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SETTING TARGETS AND CORRESPONDING ACTION PLAN WITHIN THE FRAMEWORK OF THE PROTOCOL ON WATER AND HEALTH IN THE REPUBLIC OF TAJIKISTAN

Dushanbe – 2018

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Abbreviations

ADB	Asian Development Bank
WUA	Water Users Association
AMA	Antimonopoly Agency under the GRT
AS	Academy of Sciences of RT
SA	Statistic Agency under the GRT
WB	World Bank
EECCA	East Europe, Caucasus and Central Asia
WHO	World Health Organization
GOST	State Standard
MDG	Main Department on Geology under the GRT
SUE	State Unitary Enterprise
SCI/SPM	State Committee on Investment and State Property Management
DWC	Dushanbe Water Canal
EBRD	European Bank for Reconstruction and Development
EEC	European Economic Commission
ZHKKH	Housing and Communal Services
SMA	Stakeholder Ministries and Agencies
IWRM	Integrated Water Resources Management
CSUE	Communal State Unitary Enterprise
CEP	Committee on Environment Protection under the GRT
MoFA	Ministry of Foreign Affairs
MHSPP	Ministry of Healthcare and Social Protection of Population of RT
LEAB	Local Executive Authority Bodies
MES	Ministry of Education and Science of RT
MoF	Ministry of Finance of RT
MoJ	Ministry of Justice of RT
MEWR	Ministry of Energy and Water Resources of RT
MEDT	Ministry of Economic Development and Trade of RT

NDS-2030	National Development Strategy of RT for the period till 2030
NPDWP	National Policy Dialogue on Water Policy
NGO	Non-Government Organizations
AAI	Acute Intestinal Infections
UN	United Nations
WSP	Water Safety Plan
UNDP	United Nations Development Programme
GRT	Government of the Republic of Tajikistan
MtDS	Mid Term Development Programme of RT for 2016-2020.
RT	Republic of Tajikistan
Sanpin	Sanitary rules and norms
MM	Mass Media
SPA	Sanitation Protected Areas
SAHSSP	State Agency on Healthcare Surveillance and Social Protection under the Ministry of Healthcare and Social Protection
FS	Feasibility Study
FSR	Feasibility study report
DOM	Department of operation and maintenance
KWC	Khujand Water Canal
KMK	Khojagii Manzilii Communali – Household communal services
SDG	Sustainable Development Goals
UNICEF	UN Children's Fund

The Working Group on improving the elaboration of target indicators and plan of action within the context of Protocol on Water and Health in the Republic of Tajikistan was established by the order of the Minister of Energy and Water Resources of the Republic of Tajikistan as of 1 June 2018 # 22, in line with the Decree of the Government of the Republic of Tajikistan as of 2 May 2018, #21417 (29-4). Experts participating in the Working Group are listed below:

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Foreword

The United Nations Economic Commission for Europe (UNECE) – World Health Organization (WHO) Regional Office for Europe Protocol on Water and Health ("Protocol") was adopted by the member states of UNECE and of the European Bureau of WHO in 1999. The objective of the Protocol is to promote, nationally as well as in transboundary and international contexts, the protection of human health and well-being, both individual and collective, within a framework of sustainable development, through improving water management, including the protection of water ecosystems and through preventing, controlling and reducing water-related disease.

Albeit Tajikistan is not a Party to the UNECE Convention on the Protection and Use of Transboundary Water resources and International Lakes (Water Convention), the country understands its relevance and responsibility in resolving the issues outlined by the Protocol. In accordance with Articles 21 and 22 of the Protocol, the Republic of Tajikistan may accede to the Protocol, not being a party to the Convention.

The Protocol addresses issues under the competence of several ministries and departments, specifically the Ministry of Healthcare and the Ministry of Energy and Water Resources. The Ministry of Energy and Water Resources and the Ministry of Healthcare and Social Protection of the Population, represented by the State Sanitary and Epidemiological Surveillance Service, have taken an active part in the activities and meetings carried out under the Protocol since 2010.

Against this backdrop, the elaboration of national targets in the context of the Protocol, with financial support from the Government of Norway, was launched in 2012, and, since 2016, this activity has continued with the financial support of the Government of Finland through the FinWater Wei II program. The activities outlined in this report were presented regularly during the meetings of the Coordination Council of the National Policy Dialogues on Integrated Water Resources Management.

This document provides an overview of the situation related to the Protocol in Tajikistan and it suggests a set of national targets, along with the action plan to implement the set goals. It also describes the linkages between Sustainable Development Goals (SDGs) and the Protocol target areas. Thus, the proposed goals, together with corresponding actions, will contribute both to the implementation of national ambitions and to the achievement of SDG targets.

It is expected that this document will lay the ground for the subsequent adherence process related to the national targets set in the Republic of Tajikistan within the framework of the Protocol on Water and Health.

The report is the result of consolidated activities by a group of experts delegated by relevant government organizations and it was elaborated on the basis of consultative processes with stakeholders.

Introduction

H.E. Mr. Emomali Rakhmon, Founder of Peace and National Unity, Leader of Nation, President of the Republic of Tajikistan, deployed several initiatives aimed at improving the access of people to clean and safe drinking water, rational use and protection of water resources at the international level. These initiatives were supported by reputable international organizations and the community of states.

In 2015, the international community unanimously adopted the 2030 Agenda for Sustainable Development ("2030 Agenda"), which emphasizes the vital importance of water resources for development. Sustainable Development Goal (SDG) number 6 outlines the need to ensure availability and rational use of water resources and sanitation for all, fundamental to eradicating inequality and poverty, ensuring food and energy security, accelerating industrial and agricultural development, achieving sustainable production and consumption. A high-level Symposium dedicated to the sixth Sustainable Development Goal ("SDG 6") and the targets aimed at "achieving universal access to water and sanitation" was organized by the Government of the Republic of Tajikistan, with the participation of the United Nations Department of Economic and Social Affairs. The event was held on August 9–11, 2016, in the capital of the country. In December 2016, the UN General Assembly adopted a Resolution proclaiming the International Decade for Action "Water for Sustainable Development" 2018-2028, in line with the initiative set forth by the President of Tajikistan.

An international high-level conference on the International Decade for Action "Water for Sustainable Development" was held in Dushanbe on June 20-22, 2018 (Dushanbe Water Conference). This was organized by the Government of the Republic of Tajikistan, in cooperation with the United Nations (UN) and other partners Over 1,500 delegates from more than 120 countries, as well as over 150 specialists and mass media representatives took part in the Conference.

The Conference was aimed at promoting the implementation of the International Decade for Action "Water for Sustainable Development", 2018-2028 announced by UN General Assembly Resolution 71/222 as of December 21, 2016. It called upon participants to contribute to overcoming the challenges and mobilizing efforts to achieve the goals and objectives of sustainable development in the field of water resources. It was the first in a series of conferences that the Government of the Republic of Tajikistan plans to hold on a biennial basis in support of the implementation of the Decade of Water for Sustainable Development.

The conference focused on mobilizing governments, UN agencies, international and non-governmental organizations, as well as other stakeholders on different levels, to implement the Action Plan to the International Decade to achieve internationally agreed goals related to water, including those set forth in the 2030 Agenda - with specific focus on the SDG 6. In addition, one of the objectives of the conference was to identify priorities and actions to improve water quality globally to achieve the SDGs, as well as to support monitoring of target indicators and SDG indicators related to water quality.

Overall, the Dushanbe Water Conference served as an impetus and opportunity to strengthen cooperation among the countries on rational and efficient use of water resources globally.

The National Development Strategy of the Republic of Tajikistan for the period until 2030 ("NDS – 2030"), along with the Mid Term Development Programme for the period 2016-2020 ("MtDS 2016-2020 or MtDS"), are based upon and comply with the international undertakings of the Republic of Tajikistan related to the 2030 Agenda and the SDGs approved during the 70th session of the UN General Assembly in September 2015.

Key priorities for the development of the country beyond 2015 were identified as a result of a consultative process related to 2030 Agenda, economic ideology, basic principles and the list of measures outlined in NDS 2030 and MtDS 2016-2020. These include, among others, health care, inequality, food security and nutrition, environment. Despite the progress achieved, environmental problems and vulnerability remain extremely significant, especially in the context of climate change mitigation and adaptation. These issues are of great importance in the framework of the new SDGs, which contemplate rational use of water resources, ensuring resilience of human settlements, taking urgent measures to adapt to climate change, protecting terrestrial ecosystems, addressing land degradation, preventing and eliminating the consequences of natural disasters, increasing access to clean water and sanitation. The rural population of Tajikistan is more vulnerable to environmental degradation.

The main objectives and actions ensuring implementation of the key priorities outlined in MTDS related to enhancing access to drinking water, sanitation and hygiene are defined as follows:

- To develop a system of normative-legal acts and programs in the field of sanitation and hygiene: spectrum of measures aimed at developing regulatory legal framework for the drinking water supply system, sanitation and hygiene; identification of the institutional framework related to "areas of responsibility" within the drinking water supply, sanitation and hygiene infrastructure management;
- To increase access and quality of water and sanitation and hygiene services: range of measures aimed at capacity development of specialists (both technical and managerial staff), involve and keep the experts working in the facilities dealing with drinking water supply, sanitation and hygiene; improve the system for attracting and optimizing the use of investment (public and private) in the drinking water supply, sanitation and hygiene; construction and rehabilitation of the drinking water supply systems, sanitation and hygiene within the framework of project activities; elaborate a set of measures aimed at supporting international cooperation in the field of drinking water supply and sanitation (including rainwater harvesting, desalination, improving water use efficiency, wastewater treatment and the use of recycling and reuse technologies).
- To strengthen incentives aimed at protecting the environment among the population and economic entities, in the meantime to set up incentives for saving water, gas, electricity: package of actions to disseminate best practices for the protection of environment, ecology and promote resource-saving culture involving mass media and organization of thematic events; to ensure combination of tariff policy and introduction of the automated payment system for water, gas and electricity; develop a set of measures for the development and implementation of the Environmental Code.

This document aims at improving target indicators within the framework of the Protocol on Water and Health in Tajikistan, focusing on improving water supply and sanitation conditions, which are set forth in the National Development Strategy of the Republic of Tajikistan for the period up to 2030, in the Mid Term Development Program of the Republic of Tajikistan for 2016- 2020, as well as in a number of sectoral programs on water, health and

environmental protection. As a result, a revised set of targets is presented along with the Action Plan for their implementation.

This document emphasizes the interconnection between the SDGs and the target areas of the Protocol on Water and Health. Thus, the proposed goals should lead to the implementation of national ambitions in line with SDGs related to water, sanitation and health.

