



**UNITED NATIONS
ECONOMIC COMMISSION FOR
EUROPE**

**WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR EUROPE**

**FORMAT FOR SUMMARY REPORTS UNDER
THE PROTOCOL ON WATER AND HEALTH**

PART I. GENERAL ASPECTS

1. Provide brief information on the process of target setting in your country: which public authority (ies) took the leadership and coordinating role, which public authorities were involved, how coordination was ensured, which existing national and international strategies and legislations were taken into account, how cost-benefit analysis of target sets was performed, etc.

The Ministry of Regional Development, Forestry and Water Management is the body competent for the implementation of the Protocol on Water and Health, in cooperation with the Ministry of Health and Social Welfare. 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.

2. What has been done in your country to ensure public participation in the process of target setting 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).

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

The Ministry of Regional Development, Forestry and Water Management, the Ministry of Health and Social Welfare, Hrvatske vode, and Croatian National Institute of Public Health participated in the preparation of this report.

4. 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.

5. Please describe whether and, if so, how emerging issues relevant to water and health, such as climate change, were taken into account in the process of target setting.

Not applicable.

PART II: COMMON INDICATORS¹

1. 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:

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

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

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

Water supply systems supply both urban and rural population.

3. The standards for compliance assessment are meant national standards. If national standards for reported parameters deviate from the WHO guideline vales, provide information on the values (standards) used for calculation.

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

B. Bacteriological quality

Indicator to be used: WatSan_S2: Percentage of samples that fail to meet national standard for E. coli and percentage of samples that fail to meet national standard for Enterococci

WatSan_S2	Baseline value (2005)	Current value (2009)
E. coli	4%	1,9%
Enterococci	3,8%	1,2%

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 6,09 % in 2008. Data presented in the table are taken from the data base of the Croatian National Institute of Public Health.

C. Chemical quality

Indicator to be used: WatSan_S3. Percentage of samples that fail to meet the national standard for chemical water quality. All countries shall monitor and report on:

¹ In order to allow an analysis of trends for all Parties under the Protocol, it is encouraged to use as much as possible 2005 – the year of entry into force of the Protocol – as baseline year.

- fluoride,
- nitrate and nitrite²,
- arsenic,
- lead
- iron.

Parties shall also identify five additional health-relevant chemical parameters that are of special concern in their national or local situation.

Substance	Baseline value (2005)	Current value (2009)
Fluoride	0%	0% ()
Nitrate and nitrite	1,3%	0,7%
Arsenic	5,5%	3,9%
Lead	0,2%	0,8%
Iron	5,6%	5,3%
Additional chemical parameter 1: _____		

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.

If your country calculate an integrated value reflecting overall compliance with chemical quality of drinking water, please report it below:

	Baseline value (2005)	Current value (2008)
Integrative chemical failure rate	5,9%	5,66%

² As defined in the WHO Guidelines.

2. REDUCTION OF THE SCALE OF OUTBREAKS AND INCIDENTS OF INFECTIOUS DISEASES POTENTIALLY RELATED TO WATER

For incidence, please report number of all cases per year from all exposure routes.

For the number of outbreaks, please report cases which could be potentially related to water.

	Incidence		Number of outbreaks	
	Baseline (specify the year)	Current value (specify the year)	Baseline (specify the year)	Current value (specify the year)
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 (hydric)	year 2008 13 cases not hydric	year 1985 3 hydric outbreaks	year 2008 no hydric outbreaks
EHEC	low incidence, not of hydric origin	low incidence, not of hydric origin	no outbreaks	no outbreaks
Viral hepatitis A	year 1966 14670 cases mainly not hydric	year 2008 29 cases not hydric	year 1985 1 hydric outbreak	year 2008 no hydric outbreaks
Typhoid fever	year 1960 908 cases	year 2008 1 case (imported)	last hydric outbreak 1993.	2008 no outbreaks

3. ACCESS TO DRINKING WATER

Percentage of population with access to improved drinking water	Baseline value (2005)	Current value (2009)
Total	2005 - all inhabitants have available 20 l/c/d	All inhabitants (have available 20 l/c/d). Around 80% of the population is connected to public water supply systems.
Urban		
Rural		

The Joint Monitoring Programme 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 liters per person per day from an "improved" source within 1 kilometer 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, a protected dug well.

4. ACCESS TO SANITATION

Percentage of the population with access to improved sanitation, including small decentralized sewerage systems, septic tanks and safe excreta disposal

Percentage of population with access to improved sanitation	Baseline value (2005)	Current value (2008)
Total	42.7% - public sewerage systems 57.3% - individual sewerage*	44% - public sewerage systems 56% - individual sewerage*
Urban		
Rural		

* The expressed percentages on individual sewerage refer to the manner in which wastewater is disposed of and they do not include assessment of the quality of each solution.

