

Summary report of the Netherlands under the Protocol on Water and Health

Part One

General aspects

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

Please provide detailed information on the target areas in Part Three.

YES NO IN PROGRESS

2. Were they published and, if so, how?

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

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.

There are 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 above, 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. Which existing national and international strategies and legislation 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. Important policy papers are 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 Protection Files consisting of measures to reduce risk to drinking water resources contribute to RBMPs.

5. Was cost-benefit analysis of targets set performed, and if so how?

No cost-benefit analysis was performed for the targets set under the Protocol. However analysis of economic effects and enforceability is mandatory in NL and part of target setting

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-eems.nl/>

⁶ <http://www.isc-cie.org/NL/>

under the above mentioned legislation and policy, and part of programmes of measures in the framework of the WFD.

6. 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 however 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.

7. Provide information on the process by which this report has been prepared, including information on which public authorities had the main responsibilities, which other stakeholders were involved, etc.

The report is prepared by the Ministry of Infrastructure and Environment, the National Institute for Public Health and Environment (RIVM) and National Water Authority (Rijkswaterstaat (WVL).

The report is send to the Ministries (Foreign Affairs , Health), the Union of Regional Water Authorities, Union of Municipalities and Vewin (Association of Dutch Drinking water companies.

8. Report any particular circumstances that are relevant for understanding the report, e.g., whether there is a federal and/or decentralized decision-making structure, or whether financial constraints are a significant obstacle to implementation (if applicable).

Not applicable.

9. Please describe whether and, if so, how emerging issues relevant to water and health (e.g., climate change) were taken into account in the process of target setting.

The described policy papers under point 4 take into account emerging issues which were identified at that time. Recently new policy papers with regard to (drinking) water management⁷ ⁸ ⁹ are adopted by the government of the Netherlands taking into account current knowledge. The current targets do not completely reflect this new policy. The policy plans describe the Dutch ambitions and targets for flood protection/mitigation and (drinking) water quality improvements.

⁷ National Water Plan: Our Water: <http://www.helpdeskwater.nl/onderwerpen/wetgeving-beleid/nationaal/nationaal-waterplan/> . See brochure Our water in the Netherlands

⁸ Clean drinking water now and in the future:
<https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

⁹ Deltaprogramme Fresh Water: <https://zoek.officielebekendmakingen.nl/blg-627294>

Part Two Common indicators¹⁰

I. Quality of the drinking water supplied

A. 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 this indicator?

The data reported under sections B and C give an overview of 2014. The total population in NL in 2014 was 16.7 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 "Dutch Drinking Water Statistics 2015" of the Association of Dutch water companies (Vewin)¹¹.

The source of the water quality data provided in the table is the RIVM (National Institute for Health and Environment) based on information provided by the individual drinking water suppliers.

2. Do the water supply systems reported here supply the urban population only or both the urban and rural populations?

The water supply systems reported supply both the urban and rural populations within their service area.

3. Specify where the samples/measurements are taken (e.g., treatment plant outlet, distribution system or point of consumption).

Drinking water suppliers take samples at:

- the inlet points for surface water and groundwater used for the production of drinking water
- several points during treatment (depends on the kind of source and the kind of treatment process)
- the outlet of the treatment plants
- in the distribution systems
- the point of use (consumers tap) (microbiology and some metals).

4. In the reports, the standards for compliance assessment signify the national standards. If national standards for reported parameters deviate from the WHO guideline values, provide information on the values (standards) used for calculation.

The national standards are based on the European Drinking water Directive (EU-DWD 98/83/EC). Some of the national standards are lower than the WHO guideline values as stated in the EU DWD: Boron 0.5 mg/l, Bromate 5 µg/L (after disinfection), Fluoride 1.0 mg/l, Trihalomethanes 25 µg/L, Ammonium 0.2 mg/L, Chloride 150 mg/L, conductivity 1250 µS cm⁻¹ and Sulphate 150 mg/l. Several standards are added in national legislation: Cryptosporidium, (Enteroviruses, Giardia, Cryptosporidium to be used for the Quantitative Microbial Risk Analysis (QMRA), NDMA (N-nitrosodimethylamine), Polychlorobiphenyls,

¹⁰ 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.

