

Unofficial translation*

**SUMMARY REPORT UNDER THE PROTOCOL ON WATER AND HEALTH
(GEORGIA)**

TBILISI

2016

* The UNECE does not guarantee the accuracy of the translation.

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INTRODUCTION

This report aims to give an assessment of the current situation in Georgia in the scope of meeting the requirements under the Protocol on Water and Health. Moreover, the report will be a source of compressed but still useful information, which will allow assessing the progress stages in the Protocol requirements realization in general and defining further objectives taking into consideration the UN Sustainable Development Goals for the period up to 2030.

The report consists of short reports in compliance with the Protocol on Water and Health and a generalized analysis of the issues, presented in the form of short reports, is provided. General indicators are used in respect of each issue (and target) to illustrate the progress, achieved on different aspects, covering the corresponding sections of the Protocol.

The report contains a number of restrictions. Some sections are not always equally highlighted. Not all the topics and issues are similarly deeply highlighted in the elaborated sources of information. The data available for the progress assessment and an appropriate set of indicators is limited in a number of cases. In some cases, the indicators available appear to be too general, therefore to demonstrate the progress on some aspects both in the long term and in the short run, it is reasonable to have more specific basic lines for each target.

The analysis of the data submitted will provide an opportunity to create: tangible grounds, facilitating recognition and discussion of the problems, connected with water resources management, water supply, sanitation and health of the population, intersecting with various policy sectors. For the purposes of the Protocol, it will assist in forming a platform for harmonization and integration of different sectors and different participants' cooperation with the purpose to meet the requirements of the Protocol on Water and Health on different levels.

GENERAL PART

Georgia signed the Protocol on Water and Health in 1999, however it hasn't been ratified yet. In October 2011, Economic Commission for Europe and Ministry of Environmental Protection and Natural Resources of Georgia executed the Memorandum of National Policy Dialogue (NPD) on Integrated Water Resources Management (IWRM).

In the scope of this dialogue in the period of 2012-2014:

- the National Coordination Committee was created;
- new draft law «On Water Resources Management» was developed. General requirements of a number of the EU Water Framework Directives are included into the draft law. (The law main target is to adopt integrated water resources management; to preserve and improve qualitative and quantitative parameters of water used for different purposes; to enhance the population access to safe and clean water; to introduce the mechanisms of water resources basin management; to call upon public and all the people concerned to participate in the integrated water resources management planning and implementing process and so on). After adopting the draft law (2016), phased implementation of its basic provisions is

planned, taking into account obligatory institutional changes and creation of the new advisory as well as management bodies on the basin level and so on.

- as a result of consultations, 8 main areas were chosen out of the 20, provided by the Protocol, and on the basis of the identified problems, for those chosen ones, project proposals were developed to specify targets. However, they were not confirmed by the authorities. In this regard, the data specified in the report highlights only general issues and achievement of the targets, not confirmed and not accepted by the authorities.

-the high level meetings and consultations were held on the regular base with participation of the parties concerned and nongovernmental organizations, where the Protocol ratification was considered several times. On the basis thereof, since 2013, ratification commencement has been in process, and on the 12 of March, 2014, Decree №140 of the Ministry of Environmental Protection and Natural Resources of Georgia about «Creation of an inter-departmental working group on preparation for the Protocol on Water and Health ratification process» was issued. The working group conducted the corresponding organizational works. However this process wasn't completed.

Taking into consideration all mentioned above, in 2015 Economic Commission for Europe and Ministry of Environmental Protection and Natural Resources of Georgia held consultations, aimed at initiating the process of the National Political Dialogue and on the 17th of November, 2015, new Memorandum of National Policy Dialogue (NPD) on Integrated Water Resources Management (IWRM) was signed in Budapest.

The goal of this Memorandum is to assist in fulfilling the programs connected with the Protocol. And a specific goal is to facilitate a platform for political package development aimed at achieving the following targets:

- Sustainable use of water resources in view of climate changes;
- Safe water and adequate sanitation provision;
- Eco-systems protection;
- Water-related diseases prevention.

To achieve these goals, the following activities are planned:

- Harmonization of water law with the EU Directives and the principles of integrated water resources management;
- Enhancement of bilateral cooperation in the sphere of Transboundary water management (the Kura river);
- Introduction of basin management principles, assistance to basin authorities and basin councils;
- Ratification of the Protocol on «Water and Health», development of national targets and fulfilment thereof.

As mentioned above, for the purposes of coordination of the activities, specified by the Memorandum, national coordination committee, which included the representatives of ministries and governmental agencies, of other parties concerned and nongovernmental organizations, was created on the national level on the basis of the Ministry of Environmental Protection and Natural Resources of Georgia. The meeting of the coordination committee (the

fourth one) was held on the 5th of April, 2016. The representatives of the Protocol secretariat participated in the committee work. As it was mentioned at the meeting, in compliance with the Memorandum, Georgia intends to facilitate work on the Protocol requirements realization and its ratification.

Part One

General aspects

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

For the period 2013 – 2015 the targets under the Protocol officially have not been set.

YES NOT IN PROGRESS

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

For the period of 2013 – 2015 the targets under the Protocol officially have not been published.

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.

As mentioned above, for the period of 2013-2015, targets under the Protocol were not established officially. However, in compliance with the Memorandum of National Policy Dialogue (NPD) on Integrated Water Resources Management (IWRM), to coordinate works on the national level, the national coordination committee, which included the representatives of ministries and governmental agencies, of other parties concerned and nongovernmental organizations (the Ministry of Environmental Protection and Natural Resources; the Ministry of Labour, Health and Social affairs of Georgia; the Ministry of Economy and Sustainable Development; the Ministry of Energy; the Ministry of Agriculture; the Ministry of Regional Development and Infrastructure) was created. (The specialists of the stated above governmental and nongovernmental organizations participated as well). Convening of coordination committee meeting and work facilitation were performed by official written invitation. On the 5th of April, 2016, at the meeting of the committee, the necessity of topic groups creation to analyze the existing situation and project proposals development in the view of setting targets and preparing the platform for the Protocol ratification process was considered. It was also specified that Protocol secretariat and UNECE should support these processes.

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

In spite of the fact that for the period of 2013-2015, targets under the Protocol were not set, main activities, conducted on different levels, to improve public water supply, sani-

tation, surveillance systems over the diseases, including water related ones and so on, were discussed in the given report. A number of regulatory acts were taken into consideration as well.

➤ **Laws:**

- On Water (1997).
- On Safety and Quality of Food (2005);
- On Public Health (2007);
- On Environmental Impact Permit (2007);
- Waste Management Code (2013-2014);

➤ **Decrees and Directives of the President of Georgia:**

- Decree No. 245 of 10 April 2008 "On Measures to Improve the Drinking Water Supply in Tbilisi, Rustavi and Mtskheta";

➤ **Directives and Resolutions of the Government:**

- №127 of 24 January 2012 "On Approval of the National Environment Action Programme-2";
- № 1315 of 10 September 2013 "On Preparation of the Regional Development Programme of Georgia";
- №414 of 31 December 2013 "On Approval of the Guidelines for Calculation of the Standards for Pollutants Discharged with Wastewater into Surface Water Bodies";
- №425 of 31 December 2013 «On Protection of Surface Water Bodies from Pollution»;
- №440 of 31 December 2013 "On Approval of the Regulation on Water Protection Belts"
- №445 of 31 December 2013 "On Approval of the Technical Regulation on Water Protection Belts for Small Rivers of Georgia";
- №17 of 3 January 2014 "On Approval of the Environmental Technical Regulations";
- № 1215 of 9 July 2014 "On Approval of the Regional Development Programme of Georgia for 2015-2017";
- №58 of 15 December "On Approval of the Technical Regulations on Drinking Water";
- №400 of 17 June 2014 "On Approval of the Socio-Economic Development Strategy of Georgia – "Georgia 2020" " and others.

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

Considering the fact, that for the period of 2013-2015 targets have not been established under the Protocol, the cost-benefit analysis was not performed. However, some ministries and agencies (Ministry of Regional Development and Infrastructure, Ministry of Economic Development, Ministry of Finance, the United Water Supply Company, Municipal Development Fund, etc) under the programmes and strategies aimed at the national and regional development of Georgia for 2014-2021, identified financial costs to improve water supply and sanitation systems in the country.

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?

Despite the fact that during the period of 2013-2015 targets under the Protocol have not been set, the process of development and discussion of the draft strategy and the development programme of the country and its regions was based on the principles of openness and partnership. Therefore, all ministries and agencies, academia, stakeholders and non-governmental organizations were involved in the process of developing the final versions of the mentioned above documents.

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 following organisations participated in drafting of this report:

1. Ministry of Environment Protection and Natural Resources;
2. Ministry of Labour, Health and Social Affairs;
3. Ministry of Agriculture – National Service of Food Safety;
4. Ministry of Regional Development and Infrastructure – United Water Supply Company of Georgia;
5. Municipal Development Fund, and NGO “National Water Partnership”.

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).

At the federal level, the Ministry of Regional Development and Infrastructure of Georgia is a policy and decision maker and in charge of improving a status of drinking water and sanitation supply systems to the population. Under this Ministry, the United Water Supply Company was established to carry out organisational and technical actions and implement modern systems of management and development of water supply and sanitation systems.

On the basis of the Directive of the Georgian Government № 1315 of 10 September 2013, for the period of 2013-2015 the following important documents were developed and approved:

- Regional Development Programme of Georgia for 2015-2017 (№1215 of 9 July 2014);

- Socio-Economic Development Strategy of Georgia - “Georgia 2020” (№400 of 17 June 2014).

- Socio-Economic Development Strategy for each region for the period of 2014-2021. These documents highlight: necessary activities on protection and rational use of natural as well as water resources; measures aimed at development of water supply sector, wastewater disposal and storm water drainage systems, provision of their proper functioning and enhancing operational level to international standards; measures aimed at guaranteeing uninterrupted 24 hour supply of drinking water to the population and reduction of the number of citizens having no access to water supply service and adequate sanitation and others; as well as financing issues to perform corresponding activities and so on.

To fulfil the Strategy of Socio-Economic Development of Georgia - “Georgia-2020“, according to the United Water Supply Company, drinking water supply system construction and rehabilitation as well as construction of sewage treatment plants (including biological ones) are planned in 24 residential areas for the period of 2015-2019. For the purpose thereof, 35 projects implementation is planned.

These projects provide for:

- Construction of the new and rehabilitation of the existing water supply systems, new reservoirs, chlorination systems, assembly groundwater tapping and so on;
- Construction of sewage collection systems in 3 cities (Ureki, Poti, Zestaponi);
- Construction of biological wastewater treatment plants in Anaklia, Mestia, Ureki, Poti, Telavi;

For the purposes thereof, indicative budget is:

- in 2015 - 100 million lari (42 million \$);
- in 2016 - 120 million lari (50 million \$);
- in 2017 - 120 million lari (50 million \$).

For the period of 2013-2014, to improve water and sanitation supply systems in 29 residential areas (Zugdidi, Tsqaltubo, Chiatura, Khoni, Akhaltsikhe, Abasha, Tkibuli, Khashuri, Kaspi, Dusheti, Zestaponi, Samtredia, Martvili, Aspindza, Surami, Kareli, Ozurgeti, Lanchkhuti, Sartichala and others), construction and rehabilitation works of these systems were conducted with the support of EU, European Investment Bank, Asian Development Bank.

- in 2015 such works were conducted in 19 residential areas (Mestia, Senaki, Khobi, Signaghi, Sagarejo, Kvareli, Telavi and others);

- in 2016 completion of 14 projects is planned, and for the period of 2017-2019, 9 projects are intended.

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.

Issues regarding to possible climate change impacts on water resources are reflected in The Third National Communication on Climate Change (2015)

Part Two

Common indicators¹

I. Quality of the drinking water supplied

A. Context of the data

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

Georgia is a rich country in terms of water resources. 11% of its territory is covered with water bodies. The population is using 450-500 million m³ of water per year for drinking purposes; 90% of this amount is used by urban population and 10% is used by rural population. Specific nature of Georgia water supply that is, the biggest amount of water is extracted from groundwater sources. According to the National Commission of Energy and Water, in 2014, licenses for water supply were issued to 17 companies, which provide drinking water to the population living in 18 cities of the country.

