

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

## Part One

### General aspects

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

YES  NO  IN PROGRESS

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

The Protocol on Water and Health was ratified on March 7, 2004 in Lithuania. The Outlines for the Implementation of the Protocol on Water and Health in accordance with article 6 were approved by the Order of the Minister of Health and the Minister of Environment on January 12, 2005, Nr. V-14/D1-22 (Official Gazette, 2005, No. 11-348). The approved Outlines set forth the objectives, directions for action and stages for the implementation of the Protocol on Water and Health. There were 10 targets:

- to create legal, administrative and economic provisions that would be stable and would promote the implementation of the targets;
- to establish national arrangements for coordination between the competent authorities and for relations maintained with other states at the intergovernmental level;
- to develop programs or incorporate the means in other relevant programmes which are being drawn up for other purpose;
- with the aim to supply high quality drinking water to improve and maintain a legal and organizational framework for monitoring and enforcing standards for the quality of drinking water;
- to develop a system of indicators designed to identify observe and control the spreading of water-related diseases;
- to establish preventive, surveillance systems for the outbreaks of water-related diseases;
- to develop water management plans at the transboundary and national level. Such plans may be incorporated in other relevant plans, programs or documents drawn up for other purposes;
- to review national trends in changes of water and health indicators and to carry out a comparative analysis on the territory basis;
- to collect and evaluate data concerned with the implementation of the Protocol and to assess the progress achieved;
- to provide to the secretariat data about progress achieved.

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.

To facilitate and coordinate the implementation of the Protocol on Water and Health the coordination group under the leadership of the Ministry of Health was established by the order of the Minister of Health and the Minister of Environment on on March, 2011. (Official Gazette, 2011, No. 38-1833). The active coordination group is established for bringing together representatives of the different institutions: Ministry of Health, Ministry of Environment, State Food and Veterinary Service, State Geology Service under the Ministry of Environment, Ministry of Agriculture, Center for Health Education and Diseases Prevention, Communicable Diseases and AIDS Centre, Health Emergency Situation Centre, Association of Local Authorities, Water Supply Company „Vilniaus vandenys“, Water Club.

In accordance with the Outlines for the Implementation of the Protocol on Water and Health the Ministry of Environment provides information on water to the Ministry of Health. This is the responsibility of the Ministry of Health to provide to the Secretariat data on progress achieved and the Protocol implementation in Lithuania.

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

Many of the activities under the Protocol are related to the implementation of the EU Directives on Drinking Water, Bathing Water, Urban Waste Water. Future plans are closely related to implementation of Water Framework Directive, preparation of River Basins management plans. The progress evaluation and reporting under the Protocol is possible using the targets related to water quality which have been set in Lithuanian legislation.

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

No.

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?

Representatives from the Association of Local Authorities, Water Supply Company „Vilniaus vandenys“ and NGO “Water club” were invited to take part in the Protocol implementation coordination group.

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.

The Ministry of Health, the Ministry of Environment, State Food and Veterinary Service, State Geology Service, The Environmental Protection Agency, Center for Health Education and Diseases Prevention, Communicable Diseases and AIDS Centre, Health Emergency Situations Centre took part in the preparation of Lithuanian Summary Report under the Protocol on Water and Health. There were consultations with Association of Local Authorities in Lithuania, Water Supply Company „Vilniaus vandenys“, Water Club and others. We distribute the responsibilities of Protocol fields, all coordinating group’s members has to determine the targets to every item of the 6 article of the Protocol on Water and Health using the Guidelines on the setting of targets, evaluation of progress and reporting.

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 report represents national circumstances and national decision-making structure.

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.

No.

## 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?

In parts B and C information is provided on drinking water quality in water supply zones exceeding 1000 m<sup>3</sup> per day as an average or serving more than 5000 persons. Drinking water is supplied to the population of over 1.9 million.

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

Water is supplied to urban and rural population.

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

Samples of drinking water are taken in the distribution system and point of consumption. Information is prepared on the basis of the annual report on the monitoring of drinking water carried out by the water suppliers.

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

Samples of drinking water are taken in accordance with the ISO 5667 standards.

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

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

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

## B. Bacteriological quality

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

<i>WatSan_S2</i>	<i>Baseline value (please specify the year) 2005</i>	<i>Current value (please specify the year) 2010</i>
E. coli	0	0
Enterococci	0	0

## C. Chemical quality

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

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

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

<i>Substance</i>	<i>Baseline value (please specify the year) 2005</i>	<i>Current value (please specify the year) 2010</i>
Fluoride	18,9 %	11,9 %
Nitrate and nitrite	0	0,2 %
Arsenic	0	0
Lead	0	0
Iron	8,3 %	4,7 %
Additional physico-chemical <sup>4</sup> parameter 1: Ammonium	1,2 %	1,4 %
Additional physico-chemical parameter 2: Manganese	11,7 %	3,4 %

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

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

Additional physico-chemical parameter 3: Oxidisability	1,9 %	0,2 %
Additional physico-chemical parameter 4: Sulphate	2,9 %	5,9 %
Additional physico-chemical parameter 5: Turbidity	0,1 %	0,2 %

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

In filling out the following table, please specify if the numbers reported are related to all exposure routes or only related to water (in which there is epidemiological or microbiological evidence for water to have facilitated infection).<sup>5</sup>

<i>Only related to water</i>	<i>Incidence</i>		<i>Number of outbreaks</i>	
	<i>Baseline (specify the year)</i>	<i>Current value (specify the year)</i>	<i>Baseline (specify the year)</i>	<i>Current value (specify the year)</i>
	<i>2005</i>	<i>2012</i>	<i>2005</i>	<i>2012</i>
Cholera	No registered	No registered	No registered	No registered
Bacillary dysentery (shigellosis)	No registered	No registered	No registered	No registered
EHEC <sup>a</sup>	No registered	No registered	No registered	No registered
Viral hepatitis A	No registered	No registered	No registered	No registered
Typhoid fever	No registered	No registered	No registered	No registered

<sup>a</sup> Enterohaemorrhagic E. coli.