¹¹ http://www.vewin.nl/SiteCollectionDocuments/Publicaties/Dutch_Drink_water_statistics_2015.pdf

Aeromonas spp., Temperature, Hardness, Oxygen. Furthermore signal values of 1 µg/L are added for: Aromatic amines, chlorophenols, Diglyme, ETBE, MTBE, Halogenated aliphatic hydrocarbons, Monocyclic hydrocarbons, and Other antropogenic substances. These signal values are a trigger for toxicological evaluation when exceeded.

B. Bacteriological quality

<i>WatSan_S2</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
E. coli	0.05 (2007)	0.03 (2011)	0.04 (2014)
Enterococci	0.16 (2007)	0.20 (2011)	0.27 (2014)

C. Chemical quality

<i>Substance</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
Fluoride	0 (2005)	0 (2011)	0 (2014)
Nitrate and nitrite ²	0 (2005)	0 (2011)	0 (2014)
Lead ³	0.04 (2005)	0 (2011)	0 (2014)
Iron	0.19 (2005)	0.15 (2011)	0.07 (2014)
Arsenic	0.00 (2005)	0.00 (2011)	0 (2014)
Additional physico-chemical parameter 1: pesticides	0.01 (2005)	0.00 (2011)	0.00 (2014)
Additional physico-chemical parameter 2: nitrite	0.07 (2005)	0.03 (2011)	0.03 (2014)
Additional physico-chemical parameter 3: manganese	0.32 (2005)	0.09 (2011)	0.78 (2014)
Additional physico-chemical parameter 4: sulphate	0 (2005)	0 (2011)	0 (2014)
Additional physico-chemical parameter 5: pH	0.02 (2005)	0.01 (2011)	0.03 (2014)

II. Reduction of the scale of outbreaks and incidence of infectious diseases potentially related to water

Data are obtained from the national database under the Public Health Act (Wet Publieke Gezondheid)¹². This 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 is not made. For Legionnaires disease it is known that about 40% the cases were imported cases. For cholera and typhoid cases were most probably imported from abroad since these diseases are not endemic in The Netherlands. There were no reported outbreaks of these diseases related to exposure to water in The Netherlands. Yearly a survey for recreational water is being conducted by the National Institute of Public Health and the Environment with Provinces and Public Health Authorities. In the Netherlands Water related diseases in relation to drinking water rarely occur.

	<i>Incidence (cases per year)</i>			<i>Number of outbreaks</i>	
	<i>Baseline (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>	<i>Baseline (specify the year)</i>	<i>Current value (specify the year)</i>
Cholera	5 (abroad) (2008)	3 (abroad) (2011)	3 (abroad)(2014)	0 (2011)	0 (2014)
Bacillary dysentery (shigellosis)	365 (2008)	714 (2011)	360 (2014)	0 (2011)	0 (2014)
Enterohaemorrhagic E. coli.	141 (2008)	842 (2011)	753 (2014)	0 (2011)	0 (2014)
Viral hepatitis A	183 (2008)	120 (2011)	105 (2014)	0 (2011)	0 (2014)
Typhoid fever	29 (abroad) (2008)	16 (abroad) (2008)	20(abroad) (2014)	0 (2011)	0 (2014)
Legionnaires disease		280 (2011)	370 (2014)	0 (2011)	0 (2014)

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http://www.rivm.nl/Documenten_en_publicaties/Algemeen_Actueel/Uitgaven/Infectieziekten_Bulletin/Jaargang_27_2016/Januari_2016/Inhoud_januari_2016/Meldingen_Wet_publicke_gezondheid_tot_en_met_week_53_2015

III. Access to drinking water

<i>Percentage of population with access to drinking water</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
Total			
Urban	100 (2005)	100 (2011)	100 (2014)
Rural	100 (2005)	100 (2011)	100 (2014)

Since 2010 there are 10 publicly owned drinking water companies providing nearly the entire population with drinking water. The number of people not served by these companies is marginal. Municipalities and provinces are shareholders of the drinking water companies. 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 premises¹³. The statistics report¹⁴ on the Dutch water situation, published by Vewin as a means of providing transparency to the Dutch society/consumers, gives additionally detailed information.