Despite the fact, that Georgia has a significant amount of acceptable water quality, some parts of the population in the the country do not have an access to adequate drinking water. According to the National Commission of Energy and Water (2014), insufficient capacities and poor technical condition of the water supply facilities are the key problems in the water and sanitation sector.

In recent years the part of the population having access to drinking water have gradually increased, however there are no unified data on this issue. Different organizations, working in this sphere, submit different data. Thus, for example, according to the data of Regional Development Program of Georgia for the period of 2015-2017, more than half of rural population and 10% of urban population have not been connected to the centralized water supply systems yet. According to the program in question and National Statistics Agency of Georgia (2014), only 97% of the population of the capital have water supply to their homes. In Kvemo Kartli Region the given parameter equals to 47%, and in other regions (Shida Kartli, Samtskhe-Javakheti, Guria, Mtskheta-Mtianeti, Autonomous Republic of Adjara) this aggregate parameter comes to only 43,8%. In other regions this parameter is even lower. According to the Joint Monitoring Programme (JMP) WHO/UNICEF (Progress on Drinking Water and Sanitation. UNICEF, 2012, 2014), the percentage of population having access to higher quality drinking water has increased by 11% or 98% of the total population in the country in 2013, compared to 2005. This indicator has increased by 3% - up to 100% - for the urban population and by 16% - up to 97% - for the rural population. According to Statistical Weightings Used for the 2016 Environmental Performance Index (EPI), the percentage of population having access to drinking water is 100%, and the percentage of population having access to safe drinking water is 64,22%.

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

Although all cities have improved water supply systems, 2% of the total population has no access to the water supply systems, and 3% of people living in rural areas are not connected to these systems. However, if the current speed of construction and reconstruction of water supply systems remains at the same level for 2016-2019, the whole population of the country would get an access to good quality drinking water by the end of 2020. It should also be noted here that it is necessary to conduct more detailed studies to clarify these data.

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

The water supply systems, reported here, supply both the urban population and the rural population of the country.

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

The water samples are taken from treatment plant outlets, the places of water discharges from the treatment plants and the points of consumption. The quality of drinking water is monitored according to the "Technical Regulations on Drinking Water" (2014).

In accordance with the Law "On Public Health" (2007) and the "Technical Regulations on Drinking Water" (2014), the internal laboratory control over the drinking water quality is carried out by means of suppliers. The same documents stipulate that a scheme, a frequency of the state control and monitoring over the drinking water quality, as well as defined indicators and a number of test samples are determined by the supervisory state authority. This authority is the National Service of Food Safety of the Ministry of Agriculture. It conducts "selective external laboratory control over the drinking water quality". The external laboratory audit of the drinking water quality is also allowed by legislation to be carried out by independent accredited laboratories.

Given the fact, that decentralised systems (individual wells, bore wells, etc) are major sources of water supply in the western part of Georgia, mostly in rural areas, the Ministry of Labour, Health and Social Affairs has approved the "Sanitary Rules and Regulations Regarding Water Quality in the Non-Centralised Systems of Water Supply" (Order 297/N of 16 August 2001). Taking into consideration the new requirements, the mentioned above document needs to be revised and adopted in a format of technical regulations. Thus, in Georgia, the legal framework and the system for internal and external state control over drinking water quality have been created.

It should be noted that according to the data of National Food Agency of the Ministry of Agriculture of Georgia, for the period of 2014-2015 drinking water bacteriological contamination was on the similar level of 40,7% in the whole country. As for testing of the drinking water for presence of Enterococci, such analysis was not conducted for the period of 2013-2015, because the Technical Regulation on Drinking Water (2014) does not stipulate for testing drinking water for presence of Enterococci (Table №1).

Table №1

B. Bacteriological quality

WatSan_S2	Baseline value 2005	2012	2014	2015
Bacteriological pollution, including E.coli	24,5	34,0	40,7	40,7
Enterococci	No info	No info, as the Technical Regulation on Drinking Water does not stipulate for testing of drinking water for presence of Enterococci	No info, as the Technical Regulation on Drinking Water does not stipulate for testing of drinking water for presence of Enterococci	No info, as the Technical Regulation on Drinking Water does not stipulate for testing of drinking water for presence of Enterococci

C. Chemical quality

Taking into account the local conditions and the fact, that there are mining and processing industries, as well as presence of international oil pipelines in some regions of the country, that poses a risk of environmental pollution, including a risk of water pollution, Georgia has selected the additional priority substances of special concern like manganese, copper, zinc, cadmium and petroleum products, which were included in the Technical Regulations on Drinking Water (2014) (Table 2).

Table №2

Substance	Baseline value 2005	2012	2015
Fluoride	-	not detected	not detected
Nitrate and nitrite	-	not detected	not detected
Arsenic	-	not detected	not detected
Lead	-	not detected	not detected
Iron	-		
Additional physico-chemical parameter 1: Manganese *	-	not detected	not detected
Additional physico-chemical parameter 2: Copper *	-	not detected	not detected
Additional physico-chemical parameter 3: Zinc *	-	not detected	not detected
Additional physico-chemical parameter 4: Cadmium *	-	not detected	not detected
Additional physico-chemical parameter 5: Petroleum products *	-	not detected	not detected

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

The number of cases of diseases is related to all sources of transmission of pathogens².

Table №3.

	Incidence			Number of outbreaks		
	Baseline 2005	2008	Current value 2014	Baseline 2005	2008	Current value 2014
Cholera	0	0	0	0	0	0
Bacillary dysentery (shigellosis)	310	103	702	5	0	13
EHEC ^a	No info	0	5	No info	0	0
Viral hepatitis A	889	888	98	6	0	0
Typhoid fever	0	0	0	0	0	0

^aEnterohaemorrhagic E. coli.

III. Access to drinking water

According to the Joint Monitoring Programme (JMP) WHO/UNICEF (Progress on Drinking Water and Sanitation. UNICEF, 2012, 2014), the percentage of population having access to higher quality drinking water has increased by 11% and amounted to 98% of the total population in 2013, compared to 2005. This indicator has increased by 3% - up to 100% - for the urban population and by 16% - up to 97% - for the rural population.

Table № 4

<i>Percentage of population with access to drinking water</i>	<i>Baseline value (2005)</i>	<i>Current value (2015)</i>
Total	89	98
Urban	97	100
Rural	81	97

The given above data testifies that in recent years the population has seen significant improvement in what concerns their access to drinking water in general. Nevertheless, the issue of access to drinking water still poses a problem not only in some cities, but also in rural areas, judging by the number of projects fulfilled in this area. Water supply is also a

² If possible, please distinguish between autochthonous and imported cases

very problematic issue for educational institutions both in urban and in rural areas of Georgia (UNICEF 2013).

IV. Access to sanitation

Despite the fact, that in recent years the proportion of population with access to improved sanitation has gradually increased, there is not still an unified data on it yet, as different organizations working in this area, provide different data. According to the Regional Development Program of Georgia for 2015-2017, in rural areas the problem of provision or access of population to improved sanitation still remains highly relevant and certain measures are needed to be taken to address this issue.

According to the Joint Monitoring Programme of WHO/UNICEF (Progress on Drinking Water and Sanitation, UNICEF, 2012, 2014), the percentage of population with access to improved sanitation constitutes 95% of the total country's population. This indicator for the urban population remains at the same level and constitutes 96%, and for the rural population constitutes 91%. (Table №5)

Table №5

Percentage of population with access to sanitation	Baseline value, 2005	Current value, 2012
Total	94	96
Urban	96	96
Rural	91	91

However, according to the Statistical Weightings Used for the 2016 Environmental Performance Index (EPI), the percentage of population having access to safe sanitation is 81%. Based on the above mentioned, it should be noted that the given results of two recent studies - of the international (WHO/UNICEF 2012, 2014; EPI -2016) and local organizations - are different.

The given data provided by the WHO/UNICEF 2012, 2014 are more objective. Despite the fact, that indicator of access to improved sanitation in the country is gradually improving: based on the given data, 4% of the total population are not provided with the improved sanitation systems, including up to 4% in the urban areas and up to 7-9% - in the rural areas. However, if the current pace of construction and reconstruction of such systems remains at the same level for 2016-2019, these indicators will drastically decline by the end of 2019. Therefore, it is necessary to conduct more detailed studies to clarify these data.

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

Water quality

The standard classification for water bodies, including groundwaters, generally accepted in Europe, does not exist in Georgia. Therefore, presentation of the data on surface waters status in the form of summary reports, is difficult. Classification of waters by ecological status will be introduced after the adoption of the new law "On Water Resources Management".

The regulatory acts (orders) concerning water bodies, including groundwaters, issued by the Ministry of Environment Protection and Natural Resources and Ministry of Labour, Health and Social Affairs, were in effect before 2013 and established the categories of water use and the sanitary classification of the water bodies by the degree of their pollution. However, in accordance with the Code of Safety and Free Movement of Products during the period of 2013-2014, these regulatory acts were modified and readopted by the Government in the format of technical regulations.

In accordance with the technical regulation “Protection of Surface Water Bodies from Pollution” (2013), three categories of water use were identified: water use for drinking purposes, household purposes and fishery purposes).

In accordance with the “Sanitary Rules and Standards on Protection of Surface Waters from Pollution” (2001), two categories of water use were identified. The first category includes water bodies used as sources for centralised or non-centralised drinking water supply, and water supply for food industry. The second category includes water bodies used for cultural and household purposes, recreation and sports, and also water bodies, which are located within settlements).

The hygienic classification for water bodies by the level of pollution was also adopted and four levels of pollution (the allowable level of pollution, moderate pollution level, high level of pollution, and extremely high level of pollution) were defined.

A new draft project of the technical regulation “On Groundwater Quality” is developed by the Ministry of Labour, Health and Social Affairs in 2015. However, until the the project gets approved , the “Sanitary Regulations on Groundwater Protection against Pollution” (Order of the Ministry of Labour, Health and Social Affairs No. 251/H of 15 September 2006) remain its power in the country, under which the sanitary and hygienic classification for groundwaters was adopted in the country. This classification is based on the degree of anthropogenic pollution and includes 4 classes.

It should be noted, that the protection and quality of waters in the country are also regulated by the technical regulations approved by the Governmental Resolutions: No. 440 of 31 December 2013 "On Approval of Regulations on the Water Protection Belts"; No. 414 of 31 December 2013 “On Approval of the Guidelines for Calculation of the Standards for Pollutants Discharged with Wastewater into Surface Water Bodies”; №425 of 31 December 2013 «On Protection of Surface Water Bodies from Pollution»; №445 of 31 December 2013 “On Approval of the Technical Regulation on Water Protection Belts for Small River of Georgia”; №17 of 3 January 2014 “On Approval of the Environmental Technical Regulations”.

Table № 6

For non-European Union Countries

Status of surface waters

<i>Percentage of surface water falling under class^a</i>	<i>Baseline value 2005</i>	<i>Current value 2015</i>
I	–	–
II	–	–

III	–	–
IV	–	–
V	–	–
Total number/volume of water bodies classified		No classification
Total number/volume of water bodies in the country		No classification

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

Status of groundwaters

Table №7

<i>Percentage of groundwaters falling under class^a</i>	<i>Baseline value 2005</i>	<i>Current value 2015</i>
I. Fresh drinking water (salinity below 1.0 g/l);	33,3%	No info
II		No info
III		No info
IV		No info
V		No info
Total number/volume of groundwater bodies classified		No classification
Total number/volume of groundwater bodies in the country		No classification

^a Georgian National State of the Environment Report (2007-2009), Tbilisi, 2011

Groundwaters in Georgia are divided into 3 groups by salinity and temperature:

1. Fresh drinking groundwaters (with salinity below 1.0 g/l);
2. Mineral groundwaters (with a total salinity above 1.0 g/l);
3. Thermal groundwaters used for medical purposes (temperature 20-35°C) and thermal groundwaters used for energy purposes (temperature 40-108°C).