<sup>5</sup> If possible, please distinguish between autochthonous and imported cases

### III. Access to drinking water

<i>Percentage of population with access to drinking water</i>	<i>Baseline value (specify the year) 2005</i>	<i>Current value (specify the year) 2012</i>
Total	66 %	76 %
Urban	90-95 %	
Rural	20-30 %	

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

The numbers in the table reflect the percentage of population that has the access to centralized water supply systems.

Source of data are from municipalities. The data on drinking water supplies will be taken from Lithuanian periodic population and housing census, when according to the prepared form, citizens had declared the way of their access to water services (such as centralized water supply or individual wells) at the start of June 2013. It is expected, that in this way will remove shortages and unreliability of the data on drinking water supplies.

The WHO/UNICEF<sup>6</sup> Joint Monitoring Programme (JMP) for Water Supply and Sanitation defines access to water supply in terms of the types of technology and levels of service afforded. Access to water-supply services is defined as the availability of at least 20 litres per person per day from an “improved” source within 1 kilometre of the user’s dwelling. An “improved” source is one that is likely to provide “safe” water, such as a household connection, a borehole, a public standpipe or a protected dug well.

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

### IV. Access to sanitation

<i>Percentage of population with access to sanitation</i>	<i>Baseline value (specify the year) 2005</i>	<i>Current value (specify the year) 2011</i>
Total	58 %	67 %
Urban		
Rural		

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<sup>6</sup> United Nations Children’s Fund.

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

The numbers in the table reflect the percentage of population that has the access to centralized sewer systems.

Source of data are from municipalities. The data on drinking water supplies will be taken from Lithuanian periodic population and housing census, when according to the prepared form, citizens had declared the way of their wastewater management (eg, centralized waste water treatment or individual sewage: septic tank, sewage treatment plants) at the start of June 2013. It is expected, that in this way will remove shortages and unreliability of the data on drinking water supplies.

## 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>7</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>Current value (specify the year)</i>
I		
II		
III		
IV		
V		
Total number/volume of water bodies classified		
Total number/volume of water bodies in the country		

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

#### Status of groundwaters

<i>Percentage of groundwaters falling under class<sup>a</sup></i>	<i>Baseline value (specify the year)</i>	<i>Current value (specify the year)</i>
I		
II		
III		
IV		
V		
Total number/volume of groundwater bodies classified		
Total number/volume of groundwater bodies in the country		

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

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<sup>7</sup> Please specify.

## For European Union countries

### Ecological status of surface water bodies

<i>Percentage of surface water classified as:</i>	<i>Baseline value (for the period of preparation of 1<sup>st</sup> RBD management plan (2005-2009))</i>	<i>Current value (for the period of preparation of 2<sup>d</sup> RBD management plan (2010-2014))</i>
High status	24	Not available
Good status	25	Not available
Moderate status	43	Not available
Poor status	7	Not available
Bad status	1	Not available
Total number/volume of water bodies classified	1183	Not available
Total number/volume of water bodies in the country	1183	Not available

The information about baseline values of ecological and chemical status of surface water bodies for the period 2005-2009 is provided from the first River Basin District management plans, prepared according the requirements of Water Framework Directive 2000/60/EB. The information about current values of ecological and chemical status of surface water bodies for the period 2010-2014 and information about changes of status of water bodies as the result of implementation of programmes of measures will be available in the second River Basin District management plans, prepared till 2015.

### Ecological status of surface water bodies (specified by surface water categories)

<i>Percentage of surface water classified as:</i>	<i>Baseline value (for the period of preparation of 1<sup>st</sup> RBD management plan (2005-2009))</i>				<i>Current value (for the period of preparation of 2<sup>d</sup> RBD management plan (2010-2014))</i>
	<b>River WB</b>	<b>Lake WB</b>	<b>Transitional WB</b>	<b>Coastal WB</b>	
High status	17	40	0	0	Not available
Good status	24	28	0	0	Not available
Moderate status	50	26	75	100	Not available
Poor status	8	6	25	0	Not available
Bad status	1	0	0	0	Not available
Total number/volume of water bodies classified	832	345	4	2	Not available
Total number/volume of water bodies in the country	832	345	4	2	Not available

### Chemical status of surface water bodies

<i>Percentage of surface water bodies classified as</i>	<i>Baseline value (for the period of preparation of 1<sup>st</sup> RBD management management</i>	<i>Current value (for the period of preparation of 2<sup>nd</sup> RBD management management</i>
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	plan (2005-2009)	plan (2010-2014)
Good status	99	Not available
Poor status	1	Not available
Total number/volume of water bodies classified	1183	Not available
Total number/volume of water bodies in the country	1183	Not available

#### Chemical status of surface water bodies (specified by surface water categories)

Percentage of surface water classified as:	Baseline value (for the period of preparation of 1 <sup>st</sup> RBD management plan (2005-2009))				Current value (for the period of preparation of 2 <sup>nd</sup> RBD management plan (2010-2014))
	River WB	Lake WB	Transitional WB	Coastal WB	
Good status	98	100	75	100	Not available
Poor status	2	0	25	0	Not available
Total number/volume of water bodies classified	832	345	4	2	Not available
Total number/volume of water bodies in the country	832	345	4	2	Not available

#### Status of groundwaters

Percentage of groundwaters classified as	Baseline value (specify the year) 2010	Current value (specify the year) 2012
Good quantitative status	100 %	100 %
Good chemical status	100 %	100 %
Poor quantitative status	0 %	0 %
Poor chemical status	0 %	0 %
Total number/volume of groundwater bodies classified	20	20
Total number/volume of groundwater bodies in the country	20	20

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 2005</i>	<i>Current value 2011</i>
Agriculture	0.32%	0.24%
Industry <sup>a</sup>	14.68%	10.78%
Domestic use <sup>b</sup>	0.58%	0.48%

<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).

## Part Three

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

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

For each target set in this area:

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

The main quantitative target is “95% inhabitants of municipal public water services territory should be provided with public water services until the end of 2015 year”. This target will be used to measure progress defined in the Law of the Republic of Lithuania on of Drinking Water Supply and Waste Water Management (Official Gazette, 2006, No. 82-3260). The main qualitative target is to achieve the quality of drinking water for all urban and rural inhabitants to be in compliance with Lithuanian Standard (Hygiene Norm of Lithuania) HN 24:2003: Safety and quality requirements of drinking-water (Official Gazette, 2003, No. 79-3606; 2007, No. 127-5194) and EU requirements.

