

**Template for summary reports in accordance with article 7 of the
Protocol on Water and Health
adopted by the Meeting of the Parties at its second session
(Bucharest, 23-25 November 2010)**

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 system
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 systems will encompass: - for agglomerations with more than 15 000 PE
Target 7	31 December 2020.	- for agglomerations with more than 10 000 PE for catchment areas of the Danube and other sensitive areas
Target 8	31 December 2023.	- 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 43% to average 60% including the waste water treatment on 294 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 and groundwaters water bodies with good ecological 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

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

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, Hrvatske vode (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) and other subordinate legislation. The strategic basis for the implementation of the Protocol is the 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.

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

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 in the process of preparation and adoption of the Water Management Strategy was ensured through public presentations, public media, and web sites of the Ministry and Hrvatske vode. All remarks and suggestions from the public were analysed by the authors of the Strategy. Public participation is regulated under the Ordinance on the mandatory public information procedure and the water users' participation in preparing planning bases for water management (Official Gazette 70/08).

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. 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 Hrvatske vode as a legal entity for water management. The legal basis for the implementation of the Protocol is the Water Act (Official Gazette No. 153/09) and other subordinate legislation. The strategic basis for the implementation of the Protocol is the 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. It provides strategic guidelines for the development of the water management sector, starting with the current status of the water sector, development needs, economic capacities, international commitments, and needs to preserve and improve the status of water and water-dependent ecosystems. The goal of the Strategy is to ensure sufficient quantities of drinking water of proper quality for public water supply, to ensure the sufficient quantity of water of adequate quality for various economic purposes, and to increase the rate of connection of population and economic agents to public sewerage systems by constructing and reconstructing public systems for the collection and treatment of urban wastewater.

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).

On the national level decision-making is within the competence of ministries, and on the local/regional level of local and regional self-governments. On the national and local/regional levels financing comes from the State Budget funds and Regional Budget funds.

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.

Not applicable.

Part Two

Common indicators¹

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?

There is no data base on the country level according to specific parameters

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

Water supply systems supply both urban and rural population

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

National standards for reported parameters compliance as defined in the WHO Guidelines

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.²

National standards for reported parameters compliance as defined in the WHO Guidelines. Croatia has its standards for iron (0.2 mg/l), manganese (0.05 mg/l) and arsenic (0.05 mg/l) because these parameters are not found in the latest guidelines of WHO. The values for arsenic are valid until 2015. When it will become 0.01 mg/l.

¹ In order to allow an analysis of trends for all Parties under the Protocol, please use wherever possible 2005 — the year of entry into force of the Protocol — as the baseline year.

² 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 (please specify the year)</i>	<i>Current value (please specify the year)</i>
E. coli	4% (2005)	5,5 % (2012)
Enterococci	3,8% (2005)	6,1 % (2012)

Note:

There is no data base on the country level according to specific parameters. The only available data on the country level is Integrative bacteriological failure rate which was in 2005 5,5% and 13,5 % in 2011. Data presented in the table are taken from the data base of the Croatian National Institute of Public Health. Better monitoring in small water supplies (most often it is untreated) is the reason why there are more samples that are non compliant to the standards.

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;³
- 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 (please specify the year)</i>	<i>Current value (please specify the year)</i>
Fluoride	0% (2005)	0,1 % (2012)
Nitrate and nitrite	1,3% (2005)	0,9 % (2012)
Arsenic	5,5% (2005)	2,6 % (2012)
Lead	0,2% (2005)	0 % (2012)
Iron	5,6% (2005)	7,6 % (2012)
Additional physico-chemical ⁴		

³ As defined in the WHO Guidelines for drinking-water quality.

⁴ It is recommended to take into account new and emerging pressures such as climate change or agriculture practices.

parameter 1: _____		
Additional physico-chemical parameter 2: _____		
Additional physico-chemical parameter 3: _____		
Additional physico-chemical parameter 4: _____		
Additional physico-chemical parameter 5: _____		

Note:

There is no data base on the country level according to specific parameters. The only available data on the country level is Integrative chemical failure rate. Data presented for As, Pb, Fe NO₃, NO₂ are taken from the data base of the Croatian National Institute of Public Health.

