

Ukraine

**Summary report in accordance with article 7 of
the Protocol on Water and Health**

Kyiv - 2016

Acronyms

CMU - Cabinet of Ministers of Ukraine
EHEC - Entero haemorrhagic Escherichia coli.
EU - European Union
HVA - Viral hepatitis A
HVB - Viral hepatitis B
IDPs - internally displaced persons
MDGs - Millennium Development Goals
MENR – Ministry of Ecology (Environment) and Natural Resources
NGO – non-governmental organization
NT - national target
OECD – Organization for Economic Development and Cooperation
PEWS - plan to ensure water safety
PWH - Protocol on Water and Health
UNECE – UN Economic Commission for Europe
SSES – State Sanitary and Epidemiological Service
WASH - Water, Sanitation and Hygiene
WG - Working Group
WHO – World Health Organization
WSSCC - Water Supply and Sanitation Collaborative Council

Part One

General aspects

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

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

YES NO IN PROGRESS

Ukraine is a Party of the Protocol on Water and Health from 2003 after the Law of Ukraine № 1066-IV ratification from 09.07.2003. According to Article 6 of the Protocol on Water and Health in Ukraine with the support of Ukrainian-Norwegian project of international assistance were established 15 national targets along with indicators and terms for their achievement. National Ukraine targets to the Protocol on Water and Health were approved by the Order of the Ministry of Environmental Protection of Ukraine of September 14, 2011, № 324.

During the reporting period national targets (NT) had not been reviewed.

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

PWH targets and target dates, established in Ukraine, were published in the framework of Ukrainian-Norwegian Project of international assistance for establishing Ukrainian NT (1,500 copies in Ukrainian and 200 copies in English were released). Later 3000 copies were published by the funding of the Water Supply and Sanitation Collaborative Council (WSSCC). Publications were distributed within the frame of All-Ukrainian Environmental Non-Governmental Organisation "MAMA-86" campaign "Water, Sanitation and Hygiene for all" (WASH).

Ukraine NT to the Protocol on Water and Health were published as well on the website of the Ministry of Ecology and Natural Resources of Ukraine (www.menr.gov.ua), the State Sanitary Epidemiological Service of Ukraine (<http://www.dsesu.gov.ua>), Taras Shevchenko National University, Kyiv (www.geol.univ.kiev.ua/pwh/), and All-Ukrainian Environmental NGO "MAMA-86" (www.mama-86.org.ua).

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.

Ministry of Ecology and Natural Resources of Ukraine (MENR) is a main central executive authority in Ukraine, which is acting as a coordinator of the Protocol on Water and Health in Ukraine implementation and communicating with the Secretariat of the Protocol.

In October 2003, the Cabinet of Ministers of Ukraine (CMU) has approved the Action Plan, developed by the MENR of Ukraine for implementation of the Law of Ukraine On ratification of the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes 1992" of 09.07.2003 № 1066-IV. According to the Resolution of the CMU from 06.10.2003 № 46963, the MENR is coordination and controlling the implementation of the plan referred. A number of central and local executive authorities and scientific institutions are involved in the implementation of Action Plan.

In 2006, by the Order of Ministry of Ecology and Natural Resources of Ukraine of 12.05.2006 № 243 the Interagency Working Group on the implementation of the Protocol has been established. The WG comprises representatives of central

governmental authorities, academic and sectoral research institutes, non-governmental organizations.

In 2008, the Ministry of Ecology and Natural Resources of Ukraine applied (through the mechanism of promoting the Protocol implementation) for international assistance to develop NT. From 2008 to 2010, draft NT was developed in the framework of Ukrainian-Norwegian Project. NTs were considered at the meetings of the working group of the Project and was presented at the meetings of the Interagency Working Group for discussion. In August 2010, the Ministry of Ecology and Natural Resources provided NT project for public consultation officially.

In September - November 2010, draft NTs were discussed at the public consultations, including a public hearing, organized by NGO MAMA-86" in cooperation with the Ministry of Ecology and Natural Resources and the State Sanitary Epidemiological Service of Ukraine. These activities were supported by the Norwegian-Ukrainian Project. Public comments were duly taken into account in NT project during the three meetings of the Interagency Working Group on the implementation of the Protocol in December 2010 - February 2011.

According to the Order of the Ministry of Ecology and Natural Resources of Ukraine of September 14, 2011 № 324, which approved NT statements, the responsibilities of coordinating development activities to achieve NT is assigned to the Interagency Working Group on the implementation of the Protocol.

By the Order of September 26, 2011 № 44023/1/1-11 the CMU of Ukraine designated the MENR, Ministry of Regional Development, Construction and Housing, Ministry of Agriculture Policy, Ministry of Education, Ministry of Health, Ministry of Finance, Agency of Water Resources within its competence and financial capacities to implement the measures to achieve NT and provide annual information on the progress to the Ministry of Ecology and Natural Resources by March 1 of each following year.

By the Order of the Ministry of Ecology and Natural Resources of 04.12.2013 № 165 composition of the Interagency Working Group on Coordination on the Protocol on Water and Health implementation has been updated.

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

According to the Millennium Development Goals (MDGs), Ukraine has developed relevant MDGs on water for urban and rural areas that were considered in the discussion of the NTs to the Protocol.

NT establishing was based on national legal framework, in particular, following basic and special legal acts of Ukraine were taken into account: Constitution of Ukraine, the Law of Ukraine "On providing sanitary and epidemiological welfare" of 24.02.1994 № 4004-XII, Law of Ukraine "On Drinking Water and Water Supply" of 18.11.2001 № 2196-IV, National Target Program "Drinking water of Ukraine for 2006-2020" (of 03.03.2005 № 2455-IV), the National program of reform and development of Communal Housing for 2009-2014 (of 25.06.2004 № 1869-IV), National target program of water management and environmental rehabilitation of the Dnipro river for the period till 2021, National target program of water priority providing centralized water supply for rural areas using imported water till 2015 (№ 741 of 27.09.2008), National Strategy of environmental policy for 2020, the National Action Plan on environmental protection for 2011-2015 (of 25.05.2011 № 577) Intersectoral program complex " Nation Health " of 2002-2011 (from 10.01.2002 № 14), etc.

Also, the State sanitary standards and rules on drinking water supplies, particularly State sanitary standards 2.2.4-171-10 "Hygienic requirements for drinking water intended for

human consumption", Ukraine National Standard 4808: 2007 "Sources of centralized water supply. Hygienic and environmental requirements on water quality rules and selecting" and State sanitary standards 4630-88 "Sanitary Rules and Standards for the protection of surface waters from pollution" were reconsidered.

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

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

Unfortunately, NT cost-benefit analysis was not conducted, risk analysis, as well as economic analysis of the cost of measures to achieve NT were lacking attention. Defining the specific indicators and NT occurred to them were based on measures and funds allocated for their implementation which are included in the existing government programs.

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?

Within the framework of public consultation on the NT project from September 1 to November 10, 2010, NGO "MAMA-86" organized various activities using the financial aid of The Women's Federation for World Peace International (WfWP) and the Water Supply and Sanitation Collaborative Council (WSSCC). Information on the NT project was disseminating by NGO "MAMA-86" by e-mail to "MAMA-86" lists and partner networks, mailing paper copies and during the various events. During the NT project public hearing on October 20-21, 2010, in Kyiv, concerns and comments, which have been raised during the consultation, were presented and discussed. The hearings were attended by representatives of Ukrainian-Norwegian project, the Ministry of Ecology and Natural Resources, Ministry of Health, the public and government bodies, including 11 government representatives, 17 NGOs and media from 14 cities of Ukraine. As a result of public consultation and hearing, NGO "MAMA-86" has received 23 written materials with a numerous of remarks and comments from government agencies at various levels, NGOs and individual experts. All comments on a comparative table were sent to the coordinating group of Ukrainian-Norwegian project, the Ministry of Ecology and Natural Resources and other central authorities, the Ministry of Health, Ministry of Regional Development, Construction, Housing, and State Water Resources Agency. The conclusions of the public discussions were also presented by "MAMA-86" for the fourth meeting of the Steering Committee of the National Political Dialogue on Integrated Water Resources Management (supported by UNECE, EU Water Initiative and OECD).

All comments received as a result of the public consultation were presented by NGO "MAMA-86" at the 3rd sessions of the Interagency Working Group headed by the Ministry of Ecology and Natural Resources. Most of the comments and amendments were taken into account and were included to the final NT document.

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 MENR is a main agency responsible for the preparation of the brief report on the progress in the implementation on the Protocol in Ukraine and its presentation of the General Secretariat of the Protocol is the Ministry of Ecology and Natural Resources of Ukraine. The Ministry of Regional Development, Construction and Housing, Ministry of Health, the State Sanitary and Epidemiological Service, State Agency for Water Resources, the State Geological Service and the NGO "MAMA-86" were involved in the preparation of the report. During the preparation of the report were used official statistical information provided by the above bodies of executive power and the data which were presented in the

National Report on the quality of drinking water and drinking water supply and national reports on environmental protection, annually published in Ukraine.

8. Report any particular circumstances that are relevant for understanding the report, e.g., whether there is a federal and/or decentralized decision-making structure, or whether financial constraints are a significant obstacle to implementation (if applicable).

The land area of the Autonomous Republic of Crimea and Sevastopol, Ukraine internal waters of these areas are defined under the Law of Ukraine "On the rights and freedoms of citizens and legal regime in the temporarily occupied territory of Ukraine" as temporarily occupied in result of military aggression of Russian Federation. The starting date of the temporary occupation is February 20, 2014.

Anti-terrorist operation is going on the territory of Donetsk and Lugansk regions from 2014. The operation is aimed to overcome the terrorist threat and protect the territorial integrity of Ukraine.

Since March 2014, more than one million of people were moved from Lugansk and Donetsk regions in safer areas of Ukraine, 19 000 were moved from Crimea, and more than 600 000 people went abroad, mostly to neighboring Russia. Most of the internally displaced persons (IDPs) in Eastern Ukraine at the present time are within Donetsk and Luhansk regions, followed by Kharkiv, Dnipropetrovsk and Zaporizhia.

Among 5 million people who are considered in need of the humanitarian aid in Ukraine, 3.2 million are considered as very vulnerable.

The humanitarian situation in some regions of Eastern Ukraine is getting worse. As a result of on-going fighting between armed groups and government forces as well as events that occurred in the Crimea in March 2014, Ukrainians were forced to leave their homes, worsening their vulnerability as the amplification and conflict spread. In the end of August, the conflict had spread to the South-East, and some government controlled territories, were captured by the armed groups. This caused further displacement of citizens from conflict area.

The crisis in Ukraine has left thousands people without access to drinking water, so many of them found themselves in a very vulnerable situation. Suffer people used snow for drinking purposes of had got from open sources, such as lakes. Nowadays, at least 700 000 people have no access to drinking water. The conflict led to dysfunction of water infrastructure, such as pipelines, water treatment stations, reservoirs, water sources and pumping stations, leaving suffered people without the access to water, reliable water sources or hygiene and sanitation. Due to water quality decreasing, cases of diseases were reported so that threat to the health of the population in general is increasing. Many IDPs who have lost their incomes and reached ceilings, think about hygiene and cleaning products as unnecessary financial burden. Lack of money forces IDPs to compromise in matters of hygiene, there is a significant need to provide hygiene items, most vulnerable categories of the population such as infants, families with few children, newborns, households of single people and people living in collective centers with inadequate water supply and sanitation. Hospitals, geriatrics and social institutions also are faced with significant necessity in hygiene products. Thousands of people who are living in bunkers, bomb shelters and basements make up a separate category of vulnerable people whose needs must be prioritized, especially access to adequate sanitation because of bunkers/temporary living places have not of such means.

Considering the above mentioned situation in Ukraine, the data for 2014 were presented in the report without the data of temporarily occupied and uncontrolled territories (temporarily occupied territory of the Autonomous Republic of Crimea and in Sevastopol, the zone of the antiterrorist operation in the Donetsk and Lugansk regions).

In terms of on-going administrative reform in Ukraine, financial and institutional difficulties also still cause impact on the implementation of the PWH provisions, including national targets achievement.

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.

Part Two

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?

In 2005, when the Protocol entered into force, 76% of Ukraine's population was provided with centralized water supply, more than 95% is accounted for the urban population and 27% for rural settlements. In 2013, centralized water supply was provided for 99,8% of total number of cities, 85,9% for small towns and 22.1% only for rural settlements.

In Rivne region, centralized water supply services has covered 2.7% of rural population, in Chernivtsy region - 6.3%, in Vinnytsia region - 6.3%, and Ivano-Frankivsk region - 9%. In other regions this parameter was varying from 11 to 50% (data from National Report on the state of drinking water and water supplies in Ukraine in 2013).

During 2013, around-the-clock 100% water supply was provided for settlements in Volyn, Kharkiv and Chernihiv regions, and Kyiv city, coverage in Rivne region - for 99.6%, Vinnytsia region - for 98.7%; Chernivtsi, Ivano-Frankivsk and Ternopil regions - more than 90%. The most complicated situation was in Odessa region - for 4.7% and Donetsk region - 14.1%.