At present, there are over 100 fresh drinking groundwater deposits in the country; their reserves constitute 18 billion m³ per year (573 m³/s). According to the available data, only 1/3 of the existing fresh groundwater resources, constituting 4.2 billion m³ per year (145.5 m³/s) was examined in details. Only half of the total volume is currently used. Considering, that operational fresh groundwater reserves comprise about 4.2 billion m³ per year (145.5 m³/s), and the proven fresh groundwaters reserves with good quality and low salinity water

comprise 1.4 billion m³ per year (48.5 m³/s), then the percentage of good drinking quality groundwaters is 33.3%.

At present we obtain no information, concerning groundwaters contamination, because after 1990 neither monitoring of underground hydrosphere, nor surveillance over groundwaters quality was conducted in the country. However, in 2014 the study of Alasani-Agrichi artesian basin was commenced. Some bore holes were fitted with advanced equipment to study quantitative and qualitative conditions of ground waters on the territory of the mentioned above basin in automatic mode. In the scope of the project “Environmental protection of international river basins” in Autonomous Republic of Adjara, 8 bore holes were fitted with advanced equipment, as a result thereof, data on qualitative conditions of this water can be received in automatic mode. From now forth, the chain of performance monitoring is planned to be expanded.

Hydrobiological and hydromorphological monitoring of water quality was initiated in Georgia, that will allow for ecological status defining and corresponding adequate measures taking due to the requirements of EU legislation.

It should be noted that for further legislative base development, a number of regulatory draft documents have been developed in the scope of some projects. Just to name a few, in the scope of “Environmental Protection of International River Basins Project” (Georgia, Armenia, Azerbaijan, Belarus, Moldova 2012-2016), in 2015, the four projects of such regulatory documents were developed. They are:

- on confirming basin territories boundaries of integrated river basins management;
- on procedure of river basins management plans development, consideration and confirmation;
- guidelines on water bodies boundaries identification and confirmation;
- about advisory and coordination boards creation and their status confirmation.

Under the National Political Dialogue, the following guidelines were developed:

- guidelines on water resources monitoring development and realization;
- guidelines on calculation of the standards for pollutants discharged with waste waters into surface waters bodies;

Project “Governing for Growth (G4G) in Georgia” (2014-2019) is implemented in 5 directions, providing assistance to business sector development and forming corresponding conditions for private sector to communicate with the public with a view of long term sustainable use of water resources and improvement of management thereof and so on.

Water use

In spite of the fact, that Georgia is a water-rich country, a common indicator of the mean annual abstraction of freshwater divided by the mean annual total renewable freshwater resource has remained almost at the same level and constituted 1.45% in 2005. According to the data, provided by the FAO, in 2007 this indicator was 2,56%, (FAO of the United Nations 2010, AQUASTAT online database, Water use, by sector and by source, The Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla 00153 Rome,

Italy, viewed 15th May, 2011), and in 2011 this indicator was 2,43%. A common indicator of the mean annual abstraction of freshwater divided by the mean annual total renewable freshwater resources as of 2014 was 3,7% (Table №8).

Table № 8

A common indicator of the mean annual abstraction of freshwater divided by the mean annual total renewable freshwater resource at the country level

Water exploitation index	Baseline value 2005	2011	Current value 2014
Agriculture	0,6	1,2	2,6
Industry ⁹	0,15	0,03	0,08
Domestic use ¹⁰	0,7	1,2	1,1
Total	1,45	2,43	3,76

9) The figure includes water abstraction for manufacturing industry, but not for cooling of energy infrastructure

10) The figure includes the municipal systems of water supply, but not individual supply systems (e.g wells)

Part Three

Targets and target dates and assessment of progress

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

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

As noted in the section of common indicators (Part 2), Specific nature of Georgia water supply that is, the biggest amount of water is extracted from groundwater sources with a stable composition. This water has low salinity and good quality. However, some large cities are also supplied from the surface water sources, having significantly lower water quality, that requires a good water treatment and disinfection.

Under the existing legislation, the drinking water quality in the country is supervised since 2006 by the National Service of Food of the Ministry of Agriculture. The National Service is a major customer and provider of the tenders (according to the state dedicated programmes of the Ministry of Agriculture) to independent accredited laboratories that conduct the laboratory studies of drinking water quality. In accordance with the state dedicated program of drinking water quality, from year to year there is a growing number of settlements, where the quality control of drinking water is conducted. So for example, in 2012 the quality control of drinking water covered 32 settlements, in 2013 - 36, and in 2015 - 65 settlements.

Taking into account the fact that in 2011-2012 the percentage of water samples failing to comply with microbiological parameters equaled 35%, project proposals were set forth: to reduce the percentage of water samples failing to comply with microbiological parameters to 10 %, or if possible to keep it at certain level; to introduce 5 additional parameters to the system of drinking water quality control system (manganese, copper, zinc, cadmium and petroleum) and to develop drinking water safety plans by 2015 for 5 cities (Tbilisi, Rustavi, Kutaisi, Batumi, Poti).

2. Review of measures taken

Financial:

- Provision of the state assistance, including ensuring the financial tools, organising construction and rehabilitation work of the water supply systems and improving drinking water supply in 2012-2016 (Government of Georgia, Ministry of Infrastructure and Regional Development, local governments, Municipal Development Fund, International Financial Institutions, etc.) Implementation of these activities was carried out in 2013-2015 on a basis of the Governmental Decree of Georgia:

- No. 147 of 27 January 2014 “On Measures Implemented by the Ministry of Infrastructure and Regional Development of Georgia”;
- № 599 of 23 April 2014 “On Allocation of the Financial Resources (50’000 lari) to the Ministry of Infrastructure and Regional Development of Georgia for the Implementation of Projects in the Regions of Georgia”.
- № 712 of 23 April 2014 “ On Allocation of the Financial Resources (1’084’500 lari – 748 \$) to the Ministry of Infrastructure and Regional Development of Georgia for the Implementation of Projects in the Regions of Georgia”.
- And others

Besides the mentioned above:

- In compliance with the agreement between the Ministry of Regional Development and Infrastructure of Georgia and the Asian Development Bank (2011) 500 million \$ were allocated on construction and rehabilitation of water supply systems, sewerage, sanitation as well as wastewater treatment plants for the cities of Mestia, Anaklia, Kutaisi, Zugdidi, Poti and Marneuli. Construction and rehabilitation of these systems were scheduled for 5 years up to 2015. As a result, by 2015 the water supply system had been completely facilitated in the high mountain region of Mestia (with population of 21 000 people), Anaklia (with population of 23 750 people), Poti (with population of more than 40 000 people), Zugdidi, 75% of Kutaisi population was provided with 24 hour water supply as well. In Marneuli, after conducting water supply systems rehabilitation, 4500 citizens are provided with 17 hours instead of 4 hours water supply a day and so on. Besides, European Investment Bank allocated 80 million euro on the purposes thereof. As a result of the activities conducted, more than 200 000 people got improved access to clean drinking water.

Construction and technical works:

According to the data of the United Water Supply Company:

- in 2013 water supply systems construction and rehabilitation works were conducted in 24 residential areas and in 2014-2015 – in 23 ones. According to the data of Georgian National Energy and Water Supply Regulatory Commission, in 2013, on the whole in the country 25498 damages were eliminated, 50 water pumping sets were replaced and 65 ones were thoroughly repaired, more than 300 reservoirs were washed and disinfected, 76 reservoirs underwent operating repairs. 33 000 km of water supply pipeline system were rehabilitated and in 2014 such works were conducted on 38 km lines and so on. Full rehabilitation of water supply system was performed in cities Batumi, Kobuleti, in some rural areas of Marneuli municipal district and so on. According to the Municipal Development Fund, to improve water supply to refugees living in 12 rural areas, water supply systems and 7 drainage systems were rehabilitated in Gori, Karelesk and Mtskheta municipal districts and so on.

Research works:

➤ Study of water supply situation in general academic schools of the country was conducted (2013). Results of the study provided the basis for corresponding recreation activities development;

➤ The chain of laboratories, assessing drinking water quality in terms of microbiological parameters, has expanded. In 2013-2014 the Ministry of Regional Development and Infrastructure of Georgia purchased advanced mobile laboratories for its regional departments, as a result thereof 21 laboratories test microbiological parameters of drinking water quality. These laboratories test drinking water quality in rural areas as well. The laboratories of 8 big cities (Kutaisi, Tsqaltubo, Ozurgeti, Poti, Gori, Akhaltsikhe, Bolnisi, Telavi) are fitted with advanced equipment as well and so on;

➤ As a result of several large-scale projects implementation, the problem of supplying the population of the territories, bordering on the conflict zone of Georgia, with water has been solved;

➤ Drinking water quality is controlled daily by regional as well as by the laboratories of company's service centers. Consolidated study results are quarterly sent to Georgian National Energy and Water Supply Regulatory Commission. The given data is available for all the entities and individuals concerned;

➤ In the capital of Georgia LLC "Georgian water and power" controls the drinking water quality by 53 parameters in automatic uninterrupted mode 24 hours a day;

In the scope of USAID project "Integrated Natural Resources Management In Watersheds"- program for Georgia, in 2010-2014 the program «Water supply situation analysis and drinking water safety plan development in 6 cities (Ahmeta, Telavi, Dedoplistskaro, Ambrolauri, Oni, Senaki)». Drinking water safety elaborated plans were sent to local council, corresponding companies and so on.

3. Assess the progress achieved towards the target.

According to the available data, besides gradual increase of the share of the population having access to drinking water, necessary financial, technical, organizational and other activities have been conducted recently. As a result thereof, in 2014-2015 drinking water bacteriological contamination remained at the same sustainable level in the whole country. However, the given parameter is not high yet. This circumstance is also explained by the fact that the surveillance system over drinking water quality has been improved lately, damages in the system being regularly detected. Consequently, dissatisfactory sanitary-engineering state of water supply systems and capacity deficiency are not yet a key problem of Water and Waste Water Services sector for some cities as well as rural areas.

With the assistance of international organizations, projects on drinking water safety for municipalities are performed. If the existing pace of construction and rehabilitation of water supply systems remains at the same level for 2016-2019, the targets set in the sphere of socio-economic development of the country in what concerns the drinking water quality improvement and reduction of the percentage of water samples, not complying with the microbiological parameters standards of drinking water quality, will start being achieved since 2016.

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?

There has not been such urgent necessity. However it should be noted that for the purposes of drinking water safety plans development, instead of 5 cities (Rustavi, Kutaisi, Batumi and others), 6 cities (Ahmeta, Telavi, Dedoplistskaro, Ambrolauri, Oni, Senaki) were chosen to participate in USAID project program “Integrated Natural Resources Management In Watersheds”. Drinking water safety elaborated plans were sent to local council, corresponding companies and so on.

II.Reduction of the scale of outbreaks and incidents of water-related disease (art. 6, para. 2 (b))

1. Description of the target, target date and baseline conditions

In accordance with the legislation of Georgia, the Ministry of Labour, Health and Social Affairs is the main governing authority in the system of public health, which is responsible for assessment of risks to human health and providing information on this regard. In recent years, the system of communications and alerts on epidemical outbreaks has been improved. Information about epidemical outbreaks is transmitting by any available means of communication from the primary public health care institutions to the regional public health centres in a form of emergency alert and then the information is further distributed, using the same ways and means to the NCDC&PH (National Centre for Disease Control and Prevention and Public Health).

Since the moment of receiving an alert, personnel of relevant medical institutions starts investigating the area with the epidemical outbreak. The determination of reasons and sources of the infectious diseases is carried out along with conducting health-improving and preventive measures. The Ministry has developed action plans for emergency situations, including those posed by polluted water or extreme weather events.

The information from the primary public health institutions and the regional public health centres is transferred to the NCDC&PH in two formats:

1. Emergency alert about 51 nosological forms of diseases and
2. In a form of the monthly (aggregate) report about 72 nosological forms of diseases.

