

# Template for summary reports under the Protocol on Water and Health

## Part One

### General aspects

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

YES  NO  IN PROGRESS

THE QUALITY OF THE DRINKING WATER SUPPLIED ACCESS TO SANITATION		
Number of target	Target date	Objective
Target 1	31 December 2015.	To reduce arsenic concentration in the drinking water below 10 µg/L
Target 2	31 December 2015.	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</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 they 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,**
- **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,**
- **River Basin Management Plan 2016. – 2021. Draft - in process of adoption**

3. Has your country established national or local arrangements for coordination between competent authorities for setting targets? If so please describe, including information on which public authority(ies) took the leadership and coordinating role, which public authorities were involved and how coordination was ensured.

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

4. Which existing national and international strategies and legislation 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,**
- **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,**
- **River Basin Management Plan 2016. – 2021. Draft - in process of adoption**

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

**Partly, on national level in Long term investment program for development of water utility infrastructure 2014. – 2023.**

6. What has been done in your country to ensure public participation in the process of target setting in accordance with article 6, paragraph 2, and how was the outcome of public participation taken into account in the final targets set?

**Public participation is mandatory and ensured:**

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

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

**Ministry of Agriculture is the body competent for the implementation of the Protocol on Water and Health, in cooperation with the Ministry of Health and Ministry of Environment Protection and Nature. 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.**

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

**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).**

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

**Emerging issues relevant to water and health are asses within the basic planning documents of responsible national sectors (water, environment-climate change, health) (see Part One, General Aspects, 4).**

## Part Two

### Common indicators<sup>1</sup>

#### I. Quality of the drinking water supplied

##### A. Context of the data

Please provide general information related to the context of the data provided under sections B and C below:

1. What is the population coverage (in millions or per cent of total national population) of the water supplies reported under this indicator?

**The population coverage, in per cent of total national population, of the water supplies reported under this indicator is 69,42%. Data included in the following tables refers to all public water supply systems (69,08% of total national population) and small community water supply systems which serve more than 50 inhabitants (0,34% of total national population). The source of the water quality data provided are regulatory authorities (Croatian Institute of Public Health and Croatian Waters).**

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

**Water supply systems reported here supply both, urban and rural populations.**

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

**The samples/measurements are primarily taken at the distribution system and the point of consumption (>90%). However, some of them are also taken at the treatment plant outlet.**

4. In the reports, the standards for compliance assessment signify the national standards. If national standards for reported parameters deviate from the WHO guideline values, provide information on the values (standards) used for calculation.<sup>2</sup>

**The standards for compliance assessment signify the EU Drinking water directive standards.**

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<sup>1</sup> 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.

<sup>2</sup> In order to ensure consistency and quality of the data sets resulting from sampling programmes, countries may wish to consider ensuring compliance with appropriate international standards for sampling programmes. Examples of such international standards are the ISO 5667 family of standards, in particular:

- 5667-1:2006 Guidance on the design of sampling programmes and sampling techniques;
- 5667-3:2003 Guidance on the preservation and handling of water samples;
- 5667-5:2006 Guidance on sampling of drinking water from treatment works and piped distribution systems;
- 5667-11:2009 Guidance on sampling of groundwaters.

## B. Bacteriological quality

Indicator to be used: WatSan\_S2: The percentage of samples that fail to meet the national standard for *E. coli* and the percentage of samples that fail to meet the national standard for *Enterococci*.

<i>WatSan_S2</i>	<i>Baseline value (2005)</i>	<i>Value reported in the previous reporting cycle (2009)</i>	<i>Current value (2014)</i>
E. coli	4%	1.9%	5.74%
Enterococci	3.8%	1.2%	5.68%

**Note:** There was no data base in 2005 and 2009 on drinking water quality at the national level according to specific parameters. The only available data on the national level is Integrative bacteriological failure rate which was 5,5% in 2005 and 6,09 % in 2008. Data presented in the table (and previous report) for the years 2005 and 2009 are taken from the internal data base of the Croatian National Institute of Public Health which does not cover whole country. Data base on drinking water quality was established recently in 2014 and data presented here for this year present the percentage of samples that fail to meet the national standard for those parameters at the national level.