As an example, the centralized drinking water supply in the Zaporozhye region was provided for the all 14 cities, 18 of 22 small towns and 430 of the 914 villages where 86.8% of the region population lives. At the same time only 48.5% of the population receives centralized water supply around-the-clock. Centralized wastewater discharge service has been provided only for 50.2% of the population from 14 cities, 11 towns and 28 villages.

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

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.

Centralized water supply is provided for urban and rural population. However, centralized water supply covers only 22% of Ukrainian villages. The rest of the rural population is consuming water from wells and individual well bores. Most of wells are in the unsatisfactory conditions.

In 2014, the State sanitary epidemiological service of Ukraine was keeping control of 16967 (in 2012 – 18771, in 2011 – 18875) sources of centralized water supply, including 1336 municipal (in 2012 – 1646, in 2011 – 1603), 6566 rural water pipes (in 2012 – 7579, in 2011 – 7640), and 160,225 sources of decentralized water supply (in 2012 – 170243, in 2011 – 174,314), of which 155,968 were mine wells (in 2012 – 165,653, in 2011 – 169,734), 3170 artesian wells (in 2012 – 3383, in 2011 – 3371), 1054 captations (in 2012 – 1207, in 2011 – 1209).

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

Investigation of drinking water is conducting throughout the whole system: at the water intakes points, at the outlet of water purification facilities, from distribution network and consumers intake points.

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

The State Sanitary Epidemiological Service performs the regular laboratory quality control of drinking water in the areas of water intake, the water pipeline facilities, and networks of centralized drinking water supply. Control is aimed at compliance with national standards namely:

State sanitary standards 2.2.4-171-10 "Hygienic requirements for drinking water intended for human consumption" approved by the Ministry of Health of Ukraine of May 12, 2010, № 400, and registered by the Ministry of Justice of Ukraine on July 1, 2010, № 452/1774;

Ukraine National Standart 4808: 2007 "Sources of centralized water supply. Hygienic and environmental requirements on water quality rules and selecting";

State sanitary standards 4630-88 "Sanitary Rules and Standards for the protection of surface waters from pollution" with the use of appropriate measures in case of the violations.

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.

According to the requirements of the State sanitary standards.2.4-171-10 "Hygienic requirements for drinking water intended for human consumption" approved by the Ministry of Health of Ukraine of May 12, 2010, № 400, and registered by the Ministry of Justice of Ukraine on July 1, 2010, № 452/1774, indicators "E.coli" and "Enterococci" should not be available in the section of "epidemiological safety of drinking water" (ap.1).

At the same time, national statistical reports do not use data on pollution by E.coli and by other microorganisms. According to the statistical reports, the only percentage of drinking water samples deviated by sanitary-chemical and bacteriological parameters is recorded. This report provides a table that contains an integrated assessment of the bacteriological quality of drinking water of centralized water supply.

<i>WatSan_S2</i>	<i>Baseline value (2009, 2011, 2012 years)</i>	<i>Current value (2014)</i>
E. coli	In the official statistical form is not presented separately	
Enterococci	In the official statistical form is not presented separately	

<i>WatSan_S2</i>	<i>Baseline value</i>	<i>Interim value</i>		<i>Current value</i>
	<i>2009</i>	<i>2011</i>	<i>2012</i>	<i>2014</i>
Analyzed samples for bacteriological indicator, taken from:				
Centralized water supply objects	290784	298661	233158	141006
Including: Municipal water pipelines	166281	166683	127865	77248
Rural pipelines	63899	67123	51059	32248
Pipeline network	256407	264107	204397	124542
Decentralized water supply sources	70563	82603	59133	49598
The share of non-standard drinking water samples, which do not comply with sanitary requirements of bacteriological indicators, taken from:				
Centralized water supply objects, %	3,1	2,9	2,8	3,4
Including: Municipal water pipelines, %	2,1	2,0	2,0	2,2
Rural pipelines, %	5,0	4,7	4,7	5,5
Pipeline network, %	3,2	3,0	2,8	3,4
Decentralized water supply sources, %	16,8	16,4	16,2	16,4

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

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

<i>Substance</i>	<i>Baseline value</i>	<i>Interim value</i>	<i>Current value</i>
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² As defined in the WHO Guidelines for drinking-water quality.

	2009	2011	2012	2014
Fluoride	In the official statistical form is not presented separately			
Nitrate and Nitrite	In the official statistical form is not presented separately			
Nitrate (decentralized water supply):				
Public wells/captations	–	12,2/6,3	16,7/4,6	21,4/5,9
Individual wells/captations	–	33,2/14,5	19,1/0,7	23,9/2,6
Arsenic	In the official statistical form is not separately selected			
Lead	0,5	0,9	0,5	1,3
Iron	5,0	2,9	2,8	3,8
Additional physico-chemical parameter 1: Mangan	2,7	1,5	1,4	1,1
Additional physico-chemical parameter 2: Cadmium	2,2	1,1	0,9	0,6
Additional physico-chemical parameter 3: Carbon tetrachloride	1,8	0,4	0	0
Additional physico-chemical parameter 4: Chloroform	23,6	21,6	1,1	0,7
Analyzed samples, taken for:				
Lead	4275	3624	3588	2301
Iron	5948	4128	4272	2311
Mangan	4368	3993	4215	2946
Cadmium	2990	2975	2686	1939
Carbon tetrachloride	2449	2478	1500	318
Chloroform	5556	8737	4384	2048
Public wells/captations	–	13806/441	29298/1094	13392/33
Individual wells/captations	–	34644/256	61197/292	38340/233
WatSan_S2	Baseline value	Interim value		Current value
	2009	2011	2012	2014
Analyzed samples for sanitary and hygiene indicators, taken from:				
Centralized water supply objects	201139	214629	175167	108051
Including: Municipal water pipelines	109574	115081	95087	53677

Rural pipelines	44688	49373	38335	26393
Pipeline network	170212	183669	148569	90968
Decentralized water supply sources	65130	102423	75587	67832
The share of non-standard drinking water samples that do not conform to sanitary requirements of sanitary and hygiene indicators, taken from:				
Centralized water supply objects, %	12,9	14,7	12,9	13,5
Including:				
Municipal water pipelines, %	9,2	11,8	9,8	8,4
Rural pipelines, %	18,0	18,3	17,6	21,0
Pipeline network, %	10,8	12,1	10,7	11,5
Decentralized water supply sources, %	28,6	32,0	29,3	31,4

National statistical reports has fixed a percentage of drinking water samples deviated from standard by sanitary-chemical and bacteriological parameters. This report provides a table that contains an integrated assessment of the sanitary-chemical quality of drinking water in centralized water supply systems.

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

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

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

Disease	<i>Incidence (number of people)</i>				<i>Number of outbreaks</i>			
	<i>Baseline value</i>	<i>Interim value</i>		<i>Current value</i>	<i>Baseline value</i>	<i>Interim value</i>		<i>Current value</i>
	2009	2011	2012	2014	2009	2011	2012	2014
Cholera	–	33/33*	0/0	0/0	–	1/1	0/0	0/0
Bacillary dysentery (shigellosis)	365/0	25/0	212/0	0/0	5/0	1/0	6/0	0/0
EHEC (Enterohaemorrhagic E. coli.)	In the official statistical form is not presented separately							
Enteritis, caused by Y. enterocolitica	0	0	0	0	0	0	0	0
Rotavirus	35/0	120/23	7/0	115/0	4/0	7/1	1/0	12/0

enteritis								
Viral hepatitis A	0	77/64	15/0	393/288	0	3/2	2/0	8/2
Typhoid fever	0	0	0	0	0	0	0	0

** Over slash: general data of outbreaks / under slash: data on outbreaks related to water transmission factor*

Data on the incidence of Cholera, Shigellosis, EHEC, Hepatitis A, Typhoid fever deceases have been summarized on the basis of state statistical forms № 1 and 2, where the total number of people who had got sick was recorded. Relation to water is recording only during the gathering data on outbreaks.

In 2014, 2 outbreaks of hepatitis A associated with a water transmission factor were registered (288 people of Roma nationality, residents of the district, 142 of them children were suffered because of the consumption of unsatisfactory drinking water from centralized water supply enterprise "Kryvbasvodokanal" in the Dovhyntsiivsk district of Kryvyi Rih, Dnipropetrovsk region, and Amur-Nizhnedneprovskiy district of Dnipropetrovsk, because of "Roma" nationality people migration from Dovhyntsiivsk district of Kryvyi Rih, area where an outbreak of viral hepatitis A was registered).

In 2009, 2012-2013 outbreaks associated with the consumption of poor quality drinking water has not been registered.

In 2011, 2 outbreaks of hepatitis A associated with the water transfer factor were registered (64 people including 37 children were suffered due to use poor quality of drinking water from centralized water supply system in Bakhchisarai, AR Crimea, and Sinelnikovo, Dnipropetrovsk region). Apart of this, 1 rotavirus outbreak in Rovenky of Lugansk region on "Cosmonauts" mine (23 people died), 1 outbreak of cholera in Donetsk region (injured 33 people, including 1 child) were registered.

Total population morbidity by some infectious diseases.

Disease	Incidence (number of people)				Number of outbreaks			
	Baseline value	Interim value		Current value	Baseline value	Interim value		Current value
	2009	2011	2012	2014	2009	2011	2012	2014
Cholera	–	33	0	0	–	0,07	0	0
Bacillary dysentery (shigellosis)	2826	1627	2794	1202	6,12	3,55	6,13	2,79
Enterohaemorrhagic E. coli.	130	101	88	67	0,28	0,22	0,19	0,16
Enteritis, caused by Y. enterocolitica	5747	8684	9140	13925	12,44	18,97	20,4	32,36
Rotavirus enteritis	2629	1797	1400	4357	5,69	3,93	3,07	10,12
Viral hepatitis A	6	16	3	3	0,01	0,03	0,001	0,001

III. Access to drinking water

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

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>.

According to the Statistical Bulletin of the State Statistics Service of Ukraine, 2014, centralized drinking water supply were provided for people in 397 cities or 89.8% of total number (442), 570 towns, or 68.8% of total number (828), and 4709 villages or 17.2% of total number (27412).

The number of localities that have separate water supply networks, % *

Localities	2009	2010	2011	2012	2013	2014 **
Cities	91,3	99,1	99,4	99,6	99,8	89,8
Settlements	87,1	87,1	87,0	85,9	85,9	68,8
Villages	22,1	22,1	22,0	22,0	22,1	17,2

* According to the Statistical Bulletin of the State Statistics Service of Ukraine

** Information exclude temporarily occupied territory of the Autonomous Republic of Crimea, Sevastopol and the zone of the antiterrorist operation.

The total length of Ukraine water supply is 141993.8 km, of which 49,129.4 km, or 34.6% are in a dangerous and dilapidated condition. The largest share of dilapidated and emergency water supply of the total length was in Luhansk (54.0%), Donetsk (40.8%), Lviv (45.3%), and Dnepropetrovsk (46.5%) regions.

In 2014, leakages and unaccounted water consumption from centralized water supply system amounted 28.3% of water supplied to the network (in 2013 - 29.8%). The highest percentage of leakages and unaccounted water consumption from water supply networks was registered in Lviv (46.7%), Zhytomyr (43.5%), and Chernivetskiy (41.0%) regions.

The population of 261 villages are using drinking water from local sources with a deviation from the standard requirements by physico-chemical indicators, such as total hardness, chlorides, dry residue, sulfates, fluorides, total iron, nitrates, ammonia, and manganese. The largest volume of drinking water with a deviation from the regulatory was supplied in Dnipropetrovsk (8077 000 cubic meters or 1.6% of tap water), and Kherson (6892 000 cubic meters or 15.4% of tap water) regions.

IV. Access to sanitation

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

According to the Statistical Bulletin of the State Statistics Service of Ukraine, 2014, the centralized water discharge systems were operational in 385 cities (87.1% of the total 442), 397 towns (47.9% of the total 828), and 530 villages (7.9% of the total (27412) in Ukraine.

The number of localities that have sewerage systems, % *

<i>Localities</i>	2009	2010	2011	2012	2013	2014 **
<i>Cities</i>	96,9	96,5	96,5	96,5	96,7	87,1
<i>Settlements</i>	56,8	57,9	57,9	57,6	57,2	47,9
<i>Villages</i>	2,6	2,6	2,5	2,5	2,4	1,9

* According to the Statistical Bulletin of the State Statistics Service of Ukraine

** Information exclude temporarily occupied territory of the Autonomous Republic of Crimea, Sevastopol and the zone of the antiterrorist operation.

The total length of Ukraine water sewerage pipeline is 42881.9 km, of which 14786.0 km, or 34.5% are in a dangerous and dilapidated condition. The largest share of dilapidated and emergency water sewerage pipelines of the total length was in Kharkiv (58.0%), Donetsk (43.1%), and Luhansk (52.1%) regions. The lowest share of sewerage system pipelines in such conditions were registered in Vinnitsya (17.6 %), Rivne (18.1 %), Zakarpatya (19.2 %), and Kyiv (23.09%) regions.