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).⁵

	<i>Incidence</i>		<i>Number of outbreaks</i>	
	<i>Baseline (specify the year)</i>	<i>Current value (specify the year)</i>	<i>Baseline (specify the year)</i>	<i>Current value (specify the year)</i>
Cholera	not present since nineteenth century	-not present since nineteenth century -rare, imported sporedic cases	not present since nineteenth century	not present since nineteenth century
Bacillary dysentery (shigellosis)	year 1985 2487 cases mainly not water related (hydic)	year 2008 13 cases not hydic	year 1985 3 hydic outbreaks	year 2008 no hydic outbreaks
EHEC ^a	low incidence, not of hydic origin	low incidence, not of hydic origin	no outbreaks	no outbreaks
Viral hepatitis A	year 1966 14670 cases mainly not hydic	year 2008 29 cases not hydic	year 1985 1 hydic outbreak	year 2008 no hydic outbreaks
Typhoid fever	year 1960 908 cases	year 2008 1 case (imported)	last hydic outbreak 1993	2008 no outbreaks

^a Enterohaemorrhagic E. coli

⁵ If possible, please distinguish between autochthonous and imported cases

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.

The WHO/UNICEF⁶ 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*	44% - public sewerage systems 56% - individual sewerage
Urban		
Rural		

⁶ United Nations Children’s Fund.

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

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 water⁷ falling under each defined class (e.g., in classes I, II, III, etc. for non-EU countries; for EU countries, the percentage of surface waters of high, good, moderate, poor and bad ecological status, and the percentage of groundwaters/surface waters of good or poor chemical status).

For non-European Union Countries

Status of surface waters

<i>Percentage of surface water falling under class^a</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		

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

Status of groundwaters

<i>Percentage of groundwaters falling under class^a</i>	<i>Baseline value (specify the year)</i>	<i>Current value (specify the year)</i>
I	Oxygen regime 98 % Nutrients 83 % Microbiological parameters 79 %	Oxygen regime 95 % Nutrients 60 % Microbiological parameters 89 %

⁷ Please specify.

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		

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

For European Union countries**Ecological status of surface water bodies**

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

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 (specify the year)</i>
Good status		
Poor status		
Total number/volume of water bodies classified		
Total number/volume of water bodies in the country		

Status of groundwaters

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

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 (specify the year)</i>
Agriculture		
Industry ^a		
Domestic use ^b		

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

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

No data according to water exploitation index.

**Mean annual abstraction of freshwater for the public water supply system in period 2004 – 2008:
486 millions m³/year**

Mean annual delivery of freshwater:

Domestic use (33%) 184 millions m³/year
Industry (67%) 92 millions m³/year

Industry individual supply system 44 millions m³/year

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	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, while it is 50 µg/L in the current Croatian regulation.
2.	To reduce number of small non registered water supply system	-	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.

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 drinking water regulation <i>Ordinance on health of drinking water</i> (Official Gazette No. 47/08) it is stated that all water supply systems need to supply residents with water which contains As in the concentrations < 10 µg/L by the year 2015. Association of water supplies requests for prolongation of this objective until 2020. due to the shortage of finances and the size of the task.
	Croatian Water put into use new regional water supply system in 2008 from the water supply well-field Sikervci which is arsenic free.
Target No 2	Croatian Water s 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.

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
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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.

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.

As our current baseline conditions in respect to outbreaks and incidents of water related diseases are exceptionally favorable, our vital target is to maintain such a favorable situation for the future, shortly explained, by the continuation of all preventive and surveillance and response measures and activities in the country, set by the respective laws and the national Program on health measures, 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.

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.

