

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

Executive summary

Part one General aspects

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

YES NO IN PROGRESS

THE QUALITY OF THE DRINKING WATER SUPPLIED ACCESS TO SANITATION		
Number of target	Target date	Objective
Target 1	31 December 2020	To reduce arsenic concentration in the drinking water below 10 µg/L
Target 2	31 December 2021	To reduce number of small scale non registered water supply systems (for systems providing water for more than 50 inhabitants)
Target 3	1 January 2019	The microbiological parameters and indicator parameters laid down, respectively, in Annex I – Parts A and C <i>Directive 98/83/EC on the quality of water intended for human consumption</i> shall apply to water supply zones
Target 4	1 January 2022	With regard to the chemical parametric values set out in Annex I – Part B of the <i>Directive 98/83/EC on the quality of water intended for human consumption</i>
Target 5	1 January 2023	The growth of percentage of access to public water supply system from present average 75% to average 85% to 90%, including small local systems presently unsupervised
Target 6	31 December 2018	Increasing the percentage of population connected to public sewerage for agglomerations with more than 15 000 PE
Target 7	31 December 2020	Increasing the percentage of population connected to public sewerage for agglomerations with more than 10 000 PE for catchment areas of the Danube and other sensitive areas
Target 8	31 December 2023	Increasing the percentage of population connected to public sewerage for agglomerations with more than 2 000 PE
Target 9	1 January 2024	The growth of percentage of access to public sewage system from present average 46% to average 65-70% including the waste water treatment on 281 agglomerations larger than 2000 ES, in accordance with Urban Waste Water Treatment Directive (91/271/EEC)
Target 10	1 January 2021	To increase percentage of surface water bodies with good ecological status and groundwater water bodies with good status
Target 11	31 December 2015	Developing water safety plans for small community water supply systems
Target 12	31 December 2015	Preparing educative materials on good management practice of small community water supply systems and private wells
Target 13	31 December 2016	Training of operators and education of the residents in order to raise awareness on water-related disease
Target 14	31 December 2015	Developing national data base on drinking water quality (Fulfilled)

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

The targets have not been officially published but they were defined through the framework of the:

- **Water Management Strategy published in the Official Gazette No. 91/08, adopted by the Croatian Parliament in July 2008**
- **River Basin Management Plan 2016-2021 published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**
- **Long term investment program for development of water utility infrastructure 2014-2023, published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**

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.

Ministry of Environment and Energy, the Ministry of Health, Croatian Waters (Legal entity for water management) and Croatian National Institute of Public Health participated in the preparation of this report.

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.

The legal basis for the implementation of the Protocol is the Water Act (Official Gazette No. 153/09, 130/11, 56/13 and 14/14) and other subordinate legislation. The strategic bases for the implementation of the Protocol are:

- **Water Management Strategy (Official Gazette No. 91/08), adopted by the Croatian Parliament in July 2008. The Strategy is a long-term planning document which identifies the vision, mission, goals, and tasks of the national water management policy.**
- **River Basin Management Plan 2016-2021 published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**
- **Long term investment program for development of water utility infrastructure 2014-2023, published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**

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?

Public participation is mandatory and ensured:

- **through document adoption process and**
- **through strategic environmental assessment process.**

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.

Ministry of Environment and Energy is the body competent for the implementation of the Protocol on Water and Health, in cooperation with the Ministry of Health. The following bodies are also involved in the implementation of the Protocol: the Croatian National Institute of Public Health and County Public Health Institutes, which monitor the sanitary quality of drinking water, and Croatian Waters as a legal entity for water management.

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.

Decision-making is distributed between national level (competence of ministries and national agencies) and local/regional level (local and regional self-governments and water utilities). Similarly, financing is

generally combination (co-financing) of State Budget and national funds contribution in addition to resources collected on local level (water price).

Part two

Targets and target dates set and assessment of progress

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

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.

Number of target	Target	Target date	Responsibility	Progress
Target 11	Developing water safety plans for small community water supply systems	31 December 2015	Ministry of health, Croatian Institute of Public Health	Achieved. The Act on Water for Human Consumption (OG 56/13, 64/15, 104/17, 115/18) include obligation to introduce WSP in water supply systems, meanwhile HACCP is in place. According to the new Water Services Act small community water supply systems will need to be taken by the public water supply systems thus WSP obligation will also apply for them.
Target 12	Preparing educative materials on good management practice of small community water supply systems and private wells	31 December 2015	Ministry of health, Croatian Institute of Public Health	Achieved. Different materials developed by the counties institutes of public health.
Target 13	Training of operators and education of the residents in order to raise awareness on water-related disease	31 December 2016	Ministry of health, Croatian Institute of Public Health,	Workshops (eg in schools) and meeting are going on however further activities are needed and currently it is looked for sources of funding.
Target 14	Developing national database on drinking water quality	31 December 2015	Ministry of health, Croatian Institute of Public Health, Croatian Waters	Achieved. National database developed in 2014 and data of the state monitoring for that and further year are entered into database.

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 framework of implementation several of this targets is the Act on Water for Human Consumption (OG 56/13, 64/15, 104/17, 115/18).