1656471 thousand cubic meters of wastewater were discharged through sewage systems in 2014. 1611485 thousand cubic meters of them were treated by Water Treatment Facilities. 44985 thousand cubic meters (2.7% of total amount of discharged wastewater) were discharged without purification.

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).

Status of Ukraine surface waters (data of the monitoring system of the State Water Resources Agency)

<i>Classes (categories)</i>	<i>Percentage of surface water falling under classes</i>	
	<i>Baseline value (2009-2011)</i>	<i>Current value (2012-2014)</i>
I (1)	0	0
II (2)	37	34
II (3)	54	56
III (4)	9	10
III (5)	0	0
IV (6)	0	0

V (7)	0	0
Total number/volume of classified bodies	68	68

In the major river basins, the quality of surface water has been determined in 68 places located near drinking water intake points by the Methods of Environmental Assessment of surface water quality by the appropriate categories. The Methods has been approved by the Ministry of Ecology and Natural Resources of Ukraine of 31.03.1998 № 44, but has not been registered in the Ministry of Justice of Ukraine (hereinafter - Methods).

Criteria base of the Methods is the system of ecological classification of surface water quality. Eight specialized environmental classifications within this system are divided into three blocks: a) by the salt composition criteria that includes specialized classification of criteria mineralization, ionic composition and pollution of fresh and brackish water by salt components; b) by the trophy-saprobiological (environmental and sanitary) indicators; c) by the criteria of the content of specific toxic substances and radiation exposure, and also by toxicity level.

Values ranges of all water quality parameters were grouped into the six classifications (except the first two), divided into five classes and seven categories by water quality with certain titles that describe an appropriate water quality from "very clean", which is correspond to class I quality category 1 to "very dirty", corresponding to class V quality category 7.

Monitoring waters laboratory of the State Agency of Water Resources is not carrying out the determination of hydro biological (biomass of phytoplankton and the index of self-cleaning, self-pollution), bacteriological (number of bacterioplankton and number of saprophytic bacteria) indicators of water quality and saprobity bio indexation that makes it impossible to apply the techniques in full scale and leads to some obstacles in objective defining the class and category of water. In the future, it is expected to expand the list of indicators for monitoring surface waters.

The calculation of the integral (ecological) water quality index for the the appropriate categories performed using database information of the Monitoring System of the State Agency of Water Resources, which included data of long-term observations in the river basins of Ukraine withinsectoral monitoring program.

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.

Key indicators of water resources at the national level (mln. m³) *

<i>Water exploitation index</i>	<i>Baseline value</i>	<i>Interim value</i>	<i>Current value</i>
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	2009	2011	2012	2013	2014 **
Amount of water extracted from natural water bodies - total	14478	14651	14651	13625	11505
including underground water sources	2007	1961	1961	1911	1503
Amount of fresh water used, including for:	9513	10086	10507	10092	8710
industrial needs	5149	5514	5681	5363	4871
domestic and drinking needs	1956	1860	1848	1765	1500
irrigation	1411	1638	1759	1770	1218
agriculture water supply	204	180	161	155	143
pond-fish industry	754	853	1013	999	945
Water losses during transportation	2285	2236	2286	2213	1350
Recirculating and successional water supply	41379	45209	45806	45150	43049
Capacity of waste water treatment facilities	7581	7687	7577	7592	7190
Total amount of discharged waters (waste, mine-career and collector-drainage water), including	7692	8044	8081	7722	6587
Discharged into surface water objects including portion of	7381	7725	7788	7440	6354
polluted return water	1766	1612	1521	1718	923
untreated water	270	309	292	266	175
Treated water corresponding to quality standards	1711	1763	1800	1477	1416
Satisfactory clean waters without not treated	3904	4350	4467	4246	4015
Amount of discharged wastewater	6548	6923	6978	6657	5957

* Presented in summarizing statistical reports of water users according to the 2-TP (water industry)

** Excluding reporting data from water users of temporarily occupied territories and the territories in which the public authorities' control is temporarily restricted or suspended

In 2014, 11,505 million m³ of water (fresh - 10 899 million m³) were extracted from natural sources of which 1 503 million m³ - from underground water sources, including 551 million m³ mine and open carst-mine water.

The biggest amount of the water was extracted in Dnipropetrovsk (1 565 million m³), Donetsk (1 697 million m³), Zaporizhia (1 149 million m³), Kiev (911.5 million m³), Kherson (1 442 million m³), Odessa (977.3 million m³) regions, which account 68% of the total volume of water intake.

The biggest amount of the water was taken in basins of Dnipro -7331 million m³ (22% of total runoff in dry year), Siversky Donets - 1 160 million m³ (51% of total runoff in dry year), Southern Bug - 368.9 million m³ (32% of the total runoff in dry year), and Dniester - 566 million m³ (13% of total runoff in dry year).

In 2014, the main water consumers classified by sectors were industrial enterprises (4.9 million m³, or 43% of total water intake in the country, including the largest power plants, nuclear power plants, steel plants and coal industry), agriculture - 39%, and communal sector - 21% of the total withdrawal.

In general, the use of fresh water in 2014 for various needs amounted to 8 104 million m³, including 1792 million m³ drinking water and 6 312 million m³ technical water. 320.5 million m³ of drinking water quality were used for industrial needs, including 125.9 million m³ of water from public supply systems (i.e. water specially prepared to drinking purposes). Also 605.3 million m³ of seawater were used.

In 2014, 381.5 million m³ of wastewater, 85,660,000 m³ of collector-drainage water and 57.5 million m³ of mine and open carst-mine water were used.

43.049 billion m³ of water were circulating in recycled and re-supply consistent systems.

Losses during the transportation amounted to 1 350 million m³ of water (11.7% of the extracted). More than half of the volume of lost water is accounting by housing and communal sector (65%). Most of the lost water in the housing and utilities sector were prepared for drinking consumption.

Waters discharged in natural water bodies consist of polluted waters (923.2 million m³ or 14.5%), purified to regulatory requirements waters (1 416 million m³ or 22.2%), and clean water without treatment (4,015 million m³ or 63.3%).

The main causes of surface water pollution are discharge of contaminated municipal and industrial waste water directly into the natural water bodies and through the city sewer systems as well as revenues of groundwater contaminants in the runoff water from built-up areas and farmland.

As regard to the regional picture, largest amount of wastewater are discharged in Donetsk (295.8 million m³, or 32.3% of the total volume of discharges in the region), Dnipropetrovsk (311.6 million m³ or 27.7% of the total volume discharges in the area), and Odesa (50.1 million m³ or 24% of the total volume of discharges in) regions. Water users in these 4 areas are discharged about 71% of total volume of contaminated wastewater.

In 2014, key water polluters were industrial enterprises (536,700,000 m³), in particularly, largest ones are still metallurgy enterprises (407.5 million m³), energy (85.4 million m³) and coal-industry entities (66.8 million m³). Communal sector entities discharged 346.8 million m³ of polluted wastewater, agricultural enterprises - 26.7 million m³ of polluted wastewater.

Volumes of polluted wastewaters discharged in in different river basins are ranked in the following order: Dnipro basin - 473.6 million m³, Seversky Donets - 73.3 million m³, Dniester - 22.8 million m³, Western Bug - 39.0 million m³, Danube - 18.5 million m³, Southern Bug - 6.7 million m³.

Because of the poor quality of purification of discharged wastewater, the pollution income into the surface water bodies is not reducing. Quality of surface water bodies depends on discharges of mine and open-carst mine water (551 million m³), wick are discharged without treatment into the surface water bodies.

In 2014, along with the wastewater to surface water bodies it was discharged 26040 tons suspended matters; 311100 tons oil products; 437600 tons of sulfates; 451400 tons

chlorides; 6290 tons ammonia nitrogen; 46500 tons nitrates; 11200 tons nitrites; 199400 tons detergents; 581100 tons iron; 6 tons phosphates etc.

Key indicators of the water use in the context of major rivers (mln. m³)

<i>Name of the river (Volume of water in the main channel, km³)</i>	<i>Baseline value</i>	<i>Interim value</i>			<i>Current value</i>
	<i>2009</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014 **</i>
<i>Siversky Donets (4,5)</i>					
water use	803	812	828	837	638
waste and other waters discharged	649	674	676	670	455
of which are polluted	176	162	179	193	73
<i>Dnipro(53,9)</i>					
water use	6424	6750	7294	7003	6179
waste and other waters discharged	4279	4308	4545	4328	4174
of which are polluted	793	659	593	803	474
<i>Dnister (10,0)</i>					
water use	458	467	446	425	411
waste and other waters discharged	248	246	233	220	205
of which are polluted	50	37	26	23	23
<i>Danube (214)</i>					
water use	207	211	184	200	194
waste and other waters discharged	172	172	142	142	144
of which are polluted	46	45	36	31	19
<i>Pivdenyi Buh (3,4)</i>					
water use	279	303	294	283	295
waste and other waters discharged	190	215	202	225	224
of which are polluted	29	13	7	11	7

*Data summarized in the statistical reports of water users, form 2-TP (water industry)

** Excluding reporting data from water users of temporarily occupied territories and the territories in which the public authorities' control is temporarily restricted or suspended

Key indicators of the water use by sectors (mln. m³)

<i>Water exploitation index</i>	<i>Baseline value</i>	<i>Interim value</i>			<i>Current value</i>
	<i>2009</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2009</i>
Fresh water used					
Total in Ukraine	9513	10086	10507	10092	8710
including:					

- industry	4759	5123	5316	4972	4565
- agriculture	2580	2889	3107	3128	2478
- communal sector	1992	1854	1866	1786	1487
- other sectors	182	220	218	206	180
<i>Waste and other waters discharged</i>					
Total of Ukraine	7692	8044	8081	7722	6587
including:					
- industry	4208	4645	4906	4574	3946
- agriculture	1110	1190	1019	1038	915
- communal sector	2323	2149	2104	2065	1689
- other sectors	51	60	52	45	37
<i>Contaminated return waters discharged into surface water bodies</i>					
Total of Ukraine	1766	1612	1521	1718	923
including:					
- industry	945	910	894	838	537
- agriculture	33	84	71	83	27
- communal sector	779	596	538	783	347
- other sectors	9	22	18	14	12

** Excluding reporting data from water users of temporarily occupied territories and the territories in which the public authorities' control is temporarily restricted or suspended

Part Three

Targets and target dates set and assessment of progress

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

For each target set in this area:

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

According to the paragraph 2 a) Article 6 of the Protocol in Ukraine two national targets were approved: NT 1 "Improving the safety of drinking water by microbiological parameters" and NT 2 "Improving the safety and quality of drinking water by chemical composition"

National Target 1 Improving the safety of drinking water by microbiological parameters"

Indicators: *The percentage of samples that do not meet sanitary standards and regulations by microbiological indicators (Escherichia coli and enterococcus for rural and urban water supply.*

Control date: *Interim date – 2015, it is expected to achieve the deviations of percentage of samples from the state sanitary standards and regulations for microbiological indicators (Escherichia coli (E.coli) and enterococcus) for rural water supply (3%) and urban water supply (2%); target date - 2020 it is expected to achieve the percentage of samples that do not meet sanitary standards and regulations for microbiological indicators (Escherichia coli (E.coli) and enterococcus) for rural water supply (2%) and urban water supply (0.5%).*

Responsible for implementation: Ministry of Regional Development, Construction and Housing of Ukraine, local governmental authorities, the State Sanitary Epidemiological Service of Ukraine.

National Target 2 Improving safety and quality of drinking water by chemical composition "

Indicators: The percentage of samples that do not meet sanitary standards and regulations by the sanitary-chemical parameters (priority: fluorides, nitrates (NO₃), nitrites, arsenic, lead, iron, general hardness, dry residues, sulphates, chlorides, manganese).

Control date: interim date – 2015, it is expected to achieve the deviations of percentage of samples from the state sanitary standards and regulations by the sanitary-chemical parameters for rural water supply (15%) and urban water supply (7%); target date - 2020, it is expected to achieve the percentage of samples that do not meet sanitary standards and regulations for the sanitary-chemical parameters for rural water supply (7.5%) and urban water supply (3%).

Responsible for implementation: Ministry of Regional Development Construction and Housing of Ukraine, Ministry of Agrarian Policy and Food of Ukraine, State Water Resources Agency of Ukraine, local governmental authorities, the State Sanitary Epidemiological Service of Ukraine.

These NTs have been established due to the fact that the main sources of drinking water supply are in poor condition. 70% of drinking-water supplied in Ukraine from surface sources. The main negative factors affecting the quality of drinking water are: depreciation of installations to 30-70%; obsolete preparation technology of drinking water; pollution of surface and underground water sources by untreated household and wastewater; nitrate contamination of groundwater due to the inappropriate use of mineral fertilizers by collective farms and private sector.