All legal prerequisites are currently in place and completely aligned with all respective EU communicable diseases related legislative (acquis communautaire). All necessary bodies, institutions and professional routine activities are constantly in function. So the only, but not insignificant problem and task, is to assure all necessary financial and other support, necessary for such a complex system, involving beside health sector many other segments of social life and activities.

The majority of financial needs are expressed regularly through periodical (annual, etc.) financial plans and programs of all subjects involved all over the country, as well as in their respective financial reports.

3. Assess the progress achieved towards the target.

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 i.e. achieved.

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.

Having a constant insight into current situation of all factors important to water related diseases control and prevention in the country, we can assess that at present (maintaining all other measures) the weight

should be put on further improvements of safe disposal of waste, waste waters and ballast waters, to preserve the quality of surface waters for the future, which is elaborated in details in other chapters.

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

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

For each target set in this area:

1. 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 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.

- The frameworks of legal and regulatory measures are defined by the Water Act (Official Gazette No. 153/09) and the Water Management Financing Act (Official Gazette No. 153/09) and they are harmonized with EU *acquis communautaire*. The new Water Act entered into force on 1 January 2010 and the adoption of supporting legislation has begun. Through this process the standards and practice of water management in Croatia will - in regulatory terms - be brought into full compliance with the requirements of the European Union.

- The Implementation Plans for Water Utility Directives and River Basin Management Plans are in preparation.

- 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. In that regard, groups of projects are prepared and nominated for co-financing from the said sources of funds. Aside from that, several infrastructural projects have been launched oriented to reaching the above targets:

- The Inland Waters Project, aimed at improving water supply, water protection, and flood protection in the Sava, Drava, and Danube river basins.**
- Instrument for Pre-accession Assistance (IPA) concerning of improving water supply for four towns and technical assistance for the preparation of IPA projects or structural funds. There are 7 projects of regional water supply systems. Other projects are projects in the field of water protection which can also have a water supply component.**

- 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.

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, 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:

- around 70% of the systems to which 2,000 - 10,000 people gravitate;
- around 77% of the systems to which 10,000 - 15,000 people gravitate;
- around 100% of the systems to which more than 15,000 people gravitate.

In this way the percentage of population connected to public sewerage systems will increase to around 60% of the total population.

In the light of Croatia's current position in accession negotiation with the European Commission, it is to be expected that the deadlines specified above will be shortened. The foreseen deadlines are the year 2018 for the construction of sewerage systems and wastewater treatment plants in the agglomerations of more than 15,000 PE (with the exception of a part of predominantly tourist agglomerations in the normal area), and the year 2023 for all agglomerations of more than 2,000 PE.

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) and the Water Management Financing Act (Official Gazette No. 153/09) and they are harmonized with EU *acquis communautaire*. The development of the remaining legislative framework is pending. Management measures are the Water Management Strategy (Official Gazette No. 91/08), the Implementation Plan for Water Utility Directives and River Basin Management Plans (in preparation). 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. Aside from that, several infrastructural projects have been launched oriented to reaching the above targets:

- The Inland Waters Project, aimed at improving water supply, water protection, and flood protection in the Sava, Drava, and Danube river basins (10 subprojects in the field of water protection);
- The Coastal Cities Pollution Control Project - construction of structures/systems for the collection and treatment of urban wastewater, improving the efficiency of utility companies, and investments in the development of seawater quality monitoring systems (the first priority group of 36 subprojects, the second group of 55 subprojects, and the third group of 86 subprojects);

Instrument for Pre-accession Assistance (IPA) - an indicative list of 36 projects in the total amount of EUR 896 million. There are 7 projects of regional water supply systems in the total amount of EUR 328

million. Other projects are projects in the field of water protection which can also have a water supply component.

3. Assess the progress achieved towards the target.

Due to the lack of funds and technical capacities, the investment dynamics does not indicate that the targets will be reached within the deadlines specified above.

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.

