

**SUMMARY REPORT UNDER THE PROTOCOL ON WATER
AND HEALTH**

THE REPUBLIC OF MOLDOVA

Part 1

General aspects

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

YES NO IN PROGRESS

The process of setting targets in the Republic of Moldova started in the second half of 2009. After hearing at the meetings at the Steering Committee and Working Groups and after consultation with all stakeholders, the targets were approved by the joint order of the Ministry of Environment and Ministry of Health No. 91/704 as of 20.10.2010. The order was published on the websites of both ministries in 2010. Also, targets were included in a separate brochure "Setting targets and target dates under the Protocol on Water and Health in the Republic of Moldova" in May 2011 by the NGO «Eco-TIRAS» with the financial support of the Swiss Agency for Development and Cooperation (SDC) and promotion by the Economic Commission for Europe of the United Nations (UN). Altogether 34 targets were set for all 20 sections of the Protocol.

If targets have been revised, please provide details here.

Also a joint declaration signed between the Ministry of Environment of the Republic of Moldova, Ministry of Health of the Republic of Moldova, the EEC UN and the Swiss Agency for Development and Cooperation on accomplishing the project "Implementation of the targets under the Protocol on Water and Health in the Republic of Moldova."

One of the results of this stage of project implementation is development of the National program and actions plan to achieve the targets under the Protocol on Water and health in the republic of Moldova. At the stage of program development, the analysis of the current situation in the sector of water supply and sanitation was conducted, and the targets were revised, including:

- targets achievement period was extended till 2020 and 2025;

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

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- the check-list and values of the targets were reconsidered;
 - two parameters were added in the third section (water safety plan and introduction of equal access to water for marginalized groups of people into regulation enactments);
 - in sections 3-11 the amount of settlements to be connected to the systems of water supply and sewage collecting system was increased, as well as the number of waste water treatment plants with the purpose to prevent water reservoirs contamination;
 - 16th section «Quality of water, used for aquaculture or shellfish and crustaceans cultivation and cropping» was eliminated;
 - from the 20th section the clause, providing for establishing Information Center “Clearing house” was removed, as it was already implemented;
 - the section 7 and 8 were united into single one, which is to be implemented with the help of similar activities, that’s why single target was identified.

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

At this stage, the National Program for implementation of the Protocol on Water and Health in the Republic of Moldova for the period of 2016-2025, which contains revised targets, is being approved by ministries and other institutes, and at a later stage it will be submitted to the government for approval and published in the Official monitor of the Republic of Moldova.

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.

In compliance with the joint Decree as of 21 November, 2012 under the number of №94/1166 about establishing the Committee on supervision over the project of EU NATO Mediterranean Sea Alliance on «Targets implementation in compliance with the Protocol on Water and Health». The Ministry of Health and the Ministry of Environment play coordinating role in targets implementation. The Coordination committee on supervision over the project consists of the representatives of Stationery Office, the Ministry of Agriculture, the Ministry of Internal Affairs (Service (department) of Civil Protection and Emergency Situations), the Ministry of Education, the Ministry of Finance, the Ministry of Foreign Affairs and European Integration, the Ministry of Urban Development and Construction, State Ecological Inspectorate of Moldova, State Hydrometeorological Service, Agency "Apele Moldovei", Institute of Ecology and Geography Moldova at the Academy of Sciences, National Statistics Bureau of Moldova, 'Moldova Apa-Canal' Association.

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

National strategies and regulatory enactments:

- Government decree (GD) №1032 as of 20.12.2013 about approval process of National Public Health Strategy, www.cnspl.md

- Government decree № 301 as of 24.04.2014 about approval process of Environmental Protection Strategy for the period of 2014-2023 and action plan for its implementation;
- Government decree № 199 as of 20.03.2014 about approval process of Water supply and Sanitation Strategy for the period of 2014-2028;
- Law №303 as of 13.12.2013 on Water supply and sewage disposal service;

- Government decree № 808 as of 07.10.2014 about National action plan for Association agreement between Moldova and the European Union for the period of 2014-2016;

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

The resource mobilization strategy for compiling action plan was elaborated as an integral part of the National program for the Protocol on Water and Health in the Republic of Moldova implementation for the period of 2016-2025, which took into account all the sources of financing of the projects (national and international) in the sphere of water supply and sewage disposal.

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?

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 current report was executed by the authorized people (national coordinators) The Ministry of Health and the Ministry of Environment, which play coordinating role in targets implementation. Furthermore, the data from the Ministry of Environment Departments, such as: State Ecological Inspectorate of Moldova, State Hydrometeorological Service, Agency "Apele Moldovei", Institute of Ecology and Geography Moldova at the Academy of Sciences were submitted.

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).

Financial constraints were not an obstacle to development of the Program and Plan of action to implement the targets under the Protocol on Water and Health in the Republic of Moldova.

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.

The national report on application of Mechanism for assessing equal access was developed, on the basis thereof two measures were identified in the plan of actions for the Program on targets achievement in compliance with the Protocol on water and health in the Republic of Moldova. Correspondingly, it aims to provide legal and institutional foundation for equal access to water and sanitation, for vulnerable and marginalized groups of the population and creation of solidarity funds in this sphere. Average general score of Score-Card amounts to 0,9 out of maximum 3 clauses. To provide equal access to water, the following steps have been projected: integration of fair access into institutional sphere, national strategies and into definite action plans.

Furthermore, the process of targets setting included actions aimed at international acts introduction, in particular EU directives in the sphere of water resources, in compliance with the signed Association agreement between Moldova and the European Union for the period of 2014-2016;

Part 2

Common Indicators¹

I. QUALITY OF THE DRINKING WATER SUPPLIED

A. Context of the data

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

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

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

Water supply system, referred to in the report, provides both the urban and rural populations.

Out of the total volume of the water supplied, 53,2 million m³ or 71,7% falls to the share of the population, 5,5% is for the share of state government institutions, and 22,8% is for the share of other water consumers. In 2014 the volume of the water, supplied to the population increased by 0,8%, in comparison with 2013

Table №1. Water supply systems and the volumes of the water supplied, 2010-2014

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.

	2005	2010	2011	2012	2013	2014
Quantity of water supply systems	577	690	723	742	779	836
Total length of water supply system, km	6765,8	8509,9	8914,7	9324,2	9901,1	10483,7
Volume of water supplied to consumers, million m ³	67,1	75,0	73,5	75,0	74,9	74,3
Including to the population, million m ³	47,9	51,3	51,2	52,1	52,8	53,2

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

Samples are taken at the outlet of the water treatment facilities, from drinking water reservoirs, from the distribution system and point of consumption.

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

National standards adopted in Moldova for drinking water do not differ from those contained in the EU Directive 1998/83/EU and in the WHO Guidelines.

B. Bacteriological quality

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

Table № 2. Water quality for microbiological indicators

WatSan_S2	Baseline value 2005	Intermediate value 2009	Value reported in the previous reporting cycle 2012	Current value 2015
E.coli (colon bacillus)	21.9%	20.8%		
E.coli	-	12.6%*	13%	14,5%
Enterococci	-	9.6%*	13,3%	15,1%

*Note: research on E.coli and enterococci became mandatory since 2007 after the approval of a new document on the quality of drinking water - Sanitary Standards for Drinking Water Quality; up to 2007 the E.coli was researched.

Growth of the total annual amount of drinking water samples in 2015, which fail to comply in terms of the microbiological parameters, is connected with the increase of relative share discrepancy of drinking water samples from wells, from 33% in 2014 to 40% in 2015.

C. Chemical quality

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

- a) Fluoride;
- b) Nitrate and nitrite ²;
- c) Arsenic;
- d) Lead;
- e) Iron.

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

Table № 3. Drinking water quality for chemical indicators

Substance	Baseline value 2005	Intermediate value 2009	Value reported in the previous reporting cycle 2012	Current value 2015
Fluoride	11,1%	14,5%	13,9 %	15,8%
Nitrate and nitrite	53%	42,7%	41,2%	39,9%
Arsenic ³	0%	0%	0%	0%
Lead	0%	1,3%	0%	0%
Iron	6,5%	11,1%	8,3%	9,3%
Additional chemical parameter 1: boracium	3%	6,5%	17,8%	37,8%
Additional chemical parameter 2: manganese	1,7%	5,95%	0,3%	4,3%

² As defined in the WHO Guidelines for drinking-water quality.

³ It is recommended to take into account new and emerging pressures such as climate change or agriculture practices.

Substance	Baseline value 2005	Intermediate value 2009	Value reported in the previous reporting cycle 2012	Current value 2015
Additional chemical parameter 3: turbidity	4%	4,1%	2,9%	3,9%
Additional chemical parameter 4: ammonium	6,5%	27,2%	44,4%	44%
Additional chemical parameter 5: solid residue	29,5%	25,3%	26,9%	27%

Table №3 presents aggregated data for all the sources of drinking water supply. Growth of the samples share, which fail to comply with national standards in terms of fluorine and boracium presence, is put down to increase in the number of newly constructed water supply systems, provided with water from underground sources (artesian boreholes), containing mostly fluorine and boracium and therefore being of endemicity character. On the other hand, reduction of the samples share, which fail to comply with standards in terms of nitrates content, is related to the decrease in the total amount of wells, which are used for supplying population and social objects with water.