Key instrument for the implementation of the State Policy in the fields of quality drinking water supply for population is (according to the Law of Ukraine On Drinking Water and Water Supply)' national target program Drinking Water of Ukraine"for 2011-2020, approved by the Law of Ukraine from 20.10.2011 № 3933-VI. In 2012, within the Program, state budget supported the construction and reconstructed of 46 water intake facilities, 5 water pipeline and sewage treatment facilities; 1 purification station of drinking water was entered into operation in centralized water supply system; 1 monitoring laboratory for water quality with advanced control and analytical devices was equipped; state budget was used as well for others purposes. Due to these measures, the share of the population which has access to better quality water supply had been increased. However, State Budget of Ukraine for 2013-2014 had not included funds for the activities of national program Drinking Water of Ukraine."

Condition of rural drinking water supply in Ukraine can be assessed as mostly poor and it is close to critical. The situation with the provision of quality drinking water for rural population in the some regions is becoming a social issue.

A number of measures for improving the water supply of rural areas in arid regions have been included in the National Target Program of Water Management and Environmental Rehabilitation of Dnipro River for the period until 2021. The Program envisages the construction of water supply systems in villages where the population currently uses the imported water. State Water Resources Agency of Ukraine is main implementer of the Program. However, due to lack of budget support, implementing the foreseen measures for the rural drinking water supply it was impossible in 2012-2014.

The State Sanitary Epidemiological Service of Ukraine is responsible for sanitary-epidemiological surveillance and laboratory monitoring of drinking water quality and reporting on the state of objects and environmental factors that affect on the population health.

The State Sanitary Epidemiological Service of Ukraine is carrying out the epidemiological control by selective inspections and makes permanent laboratory control of drinking water quality in the water intake points, the water plants and networks of centralized drinking water supply in order to check compliance with the State Sanitary rules and standards 2.2.4-171-10 "Hygienic requirements for drinking water intended for human consumption" and Sanitary standards 4630-88. In the case of detecting violations, appropriate actions are taking place.

Table 1 of statistical forms 18 "Report on the State Sanitary Epidemiological Service of Ukraine control of the objects and environmental factors that affect the population health" describes following:

The quality of drinking water

In 2014, laboratories of the State Sanitary Epidemiological Service took from the sources of centralized water supply 108,051 samples of drinking water for the research of sanitary-chemical indicators (in 2012 - 175167, 2011 – 216629, 2009 - 201139), and for bacteriological indicators - 141006 samples (in 2012 - 233158 , 2011 – 298661, 2009 - 290784).

In 2014 the share of non-standard drinking water samples taken from the centralized water sources (deviated from sanitary requirements) by sanitary-chemical and bacteriological indicators were 14.7% and 2.9% (as to compare: 12.9% and 2.8% in 2012, 14.7% and 2.9% in 2011, 12.9% and 3.1% in 2009). The same indicators for samples from public waterline - respectively 8.4% and 2.2% (in 2012 - 9.8% and 2.0%, in 2011 - 11.8% and 2.0%, in 2009 - 9.2% and 2.1%); rural water supply samples - respectively 21% and 5.5% (in 2012 - 17.6% and 4.7%, in 2011 - 18.3% and 4.7%, in 2009 - 18% and 5%).

More non-standard samples of drinking water from the centralized water systems have been registered, like in previous years, in rural water supply systems, the lowest – in communal water supply systems.

The quality of drinking water from the water supply network

In 2014, laboratories of the State Sanitary Epidemiological Service took from the sources of the water supply network 124542 samples of drinking water for the research of bacteriological indicators (in 2012 - 204397, in 2011 – 264107, in 2009 - 256407). Package included 2531 samples for coli-index (in 2012 - 3270, in 2011 – 4906, in 2009 - 7980). The share of non-standard drinking water samples taken from the water network by bacteriological indicators amounted 2.9% (in 2012 - 2.8%, in 2011 - 3.0%, in 2009 - 3.2%) and with excess of coli-index to 20 and more - 12.9% (in 2012 - 17.5%, in 2011 - 21.6%, in 2009 - 52.0%).

During 2014 by the laboratories of the State Sanitary Epidemiological Service from the sources of the water network were taken 90968 samples of drinking water for the research by the sanitary-chemical indicators (in 2012 - 148569, in 2011 – 183669, in 2009 – 170212). The share of non-standard drinking water samples taken from the water network of the sanitary-chemical indicators in 2014 amounted to 11.5% (in 2012 – 10,7%, in 2011 – 12,1%, in 2009 – 10,8%). From the total number of samples investigated by sanitary-chemical parameters 463 (0.5%) samples were investigated for nitrates (in 2012 - 637 (0.4%), 2011 - 772 (0.4%), 2009 - 1033 (0, 6%); 6541 (7.2%) samples – for organoleptic (in 2012 - 11 575 (7.8%), 2011 - 15 431 (8.4%) 2009 - 13057 (7.7%), 3211 (3.5) samples – for total mineralization (in 2012 - 4451 (3.0%), 2011 - 5409 (2.9%), 2009 - 4702 (2.8%).

In 2014, State Sanitary Epidemiological Service of Ukraine was controlling 16967 sources of the centralized water supply (in 2012 - 18771, in 2011 - 18875, in 2009 - 19126), of which 1336 municipal water supply pipelines (in 2012 - 1646, 2011 - 1603, 2009 - 1583), and 6566 rural water supply pipelines (in 2012 - 7579, 2011 - 7640, 2009 - 7676).

During the recent years about 4.7-5.0% water pipelines does not meet the sanitary standards. The largest numbers of them are in Luhansk, Donetsk, Kherson and Zhytomyr regions. Percentage of the water pipeline which do not meet sanitary standards is following: communal - 7.5%, rural - 5.4%, (9.3% and 7.6% respectively in 2011). Among those deviating from regulatory requirements 75.6% are lacking sanitary protection areas, 18.8% required complex treatment facilities, 16.1% required disinfecting plants (in 2011 - 67.7%, 17.5% and 25.4% respectively).

355 rural water supply pipelines (5.4%) do not meet sanitary norms and rules (in 2011 - 579 or 7.6%, in 2009 - 634 or 8.3%) of 6566 (in 2011 - 7640, in 2009 - 7676).

State Sanitary Epidemiological Service of Ukraine in 2014 have controlled 160 225 sources of decentralized water supply (in 2012 - 170243, 2011 - 174314), of which 155968 mine wells (in 2012 - 165,653, 2011 - 169,734), 3170 artesian wells (in 2012 - 3383, 2011 - 3371), 1054 catchments (in 2012 - 1207, 2011 - 1209). State Service keep on-going monitoring of nitrates levels in water of decentralized water supply sources, including private wells (to implement of the order of the Chief Medical Officer of Ukraine from 17.05.2010 № 16 "About the prevention of water-nitrate children methemoglobinemia"). Decreasing the number of monitored wells is observed due ti restriction of the functions of the State Sanitary Epidemiological Service.

In 2014, the share of the investigated samples of drinking water from decentralized sources of water supply that did not meet sanitary requirements, was 31.4% by sanitary-chemical indicators (2012 - 29.3, 2011 - 32, 2009 - 28.6) and 15.5 % by bacteriological indicators (in 2012 - 16.2, 2011 - 16.4, 2009 - 16.8%), including the samples from mine wells that did not meet sanitary requirements, was 32.1% by sanitary-chemical indicators (2012 - 30.1, 2011 - 33.2, 2009 - 30.3) and 16.8% by bacteriological indicators (2012 - 17.4, 2011 - 17.6, 2009 - 18.1).

During this period only 19% (48 thousands) of public and individual wells and pet wells were examined. 23% of them did not meet sanitary standards. In 2014, the share of the investigated samples of drinking water from decentralized sources of water supply by nitrate that did not meet sanitary requirements, was 23%. In Dnipropetrovsk region concentration of nitrates in water from wells increase recorded maximum permissible concentrations in Novomoskovsk, Pyatihatskoy and Tsarychans'ky districts.

In each case of detecting the violations in the maintenance of individual wells and inappropriate wells water quality by sanitary-chemical and sanitary-microbiological indicators, the State Sanitary Epidemiological Service took appropriate measues against owners of the wells and local governments including sharing information through mass media regarding threats from water with low quality. State Service directed the suggestions, orders of the need for proper installation of wells, carried out public awareness, including through the media about the inadmissibility of the use of wells water for drinking purposes in case of excess nitrates, etc., especially for making baby food has made sanitary-educational work with parents, staff of children's schools, with employees of medical institutions, including village health centres.

In 2014, the share of samples of drinking water from centralized and decentralized sources that did not meet health requirements amounted: by lead -1.3% (0.5% in 2012, 0.9% in 2011, 0.5% in 2009); iron - 3.8% (3.8% in 2012, 2.9% in 2011, 5.0% in 2009); manganese - 1.1% (1.1% in 2012, 1.5% in 2011, 2.7% in 2009); cadmium - 0.6% (0.6% in 2012, 1.1% in 2011, 2.2% in 2009); other metals, etc. - 0.8% (1.3 in 2011, 0.3% in 2009); recorded exceeding standards for carbon chloride 4 0% (in 2011 - 0.4%, 2009 -

1.8%, 2008 - 4.2%, in 2007 - 0.6%); for chloroform - 1.1% (in 2012 - 0.7%, 2011 - 21.6% 2009 - 23.6%, in 2007 - 20.0%).

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.

For the violations of the sanitary legislation (the population provision with quality drinking water) the State Sanitary Epidemiological Service of Ukraine in 2014 fined 713 responsible officials (960 in 2013 and 2,814 in 2012). SSES submitted to the investigating authorities 6 cases, 4 of which were prosecuted (in 2013 - 5 and 1, in 2012 - 50 cases. However, no application was given to consideration at administration commission (in 2013 - 1, 2012 - 28); no facilities were suspended from operation (in 2013 - and 500, of them 30 (6%) were closed, 2012 - 5857 and 1538 respectively (26.3%).

In 2014, 66 penalties were imposed for the violation of sanitary requirements that were identified during the examination of public wells/captations, however any resolution for the termination of objects exploitation were issues; 303 resolution were issued for temporary suspension (in 2011 - 100, 95 and 616 respectively).

In 2014 were not imposed any penalties for the violation of sanitary requirements that were identified during the examination of private wells/captations, rendered 43 resolutions for the termination of objects exploitation permanently and 424 - for temporary (in 2011 - 25, 633 and 1580 respectively).

In August 2014, moratorium on inspections of enterprises, institutions and organizations, individuals was entered into force (according to the Article 31 of the Law of Ukraine "On State Budget of Ukraine for 2014", the situation of conducting operative measures aimed to the investigation, localization and liquidation of the cases of infectious diseases, including water factor transfer become more complicated. From January 1 to July 1, 2015, moratorium of inspections had been extended, pursuant to Clause 8 of Section III "Final Provisions" of the Law of Ukraine on December 28, 2014 №76-VIII "On amendments and ceasing terminated some legislative acts of Ukraine". In fact, during the year inspections were not carried out.

The Resolution of Ministry of Regional Development Construction and Housing of Ukraine of 04.03.2013 № 78 has approved "Guidelines on the calculation and generalization performance of monitoring indicator of the quality of drinking water and drinking water condition" so that drinking water quality received by consumers was approaching to the state sanitary standards 2.2.4-171-10 "Hygienic requirements for drinking water intended for human consumption".

Progress has been registered only for the quality of drinking water by sanitary-chemical parameters, but by bacteriological parameters water quality slightly deteriorated. The reason - the reorganization of the State Sanitary Epidemiological Service of Ukraine resulted in the decreasing the number of establishment services and limitations of oversight functions and prohibition of surveillance service inspections. The situation that has worsened on the territory non-controlled by Ukraine (territorial units that are in areas controlled by terrorist groups and annexed the territory of Crimea).

The quality of drinking water of the water supply systems adversely affected by the poor sanitary condition of water supply facilities and networks. The percentage of depreciation, in different regions is varying from 30% to 70%. Negative factors are failures of capital and current repairs and preventive planning and emergency responses.

In some regions, water supply is an urgent issue not only qualitatively but also quantitatively. Water supply on a schedule and its longtime lack in water supply networks

contributes to bacterial contamination of drinking water. The situation become worse because of cases of water supply systems disconnection from energy supply, which is a flagrant violation of Article 6 of Chapter II of the Law of Ukraine "On Drinking Water and Water Supply".

It should be noted that central governmental authorities and local governments, business leaders and households does not pay due attention to the providing safe drinking water for the population, which is a violation of Article 18 of the Law of Ukraine "On ensuring sanitary and epidemiological welfare" and Article 7 of the Law of Ukraine "On drinking water and drinking water supply".

Unresolved issues of centralized water supply problem of the rural population are incomplete process of transfer of rural water supply to the balance of local governments, the lack of specialized organizations for their maintenance and operation, lack of production laboratory control of water quality etc.

Centralized water supply provided only for 22% of rural settlements of Ukraine (2009-2013). The rest of the rural population uses water from wells and individual wells, majority of which are in poor technical condition.

