

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

Executive summary

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

Suggested length: maximum 2 pages

Part one

General aspects

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

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

YES NO IN PROGRESS NA

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

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

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

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.

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.

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?

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.

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

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

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

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

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

For each target set in this area:

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

The target is to provide drinking water for the total population of good quality and which is wholesome and clean, in sufficient quantity and assurance of delivery.

Drinking Water Directive (98/83/EC) and Maltese Legal Notice 17 of 2009 as amended by legal notice 242 of 2009.

A specific target on Boron compliance to the DWD was set for December 2016 and this was achieved.

- *Link to Legal Notice 17 of 2009:*
<http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=11134&l=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).

In general the target has been reached in the mandatory parameters in the Drinking Water Directive (DWD).

In addition to the above the water supplier (Water Services Corporation) is further obliged by the Water Supply and Sewerage Services Regulations and licence issued by the Regulator for Energy and Water Services:

 - to supply water intended for human consumption according to applicable regulations and standards;
 - to report to the Regulator for Energy and Water Services on its performance according to reporting requirements established by this licence and including:
 - Percentage of tests complying with micro-biological standards (according to Water Intended for Human Consumption Regulations);

- Percentage of tests complying with chemical indicator parameters (mandatory and indicator parameters, and according to Water Intended for Human Consumption Regulations).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

The whole population has access to drinking water and the drinking water system. In general, progress is reported across a wide range of performance indicators.

Main achievements and indicators reported include Percentage of tests complying with micro-biological standards was 100% between 2010 and 2017.

Percentage of tests complying with chemical indicator parameters increased from 89% in 2010 to 92% in 2017 and % of tests complying to mandatory chemical standards remained at 100% in 2017 compared to 2010.

With regards to water quality, the national utility purchased high rejection desalination membranes to lower the value of Boron. It is to note that the values that were formerly being registered were still well within the 2.4 mg/L WHO guideline value.

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.

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

For each target set in this area:

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

The Infectious Disease Prevention and Control Unit is responsible for the surveillance of infectious diseases in Malta, including water-borne diseases. Every notified case is investigated to identify the potential source and the necessary public health control measures implemented to prevent additional cases.

On the other hand, the water utility (Water Services Corporation) is obliged under the Water Supply and Sewerage Services Regulations and the licence issued to it by the Regulator for Energy and Water Services to notify to the Regulator any breaches or potential breaches to any regulations, directions or codes of practice.

- *Link: Water Supply and Sewerage Services Regulations: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12362&l=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 recent introduction of improved laboratory techniques (PCR) have enhanced the sensitivity, specificity and timeliness of detection of human cases of water-borne diseases.

In reporting and investigation any such incidents, the water utility is also required to submit proposals to rectify operations and provide precautionary measures to ensure against repeat situations and/or continuation of such breaches.

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.

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

For each target set in this area:

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

The entire population is served with and has access to drinking water.

The Water Services Corporation has the duty under the Water Services Corporation Act (Chapter 355 of the Laws of Malta), inter alia:

- to develop, maintain and promote a safe and efficient production and distribution system in order to satisfy, as economically as possible, all reasonable demands for water;
- to manage and operate all undertakings and other installations and all property, transferred to and vested in the Corporation by virtue of this Act or otherwise acquired by the Board for the purposes of any of its functions;
- to hold and administer and, if and when it thinks fit, to realise any assets it may hold from time to time.

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 Water Services Corporation is further required to report on an annual basis to the Regulator for Energy and Water Services (REWS) on its performance in providing access to drinking water in its Licence Monitoring Reports, including details on operational outputs and performance indicators (e.g. Total number of

active accounts total potable water supplied, sources of supply, properties affected by supply interruptions etc.)

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

The Water Services Corporation meets its obligations to provide access to drinking water to the population and no major incidents where the water utility failed to meet its obligations were reported in 2018.

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.

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

For each target set in this area:

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

100% of population has access to sanitation.

The Water Services Corporation has the duty under the Water Services Corporation Act (Chapter 355 of the Laws of Malta), inter alia:

- to provide, improve and extend such a system of public sewers and to cleanse and maintain these sewers so as to ensure that the drainage system operates and continues to operate safely and effectively;
- to make provisions for the operation of these sewers and such further provisions as are necessary from time to time for effectively dealing with the contents of these sewers by means of sewage treatment and disposal works or otherwise;
- to have regard in performing its duty of the need to provide for the treatment and disposal or otherwise of trade effluent;
- to promote the proper disposal of waste water and storm-water run-off;
- to manage and operate all undertakings and other installations and all property, transferred to and vested in the Corporation by virtue of this Act or otherwise acquired by the Board for the purposes of any of its functions;
- to hold and administer and, if and when it thinks fit, to realise any assets it may hold from time to time;
- *Link to Water Services Corporation Act:*
<http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8825&l=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 Water Services Corporation is further required to report on an annual basis to the Regulator for Energy and Water Services on its performance in providing access to sanitation in its Licence Monitoring Reports, including details on operational outputs and performance indicators (e.g. Percentage of the population served with sewerage service connection)

Practically all the population (100%) is served with such a sewerage service connection. For the small number of customers (< 1%) who are not served directly with a sewerage connection due to the absence of a main sewer system in the locality, the water utility provides a free cesspit-emptying service to domestic consumers.

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

100% of population already have access to sanitation.

The Water Services Corporation meets its obligations to provide access to sanitation to the population and no major incidents where the water utility failed to meet its obligations were reported in 2017.

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.

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

For each target set in this area:

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

Refer to Section ‘Access to Drinking Water’

Furthermore, the water utility (Water Services Corporation) is regulated by the Regulator for Energy and Water Services for the supply of water through the public distribution network, and through a licence issued under the Water Supply and Sewerage Services Regulations.