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

The competent authorities are taken the measures and actions to achieve these targets.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

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

Our baseline conditions in respect to outbreaks and incidents of water related diseases are exceptionally favorable. Vital target is to maintain such a favorable situation for the future. This is and will be achieved by the continuation of all preventive, surveillance and response measures and activities in the country, set by the respective laws and the national Program on health measures at the national and local level.

Water-related diseases are mostly connected with the small water supply system.

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).

Since water-related diseases are mostly connected with the small water supply systems they are, for the first time, included in the national drinking water monitoring program by the Law on the water intended for human consumption (Official Gazette No. 56/13, 64/15, 104/17 and 115/18).

The only problem is to assure financial support necessary for the monitoring. The majority of financial needs are expressed regularly through periodical (annual, etc.) financial plans and programs of all subjects involved all over the country.

Program on health measures is created, coordinated and in a great part implemented by the health sector, particularly by the network of national and county institutes of public health with their epidemiology services as a backbone of the system. All legal prerequisites are currently in place and aligned with all respective EU communicable diseases related legislative.

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

Having one or no one outbreak related to drinking water per year is good indicator that target is fulfilled. Monitoring of drinking water quality in the small community water supply systems is essential to maintain such good conditions and need to be maintained and improved in the future. In the future, it is essential to continue to monitor water related diseases situation, and the incidence trends will be the most suitable indicator to monitor, if our targets to maintain the present favorable situation regarding water related diseases were fulfilled.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

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

The target is to ensure drinking water for the population in accordance with sanitary standards. This includes increasing the percentage of population supplied with drinking water from public water supplies system to 90% (on the average), compared to the current 86.6%. Continuous action is taken concerning this target.

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

The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, 14/14 and 46/18) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14, 119/15, 120/16, 127/17) and they are harmonized with EU *acquis communautaire*.

- **The Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines in terms of improving access to drinking water.**
 - **River Basin Management Plan 2016-2021 published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**
 - **Long term investment program for development of water utility infrastructure 2014-2023, published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**
- **Public water supply systems are further developed, but the main problem is the lack of available funds, in relation to which significant financial assistance from EU funds is expected: Operational Program 2007-2013 and 2014 – 2020. The Operational Program 2021-2027 is being prepared.**
- **Conditions are created for the sustainability of water supply systems by ensuring sufficient quantities of water of the required quality through direct use of resources or through treatment.**
- **The inhabitants not connected to public water supply systems are supplied with water from the so called local water supply systems or individual intake structures (wells, tanks). Raising the percentage of population supplied with (sanitary) safe drinking water is intended to be achieved through gradual inclusion of local water supply systems into public water supply systems. Aside from the population, public water supply systems also supply water to non-households (economic agents, institutions, etc.), mostly for sanitary purposes, and partly for technological purposes.**

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

Every year funds are regularly invested in the development of public water supply, thereby increasing the percentage of population connected to public water supply systems in Croatia. The development of public water supply systems is financed from the following sources: the water use fee, the State Budget, budgets of local self-government units, the funds of public utility companies, IFI loans, and EU funds.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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.

In line with the Water Management Strategy, RBMP and Long term investment program the target set in this area is the development of public sewerage systems. The planned activities of increasing the percentage of population connected to public sewerage systems by the year 2023 will encompass 281 agglomerations larger than 2,000 PE serving 2.7 million inhabitants with appropriate wastewater treatment (requirements of UWWTD). The updated data concerning the implementation of the UWWTD required for reporting to the EC identify 265 agglomerations larger than 2,000 PE.

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 frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, 14/14 and 46/18) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14, 119/15, 120/16, 127/17) and they are harmonized with EU *acquis communautaire*.

- **The Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines in terms of improving access to drinking water.**
- **River Basin Management Plan 2016-2021 published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**
- **Long term investment program for development of water utility infrastructure 2014-2023, published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**

Receipts collected from the water protection fee are continually invested in the construction of major structures of public sewerage systems (main sewers, pumping stations, wastewater treatment plants, outlets into receiving waters, and sludge treatment facilities) and structures of secondary sewerage network.

The main obstacle to reaching the above targets is the lack of available funds, in relation to which significant financial assistance from EU funds is expected. In that regard, groups of projects are prepared and nominated for co-financing from the said sources of funds: Operational Program 2007-2013 and 2014 – 2020. The Operational Program 2021-2027 is being prepared.

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

Due to the insufficient technical capacities, delays are expected.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

In accordance with the Water Management Strategy, RBMP, LTIP in addition to increasing the percentage of population connected to public water supply systems, development priorities on national level are the following:

- **Reducing water losses from public water supply systems;**
- **Definition of distribution areas (restructuring and optimization of the number of utility companies);**
- **Integration of water supply systems – regional systems;**
- **Economic price of water;**
- **Meeting water needs;**
- **Increasing the safety of abstraction of water for public water supply.**

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

The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, 14/14 and 46/18) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14, 119/15, 120/16, 127/17) and they are harmonized with EU *acquis communautaire*.

The Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines in terms of improving access to drinking water.