The NCDC&PH uses the centralized information system for infectious diseases (EIDSS), the database of “Health for Everybody”, the WHO Programme “Emergency Preparedness and Response (EPR)” as well as a clear definition of the outbreak (a single case of nosological forms of diseases such as cholera, typhoid fever, shigellosis, EHEC, and other types of salmonella is considered as an outbreak of disease). The laboratory system existing in Georgia and the capacities of laboratories itself allow to identify certain pathogens causing outbreaks, while at the local level laboratories supervise and provide early warning, detection of outbreaks or incidences of water related diseases, caused by water pollution or extreme weather events.

As a result of the improved surveillance, the response system and the health insurance system, first aid and reference to doctor, including cases of diarrhoeal diseases became available to the population. Therefore, the disease reporting system has radically improved and a number of registered diseases has increased over the past 5 years. A new system of laboratory diagnostics is functioning in the country under the NCDC&PH. Diagnostic laboratories with capacity BSL 3 operate in Tbilisi, and the capacity BSL 2 – in 8 cities, including Kutaisi, Batumi, Akhaltsikhe, Gori, Telavi, Ozurgeti, Zugdidi and Ambrolauri. These laboratories geographically cover the whole country, resulting in significant improvement in early diagnosis of diseases, including water-related diseases, at the national, regional and local levels.

On the basis of the signed agreement on “Cooperation between the WHO Regional Office for Europe and the Ministry of Labour, Health and Social Affairs of Georgia 2016-2018”, one of the country’s priority areas is “Environment and Health” .

Based on the above mentioned, it can be concluded, that the surveillance system for early detection, investigation, response and reporting on the infectious diseases (including water-related) functioning on a permanent basis, is efficient.

However, it should be noted, that in order to further improve the diseases surveillance at the national, regional and local levels, it is necessary to carry out organisational and technical measures regarding further improvement of the material and technical base of laboratories.

It is also necessary:

- To implement express diagnostics of drinking water quality and water-related diseases, jointly with the Ministry of Agriculture;

➤ To implement recommendations of “the Chapter 1.2.2 Public Health Authorities” from the Guidelines for Drinking-Water Quality developed by the World Health Organisation and the Water Safety Plans for effective health protection.

Despite the fact, that country has carried out some reforms at the legislative and institutional levels, the integrated information system, that may provide integrated data on environmental and public health issues to all stakeholders, does not exist yet. The National Centre for Disease Control and Prevention and Public Health regularly publishes data on diseases, including waterborne, in printed and electronic forms.

Based on the aforementioned, it should be concluded: Legal frameworks on water quality management (including drinking water) and incidences are governed by the special laws and regulations. However, the existing structures are still unable to provide with water quality monitoring and ensure the prevention of water-related diseases across the country. The coordination and cooperation mechanisms are still not established at the appropriate level.

In 2005-2014, the incidents of water-related diseases like cholera, typhoid were not registered in Georgia. A number of cases of the bacillary dysentery (shigellosis) has increased by 126% in 2014, compared to 2005, and consisted 702 cases. The morbidity level for viral hepatitis “A” has significantly decreased in 2014, compared to 2005, and consisted only 98 cases (Table 9).

Incidence and number of the outbreaks of water related diseases

Table 9

Disease	Incidence			Number of outbreaks		
	Baseline value 2005	2008	Current value 2014	Baseline value 2005	2008	Current value 2014
Cholera	0	0	0	0	0	0
Bacillary dysentery (shigellosis)	310	103	702	5	0	13
EHEC ⁵	No data	0	5	No data	0	0
Viral hepatitis A	889	888	98	6	0	0
Typhoid fever	0	0	0	0	0	0

The campylobacteriosis and cryptosporidiosis are not diagnosed. A number of cases of giardiasis, Legionnaires' disease and acute gastroenteritis of unknown, but the alleged origin (A09 in ICD-10), is presented in Table 10.

Table № 10

Disease	Incidence	Number of outbreaks
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	Baseline value 2005	2008	Current value 2014	Baseline value 2005	2008	Current value 2014
Campylobacteriosis	0	0	0	0	0	0
Cryptosporidiosis	0	0	0	0	0	0
Giardiasis	740	299	0	0	0	
Legionnaires' disease	0	0	0	0	0	0
Acute gastroenteritis of unknown, but the alleged origin (A09 in ICD-10)	7431	1090 1	25480	4	2	1

Despite the fact, that certain measures on the reduction of the scale of outbreaks and incidents of water-related diseases are carried out in Georgia, the following targets and target dates were selected to be set at the national level:

1. Reduction of the level of incidence of viral hepatitis A and dysentery by 10% by 2015 (Ministry of Labour, Health and Social Affairs);
2. Maintenance incidence of cholera and typhoid fever at zero level by 2020 (Ministry of Labour, Health and Social Affairs);
3. Development of guidelines for design, maintenance and safety of the small-scale systems of water supply taking into account the local conditions of Georgia, and drafting of recommendations for population in 2013 (Ministry of Labour, Health and Social Affairs).

The adoption of the target “Reduction of the level of incidence of viral hepatitis A and dysentery by 10% until 2015” was stipulated by the fact, that no any outbreaks of viral hepatitis A was registered in the country since 2005. In this regard, it is necessary to keep this indicator at the current level.

The choice of the target “Maintenance incidence of cholera and typhoid fever at zero level” was stipulated by the fact, that no cases of cholera were registered in last 40 years in the country, and cases of typhoid fever were not reported in the last 12 years. Regarding this, it is also necessary to keep this indicator at the current level.

The adoption of the target “The development of guidelines for design, maintenance and safety of the small-scale systems of water supply taking into account the local conditions of Georgia, and drafting of recommendations for population in 2013”, was stipulated by the fact, that according to the available data, about 900 of the small-scale water supply systems of “rural type” and 2850 non-centralised water supply systems (protected wells, springs, etc) exist in the country, but the adequate sanitary-hygienic standards on their design, maintenance and water quality control are not developed yet.

Actions taken

The following measures were offered to implement the above-mentioned targets:

1. Improvement of a system for monitoring, surveillance, detection and reporting on the infectious diseases, including water-related ones, 2013-2018 ((Ministry of Labour, Health and Social Affairs);

2. Research on drinking water safety in the small-scale water supply systems, 2014-2016 (Ministry of Labour, Health and Social Affairs, the National Service of Food Safety of the Ministry of Agriculture and the United Water Supply Company of Georgia) the development of sanitary regulations on control over the quality of drinking water in the small-scale water supply systems.

3. Creation of mechanism for coordination and cooperation on water quality monitoring and prevention of water-related diseases, 2015 (Ministry of Labour, Health and Social Affairs, the National Service of Food Safety of the Ministry of Agriculture);

To implement the first measure, since 2012, the State Programme on “surveillance over infectious diseases” is carried out in Georgia, including one of its components comprised epidemiological surveillance over the diarrheal diseases, the improvement of laboratory diagnosis and identification of pathogens.

To implement the second measure, in particular, to draft the sanitary rules on controlling over the quality of drinking water in the small-scale water supply systems, as well as collect some technical data to assess the sanitary and hygienic conditions and prepare the preliminary draft of sanitary regulations on the small-scale water supply systems, the following was carried out:

- in 2011-2012, the sanitary hygienic features of the systems of water supply in two regions at all stages of water supply (from catchment to consumer) were studied for the first time by the National Centre for Disease Control and Public Health of the Ministry of Labour, Health and Social Affairs, with assistance of the German Environment Agency.

- a project “Support of Implementation of the Environmental Management of Water Protected Areas” was carried out as a first step to implement the Safety plans on the small-scale systems of water supply in the regions Dusheti and Marneuli in Georgia.

In Georgia, the majority of the rural population does not have a well-managed centralized water supply system. Management of small-scale water supplies is a matter of national importance. Protection and sustainable management of water resource quality is a major component of the Water Safety Plans (WSP). This is a particular need of the rural areas, where the local population depends on small-scale water supplies. Therefore:

- the sanitary-technical and sanitary-hygienic status of such systems has been assessed
- quality status of drinking water has been assessed;
- risks of the water-related diseases have been assessed;
- complex of health-improving measures and projects of water safety for Dusheti and Marneuli districts has been developed.

This assessment will serve as the basis for Water Safety Plan development, ecological situation improvement, water related diseases burden reduction among local population

and elaboration of sanitary rules for small-size water supply systems. In the future it shall be necessary to develop coordination mechanisms for the ministries and departments concerned, which will provide effective coordination of partnership and information exchange.

The European "Environment and Health" process - meeting on mid-term review (EEHP MTR meeting) 28–30 April 2015, Haifa, Israel

A high-level meeting to review a mid-term progress in implementation of the European "Environment and Health" process and its institutional framework was held in Haifa, Israel, from 28 to 30 April 2015. The participants of the meeting considered the issue of fulfillment of the commitments, accepted by the member states and the parties concerned in compliance with Parma Declaration on Environment and Health, studied the difficulties faced by member states, discussed strategic partnership and identified future priorities and road map of preparation for the Sixth Ministerial Conference on Environment and Health to be held in 2017. Head of WHO European Centre for Environment and Health, World Health Organization (Elizabet Paunovic, Bonn, Germany), pointed out that still unsettled problems in the European region include water, sanitary and hygiene, some countries of the Central Asia and Caucuses failed to meet their corresponding targets in compliance with the Millennium Development Goals and in some cases assess to clean drinking water sources got even worse. They demonstrated part of a documentary film about the project, conducted by National Center For Disease Control And Public Health (NCDC and PH), "Support for water conservation zone ecological control, as the first step to implementation of water safety plan for small-size water supply systems in the regions of Dusheti and Marneuli in Georgia" and pointed out that to improve ecological situation and to reduce water related diseases burden among the population it is necessary to represent and implement approaches of the Water Safety Plan (WSP) in Georgia as well as in other countries of European regions. It is especially urgent for rural areas, where local population depends on small-size water supply systems.

The Global analysis and assessment of sanitation and drinking water (GLAAS) 2013 -2014

For the reported period Georgia joined the review period of The Global analysis and assessment of sanitation and drinking water (GLAAS) 2013 -2014³.

The goal of GLAAS under the mechanism within «UN – Water» is to monitor facilitating and hampering factors, to detect gap in knowledge, to assess strengths and weaknesses, to sort out problems, priority tasks and positive experience and so on. Issues of drinking water supply and sanitation were considered (including: Access at present time; 2. Politics and

³ http://www.who.int/water_sanitation_health/glaas/2014/en/

institutions; 3. Planning, monitoring and assessment; 4. Budgeting and expenditures; 5. Fairness in allocation; 6. Results; 7. Sustainability; 8. Human resources.

It was identified that⁴:

- the country has clear tasks, concerning water, sanitation and hygiene services provision and political measures are performed to facilitate thereof.
- there is inadequate financing of water, sanitation and hygiene services.
- there are no set criteria for fairness in funding allocation for the purposes of water supply and sanitation, and resources needed for expansion and support of water, sanitation and hygiene services and systems.
- financial resources are mainly allocated on expansion of the services provided in urban areas and the major part of water, sanitation and hygiene services financing is spent on providing water supply and the situation is characterized by relatively low services coverage in the sphere of sanitation.
- there is no information concerning the quantity of the personnel in the sphere of water, sanitation and hygiene services, which reflects serious lack of data about personnel resources.
- the quantity of the personnel in the field is not enough to operate and maintain sanitation and drinking water supply infrastructure.
- national goals aimed at providing schools with sanitation facilities haven't been set,
- hygiene publicity should be introduced in schools by including such information into school program.
- insufficient financing of operational and maintenance services pose a serious threat to providing sustainable service
- though an important contribution of hygiene to health is obvious, national targets for hygiene habits development programs are not identified

II (second)– National Environmental Health Action Plans (NEHAPs) 2016-2021

Many problems of public healthcare in Georgia, in particular, problems, related to demographic change, growing inequality in connection with health and noncontagious diseases incidence rate growth are closely related to environment. To fully understand relationship between environment and health, forward-looking policy is needed to gain an insight into complex interaction of physical, biological and social sphere. Only target oriented state policy can influence this situation in Georgia.