Link to Water Supply and Sewerage Services Regulations:
<http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12362&l=1>

Licence Monitoring Reports are submitted on an annual basis by the Water Services Corporation to the Regulator for Energy and Water Services. These reports include inter alia detailed information on key outputs and performance indicators as well as outputs on water supply systems. The Licence Monitoring Reports include proposed performance targets and outputs for a five year rolling period and including information on:

- Reliability of supply and service quality outputs (e.g.: % of households receiving low water pressure, total number of supply interruptions greater than 12 hours, emergency supplies served by water tanker etc.)
- Asset maintenance and operational efficiency of water supply systems (estimated leakages, mains bursts /1000 km, length of mains replaced, percentage unaccounted for water etc.)
- the complaints received from customers on water quality, supply pressure and interruptions to supply
- the requests on compensation according to Customer contract.

Proposed performance targets and outputs are reviewed and updated on an annual basis.

In addition the licence issued to the Water Services Corporation by the Regulator for Energy and Water Services requires inter alia the publication of a Customer Contract by the Water Services Corporation which includes:

- levels of service of water supply including
 - potable water quality standards;
 - potable water pressure (greater than 1 bar) and flow (9 litres / minute);
 - standards on continuity and reliability of supply;
 - alternative water supply arrangements to customers;
 - arrangements and procedures regarding the provision of water supply services including period to connect to distribution network and response time for repairs to service and renewals;
 - works standards
- levels of service in relation to:
 - billing and payment facilities and procedures;
 - communication response arrangements to complaints and queries by customers;
 - notification arrangements and appointments with customers;
 - arrangements and procedures for dealing with complaints and resolving disputes;
 - arrangements, guidance and procedures for giving appropriate service to vulnerable customers or customers with special needs;
 - period to correct billing errors and effectively address customer complaint
- a code of practice and procedures on disconnection / suspension of potable water supply;
- exceptional circumstances where the water utility may be exempted from fulfilling these service obligations.

The Customer Contract was brought into effect in July 2011. Prior to entry into force the Customer Contract was published in draft form for public consultation.

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 Maltese national water operator (WSC) is responsible for water quality up to the Customers' first tap downstream of the revenue meter. This water is certified to be potable according to the Drinking Water Directive 98/83/EC. Besides the continuous numerous tests conducted in the operator's accredited laboratories, the operator doses the water with Chlorine gas and uses residual chlorine as an indicator against micro-biological contamination.

Furthermore, the licence issued by the Regulator for Energy and Water Services to the water utility establishes reporting requirements on:

- manner in which Customer Contract was operated during the preceding year
- Regulatory Information including Outputs and Performance Indicators reported in Licence Monitoring Reports
- Emergency Response Plans outlining the various risks to WSC operations and established processes and procedures to address such emergency situations and to ensure continuity of service to consumers.
- Leakage Control Plans outlining estimated leakage levels and projections of leakage levels on a regional and national basis.

The Water Supply and Sewerage Services Regulations and Licence issued by the Regulator for Energy and Water Services further provides powers to the Regulator to:

- assess and audit the operations of water supplier and compliance with licence conditions;
 - issue enforcement orders to ensure compliance to any condition or requirement of the licence
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

As stated in 2. above, the water quality in Malta is according to the Drinking Water Directive 98/83/EC and is continuously monitored.

In general progress has been reported across a wide range of performance indicators.

Main achievements and indicators reported include:

- Percentage of households receiving low water pressure decreased from 1.2% in 2010 to 0.18% in 2017;
- Total number of supply interruptions greater than 12 hours decreased from 66 days/annum in 2010 to 24 days /annum in 2014 and to 37 days /annum in 2017;
- Estimated leakage was reported to have fluctuated from 4.0 Mm³/annum in 2010 to 3.6 Mm³/annum in 2014 and to 3.76 Mm³/annum in 2016 and 3.96 Mm³/annum in 2017;

- Total pipe bursts per 1,000 km (inclusive of all bursts on mains and services detected through active leakage control) decreased from 7.364/km in 2011 to 5.283/ km in 2017.
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.

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

For each target set in this area:

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

Included in the EU Urban Waste-Water Treatment (UWWT) Directive. Target is to reduce overflows.

The water utility (Water Services Corporation) is regulated by the Regulator for Energy and Water Services for the provision of sewerage services, and through a licence issued under the Water Supply and Sewerage Services Regulations.

Licence Monitoring Reports are submitted on an annual basis by the Water Services Corporation to the Regulator for Energy and Water Services. These reports include inter alia detailed information on key outputs and performance indicators as well as outputs on sewerage services provided. The Licence Monitoring Reports include proposed performance targets and outputs for a five year rolling period and including information on:

- Volumes and percentage of wastewater collected and treated,
- Sewerage system failures (e.g.: sewer collapses, sewer blockages etc.
- Asset maintenance on sewerage network (length of mains replaced, etc.)
- The complaints received from customers on sewerage services, flooding of sewers etc.
- The requests on compensation according to Customer contract

Proposed performance targets and outputs are reviewed and updated on an annual basis.

In addition the licence issued to the Water Services Corporation by the Regulator for Energy and Water Services requires inter alia the publication of a Customer Contract by the Water Services Corporation which includes:

- levels of service for providing sewerage services including:
 - in the case of industrial or commercial consumers, the permissible quantity and quality standards of effluent that may be discharged;
 - minimum quality standards of treated effluent;

- standards on continuity and reliability of the sewerage network;
- alternative sewage collection and disposal arrangements to customers;
- arrangements and procedures regarding the provision of a sewerage connection point including:
 - period to connect to Licensee's sewerage network,
 - response time for repairs to portions of the sewerage network that might affect the customer's connection and service;
- works standards;
- sanitary restoration in case of flooding of private premises and/or public areas of sewage.
- levels of service in relation to:
 - billing and payment facilities and procedures;
 - communication response arrangements to complaints and queries by customers;
 - notification arrangements and appointments with customers;
 - arrangements and procedures for dealing with complaints and resolving disputes;
 - arrangements, guidance and procedures for giving appropriate service to vulnerable customers or customers with special needs;
 - period to correct billing errors and effectively address customer complaint
- a code of practice and procedures on disconnections to the sewerage network;
- exceptional circumstances where the water utility may be exempted from fulfilling these service obligations.