- **River Basin Management Plan 2016-2021 published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**
- **Long term investment program for development of water utility infrastructure 2014-2023, published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**

The Water Services Act (in the final phase of adoption) regulates institutional and administrative framework for improvement of public water service (coverage, level and standards as well as economic, technical indicators.)

Groundwater and surface water used for human consumption is further protected through the implementation and adoption of Decisions on sanitary protection zones.

A water loss reduction programme was initiated in the year 2018. Its implementation will continue over the next several years.

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

With the implementation of the water loss reduction programme, negative upward trends in water losses have been stopped.

Planning documentation more increasingly foresees interconnection of certain water supply systems. Restructuring and optimization of utility companies is 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.

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

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

In line with the requirement of UWWTD, IED as well as with Ordinance on wastewater emission limit values (Official Gazette No. 80/13, 43/14, 27/15 and 3/16) the design, construction and maintenance of wastewater collection systems shall be undertaken in accordance with the best technical knowledge not entailing excessive costs, notably regarding:

- volume and characteristics of urban wastewater;
- prevention of leaks from the wastewater collection system;
- limitation of pollution of receiving waters due to reduced wastewater load from combined systems of urban wastewater and storm water.

Industrial wastewater entering wastewater collection systems and urban wastewater treatment plants shall be subject to such pre-treatment as is required in order to:

- protect the health of staff working in wastewater collection systems and wastewater treatment plants;
- ensure that wastewater collection systems, wastewater treatment plants and associated equipment are not damaged;
- ensure that the operation of the wastewater treatment plant and the treatment of sludge are not impeded;
- ensure that discharges from wastewater treatment plants do not adversely affect the environment, or prevent receiving waters from complying with other Community Directives;
- ensure that sludge can be disposed of safely in an environmentally acceptable manner.

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).

Full transposition of EU regulations enables full compliance with the targeted standards (due to financial and capacity constraint some delays are expected).

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

There is no monitoring of leaks from wastewater collection systems and extraordinary situations of pipeline bursts.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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 target is to improve the management of water supply and to increase the level of use and safety of water supply.

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

The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, 14/14 and 46/18) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14, 119/15, 120/16 and 127/17) and they are harmonized with EU *acquis communautaire*.

The Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines in terms of improving access to drinking water.

- **River Basin Management Plan 2016-2021 published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**
- **Long term investment program for development of water utility infrastructure 2014-2023, published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**
 - **Further steps are taken to provide water of the required quality to all users. Water undergoes treatment depending on the quality of raw water.**
 - **In general, further rationalization of water use is carried out, particularly on tourist areas and on the islands.**
 - **The so called local water supply systems will be gradually connected to public water supply systems in order to control the quality of water and introduce “the user pays principle”. All other water supply methods (wells, tanks and the like) will gradually be included in the system of public water supply in order to control the quality of water, thereby further increasing the safety of public health.**
 - **Conditions are gradually created for the introduction of the economic price of water within public water supply which is to cover the actual costs, at the same time complying with the basic “user pays principle” and having in mind the social affordability of the price of water.**

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

Depending on financial capacities, further steps are gradually taken to provide water of the required quality to all users (water undergoes treatment depending on the quality of raw water).

- **Local water supply systems will be more intensively connected to public water supply systems in the future period. Other water supply methods (wells, tanks and the like) will also be gradually included in the system of public water supply.**

- **Conditions are gradually created for the introduction of the economic price of water within public water supply which is to cover the actual costs, at the same time complying with the basic “user pays principle” and having in mind the social affordability of the price of water.**

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

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

According to the Water Management Strategy, RBMP, LTIP development priorities are the following:

- **Systems according to their size in terms of current and planned loads (population and industries connected to public sewerage systems);**
- **Systems which will enable a fully functional unit, from connection, collection and treatment to appropriate discharge of treated wastewater, respecting technical and sanitary conditions of providing the service (impermeability, load releases, temporary sludge disposal, etc.);**
- **Systems in the areas where degradation in water status has been identified (surface water, groundwater, coastal waters);**
- **Systems in the areas identified as hazardous due to undeveloped public sewerage systems;**
- **Systems in the basins whose receiving capacities are subject to a combined pressure from several sources of pollution;**
- **Systems whose construction enables balanced development of utility infrastructure and sanitary living conditions of the population on the entire national territory.**

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).

Wastewater collection and treatment systems are continuously constructed on the basis of specified priorities.

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

It has been identified that the construction of wastewater collection systems has improved the quality of water in the watercourses where these measures were carried out. Organic and nutrient pollution has been reduced.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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))

For each target set in this area:

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

In line with the Water Management Strategy, RBMP, LTIP the target set in this area is the development of public sewerage systems. It foresees mostly development of secondary wastewater treatment, with the exception of less sensitive coastal areas where, for smaller agglomerations, appropriate treatment is according to the recipient standard is planned.

In line with the Ordinance on wastewater emission limit values (Official Gazette No. 80/13, 43/14, 27/15 and 3/16), discharged effluents are temporarily tested for compliance with the parameters of the planned treatment level and are subject to continuous monitoring and recording of volumes discharged from public sewerage systems.