⁴http://www.who.int/water_sanitation_health/monitoring/investments/georgia-11_nov.pdf?ua=1

WHO European Centre for Environment and Health (WHO/ECEH) supports Georgia in elaborating the second National Environmental Health Action Plans (NEHAPs) 2016-2021, top-priority strategies and activities, which can have favorable impact on environment and health, using qualitative actual data to deliver methodological assistance in the process of decision taking in different sectors on national and international level. NEHAPs -2016-2021 plans should provide for ecological impact on children's health, including its economic consequences, quantitative targets setting in this scope, as well as appropriately reasoned activities phased implementation. Adopting NEHAP -2016-2021 Georgia takes on responsibility to develop a policy and practical activities for safe environment creation, where children would have an opportunity to attain highest possible level of health.

At this stage high-priority long-term objectives were developed. The first objective is "Population health protection by improving access to safety water supply and sanitation". Working in partnership with all the sectors concerned, NEHAPs -2016-2021 takes into account principles and provisions of Protocol on water and health as a justification and advanced instrument for development of integrated strategies on water resources and health management issues. The first objective contains clear targets and tasks aimed at providing all children with access to safety water supply and sanitation at home, in preschools, in schools, at medical institutions and at recreational water places by 2020, and taking all the possible measures to facilitate hygienic requirements observance. It is necessary to solve the problem of remaining inequality between urban and rural areas, as well as between poor and rich social groups. It is critical to continue works on providing children with improved access to safe water and adequate sanitation and hygiene conditions at schools and preschools. It is also necessary to take into account new problems, which can arise in subsequent years in connection with climate change, extreme weather phenomena, negatively affecting water resources. The highest priorities still remain to increase implementation of water safety plans and to enhance capabilities of national surveillance agencies in the sphere of uninterrupted supply with safe drinking water as well as public health protection.

The Ministry of Labor, Health and Social Affairs of Georgia, National Center for Disease Control and Public Health with all the sectors concerned with the support of WHO European Centre for Environment and Health (WHO/ECEH) are the developers of NEHAPs -2016-2021.

Works on soil-transmitted helminthiasis elimination

Soil-transmitted helminthes (geohelminthes), often called intestinal worms, still pose a serious danger for health. Georgia receives WHO support and pharmaceutical companies' aid in the form of free anthelmintic medicines. Population examination and national campaigns for dehelminthization have been conducted in Georgia with the support of Vishnevskaya-Rastropovich foundation and in close cooperation with the WHO Regional Office for Europe (2012) lately. At the meeting in February 2012, Protocol office applied to WHO European Centre for Environment and Health (WHO/ECEH) in Bonn with the request to develop Strategy plan for soil-transmitted helminthiasis control and prevention concerning children of pre-school and school age in European region. With the purpose thereof WHO/ECEH with the support of Germany government launched a project, aimed at parasitic invasion prevention in European region and held a working meeting in Bonn (Germany) with the participation of the representatives of the countries of the WHO European Region and

expert missions of WHO in 6 countries, and in Georgia as well. The experts prepared recommendations. To cope with the infection it is necessary to form a system of collecting parasitological data to perform monitoring and to conduct dehelminthization and so on. Next year WHO intends to give support and provide anthelmintic medicines.

Works on Water, Sanitation and Hygiene improvement in schools (WASH)

According to the works program for the period of 2014-2016, developed in compliance with the Protocol, Protocol parties and other states defined improvement of water, sanitation and hygiene in schools (WASH) as a priority area of activity for the first time. Hungary and Georgia are the leading countries in performing the program of actual data consideration concerning the situation in the sphere of WASH in schools and other child care centers in the WHO European Region. To support the process of works program fulfilment for the period of 2014-2016, developed in compliance with the Protocol, 3 meetings were held, 2 in Bonn (Germany) and 1 in Bucharest (Romania) to consider the issues of facilitating water, sanitation and hygiene improvement. Taking into account the present situation with WASH in schools and other child care centres in Georgia, medical professionals were hired to deliver personal, social and health education and to teach children hygiene in these institutions and so on.

Surveillance of rotavirus infection

An assessment of the Global Alliance for Vaccines and Immunization (GAVI) has demonstrated, that vaccination against rotavirus infection would be highly effective, and forecasted a significant reduction in the incidence of diarrhea and mortality among children in Georgia.

In line with the WHO recommendations, vaccination against rotavirus infections was included in the national immunisation programme. The main objective of the vaccination programme against rotavirus infection is to prevent mortality and heavy forms of diseases caused by rotavirus, and reduce child mortality rate (aged under 5). simultaneously The surveillance and monitoring of rotavirus infections is carried out through bases of sentinel surveillance to assess a need for vaccination and a vaccine impact on reducing the burden of disease.

Trainings for medical personnel and information campaigns for medical community and the population as a whole were conducted.

The project “Communicative campaign for vaccination against rotavirus infection” was implemented, in the scope thereof the following activities were conducted:

- population target groups informing;
- educational and information materials, posters, booklets, videos, radio programs and so on were prepared.

To perform the activity “Improvement of sanitation-and-epidemiological management in the sphere of surveillance over infectious and noncommunicable diseases, including water

related ones, at local levels” seminars for specialists of urban and rural public health centers have been conducted since 2014.

As for the rest (the first and the third) activities, performing thereof is planned for the period of 2016-2018.

2. Assess the progress achieved towards the target.

On the basis of the above, we can conclude that in recent years the system of epidemiological surveillance, detection and response to infectious diseases, including those related to water, have been gradually improved. The necessary financial and organisational measures as well as research activities are carried out. The system of communication and alerts on epidemic outbreaks is gradually improving at the national and local levels. The reasons and sources of infectious diseases are investigated in a prompt manner, and health-improving and preventive measures are carried out. Under the Ministry of Labour, Health and Social Affairs action plans for emergency situations, including those posed by water pollution or extreme weather events were developed.

As a result of implementation of the free emergency medical care programme in the country and certain reforms concerning the public health insurance system, a primary care became more accessible to the population in the country along with access to doctors, including for patients with diarrheal diseases. Accordingly, the record of diseases has radically improved, and the number of registered cases diseases has increased.

At present, a new package of universal health insurance has significantly improved the system of detection, surveillance and records of infectious diseases, including water related ones. While a number of the certain nosologic forms of diseases and epidemical outbreaks (viral hepatitis “A”) has decreased, a number of cases of the bacillary dysentery (shigellosis) has increased by 126% in 2014, compared to 2005, and comprised 702 cases; a number of cases of the acute gastroenteritis of unknown, but the alleged origin (diagnosis A09 according to ICD-10) has increased by 242,8% and comprised 25480 cases.

In line with the WHO recommendations, the vaccination against rotavirus infections was included in the national immunisation programme. A major target of the vaccination programmes against rotavirus infection is to prevent mortality and heavy forms of diseases caused by rotavirus, and thereby reduce a global child mortality rates. The surveillance and monitoring of rotavirus infections is carried out through bases of sentinel surveillance to assess a need for vaccination and a vaccine impact on reducing the burden of disease. The laboratory system existing in Georgia allows to identify certain pathogens causing outbreaks, while at the local level, the laboratories supervise and provide early warning, detection of outbreaks or incidences of water-related diseases, posed by water pollution or extreme weather events.

On the basis of the above, it can be concluded, that the certain legislative and institutional reforms have been introduced in the country, leading to an increase in efficiency of the surveillance system for early detection, studies, response and reporting on the infectious diseases (including water-related ones).

The National Centre for Disease Control and Prevention and Public Health regularly publishes data on diseases, including waterborne, in printed and electronic forms.

An integrated information system that may provide integrated data on the environment and public health issues to all stakeholders, does not exist yet, and the existing bodies are still unable to provide water quality monitoring and ensure prevention of water-related diseases across the country. The coordination and co-operation mechanisms are still not established at the appropriate level, etc.

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

1. Description of the target, target date and baseline conditions

In recent years, due to the large-scale activities conducted in the country, aimed at construction and rehabilitation of water supply systems, the amount of the population having access to the improved resources of drinking water increases on a regular basis. The mentioned process is facilitated by investments both from the Georgia government and from international sponsors. A number of projects are in the process in this sphere, as well as in small-size water supply systems. In 2013-2014 with the support of European investment bank, small-size water supply systems were rehabilitated in 28 settlements, and with the support of Asian Development Bank, complete rehabilitation of water supply systems was conducted in 6 settlements, as a result of which the population of these municipalities will be provided with uninterrupted water supply by the end of 2017.

2. Review of measures taken

Two measures were proposed to facilitate further improvement in access to drinking water. Their fulfilment was scheduled for the period of 2014-2016, in particular:

1. To conduct the organisational and technical as well as construction and rehabilitation works for improving the systems of water supply and increasing the share of urban population with access to centralised water-supply up to 90% and with uninterrupted water supply 24 hours a day to the population of 6 cities and districts of the country (cities Mestia, Anaklia, Kutaisi, Zugdidi, Poti, Marneuli) by 2015. The measures undertaken significantly improved sanitary-engineering condition of water supply systems in high mountain Mestia region and Anaklia, Poti, as well as provided 75% of Kutaisi population with 24 hour water supply. In Marneuli, after conducting water supply systems rehabilitation, 4500 citizens are provided with 17 hours instead of 4 hours water supply a day and so on.

2. To improve a system of water supply and to increase the share of rural population with access to centralised water supply up to 84%. Implementation of the projects on water supply in 23 villages is foreseen by 2016;

Measures taken

Georgia government elaborated and approved a number of programs and strategies, highlighting necessary measures of water supply sector development, drinking water quality improvement and so on. As mentioned above (page 8), according to the United Water Supply

Company data, in 2013-2015 construction and rehabilitation works were conducted in 48 cities and municipalities, including:

- in 2013-2014 with the support of EU, European Investment Bank, Asian Development Bank, water supply systems construction and rehabilitation works and measures aimed at population sanitary conditions improvement were conducted in 29 cities (Zugdidi, Tsqaltubo, Chiatura, Khoni, Akhaltsikhe, Abasha, Tkibuli, Khashuri, Kaspi, Dusheti, Zestaponi, Samtredia, Martvili, Aspindza, Surami, Kareli, Ozurgeti, Lanchkhuti, Sartichala and others).

- in 2015, 14 projects were fulfilled in 19 settlements (Mestia, Senaki, Khobi, Sighnaghi, Sagarejo, Kvareli, Telavi and others);

- in 2016, 14 projects implementation is scheduled in 11 settlements (Ahmeta, Tsalka, Bolnisi, Tsalenjikha, Oni and others). According to the data of the Municipal Development Fund, 42 projects were implemented in 2013-2014, and 6 projects were fulfilled in 2015. As a result, water supply systems were rehabilitated in 32 cities and in 20 rural areas. 9 projects are scheduled to be implemented in 2017-2019.

- Large-scale project of water supply systems rehabilitation has been implemented since September 2012 in Kutaisi (with the population over 186 000), it involves construction and rehabilitation of water pump stations and reservoirs, main and internal supply lines, totaling 52 km and others. As a result thereof, the population of the city will be provided with 24 hour water supply, and by 2017, in compliance with the measures plan, water supply of other cities and municipalities will be improved;

- With the purpose to enhance operation in the scope of projects on water supply improvement in 17 cities (Ozurgeti, Lanchkhuti, Martvili, Kutaisi, Tsqaltubo, Vani, Zestaponi, Tsageri, Lentekhi, Chiatura, Surami, Kaspi, Kareli, Khashuri, Dusheti, Lagodekhi and Sartichala) new electronic system (Scad) for technological processes management was implemented and others.

3. Assess the progress achieved towards the target.

According to the data submitted, it should be noted that on the whole, percentage share of population having access to higher quality drinking water has been gradually increasing in Georgia lately. The government of the country actively participates in financing water supply systems construction and rehabilitation, as well as in attracting international financial institutions and sponsors. As a result of the measures taken, more than 200'000 people got improved access to drinking water of high quality.