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

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

- a) For reporting outbreaks, please indicate if the numbers reported are related to all expo-sure routes or only related to water (i.e., for which there is epidemiological or microbiological evidence for water to have facilitated infection));
- b) For reporting incidents:
 - i) Please report cases per 10,000 persons;
 - ii) Please differentiate between zero incidents (0) and no data available (-);
 - iii) If possible, please distinguish between autochthonous and imported cases.

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

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

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

Table № 4

	Incidence			Number of outbreaks		
	Baseline value 2005	Value reported in the previous reporting cycle 2012	Current value 2015	Baseline value 2005	Value reported in the previous reporting cycle 2012	Current value 2015
Cholera	0	0	0	0	0	0
Bacillary dysentery (shigellosis)	54,19	13	3,12	0	0	0
EHEC ^{4*}	0	5,52	4,53	0	0	0
Viral hepatitis A	30,7	0,22	7,82	0	0	0
Typhoid fever	0,06	0	0	0	0	0
Rotavirus infection		21,97	5,09	0	0	0
Cryptosporidium		1,74	0,2	0	0	0
Giardia		6,07	3,26	0	0	0

According to the data, presented in the table 4, no cases of cholera and typhoid fever have been registered in Moldova for the last 10 years. Furthermore, clear tendency is observed in reduction of the number of cases of other disease per 100 thousand citizens of the country, including cases of Bacillary dysentery and rotavirus infection which decreased more than 4 times (especially after introduction of obligatory immunization against rotavirus infection in 2012), except cases of viral hepatitis A, level of which is higher than in 2012, but lower than in 2014 (13,78 cases) and the incidence of diseases is of cyclical nature. Furthermore, the level of the incidence of diseases, provoked by *Giardia* increased 1,8 times and by *Cryptosporidium* - 8,5 times.

For the last 3 years, the cases of *Legionella* related diseases haven't been registered.

It should be noted that data is collected both in terms of the amount of outbreaks and the number of the incidence of diseases.

⁴ Enterohaemorrhagic *E. coli*.

III. Access to drinking water

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

Table № 5. Percentage of population with access to improved drinking water supply

Percentage of population with access to improved drinking water supply	Baseline value 2005	Value reported in the previous reporting cycle 2012	Current value 2015
Total	45	62	86
Urban	92	94	96
Rural	17	35	81

Access to improved drinking water sources is calculated by the National Center for Public Health based on questionnaires completed annually, which are submitted to territorial public health centers. Thus official statistics data about connecting to the water system and the results of surveillance and data of local public authorities on access to other improved water supply systems are considered. The data presented in the Table 5 for 2015, is based on the results of the national research of MICS 4, published in 2014 with the support of UNICEF, www.cnsp.md. Sustainable growth of the population share, having access to improved drinking water supply at the national level is observed. It is explained by largely increased access of rural population to drinking water both as a result of the construction of a great number of water supply systems and access to improved small-size water supply sources.

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

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

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

IV. Access to sanitation

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

Table № 6. Percentage of population with access to improved sanitation

Percentage of population with access to improved sanitation	Baseline value 2005	Value reported in the previous reporting cycle 2012	Current value 2015
Total	53,6 %	59%	69,7
Urban	81,6%	84%	84,5
Rural	35%	40%	60,8

Access to sanitation was calculated as a percentage of the population, having constant access to centralized and decentralized sewerage systems of small size, septic tanks, Ecosan dry toilets and human life wastage safe disposal to the total number of the population. In this sector, centralized statistical data represents information only about availability of access to the centralized sewage systems, the information about access to other improved sanitation systems received subsequent to the results of population study.

The data presented in the Table 6 for 2015, is based on the results of the national research of MICS 4, published in 2014 with the support of UNICEF, www.cnsr.md. Sustainable growth of the population share, having access to improved drinking water supply at the national level is observed. It is explained by largely increased access of rural population to drinking water both as a result of the construction of a great number of water supply systems and access to improved small-size water supply sources (Ecosan dry toilets, toilets with waste composting)

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

Water quality

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

For non-European Union Countries

Status of surface waters

Surface water monitoring in the Republic of Moldova is regularly conducted by State Hydrometeorological Service, which has a series of monitoring networks at its disposal, situated on the whole territory of the country, including 72 observation points, installed on 34 rivers, 6 retention basins, one coastal salt lake and 2 natural lakes. Observance is conducted according to 72 hydrochemical parameters.

For the period from 2005 till 2015, the quality of waters, flowing into the districts of Dniester, the Black sea, the Prut and the Danube has significantly worsened. The degree of contamination with biogenic elements, cuprum, phenols and petrochemicals increased.

In 2015 the following contaminants were registered to have the maximum concentration (in fractions of maximum permissible concentration): *ammonium ion (ammonia)*, *nitrites*, petrochemicals, phenols, *synthetic surface active substance*, *total iron*, *sulphate*, *chlorides*.

In 2015, 9 cases of extremely high contamination in terms of minimal concentration of dissolved oxygen were detected; 61 cases of high contamination, of which: 19 cases of *ammonia contamination*, 23 cases of *nitrites pollution*, 10 cases of high concentration of biological oxygen demand in 5 days, 8 cases of reduced dissolved oxygen concentration and 1 case of pollution with petrochemicals were recorded.

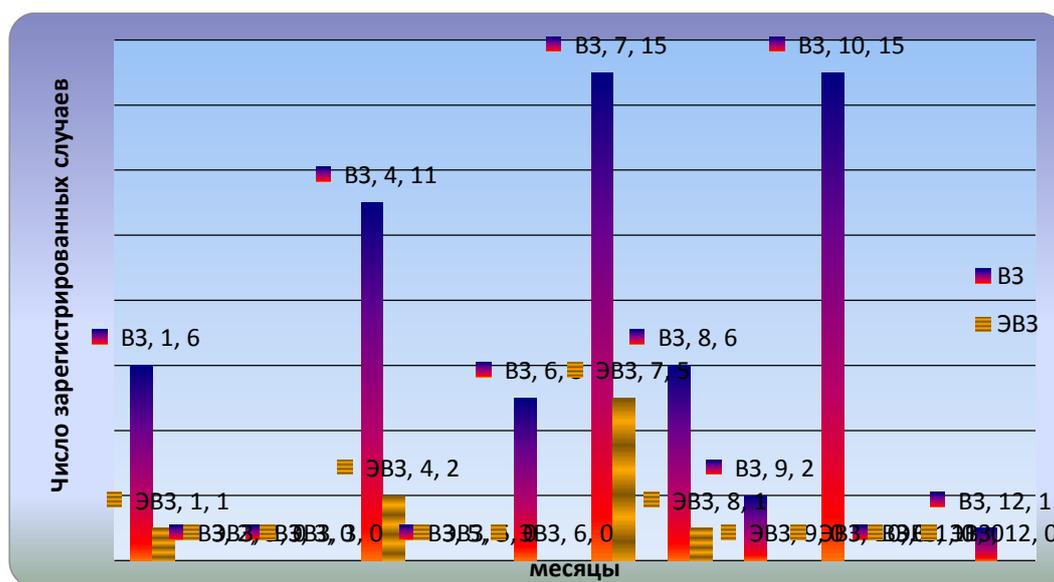


Figure. 1. Dynamics of cases of high pollution and extremely high pollution during 2015

In 2005 and in 2012 the quality of water was determined according to water pollution index. In 2015 the quality of water was determined in compliance with the environmental quality requirement regulations for surface waters (Government Decree № 890 as of 12.11.13)

Table № 7. Classes of surface waters

Classes of surface waters (rivers)	Percentage of surface water falling under class		
	Baseline value, % (2005)	Value reported in the previous reporting cycle % (2012)	Current value % (2015)
I	-	-	-
II	-	35,71	3,17

III	68,30	35,71	33,33
IV	31,70	11,90	26,98
V	-	4,77	28,57
VI	-	2,38	
VII	-	9,53	
Total number/volume of rivers classified in the country	41	42	63

Classes of surface waters (water bodies)	Percentage of surface water		
	Baseline value, % (2005)	Value reported in the previous reporting cycle, % (2012)	Current value, % (2015)
I	-	-	-
II	-	33,33	22,22
III	37,5	66,67	22,22
IV	62,5	-	22,22
V	-	-	22,22
VI	-	-	-
VII	-	-	-
Total number/volume of water bodies in the country	8	9	9

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

Status of groundwaters

Hydrogeological characteristic of basic mining levels and production sides

Ground waters are widely used for supplying major cities and industrial enterprises with water in the Republic of Moldova. Only 75% out of the total volume of the water used falls to the share of ground waters. Supplying more than 90% of the settlements with water is based on the use of ground waters. As for hydrogeological characteristic, on the territory of Moldavian water-bearing horizons are represented by Moldavian artesian basin, which is a part of Black sea artesian basin

and covers the whole territory of Moldova. The watershed area of Moldavian artesian basin is 33,7 thousand km².