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 frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, 14/14 and 46/18) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14, 119/15, 120/16 and 127/17) and they are harmonized with EU *acquis communautaire*.

The Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines in terms of the collection and treatment of urban wastewater aimed at achieving the good status of water.

- **River Basin Management Plan 2016-2021 published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**
- **Long term investment program for development of water utility infrastructure 2014-2023, published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**

Collected water protection fee are continually invested in the construction of major structures of public sewerage systems (main sewers, pumping stations, wastewater treatment plants, outlets into receiving waters, and sludge treatment facilities) and structures of secondary sewerage network.

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

An assessment of the percentage of population connected to wastewater treatment plants in the last several years shows an upward trend. According to the LTIP, in the reference year - 2014 - it stood at around 35%. Estimation is that recent years it has risen to approximately 38%.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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 (art. 6, para. 2 (g) (ii))

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

The target set in this area is the protection of receiving waters on the sites where a sewerage system is released from load through storm water overflows. This will be harmonized with the objectives of the Water Framework Directive, which requires the achievement and maintenance of good water status.

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).

Administrative procedures for issuing water rights terms for the construction of a public sewerage system require an assessment of wastewater volume and of frequency of release through storm water overflows.

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

Regulated and applied through administrative procedures.

For new sewerage systems, the recommendation is separate sewer system approach.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

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

The quality of wastewater discharged from a WWTP has to comply with the established limit values

PARAMETERS	LIMIT VALUE	MINIMUM PERCENTAGE OF LOAD REDUCTION (%)	REFERENCE METHOD OF MEASUREMENT
Suspended solids	35 mg/l (more than 10 000 PE) 60 mg/l (2 000 - 10 000 PE)	90 70	Filtering of a representative sample through a 0.45 µm filter membrane, drying at 1050C and weighing, or centrifuging of a representative sample for at least 5 minutes with mean acceleration of 2800 to 3200 g, drying at 1050C

Biochemical oxygen demand BOD5 (200C)	25 mg O2/l 40 mg O2/l (a)	70–90	Homogenized, unfiltered, undecanted sample. Determination of dissolved oxygen before and after five-day incubation at 200C ± 10C in complete darkness. Addition of a nitrification inhibitor
Chemical oxygen demand – CODCr	125 mg O2/l	75	Homogenized, unfiltered, undecanted sample. Potassium dichromate
Total phosphorus	2 mg P/l (10 000 - 100 000 PE) 1 mg P/l (more than 100 000 PE)	80	Table 1, point 44
Total nitrogen (organic N+NH4-N + NO2-N+NO3-N)	15 mg N/l (10 000 - 100 000 PE) 10 mg N/l (more than 100 000 PE)	70–80	Table 1, point 48

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).

Urban wastewater is tested in accordance with the issued water rights permit. Analyses are conducted by authorized laboratories in accordance with good international laboratory practice. Testing results are submitted to Croatian Waters.

With regard to the size of an agglomeration and sensitivity of an area, the deadlines for achieving treatment effects are specified in LTIP.

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

The progress towards the target can be measured through the compliance of wastewater monitoring results at a point of discharge with limit values laid down in water rights permits. The data are monitored.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the Water Management Plan, the goals and measures are continually updated and supplemented.

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))

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 national and local target is water protection, i.e. to reduce the quantities of dangerous substances at the source of pollution through the implementation of water protection measures; controlling the

operation of constructed structures and wastewater treatment plants; and disposal of sludge and planning of disposal sites for the sludge from WWTPs.

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 waste sludge generated from wastewater treatment can be used in agriculture if previously composted, digested or stabilized and if the content of heavy metals and other harmful substances complies with the requirements of the Ordinance on the protection of agricultural soil pollution (Official Gazette No. 9 / 14) and the Ordinance on Sludge Management from wastewater treatment plants when sludge is used in agriculture (Official Gazette 38/08).

Waste Management Plan of the Republic of Croatia for the Period 2017-2022 (Official Gazette, No. 3/2017) set the goal 2.2 Establishment of a waste sludge management system from the municipal wastewater treatment plant. When setting up a waste sludge management system, the priority of waste should be taken into account as well as considering material recovery and application on surfaces suitable for sludge application before other. In order to determine the types of suitable surfaces, their location and capacities it is necessary to adopt the Action Plan for the use of sludge from wastewater treatment plants on suitable surfaces.

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

The Action Plan is being prepared.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the Water Management Plan, the goals and measures are continually updated and supplemented.

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

Not applicable.

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.

Not applicable.

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).

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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.

No	Target	Target date	Baseline conditions
1.	To monitor quality of the raw water (waters which are used as a sources for drinking water)	continuously	Target is set on the national level. According to the Water Safety Plans approach it is necessary to control all steps in the water supply chain from the catchments to the consumer.

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 the current Croatian drinking water regulation Law on the Water Intended for Human Consumption (Official Gazette No. 56/13, 64/15, 104/17 and 115/18) it is stated that raw waters need to be monitored in all the water supply chain. The main difficulty is financial support of the Monitoring Programs especially in the small water supply companies.

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

The Program of raw water monitoring started in 2009 and has been in implementation ever since.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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.

