

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

## Part One General aspects

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

*Please provide detailed information on the target areas in Part Three.*

YES  NO  IN PROGRESS

*If targets have been revised, please provide details here.*

2. Were they published and, if so, how?

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

The national targets and target dates are available online at: <http://www.zdravlje.gov.rs/downloads/2015/Jun/Jun2015ProtokolVoda.pdf> They were posted on the web sites of the Ministry of Health and the Ministry of Agriculture and Environmental Protection. The Baseline analysis was electronically published and disseminated to relevant stakeholders. (Electronic monograph "The implementation of the protocol on water and health in the Republic of Serbia - analysis", prepared by the representatives of the Ministry of Health, Ministry of Agriculture and Environmental Protection and Agency for Environmental Protection, was published and the links were placed on the web site of The Agency for Environmental Protection, available at:

([http://www.sepa.gov.rs/download/Protokol\\_o\\_vodi\\_i\\_zdravlju\\_Analiza\\_stanja.pdf](http://www.sepa.gov.rs/download/Protokol_o_vodi_i_zdravlju_Analiza_stanja.pdf)),

and of MoH

(<http://www.zdravlje.gov.rs/downloads/2014/Decembar/Decembar2014ProtokolovodizdravljuAnalizastanja.pdf>)

In addition, timely set targets in Serbia were promoted at international conference "Water supply and sewerage system" held from 27 to 29 May 2015 at Jahorina Mountain (Pale) in Serb Republic. An articles written by the members of National working group about their achievements in implementation of the Protocol of Water and Health was also published in Serbian journals "Water and sanitary technology", (Volume No 2\_2015) and "Technics Magazine" (the Union of Engineers and Technicians of Serbia Volume No 4\_2015). The articles were also posted on the web site of The Agency for Environmental Protection (available at: <http://www.sepa.gov.rs/download/Jahorina2015.pdf>). The representatives of the National Working Group on the Protocol implementation (NWG) participated at the round table on Professional Scientific Meeting: "Water supply and sewage 2015" organized by the Union of Engineers and

Technicians of Serbia, on October 16th, 2015 in Vrsac, Serbia; round table theme: Sustainable development and water - how to preserve resources and raise safety and quality of drinking water. The national targets and target dates were officially sent to the secretariat on 22 May 2015.

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

The Republic of Serbia has become a Party to the Protocol in April 2013. According to the Law on Ratification of the Protocol on water and health, ministries responsible for health, water management and environmental protection ensure its implementation.

The “Agreement on the Establishment of the National Working Group in Order to Undertake Joint Measures and Activities Important for the Implementation of the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes” was signed between Ministry of Health, Ministry of Energy, Development and Environmental Protection, and the Ministry of Agriculture, Forestry and Water Management. The ministerial agreement resulted with the establishment of the National Working Group (NWG), charged with the main tasks:

- To monitor and analyze implementation of the Protocol both in Serbia and cross-border in order to prevent, control and reduce water related diseases;
- To coordinate and undertake related activities under the Protocol (including without limitation exchange of data and information and providing direct assistance;
- And, to report on progress to relevant national and international institutions.

Chaired by the representative of the Ministry of Health, the NWG has been undertaking measures for the implementation of the Protocol.

4. Which existing national and international strategies and legislation were taken into account?

*Please briefly mention the most relevant national and international strategies and instruments that were taken into account when setting targets (only a limited number of references are required under this question; indicatively, five references are considered appropriate, but the number will depend on your national situation).*

- Regulation on the protection of population from communicable diseases with Programme on the protection of population from communicable diseases from 2002 to 2010 (Official gazette 29/2002);
- Regulation on limit values of emission of pollutants in water and deadlines for their achievement (Official Gazette of RS, 67/2011) and Amendments on Regulation on limit values of emission of pollutants in water and deadlines for their achievement (Official Gazette of RS, 48/2012)
- Draft National Strategy on Water Management. The adoption of the Strategy is expected after obtaining the opinion of the relevant institutions and implementation of them in the Draft of Strategy

- Annual report on drinking water quality from public water supply systems in the Republic of Serbia
- Annual environmental status report in the Republic of Serbia
- Environmental statistical yearbook of the Republic of Serbia
- Health statistical yearbook of the Republic of Serbia

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

*Alternatively, please explain to what extent financial implications were taken into account when setting targets.*

The Republic of Serbia's strategic goal in terms of the economic aspects of water management is to establish a system of sustainable, long-term funding of the water sector which would include reliable sources of funding, consistent inflow of funds and an efficient charge mechanism. In this regard, the Ministry in charge of Water Resources has prepared the draft of decree on determining methodology for calculating the costs of drinking water supply via public waterworks and the costs of waste water collection, drainage and treatment via public sewerage and the draft of decree on determining criteria for defining the reference price of water with the applicable laws of the Republic of Serbia and submitted for an opinion authorized ministries. Bearing in mind that the individual ministries proposed some changes in prepared acts, the Ministry responsible for water management agreed with the World Bank that through the project Support for Serbia's EU accession process and the WSS sector to hire consultants to verify the conformity of the Draft of decree on determining methodology for calculating the costs of drinking water supply via public waterworks and the costs of waste water collection, drainage and treatment via public sewerage and the Draft of decree on determining criteria for defining the reference price of water with the applicable laws of the Republic of Serbia and the EU directives in the field of water analysis and the effects of the application of the proposed regulation on the population and companies, analysis of the possibilities of implementation of these regulations.

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?

The National workshop on the Protocol on Water and Health for Serbia was held on 9th December 2014 in Belgrade, under the financial, expert and organizational support of the UNECE and WHO/Europe. This workshop was attended by over 40 participants from various institutions engaged in target setting process such as ministries responsible for health, environmental protection, water management, construction, education, local-self government, Serbian Environmental Protection Agency and Institute of Public Health of Serbia. Among participants were also those that were not involved in the preparation of the draft targets as well as local stakeholders and NGOs. The national workshop reviewed the progress achieved in implementing the Protocol in Serbia since becoming a Party. The draft targets set by an interministerial body as well as baseline analysis were presented by the representatives of NWG and reviewed by a broad range of stakeholders. Participants provided comments to the draft targets and agreed on the next steps in the target setting process.

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

This report has been prepared by the core NWG consists of representatives of the IPH of Serbia and ministries responsible for health, environmental protection, water management, and local self-government, which has been extended with the representatives of the ministries responsible for education, natural resources, and infrastructure, and representatives of Regional Development Agency and Association of Engineers and Technicians of Serbia, as well.

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).

The Republic of Serbia set the national targets and target dates in April 2015, thus it would be taken into account for this reporting cycle that Serbia has been undertaking measures for their fulfillment since then and is still establishing mechanism for data collection for progress assessment and evaluation.

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.

Besides targets set in almost all recommended areas according to article 6.2 of the Protocol, we have taken into account climate change through the improvement of data collection system for drinking water and bathing water quality in emergency situations including floods and improvement of methodology for epidemiological investigation and assessment of water borne outbreaks.

## Part Two

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

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

##### A. Context of the data

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

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

The population coverage of the water supplies reported under this indicator is 84.1%

*The rationale of this question is to understand the population coverage of the water quality data reported under sections B and C below. Please describe the type of water supplies for which data is included in the following tables, and the population share covered by these supplies. Please also clarify the source of the water quality data provided (e.g., data from regulatory authorities).*

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

The reported data refers only to water supply systems in urban areas.

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

According to the Rulebook on the hygienic correctness of drinking water the samples are taken at drinking water sources, treatment plant outlet, reservoirs, distribution system and point of consumption.

*The rationale behind this question is to understand where the samples were primarily taken from for the water quality data reported in sections B and C below.*

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.

The national standards for reported parameters do not deviate from the WHO guideline values and EU Directive. The national standard for nitrite is even stricter and set on 0.03 mg/L.

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

## 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.

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

The very low percentage of the occurrence of listed fecal indicators in drinking water may be the result of under reporting, due to an old methodology for data collection.