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.

There was no need to do it for this target.

IV. Access to sanitation (art. 6, para. 2 (d))

Draft proposals for the targets were not defined in this area.

V. Levels of performance of collective systems and other systems for water supply (art. 6, para. 2 (e))6

Draft proposals for the targets were not defined in this area.

VI. Levels of performance of collective systems and other systems for sanitation (art. 6, para. 2 (e) continued)

Draft proposals for the targets were not defined in this area.

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

Draft proposals for the targets were not defined in this area.

VIII. Application of recognized good practice to the management of sanitation (art. 6, para. 2 (f) continued)

Draft proposals for the targets were not defined in this area.

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

1. Description of the target, target date and baseline conditions.

Regarding this matter, it should be noted, that in accordance with the environmental legislation, in particular, with the laws “On Licenses and Permits” (2005) and “On Environmental Impact Permit” (2007), the industries and activities that are subjects to environmental examination were defined. In the reports on an environmental impact, the necessary measures, the type of technologies and commitments to treat polluted waters are specified, taking into account the local conditions.

The quality of wastewaters from industrial enterprises discharged into the sewerage system is regulated by:

- the Government Decision №17 of 3 January 2014 “On Approval of the Technical Regulations on Environment Protection”. These technical regulations cover all industrial and non-industrial facilities that perform wastewater discharges into surface water bodies and activities thereof are not subject to the environmental assessment. These technical regulations are developed for certain wastewater substances, along with indications of the maximum permissible concentrations (MPC).;

- the Government Decision № 414 of 31 December 2013 “On Approval of the Guidelines for Calculation of the Standards for Pollutants Discharged with Wastewater into Surface Water Bodies”.

As for treatment of storm wastewater flows from the sewerage systems, it should be noted, that such system does not exist yet.

The lack of wastewater treatment plants is often a reason that many human settlements have become the main polluters to the environment. At present, the biological treatment fa-

cilities are operating only in two cities (Batumi and Sachkhere), and the treatment facilities in Tbilisi-Rustavi cities have mechanical treatment of wastewaters.

Programme documents of the Georgian Government: “The Regional Development Programme of Georgia for 2015-2017” (2014), “The Socio-Economic Development Strategy of Georgia – “Georgia 2020” (2014) and others stipulate development of regional infrastructure, including sanitation and sewerage systems.

Given the above stated, a draft proposal “Elimination of discharge of untreated wastewater into natural waterbodies by 2016” was introduced.

2. Review of measures taken

The Decree of the President of Georgia as of 10th of April, 2008 №245 “On Measures Aimed at Improving Drinking Water Supply to Tbilisi, Rustavi And Mtskheta” facilitates the improvement of the existing situation in this sphere. This decree provides for conducting waste treatment plant rehabilitation in Gardabani region within the period of 10 years since the decree issue. This process shall be completed in 2018. This issue is observed in the second national program of environmental protection in Georgia (2012-2016r.r.). In compliance with «Regional Development Program of Georgia for the period of 2015-2017» and «Socio-Economic Development Strategy of Georgia, Georgia-2020» for the period of 2015-2019, rehabilitation of sewage collection system in 51 municipalities and construction of biological treatment plants in tourist resort areas: Mestia, Anaklia, Ureki, Tskaltubo, Poti, Zugdidi, Kobuleti and Telavi are scheduled.

To achieve the target specified above, the measures for the period of 2012-2017 were proposed, in particular: “Implementation of rehabilitation and construction of municipal waste water collection and treatment systems in cities and regions of the country: Mestia, Zugdidi, Anaklia, Kutaisi, Batumi, Kobuleti, Borjomi, Marneuli and others (2012-2015); “Development of project documentation on sewage water treatment plants and their infrastructure (collecting, pumping and other systems) rehabilitation and modernization in Gardabani region” (2013-2014); “Development of project documentation on sewerage systems rehabilitation and new collecting sewerage system construction in Gardabani region”(2013-2014).

As for performing the proposed measures, it should be noted that:

- the Ministry of Regional Development and Infrastructure of Georgia and the Asian Development Bank have signed an agreement on advisory services for construction and rehabilitation of the wastewater treatment facilities in the cities of Mestia, Zugdidi, Anaklia, Kutaisi, Poti, Ureki and others.

- in 2013 the project of assessing environmental impact of pressure pipelines and sewerage pump stations construction in Gardabani was developed. It was submitted to the ministry of environment and natural resources protection for approval. The ministry issued a permit for construction, rehabilitation and infrastructure development of these objects;

- construction and rehabilitation of sewage collection systems was completed in 11 cities (Telavi, Gori, Kareli, Kaspi, Gurjaani, Zugdidi, Akhalkalaki, Bolnisi, Tsqaltubo, Mestia, Anaklia);

- According to the Municipal Development Fund data, in 2013-2015 in the city of Zugdidi and in villages and in municipalities of Gori, Kaspi, Kareli in the places, where internally displaced persons live, and sewage collection systems were constructed. Besides, in the cities of Zugdidi, Kharagauli, Bolnisi, Tskaltubo, Ambrolauri, Sagarejo and others, storm run-off channels were constructed.

3. Assess the progress achieved towards the target.

A required legal framework and subordinated regulations were developed in Georgia in order to prevent discharge of untreated wastewaters into surface waterbodies. As a result, certain industries and activities were appointed as subjects to environmental assessment. Necessary measures, technologies and obligations to treat polluted waters, in accordance with situation in place, are specified in the reports. Treatment systems for storm waters do not exist yet. The adoption of a new draft law on “Water Resources Management” will promote the development and adoption of new regulations for this sector.

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.

There was no need to do it for this target.

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))

Draft proposals for the targets were not defined in this area

XI. Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol (art. 6, para. 2 (h))

Draft proposals for the targets were not defined in this area

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

Draft proposals for the targets were not defined in this area

XIII. Quality of wastewater used for irrigation purposes (art. 6, para. 2 (i), second part)

Draft proposals for the targets were not defined in this area

XIV. Quality of waters which are used as sources for drinking water (art. 6, para. 2 (j), first part)

Draft proposals for the targets were not defined in this area

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

1. Description of the target, target date and baseline conditions

At present, standard classification for water bodies does not exist in Georgia. The legal provision regarding management of waters used for bathing and recreation as well as of their quality is carried out under the water legislation of Georgia and subordinated legal acts. The categories of water bodies and its hygienic classification according to degree of their pollution were set by these regulations.

Protection and quality of water used for bathing are determined according to the regulations “On Protection of Surface Water Bodies from Pollution”(№ 425 of 31 December 2013) and the “Sanitary Rules and Standards on Protection of Surface Waters from Pollution”, approved by the Order of the Ministry of Labour, Health and Social Affairs No. 297/H of 16 August 2001.

Quality of water used for bathing is also regulated by the regulations approved by the Government: №440 of 31 December 2013 “On Approval of the Regulation on Water Protection Belts; №414 of 31 December 2013 “On Approval of the Guidelines for Calculation of the Standards for Pollutants Discharged with Wastewater into Surface Water Bodies ”; №425 of 31 December 2013 «On Protection of Surface Water Bodies from Pollution »; №445 of 31 December 2013 “ On Approval of the Technical Regulation on Water Protection Belts for Small River of Georgia”; №17 17 of 3 January 2014“On Approval of the Environmental Technical Regulations”.

In accordance with the “Sanitary Rules and Standards on Protection of Surface Waters from Pollution”, two categories of water use (water bodies of the first and the second category) were defined. The first category includes water bodies used as sources for centralised or non-centralised drinking water supply, and water supply for food industry. The second category includes water bodies used for cultural and social purposes, recreation and sports. For such water bodies, including those used for cultural and social purposes (recreation and sport), the maximum permissible concentrations (MPC) for 1,346 harmful substances and 4 levels of pollution degree (acceptable level of pollution, light pollution, high pollution and particularly high level of pollution) were defined.

Additionally, according to the country’s water legislation and regulations (On Water Protection Belts №440 of 31 December 2013, On Water Protection Belts for Small River of Georgia” №445 of 31 December 2013), sanitary protection zones and water protection belts have been defined. The economic activities are limited in such zones and belts.

In the sphere of surface waters quality monitoring, in compliance with the legislation of the country, National Environmental Agency (with its branches) of the Ministry of Environment and Natural Resources Protection of Georgia is identified as a competent authority. Each year the number of controlled waters and water samples taken for tests increases. For example, in 2013 water samples for surface waters quality tests, including hydro biological ones, were taken from 47 points on 27 surface water bodies, in 2014 such researches were conducted on 40 water bodies (rivers/lakes) from 69 points, and in 2015, the total of 110 points on more than 60 rivers, 9 lakes and 3 water storage basin were tested. 786 samples were tested in total. It should be noted that, the analysis of water quality in water bodies is conducted according to the schedule. 33 physico-chemical and 4 microbiological parameters are assessed to determine quality of these waters (for the presence of: E.coli, total coliform bacterium, streptococcus, bioburden). Monthly data bulletins "Brief review of environmental performance in Georgia", published on the website of the Agency, is compiled on the basis of the analysis conducted.

In spite of it, further research in this direction, development and implementation of the complete monitoring program for other water bodies, used for bathing are needed.

On the assumption of the mentioned above, the following project proposals for the targets, to be set only on the national level, were specified:

- Elaboration of a new draft law «On Water Resources Management» and creation of national register of water bodies, suitable for bathing (2016).;
- Elimination of unauthorized waste landfills on the territory of water conservation zone of surface water bodies (2014-2017);
- Further development of monitoring of water quality in surface water bodies by 2016.
- Implementation of new standards and methods in heavy metals analysis and other informative parameters.

5. Review of measures taken

To implement the target specified above, the following 5 measures were proposed:

- Elaboration of a new draft law «On Water Resources Management»;
- Adoption of the new «Waste Management Code»;
- Elaboration and implementation of Sanitary Regulations and Standards for bathing water quality, taking into account WHO recommendations and EU Directives (2015);
- Inventory and elimination of unauthorized waste landfills on the territory of water conservation zone of surface water bodies (2014-2017);
- Creation and beautification of water conservation zones near water bodies, used for bathing (2014-2020).

For the purposes of first three measures implementation:

- the Ministry of Environment and Natural Resources Protection of Georgia in 2013-2015 elaborated a new draft law on “Water Resources Management”;
- Georgia Parliament adopted “ Waste Management Code” in 2014;
- The Ministry of Labor, Health and Social Affairs developed a new project of technical regulations on «Bathing Water Quality» in 2015, approval thereof is scheduled for the period of 2016.
- In 2015, compared to the previous years, National Environmental Agency increased the amount of points for water samples collecting to be tested for quality of water in surface water bodies and introduced new methods and standards for quality of water in surface water bodies control.

To fulfil the fourth measure, with the support of the project «Waste Governance in the ENPI East Region», inventory of both legal and illegal waste landfills was conducted and the risks for the environment thereof were assessed in Kvemo Kartli region. As for the fifth measure, that is: “Creation and beautification of water conservation zones near water bodies, used for bathing”, according to the legislation in force, this issue falls under the competence of the local council and the process of this measure implementation will be strictly controlled after adopting the new law on “Water Resources Management”.

3. Assess the progress achieved towards the target.

At present, the standard classification for water bodies does not exist in Georgia. The legal provisions regarding management of waters used for bathing and recreation and their quality, in particular, the requirements on quality, monitoring and protection, etc, are carried out in accordance with the water legislation of Georgia and subordinated legal acts. These regulations set up the categories of water bodies and hygienic classification according to degree of their pollution, the sanitary protection zones and water protection coastlines. It should be noted, that certain progress was achieved in this sphere. The projected measures aimed at obtaining targets are implemented on a phased basis. Each year the number of controlled water bodies and water samples taken for tests increases. However other surface waters, suitable for bathing, are not covered by the monitoring process. Consequently, works should be continued to achieve the final goal.

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?

There was no need to do it for this target.