## C. Chemical quality

Indicator to be used: WatSan\_S3. All countries shall monitor and report on the percentage of samples that fail to meet the national standard for chemical water quality with regard to the following:

- Fluoride;
- Nitrate and nitrite;<sup>3</sup>
- Arsenic;
- Lead;
- Iron.

Parties shall also identify five additional physico-chemical parameters that are of special concern in their national or local situation (e.g., pesticides).

<i>Substance</i>	<i>Baseline value (2005)</i>	<i>Value reported in the previous reporting cycle (2009)</i>	<i>Current value (2014)</i>
Fluoride	0	0	0
Nitrate	1.3	0.7	1.1
Nitrite	0	0	2.1
Arsenic	5.5	3.9	9.7
Lead	0.2	0.8	0
Iron	5.6	5.3	18.4
Additional physico-chemical parameter 1:			
Additional physico-chemical parameter 2:			
Additional physico-chemical parameter 3:			
Additional physico-chemical parameter 4:			
Additional physico-chemical parameter 5:			

<sup>3</sup> As defined in the WHO Guidelines for drinking-water quality.

<i>Substance</i>	<i>Baseline value (2005)</i>	<i>Value reported in the previous reporting cycle (2009)</i>	<i>Current value (2014)</i>
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**Note: There was no data base in 2005 and 2009 on drinking water quality at the national level according to specific parameters. The only available data on the country level was Integrative chemical failure rate. Data presented in the table (and previous report) for F, As, Pb, Fe NO<sub>3</sub> and NO<sub>2</sub> for the years 2005 and 2009 are taken from the internal data base of the Croatian National Institute of Public Health which does not cover whole country. Data base on drinking water quality was established recently in 2014 and data presented here for this year present the percentage of samples that fail to meet the national standard for those parameters at the national level.**

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

In filling out the following table, please specify if the numbers reported are related to all exposure routes or only related to water (in which there is epidemiological or microbiological evidence for water to have facilitated infection).<sup>4</sup>

	<i>Incidence</i>			<i>Number of outbreaks</i>		
	<i>Baseline (1985)</i>	<i>Value reported in the previous reporting cycle (2008)</i>	<i>Current value (2015)</i>	<i>Baseline (1985)</i>	<i>Value reported in the previous reporting cycle (2008)</i>	<i>Current value (2015)</i>
Cholera	0	0	0	0	0	0
Bacillary dysentery (shigellosis)	2487	13	12	3	0	0
Enterohaemorrhagic E. coli.	low incidence, not of hydric origin	low incidence, not of hydric origin	0	0	0	0
Viral hepatitis A	-	29 (not hydric)	4	1	0	0
Typhoid fever	-	1 (imported)	0	-	0	0
Rotavirus gastroenteritis	-	-	356	-	-	1

## III. Access to drinking water

<i>Percentage of population with access to drinking water</i>	<i>Baseline value (specify the year)</i>	<i>Current value (specify the year)</i>
Total	2005 - all inhabitants have available 200 l/c/d	All inhabitants (have available 200 l/c/d). Around 80% of the population is connected to public water supply systems
Urban		
Rural		

Please specify how access to drinking water is defined and calculated in your country.

<sup>4</sup> If possible, please distinguish between autochthonous and imported cases

The WHO/UNICEF<sup>5</sup> Joint Monitoring Programme (JMP) for Water Supply and Sanitation defines access to water supply in terms of the types of technology and levels of service afforded. Access to water-supply services is defined as the availability of at least 20 litres per person per day from an “improved” source within 1 kilometre of the user’s dwelling. An “improved” source is one that is likely to provide “safe” water, such as a household connection, a borehole, a public standpipe or a protected dug well.