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, in addition to increasing the percentage of population connected to public water supply systems, development priorities 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 Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines in terms of increasing the efficiency of common systems.**
- **The new Water Act (Official Gazette No. 153/09) and Water Management Financing Act (Official Gazette No. 153/09) have been adopted. The new Water Act entered into force on 1 January 2010 and the adoption of supporting legislation has begun. Through this process the standards and practice of water management in Croatia will - in regulatory terms - be brought into full compliance with the requirements of the European Union.**
- **In the period ending with the year 2009 the activities of public water supply were regulated under the Utilities Act. Under the new Water Act, which entered into force in 2010, these activities have come under the competence of the water management sector. Public water supply includes the activities of abstraction, treatment, and delivery of groundwater and surface water to the population and industry or to another water service provider, and of managing public water supply systems.**
- **The Implementation Plans for Water Utility Directives and River Basin Management Plans are in preparation.**
- **Water losses from public water supply systems, which at present exceed 40%, are gradually reduced. Under the Water Management Strategy, the losses are planned to be reduced to 15-20% in the next two investment cycles.**
- **Conditions are created for specific restructuring and optimization of the number of utility companies (e.g. through the planning documents of Development Plans for Public Water Supply Systems in the Counties, etc.).**
 - **Water supply systems are continuously constructed.**
 - **Old and worn-out pipelines in certain systems are replaced.**
 - **The existing public water supply systems are in certain cases interconnected.**
 - **Awareness of the population about the need to use water rationally is increased.**
 - **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 the number of utility companies still hasn't been done.

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.

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 Ordinance on limit values of dangerous and other substances in wastewater (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.

The establishment of the missing legislative framework is pending, upon which EU regulations would be fully transposed.

3. Assess the progress achieved towards the target.

There is no monitoring of leaks from wastewater collection systems and extraordinary situations of pipeline bursts. In 2003, the quantity of industrial wastewater discharged into wastewater collection systems having undergone preliminary treatment was 18.000 x 103 m3/year, while the quantity of industrial wastewater discharged into wastewater collection systems with no preliminary treatment was 5.500 x 103 m3/year. The progress towards the target cannot be assessed since no systematic monitoring has been established.

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.

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 Water Management Strategy (Official Gazette No. 91/08) has been adopted. It sets the targets and guidelines for the application of good practice in the management of water supply.

- The new Water Act (Official Gazette No. 153/09) and Water Management Financing Act (Official Gazette No. 153/09) have been adopted. The new Water Act entered into force on 1 January 2010 and the adoption of supporting legislation has begun. Through this process the standards and practice of water management in Croatia will - in regulatory terms - be brought into full compliance with the requirements of the European Union.

- Further steps are taken to provide water of the required quality to all users. Water undergoes treatment depending on the quality of raw water.

- The Implementation Plans for Water Utility Directives and River Basin Management Plans are in preparation.

- 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.

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, 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.

No data.

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

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

For each target set in this area:

1. 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, 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. With regard to Croatia's current position in accession negotiations with the European Commission, the application of secondary and tertiary treatment is required, with the exception of discharges into coastal waters in normal areas, where appropriate treatment will be applied. The deadlines are specified in section 4. Access to Sanitation.

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) and the Water Management Financing Act (Official Gazette No. 153/09) and they are harmonized with EU *acquis communautaire*. The development of the remaining legislative framework is pending. Management measures are the Water Management Strategy (Official Gazette No. 91/08), the Implementation Plan for Water Utility Directives, and River Basin Management Plans (in preparation). 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.

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 Water Management Strategy, in the reference year - 2007 - it stood at around 28%.

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.

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.

Since we have no data available on discharges of untreated storm water overflows, we are not able to assess the progress 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.

No data.

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

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 ₅ (20°C)	25 mg O ₂ /l 40 mg O ₂ /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 _{Cr}	125 mg O ₂ /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+NH ₄ -N + NO ₂ -N+NO ₃ -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 Hrvatske vode.

With regard to the size of an agglomeration and sensitivity of an area, the deadlines for achieving treatment effects are specified in section 4 Access to Sanitation.