XVI. Quality of waters used for aquaculture or for the production or harvesting of shellfish (art. 6, para. 2 (j), third part)

Draft proposals for the targets were not defined in this area

XVII. Application of recognized good practice in the management of enclosed waters generally available for bathing (art. 6, para. 2 (k))

Draft proposals for the targets were not defined in this area

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

1. Description of the target, target date and baseline conditions

Historically contaminated territories cause a large environmental problem for Georgia. In particular, expired and inapplicable pesticide chemical, ruins of arsenic recycling plant and arsenic recycling wastes in Lentekhi Municipality (Tsana) and Ambrolauri Municipality (Uravi) and others. Considering this, long-term and short-term targets are set on the national level in this sphere in compliance with the second National Environmental Health Action Plans for the period of 2012-2016. Long-term target is “Implementation of the modern waste management system”, and short-term targets are:

- Improvement of the management system (collection, transportation and disposal) of the municipal and hazardous wastes in 2015-2016.
- Reduction of environmental pollution caused by accumulated hazardous wastes until 2016.

On the assumption of the mentioned above, a number of projects were implemented to enhance waste management system capabilities in the country, with the support of various international organizations, as a result thereof waste management system is gradually improving, dangerous, obsolete and unapplicable pesticides and the wastes thereof are being withdrawn from the market and undergo toxicity elimination. The question of unauthorized waste landfills elimination, including the territory of water conservation zone of surface water bodies, is under consideration.

2. Review of measures taken

The following measures are planned to reach the first target:

- Development of a new draft law “Waste Management Code” (2013-2014);
- Development of the “National Waste Management Strategy ” and the “National Action Waste Management Plan” (2013-2014);
- Development of the database of the hazardous wastes and sites particularly contaminated by tailings (arsenic) of the mining and chemical industries as well as expired and outdated pesticides - by 2015;
- Capacity-building in waste management at the national level (2013-2016);
- Capacity-building of municipalities in the field of administration, planning and waste management (2013-2016);
- Support the development the Municipal Waste Management Plans, which will be harmonized with the National Waste Management Plan (2013-2016);

- Conducting of workshops and public awareness campaigns on possible negative impact of the polluted areas to the surface and groundwater resources – on a permanent basis.

Implementation of the measures:

The Ministry of Environment Protection of Georgia with the support of the TWINNING PROJECT during 2013-2014 has introduced the following actions:

- The “Waste Management Code” was adapted and became effective as from 1 January 2015
- To establish a modern waste management system:
 - Long-term (15 years) National Waste Management Strategy was developed;
 - National (5 year) Action Plan for Waste Management” was developed;
 - Rules of prior informed consent on export and import of certain hazardous chemicals and pesticides were developed;
 - Action Plan for Implementing Strategies to Reduce Chemical, Biological, Radiological, and Nuclear Hazards (2015-2019), and others were developed.
 - Law “On Export, Import and Transit of Waste across the Georgian Territory“ is still being developed.

To enhance capacity of municipalities in the field of administration, planning and waste management, training materials for development and implementation of waste management plans are prepared, hence the large companies and municipalities have an opportunity to develop their own waste management plans, which must comply with the national waste management plan and others.

The following measures were planned to achieve the second target:

- A detailed study of wastes, containing arsenic and accumulated in Tsanah and Uravi, based on its inventory, as well as development of a project on decontamination (Action Plan) and implementation of the priority (emergency) measures (2013-2015);
- Study and assessment of hazardous substances placed in the hazardous waste burial site in Ailgudzha (2013-2015);
- Additional packaging of wastes containing persistent organic pollutants, temporary placement in safe location and further transportation and decontamination, etc. (2013-2015);
- Inventory of burial site for hazardous chemicals wastes;
- Development of a draft of measures on storage and decontamination of accumulated waste containing arsenic.

Review of measures taken:

As mentioned above, providing safe life conditions for people is one of the tasks of the highest priority for the government of the country. In this regard attention shall be paid to a number of projects implementation, enabling the government goals achievement. To mention few:

- «Waste Governance in the ENPI East Region», the project is implemented in 7 countries, including Georgia in Kvemo Kartli region, where inventory of both legal and illegal waste landfills was conducted and the risks for the environment thereof were assessed. Regional strategy and waste management plan are elaborated. The plan provides for organizing regional waste landfills and facilitating introduction of waste processing and recycling system;

- “Technological infrastructure for controlled waste landfills in Borjomi” – technical works were conducted, corresponding machinery was transferred to the local authority;

- In the scope of two projects “Management of Mining waste containing arsenic in Georgia” and “Response to existing emergency on Tsana arsenic cycling plant from the point of view of ecological safety in municipality of Lentekhi (Tsana) и municipality of Ambrolauri, village Uravi” existing situation was assessed and action plan for safe wastes allocation was developed. Two burial sites (Uravi 1 and Uravi 3) were constructed, where existing arsenic containing wastes are allocated and contaminated soil and inert material are deposited in other burial sites (1,3,4). To perform such measures, corresponding territories are reserved for such purposed and they are fenced off. The burial sites (2 and 3) municipality of Lentekhi are fenced off as well.

- “Allocation of persistent organic pollutants and preparatory on-site measures for persistent organic pollutants, existing in Georgia”. In the scope of this project landfill for toxic chemicals allocation Iaglugi was studied and examined, action plan for the landfill remediation was developed, 4 hectare of the territory were fenced off. 230 tons of persistent organic pollutants were collected, packed and removed to France and Belgium for deintoxication procedure.

- Within the framework of the project “Enhancement of elimination potential and prevention of new accumulation of expired and inapplicable pesticide chemicals, as a model of inapplicable hazardous chemical substance use regulation on the territories of the former Soviet Union”, inventory of contaminated territories was conducted and service life of expired and inapplicable pesticide chemicals was estimated. Creation of higher awareness campaigns were delivered for farmers and so on.

- The project “Infectious Hospital Waste Management” provided for possibilities enhancement and assistance to private sector in the sphere of infectious hospital waste management. In the cities of Tbilisi and Samtredia, two state-of-the-art insenirators were equipped, they will serve medical institutions of western and eastern Georgia;

- “Waste management technologies in the regions”. The purpose of this project was to provide assistance to the government of the country in organizing a system of integrated waste management in two regions of the country (the Adjara Autonomous Republic and Kakheti). Inventory of spontaneous waste landfills and contaminated territories of these regions was conducted, the plan for waste landfills elimination in the municipality of Gurjaani was elaborated.

- Within the framework of the project “Support to the decision making with the purpose to rectify the Convention of «Minamata » and strengthening of institutional possibilities for the performance thereof”, works on assessment of existing mercury stocks were conducted and primary reports were compiled and so on.

- In 2013-2015 seminars and awareness campaigns about the potential adverse effect from contaminated territories on surface and underground water resources were delivered for local authority employees, members of the general public and farmers and so on.

3. Assess the progress achieved towards the target.

On the assumption of the mentioned above, it should be noted that executive bodies of Georgia conduct intensive works on legal framework development and implementation of activities aimed at providing safe life conditions for the population, including chemical safety and various wastes management. It facilitates identifying and cleaning up the most contaminated places.

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?

There was no need to do it for this target.

XIX. Effectiveness of systems for the management, development, protection and use of water resources (art. 6, para. 2 (m))

1. The target, target date and baseline conditions

In compliance with the law “On Water”, adopted in 1997, water resources management is performed by the Ministry of Environment Protection, the Ministry of Energy, the Ministry of Labour, Health and Social Affairs, the Ministry of Regional Development and Infrastructure and the Ministry of Agriculture. The Environmental Protection division of the Ministry of Environment and Natural Resources Protection of Georgia controls water resources use and protection, monitors terms and conditions of the permits and certificates issued, keeps record of violating guidelines of trade waste discharge into water bodies and so on. The National Environmental Agency of the Ministry of Environment and Natural Resources Protection of Georgia monitors the quality of surface waters.

Water protection planning is performed within the framework of environmental impact assessment preparation. Several issues, concerning water management, are solved in the scope of international projects, financed by the European Commission and other international organizations; Public participation in the water resources management is basically confined to taking part in considering the projects, developed by water withdrawers «Projects of environmental impact assessment». Public hearings are organized while submitting these documents; comments and recommendations, made during these hearings, are taken into account when final conclusion is prepared. In compliance with the regulatory acts for water bodies, including ground waters, issued by the Ministry of Environment and Natural Resources Protection of Georgia, and the Ministry of Labour, Health and Social Affairs, water consumption categories are specified and hygiene classification of water bodies according to their contamination degree was adopted.

The Joint Intergovernmental Commission on Trade and Economic Cooperation between Azerbaijan Republic and Georgia was organized, one of its activities involve enhanc-

ing cooperation in the sphere of environmental protection, including the area of transboundary water resources use and protection. «Strategic program (Georgia-Azerbaijan)» was elaborated with the support of the project «Reducing transboundary degradation in the Kura-Araks river basins» (GEF-UNDP). In 2014 the given document was approved by the Ministry of Environment Protection of both states as well as the road map for implementation of integrated water system management in Kura river basin. In 2013-2014 the work on preparation of bilateral intergovernmental agreement between Georgia and Azerbaijan continued. In the January of 2014 the last (sixth) meeting of technical experts was held in Baku. Besides, in Georgia consultative meetings of the representatives of the Ministry of Foreign Affairs, Agriculture and Energy were held with the participation of the international experts and others.

Joint management agencies of transboundary water resources between Georgia and Azerbaijan Republic will be formed after signing an agreement about «Cooperation in the sphere of transboundary water resources between Georgia and Azerbaijan Republic». Water-food-energy-ecosystem NEXUS STUDI assessment is conducted for the purposes of intersectoral cooperation improvement with the support of United Nations Economic Commission for Europe in the Alazani-Agrichai river basin.

At present, a draft law on “Water resources management” has been elaborated. After adopting this law, reforms of water resources management system are planned, for the purposes thereof it will be necessary to adopt a number of prepared subordinate acts and standards drafts to achieve Integrated Water Resources Management. It will also include transfer to basin authority principles, basins management plans elaboration, water quality standards by classes identifying, monitoring programs enhancement, institutional mechanisms of interstate cooperation improvement in compliance with European standards and so on.

Taking into account the mentioned above, project proposal (target) was made: “Improvement of surface water quality”.

2. Review of measures taken

The following draft measures were developed and proposed to achieve the target:

- Development and adoption of the new draft law “On Water Resources Management” (2015)
- Development of subordinate legal acts (after adoption of the new Law “On Water Resources Management”, 2015);
- Development of a new classification system on water use for surface water bodies (after adoption of the new law “On Water Resources Management” (2016);
- Development of surface water quality standards (after adoption of the new law “On Water Resources Management”) (2015);
- Development of the programme on water resources quality monitoring and expansion of the water pollution monitoring - by 2015 (after adoption of the new law “On Water Resources Management”.

Implementation of the planned activities

As for the suggested activities implementation, it should be noted that certain works have been conducted in the country, in particular for the purpose of performing the first three:

➤ under the first National Policy Dialogue (NPD) on Integrated Water Resources Management (IWRM), a new draft law concept of “Water resources management” was elaborated with the support of international experts in 2012-2013.

➤ the draft law on “Water Resources Management” was elaborated and in 2016 the new law adoption is scheduled, consequently implementation of project activities, development of subordinate acts and standards and of a new water consumption classification system for surface water bodies will be commenced after the draft law adoption;

➤ National Environment Agency annually develops a program on surface water quality control and the amount of water bodies and water samples taken for quality control increases each year;

➤ Within the framework of the European Commission completed the project «the Kura-Araks river basin management, phase 3», the projects of the river basin management plans for 3 pilot river basins, applying the methodology of EU Water Framework Directive were elaborated: the Alazani (transboundary basin with Azerbaijan), the Hrami-Debed (transboundary basin with Armenia) and the Aragvi River;

➤ Within the framework of GEF-UNDP “Reducing Transboundary Degradation in the Kura-Araks Basin” (2011-2014 Georgia, Armenia, Azerbaijan) works on renovation of transboundary diagnostic analysis in this basin were conducted;

➤ Within the framework of UNECE and OSCE preparation of project proposals “Agreement on cooperation in the sphere of transboundary water resources between Georgia and Azerbaijan Republic” was completed and so on. The question of bilateral cooperation prospects in the sphere of the second Integrated water management dialogue was discussed at the meeting of coordination committee of the memorandum process management with the participation of Armenian representatives on the 5th of April, 2016 in Tbilisi.