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

The Law on Supply of Drinking Water and Waste Water Management, which came into force in 2007 year, was followed by the National Drinking Water Supply and Waste Water Management Development Strategy for 2008–2015 years (Official Gazette, 2008, No. 104-3975). They set the policy agenda and set targets on water infrastructure development in Lithuania. The investments over the period 2007–2013 years should result in significant progress and modernization of the water services and management. Despite these improvements, integrated information support is still missing. Such support would enable the monitoring and evaluation of the relevant policy actions from water source to consumers and would allow involvement of all information actors and the application of a public health-based approach.

Drinking water for residents (in urban areas) is supplied from artesian water reserves. The quality of artesian water is good, but quarter of the population (mostly in rural areas) use dug wells water for drinking and food preparation. Dug wells water is not protected of contamination, which may cause health risk. Both bacteriological characteristics and level of nitrates in well water often exceed the hygiene standards. According to a Ministry of Health order, the regional public health centres are responsible for controlling the dug well-water in places with pregnant women and babies up to 6 months of age. The State Food and Veterinary Service (hereafter – SFVS) aiming to ensure the control over safety of the individually supplied drinking water has envisaged to carry out scheduled inspections on the safety of drinking water from dug wells in 2010-2012.

3. Assess the progress achieved towards the target.

Water supply service coverage 76 percent of total population.

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

Not needed at the moment

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.

According to the data of epidemiological surveillance of communicable diseases, gastrointestinal communicable infections are spread by food and or household contacts. Causes of this spread prove that we do not face any big problem of drinking-water quality, especially in case of centralized water supply.

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

Epidemiological surveillance of communicable diseases including the water-related diseases and outbreaks of those is regulated by Lithuanian legal acts. The Centre for Communicable Diseases and AIDS is not assigned competent body for control and organization of strategies on water quality improvement in Lithuania. The Centre is not involved into microbiological testing of drinking water.

The Centre for Communicable Diseases and AIDS is involved in development of legal acts and methodical recommendations and guidelines for general population on prevention of water-related communicable diseases. Final documents are available on the Centre's website: [www.ulac.lt](http://www.ulac.lt)

3. Assess the progress achieved towards the target.

Not needed at the moment

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

Not needed at the moment

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

Not relevant

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

For each target set in this area:

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

The Government of Lithuania in 2008 approved The Strategy of Development on Drinking Water Supply and Wastewater Treatment for the year 2008-2015, Resolution No. 832 (Official Gazette, No. 104-3975, 2008). The target is to create favourable conditions to increase the coverage of water supply services. The main goal of the strategy is to achieve the coverage of the supply of drinking water services at least 95 percent of the country's population in 2015.

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

The development of the drinking water supply and waste water management sector in the territory of municipalities shall be carried out in compliance with the water supply and waste water management infrastructure development plans. Centralized drinking water pipes, individual domestic wells, sewage treatment plants, etc. must be selected after the assessment of local environmental conditions, population density etc. 95 percent of municipalities have already prepared water supply and waste water management infrastructure development plans by. A water supply and waste water management infrastructure development plans shall be reviewed and updated in accordance with the procedure established by the Law on Territorial Planning.

Water suppliers must provide information to citizens (consumers); Obtain, store, process and supply drinking water that meets the public health safety and quality requirements and other parameters set out in legal acts; Ensure the quality and uninterrupted supply of drinking water and other water supply requirements.

It is planned that in 2015 the costs of water services in urban and rural areas should not exceed 4 percent of family income.

Financial instruments:

Being member of the European Union, Lithuania has the possibility to use European Union funds for drinking water supply and wastewater management infrastructure development and reconstruction.

Difficulties:

Many water companies (especially small) work at a loss, unable to self-invest (borrow), many of them are unable to ensure the quality of services and development.

3. Assess the progress achieved towards the target.

Water supply service coverage 76 percent of total population.

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

Not needed at the moment

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.

The target is to create favourable conditions to increase the coverage of sanitation services and to improve their management capacity. The goal is that availability of public drinking water supply and wastewater management service to consumers would be not less than 95 percent by 2015 (Drinking Water Supply and Wastewater Management Development Strategy for 2008–2015). Availability of wastewater management services is very uneven in Lithuania, centralized wastewater collection systems serves about 70% of the population in average. This indicator is very different in urban and 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.

Financial instruments:

When Lithuania became an EU member, the primary support tool for PHARE program, which has largely been set for technical assistance and consultation. The second source of support was the ISPA program.

Measures for the implementation of the Urban Waste Water Treatment Directive (construction and reconstruction of wastewater treatment facilities, construction of new sewerage networks and reconstruction of the old ones) in 2007-2013 have been provided for in a list of national projects:

List of National Projects No. 1 under Measure No VP3-3.1-AM-01-V Renovation and development of water supply and wastewater management system (Official Gazette, No. 47-1882, 2009);

List of National Projects No. 2 under Measure No VP3-3.1-AM-01-V Renovation and development of water supply and wastewater management system (Official Gazette, No. 24-1145, 2010).

3. Assess the progress achieved towards the target.

Wastewater treatment service coverage 67 percent of total population

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

Not needed at the moment

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.

The target is to improve water services quality. The goal is to ensure that all publicly served drinking water meet safety and quality requirements (Drinking Water Supply and Wastewater Management Development Strategy for 2008–2015). In order to improve drinking water quality in the area, taking advantage of EU structural funds and the municipal budget, the construction / reconstruction of water treatment facilities in various Lithuanian cities and towns is planned.

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.

Law of the Republic of Lithuania on Water regulated the main water resource management, protection etc.

Law of the Republic of Lithuania on drinking water supply and waste water management establishes the principles of the state management and regulation of drinking water supply and waste water management and regulate legal relationships between water suppliers and subscribers (consumers).

Drinking water quality indicators are: the drinking water supply and drinking water pressure, drinking water quality, good quality of services. The water suppliers must ensure a supply of drinking water so that each resident could receive at least 200 liters of drinking water per day.

3. Assess the progress achieved towards the target.

Water supply service coverage 76 percent of total population.

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

Not needed at the moment

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.