¹³ www.wssinfo.org/fileadmin/user_upload/resources/Netherlands.xls

¹⁴ http://www.vewin.nl/SiteCollectionDocuments/Publicaties/Dutch_Drink_water_statistics_2015.pdf

IV. Access to sanitation

<i>Percentage of population with access to sanitation</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
Total			
Urban	99 (2008)	99 (2011)	99 (2014)
Rural	99 (2008)	99 (2011)	99 (2014)

Data are based on national estimates: Rioned Foundation, Statistics Netherlands. JMP gives estimates of 98% coverage by improved facilities, and 2 % coverage by shared facilities.

Municipalities (430) are responsible for sewage water collection and maintenance of the systems, the Regional Water Authorities administer the sewage water treatment plants (343 plants in total (2012)). Except for one company: Waternet. This is the first company in the Netherlands that integrated sewage and drinking water management.

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

Water quality

On the basis of national systems of water classification, the percentage of the number of water bodies or the percentage of the volume (preferably) of water¹⁵ falling under each defined class (e.g., in classes I, II, III, etc. for non-EU countries; for EU countries, 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 European Union countries

Ecological status of surface water bodies

<i>Percentage of surface water classified as:</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
	2009	2009	2015
High status	0 / 0%	0 / 0%	0 / 0%
Good status	3 / 0.4 %	3 / 0.4 %	3 / 0.4%
Moderate status	249 / 34,8%	249 / 34,8%	269 / 38.6%
Poor status	315 / 44%	315 / 44%	335 / 48.1 %
Bad status	149 / 20,8%	149 / 20,8%	90 / 12.9%
Total number of water bodies classified	716	716	697
Total number of water bodies in the country	719 (+5 Territorial Waters not counted)	719 (+5 Territorial Waters not counted)	711

Chemical status of surface water bodies

<i>Percentage of surface water bodies classified as</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
Good status	506 / 73.9%	506 / 73.9%	278 / 40.2%
Poor status	179 / 26.1%	179 / 26.1%	413 / 59.8%
Total number/volume of water bodies classified	685	685	691
Total number/volume of water bodies in the country	724	724	711

¹⁵ Please specify.

Status of groundwaters

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

<i>Percentage of groundwaters classified as</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
Poor chemical status	9 / 39.1%	9 / 39.1%	3 / 13%
Total number/volume of groundwater bodies classified	23	23	23
Total number/volume of groundwater bodies in the country	23	23	23

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. There are also challenges to face with regard to climate change demanding even more attention to the protection of (drinking) water sources.

Water use

<i>Water exploitation index ¹⁶</i>	<i>Baseline value (specify the year)</i> 2011	<i>Value reported in the previous reporting cycle (specify the year)</i> 2011	<i>Current value (specify the year)</i> 2011
Agriculture	1%	1%	1%
Industry ^a	91 % (including cooling 68%)	91%	91%
Domestic use ^b	8%	8%	8%

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

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

¹⁶ CBS, WUR, PBL, Waterwinning en waterverbruik, 2014.
<http://www.compendiumvoordeleefomgeving.nl/indicatoren/nl0057-Waterwinning-en-waterverbruik-in-Nederland.html?i=3-126>

Part Three Targets and target dates set and assessment of progress

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

1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.

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 recent policy plan on drinking water describes further measures which have been taken or which are under development¹⁷. 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). 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.

3. Assess the progress achieved towards the target.

Target is achieved, with the exception of manganese. The percentages are however very low.

4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.

The deadline for the target has past (31.12.2013), the target needs to be reviewed.

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

Not applicable

¹⁷ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. This is done already by RIVM in the Infection diseases Bulletin. Deadline 31.12.2012. Target indicator: report issued (yes-no).

- 2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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

- 3. Assess the progress achieved towards the target.**

The annual number of Legionnaire's disease in the Netherlands is fairly constant. 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 water¹⁸. 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. For 2014 there are no data available. 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.

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

Target to be reviewed. The target date is expired.

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

Not applicable.

¹⁸ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

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

1. **Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. **Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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. Assurance of delivery now and in 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 recent Policy Paper on Drinking Water also established to assign strategic water stocks and national reserves and promote cooperation in the water supply chain¹⁹.