➤ The Ministry of Environmental and Natural Resources Protection and UNECE concluded a new memorandum of mutual understanding in the sphere of integrated water management on the 17th of November, 2015, and as a result thereof the second stage of National policy dialogue (NPD) on integrated water resources management (IWRM) started;

3. Assess the progress achieved towards the target.

In recent years, Georgia has made significant steps towards reforming environment and health policies, and legislation, etc. However, the reforming process has not been completed yet, especially in the mentioned areas. The Law of Georgia “On Water”, adopted in 1997, became outdated and does not reflect the current trends and demands. At present, a concept of the draft law “On Water Resources Management” has been developed within the National Policy Dialogue. The scheduled reform of water resources management will be implemented after adoption of the new law “On Water Resources Management”. As a part of the reform-

ing, it is necessary to adapt a number of acts and regulations to achieve IWRM, including transition to the principles of basin management and development of the basin management plans, establishment of the quality standards, improvement of the surface water quality monitoring programs and so on.

Based on the above, it should be concluded, that the planned measures are being implemented to achieve the targets, and the target will be reached after adaption of the new draft law “On Water Resources Management”.

5. 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?

There has not been such necessity in this sphere, however, due to the fact that a new draft law on «Water Resources Management» is scheduled, the specified activities, taking into account up-to-date requirements, have been postponed and will be implemented after law adoption.

XX. Frequency of publication for information on the quality of drinking water and other waters related to Protocol

1. The target, target date and baseline conditions

Georgia is a Party of the Aarhus Convention. The requirements of this Convention are regulated by the General Administrative Code and the relevant special laws. According to these laws, information about the quality status of environment, morbidity, as well as information regarding to water quality status, management and decision-making process thereof, can not be classified as a state secret.

Current status:

- special departments for public and media relations have been established within the ministries and state agencies;
- all ministries and departments have websites, which are regularly updated and include information about current and planned activities;
- electronic system “Codex” have been developed; it includes texts of all legal and subordinated acts, decrees and orders issued by the Presedent, governmental resolutions and orders issued by different ministries and agencies;

Despite the above-mentioned, to improve the system the following were preposed: “The annual publication of data on the drinking water quality in 5 major cities by 2015” and “Publication of the annual report on the quality of waters used for bathing by 2017”.

2. Review of measures taken

The following three measures were planned to reach the targets:

- Development of the electronic national database on the drinking water quality by 2015;
- Preparation and collection data on drinking water quality status and its publication by 2015;
- Preparation and collection data on the drinking water quality status used for bathing and its publication by 2015.

Implementation of measures

The Ministry of Agriculture and United Water Supply Company process the results of drinking water quality testing. The ministry of Environment and Nature Resources Protection, using ad hoc programs, process statistical reports on water consumption from river basins, which all water consumers submit, in terms of administrative-territorial entities, types of economic activities and others. National Environment Agency conduct research and process data on surface water quality in terms of chemical and biological parameters. The Ministry of Labor, Health and Social Affairs process data on diseases (including water related ones); Processed materials are transferred to National Statistics Agency of Georgia for further processing and publishing. The Ministries of Agriculture, of Environment and Natural Resources Protection, of Labor, Health and Social Affairs, United Water Supply Company and others systematically display such data on their websites.

The Ministries of Environment and Natural Resources Protection publishes National report on “Environment condition” once in four years, the Ministry of Labor, Health and Social Affairs publishes report on “Population health condition”, as well as annual statistical book “Healthcare“, which is also displayed on the ministry website. National Statistics Agency of Georgia publishes statistical yearbook of Georgia, which presents corresponding data and others.

3. Assess the progress achieved towards the target..

As mentioned above, Georgia is a Party of the Aarhus Convention. The requirements of the Convention are regulated by the General Administrative Code and by the relevant special laws. Therefore, the information on environment quality and morbidity status, as well as information regarding water quality status in the collective water supply systems, management and decision-taking process thereof can not be classified as a state secret.

Therefore, the information on the quality of the drinking water supplied and of other waters related to the Protocol, as well as information on regarding diseases (including water-related ones) is easily accessible to all entities and individuals.

3. 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?

There was no need to do it for this target.

Part Four

Overall evaluation of progress achieved in implementing the Protocol

SUMMARY

In recent years Georgia has made a significant steps towards reforming environmental and health policies, legislation and institutions. Relevant ministries and agencies carry out certain work for the purpose of convergence of the legislation of the country with EU legislation, implementation of international standards and best practices in the field of water resources management and better control over diseases, including water-related ones. In the framework of the reform process, a number of laws and other regulatory acts in the sphere of environmental protection and health were developed and updated. However, regulatory reform is not yet completed, especially in the field of water resources management and provision safe living conditions to the population, a monitoring system for early detection, investigation of infectious diseases (including water-related ones) and a response system. In this regard, it should be noted, that a new draft law "On Water Resource Management" was developed and adoption thereof is planned by the end of 2016.

In recent years, due to the large-scale activities conducted in the country, aimed at construction and rehabilitation of water supply systems, the amount of the population, including refugees, with access to the improved resources of drinking water increases on a regular basis. This process is facilitated by investments from the government of Georgia and international donors. A number of projects, including work on small-scale water supplies is carried out. Short-term (2015-2017.g.) and long-term programmes and strategies (2014-2020.g.) were developed. Proportion of the population having access to safe drinking water and sanitation is gradually increasing. However, these issues still remain pertinent.

Georgia is a water-rich country, but water resources are unevenly distributed across the country, and the problem of providing population with a sufficient amount of water remains relevant. The main risks to human health are associated with unsafe water quality. These problems are aggravated by the fact that the sanitary and technical conditions of the existing water supply and sewerage systems, and sewage treatment facilities are not satisfactory.

As for drinking water quality, it should be noted, that in recent years financial resources for the implementation of the state target programme for the coverage and monitoring of drinking water quality across the whole country have been gradually increasing. Projects to develop plans on safe drinking water for municipalities are carried out with the support of international organizations.

According to the National Service of Food of the Ministry of Agriculture, in 2014-2015, the level of bacteriological pollution of drinking water across the whole country has remain at the same level. This can be explained by the fact, that in recent years infrastructure of water supply systems has improved, and the drinking water quality monitoring system has improved. However, the indicator has remained at a high level. Therefore, a problem of the drinking water quality remains pertinent.

If the existing pace of construction and rehabilitation of water supply systems remains at the same level for 2016-2019, the targets set in the sphere of socio-economic development of the country in what concerns the drinking water quality improvement and reduction of the percentage of water samples, not complying with the microbiological parameters standards of drinking water quality, will start being achieved since 2016.

The legal provisions regarding management of waters used for bathing and quality thereof are carried out in accordance with the water legislation of Georgia and subordinated legal acts. Every year the number of surface water bodies, which are subject to the water quality monitoring conducted by the National Environment Agency (with its branches) of the Ministry of Environment Protection and Natural Resources of Georgia. However, the monitoring system needs to be expanded in this direction.

Intensive works on legal framework development and implementation of activities aimed at providing safe life conditions for the population including chemical safety, and wastes management are carried out. It facilitates identifying and cleaning up the most contaminated places. At present, a draft law on “Water Resources Management” has been elaborated. After adopting this law, reforms of water resources management system are planned, for the purposes thereof it will be necessary to adopt a number of subordinate acts and standards to achieve Integrated Water Resources Management. It will also include transfer to basin authority principles, basins management plans elaboration, establishment of water quality standards, monitoring programs enhancement, and so on.

As for the issue of reducing water related disease outbreaks and incidence, it should be noted that in compliance with Georgian legislation, the Ministry of Labour, Health and Social Affairs is the main control authority for the system of public health, responsible for assessing risks for people’s health and timely informing people of danger thereof. According to the available data, the system of epidemiological surveillance, detection and responsiveness to infectious diseases, including water related ones has been gradually improving lately. For the purpose thereof, necessary financial, organizational and research activities are conducted. The system of notification and information transfer about epidemic outbreaks is being gradually improved at the national and local level. The reasons and the sources of infectious disease origin are efficiently determined, recreational and preventive measures are taken. As a result of implementation of free emergency medical services and several reforms conducted in the sphere of health insurance, first medical help and doctor’s consultations became available for the population, even in case of diarrhoeal diseases, so consequently, the procedure of recording the number of diseases significantly improved. In compliance with the WHO recommendations, vaccination against rotavirus infections was initiated in the country and it was included into national immunization program. Epidemiological surveillance and monitoring of rotavirus infections are conducted concurrently.

Judging by the mentioned above, we can say that the system for early detection, research, responsiveness and notification about infectious diseases (including water related ones), functioning on the constant basis, works efficiently. However, it should be noted that for the purpose of further improvement of control over diseases, including water related ones, it is necessary to introduce methods of instant testing of drinking water quality and the water related diseases, and recommendations of the chapter „1.2.2 Public health bodies“ Regulation for drinking water quality control, elaborated by WHO.

As for public participation in the sphere of water resources management, prevention and control over diseases, including water related ones, it should be noted that Georgia is a party of “Aarhus Convention”. The Convention requirements are regulated by “General administrative code”, and the information about the quality of the environment state and disease incidence, as well as the information, concerning the quality of water in collective water supply system, management thereof and the decisions taken, can not be considered as a National Security Information and are accessible to the public.

On the assumption that some issues, specified in the report, are of transboundary character, the analysis of the material available on this issue, allows for the conclusion that Georgia and neighboring states, seeking cooperation, aimed at eliminating hazards of transboundary character, including those in the sphere of transboundary water resources protection and public health. Positive attitude and tendencies for entering into appropriate cooperation on the issues of transboundary water basins are observed and there are potential possibilities for further cooperation.

It should be noted, that in 2015 Economic Commission for Europe together with the Ministry of Environment Protection and Natural Resources of Georgia recommenced the process of national policy dialogue, and on 17 November 2015 in Budapest, new memorandum on National Policy Dialogue for integrated management of water resources was signed. In compliance with the memorandum, Georgia is determined to intensify efforts to implement the protocol requirements. For the purpose thereof, consultation with all the parties concerned, and with international experts are planned. Furthermore, creation of a task force is planned, it will facilitate conducting the analysis of the existing situation, aimed at developing project proposals on setting and approving targets at the official level and the protocol ratification. However, within the frameworks thereof, it is necessary for Economic Commission for Europe to give support to and assist:

- in developing a road map for fulfilling country’s obligations, specified by the protocol;

- ministries and departments, participating in the process, in development, planning, and staged implementation of targets and basic activities, and consequently, in identification of financial expenditures, needed for their achievement, taking into account the Sustainable Development Goals of UN up to 2030;

- in the sphere of assessment of small-size water supply systems and others.

The mentioned process will be an important element within the frameworks of the current and planned cooperation between Economic Commission for Europe and Georgia, taking into account the works program for the period of 2017-2019, which is related to the Association agreement between EU and Georgia and implementation of the association agenda and will facilitate active cooperation in the scope of EU sectoral assistance.

These proposals, intentions, future plans and activities of the Ministry of Environment Protection and Natural Resources of Georgia will be officially submitted for the consideration of the Executive Secretary of UNECE Mr. Christian Friis Bach in the nearest future.

Part Five

Information on the person submitting the report

The following report is submitted on behalf of Georgia in accordance with article 7 of the Protocol on Water and Health.

Nana Gabriadze, Head of Environmental Health Division at National Center for Disease Control & Public Health of Georgia

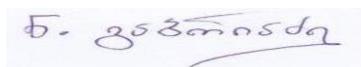
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Date: 16 April 2016

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Date: 16 April 2016