As part of the optimization and reformation of the State Sanitary and Epidemiological Service of Ukraine, conducted in 2013 and would continuing in 2016, experts of the State Sanitary and Epidemiological Service of Ukraine and State Agency "Center of diseases control and monitoring of Ministry of Health of Ukraine" will work on improvement of the statistical form 18 "Report on the State Sanitary and Epidemiological Service of Ukraine control of objects and environmental factors that affect the health of the population "and registration forms to statistical form. National target indicators to the Protocol on Water and Health will be included to the statistical form 18 namely "E.coli" and "Enterococci" as indicators of epidemiological safety of drinking water; fluorides, nitrates, nitrites, arsenic, lead, iron, cadmium, manganese, chloroform, carbon chloride

3. Assess the progress achieved towards the target.

On the occasion of anti-terrorist operation in some parts of Ukraine, a huge number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding for state programs, it is extremely difficult to estimate the expected progress as of 2016, particularly because of the lack of a specific comparison base.

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

There is no need to revise national targets 1, 2 and control date.

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

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

According to the para 2b) of the Article 6 of the Protocol, two NTs have been approved: NT 3 "Reduction of morbidity rates of diseases: cholera, bacillar dysentery (shigellosis), acute intestinal infection caused by enterohemorrhagic Escherichia coli, hepatitis A, typhoid fever, aqueous nitrate methemohlobinemia related to the use of poor drinking water

quality" and NT 4 "Providing the laboratories with the modern equipment necessary for testing safety and quality of drinking water"

National Target 3 "Reduction of morbidity rates of diseases: cholera, bacillar dysentery (shigellosis), acute intestinal infection caused by enterohemorrhagic *Escherichia coli* (EHEC), hepatitis A, typhoid fever, aqueous nitrate methemoglobinemia related to the use of poor drinking water quality".

Indicators: Number of incidences of population morbidity of cholera, bacillar dysentery (shigellosis), acute intestinal infection caused by enterohemorrhagic *Escherichia coli*, hepatitis A, typhoid fever, aqueous nitrate methemoglobinemia related to the use of poor drinking water quality.

Control date: interim date – 2015, it is expected that numbers of morbidity incidences per 100,000 population for these diseases will be for: a) cholera – 0; b) shigellosis to 2500; c) EHEC (enteritis caused by enterohemorrhagic *Escherichia coli*) to 100; d) hepatitis A to 2500; e) typhoid fever – 0; f) aqueous nitrate methemoglobinemia – 0; target date - 2020, it is expected to achieve the following numbers of morbidity incidences per 100,000 population: a) cholera – 0; b) shigellosis to 2000; c) EHEC (enteritis caused by enterohemorrhagic *Escherichia coli*) to 80; d) hepatitis A to 2000; e) typhoid fever – 0; f) aqueous nitrate methemoglobinemia – 0.

Responsible for implementation: Ministry of Health of Ukraine, the State Sanitary Epidemiological Service of Ukraine.

Number of incidences of population morbidity of cholera, bacillar dysentery (shigellosis), acute intestinal infection caused by enterohemorrhagic *Escherichia coli*, hepatitis A, typhoid fever are formed on the basis of state statistical forms № 1 and 2, where are recorded the total number of people who are sick. Contact with water is recorded only in the provision of data from outbreaks.

In 2014, two outbreaks of hepatitis A associated with the water transfer factor were registered, (were affected 288 people of Roma nationality residents, including 142 children - with the consumption of poor quality drinking water from centralized water supply enterprise Kryvbasvodokanal in the district of Dovhyntsiivsk of Kryvyi Rih city of Dnipropetrovsk region and Amur-Nizhnedneprovsk district of Dnipropetrovsk city through the migration Roma nationality people of Kriviy Rih of Dovhyntsiivsk area where the outbreak of viral hepatitis A was registered).

In 2009, 2012-2013 outbreaks associated with the consumption of poor quality drinking water have not been registered.

In 2011, two outbreaks of hepatitis A associated with the water transfer factor were registered (64 people were affected, including 37 children - with the consumption of poor quality drinking water from centralized water supply in the Bakhchisarai city of Crimea, Sinelnikovo town of Dnipropetrovsk region), 1 rotavirus outbreak in the Rovenky town of Lugansk region in a mine Cosmonauts (23 people died), 1 outbreak of cholera in Donetsk region (33 people were affected, including 1 child).

Analysis of the incidence of infectious diseases in Ukraine for the period from 1995 to 2012 showed a tendency to reducing - all without carriers, flue and acute respiratory decease in 2013 were registered 502.93 per 100,000 population (525.31 in 2011, 673.27 in 2003 and 1024.76 in 2002). In 2014, the tendency remains unchanged - 477.63 per 100,000 population (compared with 500.78 - excluding data from the temporarily occupied territories of the Autonomous Republic of Crimea and in Sevastopol, part of Donetsk and Lugansk regions - the situation is taken into account in the comparative analysis for 2013-2014 years).

Water

a) In 2009-2010 and 2012, 2014, any case of cholera had not been registered. An example of positive activity of the State Sanitary and Epidemiological Service of Ukraine to prevent the spread of infectious diseases is the localization and liquidation of the outbreak of cholera in Donetsk region in 2011, during which there were registered 33 cases of cholera and 24 cases vibriocarrier and any fatal case of cholera. Mission of WHO specialists have been defined the work to eliminate and prevent the outbreak of cholera, which was conducted by the State Sanitary and Epidemiological Service of Donetsk region, timely, efficient, qualified and adequate epidemiological and sanitary-hygienic situation which were made on the basis of that in Mariupol town were not the emergence of large-scale cholera epidemic and were registered only isolated cases, the outbreak spread beyond Donetsk region and any fatal case of cholera were not registered, while, for example, in 1994 in Ukraine 22 people died because of cholera.

Various factors transfer

b) Shigellosis to 2500 abs./6.0 per 100,000. - The incidence of shigellosis took place on intervals of 5 years and it is also characterized by a downward trend from 1995 to 1998 - from 65.56 per 100,000 population to 34.52; from 1999 to 2011 decline - from 67.10 to 3.55 (a decrease of 42% compared with 2009), in 2012 - 6.13 per 100,000 (an increase of 72% compared with 2011), in 2013 - 5.10 and in 2014 - 2.79 (conversely lowering).

c) An acute intestinal infection caused by enterohemorrhagic *Escherichia coli* - A significant proportion of acute intestinal infections (AII) belongs to enteritis, colitis, gastroenteritis and food poisoning caused by unidentified pathogens.

The highest incidence rate was found in 1999 - 96.18 per 100,000 population, the lowest was in 2005 - 59.32; in 2009 - 66.00, in 2010 - 70.48, in 2011 - 69.76, in 2012 - 73.34, in 2013 - 81.43, in 2014 - 123.61 (trend growth in 2005).

Enteritis caused by *Y. Enterocolitica* to 100/0.25 - In 2014, 67 cases were registered (enteritis caused by *Y. Enterocolitica*), which is 0.16 per 100,000 population (in 2013 - 0.7 per 100,000, 2012 - 0.19, 2011 - 0.22, in 2010 - 0.23, in 2009 - 0.28).

In 2014, 121 cases campylobacterial enteritis were registered, which is 0.28 per 100,000 population (in 2013 - 146 cases or 0.32 per 100,000 population; 2012 - 0.25; 2011 - 0.25; 2010 - 0.37).

d) Viral hepatitis A to 2500/5.5 - The incidence of acute viral hepatitis is still highly relevant for the country. In the structure of viral hepatitis infections, 1.8% cases raised during the epidemic rise and maximum 0.2% during the recession, and without flue and ARD - respectively 27% and 2.7%. Among the total number of acute viral hepatitis the proportion of hepatitis A (HAV) is an average of 22.5% in 2013 and 31% in 2014, hepatitis B (HVB) - 11.13% of hepatitis C - 5-4% , the share of other etiologic not decoded hepatitis is accounting for 1%, and the share of chronic hepatitis - 58-54% (up to 8000 cases).

High incidence of viral hepatitis A was registered in 1995-1996., in 1997-1999 was a decline sharp of HVA. Annual incidence almost decreased 2 times. In the recent years, HAV is in a period of the epidemic decline, the incidence ranged from 81.90 (2001) - 43.27 (2005) - 24.73 (2006) - 16.86 (2007) - 11.05 (2008) - 5.69 (2009) - 6.13 (2010) - 3.93 (2011) - 3.07 (2012). However, in 2013 it was a sharp increase 2.2 times (6.80 per 100,000 - 3093 cases) compared with 2012. In 2014, the situation was the similar - 10.12 per 100,000 - 4357 cases (excluding the data of the temporarily occupied territories of the Autonomous Republic of Crimea, Sevastopol, part of Donetsk and Lugansk regions).

e) Typhoid fever 0/0 - In 2014, it was registered few cases of typhoid - 3 cases (0.01) (compared with 7 cases (0.02) in 2013, 16 cases in 2011 (0.03 per 100,000 population - 2 times more than in 2009-2010 - 6 or 0.013 cases).

f) Aqueous nitrate methemoglobinemia. According to the disease classifier that is developed on the base of International Diseases Classification – 10, indicated pathology does not belong to the category of the infectious diseases, that is why it is not included in the list and not filed in the reporting forms. As to the accounting of the incidence of children with aqueous nitrate methemoglobinemia, the Resolution 2.2. of resolution of Chief State Sanitary Doctor of Ukraine №16 of 17.05.2010 "On prevention of children aqueous nitrate methemoglobinemia" enforce health care institutions have to record this children pathology and inform the State Sanitary Epidemiological Service of Ukraine. In 2014, a case of nitrates poisoning of a child were registered in Krnichansky district of Dnepropetrovsk region and 2 cases of nitrate poisoning in the Kharkiv region.

National Target 4. Providing the laboratories with the modern equipment necessary for testing safety and quality of drinking water.

Indicators: the number of modern equipped) laboratories.

Control date: interim date – 2015, it is expected to achieve the modernization of 20% of laboratories; target date - 2020, it is expected to achieve to 50 % laboratories modernization.

Responsible for implementation: the State Sanitary Epidemiological Service of Ukraine, Ministry of Regional Development Construction and Housing of Ukraine.

NT 4 was established due to the fact that most laboratories for monitoring the safety and quality of drinking water have a low material support. Pretty serious problem is the lack of modern equipment. Quality work of laboratories is based on significant maintenance costs, electricity, heating, maintenance equipment (calibration, repair, upgrading), purchase of reagents, quality standard samples and, what is most important, is completion of certification of laboratories which requires the certain funds in Ukraine.

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.

An example of positive activity of the State Sanitary and Epidemiological Service of Ukraine for the prevention of the infectious diseases spread is localization and liquidation of the cholera outbreak in Donetsk region in 2011 (33 registered cases of cholera and 24 cases vibriocarriers and no fatal case of cholera).

In particular, experts of the State Sanitary and Epidemiological Service of Ukraine have been tested 3670 objects of increased epidemiological risk, 5954 surveys of cholera decreed contingent people and 360 homeless people, researched 21851 samples of environmental objects. During the homestead detours 831,226 people were examined, including 437,993 repeated people.

The State Sanitary and Epidemiological Service of Ukraine made a set of preventive anti-epidemic measures, in particular to prevent the spread of the cholera agent through the drinking and industrial water, food, public entertainment places.

The mission of WHO experts determined the work to eliminate and prevent the outbreak of cholera by the State Sanitary and Epidemiological Service of Donetsk region timely, efficient, qualified and adequate to epidemiological and sanitary-hygienic situation.

These conclusions are made on the basis that in Mariupol were not the emergence of large-scale cholera epidemic. The only isolated cases were registered, the outbreak spreading outside of Donetsk region was prevented and no fatal cases of cholera happened, while for example, in 1994 in Ukraine 22 people passed away due to cholera.

However, currently, due to anti-terrorism operation in eastern Ukraine, particularly in Donetsk region, there is a danger of increasing of the disease threat and their pathogens outside of the endemic zones that makes it impossible to implement anti-epidemic and preventive measures by the State Sanitary and Epidemiological Service of Ukraine.

For the violations of sanitary legislation regarding the protection of surface water, the State Sanitary and Epidemiological Service of Ukraine in 2014 brought to administrative responsibility 192 penalties (267 in 2013); 1 case was handed over to the investigating authorities (in 1 in 2013). No application have been submitted to the administrative commissions (88 in 2012); 1 resolution for the termination of objects exploitation has been approved (in 2013 - 62).

As for NT 3. Some progress is observed only for morbidities of shigellosis, enteritis, etc., but the morbidities of typhoid fever, hepatitis A are still well above the target dates (not related to the water transfer factor).

The incidence of aqueous nitrate methemoglobinemia is not related to the diseases infectious, so it is not included to their list and not filed in the reporting forms.

As to NT 4. Since 2012, Reformation of the State Sanitary and Epidemiological Service of Ukraine and its territorial bodies is going on, it resulted in reducing the number of institutions in the cities and districts with the reduction of the staff units, and revision of the tasks and supervisory, and increasing monitoring functions.

From 2013, after the administrative reform, territorial Laboratory centres of the State Sanitary and Epidemiological Service of Ukraine were established, the laboratories were upgraded using equipment of the reorganized laboratories under the reform.