As of 01.01.2000 according to the data of the government information office on underground resources at the Agency of geology and mineral resources, total exploitable volume of ground waters amounts to 3442,64 thousand m³/per 24 hours. Information on water-bearing horizons and preliminary identified ground water bodies on the basis thereof are represented in the Table 8. Water bodies demarcation is performed in compliance with the Government Decree №881 as of 7 November 2013 «about approval of Methodology of identification, demarcation and classification of water bodies».

Table 8. Status of groundwaters by aquifer

№ п/п	Aquifer	Total exploitable volume, thous.m ³ /day	Number of waterbod- ies
1.	Holocene alluvian aquifer aA ₃	249,29	3
2.	Permeable locally lightly-aquiferous Pliocene and Pleistocene A ₁₋₂ -N ₂	8,10	3
3.	Pontian aquifer N _{2p}	39,90	2
4.	Permeable locally - aquiferous upper Sarmatian-Meotian complex N _{1s3} -m	70,83	3
5.	Aquiferous middle Sarmatian (Congerian)N _{1s2}	201,70	3
6.	Badenian-Sarmatian aquiferous complex N _{1b} -s	2558,18	4
7.	Cretaceous - Silurian aquiferous complex K-S	229,45	2
8.	Vendian -рифейский aquiferous complex V-R	85,19	1
	Total	3442,64	21

Ground waters quality assessment while counting exploitable volumes thereof was conducted taking into account the requirements of drinking water quality sanitary standards, confirmed by the Government decree №934 as of 15.08.2007. To determine the conformity of ground waters quality at the regional scale, it is necessary to conduct reassessment of the ground waters of the Moldavian artesian basin. The data on total exploitable volumes in compliance with ground waters quality requirements in term of the usage type is represented in Table 9.

Total 9. Total exploitable volumes of groundwater

Year	Total exploitable volumes, thous.m ³ /day

	Total	Exploitable volumes							Predicted resources
		Total	DMS		PTS		RP		
			volume	%	volume	%	volume	%	
2005	3462,8	3384,8	2960,8	87%	391,9	12%	32,2	1%	77,9
2011	3478,6	3400,7	2974	87%	391,9	12%	34,8	1%	77,9
2013	3478,6	3400,99	2974,29	87%	391,9	12%	34,8	1%	77,9

(DMS means domestic water supply, PTS means production and technical water supply, RP means water supply for recreational purposes). Production and technical waters include those ground waters that fail to comply with the parameters, applicable for drinking water. Moreover, for domestic water supply can be used waters, conditionally corresponding to all-Union State Standard, that is these waters need additional cleaning from the components exceeding all-Union State Standards or dilution with waters from other sources of water supply. As can be seen from the above, domestic water can be conditionally considered as ground waters of good quality, and production and technical water type as ground waters of bad quality, however, on the whole, ground water resources are allocated irregularly in the Republic of Moldova. Shortage of ground waters primarily used for drinking purposes can be observed on the considerable part of the territory. On the other hand, large water supply intake with submitted confirmed water volume was preserved for different purposes. The requirements to ground water quality are subject to the Government Decree № 931 as of 20.11.2013 «about approval of Regulation on groundwaters quality».

According to the results of the ground waters monitoring, conducted by the government, the condition of these waters in a quantitative and qualitative sense can be described as generally sustainable.

Summarized data on chemical constitution of ground waters according to the results of the monitoring, conducted by the government, are represented in Table 10. In general the excessive level of mineralization, of dry residue amount and fluorine content can be observed. From the point of view of anthropogenic contamination, hazard-prone area includes water bearing horizons, situated close to the surface and above all others holocene alluvial water bearing horizon, permeable locally lightly-aquiferous Pliocene and Pleistocene complex, which show the presence of contamination with nitrates.

However because of scarcity of ground waters monitoring points, for quantitative assessment of ground waters it is necessary to conduct additional analysis in compliance with the Government Decree №932 as of 20.11.2013 «about approval of Regulation on monitoring and systematic account of surface and ground waters condition».

Table 10. Chemical constitution of ground waters (2013)

Nr.	Aquifer	pH	Salinity level g/l	Water hardness, mEq/l	Composition	Elements, exceeding MPC
1	Holocene alluvian aquifer aA3	7.1-8.6	0.5-1.5	2.5-31.0	HCO ₃ -SO ₄ Ca-Na-Mg	SO ₄ , Cl, NO ₃ , NO ₂ , Solid residue, hardness
2	Pontian aquifer N2p	7.4-7.8	0.2-2.35	8.0-23.0	HCO ₃ -SO ₄ -Cl Na-Ca-Mg	Solid residue, NH ₄ , Fe
3	Permeable locally - aquiferous upper Sar- matian-Meotian com- plex N1s3-m	7.8-7.9	0.44- 1.38	1.1-25.0 0.8-5.0	HCO ₃ Ca-Na SO ₄ -Cl Na	Solid residue, sul- phates, chlorides (south), Fe, F, NH ₄ , B
4	Aquiferous middle Sarmatian	7.8-8.9	0.6-2.5	0.8-5.6	HCO ₃ -SO ₄ Na +K HCO ₃ -Cl	Solid residue, NH ₄ ,Fe,Mn
5	Badenian-Sarmatian aquiferous com-plex N1b-s	7.2-9.0	0.5-10.0	1.4-42.0	HCO ₃ -SO ₄ - Cl Na-Ca-Mg	сухой остаток, Na, NH ₄ , NO ₃ , Fe, Mn, F B
6	Cretaceous - Silurian aquiferous com-plex K-S	7.3-8.5	north - 0.7-1.5, centre - 2.0-5.5	0.8-31.0	HCO ₃ -SO ₄ - Cl Na-Ca-Mg	Solid residue NH ₄ , NO ₃ , Mn, F, B

Works on delimitation of groundwater bodies, taking into account the requirements of Water framework directive № 2000/60/EU have already been completed. Works on classification of demarcated water bodies are in progress, moreover activities on water bodies final identification with the purpose of implementation thereof into the infrastructure of the spatial data of the European Union and development of River basins management plans are being conducted.

Please provide any needed information that will help put into context and aid understanding of the information provided above (e.g., coverage of information provided if not related to all water resources, how the quality of waters affects human health).

Water use

Please provide information on the water exploitation index at the national and river basin levels for each sector (agriculture, industry, domestic), i.e., the mean annual abstraction of freshwater by sector divided by the mean annual total renewable freshwater resource at the country level, expressed in percentage terms.

In 2014 the total of 837,00 million m³ of water were withdrawn on the whole territory of the Republic of Moldova, 127,00 million m³ thereof were withdrawn out of surface waters

(15,2%). 807,4 million m³ (96,4%) were taken from Dniester river basin, and 29,04 million m³ are out of Danube-Prut river basin and from the Black sea.

The total volume of the water used amounts at 776,7 million m³, 579,2 million m³ (74,5%) of which are used for industrial needs, 42 million m³ (5,4%) are used for irrigation. At the river basin levels, water consumption from Dniester river basin amounted to 753,33 million m³ (96,9%) and 23,27 million m³ were taken out of Danube-Prut river basin and from the Black sea.

Table 11. Water exploitation index for the period of 2005-2014

<i>Sector</i>	<i>Value reported in</i>		
	<i>Baseline value 2005, mln.m³</i>	<i>the previous reporting cycle 2012, mln.m³</i>	<i>Current value 2014, mln.m³</i>
Agriculture	84,71	87,38	84.30
Industry	16,97	14,98	579,20 (13,2)
Household use ^b	182,79	179,72	113.20

^a Please specify whether the figure includes both water abstraction for manufacturing industry and for energy cooling, mln.m³.

For energy cooling – 566,0 mln.m3

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

The figure only refers to public water supply systems

Part Three

Targets and target dates set and assessment of progress

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

The process of targets setting in the Republic of Moldova was initiated in the first half of 2009. In July of 2009 United Nations Economic Commission for Europe and the Government of Switzerland signed the agreement about providing financial support to the Republic of Moldova for the purposes of the project introduction aimed at setting targets and the dates of their implementation under the Protocol. After hearing the targets announced at the meetings of Coordination Committee and the working groups and after conducting consultation with all the participants, the targets were approved by the general decree of the Ministry of Environment Protection and the

Ministry of Health No. 91/704 as of 20.10.2010. The decree was published on the websites of the both ministries in 2010. Furthermore, the targets were specified in the separate brochure «Setting targets and terms of their implementation under the Protocol on Water and Health in the Republic of Moldova», published in May of 2011 by Scientific development and production center «Eco-TIRAS» with financial support of Swiss Agency for Development and Cooperation (SDC) and assistance of United Nations Economic Commission for Europe. In total 34 targets were set in terms of 20 sections of the Protocol.