If your definition of access to drinking water from which the above percentages are calculated differs from that provided by the JMP, please provide the definition and describe your means of calculation.

#### IV. Access to sanitation

<i>Percentage of population with access to sanitation</i>	<i>Baseline value (specify the year)</i>	<i>Current value (specify the year)</i>
Total	42.7% - public sewerage systems 57.3% - individual sewerage*	46% - public sewerage systems 54% - individual sewerage
Urban		
Rural		

Please specify how access to sanitation is defined and calculated in your country.

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<sup>5</sup> United Nations Children’s Fund.

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

### Water quality

On the basis of national systems of water classification, the percentage of the number of water bodies or the percentage of the volume (preferably) of water<sup>6</sup> falling under each defined class (e.g., in classes I, II, III, etc. for non-EU countries; for EU countries, the percentage of surface waters of high, good, moderate, poor and bad ecological status, and the percentage of groundwater/surface waters of good or poor chemical status).

### For non-European Union Countries

#### Status of surface waters

<i>Percentage of surface water falling under class<sup>a</sup></i>	<i>Baseline value (specify the year)</i>	<i>Current value (specify the year)</i>
I	Oxygen regime 33 % Nutrients 6 % Microbiological parameters 11 % Biological parameters 11 %	Oxygen regime 31 % Nutrients 8 % Microbiological parameters 7 % Biological parameters 10 %
II	Oxygen regime 29 % Nutrients 39 % Microbiological parameters 15 % Biological parameters 81 %	Oxygen regime 29 % Nutrients 36 % Microbiological parameters 16 % Biological parameters 73 %
III	Oxygen regime 24 % Nutrients 32 % Microbiological parameters 26 % Biological parameters 7 %	Oxygen regime 23 % Nutrients 29 % Microbiological parameters 25 % Biological parameters 13 %
IV	Oxygen regime 10 % Nutrients 13 % Microbiological parameters 32 % Biological parameters 1 %	Oxygen regime 11 % Nutrients 13 % Microbiological parameters 31 % Biological parameters 4 %
V	Oxygen regime 3 % Nutrients 10 % Microbiological parameters 16 % Biological parameters 0 %	Oxygen regime 5 % Nutrients 14 % Microbiological parameters 22 % Biological parameters 0 %
Total number/volume of water bodies classified		
Total number/volume of water bodies in the country		

<sup>a</sup> Rename and modify the number of rows to reflect the national classification system.

#### Status of groundwater

<i>Percentage of groundwaters falling under class<sup>a</sup></i>	<i>Baseline value (specify the year)</i>	<i>Current value (specify the year)</i>
I	Oxygen regime 98 % Nutrients 83 %	Oxygen regime 95 % Nutrients 60 %

<sup>6</sup> Please specify.

	Microbiological parameters 79 %	Microbiological parameters 89 %
II	Oxygen regime 2 % Nutrients 14 % Microbiological parameters 14 %	Oxygen regime 5 % Nutrients 13 % Microbiological parameters 10 %
III	Oxygen regime 0 % Nutrients 2 % Microbiological parameters 5 %	Oxygen regime 0 % Nutrients 16 % Microbiological parameters 1 %
IV	Oxygen regime 0 % Nutrients 1 % Microbiological parameters 2 %	Oxygen regime 0 % Nutrients 6 % Microbiological parameters 0 %
V	Oxygen regime 0 % Nutrients 0 % Microbiological parameters 0 %	Oxygen regime 0 % Nutrients 5 % Microbiological parameters 0 %
Total number/volume of groundwater bodies classified		
Total number/volume of groundwater bodies in the country		

<sup>a</sup> Rename and modify the number of rows to reflect the national classification system.