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	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
<i>WatSan_S2</i>	<i>2005</i>	<i>2012</i>	<i>2014</i>
E. coli	0.14	0.15	0.11
Enterococci	0.04	0.03	0.01

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## 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:

- (a) Fluoride;
- (b) Nitrate and nitrite;<sup>2</sup>
- (c) Arsenic;
- (d) Lead;
- (e) Iron.

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

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

The percentage of reported arsenic, which is exceeded MCL of 10µg/L, according to the national regulation is under reported due to an old methodology for data collection.

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<i>Substance</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
	<i>2005</i>	<i>2012</i>	<i>2014</i>

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<sup>2</sup> As defined in the WHO Guidelines for drinking-water quality.

<i>Substance</i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
	2005	2012	2014
Fluoride	0.00	0.00	0.001
Nitrate	1.10	0.58	0.21
Nitrite	1.49	1.79	1.13
Arsenic	0.1	0.09	0.08
Lead	0.00	0.00	0.00
Iron	2.15	1.53	0.97
Additional physico-chemical parameter 1: manganese____	2.07	3.02	1.80
Additional physico-chemical parameter 2: _____			
Additional physico-chemical parameter 3: _____			
Additional physico-chemical parameter 4: _____			
Additional physico-chemical parameter 5: _____			

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

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

(a) For reporting outbreaks, please indicate if the numbers reported are related to all exposure routes or only related to water (i.e., for which there is epidemiological or microbiological evidence for water to have facilitated infection);

(b) For reporting incidents:

(i) Please report cases per 10,000 persons;

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

(iii) If possible, please distinguish between autochthonous and imported cases.

*Please consider extending the list of water-related diseases to cover other relevant pathogens (e.g., enteric viruses, Cryptosporidium, Giardia, Legionella).*

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

Collected information refers to incidence based and the number of registered outbreaks

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

Two outbreaks were registered in 2015 under the Diarrhoea et gastroenteritis causa infectionis suspecta with incidence rate 1.52. This category does not precisely determinates the cause of an outbreaks. In general, the number of reported outbreaks related to drinking water is underestimate due to routine passive surveillance systems in place, as well as outbreak alert and response mechanisms.

	Incidence			Number of outbreaks		
	Baseline	Value reported in	Current value	Baseline	Value reported in	Current value
	(specify the year)	the previous reporting cycle (specify the year)		(specify the year)	(specify the year)	
2005	2012	2014	2005	2012	2015	
Cholera	0	0	0	0	0	0
Bacillary dysentery (shigellosis)	1.41	1.53	0	12	12	0
Enterohaemorrhagic E. coli.	0	0	0	0	0	0
Viral hepatitis A	13.9	7.08	0	44*	30	0
Typhoid fever	0	0	0	0	0	0

### III. Access to drinking water

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

	Baseline value (specify the year)	Value reported in the previous reporting cycle (specify the year)	Current value (specify the year)
Percentage of population with access to drinking water	2006*	2012	2014**
<b>Total</b>	93.8	/	99
Urban	97.5	/	100
Rural	88.4	/	99

\*According to the National Health Survey Serbia , 2006



\*\* According to the WHO/United Nations Children’s Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation., 2014

*Please specify if the above data is based on national estimates or estimates provided by the WHO/United Nations Children’s Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation.*

*If national estimates are provided, please specify how access is defined and estimated in your country.*

*JMP definitions and categories are available at <http://www.wssinfo.org/definitions-methods/watsan-categories>.*

#### **IV. Access to sanitation**

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

<i>Percentage of population with access to sanitation</i>	<i>Baseline value (specify the year)</i> 2006*	<i>Value reported in the previous reporting cycle (specify the year)</i> 2012	<i>Current value (specify the year)</i> 2014
<b>Total</b>	85.2	/	95
Urban	92.9	/	99
Rural	74.2	/	95

\*According to the National Health Survey Serbia , 2006

\*\* According to the WHO/United Nations Children’s Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation., 2014

*Please specify if the above data is based on national estimates or estimates provided by JMP for Water Supply and Sanitation.*

*If national estimates are provided, please specify how access is defined and estimated in your country.*

*JMP definitions are available at <http://www.wssinfo.org/definitions-methods/watsan-categories>.*

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

### Water quality

On the basis of national systems of water classification, the percentage of the number of water bodies or the percentage of the volume (preferably) of water<sup>3</sup> falling under each defined class (e.g., in classes I, II, III, etc. for non-EU countries; for EU countries, the percentage of surface waters of high, good, moderate, poor and bad ecological status, and the percentage of 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<sup>a</sup></i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
I			
II			
III			
IV			
V			
<b>Total number/volume of water bodies classified</b>			
<b>Total number/volume of water bodies in the country</b>			

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

#### Status of groundwaters

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

<sup>3</sup> Please specify.

<i>Percentage of groundwaters falling under class<sup>a</sup></i>	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
IV			
V			
<b>Total number/volume of groundwater bodies classified</b>			
<b>Total number/volume of groundwater bodies in the country</b>			

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

For European Union countries

### Ecological status of surface water bodies

<i>Percentage of surface water classified as:</i>	<i>Baseline value (specify the year) 2012/2013</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year) 2014</i>
High status	0	-	0
Good status	4	-	5
Moderate status	74	-	43
Poor status	37	-	31
Bad status	15	-	5
<b>Total number/volume of water bodies classified</b>	149		
<b>Total number/volume of water bodies in the country</b>	498		

### Chemical status of surface water bodies\*

<i>Percentage of surface water bodies classified as</i>	<i>Baseline value (specify the year) 2012/2013</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year) 2014</i>
Good status	95	-	53
Poor status	33	-	32
<b>Total number/volume of water bodies classified</b>	149	-	-
<b>Total number/volume of water bodies in the country</b>	498	-	-

### Status of groundwaters\*\*

<i>Percentage of groundwaters classified as</i>	<i>Baseline value (specify the year) 2012/2013</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
Good quantitative status	13	-	-
Good chemical status	-	-	-
Poor quantitative status	6	-	-

<i>Percentage of groundwaters classified as</i>	<i>Baseline value (specify the year) 2012/2013</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
Poor chemical status	-	-	-
<b>Total number/volume of groundwater bodies classified</b>	19	-	-
<b>Total number/volume of groundwater bodies in the country</b>	153	-	-

Note: Although Serbia is non-European Union Country, requested data have been put here as the documents are harmonised with the EU directives. Adoption of the Water Law in 2010 and following bylaws acquired adequate conditions so that SEPA could establish and carry out water monitoring according to the Water Framework Directive (WFD). The first Programme of surface water monitoring status in Serbia harmonized with WFD requirements was carried out in 2012

\*The data provider: The Ministry of Agriculture and Environmental protection

\*\* The data provider: The Republic Hydrometeorological Service of Serbia

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) 2005</i>	<i>Value reported in the previous reporting cycle (specify the year) 2012</i>	<i>Current value (specify the year)*</i>
Agriculture	0.014	0.014	-
Industry <sup>a</sup>	23.73	23.73	-
Domestic use <sup>b</sup>	76.26	76.26	-

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

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

\*The data shown in Table are incorrect

For the correct data please see attached reference file: Water exploitation index.pdf

## **Part Three**

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

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

*For countries in the process of setting targets, please provide information on the relevant target areas (e.g., baseline conditions, provisional targets, etc.)*

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

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

*For each target set in this area:*

1. 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.

- a. Target 1 To adopt Rulebook on health safety of drinking water (drinking water quality), drafted and harmonized with EU Directive (98/83/EC). Target date: 2016

Background and justification: Currently, the Rulebook on hygienic correctness of drinking water quality is in place from 1998 and is not in concordance with EU Directive (98/83/EC). In order to harmonize national regulation with EU Directive (98/83/EC), as required in EU pre-accession process for Serbia, it is recognized as priority and set as target.

- b. Target 2 To improve collection of drinking water quality monitoring data through development of an electronic information system. Target date: 2015

Background and justification: Information system on drinking and bathing water quality in regular and emergency situation in Serbia is characterized by the coexistence of a traditional system already in place and a multitude of new information flows which emerged to meet the specific needs of the Public health reform implementation. This system collects an oversized volume of

data, while being rather unresponsive to modern Public Health information needs.