The joint decree under the number №94/1166 about establishing Committee on supervision over the project EU NATO Mediterranean Sea Alliance on «Targets implementation in compliance with the Protocol on Water and Health» was signed on 21 November 2012. The Ministry of Environment Protection, the Ministry of Health, United Nations Economic Commission for Europe and Swiss Agency for Development and Cooperation signed joint declaration on implementation of the project «Targets achievements in compliance with the Protocol on Water and Health in the Republic of Moldova». As a result thereof, in 2015, the program and action plan were elaborated to achieve the targets in compliance with the Protocol on Water and Health in the Republic of Moldova. While developing the program, the analysis of the existing situation in the water supply and sanitation sector was conducted and the targets were revised. The 16th section «Quality of water, used for aquaculture or shellfish and crustaceans cultivation and cropping» was eliminated due to the absence of such activity in the Republic of Moldova. The clause, providing for establishing Information Center “Clearing house” was removed from the 20th section, as such center has already been established.

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

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

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

1. In this section, the following targets and timelines are set out

1	Decline in the share of samples that do not meet the quality of drinking water requirements in term of microbiological indicators (E.coli, enterococci) at the point of supply to consumers	by 2015 in cities: up to 5% of annual samples by 2015 in villages: up to 10% of annual samples	by 2020 in cities: up to 3% of annual samples by 2020 in villages: up to 7% of annual samples, and by 2025 up to 5% of annual samples
2	Decline in the share of samples that do not meet the quality of drinking water requirements in term of 5 basic chemical parameters (F, NO3+NO2, As, Fe, Pb)	by 2015: up to 25% of annual samples	by 2020: up to 20% of annual samples

3	Achieving the compliance of the quality of drinking water in schools with all normative microbiological and chemical parameters	by 2015: up to 95% of schools	by 2020: up to 100% of schools
4	Plans for the safety of drinking water	by 2015: in all cities	by 2020: in other localities with population of over 5,000 residents

Basic parameters of drinking water quality were specified in the Section I of Part II of the current report. It should be noted that in 2015, relatively high level of quality incompliance of drinking water from the underground sources was registered. The share of samples, failing to comply with the standards in terms of sanitary and chemical parameters, taken from centralized underground sources in the settlements amounted to 69,5% in comparison with 71,5% in 2012. It proves the necessity to apply the technologies of cleaning water more widely and to expand the areas supplied with water from the water pipelines, feeding from surface sources. More difficult situation is observed in the regions of North and Central districts - Glodeni, Fălești, Sîngerei and correspondingly Kalarashi, Ungheni, Hincesti, Анений Noi, Telenești, as well as Autonomous Territorial Unit of Gagauzia, where incompliance amounts at 85-100%.

The procedure of achieving targets according to this section is as follows:

1. Reduction of share of water samples, failing to comply with the drinking water quality standards in terms of microbiological parameters (E.coli, enterococcus) when supplied to consumers by 2015: at urban water pipelines: up to 5% of annual water samples, at rural water pipelines: up to 10% of annual water samples. This activity was partially implemented. Though, improvement of water quality parameters in terms of microbiological parameters is observed, the percentage of the water samples from urban water pipelines, failing to comply with the standards, reduced and amounted at 7% (2012-10,8%), the quality of samples from rural water pipelines worsened a little and amounted at 16% in 2015 (2012-14,4%). It is generally explained by the fact that there are no specialized companies to serve and maintain water pipelines in rural areas.

2. Reduction of the share of water samples, failing to comply with the drinking water quality standards in terms of 5 basic chemical parameters (F, NO₃+NO₂, As, Fe, Pb) by 2015 up to 25% of annual samples. This goal was partially achieved. Though the share of water samples, failing to comply with the drinking water quality standard in terms of 5 basic chemical parameters (F, NO₃+NO₂, As, Fe, Pb) in centralized water supply systems reduced from 43% in 2012 to 37% in 2015, the target parameter of 25% wasn't achieved.

3. Achievement of drinking water quality compliance with all controlled microbiological and chemical parameters in 95% of schools and preschool institutions by 2015 was

partially fulfilled. In 2015, the parameter of compliance of drinking water quality with the standards improved in the specified institutions in terms of microbiological parameters and amounted at 87,2% (2012 – 83%).

4. Plans for drinking water safety provision by 2015 were partially fulfilled in all the cities. Two seminars were delivered to train operators of methodology development and drinking water safety plans implementation: one of them was held in 2014 under the guidance of WHO and the other in 2015 under the guidance of IWA, which the majority of urban operators of water supply systems and part of the rural ones attended. Furthermore, in 2015, under the guidance of WHO a seminar was delivered to train the personnel of territorial Centers for Public Health on the issues of auditing drinking water safety plans. In addition, guidance for drinking water safety plans development and implementation was elaborated. It will be approved by the joint decree of the Ministry of Health and the Ministry of Environment Protection. This target was revised in the project of National program for the Protocol on Water and Health implementation and transmitted to the Sector of reduction of water related disease outbreaks and incidence (clause 2 b) article 6), as an instrument for systems management improvement and prevention of contamination and infections.

2. Describe the actions taken (e.g., legal/regulatory, financial/economic and informational/educational, including management measures) to reach the target, having regard to article 6, paragraph 5, and, if applicable, the difficulties and challenges encountered.
3. Assess the progress achieved towards the target.
4. In the review of progress achieved towards the target, has it appeared that the target and target date need to be revised, e.g., in the light of scientific and technical knowledge? If so, and if the revised target and target date have already been adopted, please describe them.
5. If you have not set a target in this area, please explain why.

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

For each target set in this area:

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

In this section, the following targets and target dates are set out

1	Establishing integrated information system of state supervision over non-contagious diseases		2014
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2	Maintaining the cholera and typhoid incidence of the population at zero level		2020
3	Reduction of viral hepatitis A and dysentery incidence		by 20% by 2020

The data on outbreaks and cases of infectious diseases, potentially related to water, was transmitted to section III.

System of epidemiological surveillance

To perform epidemiological surveillance over infectious diseases, potentially related to water, a list of top-priority infectious diseases, including five those related to water (cholera, typhoid fever, virus hepatitis A, bacillary dysentery (shigellosis) and Enterohemorrhagic intestinal infection) was identified. Case identification standards for infectious as well as parasitic diseases, related to water, were developed and approved. Software was elaborated and is being introduced for the purposes of surveillance over incidence of infectious disease among the population in real time mode and the regime of special announcement about events, potentially dangerous for public health. Planned epidemiological surveillance is performed in the republic, as well as monitoring of the events, presenting potential risk for public health, specified in official and unofficial sources of information.

Laboratory service

Measures aimed at enhancing and strengthening laboratory surveillance system were implemented. The project for laboratory service modernization was implemented with the support of European Union in 2014-2015, as a result thereof 10 state-of-the-art regional laboratories for the Service of public health surveillance were created. The majority of national diagnostic laboratories were certified and accredited to comply with national regulations, adapted on the basis of international standards.

As for the targets achievement under this section, it should be noted that:

1. Availability of integrated information system of government surveillance over noncontagious disease was partially achieved, the system was elaborated, tested in two pilot regions, but it wasn't put into operation at the national level.
2. Zero level of cholera and typhoid fever incidence rate was obtained, no cases were recorded.
3. Reduction of virus hepatitis A and bacillary dysentery incidence rate by 20 % by 2020 was achieved, the incidence of dysentery decreased more than five times, compared with 2010 (the year of targets setting), the comments on virus hepatitis A are shown in section III.

For further improvement of surveillance systems over diseases, potentially related to water, in the Republic of Moldova, the following activities are planned:

- Evaluation of the capacity of national forces and resources to meet the minimum requirements of the IHR;
- Establishing and expanding relations in the field of identification, validation and study of certain diseases, especially viral etiology;

- Strengthening the potential of public health at entry places;
- Training the personnel in the field of epidemiological surveillance and laboratory diagnosis

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

3. Assess the progress achieved towards the target.

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

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

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

In this section, the following targets and timelines are set out

1	Providing access to improved water supply sources	by 2015: up to 68% of the total population by 2015: up to 35% of the rural population	by 2020: up to 80% of the total population by 2020: up to 45% of the rural population
2	Ensuring children's access to improved water supply sources in kindergartens and schools	by 2015: up to 95% of the institutions	by 2020: up to 100% of the institutions

The dynamics of growth of the population's access to improved sources of drinking water since 2005 is given in the following table

Table № 12.

Year	2005	2009	2012	2015
Indicator	45,0	55	62	86

As can be seen from the table, considerable progress in increasing access to improved drinking water for the population was achieved. It is connected with implementation of numerous projects on water supply system construction, on average 70 a year, in particular for the period of 2010-2015 at the expense of investments, made both by international partners and National Ecological Foundation. Ten projects were implemented in 2014 at the

support of World Bank. Furthermore, such big projects as supplying water to the settlements were implemented, among them: water supply to Nisporeni District, where the water treatment plant is situated, water is supplied from the River Prut to Nisporen; to the settlements in Hîncești District from underground water intake Fîrlădeni. In the cities of Cahul, Cantemir and Leova the water treatment plants were modernized.

As for the targets achievement under this section, it should be noted that:

1. The target of providing the population with access to improved water supply sources by 2015, that is up to 68% of the total population and up to 35% of rural population was achieved, correspondingly 86% and 60,8% were obtained.
2. The target of providing children with access to improved water supply sources in schools and pre-schools institutions by 2015, for institutions up to 95% was partially achieved, only 87% were obtained in 2015, however, considerable progress of up to 69% was observed in 2009.