The target is to treat 100 % of collected wastewater in accordance with established norms (Drinking Water Supply and Wastewater Management Development Strategy for 2008–2015). In order to improve wastewater collection and management in the area, taking advantage of EU structural funds and the municipal budget, the construction / reconstruction of water treatment facilities in Lithuanian cities and towns is planned.

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

The state management and regulation objectives of water supply and waste water management shall be as follows (Law of the Republic of Lithuania on drinking water supply and waste water management):

1. to ensure that all citizens would be supplied with drinking water that meets public health protection requirements and to be provided with waste water management services in accordance with the environmental requirements;
2. to ensure that public water supply in the whole territory of the country is carried out in compliance with the legal requirements;
3. to improve the efficiency of the public water supply sector and to carry out uninterrupted and long-term water supply and waste water management in the whole territory of the country;
4. to develop price regulation system for water services that would ensure the optimal price for subscribers (consumers) and recovery of costs that are necessary for the proper carrying out of public water supply as well as the implementation of the principle “polluter pays”;
5. to ensure the protection of legitimate interests of subscribers (consumers) and water suppliers and to protect consumer rights.

Regulation on Wastewater Management, approved by the Minister of Environment in 2006, sets the basic environmental requirements for waste water collection, treatment and discharge to environment from pollution.

3. Assess the progress achieved towards the target.

93 % of collected wastewater is treated in accordance with established norms.

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

Not needed at the moment

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

## **VII. Application of recognized good practices to the management of water supply, (art. 6, para. 2 (f))**

For each target set in this area:

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

The target is to promote good practices to the management of water supply.

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

One of the priorities of the Programme of the Government of the Republic of Lithuania for 2012-2016 is promotion of cleaner production methods, which are based on innovative and effective technologies, which will enable more cost-effective use of water resources and reducing the pollution effect. The measure of the Programme 2008 – 2012 of the Government is being implemented - to encourage enterprises of environmental management system.

According to the provisions of the Programme of the Government, Ministry of Economy provides financial support to small and medium-sized enterprises for the costs of environmental management systems certification.

An enterprise or institution, being certified under the ISO 14001 standard for environmental management system, declares or informs interested parties that its activities are based on cleaner production techniques, BAT and good practice.

In order to increase the use of cleaner production and to promote environmental management the requirements for firms, whose environmental management system certified according to ISO 14001 standard or the EU Eco-Management and Audit Scheme (EMAS), IPPC permits are simplified

Order of the Minister of Health, Minister of Environment, Minister of Agriculture Order No.. 612/564/411 "Good laboratory practices for monitoring and evaluation procedures" (Official Gazette, No. 102-3643, 2001; No.152-5561, 2004) approved on 23 November of 2001, sets the requirements for laboratories carrying out monitoring, management of chemical substances must comply with good laboratory practice.

National Accreditation Bureau is responsible for the accreditation of laboratories, inspection bodies, employees, products, management system's certification bodies and EMAS verifiers and carries out their supervision, as well as controls good laboratory practice compliance. In order to the provided functions, the National Accreditation Bureau carries out the periodically checks, whether the company properly complies with good laboratory practice and its other obligations. The list of authorized laboratories is publicly available at National Accreditation Bureau website - laboratories authorized to carry out measurements at sources of pollution , pollutant elements in environment and tests list.

3. Assess the progress achieved towards the target.

Not relevant

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.

**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.

See the preceding art. 6, para 2 (f).

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.

## 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.

All collected wastewater must be cleaned up to the standards before discharge to environment.

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.

Approved requirements for effluent quality; establishing of environmental liabilities; possibilities to use structural funds, etc.

3. Assess the progress achieved towards the target.

Domestic and industrial wastewater cleaning (percentage)

Indicator/year	2000	2005	2006	2007	2008	2009	2010	2011
Cleaned up to standards	14.1	67.0	67.10	69.15	72.37	88.86	90.58	92.66
Insufficiently cleaned	84.2	32.6	32.52	30.51	27.32	11.09	9.38	7.31
Uncleaned	1.8	0.4	0.39	0.34	0.31	0.05	0.04	0.03

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

Not need at the moment.

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.
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.

Not relevant for Lithuania. Collection systems for storm water and municipal wastewater are separate. Combined collection systems that were installed few hundred years ago are still operating in old town of few cities. Nevertheless occurrence of overflows is very uncommon.

**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.

All collected wastewater must be cleaned up to the standards before discharge to environment.

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.

Approved requirements for effluent quality; establishing of environmental liabilities; possibilities to use structural funds, etc.

3. Assess the progress achieved towards the target.

Pollutant discharges from point sources to surface water bodies (tons)

Pollutant/Year	2000	2005	2006	2007	2009	2010	2011
BOD7	6084,7	3818,3	3421,7	3576,4	1784,8	1839,9	1797,2
Total nitrogen	3695,4	2837,6	2819,2	2743,8	1978,8	1919,9	1964,0
Total Phosphorus	653,5	355,3	336,8	302,7	186,5	167,4	149,9

By year 2011 releases of the main pollutants in comparison to year 2000 are as follows:  
BOD7 reduced by 70%, total nitrogen reduced by 47% and total phosphorus reduced by 77%.

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

Not need at the moment.

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.

All sewage sludge must be treated and disposed or used in a way that is safe for humans and environment.

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.

By 2005, Lithuania had no strategy for sludge processing, therefore about 80 - 90 percent of sludge generated in urban wastewater treatment plants was stored in sludge sites.

The main target of sewage sludge management - sewage sludge shall not be waste, but it shall be the product, and, after appropriate treatment, sewage sludge can be used as fertilizers in agriculture, energy as a fuel (either directly or as feedstock for biogas production).

The requirements for sewage sludge usage in agriculture, set in Directive 86/278/EEC, were transposed into national legal framework and approved by the Order D1-575 of the Minister of Environment dated 28 November 2005 (LAND 20-2001 "Requirements of using sewage sludge as fertilizer", the new version).

In order to comply with the legal requirements EU and in order to solve the problem of excess sewage sludge, the feasibility study "Investment program of sludge management in Lithuania" was prepared in 2006.