The traditional system of data collection on water quality in Serbia is based on out-of-date legislation, methodology and tools. The data collection (mostly paper based and time delayed), is operated by personnel working in an outdated organizational set up. At the peripheral level, a great amount of data is collected and processed regularly, but the utilization, analysis and presentation of this data is lacking in present day methodology. At the central level data often exists, but with questionable validity. The lack of communication among partners and the insufficient feedback mechanism from the central level to the periphery is often demotivating for the staff to collect the data. At the end of the process decision makers at all levels often lacks appropriate and timely information to fulfill its functions.

- c. Target 3 To improve collection of drinking water quality monitoring data in emergency situation through development of an electronic information system. Target date: 2015

Background and justification: see above under b)

- d. Target 4 To conduct baseline analysis of drinking water supply systems in rural areas with respect to drinking water quality and sanitary surveillance Target date: 2016

Background and justification: Based on following data gaps and challenges identified in baseline analysis, GLAAS process and at the National consultation on small-scale water supply and sanitation systems in rural areas (held on 8th December 2014, in Belgrade and jointly organized by UNECE and WHO/Europe with the support of the MoH, Institute of Public Health of Serbia and the WHO country office): weak enforcement of regular drinking water monitoring in rural areas; unavailable data on number of the people served by small scale systems and the accurate number of such supplies; high level of microbiological and physico-chemical contamination; lack of necessary technical approvals, sanitary protection zones, poor construction and maintenance, unsatisfactory sanitary condition, irregular disinfection; unregulated ownership issue and lack of responsibility for maintenance and monitoring of facilities, as well as for testing the quality of drinking water; absence of a legal entity in managing these water supply systems prevents operation of the sanitary inspection; maintenance is not supported by the necessary attention, double connections in some households and various illegal connections increase the risk of water contamination; National working group prioritized improvement of the SSWS evidence base and set this specific target.

- e. Target 5 To develop plan for the improvement of microbiological and chemical quality of drinking water in rural areas. Target date: 2017

Background and justification: One of the aim of baseline analysis of drinking water supply systems in rural areas is to inform programming of improvement interventions and further policy development in the water and health domain

- f. Target 6 Public presentation of the results of the baseline analysis of drinking water supply systems in rural areas. Target date: 2016

Background and justification: One of the aim of baseline analysis of drinking water supply systems in rural areas is to perform Public presentation of the results of the baseline analysis in order to involve as many relevant stakeholders at national and local level for the improvement of the situation.

- g. Target 7 Public presentation of the plan for the improvement of microbiological and chemical quality of drinking water in rural areas. Target date: 2016

Background and justification: see above d), e) and f)

- h. Target 8 To raise awareness of the population in rural areas on importance of regular drinking water quality testing. Target date: On an ongoing basis

Background and justification: The 2002 national programme on health protection of the population from infectious diseases covers activities for awareness raising, mostly focusing on personal and collective hygiene, usage of safe drinking water, adequate waste disposal and less on importance of regular drinking water quality testing in rural areas.

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.

- a) The National working group have drafted Rulebook on health safety of drinking water (drinking water quality), which is harmonized with EU Directive (98/83/EC) and submitted for the adoption procedure. However, national working group for drafting regulations related to drinking and bathing water under the MoH have recognized the need for drafting The Law on Water for Human Consumption in order to set legal basis for further by-laws in this area. Current legal basis is insufficient for the adoption abovementioned regulation.
- b) The software application for electronic collection of data, reporting and monitoring on drinking and bathing water quality in emergency and accidental situation in the health system of the Republic of Serbia was developed and is being tested in 23 regional institutes of public health. This activity was conducted through the project implementation supported by WHO/Europe/Country Office.
- c) The action described above under b).
- d) In order to acquire a nationally representative picture of the situation of small systems in rural areas the Ministry of Health of Serbia has officially requested WHO/EURO in March 2015 to support implementation of its national targets set under the Protocol, specifically undertaking a rapid



assessment of the situation of small-scale water supplies in the country. This rapid assessment is supported by WHO/Europe within the framework of the UNDA-project and through in-kind contribution by national institutions and is being conducted in 2016 specifically undertaking a rapid assessment of the situation of small-scale water supplies in the rural areas. The survey is being undertaken on the basis of the WHO rapid assessment methodology as described in the 2012 guide “Rapid assessment of drinking-water quality: a handbook for implementation”.

- e) The action will be taken upon obtaining the results of above described survey (RADWQ in Serbia)
  - f) Please, see above under e)
  - g) Please, see above under e)
  - h) The Ministries responsible for health and environment in working towards establishing a sustainable framework for inter-sectorial and multi-stakeholder cooperation were organized three regional workshops in Central and East Serbia in November 2015. The achievements under the Protocol were presented with special focus on Serbian Protocol specific targets related to small scale water supplies and importance of regular drinking water quality testing. The workshops were supported by WHO/Euro/Country Office.
3. Assess the progress achieved towards the target.
- a) The target1 has not been met (please see justification under I2.a).
  - b) The target 2 has been partially met. The developed electronic information system is under testing and has not been fully implemented so far.
  - c) The target 3, please see above under b)
  - d) The fulfillment of the target 3 is ongoing, please see I2.d
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.

## **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.

- a. Target 9 To increase sanitary surveillance of drinking water supply systems in rural areas. Target date: On an ongoing basis

Background and justification: The baseline analysis has identified weak enforcement of sanitary surveillance of drinking water supply systems in rural areas.

- b. Target 10 To improve methodology for epidemiological investigation and assessment of water borne outbreaks. Target date: 2016

Background and justification: Existing surveillance systems is passive, as well as outbreak alert and response mechanisms.

- c. Target 11 To increase awareness of the population supplied from individual wells in rural areas on the prevention and control of water borne outbreaks Target date: On an ongoing basis

Background and justification: The awareness and the knowledge of the population in rural areas about the importance of regular control of drinking water quality from individual wells and water-related diseases are unsatisfactory.

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.

- a. The Sector for sanitary inspection of MoH is responsible for the sanitary surveillance of drinking water supply systems. Analysis of the established indicator (the number of conducted surveillance, % of increment) reported in 2015 has shown that the total number of inspected drinking water supply systems in rural areas was 318 or 38% of the total number of registered SSWS. In comparison with data from the 2013 report this number is slightly higher (27%), although in 2014 the percentage was almost the same (33%). In general, coverage of the inspected SSWS in rural areas is one third of the number of registered SSWS. Given that the registered number of SSWS is underestimated the action taken should be also directed to improvement of register of SSWS.
- b. The Republic of Serbia adopted new Law on the protection of the population against communicable diseases ("Official Gazette RS", no 15/16) in February 2016, as well as Regulation on the protection of the population against communicable diseases with Programme on the protection of the population against communicable diseases ("Official Gazette RS", no 22/16). These are the legal basis for the development of by-laws and action plan. Action plan for implementation of the communicable diseases surveillance

system and preparedness and response on serious public health threats system in the Republic of Serbia in line with EU ACQUIS/EC and ECDC recommendations, 2016-2020 is being drafted. This Action Plan envisions measures and actions to be taken related to, *inter alia*, establishment of an integrated case based surveillance system at regional and national level and classification system in line with EU case definitions, development of the electronic information system for surveillance on communicable diseases (clinical and laboratory data reporting), development of Guidelines for outbreak investigations and standards for response to outbreaks, integration of clinical, epidemiological and lab data and establishment of functional links with other relevant systems (veterinary and environmental surveillance) and strengthening the roles and responsibilities of the network of institutes of public health (IPHs) for leadership in the field of surveillance on Communicable diseases.

- c. The new Regulation on the protection of the population against communicable diseases with Programme on the protection of the population against communicable diseases ("Official Gazette RS", no 22/16) prescribes specific aims and measures in the areas of drinking water quality, waste disposal and hygiene, especially in facilities of great hygienic and epidemiological importance such as preschools, schools and facilities where children reside, public feeding facilities, healthcare facilities and collective centers for migrants. Prescribed measures, among others, include education and raising awareness of the population on the importance of health safety of drinking water and its regular monitoring.
3. Assess the progress achieved towards the target.
    - a. The achieved progress is not significant, however this is the very beginning of the target implementation.
    - b. The fulfillment of the target has not been met yet, however the legal basis has been set.
    - c. The fulfillment of the target has not been met yet, however the legal basis has been set.
  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.
    - a),b),c) Neither the targets nor the deadlines has required modification yet.
  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.

a. Target 12 To increase connections to centralized water supply systems in rural areas:

A) Expending existing regional water supply systems B) Water infrastructure completion according to national plans Target dates:

A.