1. Identification of target indicators in the framework of the Protocol on Water and Health in the Republic of Tajikistan

The Project Proposal on identification of targets and target indicators in accordance with the Protocol on Water and Health was elaborated in the framework of the National Dialogue on Water Policy in the Republic of Tajikistan in the field of integrated water resources management ("IWRM"), with the support of UNECE. This document was presented during the Second Meeting on project support mechanisms for implementation of the Protocol on Water and Health, held on 1 July 2009, in Geneva. Representatives of development partners took part in the meeting. The Ministry of Foreign Affairs of Norway has decided to assist in the implementation of the project. The work under this project is carried out with the support of UNECE and the Ministry of Foreign Affairs of Finland (under the Fin Water Wei II program).

The main objective is assisting the Republic of Tajikistan in implementing specific provisions of the Protocol on Water and Health to the Water Convention, and thus "extend support to all relevant levels, i.e. national level, as well as transboundary and international context, in implementing the activities aimed at reducing water-related disease within a framework of integrated water-management systems aimed at sustainable use of water resources, ambient water quality which does not endanger human health, and protection of water ecosystems. (Article 1 of the Protocol).

Based on a consultative process involving participation of all relevant national organizations, the project supports the elaboration and publication of national and/or local target indicators related to the standards and levels of work that are to be reached or supported in the context of the Protocol on Water and Health in the Republic of Tajikistan.

Tajikistan is not a party to the Water Convention. In accordance with Articles 21 and 22 of the Protocol on Water and Health, the Republic of Tajikistan may accede to the Protocol, not being a party to the Convention.

1.1 Protocol on Water and Health and target indicators inventory methodology (evaluation of achievements and review).

The Protocol on Water and Health to the Water Convention was developed by members of UNECE and the countries of the WHO Regional Office for Europe in 1999. It entered into force in 2005. The objective of the Protocol is to promote, nationally as well as in transboundary and international contexts, the protection of human health and well-being, both individual and collective, within a framework of sustainable development, through improving water management, including the protection of water ecosystems and through preventing, controlling and reducing water-related disease.

The Protocol covers the protection of human health and well-being in combination with environmental protection objectives. Compliance with the Protocol contributes to the integration of activities in the field of health and sanitation by the efforts of environmental protection agencies and representatives of water companies and creates a basis for involving the public in the processes of ensuring basic human rights related to water and sanitation. In Tajikistan, these works are beginning to be carried out following similar projects in a number of countries of the European Union and the states of Eastern Europe, the Caucasus and Central Asia (EECCA).

The Protocol requires countries to develop national and local targets, and timelines for their implementation in areas covering the entire water cycle and related aspects of public health, to develop measures to implement these targets, and to regularly assess progress in their achievement. The main functional provisions of the Protocol are formulated in Articles 6 and 7, which reveal the essence of the country's activities to ensure the safety of the population related to water and sanitation.

The work on the targets is based on the "Guidelines on the Setting of Targets, Evaluation of Progress and Reporting" ("Guidelines"). These guidelines set forth the steps to be taken and aspects to be considered when developing targets, implementing corresponding activities and reporting on the progress achieved with regard to health and sustainable water resources management, in line with Articles 6 and 7 of the Protocol.

The group of experts, which included representatives of stakeholders involved in the framework of the previous project in 2012, drafted the report "Basic Analysis in the Context of the Protocol on Water and Health". The report was reviewed in 2012 during the meeting of the Coordination Council of the National Policy Dialogue on Integrated Water Management resources in Tajikistan. Following the discussion of the report, 11 priority areas were selected from the Protocol on Water and Health for the further development of targets, timelines, indicators and identification of actions required.

In order to assess the achievements and review target indicators, experts used the available state documents, reports of international organizations, projects and surveys on the issues related to safe drinking water supply to the population and sanitation services in the Republic of Tajikistan. This document took stock of the provisions set forth in the Mid-Term Development Program of the Republic of Tajikistan for the period 2016-2020, Water Sector Reform Program of Tajikistan for 2016-2025, State Environmental Program of the Republic of Tajikistan for 2009-2019, Program for supplying the population of the Republic of Tajikistan with safe drinking water for 2008–2020, Program for the Development of the Housing and Communal Industry for 2014–2018, National Healthcare Strategy of the Republic of Tajikistan for the period 2010–2020; Guidelines for the elaboration and implementation of a Water Safety Plan (WHO, 2009), etc.

In line with the provisions of the Guidelines, consultations and discussions are envisaged for the established targets within the priority areas of the Protocol on Water and Health in the Republic of Tajikistan.

The monitoring of progress achieved within the previous cycle is specifically challenging, more so in the framework of achievements under relevant governmental and sectoral programs. Unfortunately, achievements on most of the target indicators were either not reflected, or the reliability of the data collected during the monitoring is doubtful. In particular, this refers to the "Strategy for improving the welfare of the population of Tajikistan for 2013-2015", Program for the Development of the Housing and Utilities Sector for 2014–2018, National Strategy for the Protection of the Healthcare of the Population of the Republic of Tajikistan for the period from 2010 to 2020. Some tasks outlined in the afore-mentioned documents are formulated only declaratively, without defining the implementation dates, responsible entities, and indicators to carry out monitoring and evaluation.

Taking the above into consideration, the experts had to exclude a larger number of targets during the review of the targets set in the previous cycle. Monitoring and evaluation of

relevant programs is therefore of utmost importance and it is also emphasized in the Mid-Term Development Programme of the Republic of Tajikistan for the period 2016 - 2020.

2. Summary of characteristic features of the water supply and sanitation.

The volume of water used in the water sector is about 400 million m^3/year. 103-105 million m^3 is used by the population. Less than 5% of the total water consumption of the entire country accounts to the needs in drinking water and sanitation.

Water supply to the population is carried out by 85 specialized enterprises (State Unitary Enterprise "KMK" - 53 enterprises, State Enterprise "Tochikobdekhot" - 28 enterprises, State Unitary Enterprises "Dushanbevodokanal", municipal State Unitary Enterprises "Khujandvodokanal", EHIS Nurek Hydro Power Plant and Rogun ПХМК). In addition, there are municipal enterprises, associations and committees of water users, supplying drinking water to residents of small communities in the rural parts of the country.

The capacity of water intake facilities within the State Unitary Enterprise “Housing and Public Utilities” is 1009.6 m^3/day. The length of water lines, trunk and distribution networks is 2335.3 km.

The industry has 84 wastewater treatment plants with a total production capacity of 1,366.4 thousand m^3/day, including 26 wastewater treatment plants with a capacity of 307.2 m^3/day, which are accounted to the balance of the SUE “Housing and Public Utilities”.

Estimated investments, in accordance with the “Program to improve safe drinking water supply for 2008–2020”, require 3,325 billion som. ($ 966.52 million) only for rehabilitation and construction of new water supply and sanitation systems. On average, only 59.5% of the needed investment within this program was provided in 2008-2017. Most of the investments were made by the development partners. Development support in 2008 was 37.2%, in 2017 it amounted to 54.3% of the total investment made in the field of drinking water supply.

Due to the limited domestic funding available for rehabilitation programs and the development of water supply and sanitation systems, activities are implemented at the expense of the funding provided in the form of grants and loans from external donors.

As of October 1, 2018, there are 7 (seven) investment projects in the Republic of Tajikistan for the amount of $ 123 million, including:

- Water supply project in Dushanbe (phase II), funded by the World Bank (WB). The total amount of the project is $ 30.0 million. The implementation started in 2015, the completion is expected in 2018;
- Water supply project in Khujand (phase III), funded by the European Bank for Reconstruction and Development (EBRD). The total amount of the project is 10.03 million US dollars. The implementation started in 2016, the completion is expected in 2019;
- The project on rehabilitation of water supply systems in the northern cities of Tajikistan, funded by the EBRD. The total project amount is $ 25.89 million. The implementation started in 2012, the completion is expected in 2018;
- Water supply systems rehabilitation project for central cities of Tajikistan, financed by the EBRD. The total amount of the project is $ 19.77 million. The implementation started in 2012 and was completed in 2013;
- Water Supply Systems Rehabilitation in Khatlon province, funded by the EBRD. The total project amount is $ 14.55 million. The implementation started in 2015, to be completed in 2018;

- The project on rehabilitation of water supply systems in the northern cities of Tajikistan, funded by the EBRD (Phase I - 2). The total amount of the project is $ 17.83 million. The implementation started in 2015, to be completed in 2019;
- The Panj River Basin Climate Resilience Project, funded by the Asian Development Bank (ADB). The total project amount is $ 4.9 million. The implementation started in 2014, to be completed in 2019;
- Khorog City Solid Waste Management Project, funded by the EBRD. The total project amount is $ 4.0 million. The implementation started in 2015, to be completed in 2019.

The procedure for elaboration of water services tariffs is defined by the Government of Tajikistan. Though the tariffs for water supply and drainage had a threefold increase for the urban population and increased by 6.25 for the commercial water use during 2007-2011, the fees collected do not cover the actual costs of water supply and drainage along with maintenance of the corresponding systems.

A differentiated tariff system is applied in Tajikistan; the differentiation is based both on the territory and on the paying capacity of the population. The lowest tariffs are set for the population, average for state entities and highest for commercial organizations and facilities. According to the final report of the Water Resources Management Project in SUE “KMK” since 2011 the preferential tariff is applied. In accordance with the calculations of the SUE economically feasible level of tariffs for water supply services shall be not less than 2 somoni/m^3, and for drainage - 1 somoni /m^3.

3. Assessment of changes per target area of the Protocol on Water and Health in Tajikistan for the period 2012-2018.

It is suggested to keep the 11 target areas selected previously within the framework of the Protocol, since the situation in the Republic of Tajikistan in the field of water use, water supply and sanitation has not changed significantly during the reporting period.

3.1. Area I. Quality of drinking water supplied.

Water supply safety in the Republic of Tajikistan is ensured through compliance with water quality standard GOST 287482 "Drinking water. Hygienic requirements and quality control". In line with GOST-2874-82, drinking water shall comply with microbiological, toxicological and organoleptic requirements. Drinking water safety from epidemiological, radiation perspective is ensured through compliance with sanitary epidemiological rules and norms SanPiN 2.1.4.004-07 "Drinking water. Hygienic requirements to water quality in centralized water supply systems. Quality control".

The quality of drinking water supply in the Republic of Tajikistan is regulated by the Law of the Republic of Tajikistan "On drinking water and water supply" adopted as of 29 December 2010. The monitoring data of MHSPP of RT for 2015-2018 indicates that out of 30581 samples collected in water pipes 2887 (9,5%) did not comply with microbiologic and bacteriologic norms, and out of 49541 samples collected for organoleptic and physic chemical analysis 16857 samples (34,02%) did not comply with standards. Of 610 water samples collected from community-based water pipelines sourcing water from ponds, 315 (51,6%) samples did not comply with the set norms.

The situation has not changed. The prevailing problems are still related with unsatisfactory water quality in water supply systems in rural area. There is also insufficient equipment base in the laboratories to define quality of water in rural areas.