The feasibility study "Investment sludge management program in Lithuania" evaluated the optimal sewage sludge management practices and proposed sludge management options for different regions of Lithuania. Using the Cohesion Fund, the sludge tanks were constructed and are operating in Kaunas, Utena, Panevezys, Vilnius, other cities' projects of sludge treatment will be implemented in near future.

3. Assess the progress achieved towards the target.

Currently 12 sludge decomposition-desiccation installations, 2 sludge desiccation installations and 9 sludge compost sites are being constructed.

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

Not need at the moment.

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.
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.

Not relevant for Lithuania, wastewater is not used for irrigation. Furthermore in some regions of Lithuania agricultural activities can become available only after reclamation of soil.

#### **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.

The Lithuanian Geological Survey uses integrated environmental geological mapping techniques to examine the quality of groundwater supplied to the population and the sources of contamination. In response to water-related health risks, a programme that evaluates these risks and the use of groundwater resources for the drinking-water supply in Lithuania for 2007–2025 had the following main targets: (a) evaluate groundwater resources (2007–2009); (b) prepare measures that protect drinking-water resources and improve drinking-water quality (2007–2011); and (c) establish an integrated information system between the administrations involved. It is also worth mentioning that water safety plans that follow the WHO novel approach to drinking-water safety and health are being introduced in two Lithuanian cities: Klaipeda and Neringa.

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

The State Food and Veterinary Service (hereafter – SFVS) aiming to ensure the control over safety of the individually supplied drinking water has envisaged to carry out scheduled inspections on the safety of drinking water from dug wells in 2010-2012. According to the data of SFVS, about 22 % of the Lithuanian population use self-supplied drinking water. In most cases shallow groundwater from dug wells and from shallow bores is obtained. Unfortunately shallow groundwater is not safe to use because in this case water comes to shallow wells and shallow bores from the nearest ground-level aquifer thus its quality depends on the location of the well, equipment and maintenance of the water supply unit and, naturally, on economic activity. The biggest polluter of ground water is farmland fertilization with organic and mineral fertilizers, as well as low farming culture.

In 2010, 1222 official confirmatory samples were taken from well water; of these, 747 (61%) were non-compliant, chemical contamination was detected in 240 (37%) samples (nitrates – 213, nitrites – 23, other chemicals – 36), microbiological – 507 (87%) samples (E. coli –126, intestinal enterococci – 200 cases). In 2011, 631 official confirmatory samples were taken from well water; of these, 326 (52%) were non-compliant, chemical contamination was detected in 152 (46%) samples, microbiological – 174 (58%) samples. In 2012, 731 official confirmatory samples were taken from well water; of these, 281(38%) were non-compliant, chemical contamination was detected in 116 (32%) samples (nitrates – 88, nitrites – 17, ammonium – 23 samples), microbiological contamination – 165 (45%) samples (E. Coli – 92 cases, intestinal enterococci – 114 cases).

Having detecting that the water is not safe, the territorial State Food and Veterinary Services have informed the consumers, the municipality bodies, and public health centres. The consumers have been also informed about the measures to ensure safety and quality of the drinking water that they use. It should be noted that the residents apply to the SFVS in exceptional cases only. In accordance with the provisions of the legislation, the residents who use individual sources of drinking water, must take care of the quality and safety of the water themselves and to protect the water supply units from contamination.

3. Assess the progress achieved towards the target.

It should be noted that an analysis of the data of the last three years shows that the situation has significantly improved, particularly with regard to microbiological parameters. In 2012, after testing water from more than 300 wells (2010 – over 600), chemical contamination of drinking water was detected on average in 3 (2010 – 4) wells out of 10 wells tested, microbiological – 4 (2010 – 9).

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

Not needed at the moment.

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

## **XV. Quality of waters used for bathing (art. 6, para. 2 (j), second part)**

For each target set in this area:

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

The main national target is to assess bathing water quality and ensure the monitoring of bathing waters quality in order to preserve and improve the state of bathing water and make safe conditions for human health.

In Lithuania, the bathing water quality requirements, the methods of measurement of bathing water quality parameters, the monitoring of bathing water quality, the bathing water quality assessment and classification and quality status of bathing waters are regulated according to the Lithuanian Hygiene Standard HN 92:2007 "Beaches and bathing water quality" approved by the Minister of Health of the Republic of Lithuania on 21 December 2007 by Order No. V-1055 (Official Gazette, 2007, No. 139-5716). This Standard implements the provisions of the directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing directive 76/160/EEC.

In the Lithuanian Hygiene Standard HN 92:2007 "Beaches and bathing water quality", not only the requirements for bathing water quality are determined but also the management measures for the control of the quality of bathing water as well as the public right to receive the information on bathing water quality are provided. According to the Hygiene Standard provisions, the beaches should be adapted for quiet or active relaxation, sunbathing, swimming, and the public should observe the rules established by the authorities responsible for the administration of beaches and bathing waters.

### Assignment of responsibilities

In accordance with the Lithuanian Hygiene Standard HN 92:2007 "Beaches and bathing water quality" water quality, the safety, hygiene requirements and usage of beaches as well as the monitoring of bathing water quality are the responsibility of the authorities administering beaches and bathing waters, i.e. of the municipalities whose territory the beaches are in.

The Health Education and Disease Prevention Center is charged with assessing the quality of bathing waters and carrying out in the classification; in order to avoid the hazards to bathers health, especially in cases of predictable short-term pollution or abnormal situations, it shall provide timely information to the public and the Government agencies by publishing the information on bathing water quality in the Internet.

### Quality requirements

The Lithuanian Hygiene Standard HN 92:2007 "Beaches and bathing water quality" determines that bathing water quality parameter values must satisfy the following requirements: for Intestinal enterococci not more than 100 cfu/100 ml of water, for Escherichia coli not more than 1000 cfu/100 ml; in exceptional cases, salmonella are monitored, however, according to the requirements, they should not be present; in cases of eutrophication, Nitrogen Kjeldahl mg/liter N, ammonia mg/liter NH<sub>4</sub>, nitrates mg/liter NO<sub>3</sub> and phosphates mg/liter PO<sub>4</sub> should be analyzed; in cases of intensive water blooming, investigations of the potential for proliferation of cyanobacteria, macro-algae and/or marine phytoplankton should be carried out.