The Customer Contract was brought into effect in July 2011. Prior to entry into force the Customer Contract was published in draft form for public consultation

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 licence issued by the Regulator for Energy and Water Services to the water utility establishes reporting requirements on:

- Regulatory Information including Outputs and Performance Indicators reported in Licence Monitoring Reports;
- the manner in which Customer Contract was operated during the preceding year;
- Emergency Response Plans outlining the various risks to WSC operations and established processes and procedures to address such emergency situations and to ensure continuity of service to consumers.

The water utility's performance as reported in the Licence Monitoring Reports and other documentation is reviewed by the Regulator for Energy and Water Services.

The Water Supply and Sewerage Services Regulations and Licence issued by the Regulator for Energy and Water Services further provides powers to the Regulator to:

- assess and audit the operations of water supplier and compliance with licence conditions;
 - issue enforcement orders to ensure compliance to any condition or requirement of the licence.
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Sewerage system failures – sewer collapses decreased from 107/1000 km in 2010 to 73 /1000 km in 2014 and to 24 /1000 km in 2017

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.

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

For each target set in this area:

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

The Maltese national water operator (WSC) uses a systematic approach to manage its potable water network. It uses a methodology recommended by the International Water Association (IWA) to manage leakage from its network.

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 WSC benchmarks its performance of the network using the internationally-recognised Infrastructure Leakage Index (ILI). Over the years, using the model described in 1. above, leakage has been brought down significantly. The target was to reach ILI = 2.

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

ILI was > 20 in the mid-1990s; it is now <2 (2015), which puts Malta in band A of the World Bank Institute classification.

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.

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

Refer to Section IV ‘Access to Sanitation’

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.

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

For each target set in this area:

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

To minimize the occurrence of such events in line with the EU Urban Wastewater Treatment (UWWT) Directive.

The water utility (Water Services Corporation) is regulated by the Regulator for Energy and Water Services for the provision of sewerage services, and through a licence issued under the Water Supply and Sewerage Services Regulations.

Licence Monitoring Reports are submitted on an annual basis by the Water Services Corporation to the Regulator for Energy and Water Services. These reports include inter alia performance indicators and associated targets on:

- Volumes of untreated wastewater disposed to sea,
- Total number of intermittent discharges to the sea
- Total number of incidents of failures of wastewater treatment plants

Proposed performance targets and outputs are reviewed and updated on an annual 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).

Under the UWWT Directive, it is forbidden that raw sewage is discharged directly into the sea without proper treatment. Over the past few years the Maltese national water operator (WSC) has commissioned three new waste

water treatment plants with a capacity to treat all waste water generated in the Maltese Islands. WSC also has an on-going programme of upgrading the sewer network infrastructure.

The licence issued by the Regulator for Energy and Water Services to the water utility establishes reporting requirements on:

- Outputs and Performance Indicators reported in Licence Monitoring Reports;
- Emergency Response Plans outlining the various risks to WSC operations and established processes and procedures to address such emergency situations and to ensure continuity of service to consumers

The water utility's performance as reported in the Licence Monitoring Reports and other documentation is reviewed by the Regulator for Energy and Water Services. The Licence issued by the Regulator for Energy and Water Services further provides power to the Regulator to:

- assess and audit the operations of water supplier and compliance with licence conditions;
- issue enforcement orders to ensure compliance to any condition or requirement of the licence.

The water utility (Water Services Corporation) is further obliged under the Water Supply and Sewerage Services Regulations and the licence issued to it by the Regulator for Energy and Water Services to notify to the Regulator any breaches or potential breaches to any regulations, directions or codes of practice.

In reporting and investigation any such incidents, the water utility is also required to submit proposals to rectify operations and precautionary measures to ensure against repetition and/or continuation of such breaches.

Link: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12362&l=1>

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

Sea water quality has dramatically improved over the past few years. This is because the waste water treatment plants mentioned above are now online. In the meantime, over 6% (around 100 km) of the entire sewer network has been extended or renewed during the past 5 years. The remainder has been continually monitored and cleaned, as have the waste water pumping stations that form part of the infrastructure.

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.

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

For each target set in this area:

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

Baseline:

Collection systems are locally, chiefly designed as separate systems. Heavy urbanisation and cross connectivity of storm-water runoff with the wastewater collection network, is imposing hydraulic overloads on the wastewater collection and treatment systems, translating into occasional inland overflows and overflows to sea, particularly during high intensity rainfall events.

The following legislation covers CSOs:

- Requirements of urban waste water collecting systems are set out by the Urban Waste Water Treatment Directive 91/271/EEC (UWWTD) in Article 3 and Annex 1(A) and a footnote (1) of Annex 1(A) stating that:

“The design, construction and maintenance of collecting systems shall be undertaken in accordance with the best technical knowledge not entailing excessive costs, notably regarding: ...

- limitation of pollution of receiving waters due to storm water overflows”

Annex 1(A) footnote (1): “Given that it is not possible in practice to construct collecting systems and treatment plants in a way such that all waste water can be treated during situations such as unusually heavy rainfall, Member States shall decide on measures to limit pollution from storm water overflows. Such measures could be based on dilution rates or capacity in relation to dry weather flow, or could specify a certain acceptable number of overflows per year.”

- Requirements to meet good ecological status of all waters by 2015 are set out by the Water Framework Directive 2000/60/EC (WFD). CSOs are considered in several river basin management plans (RBMPs) as a pressure causing a serious impact on the receiving waters.
- The Bathing Water Directive 2006/7/EC (BWD) addresses the CSO impacts by classifying the bathing waters affected by CSOs as “subject to short-term pollution”. Short-term pollution means microbiological contamination which has clearly identifiable causes, is not normally expected to affect bathing water quality for more than approximately 72 hours after the bathing water quality is first affected and for which the competent authority has established procedures to predict and deal with.

Target:

To minimize diluted wastewater overflows to land and sea during storm event

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).

