves.databank.nl/dashboard/Dashboard/>

A map with the known cooling towers (that are a risk for spreading legionella through the air) is made available for the public in 2016. People who think they see a cooling tower that is not on the map, can report it in a simple way to the authorities. See www.atlasleefomgeving.nl/nattekoeltorenkaart.

For primary and secondary schools education there is a 'watereducationportal' which links guestspeakers from the drinking water sector and regional water authority to schools (teachers with an interest for water education) <https://www.watereducatie.nl/in-de-klas/basisonderwijs> information about the possible hazards.

Furthermore the government launched a website called "Our Water" <https://www.onswater.nl/> and in various policy dossiers there is increasing attention for citizens and the role for citizens to reach the policy goals.

9.2 a; Promoting a better understanding among those responsible for water management, water supply and waste water treatment of the public health aspects of their work;

Target NL: Continue to stimulate the organisations to develop training programmes for water management and public health organisations

Progress: going concern

9.3; Promoting the education and training of specialists and technicians necessary for managing water sources and operating water supply and waste water treatment systems and to improve their knowledge and skills and acquaint them with the latest scientific knowledge. This education and training will cover the relevant public health aspects

Target: Support the stabilisation of the education system for professional water and sewer mains specialists in the area of infrastructure engineering and technology

Progress: going concern, examples are

Education: There are several institutes entirely devoted to training professionals and academics in the national and international water sector. Examples are UNESCO-IHE Institute for water education <https://www.unesco-ihe.org>; Watercampus Leeuwarden <http://watercampus.nl/en/> and Wateropleidingen: <https://www.wateropleidingen.nl/>

Bachelor and master degrees (at regular academic universities and universities of applied science)

Young Expert Programme: Recent graduates in the field of water management and technology have the opportunity to apply for a 1-2 year positions with WaSH related companies that have projects in a developing countries: Companies submit project proposal and the Netherlands Water Platform(NWP) selects candidates. Companies are partially funded and graduates stay connected with other Young Experts during their international project.

For graduates who wish to work in the Dutch water sector there is a national traineeship programme which functions similar to the YEP Water programme. Regional water authorities, drinking water companies, large engineering bureaus and other water management related parties may submit proposals <http://www.nationaalwatertraineeship.nl/>

In de Administrative Agreement on Water (2011) municipalities and regional waterboards have agreed on gaining efficiency in water chain management and save up to € 380 mln./y. Therefore these parties cooperate in 50 regional partnerships to share knowledge, work

together on asset management and joint investment in sanitation and treatment. Activities are stimulated by the national program “Kenniscoaches”.

9.4 a; Encouraging research and development of cost-effective methods and techniques for preventing, controlling and restricting the incidence of water-related diseases;

Target: Support research and development in water quality improvement through departmental grant agencies of the agriculture and environment ministries.

Progress: Agencies of the Ministries receive grant by means of the financing of programmes defined by the Ministries on basis of knowledge and policy needs. The government, provinces, water boards, drinking water companies, STOWA, Deltares, KWR, WUR and RIVM start a so-called Water Quality Knowledge Impulse program. The aim is to work more together to gain more efficiently insight into the quality of groundwater and surface water and the factors that influence this quality. Another example is research under the umbrella of the One Health programme.

9.4 b; Developing integrated information systems to work with information on long-term trends, current concerns and past problems and successful solutions in the field of water and health, and provision of this information to the competent authorities.;

Target: Current systems will be used to develop this information (no 6.2.n).

Progress: Continuous work is being done to develop integrated information systems.

An example is the Informatiehuis Water (IHW). The IHW is a cooperation of watermanagers (waterboards, provinces, Rijkswaterstaat) to work on uniform, accessible information about water. The Water Quality Portal (WKP) collects, manages and provides access to the data for the WFD in a user friendly manner and makes it possible to present a consistent picture of the Dutch water quality. But the Water Quality Portal is a broader platform than for WFD reports. As surface water managers to annually their chemical water quality data.

Another example is the monthly Infectious Disease Bulletin in which information on water related disease outbreaks are being reported and .

Routine monitoring of the Dutch drinking water utilities is assembled in the REWAB database. This database encompasses over 80.000 individual analyses performed by accredited drinking water laboratories. The REWAB data are used for yearly reports on drinking water quality by the Dutch Human Environment and Transport Inspectorate.

Big data, the combination of use of several data sources, is increasingly used for analysis and optimisation of water management.

9.4 c; International cooperation to provide quality and affordable drinking water and sanitation for all

Currently no targets are set for international cooperation under the Protocol. However a lot of work has been done.