3.2. Area II. Reduction of the scale of outbreaks and incidents of water-related disease

There is a system of registration and record keeping of infectious diseases in health care facilities. In accordance with the order of the Ministry of Healthcare and Social Protection of the Population of RT No. 95 as of 02/23/2010. "On Improving the Registration System for Infectious and Parasitic Diseases", registration and record keeping system for infectious diseases was implemented in healthcare organizations, regardless of ownership form. The State sanitary and epidemiological surveillance service receives data from the regions on the agreed days during the week. Based on the received information and in accordance with the primary form No. 058/y "Emergency notification of an infectious disease and food poisoning", the monthly reporting form No. 1 is completed, which serves as a summary further forwarded to the Republican Center on Medical Statistics under the Ministry of Healthcare and Social Protection of Population of the Republic of Tajikistan.

All typhoid paratyphoid groups of the diseases are registered in line with the order of the Ministry of Healthcare and Social Protection of the Population # 16 as of January 10, 2005. If five or more cases of water-borne morbidity are registered, an obligatory notification procedure is invoked which implies notification of the regional centre of state sanitary and epidemiological surveillance within 24 hours. Nonetheless, there is no integrated system for state control over water-related diseases in the country. The spread of these diseases is linked

to limited access of the population to safe drinking water sources, low efficiency of the water supply and sanitation systems, quality of water in surface water bodies used for household and recreational purposes, including bathing, and non-compliance with the rules of personal hygiene.

The most frequent disease among the acute intestinal infections (AII) which are wide spread in the country, directly or indirectly associated with water, are typhoid fever, bacterial dysentery and viral hepatitis A. An assessment of the cases occurred during the period from 2015 to 2018 shows that, during this period, the incidence of these diseases has significantly decreased in Tajikistan. The largest number of infectious and parasitic diseases is registered in rural areas and urban-type settlements, where the situation with water supply and sanitation is the most unfavourable.

The situation in the field has not changed significantly. The main problems in this area are related to prevailing cases of acute intestinal infections, typhoid fever, bacterial dysentery, viral hepatitis A and parasitic diseases, giardiasis, ascariasis, and enterobiosis, especially in rural areas. The situation is due to the limited access of the population to safe sources of drinking water and sanitation and to low sanitary education of the population in rural areas.

3.3. Area III. Access to drinking water

According to the analysis, based on the data provided by the State Unitary Enterprise "KMK", Ministry of Healthcare and Social Protection of the Population, State Unitary Enterprise "DWC" and SUE "KWC", in 2018 59.1% of the total population of the Republic of Tajikistan had access to improved water supply, including 92.9% of the urban population, and 47.6% of the rural population.

In 2018, the number of centralized water supply networks in the country was 763 (2014 - 762), of which 110 are public and 653 are operating under certain state entities. There are 432 (56.6%) water supply networks that do not meet sanitary and epidemiological requirements, of which 261 (34.2%) have no sanitary protection zone. In addition, 1359 sources of decentralized water supply, mainly springs and wells, are used for drinking purposes. A significant part of the population uses for drinking purposes water from various sources: from springs - 12.7%, from rivers -3.3%, from canals and irrigation ditches - 12.9%, imported water - 3.6%, water from wells - 3.7%, groundwater pumped manually - 4.5% and rainwater - 0.2%. The population in rural areas mainly uses water from open reservoirs and irrigation network for household needs.

Following a decision by the Ministry of Economic Development and Trade of the Republic of Tajikistan and in accordance with the implementation of the Program aimed at providing the population of the Republic of Tajikistan with clean drinking water for the period 2007–2020, during the timeframe under review (2012–2015), 629.2 million somoni was provided for the rehabilitation and expansion of water supply systems. These activities were mostly funded by loans from international financial institutions.

In line with the Water Sector Reform Program of Tajikistan for the period 2016-2025, 942,760 thousand somoni was provided for the construction, reconstruction and rehabilitation of water supply and wastewater systems. When assessing the Programme implementation, it was identified that the funding to achieve the indicators was allocated only in 2016-2017. 438,480 thousand somoni was provided by different sources for the above listed purposes,

covering 7 investment projects implemented in the republic for a total amount of 123 million 960.4 thousand US dollars. These were namely:

- The project aimed at rehabilitation of water supply systems in the central cities of Tajikistan, financed by the EBRD. The total amount of the project was of $ 19.78 million. The implementation was launched in 2012 and completed in 2018. The project was carried out in the Somoniyon, Gissar, Shahrinav and Tursunzoda towns. It included the following works: hydrogeological research in all cities, replacement of 82 km of water supply networks, drilling of 4 new wells, construction of 7 new reservoirs for 2000-2 pcs, 1000, 500 m^3-4pcs, construction of new pumping station - 3pcs, restoring 24 wells, supplying machinery and equipment for water supply system, supplying and installing water meters - 22394 pcs.
- The project aimed at rehabilitation of water supply systems in the northern cities of Tajikistan, funded by the EBRD. The total amount was of $ 25.89 million. The implementation started in 2012, the completion is expected in 2018. The project was implemented in of Gafurov, Guliston, Buston, Istiklol, Kanibadam, Isfara and Khorog. It included the following works: construction of 84.5 km of water supply networks and water pipes, drilling of 3 new wells, rehabilitation of 16 wells, construction of a new water intake in the city of Kanibadam, construction of 3 clean water reservoirs, rehabilitation of 2 sewage systems pumping stations and bioponds, restoration of 2 pumping stations of the second level.
- The project aimed at rehabilitation of water supply systems in the southern cities of Tajikistan - phase 2, funded by the EBRD. The total project amount is $ 14.55 million. The implementation was launched in 2015, expected completion is in 2019. The project is carried out in the cities of Yavan and Isaev. It will include the following works: construction of a sewage treatment plant using two-stage water treatment and pumping stations - 2 pcs., Replacing 34 km of water supply networks, supplying machinery and equipment to ensure functioning of the water supply system, supplying and installing water meters - 13,800 pcs.
- The project to restore water supply systems in the northern cities of Tajikistan - phase 2, funded by the EBRD. The total funding of the project is $ 17.84 million. The implementation is launched in 2015, the completion is expected in 2019. The project is carried out in the cities of Istaravshan, Zafarabad, Shahriston and Penjikent. The project includes the following works: hydrogeological research in all cities, replacement of 129.5 km of water supply networks, drilling of 9 new wells, construction of 2 new tanks for 2000 and 1000 m^3, supply of machinery and equipment for operating the water supply system, supply and installation of water meters -13,800 pcs.
- The Panj River Basin Climate Resilience Project, funded by the ADB. The total project amount is $ 4.9 million. The start of implementation is 2014, the completion is set for 2019. The project is carried out in rural areas of Kulyab, Vose and Panj districts. The project includes the following works: construction of 6 new wells, rehabilitation of 5 existing wells, construction of 29.8 km of water supply network, construction of 6 reservoirs for 100 m^3, construction of 3 reservoirs for 500 m^3, construction of 4 water towers for 85 m^3, construction of a water tower for 25 m^3, construction of 5 chlorination facilities and 6 transformation units.
- The water supply system of Dushanbe is the 2nd Water Supply Project of Dushanbe, funded by the WB. The total amount of the project is $ 30.0 million. The implementation started in 2015, the completion is envisaged for 2018. Within the framework of the project, 76,000 water meters have been installed among water consumers, a new filtering station has been built at the Gravity Flow Water Treatment Station, tanks and street networks have been cleaned.
- Khujand Water Supply System - Khujand Water Supply System Improvement Project (Phase III), funded by the EBRD. The total amount of the project is 10.03 million US dollars. The implementation started in 2014, the completion is expected in 2019. The project envisages rehabilitation of water supply networks in Khujand, rehabilitation of water supply

networks in the village of Vodnik, construction of water-measuring connecting nodes for consumers, restoration of 4 wells, rehabilitation of a second level pumping station.

The situation did not change significantly during the past cycle, due to the wear of most of the drinking water supply infrastructure, limited financial and material and technical resources for maintaining and operating drinking water supply infrastructure facilities, incomplete institutional reforms in the field of water management and insufficient public services.

3.4. Area IV. Access to sanitation

Sewage systems and good sanitary conditions are provided to 69.2% of the urban population and 6.0% of the rural population. Sewage systems are available in 29 locations out of 62 cities, district centres, urban-type settlements.

The situation in this area has not changed significantly. Similarly to the past cycle, the situation is aggravated as a result of degradation, and, in many cases, lack of facilities and utilities for sanitation and hygiene. Rehabilitation of these systems has been carried out in recent years, mainly out of the limited funds collected as payment for sewage services from the population and other water users. Most of the modernization and development of sanitation and hygiene infrastructure is carried out in the framework of projects implemented by international organizations: Regional project on rural water supply and sanitation, Fergana Valley, Tajikistan (covers the following districts: Kanibadam, Isfara, J. Rasulov, Spitamen and Mascho in Sogd province, the project is implemented by the International Water Secretariat), Water Supply and Sanitation Project in Tajikistan (implemented by OXFAM UK), funded by the Suisse Development and Cooperation Office.

Key problems in this area are related to ensuring universal access to improved wastewater systems and sanitation. Efforts to resolve them are hampered by the degradation of structures and utilities, lack of technical capacities and maintenance, shortage of backup equipment, spare parts and consumables to maintain the sanitation and hygiene infrastructure in working condition; lack of investments allocated for maintenance and development of sanitation and hygiene infrastructure; low level of competencies and rotation of personnel in municipal sewage systems and sewage treatment facilities; lack of reliable data on the conditions of sanitation and hygiene infrastructure necessary for effective management and decision making.

3.5. Area V. Levels of performance of collective systems and other systems for water supply

The situation in this area has not changed significantly. The challenges that were prevailing during the previous cycle were due to the degradation of centralized and other water supply systems, as well as low efficiency of management mechanisms and procedures related to the operation and maintenance of these systems.

Water supply to the population of the Republic of Tajikistan is carried out by 85 specialized enterprises (State Unitary Enterprise "KMK" - 53 enterprises, State Enterprise "Tochikobdekhot" - 28 enterprises, state unitary enterprises "Dushanbevodokanal", municipal state unitary enterprises “Khujandvodokanal", EST of Nurek Hydroelectric Power Station and PCMK Rogun).

In addition, in rural areas, there are municipal enterprises, water users associations and committees, providing drinking water to residents of small communities. In most rural water supply systems, however, operators are not identified, and the 22 existing operators are in a challenging economic condition, hence they are not able to ensure proper maintenance of water infrastructure facilities and provide standard quality of drinking water supply services. Water supply of individual housing facilities and a number of industrial and service enterprises is decentralized, and it is difficult to assess the effectiveness of such systems.

Most of the infrastructure related to centralized drinking water supply was built in 1960-1980. Due to unsatisfactory operation and limited maintenance, it is now in a grave physical deterioration condition, the wear off level is about 70%. Aggressive soils that cause metal corrosion also contribute to accelerated wear of the water supply network.