To maintain wastewater collection network detention galleries and basins as well as treatment plants, so as to minimize overflows to land and sea

Update the Sewerage Master plan to assess the current loading profile of the existing collection network and draw up a programme for the implementation for (1).

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

Ongoing

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.

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

For each target set in this area:

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

To establish and maintain stable operations and keep to the parameters set out under the EU Urban Wastewater 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).

Refer to Section IX (2) above.

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.

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

For each target set in this area:

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing

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

To divert sewage sludge disposal away from landfill with possible energy recovery

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).

Identify the best technology to implement the target.

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.

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.

Three reclaimed water polishing plants were commissioned between 2017 and 2018. The plants are designed around a multi-barrier process consisting of Ultra-Filtration, Reverse Osmosis and Advanced Oxidation, rendering exceptionally high quality treated effluent.

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 plants were designed to provide Class A treated effluent for unrestricted irrigation, in line with EU Guideline Document for Reuse

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

Not applicable. Water was and is being provided at a very high quality that exceeds the requirements of the latest EU and WHO guidelines

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.

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.

Objective set under EU Water Framework Directive: Good status by 2027 or when natural conditions permit.

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).

Please refer to the Implementation of actions under the Second River Basin Management Plan (2015-2021)

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

Good quantitative status planned to be achieved in all groundwater bodies by 2021 whilst the achievement of good qualitative status depends on the natural response time of the aquifer systems.

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.

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.

Coastal bathing water in Malta is monitored by the Environmental Health Directorate (EHD) in accordance with the provisions of Legal Notice 125 of 2008 as amended by Legal Notice 237 of 2011. These national regulations transpose Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006, concerning the management of bathing water quality.

- *Link to Legal Notice 125 of 2008: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=11866&l=1>*

Malta has identified a total of 87 coastal bathing waters covering the 3 main islands of the Maltese archipelago i.e. Malta, Gozo and Comino. All 87 coastal bathing waters are monitored every week during the official bathing season which starts from the 3rd week of May to the 3rd week of October. Samples are collected from each site and submitted to the Public Health Laboratory to be

analysed for the two microbiological parameters i.e. E. coli and Intestinal enterococci as defined by the respective Directive.

The analytical microbiological methods used to assess compliance with the Directive are, Intestinal enterococci - Microplate MPN technique (ISO 7899 - 1:2000) and Escherichia coli - Microplate MPN technique (ISO 9308 - 3:2000).

Analysis is performed at the Public Health Laboratory (PHL) by qualified personnel with years of experience in water analysis. The laboratory is accredited for Intestinal enterococci and Escherichia coli parameters

The bathing water quality is then classified using the criteria as defined by the same directive for the 2 microbiological parameters based on 4 years data for each site.

All 87 sites are monitored approximately four times as much the required minimum frequency stipulated in Annex IV of Directive 2006/7/EC, meaning samples are collected every week rather than every four weeks. An average of 95 samples were elevated for each site monitored for the period 2015 – 2018. The classification of all 87 was assessed as per Annex II of the Directive 2006/7/EC and resulted as follows:

86 sites classified as Excellent	-	98.9%
1 sites classified as Good	-	1.1%
0 sites classified as Sufficient	-	0.0%
0 sites classified as Poor	-	0.0%

Given the excellent track record, our target is to maintain our bathing sites of excellent quality, and strive to improve the quality of the only bathing site qualified as good. We also aim to reduce the frequency of temporarily closure of bathing sites,

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).

Malta has been monitoring its official bathing areas for decades and bathing sites were classified with the criteria stipulated under the Barcelona Convention. However, since 2004 when Malta become an EU Member State, bathing water quality started also being monitored and classified according to the EU Directives. Data for both classifications is being provided in Graph 1 and Table 1 below.

As part of the management programme, Environmental Health Officers carry out routine site-inspections so as to check for any possible sources of pollution. These officers also investigate any complaints made by the public and when in doubt, extra samples are collected and sent for analysis at the PHL. In the case that visual evidence of pollution is noted or unsatisfactory results, the affected site will be temporarily closed and bathing would not be recommended. If there will be the need to temporary close any of these areas, a temporary closure sign is attached at the same site and the information is provided in five languages, Maltese, English, French, German, and Italian. As from bathing season 2018, a

short-term pollution report is published following each temporary closure of a bathing site. These reports can be found at the following

Link: <https://deputyprimeminister.gov.mt/en/environmental/Health-Inspectorate/EHRM/Pages/Short-Term-Pollution-Reports.aspx>.

During the bathing season, the EHD issues a weekly report with the classification of each bathing site based on the Escherichia coli and Intestinal enterococci counts.

Link: <https://deputyprimeminister.gov.mt/en/environmental/Health-Inspectorate/EHRM/Pages/Bathing-Water-Programme.aspx>

Another weekly report is the star rating report, as per Commission Implementation Decision 2011/321/EU published on 27 May 2011 for the classification of sites is also issued. The EHD also posts on its webpage the raw data on a weekly basis. Copies of these reports are sent by e-mail to all those who requested to be placed on the Directorate's mailing list and to all local councils.