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 efficiency²⁰. 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).

3. **Assess the progress achieved towards the target.**

Activities are focused on maintenance of reached target.

4. **In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed.

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

Not applicable

¹⁹ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

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

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background and justification for the adoption of the target.**

National target NL: For sewerage and waste water treatment the coverage is around 100%. In the municipal sewerage plans measures are described to fulfil this goal. No target date is set. Target indicator: % of the population connected to sewers; % of treated waste water.

- 2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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 responsible for the treatment of urban waste water (Water Act)²¹. 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. Measures are inter alia based on the EU UWWT Directive and the WFD. For sewerage and urban 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. Assess the progress achieved towards the target.**

See under 2. Only 0.6 % of the households have no connection to Urban Wastewater Treatment Plants. Half of these households have individual treatment (see also Part Three, under IX and X).

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

No target date is set. The target need to be reviewed.

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

Not applicable

²¹ <https://circabc.europa.eu/sd/a/d423b03f-93c2-4fbc-9254-e0d23d587c53/Task%202%20EU%20Member%20States%20legislation>
(see page 341-353)

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

See also part Three section I and III. The owners of collective systems (in buildings) are responsible for the in-house installations. Drinking water is provided by the drinking water companies. The quality of the drinking water at the tap has to fulfil the regulations. The regulations contain requirements for monitoring drinking water in buildings if there is additional treatment, for hot water systems, and requirements for Legionella prevention. A part of the national legislation focus on prevention of Legionella in priority collective systems such as hotels and hospitals. The owner of the collective system has to perform a risk analysis on the basis of a management plan to define which measures should be taken to manage the risks and then implement those measures. Results of monitoring to maintain Legionella prevention for collective systems are under the Inspection for Infrastructure and Transport.

- 3. Assess the progress achieved towards the target.**

In general 50% of the priority collective systems (like hospitals, hotels ect.) fulfil the requirements for the risk analysis and risk management plans. Inter alia because of this outcome the legislation is under evaluation²².

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed

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

Not applicable.

²² <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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 apply Article 5.4 and 5.8 of the Directive to the whole territory. The environmental objectives of the WFD may give rise to regional take additional measures to increase the purification degree²³. The tenth baseline report describes measures taken and the situation at end 2015²⁴ (see also Part Three under IX and X).

- 3. Assess the progress achieved towards the target.**

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 2006²⁵.

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed.

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

Not applicable

²³ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

²⁴ http://ec.europa.eu/environment/water/water-urbanwaste/implementation/implementationreports_en.htm

²⁵ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0045&from=EN>

VII.

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

1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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.

2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.

Remediation measures have been formulated and implemented inter alia to the RBMPs²⁶. 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 is currently setting up a renewed protocol.

3. Assess the progress achieved towards the target.

Programmes of measures has been defined for all water intake locations. Effects of measures are yet to be determined²⁷. In the 2nd RBMPs and recent policy papers on (drinking) water management^{28,29} it is stated that even with measures already taken many drinking water companies will have to invest because of problems caused by pollutants³⁰. The target of WFD article 7.3 with regard to lowering purification effort is not reached.

4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.

To be reviewed

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

Not applicable

²⁶ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

²⁷ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

²⁸ <http://www.helpdeskwater.nl/onderwerpen/wetgeving-beleid/nationaal/nationaal-waterplan/>. See brochure Our water in the Netherlands

²⁹ <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>

³⁰ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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

- 3. Assess the progress achieved towards the target.**

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

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed. Target and indicator does not cover the issue. Municipal Sewage Plans will be upgraded to municipal Sewage Programmes to facilitate a better understanding of urban sewage and waste water discharge needs, effects of discharge on ecosystems and the urban environment and opportunities for reuse.

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

Not applicable

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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

- 2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

See part three nr IV, VI, VIII and X.

- 3. Assess the progress achieved towards the target.**

Only 0.6 % of the households have no connection to Urban Wastewater Treatment Plants. Half of these households have individual treatment. Progress has been made. Further measures are foreseen according to the River Basin Management Plans.

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed.

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

Not applicable

X. **Occurrence of discharges of untreated storm water overflows from wastewater collection systems to waters within the scope of the Protocol (art. 6, para. 2 (g) (ii))**

1. **Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. **Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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 Three, 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 States³¹.