According to data, 68% of centralized water supply systems in cities and urban-type settlements are in working condition, 7% do not fulfill the normative indicators, and 25% of the systems are inoperative and require major repairs or complete replacement. In rural areas, only 40% of water supply systems are in working condition, 44% are only partially functioning, and 16% of systems are inoperative. On average, water losses in the form of leaks from the water supply network and shut-off and control valves reach 17-60% of the water intake volumes. Over a quarter of these losses occur in trunk pipelines, and 75% in distribution networks.

In most cities, there are 1.3 and 2.9 breakdowns per year per 1 km of pipe. In 2018, 7396 breakdowns were registered in the water supply system, which is 2.9 breakdowns per 1 km of the network. In Dushanbe, 1577 breakdowns or 2.2 breakdowns per 1 km of pipe per year (0.2–0.3 breakdowns per 1 km of water supply networks per year are considered acceptable).

Most shut-off and control valves (valves) of water supply networks are worn out, wedged and disabled. For this reason, in order to eliminate breakdowns on water distribution networks, water utility enterprises are forced to disconnect significant areas from the water supply, often for 2–3 days.

Water supply enterprises in all cities and urban-type settlements have poorly developed human and technical capacity. Due to poor conditions and remuneration for most operators, there is a shortage of qualified service personnel. Only 15–20% of the available machines and equipment are in working condition, there are no reserve stocks of equipment, spare parts and consumables, as well as specialized vehicles for alternative delivery of drinking water. The chronic shortage of finances and technology limits significantly the ability of local authorities and enterprises-operators to implement rehabilitation and effective maintenance of drinking water supply infrastructure.

The key national problems in this area are related to prevailing and ever-increasing degradation trends of water supply systems, as well as the low efficiency of management mechanisms and procedures, operation and maintenance of these systems. Efforts to resolve these problems are hampered by the lack of investment in maintenance, rehabilitation and development of water supply systems, weak human and technical capacity of drinking water supply systems/drinking water suppliers; lack of operators/specialized services for the operation of water infrastructure in most rural communities; shortage of backup equipment, spare parts and consumables to maintain water supply infrastructure in working condition;

insufficient reliability of data on the state of water supply infrastructure for effective decision making.

3.6. Area VII. Application of good practices to the management of water supply

The situation in this area has not changed significantly. The introduction of standards allows to ensure the necessary quality of drinking water. In small communities in rural areas, protecting the source of drinking water is the only possible form of ensuring adequate water quality. In large settlements, the water demand is high and can only be satisfied by using additional sources with water of low microbiological quality. Such water requires the use of all cleaning methods to ensure its acceptability and safety for drinking purposes. Chlorination is predominantly used to disinfect water and only in some cases - ultraviolet treatment and ozonation is applied; in local water supply conditions, it is necessary to use boiled water.

Special chlorinators are used to disinfect water in large water pipelines, chlorine in the water is used for disinfection by special devices. With smaller water pipelines, and, when necessary, in barrels or other tanks, water disinfection is carried out by bleach or DTSGN. The choice of water supply source is made on the basis of its sanitary reliability and possibility of obtaining drinking water compliant to relevant standards.

Sanitary protection zones are available in all designed and reconstructed drinking water supply lines in order to ensure sanitary and epidemiological reliability. Water supply zones should include water supply source zone at the water intake site (including water intake structures), sanitary protection line of water supply facilities (pumping stations, water treatment plants, tanks), and sanitary protection line of water lines.

A UNDP project has developed draft guidelines for calculating tariffs for water supply and sanitation services for water sewage enterprises; these are included in the Practical Guidelines for calculating water supply tariffs for rural operators in the Republic of Tajikistan. Tariffs for water supply, sewage and utilities were revised and presented to the Anti-Monopoly Committee under the Government of the Republic of Tajikistan. In 2015, 17 thousand units water meters were installed, covering 12.2% of the required amount.

3.7. Area XI. Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol

There are no qualitative changes in the situation. Similarly to the previous cycles, the situation can be characterized as degrading, and in many cases, there is a crucial lack of wastewater treatment facilities. In total, there are 84 treatment plants with a total capacity of 1366.4 thousand m^3/day, including 26 treatment facilities with a capacity of 307.2 thousand m^3/day, these facilities are on the balance of the SUE “KMK”. Due to various reasons, out of the total number, 49 treatment facilities do not function. Almost 80% of the treatment facilities (with the exception of the city of Dushanbe and Khujand) are extremely worn out and do not meet the regulatory technical requirements. As a result, significant volumes of wastewater are discharged into the water bodies without treatment. In small cities and rural areas, domestic and industrial wastewater is accumulated in absorbing or cesspools and subsequently discharged into depressions in the terrain, collector-drainage networks or water bodies without treatment. A small number of enterprises have autonomous treatment facilities and sewage systems. After the preliminary treatment, the waste water from the city industrial enterprises is channelled to the treatment facilities together with the domestic waste water.

The annual volume of wastewater discharged through the sewage treatment plant amounted to 77.165 million m^3. Only 60.1 million m^3 of wastewater was completely (biologically and physico-chemically) treated. These data do not take into account wastewater statistics in rural areas and settlements that are not covered by centralized wastewater disposal and treatment systems. In the republic as a whole, 21% of the centralized water supply systems do not have water treatment facilities, and more than 31% of such systems do not disinfect water.

The key national problem in this area is to ensure the improved quality of wastewater treatment discharged into natural water bodies from wastewater systems. It is challenging due to lack of investments allocated to maintenance, repair and development of cleaning and disinfecting systems and facilities, insufficient functionality of existing cleaning and disinfecting facilities, poor technical condition of most cleaning and disinfecting facilities and use of inefficient technologies, technical means and reagents for cleaning and disinfecting sewage, unsatisfactory operation and poor functioning of cleaning and disinfecting systems.

3.8. Area XIV. Quality of waters which are used as sources for drinking

The situation in the field of drinking water has not changed significantly. Water quality tends to deteriorate in terms of sanitary-chemical and microbiological safety indicators in water sources. There are 753 sources of centralized drinking water supply, including 696 ground water sources (92.4%) and 57 surface water sources (7.6%) (Annual report f-18 SAHSSP). Water in the Kurgan-Tyube in Khatlon province and Sogd province is highly mineralized (up to 10g/liter) and rather hard (15-22mg/liter). In addition, in rural areas, springs, wells and irrigation canals are used as sources of decentralized water supply; it is difficult to assess the overall number of such sources. In general, with the exception of certain areas, the Republic of Tajikistan possesses long term drinking water supple sources.

Water pollution control is carried out by six hydrochemical laboratories of the Committee of Environmental Protection under the Government of the Republic of Tajikistan (CEP), located in Sogd province, in Kurgan-Tyube, Kulyab, Dushanbe, Tursunzade and Penjikent towns.

There are over 54% of water sources in Tajikistan, including 79.9% of surface sources, that do not meet sanitary and hygienic standards. Furthermore, there is annual growth of pollution, especially in rural areas. In 256 sources there are no sanitary protection zones, in 67 there are no wastewater treatment facilities, and in 347 there are no disinfecting facilities. According to the monitoring data conducted by SAHSSP in 2011, 35.2% of water samples from all sources did not meet hygienic standards, in particular physico-chemical indicators and 13.2% did not comply with microbiological indicators. For surface sources, these figures are 60.5% and 60.7% respectively. The main causes of pollution are discharges of untreated or insufficiently treated wastewater from municipal and industrial water supply systems, household discharges, including faecal wastewater from unsuitable settlements and individual dehkan farms and livestock facilities. Other important sources of pollution are wastewater from fields enriched with pesticides and mineral fertilizers and wastewater from household waste dumps. Pollutants from ground and surface water runoff during floods, rainfalls, and drainage flow into canals and reservoirs, contributing to the spread of infectious diseases.

Water quality monitoring in the sources of centralized and decentralized water supply is carried out by the SAHSSP. 90.4% of the country is covered by the sources of centralized drinking water supply systems (Annual report f.18 SAHSSP). The quality of decentralized

water supply systems at small sources (springs, streams, canals) is not sufficiently monitored, due to the lack of efficient transportation and limited capacity of laboratory services in rural areas, insufficiently trained personnel, etc.

A key national problem in this area is increasing trends of water quality deterioration in terms of sanitary-chemical and microbiological safety indicators in water sources. This problem can be resolved, though it is constrained by the lack of investment in the rehabilitation and protection of drinking water sources; lack or insufficient development and use of water protection zones; degradation of the monitoring network, technical and institutional framework aimed at monitoring water quality in drinking water supply sources, in particular in surface, small and remote sources.

3.9. Area XVIII. Identification and remediation of particularly contaminated sites

The situation in the region tends to improve. There is a number of projects being implemented with the support of development partners, aimed at improving the conditions of industrial and agricultural waste storage facilities. Key reasons for sporadic contamination of drinking water sources in the Republic of Tajikistan are related to inability of treating wastewater and sewage in most parts of the country, which leads to leakage of untreated sewage, inadequate storage of waste in the agricultural sector, inadequate condition of garbage pits (landfills) both on the household and industrial waste, as well as accumulators used fuels and lubricants. The most difficult problem is the organization of collection, transportation and storage of solid and liquid household waste, since there are no landfills in the country that meet the requirements of sanitary norms and rules.

Currently, only 25% of the overall population in Tajikistan is covered by the services for the collection and removal of solid household waste, of which 85.6% is urban population, 67.3% is peri-urban population and only 3.6% is rural population. The main activities for the collection and removal of municipal solid waste are carried out by specialized enterprises of the State Unitary Enterprise “Housing and Communal Services” and municipal enterprises in cities, urban-type settlements and jamoats.

The most common local sources of pollution include waste from mining and industrial production in dumps and tailing dumps. Most of them are located in the cones and floodplains in or near settlements and represent a potential threat to the population and aquatic ecosystems. Other dangerous sources of pollution include storage facilities and burial sites for the storage of toxic chemicals, mainly pesticides. In this regard, as a matter of priority, it is necessary to carry out a detailed survey of warehouses and landfill sites for prohibited and outdated toxic chemicals and to ensure their disposal or destruction in the future. One of the significant threats is the accumulation of thousands of tons of nitrogen and other fertilizers and pesticides in the soil layers of irrigated arable land and other agricultural land for many decades, which regularly infiltrate, washed off and enter water bodies.

The key national problems in this area are the degradation of industrial and agricultural waste storages and the increasing tendency of production and consumption wastes contamination, as well as the degradation of warehouses and landfills for the storage of substances related to Persistent Organic Pollutants (“POPs”). These problems can be resolved, although efforts to resolve them are hampered by the imperfect observation network and system for monitoring pollution of the aquatic environment in the areas where pollution sources

are located; lack of investments allocated for the purpose of adequate maintenance and rehabilitation of storage of household, industrial, agricultural and toxic waste.