## For European Union countries

### Ecological status of surface water bodies (rivers / lakes / transitional / coastal)

<i>Percentage of surface water classified as:</i>	<i>Baseline value (specify the year)</i>	<i>Current value 2015 (2012)</i>
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/volume of water bodies classified		1484 / 37 / 25 / 26
Total number/volume of water bodies in the country		1484 / 37 / 25 / 26

### Chemical status of surface water bodies

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

### Status of groundwaters

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

Please provide any needed 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).

### Water use

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 the year)</i>	<i>Current value 2012 - 2015 (m<sup>3</sup>/year)</i>
Agriculture		1.300 (organized - water allocated trough concession) + 23 (estimation for individual supply - wells)
Industry <sup>a</sup>		474.000 (manufacturing – water allocated trough concession)
Domestic use <sup>b</sup>		460.700 (public - abstracted) + 27 (estimation for individual supply -wells)

<sup>a</sup> Please specify whether the figure includes both water abstraction for manufacturing industry and for energy cooling.

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

**No data according to water exploitation index.**

## Part Three

### Targets and target dates set and assessment of progress

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

For each target set in this area:

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

No	Target	Target date	Baseline conditions
1.	To reduce arsenic concentration in the drinking water below 10 µg/L	31 December 2015.	Target is set on the national level but the problem with As pollution occurs in the local level; especially in the eastern part of the country. According to the EU Drinking water directive maximum admissible level for As in the Drinking water is 10 µg/L, the same is proscribed by Croatian legislation. However, 50 µg/L is allowed by the same legislation in the period of adoption of new technologies.
2.	To reduce number of small non registered water supply system	31 December 2015.	There is a lot non registered systems in Croatia (especially in the northern part of the country). Revision of the EU Drinking water directive will bring new approach regarding the water safety in all kind of the water supply systems including the small one.
3.	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	1 January 2019.	Targets are set on the national level since whole country needs to be divided to the water supply zones according the definition of the water supply zone given at the EU Directive 98/83/EC. Microbiological and chemical parametric values set out in <i>Directive 98/83/EC</i> shell apply in all public water supply systems all over Croatia.
4.	With regard to the chemical parametric values set out in Annex I – Part B of the <i>Directive 98/83/EC</i>	1 January 2022.	
11.	Developing water safety plans for small community water supply systems	31 December 2015	Targets are set on local level; level of counties where small community water supply systems occur. Most of water-borne diseases in Croatia are related to small community water supply systems thus certain actions are needed. Furthermore, according to the WHO Guidelines special attention need to be done to the small community water supply systems and private wells.
12.	Preparing educative materials on good management practice of small community water supply systems and private wells	31 December 2015	
13.	Training of operators and education of the residents in order to raise awareness on water-related disease	31 December 2016	
14.	Developing national database on drinking water quality	31 December 2015	
			Target is set on the national level. By the Ordinance on sanitary quality of drinking water it is proscribed that Croatian National Institute of Public Health need to have data base on drinking water quality. Data from this data base will be used to report EC according to <i>Directive 98/83/EC on the quality of water intended for human consumption</i> .