### Monitoring requirements

The authority responsible for the administration of beaches and bathing waters shall establish a monitoring calendar before the start of each bathing season and shall ensure that monitoring take place no later than four days after the date specified in the monitoring calendar. During the bathing season at least 8 samples including the first sample taken before the start of the bathing season must be taken and analyzed.

### Enforcement (ability of a competent authority to exert control over bathing water quality status)

Laboratory system capable of monitoring bathing waters quality

Data transfer and treatment mechanisms for surveillance

Analyses of bathing water quality are carried out by the National Public Health Surveillance Laboratory (NPHSL). The National Public Health Surveillance Laboratory is accredited by the Lithuanian National Accreditation Bureau and German Accreditation Service according to the International Standard EN ISO/IEC 17025. NPHSL Quality Control Department and Department of Production of Microbiological Media have certified in compliance with quality standard LST EN ISO 9001:2001. Samples of bathing water are selected by accredited / or certified laboratory staff.

The microbiological parameters of bathing water are analyzed in accordance with the standards of Lithuania:

LST EN ISO 9308-1:2001. Water quality – Detection and enumeration of Escherichia coli and coliform bacteria – Part 1: Membrane filtration method (ISO 9308-1:2000/Cor 1:2007).

LST EN ISO 7899-2:2001. Water quality- Detection and enumeration of intestinal enterococci – Part2: Membrane filtration method (ISO 7899-2:2000/Cor 1:2007).

Assessment of bathing water quality status

Bathing water quality assessment is carried out at every beach after the end of the bathing season on the basis of the set of bathing water quality data compiled in relation to the current bathing season and the three preceding bathing season according to the directive 2006/7/EC of the European Parliament and of the Council provisions of article 4.

Bathing water quality assessment is carried out on the basis of the set of two microbiological parameters (Intestinal Enterococci and Escherichia coli) which consist of the monitoring data. The data set comprises at least 16 samples.

For inland waters

Parameter	Excellent quality	Good	Sufficient	Reference methods of analysis
1. Intestinal enterococci (cfu/100 ml)	200(*)	400(*)	330(**)	LST EN ISO 7899-2:2001
2. Escherichia coli (cfu/100 ml)	500(*)	1000(*)	900(**)	LST EN ISO 9308-1:2001

(\*) Based upon a 95-percentile evaluation.

(\*\*) Based upon a 90-percentile evaluation.

For coast waters and transitional waters

Parameter	Excellent quality	Good	Sufficient	Reference methods of analysis
1. Intestinal enterococci (cfu/100 ml)	100(*)	200(*)	185(**)	LST EN ISO 7899-2:2001
2. Escherichia coli (cfu/100 ml)	250(*)	500(*)	500(**)	LST EN ISO 9308-1:2001

(\*) Based upon a 95-percentile evaluation.

(\*\*) Based upon a 90-percentile evaluation.

Health effects surveillance linked to recreational water use.

Not assessed.

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 Lithuania, the following programmes approved by the Resolutions of the Government of the Republic of Lithuania are carried out: Programme of Measures for Achieving Water Protection Objectives within the Nemunas River Basin District (Official Gazette, 2010, No. 90-4756), Programme of Measures for Achieving Water Protection Objectives within the Dauguva River Basin District (Official Gazette, 2010, No. 136-6938), Programme of Measures for Achieving Water Protection Objectives within the Venta River Basin District District (Official Gazette, 2010, No. 136-6939), and Programme of Measures for Achieving Water Protection Objectives within the Lielupe River Basin District District (Official Gazette, 2010, No. 136-6940).

The Programmes were drawn up on the analysis of the status of water bodies within the Nemunas RBD, Dauguva RBD, Venta RBD and Lielupė RBD and assessment of impacts of anthropogenic activities on water bodies. While developing the Programmes, account was taken of the Programmes currently implemented on the national level as well as the technical feasibility of the measures and economic resources, including recovery of costs related to the provision of water services.

Pursuant to the requirements of the Lithuanian water legislation, programmes of measures must be established for each river basin district in order to achieve water protection objectives. Each programme of measures comprises basic measures which are the mandatory requirements under the Lithuanian laws regulating the water sector and the EU directives (construction of wastewater treatment facilities and manure storage facilities, balanced soil fertilization, crop rotation, etc.). Where the assessment of the effect of the basic measures reveals that they are sufficient for achieving water protection objectives, the programmes are limited to these measures. If, however, the basic measures are not sufficient for a water body to achieve water protection objectives, supplementary measures are then chosen as may be necessary in order to achieve the set water protection objectives. These measures must be inter-coordinated so as to adopt the most effective set of instruments which will enable attainment of the set objectives at the lowest cost. Supplementary measures are chosen on the basis of a socio-economic impact analysis: the assessment of the efficiency of the measures and the cost-benefit assessment of the achievement of water protection objectives.

The recommendations for establishing profiles of bathing water were approved by the Minister of Health of the Republic of Lithuania on 28 March 2011 by Order No. V-302 (Official Gazette, 2011, No. 39-1897).

A bathing water profile is the basis for management measures which help ensure the quality of bathing water, foresee all possible risks and protect the public from permanent or accidental contamination. A bathing water profile is intended to gain an understanding of the faecal sources and routes of pollution, and focuses on the indicators for faecal pollution: either *Escherichia coli* (*E.coli*) and intestinal enterococci or thermotolerant bacteria of the coli group and faecal streptococci.

In Lithuania, 114 bathing water profiles are prepared and information is published in the Internet in the Center for Health Education and Diseases Prevention website:

[http://www.smlpc.lt/lt/aplinkos\\_sveikata/maudyklos/maudyklu\\_charakteristikos.html](http://www.smlpc.lt/lt/aplinkos_sveikata/maudyklos/maudyklu_charakteristikos.html).

3. Assess the progress achieved towards the target.

In Lithuania, bathing water quality for 2010-2011 was observed according to the Bathing Water Quality Monitoring 2009-2011 approved by the Government of the Republic of Lithuania on 25 June 2009 (Official Gazette, 2009, No. 80-3344).

In order to ensure the continuity of this program, the Minister of Health of the Republic of Lithuania approved the list of Lithuanian monitored bathing sites on 20 February 2012 by order No. V-138 (Official Gazette, 2012, No. 24-1132) which can be changed if need be.