Two projects are relevant in this area:

- Project on solid household waste management in Kurgan Tube town, funded by the EBRD. The overall budget for the project is of 4000,0 thousand US dollars. The implementation was launched in 2014, completion was achieved in 2017. Within the framework of the project, it was envisaged to improve the garbage collection area, to construct the unit for processing of mercury lamps and to purchase the garbage collection machinery.
- Project on solid waste management in Khorog town, funded by the EBRD. The overall budget for the project is of 4000,0 thousand US dollars. The implementation was launched in 2015 and is to be completed in 2019. It is envisaged to construct new garbage landfill, construct new office premise and garage and to purchase garbage collection machinery.

3.10. Area XIX. Effectiveness of systems for the management, development, protection and use of water resources

The situation in this area has not changed significantly. It is assumed that improvements are to be facilitated through the implementation of measures outlined in the Water Sector Reform Program of the Republic of Tajikistan for 2016–2025. As for the effectiveness of the water resources management and protection system, water supply and drainage systems, it remains at an average level. Characteristic features of the existing water sector management system are significant physical deterioration of the water infrastructure, inappropriate use and excessive water losses, deterioration of aquatic ecosystems, etc.

In drinking water supply systems, an average of 50-60%, (more than half of the water volume) is lost. This clearly demonstrates low efficiency of water supply systems. By increasing the efficiency of water supply systems, existing facilities can double the efficiency of water use and double the number of people who get access to water.

In the conditions of market economy topped up with limited material, technical and financial resources, there is a need to introduce integrated water resources management. This is also reiterated by the inefficiency of existing water management system and the continued deterioration of water supply and sanitation infrastructure, that was constructed in the last century. The activities implemented within the framework of the project “Integrated Water Resources Management in Ferghana Valley” (IWRM-Fergana), funded by the Suisse Development and Cooperation Office, provided first positive results.

At the national level, key problems are related to non-expeditious and inconsistent implementation of the reform in IWRM context, institutional structure in the water sector of the Republic of Tajikistan as a whole, including water management and protection systems, water supply and wastewater infrastructure management. The impeding factors to resolving existing problems are incomplete institutional reforms in the field of water management and transition to IWRM; lack of investments in maintenance, logistics of water supply and wastewater systems, capacity development of the state bodies at all levels; imperfection of tariff, fiscal and tax policies in the water sector of the Republic of Tajikistan, lack of mechanisms allowing effective motivation of the population and water users for the rational use and protection of water; insufficient utilization of participatory approaches to discussions and decision making in the water sector.

3.11. Area XX. Frequency of publication of information on the quality of drinking water supplied and on other waters relevant to the Protocol

The situation in this area has not changed significantly. The key challenge is related to imperfection of state and agency reporting schemes on conditions and utilization of the water supply, drainage and sanitation infrastructure, water use and quality of water resources.

All state bodies have launched web pages. However, due to limited funding, these web pages are not updated regularly, hence failing to establish sustainable feedback with the users. In line with the Decree of the MHSPP №95 as of 23.02.2010 "On improving the record keeping for certain infectious and parasitic diseases", a corresponding record keeping system is introduced by relevant healthcare facilities regardless of ownership form. When five or more instances of water borne diseases are registered among the population, a mandatory rapid alert messaging mechanism is triggered within 24 hours to the area centre of sanitary epidemiological control. Data of the sample chemical and sanitary analysis of water supplied to population are published in the annual reports of the State Agency on Healthcare Surveillance and Social Protection under the Ministry of Healthcare and Social Protection (SAHSSP) and the Ministry of Healthcare and Social Protection of Population (MHSPP).

The outcomes of laboratory testing carried out by social protection services indicating deviations from the normal parameters of quality drinking water are submitted to water suppliers and local government bodies.

Data on quantitative and qualitative water parameters, utilization of these parameters are to be registered in the Water Cadastre under the responsibility of state bodies in charge of surface and ground water resources, environment protection and hydrometeoservices. Nonetheless, Water Cadastre of Tajikistan was not published for a long time. The papers related to methodologies are being published by the state bodies as well as NGOs, with the support of international organizations.

One of the key challenges in this sphere is limited access of water suppliers and users, local authority bodies and the population specifically in the rural and remote areas to updated information on the conditions and usage of water resources, infrastructure, water supply and drainage and sanitation. The scope for solving this issue is limited, due to lack of investments allocated to local government to disseminate the information among the population and water users; shortcomings in the system of state and interagency reporting on the actual condition and usage of water supply, drainage and sanitation infrastructure, water use and quality of water resources; lack of approved procedures and infrastructure related to information exchange, awareness raising among suppliers and users of water resources; outdated or incomplete cadastre data base on the condition and usage of surface and ground water resources.

4. Reviewed target indicators in the field of Protocol on Water and Health in the Republic of Tajikistan

Assessment of the situation in the field of water supply and sanitation in the Republic of Tajikistan for the period until 2018, indicated that the interventions planned for the preceding period related to implementation of target indicators were not implemented, or when implemented, this was done only partially. Some relevant developments were as follows:

- During the period between 2015 and 2018, as noted above within the Area II, there was a decrease in instance of typhoid fever (9,1), bacterial dysentery (1,5), viral hepatitis A (1,3) and acute enteric infections (1,3).
- Guidelines for calculating the tariffs for water supply and drainage for the water supplying enterprises were developed within the framework of a UNDP project along with the Practical guideline for calculating the tariffs for rural operators in the Republic of Tajikistan.
- 17 thousand water meters were installed throughout the country in 2015 (76 thousand in Dushanbe, 20,5 thousand in DRS, 4,8 in Pyanj district); this is 12,2 % of the required number.
- Prior 2018 (in 2008) water meters were installed in Khujand city, in total 11 thousand items were installed.

Furthermore, target indicators for Areas I and VII were related to elaboration of the Plans for safe drinking water supply and provision of laboratory equipment to local water supply enterprises as well as SAHSSP. In line with the available information, in the framework of a new project by WHO in line with the "Plans for safe drinking water supply", equipment for five water canal enterprises and SAHSSP was supplied.

In line with the National Development Strategy of the Republic of Tajikistan for the period until 2030 (NDS 2030) and Mid Term Development Strategy of the republic of Tajikistan for the period of 2016-2020, the Government of the Republic of Tajikistan had approved Water Sector Reform Programme for the period of 2016-2025, which outlines a range of concrete activities and sets forth the necessary funding to ensure water supply to the population. Furthermore, the State Environmental Programme of the Republic of Tajikistan for the period 2009-2019 is still valid and it foresees activities aimed at ensuring rational usage and protection of water resources. Given programmes set forth obligations for relevant agencies and organizations to conduct regular monitoring and evaluation of the activities planned and implemented.

Within the framework of the Mid Term Development Strategy for 2016-2020 of the Republic of Tajikistan on strengthening the institutional base of the drinking water supply, sanitation and hygiene, the following activities are foreseen:

1. Elaborate and approve the Regulations on Institutional/Agency "areas of responsibility" and interaction in the process of drinking water supply, sanitation and hygiene management;
2. Develop, approve and implement a roadmap on capacity development in the system of drinking water supply, sanitation and hygiene reflecting the processes related to the formation of data base, staff training, tariff setting, investment attraction.

Representatives of the Ministry of Water Resources (MEWR), the Ministry of Health and Social Protection (MHSPP), the State Agency on Healthcare Surveillance and Social Protection (SAHSSP, under the Ministry of Health), the Committee on Environment Protection (CEP), the State Unitary Enterprise (SUE), the Khojagii Manzilii Communali (KMK, communal services) and other stakeholders are recommended to implement the previously adopted programmes and target indicators outlined in Protocol on Water and Health to the extent possible. In its turn, the target indicators being reconsidered at the current stage within

the framework of Protocol on Water and Health are to reflect the activities foreseen by various Programmes aimed at drinking water supply and sanitation systems development. Since participatory processes and broad inter-sectoral discussions support timely reflection of outcomes for all stakeholders, it is necessary to initiate these processes.

Discussions were conducted with the participation of local consultants from a variety of governmental institutions and agencies, namely from the MEWR, the Ministry of Foreign Affairs (MFA) , the Ministry of Justice (MoJ), the Ministry of Finance (MoF) , the Ministry of Economic Development and Trade (MEDT), the Ministry of Healthcare and Social Protection of Population (MHSPP), the Ministry of Education and Science (MES) , CEP, the State Committee on Investment and State Property Management (SCI and SPM), AG under the GoT, SAHSSP, SUE KMK, SUE Dushanbe Water Canal (DWC), Institute of Economics and Demography under the Academy of Science, as well as with representatives of international organizations and projects and the international consultant of the project. These facilitated identification of key principles for the review of the target indicators within the framework of the Protocol on Water and Health in Tajikistan, and these include the following:

- monitoring and evaluation of target indicators for the preceding period that were of limited character;
- consider previously set target areas and indicators under the Protocol still valid in Tajikistan;
- define new timeframe and implementing partners for the activities agreed previously though not implemented or implemented partially. Introduce corresponding changes in the Action Plan for the implementation of the target indicators;
- include the activities aimed at implementation of targets outlined in the state programmes outlined above;
- include development of accounting and statistic reporting methodology in the field of water supply and drainage, access of the population to safe drinking water supply and sanitation conditions. Foresee activities aimed at approval of corresponding normative-legal documents.

Priority areas and recommended target indicators are provided in the matrix below. These set forth:

- formulation of suggested activities
- timeframe for implementation
- organizations responsible for implementation
- status and justification including cross references to national programs.

It is suggested to discuss and approve the below during the session of the Coordination Council of NDWP in Tajikistan.