The Ministries of Foreign Affairs; Economic Affairs; and Infrastructure and Watermanagement have joint their efforts in the field of international water cooperation. The collaborative goal is to increase the water security of urbanizing delta's and their supply systems over the time period 2016-2021. Besides bilateral activities NL also invests in multilateral cooperation. Within the Protocol on Water and Health NL was co-lead for workarea 5 on safe and efficient management of drinking water supplies and sanitation. In this area two workshops were funded and co-organized, one on climate resilient drinking water and sanitation planning, and one on sanitation in the Pan European region. Furthermore a study has been done by the RIVM on state of the art and challenges on sanitation in the Pan-European region in cooperation with WHO and UN-ECE. Furthermore NL supported capacity building activities under this work-area. The Netherlands supported also the work under the Water Convention inter alia by funding and as co-chair of the Task Force on Water and Climate and several activities in this area.

Drinking water companies and Regional Water Authorities are allowed to spend up to 1% of their annual turnover for development project. For a selection of drinking water projects: <http://www.idwp.nl/>. New programmes have being launched. WaterWorX aims to increase sustainable access to drinking water to 10 million people in 2030. Through Water Operator Partnerships (WOPs) between Dutch and local drinking water companies, WaterWorX is working on long term sustainable water services by improving operation and maintenance of the local water companies and getting their finances in order. Furthermore a program on sanitation and water management had been launced recently called Blue Deal. The Blue Deal programme offers long-term collaboration with regional and national governments in finding and developing solutions to improve water management.

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	100% in 2019
Basic drinking-water service	100% in 2019
Basic hygiene service	100% in 2019
<i>Health-care facilities</i>	
Basic sanitation service	100% in 2019
Basic drinking-water service	100% in 2019
Basic hygiene service	100% in 2019

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): n/a

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).

Infection prevention control is the responsibility of schools and hospitals/HCFs. In this task they are supported by several municipal and national institutions, which provide guidance.

The Inspectorate for Health and Youth supports the IPC situation in hospitals through randomised samples. Highly resistant micro-organisms are a major driver to continuously ensure basic hygienic procedure, next to more specialised procedures, are in compliance with the existing protocols.

Schools are supported by guidelines developed by the National Centre for Hygiene and Safety (LCHV). There are guidelines available on how to deal with common colds next to more severe infections, which require a notification to the municipal health services (and are subsequently registered by the LCHV). WASH in schools is part of the technical hygiene programmes or the municipal health services who screen for priorities, in support of schools. There is no national assessment /or randomised sampling studies (like in hospitals).

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.

Beleidsnota drinkwater. <https://www.rijksoverheid.nl/documenten/beleidsnota-s/2014/04/25/beleidsnota-drinkwater>

Drinking Water Act⁴², Drinking Water Decree⁴³, Drinking water Regulation⁴⁴, Legionella Regulation⁴⁵. See also a recent RIVM report: <https://www.rivm.nl/publicaties/risicoanalyse-ten-risicomanagement-van-drinkwaterproductie-in-nederland>

⁴² <https://wetten.overheid.nl/BWBR0026338/2015-07-01>

⁴³ <https://wetten.overheid.nl/BWBR0030111/2018-07-01>

⁴⁴ <https://wetten.overheid.nl/BWBR0030152/2017-10-27>

⁴⁵ <https://wetten.overheid.nl/BWBR0030166/2018-01-01>

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 (-).

Percentage of population	Current value (specify year)
Total	100% ⁴⁶

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).

Municipalities, water boards and drinking water companies work together on water management in the water chain. In accordance with the Administrative Agreement on Water for the 2011-2020 period, the focus is on quality (improving/optimizing urban water management in all respects), reducing the vulnerability of the organizations involved and controlling costs (ensuring a moderate increase in costs). Recently, additional agreements¹⁵ have been concluded to respond to new challenges. See Administrative Agreements on Water Management⁴⁷.

In the Netherlands almost 100% of the population, including schools and hospitals, are connected to the drinking water system. The Drinking Water Act contains provisions stipulating the right of access to drinking water, in the form of a 'connection and delivery obligation'. In addition, the Netherlands has a safety net for socially vulnerable groups in order to guarantee access to drinking water for all. Water companies may only disconnect the drinking water supply in households if a careful step-by-step plan is followed, with specific provisions for people with health problems and early warning of households with debts. Households in debt assistance are not disconnected from the water supply. If this does occur, a supply of drinking water is guaranteed to ensure that basic needs can be met. <https://wetten.overheid.nl/BWBR0031481/2018-07-01>

Part seven

Information on the person submitting the report

The following report is submitted on behalf of The Netherlands in accordance with article 7 of the Protocol on Water and Health.

⁴⁶ Risicoanalyse en risicomangement van drinkwaterproductie in Nederland, RIVM report 2017

⁴⁷ <https://www.helpdeskwater.nl/onderwerpen/wetgeving-beleid/bestuursakkoord/>

Name of officer responsible for submitting the national report: Jelka Appelman

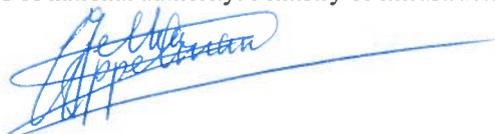
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Telephone number: +31 652740185

Name and address of national authority: Ministry of Infrastructure and Watermanagement

Signature:

Date: 18-4-2019



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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