1) 2015-2020: establishing and intensive enforcement;

2) 2021-2025: establishing and intensive enforcement;

3) 2026-2035: moderate intensity enforcement.

B.

1) 2015-2020: establishing and intensive enforcement; 2021-2025: establishing and intensive enforcement;

2) 2026-2035: moderate intensity enforcement.

Background and justification: Identified challenges and bottlenecks in the baseline analysis and GLAAS process include planning of drinking water and sanitation services, infrastructure development in rural areas and management and institutional arrangements for continuous provision of the services that hinder enforcement of the policy and by-laws indicated prioritization in target setting.

Target 13 To estimate investment required for the improvement of water supply in schools and preschools facilities, supplied from individual wells or connected to rural water supply system (SSWS). Target date: 2016

Background and justification: Identified challenges and data gaps in the baseline analysis and GLAAS process include weak enforcement of the drinking water quality monitoring in schools and preschools facilities, especially those connected to individual wells and rural water supply systems, lack of data on sanitary conditions of drinking water and sanitation facilities and drinking water sources, as well as lack of assessment of investment needed for the improvement of the situation indicated prioritization in target setting.

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.

According to Water Law („Official Gazette of the Republic of Serbia“ number 30/2010 and 93/2012) and Regulation on implementation of Water management program by Government for each calendar year, construction, reconstruction and development of technical documentation for water facilities for drinking water supply and sanitation-hygiene needs, drinking water preparation plants, major

pipelines and tanks with relevant devices are funded by Ministry of Agriculture and Environmental Protection - Republic Water Directorate.

Also, with aim to establish functional and efficient selection and infrastructure projects prioritisation system, the ministry responsible for water management proposed projects from the field of arrangement and use of waters, which realisation is planned until 2027, to the "Single project pipeline", representing strategic document based on which international developmental aid (IPA, Western Balkan Investment Framework (WBIF), loans provided by international financial institutions - EIB, EBRD, KfW, WB, CeB), but also other developmental partners being active in the domain of infrastructure development will be programmed.

a. The project "Situation Analysis of access to safe drinking water and sanitation for children of primary schools in rural areas of the territory of Sumadija and Pomoravlje" has been approved and is ongoing. The project is led by Regional Economic Development Agency for Sumadija and Pomoravlje Districts.

The objectives of the projects are:

- to perform a situation analysis (gap analysis) of access to healthy drinking water and sanitation of children primary schools, as well as sanitary surveillance of the facilities in Sumadija and Pomoravlje Districts in Serbia, with investment preliminary evaluation for 254 primary schools in rural areas.

- to provide institutional capacity building for health safety of drinking water and sanitation in schools, by involving in its development selected representatives of the local concerned institutions and stakeholders.

The objectives will be pursued by developing a pilot methodology, by selecting a representative sample of primary schools on the territory, in order to allow the replicability and dissemination of the project to the whole Region and other areas of the Country.

3. Assess the progress achieved towards the target.

a. Since these are the long terms targets the real progress assessment is to be done according to presented plan and target dates

b. The fulfillment of the target 13 is ongoing, please see above under c2.b

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.

a. Neither the target nor the deadline has required modification yet.

b. Neither the target nor the deadline has required modification yet.

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.

a. Target 14 To estimate investment required to improve access to sanitary equipment, proper waste water disposal and regular emptying of septic tanks in schools and preschools facilities. Target date: 2016

Background and justification: Please see background and justification for Target 13

b. Target 15 To develop a plan for the improvement of sanitation in schools and preschools facilities Target date: 2017

Background and justification: Please see background and justification for Target 13

c. Target 16 To improve sanitation in schools and preschools facilities. Target dates:

- 1) 2015-2020: establishing and intensive enforcement;
- 2) 2021-2025: establishing and intensive enforcement;
- 3) 2026-2035: moderate intensity enforcement.

Background and justification: Please see background and justification for Target 13

d. Target 17 To increase % of connections to centralized sewerage systems in rural areas. Target dates:

- 1) 2015-2020: establishing and intensive enforcement;
- 2) 2021-2025: establishing and intensive enforcement;
- 3) 2026-2035: moderate intensity enforcement.

Background and justification: Please see background and justification for Target 12

e. Target 18 To raise awareness of teachers, school staffs and pupils on hygiene of the sanitation facilities in schools:

- A) Review of curricula and textbooks related to the content related to water and sanitation
- B) Education planning for educators, teachers and school administration
- C) Education planning for children, students and parents -
- D) Realization of educational plans related to school staff
- E) Realization of educational plans related to children and students. Target dates:

A, B, C March 2016; D, E 2016-2017

Background and justification: After reviewing educational plans and programmes the ministry responsible for

education has suggested to the NWG prioritizing the raise awareness activities for teachers, school staffs and pupils on hygiene of the sanitation facilities in schools in order to empower curricular competences and knowledge related to environment and health.

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.

a. Please see actions taken under c) 2.b

b. Please see actions taken under c) 2.b

c. Please see explanation under d)2.c

d. Please see explanation under c)2.a

e. A) The Ministry responsible for education (MoE) has established in December 2015 interdepartmental group for reviewing curricula and posted public vacancy in March 2016 for schools to submit their good practices in the education process related to protection of environment and natural resources, as well as to health and safety of students.

B) and C) Planning education is provided through Teachers' Professional Development programmes

For each level of education there are professional development programmes for teachers intended for specific areas. These programmes are approved by Institute for Education Development (governmental institution) and supported by MoE. The approval process is repeated every two years. For health education, the following programmes have been approved:

For pre-school education:

“Health Education - First Steps”

“Kindergarten Promoting Health”

For primary school education

“Health Education in Elementary School”

For primary and secondary school

“School as Centre of Local Community”

“School Open for Parents”

“Water: Interdisciplinary Approach to Protection and Sustainable Use”

“Magic Power of Water”

“Sustainable Development Education”

“Communication for Environment”

C), D) In the Republic of Serbia, local self-governments are required by law to support construction and maintenance of schools' sanitation facilities. However, in 2015, MoE independently financially supported:

- construction of new water supply system and sewerage in one (1) school;

- construction of new sanitation facility in one (1) school;
  - reconstruction and repair of damages in 10 (ten) schools (one of them has been equipped and improved with sanitation facilities by adding ramp and enabling access for persons with disabilities).
3. Assess the progress achieved towards the target.
    - a. The fulfillment of the target 13 is ongoing, please see above under c2.b
    - b. The fulfillment of the target 13 is ongoing, please see above under c2.b
    - c. Please, see explanation under c)3 a
    - d. Please, see explanation under c)3 a
    - e. The fulfillment of the target 18 is ongoing
  4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.
    - a), b), c), d) Neither the target nor the deadline has required modification yet.
  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.

Target 19 Water supply in accordance to drinking water quality standards, the water quantity, affordability and accessibility. Target dates: On an ongoing basis

Background and justification: Baseline analysis and especially GLAAS has revealed weaknesses and lack of performance indicators particularly for affordability, functionality of systems, cost recovery and expenditure related to both water and sanitation.

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.



According to Article 5 of the Law on Communal Utility Activities, communal activity of supply of a drinking water could be performed by a public enterprise or a company in which the majority ownership of at least 51% is held by the Republic of Serbia or local government, which is a monopoly of public sector. Communal activity of treatment and drainage disposal of rainwater and wastewater can be performed by any business entity (public enterprise, company, entrepreneur or other business entity), based on a special decision of the local government and the process of entrusting the performance of communal activities.