5. Linkages between the Protocol on Water and Health and Sustainable Development Goals (SDGs), relevance of target indicators

SDG	Link to WH Protocol	SDG targets
SDG, Goal 1. End poverty in all its forms everywhere	The Protocol promotes access to safe and sustainable drinking water supply and sanitation for all, in particular for poor and vulnerable groups (target 1.4).	§1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
SDG, Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Water, sanitation and hygiene and linked with nutrition. Children cannot get health food without access to safe water and sanitation. Improvement of the integrated systems "Water and Sanitation for Health" supports ending hunger (target 2.2).	§2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

SDG	Link to WH Protocol	SDG targets
SDG, Goal 3. Ensure healthy lives and promote well-being for all at all ages	One of the main objectives of the Protocol is to reduce the epidemics and the incidence of water-related diseases (target 3.3). The Protocol also aims to identify and clean contaminated sites in order to improve the quality of water bodies and reduce the number of water-related diseases caused by these sources of pollution (target 3.9). The improvement of water supply and sanitation services in the households and in medical institutions, which is promoted by the Protocol, reduces preventable mortality among new-borns and children under 5 years of age (target 3.2). The Protocol requires the introduction of surveillance and early warning systems to monitor outbreaks and cases of water-related diseases (target 3.d).	§3.2: By 2030, end preventable deaths of new-borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births. §3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases §3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination §3.d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks
SDG, Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Education cannot be inclusive and equitable without providing safe learning environment, including adequate water supply, sanitation and hygiene. The Protocol helps to draw attention and stimulate action along with disseminating the information to improve access to water, sanitation and hygiene in educational facilities, thus promoting safe and effective learning environment for all (target 4.a). At the same time, it raises awareness on the importance of water, sanitation and health (target 4.7).	§4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development §4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

SDG	Link to WH Protocol	SDG targets
SDG, Goal 5. Achieve gender equality and empower all women and girls	In terms of Gender Equality, the Protocol is constantly expanding, though special attention is already paid to promoting participation of women in decision-making processes related to water and health (target 5.5). The Protocol also provides gender-sensitive solutions that reduce discrimination in access to water, sanitation and hygiene services (target 5.1).	§5.1 End all forms of discrimination against all women and girls everywhere §5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

SDG, Goal 6. Ensure availability and sustainable management of water and sanitation for all	The Protocol is directly aimed at the sustainable provision of safe drinking water and sanitation (targets 6.1 and 6.2), as well as creating healthy habitat for people and ecosystems (target 6.6). It is directly related to all aspects of the SDG on water and sanitation, throughout the entire water cycle, from the source to use (target 6.4 and 6.5) and up to waste disposal (target 6.3).	§6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all §6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations §6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally §6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity §6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate §6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes §6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies §6.b Support and strengthen the participation of local communities in improving water and sanitation management

SDG	Link to WH Protocol	SDG targets
SDG, Goal 10. Reduce inequality within and among countries	Equitable and non-discriminatory access to water and sanitation has always been at the core of the Protocol, ensuring that legislation, policies and practices provide equal opportunities for the most vulnerable groups (target 10.3). Through an inclusive process of public participation and consultation, the Protocol seeks to create equal conditions for all stakeholders (target 10.2).	§10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status §10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard
SDG, Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	The Protocol is promoting collective water supply and sanitation systems, urban water management and the closed water cycle helps to make cities healthier and more convenient for living in an efficient way (target 11.b). In addition, by its very nature, the Protocol promotes the provision of affordable water supply and sanitation services (target 11.1) and reliable water supply and sanitation to reduce the number of people killed and affected by water-related disasters (target 11.5).	§11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums §11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations §11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

SDG	Link to WH Protocol	SDG targets
SDG, Goal 12. Ensure sustainable consumption and production patterns	The main objective of the Protocol is to make the environment healthier for people, which is accomplished by promoting the reduction of wastewater discharges and expanding wastewater treatment, while maintaining guidelines for providing safe drinking water and safe disposal of waste water (target 12.4).	§12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
SDG, Goal 13. Take urgent action to combat climate change and its impacts	Climate change poses risk to health due to extreme events. It affects water supply and sanitation systems and poses health risks associated with changes in food production, disease vectors and rodents. The Protocol aims to create drinking water and sanitation systems and services that are more resilient to the impacts of climate change (target 13.1).	§13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
SDG, Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Freshwater ecosystems provide a healthy habitat, resources for food and energy production. Protecting and restoring these areas can maintain and improve ecosystems and human health. The Protocol promotes this from a practical perspective, assessing the effectiveness of water resources management and pollution reduction (target 15.1).	§15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

6. Review of target indicators

	№	TI and timeframe for implementation (subjected to possible changes since 2018)	Corresponding organizations and partners
I. Quality of the drinking water supplied			
1	1.1.	By 2020, develop a new edition of the Program for Providing the Population of the Republic of Tajikistan with Clean Drinking Water.	- MEWR RT; SUE "KMK"; SUE “DVC"; SUE "KVC"; MISP; WB
2	I.2.	Ensure compliance of the samples collected in central water supply systems to sanitation norms : i - by 2020 in the cities to the level of 90%, ii - by 2025 not less than 98%; iii – by 2020 in rural areas on the level of 70%, iv - by 2025 not less than 95%;	- MHSPP of TY; - SAHSSP; - LEOB; - SUE KMK, SUE DWV; SUE KWC;
3	I.3.	To develop Plans on Drinking Water Safety for 30 rural settlements by 2020	- MEWR of RT - MHSPP of RT - LEOB; Fin Water Wei; - WHO;
II. Reducing the scale of outbreaks and incidence of water-related disease			

	№	TI and timeframe for implementation (subjected to possible changes since 2018)	Corresponding organizations and partners
4	II.1.	By 2025 decrease the instances of water-related diseases by 50% in comparison with 2015 for the following diseases: i.typhoid fever; ii.bacterial dysenterie; iii.viral hepatitis; iv.acute intestinal infections; v.parasitic diseases.	- MHSPP of RT; - SAHSSP; - WHO;
III. Access to drinking water			
5	III.1.	By 2025 increase the access to drinking water in the rural areas to 70%, in urban areas to 97%.	- SUE KMK, SUE DWV; SUE KWC; - LEOB;
6	III.2.	To develop a progamme on water supply rehabilitation in schools, pre-school facilities and medical facilities by 2020	- MEWR of RT; - MoES of RT; MHSPP of RT; SAHSSP; - WHO; - UNICEF;
7	III.3.	To provide 20 medical facilities (maternity homes) with water supply and sewage systems by 2019 (funded by UNICEF).	MHSPP of RT; SAHSSP; - UNICEF;
8	III.4.	Provide 50 schools with water supply and sewage systems by 2020 (funded by UNICEF). Number of schools will increase depending upon the funding	MoES of RT; UNICEF
IV. Access to sanitation			
9	IV.1.	Provide 90% of the urban population and 25% of rural population with sewage systems by 2025	- SUE KMK, SUE DWV; SUE KWC; - LEOB

	№	TI and timeframe for implementation (subjected to possible changes since 2018)	Corresponding organizations and partners
10	IV.2.	Provide not less than 80% of schools and 90% of preschool facilities with improved sanitation by 2025	- MoE S of RT; - MHSPP of RT; - SAHSSP; - SUE KMK, SUE DWV; SUE KWC; - LEOB; UNICEF;
V. Levels of performance of collective systems and other systems for water supply			
11	V.2.	Ensure certification of the water supply system in towns and districts by 2025	- SUE KMK, SUE DWV; SUE KWC; - LEOB;
12	V.3.	Decrease the breakdowns in water supply systems by 50% of the existing level by 2025	-SUE KMK, -SUE DWV; - SUE KWC; - LEOB;
VII. Application of good practices to the management of water supply			
13	VII.1.	Provide 10 water and sewage enterprises and 15 SAHSSP entities with modern laboratory equipment and qualified staff to conduct analysis of water and sewage by 2020	- MHSPP of RT; - CEP GoT; - SAHSSP; - LEOB; - SUE KMK; - Fin Water Wei; - WHO

	№	TI and timeframe for implementation (subjected to possible changes since 2018)	Corresponding organizations and partners
14	VII.2	Develop and adopt the Concept of the National Water Information System of the Republic of Tajikistan by 2020 and establish national water information system of the Republic of Tajikistan by 2025	- MEWR of RT; - MHSPP of RT; - SUE KMK, -SUE DWV; - SUE KWC;
XI. Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol			
15	XI.1.	Develop a methodology on maximum limits of drainage to water sites by 2022	- CEP GoT; - MHSPP of RT; - LEOB; - SUE KMK;
16	XI.2.	Carry out certification of the water treatment facilities in cities and districts by 2022	- CEP GOT; - SUE KMK, SUE DWC, SUE KWC;
XIV. Quality of waters which are used as sources for drinking water			
17	XIV.2.	Develop and adopt an educational standard on environmental education to be included in the formal education system on all the levels by 2020	- MEWR of RT; - MoES of RT; - MHSPP of RT; - CEP GoT; - UNICEF; - WHO;
XVIII. Identification and remediation of particularly contaminated sites			
18	XVIII.1.	Construct solid waste processing facilities and improve the conditions in the landfills for 85 % of the urban population and for 40% of the rural population by 2025	- SUE KMK; SUE DWC; SUE KWC; - LEOB; - SCI of RT;

	№	TI and timeframe for implementation (subjected to possible changes since 2018)	Corresponding organizations and partners
XX. Frequency of publication of information on the quality of drinking water supplied and on other waters relevant to the Protocol			
19	XX.1.	Ensure regular publications on access of the population to clean water and sanitation by 2020	- MEWR of RT; - Agency on Statistics of RT

7. Correlation of target indicators with Sustainable Development Goals

Target Indicator		SDG targets
I. Quality of the drinking water supplied		
1 (I.1)	By 2020, develop a new edition of the Program for Providing the Population of the Republic of Tajikistan with Clean Drinking Water.	§1.4, §3.2, §6.1, §6.3, §6.4, §11.b
2 (I.2)	Ensure compliance of the samples collected in central water supply systems to sanitation norms: i - by 2020 in the cities to the level of 90%, ii - by 2025 not less than 98%; iii – by 2020 in rural areas on the level of 70%, iv - by 2025 not less than 95%;	§1.4, §3.2, §3.3, §3.9, §6.1,
3 (I.3)	To develop Plans on Drinking Water Safety for 30 rural settlements by 2020	§1.4, §3.2, §3.3, §3.4, §6.1, §6.3, §6.4, §11.b,
II. Reducing the scale of outbreaks and incidents of water-related disease		**SDG targets**
4(II.1)	By 2025 decrease the instances of water-related diseases by 50% in comparison with 2015 for the following diseases: i. typhoid fever; ii. bacterial dysenterie; iii. viral hepatitis; iv. acute intestinal infections; v. parasitic diseases.	§1.4,§3.2, §3.3, §3,9, §11.5,
III. Access to drinking water		**SDG targets**
5 (III.1)	By 2025 increase the access to drinking water in the rural areas to 70%, in urban areas to 97%.	§1.4, §2.2, §3.2, §6.1, §6.4
6 (III.2)	To develop a the progamme on water supply rehabilitation in schools, pre-school facilities and medical facilities by 2020	§1.4, §2.2, §3.2, §4a, §6.1, §6.4

Target Indicator		SDG targets
7 (III.2)	To provide 20 medical facilities (maternity homes) with the water supply and sewage systems by 2019	§4.7, §4a, §6.2
8 (III.2)	Provide 50 schools with t water supply and sewage systems by 2020	§1.4, §2.2, §3.2, §4a, §6.1,
IV. Access to sanitation		**SDG targets**
9 (IV.I)	Provide 90% of the urban population and 25% of rural population with sewage systems by 2025	§1.4, §6.2
10 (IV.2)	Provide not less that 80% of schools and 90% of preschool facilities with improved sanitation by 2025	§4.7, §4a, §6.2
V. Levels of performance of collective systems and other systems for water supply		**SDG targets**
11 (V.2)	Ensure certification of the water supply system in towns and districts by 2025	§6.1, §6.4
12(V.3)	Decrease the breakdowns in water supply systems by 50% of the existing level by 2025	§6.4