5. EFFECTIVENESS OF MANAGEMENT, PROTECTION AND USE OF FRESHWATER RESOURCES

Water quality

On the basis of national systems of water classifications, percentage of the number of water bodies or percentage of the volume of water³ falling into each defined class (e.g. in classes I, II, III, etc., for non-EU countries; for EU countries percentage of surface waters with high, good, moderate, poor and bad ecological status and percentage of groundwater/surface waters of good or poor chemical status).

For non-EU countries:

Status of surface waters

Percentage of surface water falling into class ⁴	Baseline value (2005)	Current value (2008)
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 %	Oxygen regime 23 % Nutrients 29 %

³ Please specify.

⁴ Rename and modify number of rows as requested by the national classification system.

	Microbiological parameters 26 % Biological parameters 7 %	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 %

Status of groundwaters

Percentage of groundwaters falling into class⁵	Baseline value (2005)	Current value (2008)
I	Oxygen regime 98 % Nutrients 83 % Microbiological parameters 79 %	Oxygen regime 95 % Nutrients 60 % 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 %

Water use

Water exploitation index at the national and river-basin levels for each sector (agriculture, industry, domestic): mean annual abstraction of freshwater by sector divided by the mean annual total renewable freshwater resource at the country level, expressed in percentage terms.

Water exploitation index	Baseline value (specify the year)	Current value (specify the year)
Agriculture		

⁵ Rename and modify number of rows as requested by the national classification system

Industry⁶		
Domestic use⁷		

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 m ³ /year
Industry	(67%) 92 millions m ³ /year

Industry individual supply system	44 millions m ³ /year
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⁶ Please specify whether the figure includes both water abstraction for manufacturing industry and for energy cooling.

⁷ Please specify whether the figure only refers to public water supply systems or also individual supply systems (e.g. wells).

PART III: TARGETS AND TARGET DATES SET AND ASSESSMENT OF PROGRESS**1. ART. 6, PARA. 2 (a): THE QUALITY OF THE DRINKING WATER SUPPLIED**

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether the target is national or local, and intermediate targets as relevant). Also include information on the background and justification for the adoption of such 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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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.
	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. Shortly assess the progress 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

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

2. ART. 6, PARA. 2 (b): THE REDUCTION OF THE SCALE OF OUTBREAKS AND INCIDENTS OF WATER-RELATED DISEASE

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

As our current baseline conditions (2009/2010) 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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

If so, and if the revised target and targets 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.

3. ART. 6, PARA. 2 (c): ACCESS TO DRINKING WATER

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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 supply system to 85-90% (on the average).

2. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

4. ART. 6, PARA. 2 (d): ACCESS TO SANITATION

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

No data.

If so, and if the revised target and targets date have already been adopted please describe them.

5. ART. 6, PARA. 2 (e): LEVELS OF PERFORMANCE OF COLLECTIVE SYSTEMS AND OTHER SYSTEMS FOR WATER SUPPLY

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

6. LEVELS OF PERFORMANCE OF COLLECTIVE SYSTEMS AND OTHER SYSTEMS FOR ... SANITATION (ART. 6 (2) (e) cont'd)

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 $18.000 \times 10^3 \text{ m}^3/\text{year}$, while the quantity of industrial wastewater discharged into wastewater collection systems with no preliminary treatment was $5.500 \times 10^3 \text{ m}^3/\text{year}$. The progress towards the target cannot be assessed since no systematic monitoring has been established.

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

No data.

If so, and if the revised target and targets date have already been adopted please describe them.

7. ART. 6, PARA. 2 (f): APPLICATION OF RECOGNIZED GOOD PRACTICES TO THE MANAGEMENT OF WATER SUPPLY

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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

2. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

8. 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 target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

No data.

If so, and if the revised target and targets date have already been adopted please describe them.

9. OCCURRENCE OF DISCHARGES OF UNTREATED WASTEWATER (ART. 6, PARA. 2(g) (i))

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

No data.

If so, and if the revised target and target date have already been adopted please describe them.

10. 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 target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

No data.

If so, and if the revised target and targets date have already been adopted please describe them.

11. 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 target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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 ⁰ 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 ⁰ C
Biochemical oxygen demand BOD ₅ (20 ⁰ 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 ⁰ C ± 1 ⁰ 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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

No data.

If so, and if the revised target and targets date have already been adopted please describe them.

**12. 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 target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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 Protection, Physical Planning and Construction. Difficulties: high investments in the infrastructure for wastewater treatment and waste disposal sites.

3. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

**13. QUALITY OF WASTEWATER USED FOR IRRIGATION PURPOSES (ART. 6,
PARA. 2 (i), second part)**

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

Not applicable.

2. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target and, if applicable the difficulties and challenges encountered:

Not applicable.

3. Shortly assess the progress towards the target:

Not applicable.

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

14. 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 target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

15. QUALITY OF WATERS USED FOR BATHING (ART. 6, PARA. 2 (j), second part)

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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), expected to take place in the first quarter of 2010.

3. Shortly assess the progress towards the target:

Not applicable.

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

16. QUALITY OF WATERS USED FOR AQUACULTURE OR FOR THE PRODUCTION OR HARVESTING SHELLFISH (ART. 6, PARA. 2 (j), third part)

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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, expected to take place in the fourth quarter of 2010.

3. Shortly assess the progress towards the target:

Not applicable

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable

If so, and if the revised target and targets date have already been adopted please describe them.

17. APPLICATION OF RECOGNIZED GOOD PRACTICE TO THE MANAGEMENT OF ENCLOSED WATERS GENERALLY AVAILABLE FOR BATHING (ART. 6, PARA. 2 (k))

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

Not applicable

2. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target and, if applicable the difficulties and challenges encountered:

Not applicable.

3. Shortly assess the progress towards the target:

Not applicable.

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

**18. IDENTIFICATION AND REMEDIATION OF PARTICULARLY
CONTAMINATED SITES (ART. 6, PARA. 2 (L))**

For each target set in this area

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

There are no particularly contaminated sites in terms of this Protocol.

2. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target and, if applicable the difficulties and challenges encountered:

Not applicable.

3. Shortly assess the progress towards the target:

Not applicable.

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

19. 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 target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

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. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target 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 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. Shortly assess the progress 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 towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

20. ADDITIONAL NATIONAL OR LOCAL SPECIFIC TARGETS

In case additional targets have been set, for each target:

1. Describe target, target date and baseline conditions (including information whether target is national or local, and intermediate targets as relevant):

Not applicable

2. Shortly describe actions taken (e.g. legal/regulatory, financial/economic and informational/educational and management measures) to reach the target and, if applicable the difficulties and challenges encountered:

Not applicable.

3. Shortly assess the progress towards the target:

Not applicable.

4. In the review of progress towards the target has it appeared that the target and target date need to be revised, also in light of scientific and technical knowledge?

Not applicable.

If so, and if the revised target and targets date have already been adopted please describe them.

PART IV: OVERALL EVALUATION OF PROGRESS ACHIEVED IN IMPLEMENTING THE PROTOCOL

This part of the summary report should provide an analysis and synthesis of the status of implementation of the Protocol. Such overall evaluation should not only be based on the issues touched upon in the previous parts but should, as far as possible include a succinct overview of implementation of article 9 on public awareness, education, training, research and development and information, article 10 on public participation, 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 status, trends and threats sufficient to inform decision-makers, rather than an exhaustive assessment of these issues. It will provide an important basis for planning and decision-making and also for the revision of 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 and Social Welfare. 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. 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 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 V: INFORMATION ON THE PERSON SUBMITTING THE REPORT

The following report is submitted on behalf of Republic of Croatia

**Name of officer responsible for
submitting the national report: dr.sc. Darko Rajhenbah**

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Telephone number:+ 385 1 6307 348

**Name and address of national authority: MINISTRY OF REGIONAL DEVELOPMENT,
FORESTRY AND WATER MANAGEMENT
Babonićeva 121, HR-10000 Zagreb, Croatia**

**Signature: VICE PRIME MINISTER AND MINISTER OF REGIONAL DEVELOPMENT,
FORESTRY AND WATER MANAGEMENT**

Božidar Pankretić, M.Sc.

Date: March 23 2010

PART V: INFORMATION ON THE PERSON SUBMITTING THE REPORT

The following report is submitted on behalf of Republic of Croatia

Name of officer responsible for
submitting the national report: **dr.sc. Darko Rajhenbah**

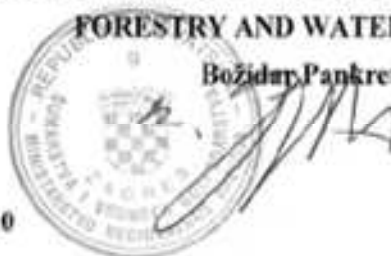
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Signature: **VICE PRIME MINISTER AND MINISTER OF REGIONAL DEVELOPMENT,
FORESTRY AND WATER MANAGEMENT**

Božidar Pankretić, M.Sc.



Date: **March 23 2010**