At the same time, laboratory facilities of microbiological profile of institutions and establishments of the State Sanitary and Epidemiological Service were sufficiently modernized. Process was supported by the Agreement between the Ministry of Health of Ukraine and the USA Ministry of Defence aimed at the cooperation for preventing the spread of technology, pathogens and expertise that can be used in the development of biological weapons.

7 laboratories of the State Sanitary and Epidemiological Service Ukraine were engaged in activities under the Biological Threat Reduction Program (Zakarpattia, Vinnitsa, Dnipropetrovsk, Lviv, Ternopil, Kharkiv and Kherson regional laboratory centres). It was also created the temporary central reference laboratory at the Ukrainian Scientific Research Institute named after Mechnikov (in Odessa) and epidemiological research laboratory at the "Lviv Research Institute of Epidemiology and Hygiene". In order to improve biosafety and biosecurity, all laboratory departments, especially of dangerous infections of regional sanitary and epidemiological stations, were equipped with boxes of biosafety of Class II, and institutions have got vehicles for the transportation of the biological material.

3. Assess the progress achieved towards the target.

On the occasion of anti-terrorist operation in some parts of Ukraine, a huge number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding for state programs, it is extremely difficult to estimate the expected progress as of 2016, particularly because of the lack of a specific comparison base.

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

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

There is no need to revise national targets 1, 2 and control date.

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

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.

To the paragraph 2 c) of Article 6 of the Protocol in Ukraine were approved two national targets: NT 5 "Increase the percentage of population with access to drinking water of adequate quality" and NT 6 "Ensuring that the children in pre-school and secondary schools are provided with drinking water of adequate quality"

National Target 5. "Increase the percentage of population with access to drinking water with adequate quality."

Indicators: Proportion of population with access to safe drinking water

Control date: interim date – 2015, it is expected to achieve the level of ensuring drinking water of good quality in cities and towns 90%, in rural areas 50%; target date - 2020, it is expected to achieve the level of provision of drinking water of good quality in cities and towns 100%, in rural areas 70%.

Responsible for implementation: Ministry of Regional Development Construction and Housing of Ukraine, Ministry of Agrarian Policy and Food of Ukraine, the State Agency of Water Resources of Ukraine, the State Agency of Geology and Mineral Resources of Ukraine, local government authorities.

Access to drinking water is ensured first of all primarily by availability of centralized water supply. According to the law, owners of the sources of drinking water (essentially wells), located on their land of private property, are not obliged to keep account of such sources.

National Target 6 "Ensuring that the children in pre-school and secondary schools are provided with drinking water of adequate quality"

Indicators: Increasing numbers (in percent) of pre-school and secondary schools with improved access to safe drinking water

Control date: Interim date – 2015, it is expected to achieve the increasing of the number of kindergartens and secondary schools with the access to safe drinking water in cities and towns by 15%, in villages – by 10%. The deadline for 2020 is expected to achieve the increasing number of kindergartens and secondary schools with the access to safe drinking water in cities and towns by 25%, in villages – by 20%.

Responsible for implementation: the State Sanitary and Epidemiological Service Ukraine, Ministry of Education and Science, Youth and Sport of Ukraine, Ministry of Regional Development, Construction and Housing of Ukraine.

The percentage of kindergartens and secondary schools with access to safe drinking water is 93.5% and 84.9% respectively in 2014 (94.8% and 87.5% in 2012 and 94.4% and 82% in 2009).

797 (6.5%) kindergartens (685 (5.2%) in 2012) are not connected to the centralized and local water supply systems. Due to the lack of centralized water supply sources in settlements, disparity of water to the regulations of local sources, 258 (2.1%) kindergartens are using delivery water (in 2011 - 267 or 2.2%). The largest numbers of such institutions are in Mykolaiv – 81, Odesa – 44, and Dnipropetrovsk - 43 regions.

As of 15.09.2015 decentralized water supply (except kitchens premises) are provided to 2545 (15.1%) secondary schools (in 2012 - 2414 (12.5%) (Vinnytsia region - 698, Lviv region - 440, etc.). 522 secondary schools of the country use delivery water (in 2012 - 466), including in Rivne region - 118, Zaporizhzhia region - 69, Dnepropetrovsk region - 62 etc.

Safe water supply is one of the most important issues for the school. Laboratory tests of water sources are been conducting at the beginning of each new academic year. 8% of drinking water samples taken in 2015 (2.7% in 2012 and in 2013) do not correspond to bacteriological standards, 2.8% of samples in 2015 (10% in 2014 and 6.7% in 2013) deviate from the sanitary-chemical indicators.

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.

As to NT 5. The Ministry of Regional Development Construction and Housing of Ukraine has approved the Procedure for construction and operation of pump rooms that are part of noncentralized systems of drinking water supply" (Order of 24.04.2013 №167, registered in Ministry of Justice of Ukraine 05.18.2013 of № 773/23305).

The Procedure has introduced unified and effective approaches to the construction and exploitation of well-rooms, which would help to ensure managing proper condition and drinking water quality and protection of consumers' rights.

The Ministry of Regional Development Construction and Housing of Ukraine has also approved Guidelines on calculation of water balance of the drinking water supply and implementation of hydraulic design of water distribution networks"for the purpose of rational use of drinking water in towns (Order of of 11.03.2013 №91).

As to NT 6. In 2014, 72,118 (2014 - 82,420) educational and health institutions, including 12268 kindergartens, 17100 general education institutes, 830 – boarding schools, 14052 - institutions of sanitation and recreation for children, 5682 - extracurricular, 16183 - canteens of schools, lyceums, gymnasiums, vocational schools, educational complexes, universities of I-II accreditation level were under the supervision of the State Sanitary an Epidemiological Service of Ukraine in 2014 were.

in 2014, to ensure sanitary-epidemiological welfare of children in schools and teenager institutions, the specialists of the State Sanitary an Epidemiological Service of Ukraine have issues penalties for 10,487 officials (41,636 in 2011), 10455 (99.7%) of them paid penalties. Territorial chief sanitary doctors issues 10 regulations on the termination of operation of facilities (in 2011 - 12,008); 8 cases (81 in 2011) were submitted to the investigating authorities, 4 of which (in 2011 - 59) were proved as guilty. Assortment of products in 65 objects was limited (in 2011 - 2298), job activity of 16,965 people (2011 - 31,938) was temporary suspended.

As to NT 5. Official statistics in Ukraine is lacking data on the percentage of population connected to the centralized water supply system. Therefore, the calculation has been made each year using the data from the State Statistics Service of Ukraine on available population in urban and rural areas and data on number of households connected to the centralized water supply sources. Obtained data have estimated character.

Centralized water supply covers only 22% of rural settlements in Ukraine (2009-2013). The rest of the rural population uses water from wells and individual wells, majority of which are in poor condition.

Ccondition of water supply systems throughout Ukraine requires serious technical re-equipment and significant investment. However, financing of the state programs was significantly reduced due to political and economic crisis and military conflict on the territory of Ukraine.

As to NT 6. Percentage of kindergartens and secondary schools with access to safe drinking water in Ukraine in the reporting period slightly increased as to compare with the previous years. There is reason to admit some progress due to the implementation of the state program "Drinking Water of Ukraine" and the initiatives of NGOs, local communities and the support of international organizations.

To implement the regional comprehensive program "Drinking water Dnipropetrovsk for 2006 - 2020 years" the improvement of drinking water purification systems is going on in educational institutions of Dnipropetrovsk region. Thus, almost 50% of schools of this region introduced the schemes of purification of drinking water. The most effective this work is carried out in the cities Dnipropetrovsk, Vilnogirsk, Krivuy Rig and others. The percentage of children institutions of the region are not connected to centralized sewage systems is 16.1%.

In 2014, progress is observed in Zhytomyr region: 100% kindergartens were connected to the water supply systems (99.7% in 2012) however, there is no positive tendency in the connection of secondary schools (67.1% in 2012, 71.3% - in 2013 and 71.1% in 2014).

3. Assess the progress achieved towards the target.

On the occasion of anti-terrorist operation in some parts of Ukraine, a huge number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding for state programs, it is extremely difficult to estimate the expected progress as of 2016, particularly because of the lack of a specific comparison base.

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

There is no need to revise national targets 5, 6 and control date

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

For each target set in this area:

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

Paragraph 2d) of Article 6 of the Protocol. Two national targets in Ukraine were approved: NT 7 "Providing population with centralized sewerage system" and NT 8

Providing children with improved sanitation conditions in preschool and institutions of general education (improving sanitation conditions and connection of preschool and institutions of general education to sewage systems)”.

National target 7. «Providing population with centralized sewerage system”

Indicator: *percentage of urban and rural population with access to centralized sewerage systems.*

Target dates: *interim period - 2015, it is expected to reach the portion of the population with centralized sanitation systems in cities and towns 80%, in villages 20%; deadline - 2020, it is expected to reach the level of providing the population with centralized sanitation systems in cities and towns 100%, in villages 50%.*

Responsible for implementation: *Ministry of Regional Development, Construction and Housing, Ministry of Ecology and Natural Resources, Ministry of Agriculture policy and Food of Ukraine, local governments, State Sanitary and Epidemiological Service of Ukraine.*

According to the Statistical Bulletin of the State Statistics Service of Ukraine for 2014, in Ukraine centralized wastewater was provided in 385 cities or 87.1% of the total (442), 397 towns, or 47.9% of the total (828) and 530 villages or 1.9% of the total (27412).

The total length of Ukraine water sewerage is 42881.9 km, of which in a dangerous and dilapidated condition are 14786.0 km, or 34.5%. The largest share of dilapidated and emergency water sewerage of the total length was in Kharkiv region – 58.0%, Donetsk - 43.1%, Luhansk region - 52.1%. The lowest share of dangerous and dilapidated condition of water sewerage of the total length was in regions such as Vinnitsya – 17.6 %, Rivne – 18.1 %, Zakarpatya – 19.2 % and Kyiv – 23.09%.

National target 8. Providing children with improved sanitation conditions in preschool and institutions of General Education (improving sanitation conditions and connection of preschool and institutions of General Education to sewage systems)”.

Indicator: *increasing the number of preschool and general education institutions connected to waterwaste systems and sewage cesspool system.*

Target dates: *intermediate period - 2015, it is expected to reach the level of providing children with improved sanitation in preschool and general education institutions in cities and towns to 15%, in villages - 5%; the deadline – 2020, it is expected to provide children with improved sanitation in preschool and general education institutions (improving sanitation conditions and connection of preschool and institutions of General Education to sewage systems in cities and towns to 100%, in villages- to 50%).*

Responsible for implementation: *in cities and towns - local governments, State Sanitary and Epidemiological Service of Ukraine, Ministry of Education, Youth and Sports of Ukraine, Ministry of Regional Development, Construction and Housing; in villages - State Water Resources Agency of Ukraine.*

In 2014, 5132 (42%) preschool institutions were connected to the sewage cesspool system versus 4309 (32,7%) in 2010; in 2011 281 (2,3%) preschool institutions were with no sewage at all versus 172 in 2010.

In total there are 8479 (44%) institutions of general education in Ukraine with sewage cesspool system versus 7463 (43,6%) in 2014 and 8573 (45%) in 2010. However, very acute today is the problem that institutions of general education have no canalization; currently there are 791 institutions (4.6%) versus 1087

(5.6%) in 2011 and 1551 (8.0%) in 2010. Thus, in the Zhytomyr region almost one-third - 28.7% of institutions does not have sewage.

As for providing pupils with safe drinking water and warm toilets:

the number of institutions of general education that have no centralized or local sewage - 6920 in 2014 (8545 in 2012). Among them the number of institutions of general education equipped with toilets inside is 12,733 (1576 in 2011); the number of preschool institutions that have no centralized or local sewage 3789 in 2014 (4328 in 2012). Among them the number of preschool institutions equipped with toilets inside 1230 (539 in 2011); the number of institutions of general education with no sewage - 281 in 2014 (791 in 2012); the number of preschool institutions with no sewage - 281 in 2014 (791 in 2012); the number of collected samples of drinking water for bacteriological analysis in educational institutions - 18369, among them 8% do not meet requirements; the number of collected drinking water samples for sanitary-chemical analysis - 15903, among them 10.4% do not meet requirements.

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

Concerning NT 8. *State Sanitary Epidemiological Service of Ukraine in 2014 had monitored 72118 (in 2014 - 82420) educational and health institutions, including 12268 preschool institutions, 17100 institutions of General Education, 830 - boarding schools, 14052 - institutions of rehabilitation and recreation for children, 5682 - extracurricular, 16183 - school canteens, colleges, high schools, vocational schools, training-educational complexes, universities and institutions of I - II accreditation level.*

To ensure sanitary-epidemiological welfare of children in schools and teenager institutions in 2014, the specialists of the State Sanitary and Epidemiological Service of Ukraine have penalized 10,487 officials (41,636 in 2011, 10455 (99.7%) of them were held on. Territorial chief sanitary doctors issued 10 regulations on the termination of operation of facilities (in 2011 - 12,008); 8 cases (81 in 2011) were submitted to the investigating authorities, 4 of which (in 2011 - 59) were proved as guilty. Assortment of products in 65 objects was limited (in 2011 - 2298), job activity of 16,965 people (2011 - 31,938) was temporarily suspended.