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

In this section, the following targets and target dates are set

1	Ensuring a proportion of the population provided with improved sanitation facilities	by 2015: up to 85% of the urban population by 2015: up to 45% of the rural population	by 2020: up to 90% of the urban population, and by 2020: up to 70% of the rural population
2	Ensuring children's access to improved sanitation facilities in kindergartens and schools	by 2015: up to 90% of the institutions	by 2020: up to 100% of the institutions
3	The increase of the number of settlements and the proportion of their population served by small (individual and / or collective) systems of improved sanitation (Ecosan dry toilets, wet constructed zones, septic tanks and other technologies)	by 2015: up to 50 settlements	by 2020: up to 100 settlements

The targets for this group are set taking into account Moldova's commitments in achieving the Millennium Development Goals.

The established target stipulates for providing the population with improved sanitation systems, ensuring children's access to improved sanitation systems in kindergartens and

schools and increasing the number of settlements and proportion of their population served by small (individual and / or collective) systems of improved sanitation (Ecosan dry toilets, wet constructed zones, septic tanks and other technologies).

As for the targets achievement under this section, it should be noted that:

:

1. The target of providing the share of the population with access to improved sanitation facilities by 2015, that is up to 85% of urban population and up to 45% of rural population was fully achieved: correspondingly 84,5% and 60,8% were obtained.
2. The target of providing children with access to improved sanitation facilities in schools and pre-schools institutions by 2015, for institutions up to 90% was partially achieved, only 82% were obtained in 2015, however, considerable progress is observed.
3. The target of increasing the amount of the settlements and the population share in them, served by improved small-size sanitation facilities (individual or/and collective), for example (Ecosan dry toilets, wet constructed zones, septic tanks and other technologies) by 2015 for up to 50 settlements was fully achieved, such projects were constructed in the amount of 120 in 100 settlements

A number of investment projects were implemented in the country to achieve this target, in particular:

- In 2014 the project on building a new type of treatment systems (wetlands), one of the largest in Europe, was fulfilled in the city of Orhei, for 20 thousand people, with the support of the World Bank.
- 120 km of sewage systems were rehabilitated in Kishinev, Nisporen, Ceadâr-Lunga and Orhei with the support of the European Bank for Reconstruction and Development, ADA, BEI and EC.
- Swiss Agency for Development and Cooperation actively supports the republic in the sphere of improving sanitation in rural areas and in the field of education & information process.

For the last years:

- ✓ method of decentralized water supply was developed and proved to be a viable option in 22 villages (a total of 50000 beneficiaries);
- ✓ as an experiment, innovative ecological models of decentralized sewage systems (wetlands objects, EcoSan-toilet) have been demonstrated. Four wetlands have been constructed in the villages of Negrea Rusca, Sarata Galbena (Hincesti district) and village Bratuleni (Nisporeni district), and other three ones are in the progress of implementation. 15000 people were provided with improved sanitation conditions;
- ✓ in the centre of Moldova 115 EcoSan toilets were built. Schools and 19000 students became beneficiaries of improved sanitation conditions;

✓ in collaboration with the scientific community and non-governmental organizations scientific researches were conducted to develop recommendations about the use of urine in EcoSan toilets for agricultural purposes.

- In 2013-2015, the funds from the National Ecological Foundation were allocated to the construction and rehabilitation of 445 km of networks and 76 stations for waste water treatment.

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

No	Target area of the Protocol on Water and Health	Target	Target date
5.	Target area V – art. 6, para. 2 (e), Part I - Levels of performance of collective systems and other systems for water supply	13) The availability of effective collective water supply systems 14) The presence of the collective operators of water supply and sanitation with the potential for response on regional level to combat the effects of extreme weather conditions and large-scale emergencies	1) by 2020 in 14 cities and 20 villages 2) by 2025 - 7 operators
6.	Target area VI – art. 6, para. 2 (e), Part I - Levels of performance of collective systems and other systems for sanitation	15) The availability of effective collective sanitation systems.	1) by 2025 in 7 cities

To achieve these targets, the following activities were included into the National Program for the Protocol on Water and Health implementation in the Republic of Moldova for the period of 2016-2025 (they were united into single goal):

1. To develop regulatory enactments, connected with the regulation of water supply and sewerage services quality in compliance with Law № 303 as of 13.12.2013 about public water and sewerage service.
2. To implement a transparent controlling system over water supply and sewerage systems efficiency.

3. To develop a plan of high-priority actions, necessary for the operators to conduct regionalization of water supply and sewerage services.
4. To establish a mechanism for providing control over the procedure of tariff calculations by operators.
5. To establish public and private partnerships in this sector.
6. To elaborate guiding principles used in creating a business-plan for the system of operators development.

These targets dates were revised (with regard to the initial targets of 2010) in terms of increasing the amount of settlements, where this area is to be introduced. As for the progress in achieving this target, it should be noted that regulatory enactments, connected with the regulation of water supply and sewerage services quality in compliance with Law № 303 as of 13.12.2013 about public water and sewerage service, were partially developed. The mechanism for establishing public and private partnerships on delivering water supply and sewerage services is being implemented in 7 settlements.

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

See the target area V.

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

№	Target area of the Protocol of Water and Health	Target	Target date
7.	Target area VII и VIII – art. 6, para. 2 (f), part I и II – Application of recognized good practices to the management and to the management of sanitation activities	16) The presence of regional associations of companies for management of collective and other systems of water supply and sanitation	1) by 2020 - 5 associations

To achieve these targets, the following activities were included into the National Program for the Protocol on Water and Health implementation in the Republic of Moldova for the period of 2016-2025:

1. To develop and approve regulatory enactments for small-size wastewater treatment plants (sanitation).
2. To create local associations in rural settlements for the purpose of operating collective water supply systems and sanitation.

3. To assess financial and economic status of water supply and sewerage operators.
4. To equip laboratories of water supply and sewerage operators so that they could control the quality of water, supplied to consumers.
5. To develop and approve the guidance for water supply and sewerage operators.
6. To implement the concept of water supply and sewerage operators in compliance with recognized good practices, used in EU.

These targets dates were not revised (with regard to the initial targets of 2010). As for the progress in achieving this target, it should be noted that works on alteration and supplement of regulatory enactments were commenced.

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

See the target area V.

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

№	Target area of the Protocol of Water and Health	Target	Target date
8.	Target area IX, X и XI – art. 6, para. 2 (g), (i), (ii), (h) – Discharges of untreated wastewater. Discharges of untreated storm water overflows from wastewater collection systems. Quality of discharges of wastewater from wastewater treatment installations	17) Termination of the discharge of untreated wastewater into natural water bodies 18) Presence of facilities for treatment of polluted storm water discharged into natural water bodies from urban areas 19) Wastewater treatment up to the standards for discharge into natural water basins after the treatment facilities	1) by 2025 in 10 cities 1) by 2025 in 5 cities 1) by 2025 в 10 cities и 20 villages

To achieve these targets, the following activities are included into the National Program for the Protocol on Water and Health implementation in the Republic of Moldova for the period of 2016-2025:

1. To renovate operation plans in the sphere of water supply and sanitation in the regions of the Center, the North and the South of the Republic.
2. To work out a strategy for storm-water management.
3. To conduct research of storm-water influence on the surface water quality.
4. To conduct inventory of storm-water treatment plant at all the enterprises.
5. To reduce the number of greenhouse gas emissions after residue treatment, in compliance with the section 16 of the Association agreement between the Republic of Moldova and EU.
6. To develop a plan for improving storm-water treatment plans operation in compliance with the requirements of the Directive 91/271/ European Economic Community of European Parliament and European Council as of 21 May 1991 about urban storm water treatment, with amendments, made into the Directive 98/15/EU and Regulation (EU) № 1882/2003.
7. To perform reconstruction of storm-water treatment plants in the cities of: Kishinev, Beltsy, Ungheni, Căușeni.

These targets dates were revised (with regard to the initial targets of 2010). As for the progress in achieving this target, it should be noted that, special operation plans were developed in the sphere of water supply and sanitation in 3 regions, inventory of storm-water treatment plants at the enterprises was partially conducted, works on assessment of the situation were started in connection with implementation of the Directive 91/271/ European Economic Community of European Parliament and European Council as of 21 May 1991 about urban storm water treatment.

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))

See the target area IX.

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

See the target area IX.

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

№	Target area of the Protocol of Water and Health	Target	Target date
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9.	Target area XII and XIII – art. 6, para. 2 (i), Parts I и II – Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations Quality of wastewater used for irrigation purposes	20) Availability of a mechanism for re-use of residues in sewage treatment plants and ecosan for its further application in agriculture and in the sector of land improvement. 21) Availability of rules for the use of wastewater from treatment plants for irrigation	1) Availability of a mechanism by 2017 1) Availability of rules by 2022
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To achieve these targets, the following activities are included into the National Program for the Protocol on Water and Health implementation in the Republic of Moldova for the period of 2016-2025:

1. To develop and approve Regulation on repeated use of the residue, received from storm-water treatment plants.
2. To conduct analysis of the residue, received from treatment plants for the purposes of the further use in agriculture sector.
3. To renovate action plan for implementation of the Water supply and sanitation strategy with attracting investments to develop this sector.
4. To study the possibility of using treated wastewater from treatment plants for irrigation purposes.
5. To develop Regulation on using treated wastewater for irrigation purposes.