The national target is set with the transposition of Bathing Water Quality Directive.

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

The legal basis is the Water Act. Based on that, two by-laws (Ordinances) are regulating more detailed management of the bathing water sites and bathing water quality.

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

The system of monitoring and public disclosure of bathing water quality is fully established and publicly available. The targets set in the Directive were achieved (good bathing water quality is achieved in a high percentage, especially in the coastal bathing waters).

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

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 national target is set with the transposition of Fish and Shellfish Directive.

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

The system of monitoring and public disclosure of water quality for fish and shellfish is fully established. The objectives set in the Directive have not yet been fully achieved.

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.

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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.

Protection of bathing water in Croatia is regulated by Regulation on the quality of sea bathing water (Official Gazette 73/08) (quality of sea bathing water at sea beaches) and Regulation on the quality of bathing water (Official Gazette 51/2010) (quality of bathing water on land surface waters)

The regulations set out additional microbiological standards for bathing water quality and mandatory measures for bathing water management.

Bathing water management measures are in charge of local units self-government (for bathing areas on the surface waters) or counties (for seaside beaches).

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).

Keys type of measures are part of River Basin Management Plans of Croatia for the period 2016 -2021. Administrative measures for the bathing water protection includes decisions on determining bathing water that are made before each bathing season. Bathing waters are listed in the Register of Protected Areas and are subject to regulated monitoring. Bathing water profiles for swimming are established for every beaches as one of measure of the managamnet of water quality at beaches.

By implementing measures, continual achievement of the goals of protection of bathing water and beaches and health protection of swimmers is ensured.

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

Targets are achieved through the continuous implementation of the bathing water protection measures.

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

The target set under this area is compatible with the 2030 Sustainable Development Agenda. Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

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

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

There are no specifically polluted locations according to the protocol directives.

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).

Not applicable

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

Not applicable

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

Not applicable

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

Not applicable

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

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 basic objective of water management is the establishment of an integrated and coordinated water regime on the national territory. This implies having in mind the spatial distribution and level of development of the water system, as well as quantitative and qualitative status of water in the manner which best suits a particular area and a particular time. With that in mind, integrated water management is supposed to:

- **provide sufficient quantities of drinking water of good quality for the population;**
- **provide the required quantities of water of adequate quality for various economic purposes;**
- **protect people and assets against adverse effects of water;**
- **achieve and preserve the good status of water in order to protect aquatic and water-dependent ecosystems;**
- **harmonizing in that process water management measures with other sectors - users of space, and ensuring the good status of surface water, groundwater, transitional and coastal waters (the sea).**

Management of river basin districts in a sustainable manner implies integrated management of surface water and groundwater and the water estate which will ensure:

- **good water status;**
- **sufficient quantities of water of adequate quality for various forms of water use;**
- **protection and improvement of aquatic ecosystems;**
- **mitigation of adverse environmental impacts caused by droughts and floods.**

Within integrated water management it is necessary to improve sustainable water use in economic, environmental and social terms in line with the needs of the society, interests of stakeholders, and long-term development.

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 frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, 14/14 and 46/18) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14, 119/15, 120/16 and 127/17) and they are harmonized with EU *acquis communautaire*.

The Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines in terms of improving access to drinking water.

- **River Basin Management Plan 2016. – 2021. published in the Official Gazette No. 66/16, adopted by the Croatian Government in July 2016,**

- **Long term investment program for development of water utility infrastructure 2014. – 2023., published in the Official Gazette No. 117/15, adopted by the Croatian Government in October 2015,**

Sufficient quantities of water of adequate quality are provided from the existing or new sources (resources) with implementation of protection measures within sanitary protection zones used for public water supply.

Investigations of the availability of water resources for the provision of sufficient quantities of water of the required quality from the existing or new sources are continuously performed.

In addition to water supply, other forms of water use are also present (production of electricity, irrigation, fish farming, inland navigation, sport, bathing and recreation, abstraction of mineral and geothermal water).

Improved monitoring of all water uses in the basin through the Water Information System in line with the needs and requirements of the European Union by introducing the European parameters for the monitoring of water use is operational.

The public is regularly informed about the status and potentials of water use.

Participation of institutions from the water management sector in the preparation of regulations, standards and acts in the field of water use in industry in order to improve safe, efficient and sustainable water use is legally regulated.

On transboundary and boundary watercourses and aquifers with the neighbouring countries the water management sector participates in the identification and implementation of rules and measures for the purpose of joint regulation and use of watercourses under bilateral/multilateral agreements (use of water power, inland navigation, public water supply, sport and recreation, fish farming, etc.).

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

In general, within integrated water management steps have been made in further improvement of sustainable water use in economic, environmental and social terms in line with the needs of the society, interests of stakeholders, and long-term development.

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

Through the updating of the River Basin Management Plan the goals and measures are continually updated and supplemented.

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

Not applicable.

XX. Additional national or local specific targets

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.

Not applicable

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).

Not applicable

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

Not applicable

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

Not applicable

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

Not applicable

Part three

Common indicators¹

I. Quality of the drinking water supplied

1. Context of the data

1. What is the population coverage (in millions or per cent of total national population) of the water supplies reported under sections 2 and 3 below?