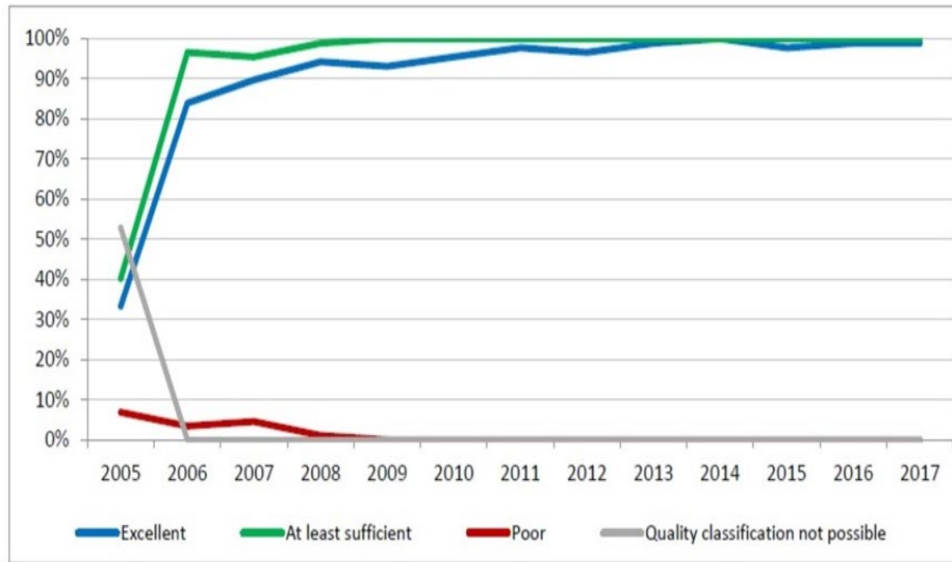
All bathing areas monitored as part of the bathing water monitoring programme are clearly identified by fixed information signs in five languages, indicating the site code and stating that the area is monitored by the EHD on a regular basis. In 2018, a QR code which provides the raw data for each Blue Flag beach was affixed to the information boards. The EHD has new information boards which provide further information on the classification of sites and beach profiles in the pipeline.

The EHD has completed the compilation of 29 beach profiles covering all 87 bathing sites monitored as part of the annual bathing water monitoring programme in 2013. Every year a revised version of the beach profile is published and copies of these reports can be found at the following

Link: <https://deputyprimeminister.gov.mt/en/environmental/Health-Inspectorate/EHRM/Pages/Bathing-Water-Profiles.aspx>

Moreover, officials from the EHD participated on television and radio programmes to raise awareness among the general public on bathing water quality.

Results of bathing water quality in Malta from 2005 to 2017



Graph 1: Coastal bathing water quality trend in Malta. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

Source: (European Environment Agency, 2018)

Barcelona Convention Classification based on Intestinal Enterococci counts in line with the EU Directive 2006/7/EC

		Total number of bathing waters	Excellent Quality		Good Quality		Sufficient Quality		Poor Quality	
			Number	%	Number	%	Number	%	Number	%
Coastal bathing waters	2009	87	73	83.9%	13	14.9%	1	1.1%	0	0.0
	2010	87	87	100.0%	0	0.0%	0	0.0%	0	0.0
	2011	87	87	100.0%	0	0.0%	0	0.0%	0	0.0
	2012	87	86	98.9%	1	1.1%	0	0.0%	0	0.0
	2013	87	87	100.0%	0	0.0%	0	0.0%	0	0.0
	2014	87	87	100.0%	0	0.0%	0	0.0%	0	0.0
	2015	87	87	100.0%	0	0.0%	0	0.0%	0	0.0
	2016	87	87	100.0%	0	0.0%	0	0.0%	0	0.0
	2017	87	87	100.0%	0	0.0%	0	0.0%	0	0.0
2018	87	87	100.0%	0	0.0%	0	0.0%	0	0.0	

Table 1

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

As can be seen from the classification graph and table above, there has been a positive progress in the bathing water quality both as for the requirements of the EU Directive and the Barcelona Convention.

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

Targets as required both by the EU Directive and the Barcelona Convention have already been achieved. SDG 14 is being addressed with the provision of several waste bins and daily collection of waste to prevent plastic and other waste from ending up in the sea. Malta is also aiming to increase the number of Blue Flag Beaches, so that most of our official bathing sites are monitored also under international criteria of high environmental and quality standards.

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

NA

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

For each target set in this area:

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

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.

Public/Commercial swimming pools are covered by Legal Notice 129 of 2005 – Swimming Pools Regulations as amended by Legal Notice 135 of 2008. Swimming pools under these regulations are defined as “public or commercial swimming pools which include any artificial basin intended for recreational bathing, swimming, diving or therapeutic purposes which is located indoors or outdoors and is provided with controlled water supply and which is not used or intended to be used as a pool at a single family residence unless it is used or intended to be used for commercial or business purposes and shall include wading pools, spas, whirlpools, hot tubs, diving pools and special purpose pools”.

Our target is to have all public/commercial pools registered with the Superintendent for Public Health and carry out audits on a regular basis. During audits, records of the monitoring and analysis carried out are checked to verify that pools are kept safe.

- *Link to Legal Notice:*
<http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=11859&l=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 responsibility of keeping the water quality of the said pool safe for recreational use falls under the responsibility of the responsible person. The EHD has a regulatory role to verify that all the provisions laid down under these regulations are being fulfilled by the responsible person.

Under these same regulations, the Health Authority is required to keep a register for all registered swimming pools and this register is being kept by the Environmental Health Directorate. Copy of said register has also been placed for the general public information on the Directorate's webpage. To-date 223 premises have registered their swimming pools totalling- 485 registered pools.

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

As from June 2006 the Environmental Health Directorate started carrying out audits of all registered swimming pools with the Health Authority. These audits are carried out by Environmental Health Officers within the Water Regulatory and Auditing Unit in Malta and the regional offices in Gozo, as coordinated by the Senior Environmental Health Practitioner responsible for the Water Regulatory and Auditing Unit. An appointment is made with the responsible persons so that they are present during the audits and ensure that the documentation is made available to the officers for audit. Between 2016 and 2018 approximately 81 premises covering 179 swimming pools were audited. These audits are usually combined audits, during which the premises are also audited for Legionella control. The extent, nature and timing of the audit depends on the size of the hotel, number of registered swimming pools and documentation made available by the management.

Following each audit, a risk assessment report is issued identifying any remedial actions that need to be taken by the management. A follow-up inspection is carried out to verify that the non-conformities and observations identified during the audit have been addressed.

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

No targets have been set in this regard.