These targets dates were revised (with regard to the initial targets of 2010).

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

In this section the following targets and their timelines are set

1	Availability of rules for the use of wastewater from treatment plants for irrigation	by 2015	
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Existing standards in the Republic of Moldova, applied to assess the quality of irrigation water, do not apply to wastewater. At the moment there is no integrated standard for the assessment of water quality for irrigation. Re-use of treated wastewater for irrigation is not practiced in Moldova, a detailed national legislation in this area has not been developed, but

there are intentions to start the debate and the involvement of experts from the field. In most cases the treated wastewater can not be reused for irrigation due to microbial contamination.

The set target provided for the availability of the standards for using wastewater from treatment plants for the purposes of irrigation in 2015, but this target hasn't been achieved yet. This target date was revised (with regard to the initial targets of 2010).

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

In this section, the following targets and target dates are set

1	Bringing indicators of quality of surface waters used for drinking water supply, in terms of presence of enterococci and E. coli to the level of:	by 2015: to 3rd class quality	by 2020: to 2nd class quality
2	The presence of GIS quality of sources used for drinking water supply	2015	Constantly

The main source of drinking water supply in Moldova are underground water sources, from which about 100% of the rural population is being served and 30% of the urban population, or 65% of the total population. From surface sources, the most important is the river Dniester, which accounts for 32%, the river Prut - 2.8%, other surface sources - 0.2%.

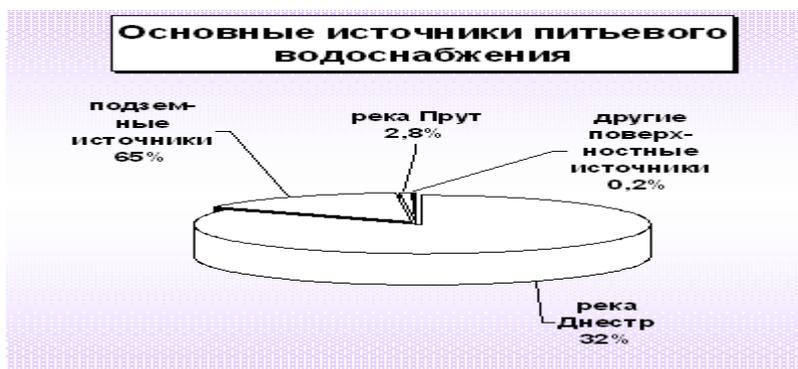


Рис. 2

The main source of drinking water supply

The quality of underground water, used for drinking water supply, is shown above in other sections.

The monitoring over the quality of surface water – the rivers Dniester and Prut, where 11 intakes are located, accomplished by NPHC and regional centres for public health.

As for the targets achievement under this section, it should be noted that:

1. The target of bringing the indicators of the quality of surface waters used for drinking water supply, in terms of presence of enterococci and E. coli to the level of the 3d quality class in 2015 was partially fulfilled. The results show that this parameter was achieved at the majority of objects: the river Dniester – 69% that corresponds to 1-3d quality classes, the river Prut – 92% that corresponds to 1-3d quality classes. This data suggests that water microbial contamination is present in these rivers and it is higher in the river Nistru, than in the river Prut.
2. Availability of GIS quality of sources used for drinking water supply in 2015 was partially achieved – at the support of Czech Development Agency since 2014 such data base on geographic regions has been created, at present the data on the South region is available on the website www.cnsr.md/water.

The figure 3 - The percentage of water samples of all types of surface water bodies, including Dniester and Prut rivers, that fail to comply with microbiological indicators in 2015.

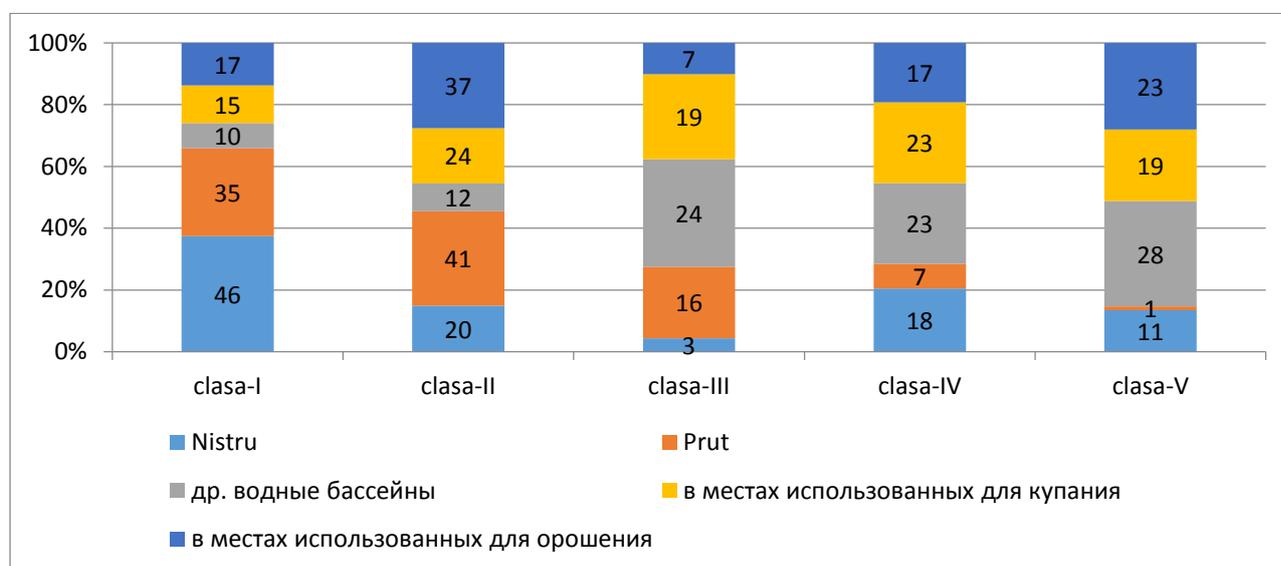


Fig.3. Classes of surface water quality for microbiological indicators

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

1	The achievement of quality of bathing water in terms of enterococci and E. coli presence to the level of satisfactory quality	by 2015: all the objects of national importance	by 2020: all the objects of local significance
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2	The existence of the National Registry of water bodies that are allowed for swimming (bathing)	by 2015	
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In the Republic of Moldova the Governmental Decree number 737, as of 11.06.2002 "On the regulation of recreational areas water bodies" defines bathing areas on rivers Dniester, Prut and water reservoir Ghidighici with the national status. Other water bodies used for bathing have the status of local significance. The requirements for the quality of water used for bathing have not changed and are defined by the rules of hygiene № 06.6.3.23 as of 03.06.1997.

The Ministry of Health drafted the sanitary regulation on water quality use for bathing by taking into account the WHO recommendations and EU directives. The document was agreed by all line ministries and departments. An inventory is made for all pollution sources for water bodies used for bathing and the information is presented by the Public Health Centre in order to take appropriate actions.

The issue of developing the water protection zones in water bodies used for bathing was discussed at the National Emergency Commission for public health with the adoption of Resolution number 1 as of 09.07.2012. The Minister of Health of the Republic of Moldova developed and approved on 27.07.2012 an action plan to improve the sanitary condition of recreational and bathing areas.

Achievement of the targets under this section:

1. The target of bringing the indicators of the quality of waters used for bathing, in terms of presence of enterococci and E. coli to the satisfactory quality level in 2015 was partially fulfilled at all the objects of national importance. According to the results of the conducted analysis of water quality in the rivers Dniester and Prut in the places, used for bathing for the period of 2015, 29 % of water samples fail to comply with standard bacteriological index (29,7% in 2012) and 8% of water samples correspondingly (53,0% in 2012г.) (picture 3).
2. Availability of National register of water bodies, designated as bathing waters by 2015 was partially achieved, the given register is available in the form of a journal, but there is no e-version.

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

In this section the following targets and their dates are set

1	Reduction in the percentage of inconsistent water samples from water bodies used for aquaculture by physical, chemical and biological parameters	by 2015: up to 40% of annual tests	by 2020: up to 25% of annual tests
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For the Republic of Moldova, as a country that has no access to the sea, the target indicators on water for the cultivation of shellfish were not established.

The Republic of Moldova has a law Nr. 149 of 08.06.2006 on the fish stock, fishing and fish farming which specifies the legal framework for the regulation of relations in the field of fish stock, fishing and fish farming and principles for aquatic biological resources, including:

- preservation of aquatic biological resources;
- maintenance of biological potential and conservation of biological diversity;
- long-term use of aquatic biological resources;
- development of fisheries;
- monitoring of water quality and aquatic biological resources;

However, the law does not apply to all artificial fishery water bodies, and moreover to the production or cropping of shellfish. There are also no requirements to the customer ordering artificial objects, like water quality for breeding and quality of discharged water after use.

In connection with this it is problematic to carry out controls on non-compliance and to regulate the quality before and after these facilities, to assess their impact on water bodies, on biodiversity, to control the implementation of measures on fishes' diseases, as well as requirements on the number of samples taken and the percentage of samples that must meet the quality standards.