Concerning NT 7. *Dynamics of the part of the population for the period 2009-2014 has no significant positive changes in the cities and villages of Ukraine. Indicator's change in 2014 related to the lack of data from the temporarily occupied territory of the Autonomous Republic of Crimea and in Sevastopol, and the zone of the antiterrorist operation.*

Concerning NT 8. *Progress should be noted, as the number of institutions of general education that have not connected to the sewage systems, is decreased. However, the pace of progress insufficient to meet interim goals in 2015.*

Progress was not observed for institutions of general education by the indicator connected to the sewerage - from 25.5% in 2012 to 23.1 in 2014, on the other hand the proportion sewage cesspool system have significantly increased - from 42.5 in 2012 to 48.1 in 2014.

3. Assess the progress achieved towards the target.

On the occasion of anti-terrorist operation in some parts of Ukraine, a huge number of internally displaced persons and the deep economic crisis that led to a significant reduction

in funding for state programs, it is extremely difficult to estimate the expected progress as of 2016, particularly because of the lack of a specific comparison base.

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

There is no need to revise national targets 7, 8 and control date

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

For each target set in this area:

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

National target 9. Reducing the length of water supply and sanitation pipelines in disrepair.

Indicator: percentage of replaced pipelines in disrepair.

Target dates: *intermediate period - 2015, it is expected to replace the wrecking pipelines in cities with population over 500 000 people (30%), and in other settlements - 15%; the deadline – 2020, it is expected to replace the emergency pipelines in cities with population over 500 000 people (50%), and in other settlements - 30%.*

Responsible for implementation: *Ministry of Regional Development, Construction and Housing, local governments, Ministry of Ecology and Natural Resources, Ministry of Agriculture Policy and Food of Ukraine.*

NT 9 unites two paragraphs 2e) and 2e) (continuation) of Article 6 of the Protocol on Water and Health.

Because of high deterioration and accident of water supply pipeline, NT 9 has high relevance for Ukraine. One of serious problem is the pollution of water systems, due to the interruption of water supply, low pressure and leakage from pipes. In many cities, up to 50% of water can be lost in the distribution networks. Under such conditions, there is a high probability of infiltration and secondary pollution of water, which is sent after preparation and disinfection in water supply networks.

The total length of Ukraine water supply in 2014 was 141993.8 km, 49,129.4 km, or 34.6% of which were in a dangerous and dilapidated condition The largest share of dilapidated and emergency water supply of the total length was in Luhansk region - 54.0%, Donetsk - 40.8%, Lviv - 45.3%, and Dnepropetrovsk - 46.5% regions.

Leakage and unaccounted water consumption of centralized water supply in 2014 amounted to 28.3% of water intaken to the network (in 2013 - 29.8%). The highest percentage of leakage and unaccounted water consumption due to its distribution of water supplied to the network was in Lviv - 46.7%, Zhytomyr - 43.5% and Chernivetskiy - 41.0% regions.

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

The National Target Program "Drinking Water of Ukraine" for 2011-2020 was approved (according to Law of Ukraine of 20.10.2011 № 3933-VI). In 2012, according to the budget program "Drinking Water of Ukraine," by using the state budget of Ukraine, 46 intakes facilities were built and reconstructed, 5 water and sewage treatment facilities, 1 station introduced purification of drinking water in centralized water supply.

A number of measures to improve the water supply of rural areas in the regions with poor water availability included as a separate Annex to the National Target Program for Water Management and Environmental Rehabilitation of the Dnipro River for the period until 2021. The construction of water supply systems in villages, where the population currently uses imported water is envisaged. The main implementer of these measures is the State Water Resources Agency of Ukraine.

Every year, due to various funding sources, including the state budget of Ukraine and local budgets, the construction, expansion, reconstruction, repair of water supply and sanitation are carried out. Technical re-equipment of these systems require significant capital investments.

3. Assess the progress achieved towards the target.

On the occasion of anti-terrorist operation in some parts of Ukraine, a huge number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding for state programs, it is extremely difficult to estimate the expected progress as of 2016, particularly because of the lack of a specific comparison base.

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.

No. There is no need to revise national target 9 and target dates there.

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

For each target set in this area:

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

National target 9. Reducing the length of water supply and sanitation pipelines in disrepair.

Indicator: percentage of replaced pipelines in disrepair.

Target dates: *intermediate period - 2015, it is expected to replace the wrecking pipelines in cities with population over 500 000 people (30%), and in other settlements - 15%; the deadline – 2020, it is expected to replace the emergency pipelines in cities with population over 500 000 people (50%), and in other settlements - 30%.*

Responsible for implementation: Ministry of Regional Development, Construction and Housing, local governments, Ministry of Ecology and Natural Resources, Ministry of Agriculture Policy and Food of Ukraine.

NT 9 unites two paragraphs 2e) and 2e) (continuation) of Article 6 of the Protocol on Water and Health.

Because of high deterioration and accidentence of water supply pipeline, NT 9 has high relevance for Ukraine.

The total length of Ukraine water sewerage in 2014 was 42881.9 km, of which in a dangerous and dilapidated condition were 14786.0 km, or 34.5%. The largest share of dilapidated and emergency water sewerage of the total length was in Kharkiv region – 58.0%, Donetsk - 43.1%, Luhansk region - 52.1%. The lowest share of dangerous and dilapidated condition of water sewerage of the total length was in regions such as Vinnitsya – 17.6 %, Rivne – 18.1 %, Zakarpatya – 19.2 % and Kyiv – 23.09%

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

The National Target Program "Drinking Water of Ukraine" for 2011-2020 was approved (according to Law of Ukraine of 20.10.2011 № 3933-VI). In 2012, according to the budget program "Drinking Water of Ukraine," by using the state budget of Ukraine, 46 intakes facilities were built and reconstructed, 5 water and sewage treatment facilities, 1 station introduced purification of drinking water in centralized water supply.

A number of measures to improve the water supply of rural areas in the regions with poor water availability included as a separate Annex to the National Target Program for Water Management and Environmental Rehabilitation of the Dnipro River for the period until 2021. The construction of water supply systems in villages, where the population currently uses imported water is envisaged. The main implementer of these measures is the State Water Resources Agency of Ukraine.

Every year, due to various funding sources, including the state budget of Ukraine and local budgets, the construction, expansion, reconstruction, repair of water supply and sanitation are carried out. Technical re-equipment of these systems require significant capital investments.

3. Assess the progress achieved towards the target.

On the occasion of anti-terrorist operation in some parts of Ukraine, a huge number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding for state programs, it is extremely difficult to estimate the expected progress as of 2016, particularly because of the lack of a specific comparison base.

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.

No. There is no need to revise national target 9 and target dates there.

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

NP are not set due to lack of financial and technological capabilities.

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

NP are not set due to lack of financial and technological capabilities.

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

For each target set in this area:

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

National target 10 Reducing the discharge volume of sewage, mines-quarries and collector-drainage waters non-treated and inefficiently treated."

Indicator: percentage of the discharge volume of sewage, mines-quarries and collector-drainage waters non-treated and inefficiently treated.

Target dates: intermediate period - 2015, it is expected to reduce the volume of sewage, mines-quarries and collector-drainage waters without treatment up to 3%, and inefficiently treated waters up to 15%. Deadline – 2020, it is expected to reduce the discharge volume of sewage, mines-quarries and collector-drainage waters without treatment up to 1,5%, and inefficiently treated waters up to 10%.

Responsible for implementation: Ministry of Ecology and Natural Resources of Ukraine, State Water Resources Agency of Ukraine, local governments

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.

Discharge volume of sewage, deep and open-carst mine, and drainage untreated or semi-treated waters in surface water bodies*

<i>The volume of discharged waters</i>	<i>Baseline value</i>	<i>Interim Value</i>			<i>Current value</i>	<i>Target</i>	
	<i>2009</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014**</i>	<i>2015</i>	<i>2020</i>
Total for Ukraine, mln m ³	7381	7725	7788	7440	6354	-	-

including, %							
<i>polluted waters without treatment</i>	3,7	4,0	3,7	3,6	2,7	3,0	1,5
<i>polluted waters inefficiently treated</i>	20,3	16,9	15,8	19,5	11,8	15,0	10,0

*From standard statistic data

** Data exclude data from temporary occupied territories and territories with lack or no state control

In 2014, the actual values of indicators were below those defined for 2015. Particularly it happened due to the fact that the data on the volume of discharges in some parts of Ukraine were not considered.

Due to the anti-terrorist operation in Eastern Ukraine, a large number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding state programs, it is extremely difficult to estimate the expected progress in 2016, particularly because of the lack of specific comparison base.

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.

No. There is no need to revise national target 10 and target dates there.

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))

NP are not set due to lack of financial and technological capabilities.

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

For each target set in this area:

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

National target 11 “Increasing an effectiveness of water treatment facilities”

Indicator: number of newly constructed, reconstructed and upgraded water treatment facilities.

Control periods: Intermediate term – 2015 (it is expected to construct 25 units, and upgrade 30 units); final term – 2020 (it is expected to construct 60 units, and upgrade 70 units)

Responsible for implementation: Ministry of Regional Development, Construction and Housing, Ministry of Ecology and Natural Resources, State Agency of Water Resources, Ministry of Agriculture Policy and Food of Ukraine, local self-governance bodies.

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.

Construction, extension, reconstruction, capital maintenance of waste water facilities are going on annual basis by funding from different sources including state budget. These measures have required substantial capital investments.

3. Assess the progress achieved towards the target.

On the occasion of anti-terrorist operation in some parts of Ukraine, a huge number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding for state programs, it is extremely difficult to estimate the expected progress as of 2016, particularly because of the lack of a specific comparison base.

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.

No. There is no need to revise national target 11 and target dates there.

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

NTVs have not been established because of the lack of financial and technological opportunities.

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

NTVs have not been established because of the lack of financial and technological opportunities.

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

NTs have not been established because of the lack of financial and technological opportunities.

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

NTs have not been established because of the lack of financial and technological opportunities.

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

NTs have not been established because of the lack of financial and technological opportunities.

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

NTs have not been established because of the lack of financial and technological opportunities.

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

NTs have not been established because of the lack of financial and technological opportunities.

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

For each target set in this area:

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

National target 12 “Development and approval of management plans for Dnieper, Dniester, Danube, Tysa, Siverskyi Donets, Pivdennyi Bug rivers basins.”

Indicator: availability of the Plan of river basins management.

Control periods: intermediate term –2015, it is expected to develop and approve management plans for Danube, Tysa, Pivdennyi Bug rivers basins; final term –

year 2020, is expected to develop and approve management plans for Dnieper, Dnister, Siverskyi Donets river basins.

Responsible for implementation: Ministry of Ecology and Natural Resources of Ukraine, State Water Resources Agency of Ukraine.

NT has been established with the purpose of improving the condition of surface waters of river basins and related underground waters which are sources of drinking water supply and irrigation in Ukraine. In recent years, there is a trend of worsening of the water and ecological situation in most river basins of Ukraine. Experience of neighbouring countries clearly demonstrates the progress in such problems solving. Ukraine needs radical reforms in water resources management.

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

The key priority of the state policy in the field of protection and sustainable use of water resources is transferring from the administrative-territorial management model to the basin one (integrated water resource management under the basin principle).

Such reformation envisages:

On a legislative level – approximation of national legal base to the EU legislation with regard to implementation of the provisions of the Water Framework Directive 2000/60/EU of October 23, 2000 (implementation of integrated approaches in water resources management under the basin principle);

On an institutional level:

Optimization of functions and credentials of central and local bodies of executive power; bodies of local self-governments in the field of use and management of water resources;

Optimization of the current structure of basin and oblast administrations of water resources under auspice of the State Water Resources Agency of Ukraine;

Assessment of the current ecological state of main river basins of Ukraine and elaboration of elements river basins management plans on their basis.

For the fulfillment of the Action Plan of implementation of EU-Ukraine Association Agreement for 2014-2017 (it was approved by the Order of the Cabinet of Ministers of Ukraine of September 17, 2014 No. 847-p, Order of the Cabinet of Ministers of Ukraine of April 15, 2015 No. 371-p), the Ministry of Ecology and Natural Resources of Ukraine has elaborated and approved implementation plans for:

Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (with regard to the measures with the period implementation by the end of 2017);

Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources;

Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive).

3. Assess the progress achieved towards the target.

The basin administration for water resources of Tysa River has developed the National plan of Tysa River basin management (jointly with national experts of the International commission for protection of Danube River under support of EU Project “Strengthening the support departments of Ukraine, responsible for implementation of the Danube and Ramsar Conventions”).

Participation of organizations of the State Water Resources Agency of Ukraine in projects of international support promotes applying EU experience in the sphere of water resources management, development of the trans-border cooperation and implementation of principles of the EU Water Framework Directive particularly with regard to the development of elements of plans of Pivdennyi Bug, Danube, Verkhniy Dnieper and Prut rivers basins management.

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

There was no necessity to review national target 12 and control period.

XX. Additional national or local specific targets

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.