Evaluating bathing water quality according to the number of microbiological analyses, numbers for the coastal water samples were: for 2010-134, for 2011-105, for 2012-92, of them, only 3.8 percent did not meet the hygiene requirements in 2011; the numbers for fresh waters were as follows: for 2010-970, for 2011-966, for 2012-771; the numbers which did not meet the requirements for 2010-4.9 percent, for 2011-3.3 percent, for 2012-3.5 percent.

While evaluating the monitored waters with short-term pollution according to the requirements of the national legal acts, the short-term pollution was observed in 21 percent of waters in 2010, 16 percent in 2011, 18 percent 2012, when the number of intestinal enterococci or *E.coli* exceeded the limit values established by the Lithuanian Hygiene Standard HN 92:2007.

Results of bathing water quality in Lithuania. Assessment under Directive 2006/7/EC.

Year	Excellent quality (%)	Good quality (%)	Sufficient (%)	Poor (%)	Closed (%)	Insufficient (%)	New (%)
2011	72,8	10,5	5,3,	0,	0,	6,1	2,
2011*	48,2	6,1	3,5	0,	0,	36,8	2,
2012**	71,0	9,	4,0	0,0	1,0	16,6	5,

\*- evaluated according to strict valuation rules;

\*\* - tentatively evaluated according to strict valuation rules.

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 directions of the implementation of the Protocol concerning the improvement of the indexes that help to assess, observe and control the spread of the water-related diseases and the establishment of the system for the monitoring and prevention of the outbreaks of water-related diseases are not envisaged in Lithuania's legal acts.

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 provisions of Council Directive 2006/113/EC on the quality required of shellfish waters are transposed into national law framework:

1. Quality assurance procedures for the shellfish waters (Official Gazette, 2004, No. 52-1742);
2. Information procedure on sea water shellfish, the quality of the provision of the European Commission (Official Gazette, 2004, No. 68-2377).

Lithuanian marine waters have low salinity and the salinity does not meet the recommended and mandatory values for shellfish harvesting. Crustaceans and molluscs in Lithuanian marine waters are not used for food production. There are no distinguished marine areas that are appropriate for shellfish breeding.

## **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.
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.

According to Lithuanian Hygiene Norm HN 109:2005 "Pools. Installation and maintenance of health safety requirements" public pools and spas are generally required to be equipped with water treatment and disinfection appliances in order to ensure an acceptable, low risk of infections transmitted via the water. (Official Gazette, Nr. 87-3277, 2005).

Appropriate legal acts are being implemented, no additional documents are applied.

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

For each target set in this area:

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

From the end of 2008 to 2011, the Geological Survey of Lithuania implemented project Impact Assessment of Contaminated Sites in Lithuania. The project activities were financed by the budget of Lithuania and the European Union. The project had as its main goal a preliminary survey (inventory) of potentially contaminated sites in 39 districts (39 300 km<sup>2</sup>) of the country. After its completion, for the time being the data base of Geological Survey has information about more than 11 000 places where dangerous chemical substances were used in the past or are used today. The result from the preliminary survey was compilation of maps for districts where the survey was carried out. The maps and information about contaminated sites were provided to district authorities. In the frame of project, 100 most "risky" sites (after ranking) were investigated. The preliminary investigation included soil and groundwater sampling. After the evaluation of results obtained in the stage of preliminary investigation, detailed investigations further were carried out in 50 most highly contaminated sites.

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

The generalized data show that in 35 sites soils on an average area of 4120 m<sup>3</sup> are polluted by hydrocarbons, in 11 sites (the average area of 2262 m<sup>3</sup>) soils are polluted by persistent pesticides and in 4 sites by heavy metals. Similar situation was found in groundwater, where concentrations of hydrocarbons were beyond the allowable limits. In 4 cases, oil seepage was reported. High concentrations of pesticides were found in the groundwater of 4 sites. Limited investigations carried out in the frame of the project proved that in 35–45% of cases, the soil and the groundwater are contaminated by chemical substances. In general, the received results suggest that there may be about 3000–4000 sites across Lithuania dangerous to environment and humans. Their investigation and remediation should be of priority importance for the environmental sector.

3. Assess the progress achieved towards the target.

From 2007 to 2012 1800 hectares of Lithuania's territory has been investigated. Preliminary investigations have been performed in an area of 1700 ha, detailed – 250 ha. It is estimated, that the area of polluted soil, that requires cleaning covers the area of approximately 60 hectares.

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.

On the base of information collected, the Order of Minister of Environment was issued: "Plan of management of contaminated sites for 2013-2020 (St. gazette, 2012, No. 115-5842)

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.

One of the most important goals of water management in Lithuania is to prevent deterioration of the status of surface and ground water bodies and to achieve the objective of at least good water status until 2027.

This goal is set in the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, which Lithuania as the Member of European Union must implement.

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

The status of water bodies is determined mainly by human economic activities. Therefore, the extent of diffuse pollution from agriculture; point-source pollution by organic substances, nitrogen and phosphorus compounds; river straightening; hydropower plants and international pollution loads from neighbour states was estimated.

When the state of surface and ground water bodies was assessed, the pressures determining the state of water bodies evaluated, measures to reach good water status were established.

One group of measures deals with additional research, studies and investigations. It is applied to water bodies where it is not clear if there is a problem (dubious modelling results etc.), what kind of the problem is and what the reason is behind the problem. There are also some small scale pilot projects planned aimed at investigation of their applicability for wider use in future in terms of their cost-effectiveness and practical implementation.

For point source pollution abatement there are measures to upgrade waste water treatment technologies in smaller settlements having significant pressures on water bodies (bigger ones are handled by basic measures).

Legal and financial encouragement/compensation measures are planned for diffuse source pollution reduction. Legal ones are aimed at putting stricter requirements for application of fertilizers (both organic and mineral). Financial encouragement/compensation measures are oriented toward introducing changes into Rural Development financing schemes for activities, that would reduce agricultural impact in strongly affected areas.

For morphologically affected rivers the construction of fish-passes is planned where fish migration is impeded. Changes in law will be made to improve the control of the owners of hidropower plants. For improvement of transitional waters and marine ecosystems macrophyte harvesting is envisaged as well as the creation of methodology to track invasive species etc.