As for the assessment of water quality in fish ponds, in fact there is no systemic state control, and evaluation of water quality, in most cases, is carried out on request of farmers during the "freeze" of fish and sometimes during incubation. Academy of Sciences, within research projects, also assesses the quality and condition of water basins.

In the case of diseases that are dangerous to human health and aquatic organisms, the bodies of fish protection and veterinary service shall inform the central and local public administration, as well as the population and take measures to suspend the spread of these diseases. Cases of such diseases have not been registered during last three years.

The target set provides for the reduction of water samples percentage of non-compliance in water bodies used for aquaculture by physical-chemical and biological parameters to 40% of annual tests by 2015, with interim target date and up to 25% by 2020. There is no information on the progress made towards this target.

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

In this section the following target and the target date are set out

1	Achieving the standard indicators of water quality in closed basins, accessible for public bathing		by 2015: for all objects
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At present, there is no national document, regulating the use of the recognized good practice in the sphere of management of closed water basin, generally accessible for bathing in the Republic of Moldova. Law № 10 as of 03.02.2009 about government surveillance over public health and Regulation on government surveillance agency over public health, approved by the Government Decree №384 as of 12.05.2010 serves as a regulatory framework for this target. These documents specify that such water bodies are to function on the basis of sanitary certificate, issued by regional Public Health Center. To take decision about compliance or incompliance of these water bodies with the standards, Intergovernmental document for the member-states of Commonwealth of Independent States - Sanitary regulations and standards 2.1.2.1188-03 «Swimming pools. Hygiene requirements to arrangement, operation and quality of water. Quality control». In 2017, sanitary regulation for water quality in closed water basins, designated for bathing in compliance with WHO recommendations, in accord with the Government Decree (GD) №1032 as of 20.12.2013 on Public Health National Strategy approval.

Territorial public health centres supervise 22 swimming pools (including 7 swimming pools in Kishinev) and 5 SPAs at sanatoriums (in cities Kishinev, Cahul, Calaras, Vadu lui Voda). According to the researches performed in 2015, quality of 3,5% of water samples, taken from closed water basins, available for public bathing did not meet the standards in terms of microbiological indicators, that is 3 times higher than in 2012 (10,2%). This target was partially achieved. In the project of National Program for implementation of the Protocol on Water and Health, the given target was revised.

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

In this section the following targets and the target date are set out

№	Target area of the Protocol of Water and Health	Target	Target date
16.	Target area XVIII – art. 6, para. 2 (l) Identification and remediation of particularly contaminated sites	27) Mapping the sites contaminated by pesticides, petroleum products and other chemicals	1) 100% of identified most contaminated sites throughout the territory by 2020 and Decontamination of most contaminated sites

To achieve these targets, the following activities are included into the National Program for the Protocol on Water and Health implementation in the Republic of Moldova for the period of 2016-2025:

1. To develop project documentation and establish Waste management center.
2. To fit laboratories with advanced equipment for the purposes of monitoring the presence of certain contaminants in soil, water and other environments.
3. To create and renovate the data base on polluted lands.
4. To conduct decontamination / rehabilitation of the lands polluted with oil-products, pesticide chemical wastes, polychlorinated biphenls and other chemical wastes.
5. To deliver seminars and campaigns with the purpose to inform the public about possible adverse effects of polluted lands on surface water resources and ground waters.

These targets dates were revised (with regard to the initial targets of 2010).

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

In this section the following target and the target date are set out

№	Target area of the Protocol of Water and Health	Target	Target date
16.	Target area XIX – art. 6, para. 2 (m)- Effectiveness of systems for the management, development, protection and use of water resources	27) The existence of water management plans for the basin rivers Dniester and Prut.	1) existence plans by 2017

To achieve these targets, the following activities are included into the National Program for the Protocol on Water and Health implementation in the Republic of Moldova for the period of 2016-2025:

1. To elaborate a Plan for risk of flooding from rivers Dniester and Prut, in compliance with article 6 of Directive 2007/60/EU on Flood risk assessment and management.
2. To develop Surface water quality monitoring program in compliance with the article 8 of the Directive of EU 2000/60.
3. To elaborate measures aimed at adopting water resources management to climate changes.

4. To develop Nitrates contamination monitoring program in compliance with article 6 of Directive 91/676 EU on protecting waters from nitrate contamination, coming from agricultural sources.
5. To develop Groundwater management strategy.
6. To determine water contamination and risk of contamination with nitrates. To map out regions, vulnerable to nitrates contamination in compliance with the article 3 of the Directive 91/676 EU on protecting waters from nitrate contamination, coming from agricultural sources.
7. To strengthen institutional capacity for water resources management.
8. To fulfil plans for management of hydrographical basin of rivers hydrographical basin Dniester and Prut.

These targets dates weren't revised (with regard to the initial targets of 2010). At present, these plans have been developed and consultations with the public have been conducted.

XX.Additional national or local specific targets

In this section, the following targets and the target dates are set out

1	Publication of the National Report on Drinking Water Quality	2011	every 3 years
2	Publication of the regional (municipal) reports on the quality of drinking water	2011	Annually
3	Publication of the annual report on the quality of water used for bathing	2011	Annually
4	Publication of the National Report on the implementation of the requirements under the Protocol	2013	every 3 years
5	Establishment of "Clearing house" centre on water quality under the Protocol	2012	

As for the targets achievement under this section, it should be noted that:

1. The task of publishing National report on drinking water quality every 3 years was performed. At present, processed annual national data on the quality of drinking and surface waters, are published in the annual book on Public Health Surveillance Service performance indicators, as well as on the website of National Center of Public Health, www.cnspl.md.
2. The task of publishing regional (municipal) reports on drinking water quality annually was fulfilled. At the local level, the data on drinking water quality, taking into account own processed data, as well as the information received from other operators. In compliance with Sanitary regulations and standards for drinking water quality (approved

by the Government Decree Nr.934 as of 15.08.2008), the operators are also obliged to submit these data upon first request. The data, concerning administrative territories, is published on the websites of territorial Public Health Centers.

3. The task of submitting report on the quality of water, used for bathing, annually was performed. Every year the information about recreational water quality is sent to the address of the government, in compliance with the Government Decree Nr.737 as of 11.06.2002 on approval of the Regulation of bordering on water bodies recreational areas operation, this data isn't published in a special book, but it is included into annual book on Public Health Surveillance Service performance indicators.

4. The task of publishing National report on observance of the requirements under the Protocol every 3 year was performed. The report, submitted in 2013 was published, the current report, submitted in 2016, will be published as well.

5. The task of establishing "Clearing house" on water quality under the Protocol was performed. In compliance with the Ministry of health order №1131 as of 11 October 2013 informational center "Clearing house" was created under the Protocol on Water and Health on the basis of National Centre of Public Health in the Republic of Moldova, the regulation for this center was approved by this order as well, www.cnsp.md. The center provides information about drinking water quality, about access to the improved water supply systems and sanitation, organizes and holds meetings with scientific development and production centers, local authorities on the issues of implementation of the Protocol on Water and Health, distributes informational materials and conducts awareness campaigns.

Additionally, National report "The state of the environment in Moldova" is published once in 3 years and in 2014 the report, being a scientific and practical work on the condition of major types of ecosystems in general and the environment (water, air, soil, biodiversity), taking into account the adverse effect on thereof for the period of 2011-2013 was published. This document was prepared by the Institute of Ecology and Geography, responsible for the systematization of the information held in the institute and the information provided by the specialized institutions, including National Centre of Public Health.

Part Four

Overall evaluation of the progress achieved while implementing the Protocol

In this part of the summary report, Parties shall provide an analysis and synthesis of the status of implementation of the Protocol. Such an overall evaluation should not only be based on the issues touched upon in the previous parts, but should also include, as far as possible, a succinct overview of implementation of activities related to, for example:

- (a) Response systems (article 8);

- (b) Public awareness, education, training, research and development and information (article 9);
- (c) Public information (article 10);
- (d) International cooperation (article 11);
- (e) Joint and coordinated international action (article 12);
- (f) Cooperation in relation to transboundary waters (article 13);
- (g) International support for national action (article 14).

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

Suggested length: up to 3 pages

In general, a visible progress was registered in the Republic of Moldova on implementation of the Protocol on Water and Health and concrete measures are adopted to implement the objectives of the Protocol:

- Targets have been approved by the joint order of the Ministry of Environment and Ministry of Health No. 91/704 from 20.10.2010. A total of 34 targets were adopted covering all 20 fields of the Protocol.

- On November 21, 2012 a joint order was signed by the Ministries of Environment and Ministry of Health number 94/1166 on the establishment of the Oversight Committee for the implementation of the targets under the Protocol on Water and Health. Also a joint declaration was signed between the Ministry of Environment of the Republic of Moldova, Ministry of Health of the Republic of Moldova, the UNEEC and the Swiss Agency for Development and Cooperation on the project "Implementation of the targets under the Protocol on Water and Health in the Republic of Moldova."