Three additional national targets have been set up in Ukraine:

NT 13 “Preparation and publication of the National Report about the quality of drinking water and water supplies state in Ukraine”.

NT 14 “Preparation and publication of a summary report about the progress of the Protocol implementation on water and health”.

NT 15 “Rising awareness of the central executive authorities and local governments, academic institutions, organizations, and the public. Sharing information on the best world’s technologies of water and sanitation, raising public responsibility for water conservation”.

NT 13 “Preparation and publication of the National Report about the quality of drinking water and water supplies state in Ukraine”.

Indicator: Availability of the National report about the quality of drinking water and water supply state in Ukraine.

Control dates: expected annual publication.

Responsible for implementation: Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine.

National target 14 “Preparation and publication of a summary report about the progress of the Protocol implementation on water and health”.

Indicator: availability of summary report on the progress in implementing of the Protocol on Water and Health.

Control dates: It is expected to prepare brief report about the progress in implementing of the Protocol on Water and Health on three years basis.

Responsible for implementation: Ministry of Ecology and Natural Resources of Ukraine, Ministry of Health of Ukraine.

National target 15 “Increase awareness of the central executive authorities and local governments, academic institutions, organizations and the public. Sharing information on the best world’s technologies of water and sanitation, raising public responsibility for water conservation”.

Indicator: Organizing meetings, conferences, seminars, International Water Forum AQUA UKRAINE. **Control dates:** annually.

Responsible for implementation: Ministry of Ecology and Natural Resources of Ukraine, Ministry of Health of Ukraine, Ministry of Regional Development, Construction and Communal Services of Ukraine, the State Agency for Energy Efficiency and Energy Saving of Ukraine, the State Water Resources Agency of Ukraine, International Exhibition Centre.

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.

Regarding NT 13. According to Article 9 of the Law of Ukraine “On Drinking Water and Water Supply”, the Cabinet of Ministers of Ukraine has issued and approved “Procedure for preparation and publication of national reports on water quality and the state of drinking water in Ukraine”. In order to inform consumers about the quality of drinking water the Ministry of Regional Development, Construction and Communal Services of Ukraine with other interested central and local authorities is preparing annually and publishing on the website National report on drinking water quality and the state of drinking water in Ukraine.

Regarding NT 14. Central executive authorities are leading discussion and coordinating activities - meetings of ministries and agencies, the session of the intersectoral working group on the achieving national targets Protocol on Water and Health, meetings Basin Councils. Community organizations are involved in the development and discussion of the documents, and are part of the working committees. Disclosure is usually carried out on the website of the Ministry of Ecology and Natural Resources of Ukraine.

Regarding NT 15. According to the decision of the Cabinet of Ministers of Ukraine (of 11.05.2006 # 268) International Water Forum “AQUAU-KRAINE” is held annually as a part of the specialized exhibitions and scientific conferences.

On annual basis, the MENR the Agency of Water Resources are the co-organizers of the scientific conference “Water and Environment”, held during the Water Forum “AQUAUKRAINE”. The MENR is taking part with subordinate organizations in the celebration of World Water Day (holding round tables, conferences and other events). Such activities are increasing environmental awareness of the central executive authorities and local governments, academic institutions, organizations and the public to learn on the best global technologies of water supply and drainage, raising the level of public responsibility for the protection of water resources.

3. Assess the progress achieved towards the target.

NT 13 - National report on drinking water quality and the state of drinking water in Ukraine for 2012 is published in 2013 on the website of the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine (www.minregion.gov.ua)

NT 14 – Brief report on the progress in implementing the Protocol on Water and Health on has been published on the website of the MENR (www.menr.gov.ua) in 2016.

NT 15 - International Water Forum "AQUA Ukraine" become an annual event. Forum includes scientific conferences, round tables, and exhibitions.

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

There is no need to revise national targets 13, 14, 15 and corresponding target dates.

Part Four

Overall evaluation of progress achieved in implementing the Protocol

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

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.

The Law of Ukraine On the Fundamentals (strategy) of the State Environmental Policy 2020 and the Law On Approval of the State Target Program of Water Resources and Environmental Rehabilitation of Dnipro River for the period till 2021 have determined that the system of governance in the field of water resources has to be urgently reformed towards integrated water management.

National Action Plans with the Strategy of State environmental policy stipulate introduction of integrated water resources management in Ukraine. Integrated water resources management is defined as a process that promotes the coordinated use and management of water, land and other resources in the relation to the needs of all water users to achieve social and economic prosperity on a fair basis without damage to sustainability of vital ecosystems.

In addition, the Law of Ukraine "On Approval of the State Target Program of Water Resources and Environmental Rehabilitation of Dnipro River till 2021" envisages system measures aimed at implementing the state policy on sustainable innovation and investment development of Water Sector. The Measures will target urgent problems related to environmental rehabilitation and restoration of ecosystems, and especially the Dnipro river as the main waterway of Ukraine, for environmentally safe life conditions of the population.

Despite the measures that were taken in Ukraine to achieve set national targets, many problems remain unresolved.

The technical condition of water supply and sewage facilities remains unsatisfactory, most of them are in a dilapidated and dangerous condition. There is no centralized sewage to waste water in the towns where population use septic tanks or pit latrines, the use of which causes a tendency of deterioration of the ecological status of water sources, leading to contamination of nutrients, pathogenic bacteria and viruses, as well as increasing areas of flooding settlements.

In 2012, the population of about 4.6 million in 261 urban areas, namely in 161 cities and 100 towns of 25 regions of the country, received drinking water from local sources with deviation from the standard requirements by physical and chemical indicators such as total hardness, chloride, dry residue, sulfate, fluoride, total iron, nitrates, ammonia, manganese. Nearly 2.5 million of population gets a drinking water on schedule in 102 settlements of 17 regions. Problematic issues of water supply and sanitation remain: the low level of installed production capacity of centralized water and wastewater systems that require optimization and modernization; provision of centralized water supply schedules; absence in many towns of capacities needed to clean drinking water and wastewater; lack of quality drinking water by certain physical and chemical parameters that requires reconstruction and implementation of the construction of local water treatment facilities, reconstruction of existing filtering stations and drainage systems, sewage settlements in rural areas, etc..

The problem of water supply for the rural population has been one of the most difficult social problems in Ukraine. If cities and towns, centralized water supply was provided 99.6% and 85.9% respectively in 2012 (in 2014 - 89.8% and 68.8%) for their inhabitants, in rural areas this indicator reached only 22% in 2012 and 17% - in 2014. Nearly 6,500 villages, or 20%, have drinking water pipelines for household purposes. More than half samples of drinking water from underground sources in rural areas do not meet current standards and regulations.

According to the data of local authorities and water management organizations, in 2014 1323 villages with a population of over 950 thousand people were using an imported and poor water quality in 16 regions of Ukraine (Dnipropetrovsk, Donetsk, Zakarpattia, Zaporizhia, Ivano-Frankivsk, Kiev, Kirovograd, Lviv, Luhansk, Mykolaiv, Odesa, Poltava, Rivne, Kharkiv and Kherson regions).

For 2001 - 2010 years, the planned measures of the Complex program were funded only by 19% of the demand (the Complex program of priority ensuring rural communities that use imported water, with centralized water supply for 2001 - 2005 and forecast to 2010 and the National Programme for primary provision of centralized water supply to rural areas using imported water for the period up to 2010). However, despite this, National Water Agency has completed activities to ensure the centralized water supply in 44 villages in Dnipropetrovsk, Zaporizhzhya, Luhansk, Lviv, Odessa and Kherson regions.

At the same time, today more than 10 major rural water supply facilities remain suspended in southeastern regions and for which the project documents have been elaborated. This list includes Nikopol group water supply in Dnipropetrovsk region, Dvorichansky – in Kharkiv region, Krasnodon - in Luhansk region, Belotserkovskii - in Kiev region, Kiliya and Tatarbunary - in Odessa, Pistryalivskyy - in the Transcarpathian region, Ivanovo – in Kherson oblast and local water pipelines in Zaporizhia, Lviv, Ivano-Frankivsk and other regions.

In 2012, the Law of Ukraine “On Approval the State Program of Water Resources and Environmental Rehabilitation of the Dnipro River for the period till 2021” was approved.

Measures of primary provision of centralized water supply to rural areas using imported water, which were included to this program, aimed at the construction of drinking water supply systems in rural arid regions (construction and reconstruction of group pipelines, treatment plants, water mains, separating networks), software development of sanitation (construction of sewage disposal networks) and certification of water sources and sanitation facilities, searching underground water sources and artificial replenishment of reserves, development and reconstruction of production facilities for the operation of water supply group, development of scientific documentation and regulations of water and sanitation in rural areas. The implementation of this program as a whole started in 2013.

However, budget allocations for the construction of rural water supply systems in accordance with the National program were not included in approved state budget for 2014.

In 2014, the funding was not envisaged as well for the budget program “Primary providing centralized water supply for settlements” (responsible for the program implementation - National Water Agency). The main reason for the lack of progress in the achievement of national targets was significant reduction of financing of the state programs (due to political and economic crisis and military conflict in Eastern Ukraine).

Due to the anti-terrorist operation in parts of Ukraine, a large number of internally displaced persons and the deep economic crisis that led to a significant reduction in funding for state programs, to assess expected progress in achieving national targets in 2016 is extremely difficult. This report contains data for 2012, 2013 and 2014. At the time of report completion, the official statistics for 2015 were not available.

(a) Response systems (article 8);

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

In January - March 2013, Ukraine took part in the testing instrument of self-evaluation to ensure equal rights to water and sanitation at the national level. The pilot project was implemented by the State Sanitary and Epidemiological Service of Ukraine and the All-Ukrainian Environmental NGO “MAMA-86”. Ministry of Ecology and Natural Resources of Ukraine provided support to this initiative. The pilot was implemented in framework of the Work programme (for 2010-2013) on implementation of the Protocol on Water and Health (hereinafter – the Protocol) to the Convention of the UN Economic Commission for Europe (UNECE) on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention). Pilot testing instrument was conducted in the direction of “equal rights to water and sanitation” in 3 countries (France, Portugal and Ukraine) with the assistance of the Secretariat of the Protocol and the support of the France government. Analytical results of self-assessment document “The situation regarding the equal right to water and sanitation in Ukraine” as an annex №1 was included in the Short national report on the progress of implementation of the Protocol in Ukraine 2013.

Since 2013, “MAMA-86” used a tool for self-assessment survey of regional branches of “MAMA-86” in the cities such as Sevastopol, Artemovsk (in 2013), Kirovograd, Yaremche (2014-2015), Zaporizhia, Kyiv, Luhansk, Mykolaiv, Nizhyn, Nova Kakhovka, Poltava, Sumy, Kharkiv and Khmelnytsky. The results of self-assessment and objectives of the Protocol on Water and Health discussed during the 12 round tables, which took place at the local level with the involvement of stakeholders (March - November 2015).

As a part of the Summer School 2015, “MAMA-86” held training for network in development plan to ensure water safety (PEWS), using guidelines of the European Bureau of the WHO “Plan security of water: a practical guide to improve the safety of drinking water in small local communities” Bettyna Rykert, Shmol Oliver et al., 2014. The training was attended by 27 members of the network “MAMA-86” - members of the water network project. City of Kyiv hosted a national seminar in support of security water plans (August 11, 2015). The seminar was organized by the NGO “MAMA-86”, European Office of WHO, WHO Country Office in Ukraine, the State Sanitary Epidemiological Service of Ukraine with financial assistance of the Swedish Agency for International Development Cooperation. The overall objective of the workshop was to support the implementation of the Protocol on Water and Health in Ukraine and raise awareness of the technique among PEWS, which form and implement state policy in the health and water management. The event was attended by 52 representatives of central executive authorities (Ministry of Environment, Ministry of Regional Development, Ministry of Health, State Agency for

Water Resources and the State Sanitary Epidemiological Service and its regional branches, academic institutions and non-governmental organizations, including partners and members of the NGO network “MAMA-86” which implement pilot projects on water safety in various regions of Ukraine under “equal rights to water and sanitation in the Ukraine”. The final document on the discussion reflected the main recommendations of the participants to ensure the safety of drinking water for the citizens of Ukraine taking into account the principles and methods of planning water safety of WHO.

Since August 2015, 8 regional organizations of “MAMA-86” started work in developing PEWS at the local level. The working groups have been created, which included representatives of stakeholders, e.g., relevant authorities (SES, departments of National Water Households, State Environmental Inspection, local and regional deputies, village heads, etc.), academic institutions, administrations children’s educational and medical institutions, parent councils, businesses, experts in health and water and sanitation. Trainings to develop PEWS were delivered in September-November 2015 for local working groups. The water security plans were prepared for 8 schools in Bilyk village Poltava region, Mykulychyn village Ivano-Frankivsk region., Ruzhychanka village Hmelnytskoy region, Kharkiv city; Odradokamyanka village, Tyashynsk village Kherson region; Kirovograd, Zaporizhzhya and for the 1 st children clinic of Nizhyn town.

Part Five

Information on the person submitting the report

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

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Oleksandr Bon’

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