The ministry responsible for communal activities has a competency to monitor the quality and scope of the performing of communal activities, efficiency of executors, price trends, the number of employees and the level of investment in the maintenance and construction of communal infrastructure. The Government and the public should be informed about it at least once a year. In order to perform this competency, Article 8 of the Law on Communal Activities, provides the obligation for local governments and all executors of communal activities, to submit a report on the performance of public utilities in the previous year to the competent ministry, by the end of February of the current year. Also, they have to submit other data and information regarding communal activities, according to the request of the ministry. Law on Communal Utility Activities („Official gazette of Republic of Serbia“ no. 22/11), provides a legal basis for adoption of Regulation on the criteria for the provision of communal activities (drinking water supply and treatment and drainage of rainwater and wastewater) which will contain the minimum scope of area and population which will be provided with certain communal activity, frequency and content of communal activity, as well as indicators of the quality and efficiency of service delivery.

This competency should enable an increase of scope of communal activities, particularly in settlements outside cities and seats of local government units, as well as to unify the provision of communal activities throughout the territory of Republic of Serbia. Drafting of this Regulation is underway.

3. Assess the progress achieved towards the target.

We had established the legal basis for the reporting on the performance of public utilities including drinking water and sanitation delivery services, however there is still the need to identify data sets and indicators that should be reported by public utilities at local level.

Some progress has been made, however there is still work to be done related to established performance indicators and efficient mechanisms for monitoring the progress.

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.

Neither the target nor the deadline has required modification yet.

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.

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.

Please, see explanation for target 19, which include sanitation, too.

## **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.

a. Target 20 To adopt amendments on the Rulebook on defining and maintaining the sanitary protection zones of water supply source. Target date: 2016

b. Target 21 To develop legislation for the implementation of Water Safety Plan in all water supply systems Target date: 2016

Background and justification:

Article 47 of the Law on Food Safety prescribes following: „Food business operators shall establish system for ensuring food safety in all stages of food production, processing and circulation, other than on the primary production level, in all facilities under their control, in accordance with the principles of good production and hygienic practice and hazard analysis and critical control points (HACCP). The Minister and/or the minister responsible for public health shall prescribe the requirements for assessment of the self-control procedures referred to in paragraph 1 of this Article. “

According to mentioned above, and having in mind that drinking water is regarded as food, the obligation of the MoH was to develop legislation that is fully in link with Water Safety Plan.

There was a period of a kind of hesitation, and the mentioned obligation has been postponed.

The legal basis regarding food safety and also WHO recommendations regarding WSP were strong push to NWG to set this target.

c. Target 22 To establish sanitary protection zones of existing water sources. Target dates:

1. 2015-2019: establishing and intensive enforcement;
2. 2020-2025: establishing and intensive enforcement;
3. 2026-2034: moderate intensity enforcement.

Background and justification: Baseline analysis has shown that in the period from 2000-2014 total number of established sanitary protection zones according to the national regulation was 156, which is on average 11 per year. The NWG has prioritized this issue and set the target.

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.

- a. The Rulebook on water sources for which sanitary protection zones are being determined and on method for sanitary protection zones determination, maintenance and use has been drafted. Adoption of the Regulation is expected after relevant institution opinions being obtained and harmonized.
- b. The Sector for sanitary inspection of MoH is about to establish WG whose task is to prepare a document in order to prescribe health safety of drinking water, natural mineral, natural spring and table water issues, that will be undertaken in waterworks organization in Serbia.
- c. The Sector for sanitary inspection of MoH is responsible for the approval of sanitary protection zones. Analysis of the established indicator (the number of established sanitary protection zones) reported in 2015 has shown that the total number of established and approved zones was 34, which is 3 times more than average number per year in previous period.

Measures to achieve the objective defined by water management sector are following:

- to intensify activities on determination of sanitary protection zones and implementation of relevant protecting measures at the existing water sources;
  - to organize monitoring of relevant parameters determined by regulation defining surface and groundwaters status parameters at the existing and potential water sources;
  - protection of water sources in order to prevent decreasing status of surface and groundwaters water bodies to be provided through the administrative and technical measures, according to relevant regulative;
  - to provide good quantitative underground waters status by equilibrium between abstraction and recharge of groundwaters;
  - to perform investigatory works at the potential water sources of surface and groundwaters in order to evaluate water quality and quantity.
3. Assess the progress achieved towards the target.
- a. The target has not been met yet, however action towards fulfillment has been taken
  - b. The target has not been met yet, however the basic action towards achievement of this target has been initiated.
  - c. As described above under f 2.c there is the progress upon this 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.
- a) The target date should be revised and set at 2017
  - b), c) Neither the target nor the deadline has required modification yet.
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.

a.Target 23 To improve WASH survey in schools introducing new methodology. Target date: 2016

Please see explanation under target 14 and 15

b.Target 24 To raise awareness on adequate water supply and sanitation in schools, especially in those with individual wells. Target dates: On an ongoing basis

Background and justification: The awareness and the knowledge of the school staff and pupils, especially in rural areas about the adequate water supply and sanitation are unsatisfactory.

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.

a. Please see explanation under target 14 and 15

b. The fulfillment of the target is ongoing. The numerous workshops have been conducted on regional levels as explained in part one of this report

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.

a), b) Neither the targets nor the deadlines has required modification yet.

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.

a. Target 25 A)Revitalization and completion of the wastewater treatment plant (WWTP) B) Construction of new WWTP by priority C) The construction of storm sewers. Target dates:

A.

1. 2015-2020: establishing and intensive enforcement;

B.

2. 2015-2041: establishing and intensive enforcement;

C.

3) 2015-2034: moderate intensity enforcement.

Background and justification: According to Water Law („Official Gazette of the Republic of Serbia“ number 30/2012 and 93/2012) and Regulation on implementation of Water management program by Government for each calendar year, construction, reconstruction and development of technical documentation for water facilities for collection, drainage and treatment of waste waters and water protection, particularly major pipelines, wastewater treatment plants and purified water collectors are funded by Ministry of Agriculture and Environmental Protection - Republic Water Directorate.

Also, with aim to establish functional and efficient selection and infrastructure projects prioritisation system, the ministry responsible for water management proposed projects from the field of protection of water against pollution, which realisation is planed until 2027, to the “Single project pipeline”, representing strategic document based on which international developmental aid (IPA, Western Balkan Investment Framework (WBIF), loans provided by international financial institutions - EIB, EBRD, kfW, WB, CeB), but also other developmental partners being active in the domain of infrastructure development will be programmed.

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 construction of WWTP larger settlements at smaller watercourses have advantage, especially those with high degree of connections to the public sewer system (all settlements bigger than 10000 inhabitants), and then settlements with low connections to the public systems (mostly settlements under 10000 inhabitants and connection under 50 %), i.e. criteria for priorities defining is specific wastewater load of the relevant receiving waters. Within construction of the sewerage network and main collectors priorities are as follows:

1. primary and secondary sewerage network
  - settlements over 2 000 inhabitants and where existing individual systems threaten population health:
  - settlements where constructed WWTPs have excess capacity
  - in case there is no constructed WWTPs, but settlements are located nearby to large recipients
  - settlements under 2000 inhabitants where construction of central sewerage systems is started (conditionally, more than 30 % population)
  - settlements under 2000 inhabitants without public sewer (or with sewerage system covering less than 30 % population) and with public water supply it should be oriented to individual systems for waste water treatment
2. major collectors:
  - if their construction is timed with WWTP construction

- if their construction isn't timed with WWTP construction, but population health protection and water supply source protection is improved or recipient water quality is increased using collector

#### Priorities from 2015 to 2020

1. To continue with started projects realisation covering extension of sewerage network to the required level and construction of the main water supply and waste water treatment plants (commonly known as WWTP).