The following measures have already been implemented:

- The Programme and the Action Plan were developed to implement the targets under the Protocol on Water and Health.
- The Clearing House was created for the objectives of the Protocol on Water and Health, operating under the National Centre of Public Health.

During the reported period the measures for the legislative development and legal basis improvement were carried out in order to achieve the Protocol's targets:

- New strategy of water supply and sanitation was approved for the period of 2014-2028, Government Decree №199 as of 14.03.2014.

- New law on water supply and sanitation public services was approved by Government Decree № 303 as of 13.12.2013.

- Law on ratification of the loan agreement between the Republic of Moldova and European Bank for Reconstruction and Development (30.07.2015) and law on ratification of the Finance Agreement between the Republic of Moldova and European Investment Bank concluded to facilitate water supply pipeline construction in 7 regions of the republic (31.07. 2015).

- The following regulatory enactments were approved by the order of the Minister of the Environment:

1) Concepts and Regulation of water supply and sanitation services regionalization (№ 122 as of 04.12.2015);

2) Methodology of prioritizing water supply and sanitation infrastructure projects (№ 81 as of 03.09.2015).

3) Guidance for developing a Plan of water supply and sanitation in the Republic of Moldova (№ 33 as of 18.04.2014).

4) Guidance for applying the best available technologies for treatment of waste water discharged from food-processing factories (№ 61 of 10.09.2014).

5) Guidance for developing technical and economic feasibility of the water supply and sanitation projects (№ 98 as of 20.12.2014).

- National Agency for Energy Regulation approved the Method of determination, approval and application of tariffs for the public service of water supply, sewerage and wastewater treatment (№741 as of 18.12.2014, which was published in Method of determination №.33-38/258 as of 13.02.2015).

- Memorandum on understanding between the Ministry of Environment Protection and Economic Commission for Europe was signed on the basis of National Policy on integrated management of water resources.

- The project of National program on the implementation of the Protocol on Water and Health in the Republic of Moldova.

Cross-border cooperation

For Moldova, the basins of Prut and Dniester rivers are the subject of cross-border cooperation with neighboring countries, Romania and Ukraine, and for purposes thereof, we need an effective legal framework, developed on the basis of the best international practices for such cooperation.

Progress has been made in the development of cooperation in the field of protection of water resources of the river Prut between Moldova and Romania. In June 2010, we signed an Agreement between the Government of the Republic of Moldova and the Government of Romania on cooperation in the protection and sustainable use of the waters of Danube and Prut. This document establishes the legal framework for the protection and sustainable use of the waters of Danube and Prut, joint exploitation of hydroelectric station Stinca-Costesti, construction and exploitation of other power packs in the basin, capacity building for eco-

conomic and scientific cooperation. The basic principles of the Agreement aim at improving the quality of water, stipulated by the EU Water Framework Directive. The agreement provides for specific actions and forms of cooperation on the basis of Hydraulic Engineering Intergovernmental Commission.

The Republic of Moldova is united with Romania and Ukraine by requirements for the implementation of signed international conventions related to the protection of the aquatic water environment and biodiversity, where the basin countries participate.

The requirements of these conventions are aimed at the adoption of joint measures to prevent, control and reduce transboundary impact on the shared water resources and ecosystems.

Based on these requirements and obligations of Art. 5 of the Convention regarding the transboundary wetlands and transboundary water systems, in the period 2007-2010 the draft Agreement was developed and agreed at the national levels concerning the Cooperation for the Protection and Sustainable Development of Nistru river basin. This document was developed with the support of the UNECE and OSCE. The agreement was ratified by the Republic of Moldova, but has not been ratified by Ukraine.

The purpose of the Agreement is to establish legal and organizational framework for cooperation for the sustainable use and protection of water resources and ecosystems of Nistru in the interests of both Parties. The new document takes into account the requirements of the Water Framework Directive, including the creation of the basin commission, which will be an international body to manage the Dniester waters under the Agreement.

With the support of the UNECE and the OSCE, Moldova and Ukraine together a number of projects on flood risk management of the Dniester river, including the drawing up of a database for water management, and vulnerability assessment on floods.

The process of climate change has a negative impact on water resources and in the near future, if we do not develop national adaptation policies, the economic, social and environmental impacts will be disastrous.

Lately, Moldova, Romania and Ukraine have faced big unpredictable destructive phenomena on our rivers, such as floods. This phenomenon is undoubtedly due to global climate change, and of course we have to be prepared to take proper preventive joint measures in the cross-border context, since the failure to undertake measures by one party would adversely affect the other party or both parties at the same time to reduce vulnerability to such extreme situations in the basin, as floods affect the economic development of our countries, the hydrological cycle, various sectors of the economy, recreation and safety regime in the basin.

It should be noted that in the framework of a joint pilot project with Ukraine "Reducing vulnerability to extreme floods and climate change in Dniester River Basin ("Dniester - III - floods and climate"), with the support of the UNECE, OSCE, UNEP, we assessed the vulnerability to floods, agreed on scenarios and models to assess the effects of floods, the frequency and magnitude of extreme floods. The data of hydrological and meteorological observations collected in Moldovan and Ukrainian parts of the basin were evaluated. On Moldovan part of the river the profiles were made for the implementation of inundation models and maps of Dniester. In making the maps, the transformation of the flood wave and overflow over the dam below Dubasari hydroelectric power station, which is important for the approximation to the actual boundaries of the flood shall be also taken into account. The

project also envisaged the improvement of water management and monitoring of Dniester water, by establishing automated monitoring stations that will improve also the infrastructure and data exchange with Ukraine.

With the assistance of the Secretariat of the Convention a permanent Conservation Policy Dialogue is being conducted in the cross-border context between Moldova and Ukraine. This dialogue takes place in the framework of joint projects in the region, namely: the TACIS projects "Water Management", "Cooperation on the Protection of the Black Sea", a project with the support of Germany "Risk Management", a series of projects UNECE and OSCE and other projects aimed at strengthening cooperation between the two countries. I especially want to acknowledge the role of international organizations such as the OSCE and the UNECE and UNEP, which provide us with strong support and we look forward to developing further cooperation.

Water policy in the Republic of Moldova (Water Concept) defines three main priorities in the management of water resources and their protection. This is the development and implementation of the system for water management and protection of water resources based on integrated approach, on principles taking into account the particularities and purpose of the river basin and its constituent water bodies and with the participation of all stakeholders.

The main objectives of national water policy are defined as:

- achievement of a sustainable water management as a natural component (resource) and as a socio-economic category (product)
- creation of a healthy and safe living conditions for citizens.

One of the priorities is the harmonization of water legislation with the directives of the European Union in the field of waters. At present, the Water Act, which is approximated to the Water Framework Directive of the European Union, was adopted and currently the provisions for its implementation being developed.

Principles of Water Framework Directive, adopted in the law, should be added in the future to the existing national water policy with new effective mechanisms for the water management in the hydrographic basin.

Achievement of the targets set

Significant progress in achieving the targets was observed in Moldova for the report period of 2013-2015. No cases of cholera or typhoid fever have been registered in Moldova for the last 10 years, also a clear tendency for the number of other disease incidence, including dysentery and rotavirus infection, to reduce more than four times for 100 thousand people is observed. Furthermore the number of diseases caused by Giardia reduced 1,8 times, by Cryptosporidium - 8,5 times and the cases of viral hepatitis decreased by 20%. For the last 3 years no cases of diseases caused by Legionella have been registered. Drinking water quality parameters improved in schools and in pre-school institutions.

Sustainable growth of the share of the population, having access to improved drinking water supply and sanitation systems both at the national level and for rural population.

It is explained by both construction of great number of water supply pipelines and access to improved small size sources of water supply and sanitation.

Information center "Clearing house" was established under the Protocol on Water and Health in the Republic of Moldova on the basis of National Center of Public Health. The center provides information about drinking water quality, access to the improved water supply and sanitation systems, organizes and holds different meetings with scientific development and production centers, local authorities on the issues of implementation of the Protocol on Water and Health, distributes informational materials and conducts awareness campaigns. Information is available on the website www.cnspl.md, and can also be available upon request.

In general, out of 34 targets, approved in 2010, 14 ones were completely achieved, 17 ones were partially achieved, 3 ones were not achieved, Sections: XI. Quality of wastewater discharge from treatment facilities into the waters, falling under the provisions of the Protocol (clause 2 h) article 6); XIII. Quality of wastewater, used for irrigation purposes (clause 2 i) article 6 – second part); XVI. Quality of water, used for aquaculture or shellfish and crustaceans cultivation and cropping (clause 2 j) article 6 – third part).

It should be noted that the targets and the targets dates have been revised, taking into account Sustainable Development Goals in the National program for implementation of the Protocol on Water and Health in the Republic of Moldova for the period of 2016-2025, which was submitted to the government of the Republic of Moldova for approval.

This report was developed by the national Coordinators of the Protocol on Water and Health, on the part of the Ministry of Health and the Ministry of Environment Protection, and was distributed to a wide range of users (ministries, departments, Science academies, nongovernmental organizations and territorial Centers for Public Health) to be looked through and commented upon.

Part Five

Information on the person submitting the report

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

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Signature:

Date:

Submission

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

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

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