Data reported under section 2 and 3 refer to the national monitoring of drinking water quality done under Drinking Water Directive (DWD, Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption) and national legislation. Population served from public water supply systems is: 86.6% of total national population and those from local water supply systems in rural areas: 1.57% of total national population. Population supplied by individual structures are not a part of the state monitoring.

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).

Water quality samples reported in sections 2 and 3 below are primarily taken at the 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.

National standards are in line with the DWD.

2. Bacteriological quality

4. Please indicate the percentage of samples that fail to meet the national standard for *Escherichia coli* (*E. coli*). Parties may also report on up to three other priority microbial indicators and/or pathogens that are subject to routine water quality monitoring.

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

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

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

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.

<i>Parameter</i>	<i>Area/category</i>	<i>Baseline value (2005)</i>	<i>Value reported in the previous reporting cycle (2014)</i>	<i>Current value (2017)</i>
<i>E. coli</i>	Total	4%	5.74%	2,6%
	Urban	-	-	0,2%
	Rural	-	-	29,5%

3. Chemical quality

5. Please report on the percentage of samples that fail to meet the national standard for chemical water quality with regard to the following parameters:

- (a) Arsenic;
- (b) Fluoride;
- (c) Lead
- (d) Nitrate.

6. Please also identify up to three additional chemical parameters that are of priority in the national or local context.

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

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

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

<i>Parameter</i>	<i>Area/category</i>	<i>Baseline value (2005)</i>	<i>Value reported in the previous reporting cycle (2014)</i>	<i>Current value (2017)</i>
Arsenic	Total	5.5	9.7	6,9
	Urban	-	-	6,5
	Rural	-	-	11,1
Fluoride	Total	0	0	0
	Urban	-	-	0
	Rural	-	-	0
L ead	Total	0,2	0	0
	Urban	-	-	0
	Rural	-	-	0
Nitrate	Total	0	2.1	0,1
	Urban	-	-	0
	Rural	-	-	1,6

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 (1985)	Value reported in the previous reporting cycle (2015)	Current value (2018)	Baseline (1985)	Value reported in the previous reporting cycle (2015)	Current value (2018)
	Shigellosis	53.4	0.28	1.52	3	0
Enterohaemorrhagic <i>E. coli</i> infection	-	0	0.23	0	0	0
Typhoid fever	0,5	0	0,02	-	0	0
Viral hepatitis A	35.6	0.09	2.24	1	0	0
Legionellosis	0	1.17	1.84	-	0	0
Cryptosporiosis	-	0	0.16	-	0	0
Rotavirus gastroenteritis:	-	8.31	22.29	-	1	0
Unknown agent:	-	-	-	-	-	1
Additional disease3:						

III. Access to drinking water

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

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

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

<i>Percentage of population with access to drinking water</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
Total		2015 year – 80%	2018 year 86.6% of the population is connected to water supply systems
Urban			
Rural			

x **Estimates provided by the WHO/United Nations Children’s Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation. JMP definitions are available at <http://www.wssinfo.org/definitions-methods/watsan-categories>.**

National estimates. *Please specify how “access” is defined and what types of drinking-water supplies are considered in the estimates in your country.*

In particular, please specify if the above percentage on “access to drinking water” refers to access to (tick all applicable):

- Improved drinking water sources (as per JMP definition)
- Supplies located on premises
- Supplies available when needed
- Supplies that provide drinking water free from faecal contamination

IV. Access to sanitation

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

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

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

<i>Percentage of population with access to sanitation</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
Total		2015 year - 46%	2018 year 53% of the population is connected to public sewerage systems
Urban			
Rural			

x **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 water² falling under each defined class (e.g., for European Union countries and other countries following the European Union Water Framework Directive³ classification, the percentage of surface waters of high, good, moderate, poor and bad ecological status, and the percentage of groundwaters/surface waters of good or poor chemical status; for other countries, in classes I, II, III, etc.).

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

(i) Ecological status of surface water bodies

Percentage of surface water classified as:	Baseline value (specify the year)	Current value 2015 (2012)
High status		19,4% / 29,7% / 0% / 0%
Good status		22,2% / 16,2% / 44% / 65,4%
Moderate status		19,5% / 13,5% / 48% / 30,8%
Poor status		15,7% / 8,1% / 4% / 0%
Bad status		23,1% / 32,4% / 4% / 3,8%
Total number of water bodies classified		1484 / 37 / 25 / 26
Total number of water bodies in the country		1484 / 37 / 25 / 26

(ii) Chemical status of surface water bodies

Percentage of surface water bodies classified as	Baseline value (specify the year)	Current value 2015 (2012)
Good status		92%
Poor status		8%
Total number of water bodies classified		1484
Total number of water bodies in the country		1484

(iii) Status of groundwaters

Percentage of groundwaters classified as	Baseline value (specify the year)	Current value 2015 (2012)
Good quantitative status		97%
Good chemical status		90,9%
Poor quantitative status		3%
Poor chemical status		9,1%
Total number of groundwater bodies classified		33
Total number of groundwater bodies in the country		33

² Please specify.