Also many public awareness raising activities are foreseen aimed at effective implementation of measures.

3. Assess the progress achieved towards the target.

Measures with constant implementation mechanism such as public awareness measures are being implemented steadily. A part of legal/regulatory measures have already been implemented.

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 review of targets will be done preparing the second River basin management planing stage, according the Directive 2000/60/EC

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.

No additional targets were set.

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

3. Assess the progress achieved towards the target.

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

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

## **Part Four**

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

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

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

#### *Implementation of the Protocol on Water and Health*

For 3 years decades Lithuania has made great efforts to improve and preserve the water quality. After the Protocol was ratified (2004), the stakeholders concerned with the Protocol attended an initial meetings to share information and opinions on the Protocol on Water and Health. Closer collaboration between different institutions began in 2011 in order, on the one hand, to prepare the second report and, on the other, to launch the target-setting process. The future implementation of the Protocol will be discussed at the start of June 2013 in a meeting of coordination group.

Setting targets in relation to water is not new for Lithuania – targets and requirements are embedded in the legislation. What is new about the strategy of the Protocol for Lithuania? The Protocol promotes cooperation between the relevant stakeholders concerned with water and provides the option of enforcing the setting of targets or of lending greater weight to certain targets. The Protocol on Water and Health provides the opportunity to develop or extend national databases in order to produce a central overview of the water quality of the water resources and drinking water. Such an overview, in turn, will form the basis for future decisions and strategies designed to achieve further improvements in water quality.

#### *Public information and public participation*

The importance of up to date information on the quality of drinking, bathing and pool water can not be underestimated. This information is easily available for public in different ways such as leaflets, newspapers and Internet. Severe problems are duly informed in the media.

In accordance with the procedure laid down by the Law on Drinking Water, adopted on 10 July 2001, the quality of drinking water in Lithuania (in flood area as well) is controlled by the State Food and Veterinary Service, which annually announces data on water quality.

Information on drinking water supply and waste water management for subscribers (users) assigned to water suppliers. According to the Order of the Minister of Environment water suppliers must inform the subscribers (users) of drinking water quality deterioration, accidents, planned potable water supply and waste water management services interruptions and other changes that may affect the retail (consumer), water use, safe and efficient water supply infrastructure, the development of water pricing, and retail

(consumer) services, outreach plan for the creation and enforcement of the provision of information to subscribers (consumers) in accordance with their requests.

The Ministry of Environment publishes background information, relating to water quality management through the telecommunications equipment (mainly the Ministry of Environment website), where is placed:

- The European Union and national legislation and other documents, related to the management of the water quality;
- The documents, strategy, action plan and program, which are related to the Baltic Sea protection and policy;
- Other relevant public information (about individual water management, etc.).

Environmental Protection Agency provides information on water quality and human activities on surface water status in Lithuania. Every year, Agency prepares and releases statistical information brochure - "State of the Environment", where the most pressing and important environmental issues and the country's direction on this review, an analysis of findings are published. According to 1991 21 May Council Directive 91/271/EEC, concerning urban waste water treatment, every two years Environmental Protection Agency submits a report to inform the public about waste water and sludge management in Lithuania. It is also website the public can access the state of lakes and river monitoring data, pollutant discharges registry data, rivers, lakes and ponds cadastral data.

In order to raise public awareness and improve its involvement in water management, in 2012 the timetable for the elaboration of River Basin Management Plans, according to which they will be prepared, has been renewed and made available for the public.

Currently, the public can obtain information on water quality in the presence of assessing the economic impact on the environment, spatial planning, delivery notes and suggestions for new legislation. Communities could be created and represent their views, volunteer water monitoring could be carried. There are allowed for public to access accepted reporting procedures.

Furthermore, the information about the Protocol implementation is posted on the web side of the Centre for Health Education and Diseases Prevention. ([www.smlpc.lt](http://www.smlpc.lt)).

### *Response systems*

The biggest natural disaster, which could make an influence on drinking water quality in some Lithuanian regions, is flood. Nemunas river is the largest river in Lithuania. Floods happen every year in lower Nemunas river and delta. A big flood in lower Nemunas river occurs approximately every 12-15 year. Every year a flood in Šilute's region floods about 300 meters of the Šilute – Rusne road and water on the road raises until 140 centimeters. A flooded road blocks a transport communication with Rusne's island in which live about 2500 people. Furthermore, flood makes big influence to small-scale water supplies in rural areas.

State budget allows for laboratory investigation and monitoring of drinking-water quality after extreme weather events (such as flood) 40 000 Lt every year (according to the 2007-2015 Programme for Klaipeda and Taurage districts flood preparedness and consequences elimination, which was confirmed by Governmental decision Nr. 1202 on 30 November 2006). In accordance with the procedure laid down by

the Law on Drinking Water, adopted on 10 July 2001, the quality of drinking water in Lithuania (in flood area as well) is controlled by the State Food and Veterinary Service, which annually announces data on water quality to the Ministry of Health.

Institutions organize activities according to the State Emergency situations management plan, which is confirmed by Governmental decision, Nr. 1503 on 20 October 2010 (Official Gazette, 2010, No. 125-6425):

- Municipalities are responsible for flood warning for its citizens, evacuation from flood zone, accommodation and providing of drinking water if necessary.

- Public health centers are responsible for public information about water-related diseases and their prevention measures.

- Health Emergency Situations Centre of the Ministry of Health prepares information about negative flood impact to health and how to reduce it and announces updated recommendations and advice for public and general practitioners on its website <http://www.essc.sam.lt>

## Part Five

### Information on the person submitting the report

The following report is submitted on behalf of **Lithuania** [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:

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**Center for Health Education and Diseases Prevention**

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Signature:

Date:

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Name and address of national authority:

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**Ministry of Environment**

**Jaksto st 4/9, LT-01105 Vilnius, Lithuania.**

Signature:

Date:

### Submission

Parties are required to submit their summary reports to the joint secretariat, using the present template and in accordance with the adopted guidelines on reporting, by **29 April 2013**. Submission of the reports ahead of this deadline is encouraged, as this will facilitate the preparation of analyses and syntheses to be made available to the third session of the Meeting of the Parties.

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

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