VII. Application of good practices to the management of water supply		SDG targets
13 (VII.1)	Provide 10 water and sewage enterprises and 15 SAHSSP entities with modern laboratory equipment and qualified staff to conduct analysis of water and sewage by 2020	§1.4, §3.2, §3.9, §3.d, §6.1, §6a
14 (VII.2)	Develop and adopt the Concept of the National Water Information System of the Republic of Tajikistan by 2020 and establish national water information system of the Republic of Tajikistan by 2025	§6.1, §6.4, §6a
XI. Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol		**SDG targets**
15 (XI.1)	Develop a methodology on maximum limits of drainage to water sites by 2022	§6.2, §6.3, §6a, §6.b
16 (XI.2)	Carry out certification of the water treatment facilities in cities and districts by 2022	§6.3
XIV. Quality of waters which are used as sources for drinking water		**SDG targets**
17 (XIV.2)	Develop and adopt an educational standard on environmental education to be included in the formal education system on all the levels by 2020	§4.7, §4a
XVIII. Identification and remediation of particularly contaminated sites		**SDG targets**
18. (XVIII.1)	Construct solid waste processing facilities and improve the conditions in the landfills for 85% of the urban population and for 40% of the rural population by 2025	§3.4, §6.3
XX. Frequency of publication of information on the quality of drinking water supplied and on other waters relevant to the Protocol		**SDG targets**
19 (XX.1.)	Ensure regular publications on access of the population to clean water and sanitation by 2020	§4.7, §11.b

8. Recommended plan of action to implement target indicators

	Targets- Target indicators and deadlines	CPU Implementation Measures	Event Results	Indicators of achievement	Main implementing organizations	Justification
Area I. Quality of the drinking water supplied						
1 (1.1)	By 2018, include the relevant areas of the Protocol in the "National Water Strategy of the Republic of Tajikistan until 2030"	Formation and organization of the activities of the interdepartmental working group and experts; Analysis of the current state of the water sector and water resources of Tajikistan in the context of the Protocol and sustainable development Proposed sections of drinking water supply and sanitation for the National Water Strategy of the Republic of Tajikistan until 2030 Organization of public discussion, coordination and approval of the Program;	Relevant sections of drinking water supply and sanitation to the National Water Strategy of the Republic of Tajikistan until 2030 are proposed. Interested parties have commented the draft program. The "National Water Strategy of the Republic of Tajikistan until 2030" reflects the relevant areas of the Protocol	The relevant areas of the Protocol are included in the "National Water Strategy of the Republic of Tajikistan until 2030"	- MEWR RT; SUE "KMK"; SUE "DVC"; SUE "KVC"; MISP; WB	The program of reform of the water sector of the Republic of Tajikistan for the period 2016-2025. Involvement of partner funds.

2(1.1)	By 2020, develop a new edition of the Program for Providing the Population of the Republic of Tajikistan with Clean Drinking Water.	Formation and organization of the activities of the interdepartmental working group and experts; Analysis of the implementation of the Program of providing the population of the Republic of Tajikistan with clean drinking water for the period 2008-2020; Organization of public discussion, coordination and approval of the Program;	Development of the "Program of providing the population of the Republic of Tajikistan with clean drinking water for the period until 2030"; Participation of stakeholders in the discussion of the draft program; Program Coordination and Approval	Approval of the Program by the Government of the Republic of Tajikistan. .	- MHSPP of RT; - SAHSSP; - LEOB; - SUE KMK, SUE DWV; SUE KWC;	The program of reform of the water sector of the Republic of Tajikistan for the period 2016-2025. Involvement of partners funds.

2 (I.2)	Ensuring compliance with sanitary standards of water samples in centralized water supply systems: i - in cities by 2020 at 90% ii - by 2025 not less than 98%; iii - in rural areas by 2020 at the level of 70%, iv - by 2025 not less than 95%;	Formation and organization of the working group of experts to develop a program for the rehabilitation of sewage treatment plants and water supply disinfecting devices, which should consist of the following stages: Inventory of all water quality control laboratories in terms of manning equipment and personnel; The establishment of existing and potential causes and sources of water pollution within the zones of sanitary protection of surface and groundwater bodies and directly in the water supply systems of settlements; Justification and implementation of a set of measures to eliminate identified local sources of water pollution and / or a radical reduction of their negative impact; Monitoring water quality under current legislation of the Republic of Tajikistan and introducing a risk assessment approach for monitoring the water supply system	Providing all laboratories with the necessary equipment to conduct water quality control; Design and construction of water treatment plants using the latest technologies for disinfection and water purification; The use of standardized forms of sanitary inspection to identify potential risks of pollution; Eliminating or consistently preventing and reducing the negative impact of the causes of microbiological and chemical water pollution in water bodies that are sources of rural water supply.	Increase in % of samples corresponding to sanitary standards	- MHSPP of TY; - SAHSSP; - LEOB; - SUE KMK, SUE DWV; SUE KWC;	The goal and priorities of the “International Decade for Action“ Water for Sustainable Development ”2018-2028 Order of the Ministry of Health and the SZN of the Republic of Tajikistan on approval and procedure for the implementation of an integrated system of state surveillance of diseases related to water quality. To be carried out at the expense of budget funds allocated MHSPP RT; SAHSSP; and other executive agencies of organizations

3 (I.3)	By 2020, develop for 30 rural settlements Drinking Water Safety Plans	Formation of working groups of experts to support the implementation of the WSP and establish actual indicators of drinking water safety in cities and regions; Develop a methodological guide or national regulation on a WSP, taking into account the local context; Organization of training for WSPs for SGBP and NWS specialists, water supply system operators and initiative groups. Compilation and implementation of a WSP by water supply system operators	Commissioning of safe water supply systems; Expanding the development and implementation of a drinking water safety plan; Development and implementation of the Program for the construction and rehabilitation of infrastructure to ensure the safety of water supply.	Ensuring public access to safe water supply; The number of cities and rural settlements with the WSP.	MEWR of RT MHSPP of RT LEOB; Fin Water Wei; - WHO;	The program of reform of the water sector of the Republic of Tajikistan for the period 2016-2025.
Ii. Reducing the scale of outbreaks and incidents of water-related disease						

4(II.1)	By 2025 reduce the incidence of water-related diseases by 50% compared with 2015 for such diseases as: I. typhoid fever; II. bacterial dysentery; III. viral hepatitis; IV. acute intestinal infections; V. parasitic diseases.	Formation and organization of the working group of experts to develop a plan of action for the prevention of the reduction of infectious and parasitic diseases transmitted by water. To improve the technical condition of the water supply infrastructure in rural areas.	The technical condition of the water supply infrastructure in rural areas has been improved. Designed, approved and implemented Improved methodology, technology and procedure for the implementation of state surveillance of diseases related to water quality.	Reduce incidence of water-related disease.	MHSPP of RT SAHSSP; WHO;	Order of the Ministry of Health and the SZN of the Republic of Tajikistan on approval and procedure for the implementation of an integrated system of state surveillance of diseases related to water quality. To be carried out at the expense of budget funds allocated MHSPP RT; SAHSSP; and other executive agencies of organizations
Area III. Access to drinking water						

5 (III.1)	By 2025, increase the level of access to drinking water in cities to 97%, in rural areas to 70%.	Analysis of the program of providing the population of the Republic of Tajikistan with clean drinking water for the period 2008-2020. and development of a new Program of providing the population of the Republic of Tajikistan with clean drinking water for the period up to 2030. Development of a comprehensive feasibility study (FS) of measures to expand water supply and sanitation systems; Development of projects for the construction and / or rehabilitation and development of these systems according to the approved list; Construction, installation and other works in the framework of these projects; Acquisition and training of staff of the organization carrying out the UITI of these systems; Organization of sustainable financial support for the maintenance and operation of these systems	Conducting a technical inventory of water supply systems and submitting periodic reports; Development, approval and implementation of the Program Consistent improvement in the technical condition and development of water supply and wastewater systems has been ensured; Improved staff skills. A sustainable financing mechanism has been introduced.	Percentage of access to drinking water in urban and rural areas. The number of staff with advanced qualifications.	NGOs. SUE “KMK” SUE "DWC" SUE "KWC" LEOB; NGO.	Programs to improve the provision of the population of the Republic of Tajikistan with clean drinking water for the period 2008-2020; 1,180,815.9 Thousand somoni at 2006 prices are foreseen for 2017-2020. The reform program of the water sector of the Republic of Tajikistan for the period 2016-2025. Capex is provided for 942,760 thousand somoni.

6 (III.2)	By 2020, develop a program to restore water supply and sanitation systems in secondary schools, kindergartens and medical facilities	Formation and organization of a working group of experts to develop a program for the reconstruction of water supply and sanitation systems in secondary schools, pre-school institutions and medical centres; Conducting an inventory and comprehensive assessment of the technical condition of water supply and sanitation systems in secondary schools, pre-school institutions and medical centres, and the development of a comprehensive feasibility study (FS); Development of projects for the construction and / or rehabilitation and development of these systems according to the approved list; Construction, installation and other works in the framework of these projects; Organization of sustainable financial support for the maintenance and operation of these systems.	MHSPP RT; The Ministry of Education and Science of the Republic of Tajikistan, in cooperation with UNICEF, carries out an objective assessment of the technical condition and technical inventory of water supply systems in schools, preschool institutions and medical centres, and periodical reports are submitted; Development, approval and implementation of the program; Ensuring the consistent expansion of access for children to schools and preschool organizations to modernized water supply systems	The level of access to drinking water and improved sanitation in schools and preschool institutions.	MEWR RT; MoES RT; MHSPP RT; SAHSSP; UNICEF; WHO;	Programs to improve the provision of the population of the Republic of Tajikistan with clean drinking water for the period 2008-2020; The program of reform of the water sector of the Republic of Tajikistan for the period 2016-2025; Implemented at the expense of UNICEF

7 (III.3)	By 2019 to provide 20 medical institutions (maternity homes) with water supply and sewage systems	Formation and organization of a working group of experts to develop a program for the construction of water supply and sewage systems for medical institutions (maternity homes); ; Development of construction projects and / or rehabilitation and development of water supply and sewerage systems according to the approved list; Construction, installation and other works in the framework of these projects; Organization of sustainable financial support for the maintenance and operation of these systems.	The implementation of an objective assessment of the technical condition and the technical inventory of water supply systems in medical institutions (maternity homes); ; Development, approval and implementation of the program; Implementation of a sustainable financing mechanism; Ensuring the consistent expansion of access of medical institutions (maternity homes) to modernized water supply systems	Level of access of medical institutions (maternity homes) to improved water supply and sanitation systems	MHSPP RT; SAHSSP; UNICEF	Funding will be provided by UNICEF