- WWTP Brus - Blace
- WWTP Kula - Vrbas - Crvenka
- WWTP Vranje
- WWTP Nis
- WWTP Uzice
- WWTP Mladenovac

2. To work on preparation of project documentation for extension of sewerage network and construction of WWTP for agglomerations defined as priorities for planning period from 2021 to 2027 according to the Draft Plan of protection of waters against pollution: Kragujevac (reconstruction and extension), Kraljevo, Krusevac, Cacak, Novi Pazar, Zrenjanin, Valjevo (reconstruction and extension), Sombor (reconstruction and extension), Pozarevac, Pirot, Zajecar, Jagodina, Kikinda (reconstruction and extension), Loznica, Vrsac (reconstruction and extension), Bor, Arandjelovac (reconstruction and extension), Ruma, Lazarevac, Surcin, Prokuplje, Paracin, Gornji Milanovac (reconstruction and extension), Indjija, Smederevska Palanka, Temerin, Becej (reconstruction and extension), Vrnjacka Banja, Knjazevac, Pozega, Nova Pazova, Negotin, Vlasotince, Ivanjica, Sid, Backa Topola, Srbobran, Sjenica, Kursumlija, Odzaci, Novi Becej, Mali Idjos, Backi Petrovac, Svilajnac, Ugrinovci, Lebane, Arilje.

#### Priorities from 2021 to 2027

3. To finalize started preparation of project documentation and to start with construction of sewerage network and WWTP for agglomerations from the point 2.

4. To prepare project documentation for agglomerations from 2000 to 10000 inhabitants:

Kanjiza, Bogatic, Petrovac na Mlavi, Vrcin, Bujanovac, Crvenka, Vladicin Han, Lajkovac, Aleksandrovac, Dobanovci, Bantski Karlovac, Sokobanja, Majdanpek, Svrljig, Bajmok, Majur, Cantavir, Topola, Ub, Cajetina, Novo Milosevo, Osecina, Batocina, Ribare, Kosjeric, Babusnica, Vranjska Banja, Blace, Zitiste, Brus, Kusadak, Bojnik, Lucani, Irig, Krupanj, Koceljeva, Despotovac, Azanja, Bukovac, Pukovo, Kucevo, Trgoviste, Vucje, Selevac, Zitoradja, Zlot, Ljig, Mionica, Vrdnik, Presevo, Simanovci, Ralja, Stepojevac, Malosiste, Guca, Vinarce, Darosava, Velika Krsna, Mihajlovac, Ropocevo, Bosilegrad, Raca, Pecinci, Maglic, Medvedja, Veliko Orasje.

5. To start construction of sewerage network and WWTP for agglomerations from point 2.

6. To start with development of project documentation for agglomerations where water protection will be carried out from 2028

to 2034: Beograd, Novi Sad, Aleksinac, Cuprija, Prijepolje, Priboj, Trstenik, Zabalj, Kac, Surdulica, Ripanj, Tutin.

3. Assess the progress achieved towards the target.
  - a. Since these are the long terms targets the real progress assessment is to be done according to presented plan and target dates
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.

The target date should be revised and set at:

  - A.
    1. 2015-2020: establishing and intensive enforcement;
  - B.
    2. 2015-2041: establishing and intensive enforcement;
  - C.
    - 3) 2015-2034: moderate intensity enforcement. 2018.
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.

Please, see explanation of target 25

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.



## **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.

Target 26 1) Legal entities, entrepreneurs and individuals that have waste water treatment plant and / or their wastewater discharged into the recipient or public sewers are obliged to comply with emission limit values for pollutants in water prescribed by the Regulation on emission limit values of pollutants in water and target dates for their achievement (Official Gazette of RS, no. 67/11, 48/12), Article 19

2) Waste water treatment plant from agglomerations of more than 2000 population equivalent (PE), which discharged municipal waste waters into the recipient to be in compliance with emission limit values of pollutants prescribed by this Regulation and in accordance with the Water Management Plan.

3) Legal entities, entrepreneurs or individuals who have waste water treatment plants that discharge waste water into the recipient or public sewers are obliged to adopt action plans for achieving the emission limit values and set target dates for reaching emission limit values of pollutants progressively, in accordance with plan for the protection of water from pollution, issued pursuant to the law on water, within six months of adoption of this Plan.

Target dates:

1) 31 December 2030

2) 31 December 2041

3) 6 months after adoption of the action plans for achieving the emission limit values

Background and justification: National target 26 is set in accordance with one of the most important target in national strategic and planning documents regarding environmental protection: enhance the water quality in watercourses by reduction of discharge of untreated communal and industrial wastewaters.

Around 50 wastewater treatment installations in settlements larger than 2000 inhabitants were built in the last several decades in Serbia, although most of them do not meet required capacity or efficiency, so it is assessed that only 5% of population have adequate and satisfying level of wastewater treatment. Only 26 of the installations built are functioning and only 8 of them work by the project criteria. The efficiency of the rest is far below the projected.

Low number of industrial facilities has installations for pretreatment or treatment of wastewaters before discharged into recipient or city collectors, or they are inefficient. In the past we

had better situation but due to adverse economic situation, performed privatizations and restructuring, a lot of industrial facilities stopped working or changed type of activity so that the wastewater treatment installations are derelict or not adequate.

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.

1) and 2)

In December 2015, Regulation on Amendments on Regulation on emission limit values of pollutants in water and target dates for their achievement (Official Gazette of RS, no. 1/2016) was adopted. It prescribes some additional subchapters of ELVs for industrial wastewaters and gives changed deadlines for compliance with ELVs harmonizing them with assessments related to UWWT directive. All facilities that were existing and functional before 21.09.2011 have transitional period to comply with ELVs latest by the end of 2025 for industrial waste waters and 2040 for urban waste waters. The precise deadlines for each facility will be defined in action plans developed by corresponding operators. Facilities that started operation after the mentioned date have to comply with ELVs immediately after commissioning. In the light of these new changes in legislation, target dates for 6.2.h.1) and 6.2.h.2) also need to be changed accordingly.

Currently, reliable data on quantities of discharged untreated as well as treated wastewaters are lacking. The actions to enhance relevant data monitoring are being taken. We are expecting the Rulebook on manner and conditions of measurement of quantity and quality testing of waste water and the content of the report on the conducted measurements to be published. Its implementation will further insure the obtaining of adequate data.

3)

According to new amendments on the Regulation on emission limit values of pollutants in water and target dates for their achievement (Official Gazette of RS, no. 1/2016), polluters are obliged to adopt Action plans for achieving the emission limit values with target dates set for reaching emission limit values of pollutants progressively, by the 14<sup>th</sup> of July, 2016. IPPC installations will fulfill that through the IPPC permitting procedure in accordance with the amendments on Law on Environmental Protection (Official Gazette of RS, no. 14/2016). So the target date for this target also need to be changed.

3. Assess the progress achieved towards the target.

Progress has been achieved towards establishing proper legal basis and a good working area for reaching the targets. Target dates seem to be too far away, but targets 1) and 2) are very

financially demanding and so far we did not expect much of a progress in this short period.

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.

As explained in point 2, target dates for all three targets will need to be changed in accordance with legislative changes.

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.

a. Target 27 Harmonization of the national legislation with EU Water Framework Directive. Target date: 2020

Background and justification: This target has been set as an obligatory action to be fulfilled in the accession of Serbia to the EU

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.

a. The umbrella law regulating the issues connected with water management is Water Law. Directives related to waters are partly transposed into Serbian legislation and full harmonization is planned to be finished until the end of 2018 by adopting new Water Law in 2017 and then bylaws until the end of 2018.

3. Assess the progress achieved towards the target.

a. The adequate actions have been taken to meet the target and target date

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.

Neither the target nor the deadline has required modification yet.

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.

Please, see explanation for target 27

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.

### **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.

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.

The target 27 is related to harmonization of the national legislation with EU Water Framework Directive, which the NWG has recognized as a priority area and after finalizing that work it would be more realistic to prioritize this target subarea.

## **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.

a. Target 28 To adopt Rulebook of bathing water quality harmonized with EU Directive 2066/7/EC. Target date: 2016

Background and justification: In order to harmonize national regulation with EU Directive (2006/7/EC) it is recognized as priority and set as target.

b. Target 29 To improve collection of bathing water quality monitoring data through development of an electronic information system. Target date: 2015

Please, see justification under target 2

c. Target 30 To improve collection of bathing water quality monitoring data in emergency situation through development of an electronic information system. Target date: 2015

Please, see justification under target 3

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.

a. The Rulebook on bathing water quality harmonized with EU Directive 2066/7/EC has been drafted.

b. Please, see the actions taken for the fulfillments of target 2

c. Please, see the actions taken for the fulfillments of target 3

3. Assess the progress achieved towards the target.

a) The target 28 has not been met, yet. The target date is still valid.

b) The target 29 has been partially met. The developed electronic information system is under testing and has not been fully implemented, so far.

c) The target 30, please see above under b)

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.

a), b), c) Neither the targets nor the deadlines has required modification yet.