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

Presently the regulations are based on the WHO Guidelines for recreational waters

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

For each target set in this area:

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

For facilities falling under the EU Industrial Emission Directive (IED), requirements for land monitoring data and an Outline Decommissioning Plan arise from Regulation 7 of Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013), which transpose the EU Industrial Emissions (IPPC) Directive (2010/75/EU) into Maltese law (IED). Soil screening values and groundwater threshold values for Malta have been determined based on relevant EU regulations and international guidance documents. Later on such a document also provided a scientific basis for the drafting of general Terms of Reference for land and groundwater contamination investigations to be carried out for potentially contaminated sites, either before their redevelopment or after decommissioning.

In cases which do not fall within the scope of the IED, the provisions of SL 549.97 (Prevention and Remedying of Environmental Damage Regulations) or SL 549.63 (Waste Regulations) may be applied.

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 compilation of the list of contaminated and potentially contaminated sites in Malta is an ongoing process, as is the assessment of the likelihood, extent and significance of contamination. The compilation of the list takes into consideration various potentially polluting installations (e.g. petrol stations, slurry pits, scrapyards and historical military fuel storage sites) where there is a risk of seepage of contaminants and groundwater contamination.

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

The requirement for remediation may depend on the projected after-use of the site. Soil screening values and groundwater threshold values established are different in cases of “industrial” and “residential” after uses. In different cases, the Authority may require specific techniques ranging from site sealing to full remediation activities

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.

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.

The River Basin Management Plan sets out the objectives in each water body in order to maintain good ecological and chemical status or to achieve it. The target of good ecological status, good chemical status and no deterioration are expected to be achieved at a water body level and cover the waters of the Maltese Water Catchment District (i.e. the whole of the Maltese Islands). The plan providing details on each target and related actions to achieve those targets is accessible from the following link:

https://era.org.mt/en/Documents/2nd_Water_Catchment_Management_Plan-Malta_Water_in_Maltese_Islands.pdf

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).

Actions are described in the Second River Basin Management Plan (2015-2021).

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

Please refer to the programme of measures under the Second River Basin Management Plan which highlighted all the measures and actions taken by Malta.

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.

XX. Additional national or local specific targets

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

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

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

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

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

Part three

Common indicators¹

I. Quality of the drinking water supplied

Link to further qualitative and quantitative information:

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

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?

Population coverage is 0.43 Million or 100%

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

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

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

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

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

Treatment plant outlet, distribution system or point of consumption.

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

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

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

¹ 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.

² 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/.

microbial indicators and/or pathogens that are subject to routine water quality monitoring.

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

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

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

<i>Parameter</i>	<i>Area/category</i>	<i>Baseline (specify year)</i>	<i>Value reported in the previous cycle (specify year)</i>	<i>Current value (specify year)</i>
<i>E. coli</i>	Total			
	Urban			
	Rural			
Additional parameter 1:	Total			
	Urban			
	Rural			
Additional parameter 2:	Total			
	Urban			
	Rural			
Additional parameter 3:	Total			
	Urban			
	Rural			

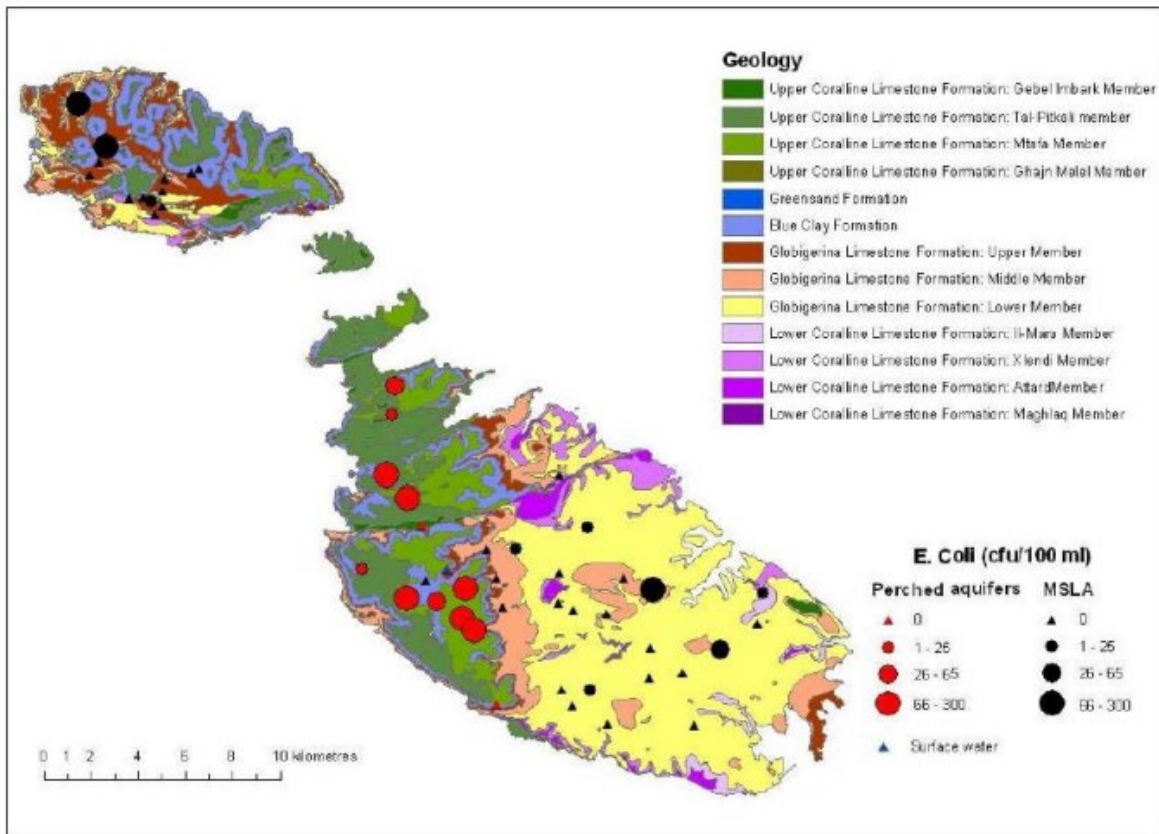


Figure 1 Presence of E-Coli in groundwater samples from the Mean Sea Level and Perched Aquifer System. Source 2nd Water Catchement Management Plan in the Maltese Islands, 2016.