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

Target No 1	In the current Croatian <i>Law on the water intended for human consumption</i> (Official Gazette No. 56/13, 64/15) as well as in the <i>Ordinance about parameters and method analyses of water intended for human consumption</i> (Official Gazette No. 125/13, 141/13, 128/15) it is stated that water supply systems need to adopt technologies to reduce arsenic < 10 µg/L, meanwhile they can obtain temporal permission for work and supply water with <50 µg/L of arsenic.
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	Croatian Water put into use new regional water supply system in 2008 from the water supply well-field Sikirevci which is arsenic free.
	Water supply companies (eg Osijek water supply) applied for EU project funds for the adoption of the water treatment technologies.
Target No 2	Croatian Waters and Croatian National Institute of Public in 2008 performed Study of defining the state of small water supply systems in Croatia which are not connected to the public water supply systems
	Croatian National Institute of Public Health with the Public health institutes in the Counties organized educational workshops and meetings.
	Croatian Waters prepared draft version of the Ordinance which regulate that public water supply systems need to took responsibilities over small community water supply systems at their area.
	By the <i>Law on the water intended for human consumption</i> (Official Gazette No. 56/13, 64/15) as well as in the <i>Ordinance about parameters and method analyses of water intended for human consumption</i> (Official Gazette No. 125/13, 141/13, 128/15) small community water supply systems are also included at the state monitoring of the drinking water quality.
Target No 3 and No 4	Definition of the water supply zone was introduced by the <i>Ordinance about parameters and method analyses of water intended for human consumption</i> (Official Gazette No. 125/13, 141/13, 128/15).
	Croatian Institute of public Health and Croatian Waters organized several workshops with water professionals (from public health institutes and water supply companies) in order to divide Croatia into water supply zones.
	Drinking water treatment technologies are being adopted to achieve microbiological and chemical parametric values set out in <i>Directive 98/83/EC</i> .
Target No 11, No 12 and No 13	Water safety plans were studied for different cases of water supply in small communities.
	Croatian National Institute of Public Health prepared educational DWD material on water safety in small community water supply systems into Croatian language.
	Croatian National Institute of Public Health with the Public health institutes in the Counties organized educational workshops and meetings. There is a huge level of non cooperatives with local community.
Target No 14	Croatian National Institute of Public Health prepared templates for developing the national database on drinking water quality.
	Croatian Waters developed procedures for validation of data and prepared IT algorithms for the national database.

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

Target No 1	Bigger water supply companies made pilot studies in order to find out the effective and financially acceptable technological solution for As removal.
	New water supply system covered 50% of the villages which previously have been supplied with local systems affected by arsenic.
Target No 2	Study of defining the state of small water supply systems resulted in better knowledge of the number and the state of the small systems.
	There is a huge level of non-cooperatives with local community - they accept only local systems which provide water out of charge or with small charges
	Some of small community water supply systems were connected to the bigger public water supply systems (eg Vinkovci area)
	Regular monitoring of drinking water quality and successively taken corrective action ensure safe drinking water in some of the small community water supply systems.
Target No 3 and No 4	Croatia was divided on the water supply zones during 2014.
	State monitoring of the drinking water quality (microbiological, chemical and indicator parameters) was performed according to water supply zones in 2014 and 2015
	Croatian Waters in line with water supply companies are developing projects for adoption of water treatment technologies at several locations in the country.
Target No 11, No 12 and No 13	Modal water safety plans for small community water supply systems were developed but still not implemented.
	Educational materials prepared for small community water supply systems, while the materials for the private wells are under preparation.
	Workshops and meeting are going on regular basis.
Target No 14	National database developed in 2014 and data of the state monitoring for that and further year are entered into database.

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

**Not applicable.**

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))**

For each target set in this area:

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

**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. Thus target No 2 described and explained on the page 11 is the relevant for this area, too.**

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

**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).**

**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. Assess the progress achieved towards the target.

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

**Not applicable.**

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))

For each target set in this area:

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

**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 85-90% (on the average).**

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

- The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, and 14/14) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14 and 119/15) 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,
- 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,
- River Basin Management Plan 2016. – 2021. Draft - in process of adoption

- 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.

- 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. Assess the progress achieved towards the target.

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

**Not applicable**

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

**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 agglomeration larger than 2.000 PE serving 2,7 million inhabitants with appropriate wastewater treatment (requirements of UWWTD).**

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

**- The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, and 14/14) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14 and 119/15) 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,**
- **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,**
- **River Basin Management Plan 2016. – 2021. Draft - in process of adoption**

**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.**

3. Assess the progress achieved towards the target.

**Due to the technical capacities, delays are expected.**

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

**Not applicable**

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

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

**- The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, and 14/14) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14 and 119/15) 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,**
- **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,**
- **River Basin Management Plan 2016. – 2021. Draft - in process of adoption**

**Public water services act (in preparation) 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.**

3. Assess the progress achieved towards the target.

**According to available data, it seems that negative upward trends in water losses have come to a halt in the last several years.**

**Planning documentation more increasingly foresees interconnection of certain water supply systems.**

**Restructuring and optimization of utility companies is ongoing.**

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

**Not applicable**

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) continued)**

For each target set in this area:

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

**In line with the requirement of UWWTD, IED directive as well as with Ordinance on limit values emissions (Official Gazette No. 94/08), 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.