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.

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.

The Republic of Serbia has not established regular monitoring of quality of waters used for aquaculture yet and related to the quality of waters used for production or harvesting of shellfish, is not relevant for Serbia.

## **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.
  - a. Target 31 To develop Best practice guide in accordance with the Rulebook of bathing water quality. Target date: 2017  
  
Background and justification: After the harmonization of the Rulebook on bathing water quality harmonized with EU Directive 066/7/EC there will be a need to develop guide document in order to implement new provisions.
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.
  - a. The action will be undertaken after the adoption of the Rulebook of bathing water quality
3. Assess the progress achieved towards the target.
  - a. It is not relevant in this stage of target implementation
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.  
  
Neither the target nor the deadline has required modification yet.
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 (l))**

*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.

- a. Target 32 To identify and establish Registry of contaminated sites which adversely affect waters within the scope of this Protocol

Background and justification: Please, see explanation under I 2a

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.

- a. According to provisions of Water Law („Official Gazette of the Republic of Serbia“ number 30/2010) Public Water Management Company “Srbijavode” (PWMC) conduct Water registers, as the part of Water Information System, as well as Cadastre of pollutants.

With development of informatical support to administrative and organizational activities, jobs related to analysis and decision in relation to the prescribing of fees, the release of water conditions, approvals and permits, as well as in operational activities in cases of accidental pollution, during 2008 PWMC “Srbijavode” gets unique Oracle data base called Concentrated Pollutant Sources to utilizing and maintaining.

In the process of strengthening of informatical support to administrative and organizational activities in water management it is designed and started with use of Water management Information System of the Republic of Serbia (WIS), that should improve water management activities and to help to realize sustainable water management. Structure of WIS includes monitoring and assessment of natural constructed resources, planning, strategic management and designing of water management systems and facilities and administrative managing of water management.

Within WIS there is functioning Oracle data base called Concentrated Pollutant Sources (CPS), representing water pollutants register. Concentrated Pollutant Sources include industrial and municipal sewage systems and leachate from the landfill waste.

The scope and content of CPS base is completely in accordance with valid legislation from the field of water management, public utilities, and specially water protection. During the process of cadastre making the recommendations of developed Europe countries, defined by Water Framework Directive (2000/60/EEC) and other Directives were taken into account. The content of cadastre is conceived to response to all listed requirements from Directives related to the monitoring of polluting emissions.

A special quality of this cadastre is a possibility to assess quantity and quality of waste water in case there is no enough data.

Summaries or reports as the outlet from the cadastre represent its most useful part and justify previous multiple data entry.



Reports can be taken separately for different categories - settlements, industry and measurements.

Data base Concentrated Pollution Sources has an invaluable importance for the organization and execution of future administrative and organizational activities in the water management

Data from this cadastre can be obtained by total emissions from certain industries in certain time intervals.

Also, measured or estimated emission from settlement can be outlet from cadastre. Except data related to pollutants, cadastre can give informations about pollution at recipient waters, at the whole course as well as at parts of the course or at the water bodies.

CPS is of crucial importance for assessment of pressures and impacts during integral basin management and it was firstly used for that purpose (Pilot project - Kolubara river basin management plan).

3. Assess the progress achieved towards the target.
  - a. The target has been partially met. There is the need for further effort to feed the database.
4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.

Neither the target nor the deadline has required modification yet.
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.

- a. Target 33 To develop legislation for the implementation of Water Safety Plan in all water supply systems. Target date: 2018

Please, see target 21

- b. Target 34 To develop Water Management Plan and Plan for the protection water resources from pollution. Target date: 2015

Background and justification: The NWG has identified the development of plans in area of water management as priority.

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.

a. Please, see target 21

b. The Danube river basin management plan has been drafted. Report on strategic impact assessment for Danube river basin management plan has been obtained. Adoption of Danube river basin management plan is expected after obtaining opinions of relevant institutions and their harmonization.

The Plan of protection of waters against pollution has been drafted, too. Strategic impact assessment for Plan of protection of waters against pollution on the environment in 2016 has to be done and to obtain Report on strategic impact assessment for Plan of protection of waters against pollution on the environment, as well as relevant institutions opinions and their harmonization.

3. Assess the progress achieved towards the target.

a. Please, see target 21

b. The progress has been made by drafting above mentioned plans, however the adoption of the plans is under routine procedure.

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.

b. The target date should be revised and set at 2018.

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.

a. Target 35 To create web portals on the websites of all relevant governmental bodies, institutions and local governments with respect to water and sanitation (information about the quality of delivered drinking water and other water bodies that are relevant to the objectives). Target date: 2017

Background and justification: The NWG recognized the gap in data posting of the implementation activities under the Protocol, as well as to meet the requirements of the Protocol regarding public information.

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.

- a. All relevant institutions involved in process have started updating their web portals with relevant information about the implementation of the Protocol

<http://www.zdravlje.gov.rs/showelement.php?id=8389>

<http://www.zdravlje.gov.rs/showelement.php?id=8390>

3. Assess the progress achieved towards the target.

- a. It is an ongoing process

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.

- a. Neither the target nor the deadline has required modification yet.

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 activities related to, for example:

- (a) Response systems (article 8);

After devastating floods in 2014, the Republic of Serbia has undertaken following measures and actions as the result of indentified challenges, bottlenecks and gaps in response system:

- Capacity building workshops, trainings, education etc. related to response in an emergency situation;
- Drafting new regulation in that area and improving existing regulations
- Strengthening institutions, especially, the civil response system using European experiences;
- Improving inter-sectoral collaboration between relevant institutions and stakeholders;
- Developing an early warning system;
- Developing strategies, programs and plans for risk management;
- Finding sustainable ways of financing the prevention, preparedness and response in emergency situations;

Adopted National strategic documents related to improvement of the response system:

1. National Disaster Risk Management Program - contains all principles of the Sendai Framework for Disaster Risk Reduction 2015 - 2030
2. National Action Plan for Implementation of the National Disaster Risk Management Program - contains all principles of the Sendai Framework for Disaster Risk Reduction 2015 - 2030

Drafted or amended National legal framework related to improvement of the response system:

1. Law on Disaster Risk Reduction and Emergency Management
2. Law on Reconstruction Following Natural and Other Hazards
3. National Health Emergency Response Plan
4. Implementation of the International Health Regulations (IHR)

According to the Contract/Agreement between WHO and Institute of Public Health of Serbia (IPHS), signed on July 21, during the period July –

October 2015, 23 local (district) Institutes of Public Health (IPHs) in Serbia held 122 training sessions on the community response to crisis situations with special emphasis on public health. Total number of participants attended those training courses was 1372. Coordination and monitoring of the implementation of trainings at local level was conducted by the IPHS, which is an expert institution for public health, established at national level. Specific coordination, management, overseeing, monitoring and evaluation of delivered trainings, as well as providing of necessary technical support, was carried out by the Training Coordinator.

The final goal of the trainings – passing the specific knowledge to the community level in order to reach the best possible preparedness to respond and mitigate the public health effects of crisis/emergency situations, through intersectoral and multidisciplinary cooperation – has been fully reached throughout the training sessions.

As expected, the key delivery of the training campaign is evidently successful implementation of the trainings at local level, as well as improvement of knowledge and public health emergency response management skills of the representatives of local communities, which are considered as main stakeholders regarding emergency/crisis situations (local health council members, municipal and district emergency management headquarters members, local government representatives, health care professionals, representatives of local Red Cross branches, social welfare centers, schools, civil society organizations etc.). Through the training process, their specific roles in response to crisis situation have gained new quality in the sense of prevention and managing public health emergencies through emergency preparedness and risk management knowledge and policies.