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.

Substance	Baseline value (please specify the year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)
Fluoride	<i>0% (2006)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>
Nitrate and nitrite	<i>0% (2004)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>
Arsenic¹	<i>0% (2004)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>
Lead	<i>0% (2004)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>
Iron	<i>10% (2011)</i>	<i>2% (2013)</i>	<i>8% (2017)</i>
Additional chemical parameter 1: <i>Boron</i>	<i>0% (2004)</i>	<i>24% (2013)</i>	<i>4% (2017)</i>
Additional chemical parameter 2: <i>THMs (Total)</i>	<i>0% (2004)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>
Additional chemical parameter 3: <i>pH</i>	<i>0% (2004)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>
Additional chemical parameter 4: <i>Nitrates</i>	<i>0% (2006)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>
Additional chemical parameter 5: <i>Benzo(a)pyrene</i>	<i>0% (2004)</i>	<i>0% (2013)</i>	<i>0% (2017)</i>

A summary of the resultant chemical status for each water body is provided in table 6.6 below. The analysis that was carried out related to the pressures and impacts and associated exceedances in particular contaminants is provided in Chapter 3.

Water category/name	Chemical quality of the <u>Water matrix</u>	Chemical quality of the <u>Sediment matrix</u>
Transitional water		
Is-Salini	Good High confidence All parameters were below their respective EQS Lead (3.367 µg/l) was relatively high.	Good High confidence All parameters were at levels below the guideline values of ecotoxicological significance in surface waters
Il-Maghluq ta' Marsascala	Good High confidence All parameters were below their respective EQS	Bad High confidence Fluoranthene, Benzo(a)pyrene, Benzo(b)fluoranthene, and Benzo(g,h,i)-perylene , were at levels above or close to the guideline values of ecotoxicological significance
Il-Ballut ta' Marsaxlokk	Good High confidence All parameters were below their respective EQS.	Bad High confidence Fluoranthene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)-perylene , and Nickel were at levels above or close to the guideline values of ecotoxicological significance.
Is-Simar	Good High confidence All parameters were well below their respective EQS.	Good High confidence All parameters were at levels below the guideline values of ecotoxicological significance in surface waters.
L-Ghadira	Good High confidence All parameters were well below their respective EQS	Good High confidence All parameters were at levels below the guideline values of ecotoxicological significance in surface waters
Water courses		
Bahrija	Good Medium Confidence All parameters were below their EQS.	Good High confidence All parameters were at levels below the guideline values of ecotoxicological significance in surface waters.
Wied il-Luq	Good High confidence All parameters were well below their respective EQS.	Good High confidence All parameters were at levels below the guideline values of ecotoxicological significance in surface waters.
Wied tal-Lunzjata	Good High confidence Mercury (0.071 µg/l) exceeded the EQS (0.07 µg/l) in one sample. Other samples were very low and below detection.	Bad High confidence Lead and dioxin like compounds were found to be above or close to the guideline values of ecotoxicological significance.
Pools		
Il-Qattara	Good High confidence All parameters were well below their respective EQS.	Bad High confidence Cadmium, Lead and Zinc were found to be above or close to the guideline values of ecotoxicological significance.
L-Ghadira ta' Sarraflu	Good High confidence All parameters were below their respective EQS.	Good High confidence All parameters were at levels below the guideline values of ecotoxicological significance in surface waters.

Table 6.6: Chemical quality of inland surface waters based on monitoring in water and sediment

Source 2nd Water Catchment Management Plan in the Maltese Islands, 2016

II. Outbreaks and incidence of infectious diseases related to water

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

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

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

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

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

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

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

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

Disease	Incidence rate per 100,000 population (all exposure routes)			Number of outbreaks (confirmed water-borne outbreaks)		
	Baseline (Average 2014- 2018)	Value reported in the previous reporting cycle (2015)	Current value (2018)	Baseline (Average 2014- 2018)	Value reported in the previous reporting cycle (2015)	Current value (2018)
Shigellosis	0.67	0.2	2.5 (12 cases of which 7 were imported)	0	0	0
Enterohaemorrhagic <i>E. coli</i> infection	0.33	0.4	0.2 (1 non-toxicogenic case reported)	0	0	0
Typhoid fever	0	0	0	0	0	0
Viral hepatitis A	1.4	0.9	0.84 (4 cases of which 3 were imported)	0	0	0
Legionellosis	1.8	Not reported	2.5	0.4	Not reported	0
Cryptosporidiosis	0.2	Not reported	0.2	0	Not reported	0
Cholera	0	Not reported	0	0	0	0
Amoebiasis	0.04 (1 imported case in 2016)	Not reported	0	0	0	0

Additional disease 3:						
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III. Access to drinking water

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

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

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

<i>Percentage of population with access to drinking water</i>	<i>of Baseline value (specify year)</i>	<i>Value reported in the previous cycle (specify year)</i>	<i>Current value (specify year)</i>
Total	100% (2004)	100% (2015)	100% (2017)
Urban	100% (2004)	100% (2015)	100% (2017)
Rural	100% (2004)	100% (2015)	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

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

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

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

<i>Percentage of population with access to sanitation</i>	<i>of</i>	<i>Baseline</i>	<i>value</i>	<i>Value reported in the reporting cycle</i>	<i>previous cycle</i>	<i>Current</i>	<i>value</i>
<i>(specify year)</i>		<i>(specify year)</i>		<i>(specify year)</i>		<i>(specify year)</i>	
Total							
Urban				100% (2015)		100% (2017)	
Rural				100% (2015)		100% (2017)	

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 water³ falling under each defined class (e.g., for European Union countries and other countries following the European Union Water Framework Directive⁴ 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.).

³ Please specify.