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

3. Assess the progress achieved towards the target.

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

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

**No data**

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

**No data**

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

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

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

- The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, and 14/14) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14 and 119/15) 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,
- 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,
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- 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. Assess the progress achieved towards the target.

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

**Not applicable.**

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) continued)**

For each target set in this area:

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

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

**Wastewater collection and treatment systems are continuously constructed on the basis of specified priorities. Under the provisions of the Water Act (Official Gazette No. 153/09), disposal of sludge into watercourses is forbidden, and it shall be performed in accordance with waste disposal regulations.**

3. Assess the progress achieved towards the target.

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

**Not applicable.**

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

**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, primary treatment is foreseen.**

**In line with the Ordinance on limit values of dangerous and other substances in wastewater (Official Gazette No. 94/08), 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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.

**- The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, and 14/14) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14 and 119/15) 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,**
- **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,**
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**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. Assess the progress achieved towards the target.

**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%.**

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

**No data.**

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

**Not applicable**

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

For each target set in this area:

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

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

**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. Assess the progress achieved towards the target.

**No data available.**

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

**No data.**

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 to waters within the scope of the Protocol (art. 6, para. 2 (h))**

For each target set in this area:

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

**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 105°C and weighing, or centrifuging of a representative sample for at least 5 minutes with mean acceleration of 2800 to 3200 g, drying at 105°C
Biochemical oxygen demand BOD <sub>5</sub> (20°C)	25 mg O <sub>2</sub> /l 40 mg O <sub>2</sub> /l (a)	70–90	Homogenized, unfiltered, undecanted sample. Determination of dissolved oxygen before and after five-day incubation at 20°C ± 1°C in complete darkness. Addition of a nitrification inhibitor
Chemical oxygen demand – COD <sub>Cr</sub>	125 mg O <sub>2</sub> /l	75	Homogenized, unfiltered, undecanted sample. Potassium dichromate
Total phosphorus	2 mg P/l (10 000 - 100 000 PE) <sup>1</sup> mg P/l (more than 100 000 PE)	80	Table 1, point 44
Total nitrogen (organic N+NH <sub>4</sub> -N + NO <sub>2</sub> -N+NO <sub>3</sub> -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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.

**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. Assess the progress achieved towards the target.

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

**Not applicable.**

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

**Not applicable**

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

For each target set in this area:

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

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

**The bases for reaching the target are the Water Management Strategy and the Water Act. An ordinance regulates the management of sewage sludge when used in agriculture (Official Gazette No. 38/08). The ministry in charge of waste management is the Ministry of Environmental and Nature protection. Difficulties: high investments in the infrastructure for wastewater treatment and waste disposal sites.**

3. Assess the progress achieved towards the target.

**The progress is achieved through the construction of wastewater treatment plants, rehabilitation of existing waste disposal sites, and construction of new controlled ones. Investments are achieved through EU pre-accession funds, the state budget, and grants.**

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

**Not applicable.**

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), second part)**

For each target set in this area:

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

**Not applicable.**

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

**Not applicable.**

3. Assess the progress achieved towards the target.

**Not applicable.**

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

**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), first part)**

For each target set in this area:

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

<b>No</b>	<b>Target</b>	<b>Target date</b>	<b>Baseline conditions</b>
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. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.