3. **Assess the progress achieved towards the target.**

Between 2009-2015 95 discharges of untreated storm water overflows have been reduced (see summary of the RBMP's) and more is planned from now onwards (see Program of measures of RBMP's)³².

4. **In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed

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

Not applicable

³¹ <https://circabc.europa.eu/sd/a/d423b03f-93c2-4fbc-9254-e0d23d587c53/Task%202%20EU%20Member%20States%20legislation> (see page 341-353)

³² http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

XI. Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol (art. 6, para. 2 (h))

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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

- 3. Assess the progress achieved towards the target.**

See VI, VII, VIII, IX, X

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed.

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

Not applicable

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background and justification for the adoption of the target.**

No target is set.

- 2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**
- 3. Assess the progress achieved towards the target.**
- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**
- 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. 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.

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

1. **Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background and justification for the adoption of the target.**

No target is set.

2. **Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

3. **Assess the progress achieved towards the target.**

4. **In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed. 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. As there is little regulation on re-use, the European Commission is working on water-reuse, as well under the Water Framework Directive as part of the Circular Economy package. The primary goal is to encourage efficient resource use and reduce pressures on the water environment, in particular water scarcity, by fostering the development of safe reuse of wastewater. These developments can be linked with the fact that farmers are using more and more water for irrigation purposes (8 % increase between 2003 and 2010)³³. In dry summer seasons the total volume can be similar to abstraction by large drinking water companies serving millions of people. Groundwater abstraction for irrigation might be competing with fresh water availability for other ecosystem services and may even deter the overall quality of freshwater reserves used for source water abstraction for drinking water. Wastewater reuse could be an alternative for groundwater abstraction in the future.

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

No use is made of wastewater for irrigation purposes in NL.

³³ <https://data.overheid.nl/data/dataset/irrigatiewater-locatie-beregeningsonttrekkingen-uit-grondwater-en-oppervlaktewater>

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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 Netherlands³⁴. 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 2015-2021 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 Three, section VII.

- 3. Assess the progress achieved towards the target.**

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 met³⁵. See also Part Three, section VII.

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

The target and indicator "good status" is not suitable for human health. To be reviewed.

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

Not applicable

³⁴ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

³⁵ Wuijts, S., J.J. Bogte, H.H.J. Dik, W.H.J. Verweij, N.G.F.M. van der Aa (2014) Review of drinking water protection files (In Dutch, English synopsis) RIVM-report 270005001.

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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 schedule³⁶.

- 3. Assess the progress achieved towards the target.**

The target was reached in 2012. In 2014, water quality at 70.2% of the 715 identified bathing water locations in The Netherlands complied with the requirements for classification 'excellent' as specified in the EU Bathing Water Directive 2006/7/EC; 92.9% of the 715 locations complied with the requirements for classification of at least 'acceptable' and at 4.9% of the locations, the water quality was such that these locations were classified as 'poor'. Bathing water locations classified as 'poor' are not suited for swimming³⁷. Signage indicating a negative swimming advice is placed at these locations.

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

To be reviewed.

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

Not applicable

³⁶ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

³⁷ <http://www.eea.europa.eu/publications/european-bathing-water-quality-in-2014>

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

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 first river basin management plans of 2009-2015³⁸.

- 3. Assess the progress achieved towards the target.**

The 2nd RBMP³⁹ 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.

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

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 will start in November 2016 to assess the proportion of EU classified production areas contaminated with Norovirus . 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).

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

Not applicable

³⁸ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

³⁹ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background and justification for the adoption of the target.**

No target set. See XV

- 2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

- 3. Assess the progress achieved towards the target.**

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

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

Falls under the scope of XV.

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

1. **Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background and justification for the adoption of the target.**

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

2. **Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

3. **Assess the progress achieved towards the target.**

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

4. **In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

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

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 the RBMPs. See program of measures as part of the RBMP's⁴⁰

⁴⁰ http://ec.europa.eu/environment/water/participation/map_mc/countries/netherlands_en.htm

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

- 1. Describe the target, target date and baseline conditions. Please include information on whether the target is national or local, and intermediate targets as relevant. Also include information on the background and justification for the adoption of the target.**

Target NL: General WFD goals. On ongoing basis.