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

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

(i) Ecological status of surface water bodies

	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
<i>Percentage of surface water classified as:</i>			
High status			
Good status			
Moderate status			
Poor status			
Bad status			
Total number/volume of water bodies classified			
Total number/volume of water bodies in the country			

(ii) Chemical status of surface water bodies

	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
<i>Percentage of surface water bodies classified as</i>			
Good status			
Poor status			
Total number/volume of water bodies classified			
Total number/volume of water bodies in the country			

(iii) Status of groundwaters

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

(b) For other countries

(i) Status of surface waters

<i>Percentage of surface water falling under class^a</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
I			
II			
III			
IV			
V			

Total number/volume of water bodies classified

Total number/volume of water bodies in the country

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

(ii) *Status of groundwaters*

<i>Percentage of groundwaters falling under class^a</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
I			
II			
III			
IV			
V			

Total number/volume of groundwater bodies classified

Total number/volume of groundwater bodies in the country

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

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

2. Water use

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

<i>Water exploitation index</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
Agriculture		43% (2015)	43% (2015)
Industry ^a		12% (2015)	12% (2015)
Domestic use ^b		32.5% (2015)	32.5% (2015)

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

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

Part four

Water-related disease surveillance and response systems

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

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

YES NO IN PROGRESS

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

YES NO IN PROGRESS

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

YES NO IN PROGRESS

2. If yes or in progress, please provide summary information about key elements of the water-related disease surveillance and outbreak response systems (e.g., identification of water-related disease outbreaks and incidents, notification, communication to the public, data management and reporting). Please also provide reference to existing national legislation and/or regulations addressing water-related disease surveillance and outbreak response.

The Infectious Disease Prevention and Control Unit (IDCU) within the Health Promotion and Disease Prevention Directorate of the Maltese Ministry for Health is the national surveillance centre for communicable diseases in Malta. The main objectives of IDCU are:

- To undertake surveillance of communicable diseases in Malta.
- To improve reporting of notifiable diseases by creating methods that would encourage early notification.
- To disseminate relevant, accurate and timely information.
- To control infections through timely investigation and management of incidents of communicable diseases.
- To undertake epidemiological research in the area of infectious diseases
- To provide advice on communicable diseases to health professionals and the general public.
- To contribute to training in communicable disease control.

IDCU collates data on 71 notifiable diseases, including water-borne diseases. General practitioners, hospitals and medical diagnostic laboratories (public and private) have to report to IDCU either by mail, fax, e-mail, or telephone. IDCU also actively data from the main general hospital laboratory on cases of infectious diseases. Case-definitions are based on EU case definitions. All cases are investigated by IDCU staff using dedicated questionnaires in order to identify the source of the infection and prevent additional cases. IDCU also liaises with the relevant authorities in order to implement the necessary public health control

measures. The unit collaborates closely with other directorates and ministries in outbreak investigations and surveillance, namely, the EHD and the Veterinary Department. IDCU staff also provide the necessary when communicating to cases and their contacts and also promote awareness amongst the public on infectious diseases.

SOPs exist for the investigation of cases and they are regularly updated. A 24/7 on call service of the IDCU for urgent notifications or public health emergencies is also in place. A helpline for the public operates when there is a Public Health Emergency of International Concern. Data is analysed regularly and monthly, quarterly and annual reports are issued. IDCU also regularly reports data to ECDC, WHO and other relevant authorities and communicates internationally and with stakeholders and via EWRS whenever this is required.

- Public Health Act:
<http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8931>
- Food Safety Act
<http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8915&l=1>
- Additional legal notices:
<https://deputyprimeminister.gov.mt/en/environmental/Legislation/Pages/Food-Legislation/National/Food-Safety-Act-and-Legal-Notices.aspx>

5. 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.

Introduction of improved lab techniques such as PCR have enhanced the detection of cases of water-borne diseases amongst humans. New applications were also set up in order to facilitate electronic notification of cases of diseases by physicians to IDCU.

Part five

Progress achieved in implementing other articles of the Protocol

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

Suggested length: up to two pages

NA

Part six

Thematic part linked to priority areas of work under the Protocol

NA

1. Water, sanitation and hygiene in institutional settings

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

Basic services refer to the following:

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

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

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

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

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

<i>Institutional setting</i>	<i>Current value (specify year)</i>
<i>Schools</i>	
Basic sanitation service	
Basic drinking-water service	
Basic hygiene service	
<i>Health-care facilities</i>	
Basic sanitation service	
Basic drinking-water service	
Basic hygiene service	

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

YES NO IN PROGRESS

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

YES NO IN PROGRESS

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

To improve WASH in schools

To improve WASH in health-care facilities

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

2. Safe management of drinking-water supply

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

YES NO IN PROGRESS

7. If yes, please provide reference to relevant national policy(ies) or regulatory documentation.
8. In the table below, please provide information on the percentage of the population serviced with drinking-water under a WSP.

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

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

3. Equitable access to water and sanitation

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

YES NO IN PROGRESS

10. Do national policies or programmes include actions to improve equitable access to water and sanitation (please tick all that apply):
- To reduce geographical disparities
 - To ensure access for vulnerable and marginalized groups
 - To keep water and sanitation affordable for all
11. If yes, please provide reference to main relevant national policy(ies) and programme(s).

Part seven

Information on the person submitting the report

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

Name of officer responsible for submitting the national report:

Claire Pace- Environmental Health Officer

Charles Bonnici- Environmental Health Practitioner

Dr Roberto Debono- Office of the Superintendent of Public Health- WHO-UNECE National Focal Point Environment & Health

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Name and address of national authority: Environmental Health Directorate- Head Office – Superintendence of Public Health.

Signature: Clive Tonna- Diretor Environmental Health

Date: 16th April 2019

Submission

1. Parties are required to submit their summary reports to the joint secretariat, using the present template and in accordance with the adopted guidelines on reporting, 210 days before the next session of the Meeting of the Parties. Submission of the reports ahead of this deadline is encouraged, as this will facilitate the preparation of analyses and syntheses to be made available to the Meeting of the Parties.
2. Parties are requested to submit, to the two addresses below, an original signed copy by post and an electronic copy by e-mail. Electronic copies should be available in word-processing software.

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