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, but they are not integrated in an information system and they cannot be analysed properly.

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.

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.

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.

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.

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. 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 *Ordinance on health of drinking water (Official Gazette No. 47/08)* 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; program was successful in 50% cases. The program for 2010 has been started.

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.

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 the use of water for economic purposes - sports, bathing, and recreation in accordance with the Water Management Strategy and taking into account planning documents in the field of tourism.

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 and the adoption of a piece of subordinate legislation on the management of bathing water quality related to surface water (rivers and lakes).

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.

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 the use of water for economic purposes - fish and shellfish farming in accordance with the Water Management Strategy and taking into account the Strategy on Agriculture and Fisheries.

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 and the adoption of subordinate legislation defining quality standards for the water supporting the life of freshwater fish and water capable of supporting shellfish life and growth.

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.

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.

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 aim 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 off 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.

- **Some water management projects can have certain adverse environmental impacts which can be mitigated through the implementation of the established environmental protection measures, taking at the same time into account the safety and health of the population, protection of their assets, and the planned economic development.**
- **Water resources, investments in the development of water systems, and management of water systems are treated as a matter of national sovereignty and interest. Water is regarded as the human right, public good and national treasure.**
- **The new Water Act (Official Gazette No. 153/09) and Water Management Financing Act (Official Gazette No. 153/09) have been adopted. The new Water Act entered into force on 1 January 2010 and the adoption of supporting legislation has begun. Through this process the standards and practice of water management in Croatia will - in regulatory terms - be brought into full compliance with the requirements of the European Union**
- **The Implementation Plans for Water Utility Directives and River Basin Management Plans are in preparation.**

- 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.
- Investigation and definition of the availability of water resources for the provision of sufficient quantities of water of the required quality from the existing or new sources.
- 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.
- The public is 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.
- Participation of the water management sector in the preparation of preparatory documents and designs, construction and use of water management facilities, in particular multi-purpose facilities for water use in which various institutions and public and commercial users have interest (public water supply, production of electricity, agriculture, inland navigation, etc.).
- On transboundary and boundary watercourses and aquifers with the neighboring 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.

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.

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 ensured through seminars and workshops, the media, and web sites of the Ministry of Agriculture. The public also participates through EU projects, e.g. CARDS 2004 Twinning Project "Capacity Building and Development of Guidelines for the Implementation of the Water Framework Directive", workshops and events.

The above-mentioned project supported the training of staff employed in the laboratory of Hrvatske vode. The training of staff of the Ministry of Agriculture and Hrvatske vode is also conducted in cooperation with the German Federal Ministry of the Environment, Public Health and Nuclear Safety. The Croatian National Institute of Public Health is conducting training of expert and technical laboratory staff, be it authorized public health laboratories or laboratories of water utility companies. Training is also conducted by organizing technical and scientific meetings.

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 countries (e.g. cooperation with the Bavarian State Ministry of the Environment and Public Health, Agreement on Water Management Relations between the Government of the Republic of Croatia and the Government of the Republic of Hungary).

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 fulfills 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 HEALTH OF REPUBLIC OF CROATIA[name of the Party or the Signatory] in accordance with article 7 of the Protocol on Water and Health.

Name of officer responsible for submitting the national report: LUKA VONČINA, MD

E-mail: luka.voncina@miz.hr

Telephone number: + 385 1 46 07 508

Name and address of national authority: Ministry of Health, Ksaver 200a, 1000 Zagreb, Croataia

Signature:

Date: May 8, 2013

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 **29 April 2013**. 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.

Joint Secretariat to the Protocol on Water and Health

United Nations Economic Commission for Europe
Palais des Nations
CH-1211 Geneva 10
Switzerland
E-mail: protocol.water_health@unece.org

and

Regional Office for Europe of the World Health Organization
WHO European Centre for Environment and Health
Hermann-Ehlers-Strasse 10
53113 Bonn – Germany
E-mail: watsan@ecr.euro.who.int