(b) Public awareness, education, training, research and development and information (article 9);

Within the framework of the EH process in Serbia, WHO-EURO supported the Ministries responsible for health and environment in working towards establishing a sustainable framework for inter-sectorial and multi-stakeholder cooperation to address key environment and health issues. For this purpose, with the support of Regional Development Agencies, three regional promotional workshops were realized in Central and East Serbia in November 2015 (Borski, Zajecarski, Sumadijski and Pomoravski districts).

The aim of these workshops was to present the environmental health process and the role of local self-governments and stakeholders in implementing the Parma commitments and Protocol on water and health. The achievements under the Protocol were promoted with special focus on Serbian Protocol specific targets related to small scale water supplies and WASH in school aligned with RPG1. The promotional workshops sparked fruitful discussion among representatives of the local self-governments and provided the opportunity to share stakeholders perspectives and to exchange ideas on how to facilitate inter-sectorial cooperation and knowledge transfer among professional communities towards fulfilment of Serbian Protocol targets and Parma commitments. The continuation of the this work is going to be done during 2016, covering other regions.

(c) Public information (article 10);

The Law on access to information of public importance prescribes the obligations that all information important for public must be available.

In addition, Serbia's EU accession process is now under way and includes 35 thematic chapters. The screening process began in September 2013 and was completed in late March 2015. On 14 December 2015, the EU opened the first two of thirty-five chapters in its accession negotiations with Serbia. The current negotiation process has revealed that Serbia's legislation is in many chapters already harmonized with that of the EU. Yet, the implementation of the laws and related regulations in practice remains the country's weak point. The main problems pertain to: serious shortage of well educated human resources; lack of suitable infrastructure; and, scarce financial means.

In order to contribute to the solving of the first above mentioned problems in the field of water quality, the DC UETS has developed on day seminar "Sustainable development and water -how to preserve resources and improve safety and quality of drinking water" in November 2015. The special attention was paid to the Protocol on water and health, National policies and strategies in the water sector, integrated water resources management and the technologies for improving the safety and quality of drinking water.

Please, see explanation for the target 35

(d) International cooperation (article 11);

The longest bilateral cooperation in water field the Republic of Serbia has with Hungary and Romania based on the Agreement on water management and water development issues signed in 1955. The monitoring is performed by Serbian Environmental Protection Agency. Serbian-Hungarian cooperation defines joint sampling, field analysis, and hydrometric measurements at the following border profiles: Danube Bezdan, Tisa - Martonoš, Plazović - Bački Breg and the Baja-Bezdan Channel - Bački Breg, with monthly dynamics (12 times a year). Serbian-Romanian cooperation includes six (6) series of joint sampling, field analysis, and hydrometric measurements in the following waterflows on the Serbian territory: Zlatica - Vrbica, Stari Begej - Hetin, Brzava - Markovićevo, Moravica - Vatin, and on the Romanian territory: Plovni Begej - Otelek, Tamiš - Graničeri, Karaš - Vrani and Nera - Najdaš and Sokol; and on the Danube: Banatska Palanka on the Serbian territory, Gruja on the Romanian territory, monthly (12 times a year). Obligation of each party is to participate in the sub-commissions' work on the harmonization of the results of the analysis, preparing and sharing documents with the results of the performed tests. Serbian Environmental Protection Agency, starting from its founding in 2003, regularly submits annually data on water quality to the European Environment Agency (EEA) through EIONET (European Environment Information and Observation Network), as a representative of the Republic of Serbia as a cooperating country.

(e) Joint and coordinated international action (article 12);

(f) Cooperation in relation to transboundary waters (article 13);

The Republic of Serbia has significant role in international cooperation, especially in the field of water use, protection from waters and water quality protection. In Serbia even 92 % of available waters are transit water entering the country through the Danube,

Sava, Tisa and other watercourses. Unsatisfactory water quality is also a consequence of transboundary pollution of water entering Serbia.

International cooperation is being conducted through bilateral cooperation, mostly with neighbor countries and through multilateral cooperation, dominantly through the implementation of the United Nations Convention on the protection and use of transboundary watercourses and international lakes, the Convention on protection and sustainable use of Danube river (International Commission for the Protection of Danube River - ICPDR) and the Framework Agreement on the Sava River Basin (International Sava River Basin Commission). The Republic of Serbia has valid active bilateral agreements with Hungary and Romania. Those Agreements are from 1955 need revision. Changes that happened in a meanwhile in the field of water management require establishment of a new form of bilateral cooperation with Hungary and Romania. Also, by formation of internationally recognized countries in the surroundings of Republic of Serbia, originating from the breakdown of SFR of Yugoslavia, interstate watercourses and groundwaters had got interstate status that requires establishment of interstate and international cooperation in the field of waters. Without concluded bilateral agreements there is no legal basis for the regulation of the issues of interest for one or both countries.

(g) International support for national action (article 14).

- Ongoing project "Rapid assessment of drinking water quality in rural areas in Serbia", supported by the UNDA project UNECE/WHO/Europe
- Ongoing project "Situation analysis of access to healthy drinking water and sanitation for children in primary schools in rural areas in the Sumadija and Pomoravlje Districts - supported by donation of the Ministry of Environment, Land and Sea, remained financial means after funding project" Serbian-Italian Fund for the Environment (ESIF)"
- Ongoing promotional activities of the Environmental health process, including Protocol on water and health, supported by WHO/BCA

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.

Suggested length: up to 3 pages

## **Part Five**

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

The following report is submitted on behalf of The Republic of Serbia\_\_\_\_\_ [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:

Ljiljana Jovanovic, MD, Epidemiologist, National focal point for environment and health

Dragana Jovanovic, MD, PhD, Hygiene specialist, National focal point for water and sanitation and GLAAS

E-mail: ljiljana.jovanovic@zdravlje.gov.rs

dragana\_jovanovic@batut.org.rs

Telephone number: +381113616632

+381113614704

Name and address of national authority:

Ministry of Health, Nemanjina 22-26, 11000 Belgrade, Serbia

Institute of Public Health of Serbia, Dr Subotica 5, 11000 Belgrade, Serbia

Signature:

Date: 18<sup>th</sup> April 2016

### **Submission**

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

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

#### **Joint Secretariat to the Protocol on Water and Health**

United Nations Economic Commission for Europe

Palais des Nations

1211 Geneva 10

Switzerland

E-mail: protocol.water\_health@unece.org



and

World Health Organization Regional Office for Europe

WHO European Centre for Environment and Health

Water and Sanitation Programme (WSN)

Platz der Vereinten Nationen 1

53113 Bonn

Germany

E-mail: [watsan@ecehbonn.euro.who.int](mailto:watsan@ecehbonn.euro.who.int)

	<i>Baseline value (specify the year)</i>	<i>Value reported in the previous reporting cycle (specify the year)</i>	<i>Current value (specify the year)</i>
<i>Water exploitation index</i>	2005 <sup>a</sup>	2012 <sup>a</sup>	
Agriculture	0.014	0.014	
Industry <sup>a</sup>	23.73	23.73	
Domestic use <sup>b</sup>	76.26	76.26	

\*The data shown in Table are incorrect

## 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.

## Water use

Annual abstraction of freshwater (10 <sup>6</sup> m <sup>3</sup> )	2007	2008	2009	2010	2011	2012	2013
Agriculture	92,39	48,41	43,48	65,45	66,10	110,45	-
Domestic use	691,84	690,78	684,73	666,87	672,74	681,25	-
Industry	3138	3241	3365	3126	3462	3048	-
<i>Water exploitation index (WEI)</i>							
<i>WEI = V<sub>fa</sub>/V<sub>rf</sub> (%)</i>	0,5	0,48	0,47	0,48	0,51	0,48	-
Freshwater abstraction, V <sub>fa</sub>	848 x 10 <sup>6</sup> m <sup>3</sup>						-

(2007-2012)		
Renewable freshwater, $V_{rf}$ (2007-2012)	175376 x 10 <sup>6</sup> m <sup>3</sup>	-

Source: Annual report on the status of the environment in the Republic of Serbia in 2013, Serbian Environmental Protection Agency  
Annual report on the status of the environment in the Republic of Serbia in 2014, Serbian Environmental Protection Agency

<http://www.sepa.gov.rs/download/Izvestaj2014.pdf>