³ 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.

For other countries: Not applicable

(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>Value reported in the</i>		
	<i>Baseline value (specify year)</i>	<i>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>
		2013-2015	2016-2018
Agriculture		1.300.000 (organized - water allocated trough concession(+ 23.000.000 (estimation for individual supply-wells)	5.346.111 m3/year (organized-water allocated through concession)+10.000.000 –according River Basin Management Plan 2016-2021)
Industry ^a		474.000.000 (manufacturing - water allocated trough concession)	35.567.186 (manufacturing – water allocated through concession)
Domestic use ^b		460.700.000 (public-abstracted) + 27.000.000 (estimation for individual supply wells)	461.601.473 (public abstracted) – 27.500.000 (estimation for individual supply wells according River Basin Management Plan

^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.

Monitoring, study, control and prevention of communicable diseases are legally regulated by a number of acts and ordinances. Some of the most pivotal are: the Health Care Act with secondary legislation (OG 150/08, 155/09, 71/2010, 139/2010, 22/2011 and 100/2018), Act on the Protection of the Population against Communicable Diseases (OG 79/2007, 113/2008, 43/2009, 22/2014 and 130/2017), List of communicable diseases the control and prevention of which is of interest to Croatia (OG 60/2014) and Ordinance on the method of reporting communicable diseases (OG 23/94).

The surveillance of communicable (including water-related) diseases is under the authority of the Croatian Institute of Public Health (CIPH)' Infectious Diseases Epidemiology Service (IDES), as well as competent County Public Health Institutes (21) and Field Epidemiology Units (112) that are part of the County Public Health Institutes. Epidemiological monitoring and analysis of communicable (including waterborne) diseases is carried out continuously, in keeping with the elaborate methodology of descriptive and analytical epidemiology. According to the legislation any suspicion of the infectious disease listed on the List of the communicable diseases the control and prevention of which is of interest to Croatia must be immediately reported by the physician to the field epidemiology unit. At the national level, submitted communicable disease notifications are daily analysed at the IDES, CIPH. These daily analyses serve to give insight into the epidemiological situation in Croatia. The CIPH submits these weekly, monthly and yearly reports to the Ministry of Health (MoH), with copies of monthly reports sent to the County Public Health Institutes and state administration bodies competent for sanitary inspection and veterinary medicine. Weekly and monthly reports by the CIPH exhibit the number of patients and deaths from infectious diseases, while the annual report also includes sex, age and month of disease onset. The following publications are issued: monthly a bulletin called Epidemiological News and annual publication called "Communicable diseases in Croatia". A report on the trends of communicable diseases in Croatia is included in the Croatian Health Service Yearbook. IDES is also the Reference Epidemiology Centre of the MoH. In addition to the national work on communicable diseases control, the IDES is also the focal point for the WHO International Health Regulations (IHRs) and a partner to the European Centre for Disease Prevention and Control (ECDC), which is one of the bodies of the Directorate General for Health and Consumer Protection (DG SANCO), the highest EU body in charge of health. IDES coordinates the work of all epidemiology services in Croatia and heads a medical consilium service and epidemiological information system on the national level, including a national epidemiological EWS, while at the same time being part of the EU IHR and EWRS systems.

The reporting of foodborne outbreaks in Croatia is regulated by a number of laws and ordinances as stated above. Pursuant to the above-mentioned regulations each foodborne outbreak is mandatorily notified to the Infectious Disease Epidemiology Service of the Croatian Institute of Public Health (CIPH) immediately when the outbreak occurs and is identified. Infectious Disease Epidemiology Service of the Croatian Institute of Public Health receives the paper report about an outbreak with all the necessary information after the completion of the outbreak investigation.

The epidemiological investigation takes place at the location where the infection occurred – in the field, household, institution, restaurant or other venue – in order to gather all the information needed to understand the onset of disease with a view to taking suitable outbreak control measures and estimating the number of infected or suspected patients for immediate isolation and/or treatment, and prevention of further spreading of the infectious disease. Epidemiological investigation consists of a medical examination, epidemiological survey, field investigation and sample taking for laboratory analysis. After the epidemiological investigation, the data is analysed and suitable outbreak control measures chosen and implemented.

The outbreaks are investigated by the field epidemiology team that has a microbiological support from the county public health laboratories (21). They also notify and cooperate with the Ministry of Health's sanitary inspectors and this approach enables also environmental analysis (inspection of food facilities), taking samples for laboratory investigation. In some instances also veterinary inspection is notified and that enables taking also food samples of animal origin.

3. Please describe what actions have been taken in your country in the past three years to improve and/or sustain water-related disease surveillance, early warning systems and contingency plans, as well as to strengthen the capacity of public authorities to respond to water-related disease outbreaks and incidents, in accordance with the provisions of article 8 of the Protocol.

Not applicable.