8 (III.4)	By 2020, provide 50 schools with water and sewage systems.	Formation and organization of the working group of experts to develop a program for the construction of water supply and sewage systems for schools; Development of construction projects and / or rehabilitation and development of water supply and sewerage systems according to the approved list; Construction, installation and other works in the framework of these projects; Organization of sustainable financial support for the maintenance and operation of these systems.	The implementation of an objective assessment of the technical condition and the technical inventory of water supply systems in school institutions; Development, approval and implementation of the program; Implementation of a sustainable financing mechanism; Ensuring the consistent expansion of school access to modernized water supply and sewage systems.	The level of access of schools to water supply and sanitation. The number of schools will be increased depending on the availability of funding.	MoES RT UNICEF	UNICEF will provide funding.
IV. Access to sanitation						

9 (IV.I)	By 2025, provide 90% of the urban population and 25% of the rural population with sewage systems.	Formation and organization of the working group of experts to assess the current state of sewage systems; Conducting an inventory and comprehensive assessment of the technical condition of sewage and sanitation facilities in cities and rural areas; Development of a feasibility study and programs for the development of sewage and sanitation facilities for specific cities and rural areas - the construction of new sewage systems; Restoration and reconstruction of sewage and sewage treatment plants; Development of construction projects and rehabilitation, as well as the modernization of sewer systems; Construction and installation work related to the rehabilitation and development of these systems.	Development of a Program for the development of sewerage and sanitation systems in cities and rural settlements, approval and implementation of programs; Development and implementation of a system of effective state and public control over the implementation of projects for the construction and modernization of these systems and facilities; Ensuring the consistent improvement of the technical condition of the infrastructure for water disposal and sanitation in human settlements; Ensuring the effective management, maintenance and operation of these facilities due to the sustainable funding of these activities.	Access to improved sanitation in cities and rural areas.	SUE KMK; MHSPP RT; SAHSSP; SUE DWC; SUE KWC; LEOB;	To be carried out by involving investments and budget funds; Volumes of additional funds intended for payment for services.

10 (IV.2)	Provide by 2025 at least 80% of schools and at least 90% of preschool institutions with improved sanitation.	Formation and organization of the working group of experts to develop a program for the reconstruction and improvement of sanitation systems in secondary schools, kindergartens. Assessing water, sanitation and hygiene services in school and medical facilities and developing and implementing improvement plans Conducting an inventory and comprehensive assessment of the technical condition of the feasibility study sanitation systems (FS); Development of projects for the construction and / or rehabilitation and development of these systems according to the approved list; Construction, installation and other works in the framework of these projects; Organization of sustainable financial support for the maintenance and operation of these systems	Implementation of an objective assessment of the technical condition and a technical inventory of sanitation systems in schools, pre-school institutions; Development, approval and implementation of programs. Ensuring the consistent expansion of access for children to schools and pre-school organizations to modernized sanitation systems	Level of access to improved sanitation systems in schools and preschool institutions	MoES RT; MHSPP RT; SAHSSP; SUE KMK; SUE DWC; SUE KWC; LEOB; UNICEF;	The program of reform of the water sector of the Republic of Tajikistan for the period 2016-2025; To be carried out at the expense of budgetary funds allocated by the Ministry of Defense and National Security of the Republic of Tajikistan, the Ministry of Health and the North Caucasian Specialized Hospital LEOB and other executive agencies of organizations.

Scope V. Levels of performance of collective systems and other systems for water supply						
11 (V.2)	By 2025 certification of the water supply system for the population of cities and regions	Formation and organization of the work of the working group for the certification of water supply systems of the population of cities and regions; Certification of water supply systems for the population of cities and districts;	Certification of water supply systems of the population and cities and districts.	Certification	SUE KMK; SUE DWC; SUE KWC; LEOB;	SDP-2020

12(V.3)	By 2025 reduce accident rates on water supply systems by 50% of the existing level	Develop an action plan to reduce water leaks and reduce accidents in water supply systems; To compile a water balance and a map of monomeric pressures for all water supply systems, starting from the water intake to the main nodal points; Replace worn out networks and water lines; Acceptance of works of reconstructed systems to produce in accordance with current regulatory documentation.	Action Plan to reduce water leaks; Availability of monomeric pressure and water balance charts; Updated sections of water supply networks.	Reducing accidents in water supply systems by 50% of the existing level.	SUE KMK; SUE DWC; SUE KWC; LEOB;	Measures to reduce water leaks and reduce accidents in water supply systems should be carried out at the expense of the state budget, loans and grants from donor organizations.
Area VII. Application of recognized and good practices to the management of water supply						

13 (VII.1)	By 2020, provide 10 enterprises of water utilities and 15 SAHSSP with modern laboratory equipment and qualified personnel for the analysis of water and sewage.	Implementation of a joint project of the WHO, the Ministry of Health and the NWT of the Republic of Tajikistan on the Plan for the Safety of Drinking Water in the Republic of Tajikistan (WSP); Implementation of a joint project of the WHO, MoH and SZ RT of the Plan for the safety of drinking water in the Republic of Tajikistan (WSP); Development of a feasibility study development, location and technical equipment of the laboratory base; Justification of sources of investment and their attraction; Purchase of equipment and consumables for laboratories; Modernization and equipment of the laboratory with modern equipment; Staffing and training of laboratory personnel.	National Program for the Improvement of Drinking Water Quality in PT; Organization of sustainable financial support for the further acquisition and operation of laboratory equipment; Modernization and development of the technical base and methodology for the operational analysis of drinking water samples; Providing rapid and reliable monitoring of the quality of drinking water in rural areas.	Laboratories are organized, provided with necessary equipment and consumable materials; Laboratory staff is staffed and trained in drinking water sample analysis methodology; Regular expansion and distribution of a water quality database has been ensured.	MEWR RT; MHSPP RT; SAHSSP; CEP RT; LEOB; SUE KMK; Fin Water Wie; WHO;	To be carried out at the expense of the state budget, loans and grants of donor organizations; National Development Strategy of the Republic of Tajikistan for the period up to 2030.

14 (VII.2)	By 2020 adoption of the Concept of the National Water Information System of the Republic of Tajikistan and by 2025 creation of a national water information system of the Republic of Tajikistan	Formation and organization of the work of the working group and experts for the development of the Concept of the national water information system of the Republic of Tajikistan; Development of the Concept with the involvement of international experts with a reflection of the order of formation of the information base; Conducting the procedure for the examination and coordination of the Concept with relevant ministries and committees; Introduction of the developed Concept for consideration and approval by the Government of the Republic of Tajikistan.	Develop accounting methodology and statistical reporting on the development of water supply and wastewater resources; Design the form "Drinking water" for state statistical reporting; Design the form “Waste Water Management” for state statistical reporting; Develop the concept of creating a database of an information system;	Approval and implementation of the Concept of the National Water Information System of the Republic of Tajikistan. Creation of Water Information System;	MEWR RT; MHSPP RT; CEP GOT; DG GOT; SUE KMK; SUE DWC; SUE KWC; WB	According to SDP-2020, to be carried out at the expense of budget and funds of partners (WB);
Area XI. Quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol						

15 (XI.1)	By 2020, develop a methodology for calculating the maximum permissible discharges (MPD) in water bodies with wastewater.	Formation and organization of the working group of experts to develop a methodology for calculating the maximum permissible discharges (MPD) in water bodies with wastewater; The organization of a broad discussion, the conduct of the examination procedure and the coordination of the methodology with the relevant ministries and committees; Approval of the methodology by the order of the CEP Chairman.	Development and implementation of the methodology for calculating the maximum permissible discharges (MPD) in water bodies with wastewater. Conducting an examination and procedure for approving the methodology in relevant ministries and departments; Statements by the Order of the CEP GOT Chair.	Approved method of calculating the maximum permissible discharges (MPD) in water bodies with wastewater	CEP GOT; MHSPP RT; LEOB; SUE "KMK".	Activities related to the development of a methodology for calculating the maximum permissible discharges (MPD) into water bodies with wastewater is carried out at the expense of the budget and funds of development partners.

16 (XI.2)	By 2022 carry out certification of the wastewater treatment system of cities and regions.	Formation and organization of the work of the working group for certification of wastewater treatment systems of cities and regions. Certification of wastewater treatment systems in cities and regions.	Certification of all structures is carried out, regardless of the form of ownership for the structures of the water disposal system.	Passports for all facilities of the water supply and drainage system	CEP GOT; SUE KMK; SUE DWC; SUE KWC;	Measures for the certification of the water supply system of the population and wastewater treatment facilities of cities and regions should be carried out at the expense of organizations
Area XIV. Quality of waters which are used as sources for drinking water						

17 (XIV.2)	By 2020, develop and adopt an educational standard on environmental education in the system of formal education at all levels.	Formation and organization of the activities of the interdepartmental working group; Development of an educational standard on environmental education in the system of formal education at all levels; Development, with the involvement of an international expert, of the standard of environmental education, including a set of requirements for the content, methods, forms, means of training and control.	Creation of a working group to develop an educational standard for environmental education in the formal education system at all levels; Development, with the assistance of an international expert educational standard, carrying out the approval procedure in the MO and N RT	Approval of the educational standard on environmental education in the system of formal education at all levels.	MEWR RT; MoES RT; MHSPP RT; CEP GOT; UNICEF; WHO;	Activities related to the development of an educational standard, in accordance with SDP-2020, are carried out at the expense of the budgets of the Ministry of Defense, the National Assembly of Tajikistan , the CEP and the partner's funds (UNDP)
XVIII. Identification and remediation of particularly contaminated sites						

18 (XVIII.1)	By 2025, construction of facilities for the processing of solid household waste and improvement of landfills for the urban population is 85%, 40% for the rural population.	Conducting an inventory and comprehensive assessment of the technical and financial condition of enterprises engaged in the collection and disposal of municipal solid waste and the development of integrated development measures for the management of municipal solid waste; Justification of the volumes and sources of investments for the implementation of programs and their attraction; Commissioning of new and reconstructed landfills.	Update of the park of communal special equipment; Construction of garbage collection points; Construction and expansion of landfills; Construction of solid waste recycling facilities	Household access to solid waste collection services.	SUE KMK; SUE DWC; SUE KWC; LEOB; GKI and OIG RT;	To be carried out at the expense of the state budget, loans and grants of donor organizations;

XX. Frequency of publication of information on the quality of drinking water supplied and on other waters relevant to the Protocol						
19 (XIX.1)	By 2020 ensure regular publication on access to clean water and sanitation for the population.	Development of accounting methodology and statistical reporting on the development of water supply and wastewater resources; The support of the authorities in the provision of reliable environmental information on water supply and sanitation; Creating a mechanism for publishing information.	Creation of a unified and reliable database on all issues related to systems and objects of drinking water supply and sanitation; Compile a geodatabase of all available spatial data.	Publication of generalized information for the public and detailed information for relevant organizations.	MEWR RT; Agency for Statistics RT; RMA	To be carried out at the expense of the state budget, loans and grants of donor organizations;