**In the current Croatian drinking water regulation Law on the water intended for human consumption (Official Gazette No. 56/13, 64/15) it is stated that raw waters need to be monitored in the all water supply systems. The main difficulty is financial support of the Monitoring Programs especially in the small water supply companies.**

3. Assess the progress achieved towards the target.

**Program of raw water monitoring started in 2009; and it is continuously going on up to day. The program for 2016 has just been started. Program was successful in 50% cases.**

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

**Not applicable.**

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), second part)**

For each target set in this area:

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

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

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

**The legal basis is the Water Act.**

3. Assess the progress achieved towards the target.

**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 (swimming water quality is achieved in a high percentage)**

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

**Not applicable.**

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), third part)**

For each target set in this area:

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

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

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

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

**Not applicable**

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

**Not applicable**

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

**Not applicable**

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

3. Assess the progress achieved towards the target.

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

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

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

For each target set in this area:

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

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

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

**Not applicable**

3. Assess the progress achieved towards the target.

**Not applicable**

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

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

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

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

- The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09, 130/11, 56/13, and 14/14) and the Water Management Financing Act (Official Gazette No. 153/09, 90/11, 56/13, 154/14 and 119/15) 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 (for period 2013. – 2015.) published in the Official Gazette No. 82/13, adopted by the Croatian Government in June 2013,
- 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,
- River Basin Management Plan 2016. – 2021. Draft - in process of adoption

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. Assess the progress achieved towards the target.

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

**Not applicable**

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

**Not applicable**

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

**Not applicable**

3. Assess the progress achieved towards the target.

**Not applicable**

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

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

## **Part Four**

### **Overall evaluation of progress achieved in implementing the Protocol**

In this part of the summary report, Parties shall provide an analysis and synthesis of the status of implementation of the Protocol. Such an overall evaluation should not only be based on the issues touched upon in the previous parts, but should also include, as far as possible, a succinct overview of implementation of article 9 on public awareness, education, training, research and development and information; article 10 on public information; article 11 on international cooperation; article 12 on joint and coordinated international action; article 13 on cooperation in relation to transboundary waters; and article 14 on international support for national action.

This analysis or synthesis should provide a succinct overview of the status of and the trends and threats with regard to waters within the scope of the Protocol sufficient to inform decision makers, rather than an exhaustive assessment of these issues. It should provide an important basis for planning and decision-making as well as for the revision of the targets set, as needed.

**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 80% to 85% - 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 43% to 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 Agriculture.**

**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.

Regarding to Article 12 on joint and coordinated international action, we consider:

- Republic of Croatia is a participant of the IHR, RASFF and INFOSAN rapid alert systems, and exchanges data on infectious and waterborne diseases with the ECDC,
- Republic of Croatia has for a number of years monitored several indicators related to the quality of drinking water and waterborne diseases, and has cooperated in this regard with the Croatian Environment Agency, WHO (EHIS program) and ECDC,
- Croatian legislation on drinking water is harmonized with the EU legislation; Republic of Croatia, consequently, has and fulfils the obligation of notifying the general public and the European Commission.

Regarding to Article 14 on international support for national action is stated:

- Republic of Croatia is deemed advanced in the systems of drinking water safety assurance and waterborne disease monitoring and prevention. Republic of Croatia, therefore, willingly puts its knowledge and experience at the disposal of any country in the region, including signatory countries of the UN Protocol on Water and Health.

## **Part Five**

### **Information on the person submitting the report**

The following report is submitted on behalf of MINISTRY OF AGRICULTURE 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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Name and address of national authority: Ministry of Agriculture, Ulica grada Vukovara 220, 1000 Zagreb, Croatia

Signature:

Date: April 22, 2016

### **Submission**

Parties are required to submit their summary reports to the joint secretariat, using the present template and in accordance with the adopted guidelines on reporting, by **18 April 2016**. Submission of the reports ahead of this deadline is encouraged, as this will facilitate the preparation of analyses and syntheses to be made available to the third session of the Meeting of the Parties.

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

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