Part five

Progress achieved in implementing other articles of the Protocol

The Republic of Croatia is aware that water is essential to sustain life and that the availability of water in quantities, and of a quality, sufficient to meet basic human needs is a prerequisite both for improved health and for sustainable development. As a Contracting Party to the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992), the Republic of Croatia is streamlining its efforts into the availability of drinking water and application of sanitary measures for the entire population within the integrated water management system aimed at protecting human health and aquatic ecosystems. In order to sustain the high level of efficient protection against water-related diseases in Croatia, drinking water monitoring is conducted on the basis of the Ordinance on sanitary quality of drinking water by County Public Health Institutes and the institutions authorized by the Ministry of Health. The Ordinance on sanitary quality of drinking water lays down minimum standards for the control of sanitary quality of drinking water identified in the WHO Drinking Water Quality Guidelines and the corresponding European legislation on drinking water.

Information and evaluation of the results of drinking water quality tests conducted by Public Health Institutes are published and available to the public once a year in the Croatian Health Service Yearbook. The trends of diseases related to drinking water have been monitored in the Republic of Croatia for more than 70 years within the monitoring of contagious diseases aimed at reducing illnesses and preventing epidemics outbreaks. At the level of the Republic of Croatia the status of contagious diseases is supervised and assessed by the Epidemiological Service of the Croatian Institute for Public Health pursuant to the Act on the Protection of the Population against Contagious Diseases and the Ordinance on the mandatory reporting of contagious diseases.

In order to develop water supply systems, activities are carried out to ensure sufficient quantities of drinking water of proper quality for public water supply as well sufficient quantity of water of adequate quality for various economic purposes. It is also planned that the average percentage of the population

supplied with water from public water supply systems will increase from the current 86.6% to 90% by the year 2023, in line with the European standards.

In order to develop sewerage systems, it is planned that the percentage of the population and economic agents connected to public sewerage systems will increase from the current 53% to more than 60%.

Public information and participation in water management activities is regulated and ensured through public participation in adoption of planning documents, seminars and workshops, the media, and web sites of the Ministry of Environment and Energy.

The Republic of Croatia is a party to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992), and it has participated in the Convention's activities and meetings conducted so far. The Republic of Croatia also takes part in the activities of interstate commissions established under international agreements (the International Commission for the Protection of the Danube River (ICPDR), the International Sava River Basin Commission), and in the activities of the commission established under bilateral agreements (Agreement between the Government of the Republic of Croatia and the Government of the Republic of Slovenia on the Regulation of Water Management Relations, Agreement between the Government of the Republic of Croatia and the Government of Bosnia and Herzegovina on the Regulation of Water Management Relations, Agreement between the Government of the Republic of Croatia and the Government of the Republic of Monte Negro on Water Management Relations, Agreement on Cooperation between the Government of the Republic of Croatia and the Government of the Republic of Hungary in the field of environmental and nature protection).

International support in infrastructural programs related to water supply and wastewater is achieved through cooperation with EU.

Part six

Thematic part linked to priority areas of work under the Protocol

1. Water, sanitation and hygiene in institutional settings

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

Source of data: Booklet-overview of the results and recommendations from health-environmental indoor indicators study in elementary schools in Croatia. The study was conducted in period from 2012 – 2014 and is available on: https://www.hzjz.hr/download/DIZAJN_BROSURE_HZJZ_WEB.pdf

<i>Institutional setting</i>	<i>Current value (2014)</i>
<i>Schools</i>	
Basic sanitation service	40%
Basic drinking-water service	98.74%
Basic hygiene service	soap: 25,41%, water: 98.74% 8 and only 27,47% warm water)
<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).

State Pedagogical Standard (Official Gazette 63/2008, 90/2010) for primary and lower secondary education.

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.

Croatia was aware of importance of risk-based approach in water supply even before entrance in EU and signing the Protocol. Already from the 2004, Croatia defined that public water supply systems need to implement HACCP. However, there were no guidelines for water supplier and all activities were based on the experience from the food processing, accordingly some difficulties were found out in such approach in the water supply.

Croatia decided to take opportunity to improve this important area through the transposition of Annex II of the Council Directive on the Quality of Water Intended for Human Consumption from 2015 in national legislation. The Act on Water for Human Consumption (OG 56/13, 64/15, 104/17, 115/18) stipulates that large water supply systems serving ≥ 5000 inhabitants need to introduce WSP in a period of 5 years and small systems serving < 5000 inhabitants in a period of 10 years.

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 (2017)</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).

The Island Act (OG 116/18) provides better conditions for public water supply in island settlements that do not receive water from water supply systems. Namely, for the purpose of improving the living conditions of the island population and encouraging the island economy, it is possible to deliver water by watercraft boats and tanks at

prices equal to the price of land water for the same category of beneficiaries and the remainder to full price is subsidized from the state budget. This measure contributes to reduce geographical disparities.

Part seven

Information on the person submitting the report

The following report is submitted on behalf of MINISTRY OF ENVIRONMENT AND ENERGY in accordance with article 7 of the Protocol on Water and Health.

Name of officer responsible for submitting the national report: ELIZABETA KOS, ASSISTANT MINISTER

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Telephone number: + 385 1 6306411

Name and address of national authority: Ministry of Environment and Energy, Ulica grada Vukovara 220, 1000 Zagreb, Croatia

Signature:

Date: April 23, 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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