- 2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.**

Regular monitoring and evaluation of policies and legislation takes place. On the basis of these evaluations, policies and/or legislation may be changed. 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 Netherlands. The 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.

- 3. Assess the progress achieved towards the target.**

The OECD report highlights the past successes of Dutch water management, examines potential weaknesses for the future and suggests ways to put the system on a more sustainable footing. These include fostering a greater engagement of stakeholders outside the government, using economic incentives more systematically and improving transparency of information on water costs⁴¹.

- 4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.**

Target to be reviewed.

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

Not applicable

⁴¹ <http://www.oecd.org/gov/regional-policy/water-governance-netherlands.htm>

XX. Additional national or local specific targets

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.

6.5.b. Water management plans

Target NL: According to 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".

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

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/>

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 the 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". The Administrative Agreement on Water will be evaluated in 2015.

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.

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.

Drinking water companies report to the inspectorate in case of non-compliant measurements in the source water, based on a guideline which analysis microbiological safety.

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 work has been done. 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/>.

Within the Protocol region a workshop on Water Safety Planning was organised in 2014 by the RIVM WHO Collaborating Centre for Risk Assessment (Kyrgystan).

The Netherlands supported the work under the Water Convention inter alia by funding and as co-chair of the Task Force on Water and Climate.

The Ministries of Foreign Affairs; Economic Affairs; and Infrastructure and the Environment 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 – and the Dutch stake in that increase - over the time period 2016-2021. In order to achieve this, many activities are undertaken under 3 cornerstones: strengthening the Netherlands as Centre of Excellence; bringing the integrated Delta approach further in the international arena; and the development of local strength in implementation.

Part Four Overall evaluation of progress achieved in implementing the Protocol

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 and microbial health issues. Recently new policy papers with regard to (drinking) water management⁴² are adopted by the government of the Netherlands taking into account current knowledge and challenges. The current targets under the Protocol do not completely reflect this new policy.

Furthermore most of the current targets 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 UWWTP 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 are in hand.

With regard to the social component of the Protocol into cooperation on water management, 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, warning and alarm systems. The international commissions are platforms to coordinate the implementation of EU water Directives. Within the Protocol region a workshop on Water Safety Planning was organised in 2014 by the RIVM WHO Collaborating Centre for Risk Assessment (Kyrgystan). Furthermore the Netherlands supported the work under the Water Convention *inter alia* by funding and as co-chair of the Task Force on Water and Climate.

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. It is clear that the goals of the Protocol covers the Sustainable Development Goals 6 on sanitation and drinking water. Therefore it would be a logical step to revise the targets under the Protocol with specific focus on health related issues on drinking water and sanitation, having in mind especially SDG 6, the aims of the Protocol on Water and Health.

⁴² <http://www.helpdeskwater.nl/onderwerpen/wetgeving-beleid/nationaal/nationaal-waterplan/> . See brochure Our water in the Netherlands; <https://www.rijksoverheid.nl/documenten/rapporten/2014/04/25/beleidsnota-drinkwater-schoon-drinkwater-voor-nu-en-later>; <https://zoek.officielebekendmakingen.nl/blg-627294>

Part Five

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.

Data are prepared by: RIVM, Rijkswaterstaat (WVL) and the Ministry of Infrastructure and Environment;

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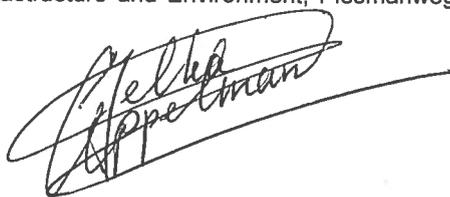
Ministry of Infrastructure and Environment; Plesmanweg 1-6 | Postbus 20901 | 2500 EX | Den Haag

Signature:

Date:

19-4-2016

Submission



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, by 18 April 2016. 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 third session of the Meeting of the Parties.

Parties are requested to submit, to the two addresses below, an original signed copy by post and an electronic copy either on a CD-ROM or by e-mail. Electronic copies should be available in word-processing software, and any graphic elements should be provided in separate files.

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