



SUMMARY REPORT

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

THE REPUBLIC OF BELARUS

Executive Summary

The State pays significant attention to providing the population with safe and high-quality water and promoting the rational use of water resources, and the main activities under the Protocol are in line with the priorities of the social policy of the Republic of Belarus. The Republic of Belarus has been a Party to the Protocol on Water and Health since 21 July 2009. The Ministry of Health and the Ministry of Natural Resources and Environmental Protection are national bodies responsible for fulfilling the obligations undertaken by the Republic of Belarus under the Protocol. The Protocol Implementation Council coordinates the activities of the bodies and agencies that ensure the fulfilment of obligations under the Protocol. The National Focal Point operates under the auspices of the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene.”

Targets under the Protocol were revised in 2018-2019 with the support of the Joint Secretariat of the Protocol within the framework of the European Union Water Initiative Plus for the Eastern Partnership (EUWI+) project. The updated targets were defined in the Set of Measures to Meet the Obligations undertaken by the Republic of Belarus under the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes until 2030, as approved by the Ministry of Health, the Ministry of Natural Resources and Environmental Protection, and the Ministry of Housing and Communal Services on 17-18 March 2021. The Set of Measures was developed on the basis of the analysis of the situation in the water supply and sanitation sector and with the protection of water resources, subject to the achievement of targets under the Protocol until 2015, strategic priorities of the Republic by analogy and in synergy with the SDGs for the period until 2030. The main national and international strategies and instruments of legislation were taken into account. The Set of Measures includes the list of targets and target dates under the Protocol (29 targets in 17 target areas relevant for the Republic of Belarus and 43 target indicators to assess their achievement), activities to achieve target indicators, bodies responsible for implementation of the activities; and identified synergies between individual targets and the nationalized SDGs. The main responsibilities for achieving the targets provided for by the Set of Measures are assigned to local executive and regulatory authorities and republican government bodies.

The main provisions of the Protocol are implemented within the framework of the current legislation. Activities to achieve the targets that require financial investments and affect the improvement of the infrastructure of drinking water supply and sanitation systems, the protection of water resources, and the improvement of supervision are carried out within the framework of state programmes and strategies using the funds from the republican and local budgets, including in the State Programme “Comfortable housing and friendly environment for 2021-2025”, as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28/01/2021 (targets for water supply and sanitation), the National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030 (3 targets and 5 target indicators); the Environmental Strategy of the Republic of Belarus until 2035 (5 indicators), and the State Programme “People’s Health and Demographic Security” for 2021–2025.

The Set of Measures is publicly available on the website of the National Focal Point of the Protocol (http://rspch.by/ru/protocol_water_and_health) and was brought to the attention of all stakeholders, and sent to the Joint Secretariat of the Protocol on 22 March 2021 in Russian and English.

The implementation of the measures made it possible to achieve the provision of the population with centralized water supply systems at the level of 91.0% (by 2025 it is planned to reach 93.2%), with centralized sanitation systems at the level of 78.8% (with the planned target of 79.3% by 2025). The proportion of drinking water samples that meet regulatory requirements for chemical indicators has increased, and the achieved level of epidemiological reliability of water supply systems is being maintained.

An assessment of the situation of equitable access to water and sanitation in the Republic of Belarus was carried out using the Protocol's tools with the support of the Secretariat, and the results were used to develop measures to achieve the targets.

The legislative and regulatory framework on issues covered by the Protocol is constantly being improved, including improvement of approaches to the monitoring on the basis of implementing a risk assessment methodology, and introduction of more improved methods of research. In furtherance of Law No. 166-Z of the Republic of Belarus "On Amendments to Certain Laws of the Republic of Belarus on Drinking Water Supply Issues" of 09/01/2019, a number of new sectoral and intersectoral regulatory legal acts were developed and existing ones were revised, including amendments to the resolution of the Council of Ministers regulating the use of centralized water supply and sanitation systems in settlements, and amendments were made to the regulations governing the calculation of water loss and unaccounted-for water consumption, the assessment and calculation of the technological water consumption standard in centralized water supply systems, and the scheduled and preventive maintenance of centralized drinking water supply and sanitation systems.

Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021 updated the hygienic standards for drinking water chemicals, taking into account modern data on their toxicity and danger, clarified the list of monitored indicators based on the results of multiple-year monitoring, improved approaches to virological monitoring in drinking water supply systems, introduced tests for the presence of the causative agent of Legionnaires' disease in water use facilities with a focus on risk groups. In order to increase the efficiency of water supply systems management, based on the implemented risk assessment methodology, the country has developed Guidelines on the Procedure for Organizing State Sanitary Supervision of Drinking Water Supply, Responses to Accidents (Emergencies) in Centralized Drinking Water Supply Systems, Instructions for Use providing for the "Method for assessing public health risk from exposure to chemicals that influence the organoleptic properties of drinking water in case of accidents (emergencies) in centralized drinking water supply systems", and the "Method for assessing public health risk from exposure to chemicals polluting drinking water", and the "Method of hygienic standardization of chemicals in drinking water according to health risk criteria." A method for quantification of the health risk associated with a microbiological factor in drinking water and the Method for Quantification of adenovirus DNA, which makes it possible to determine the presence of this viral pathogen in drinking water, have been developed.

The issues of adaptation to climate change are reflected in the state programme "Environmental Protection and Sustainable Use of Natural Resources" for 2021-2025, as approved by Resolution No. 99 of the Council of Ministers of the Republic of Belarus of 19 February 2021, as well as in the National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030, as approved by Resolution No. 91 of the Council of Ministers of the Republic of Belarus of 22 February 2022. The strategy includes an Action Plan for the implementation of the objectives of the Strategy, including measures to develop the water supply and sanitation system. Methodologies for calculating indicators in the field of protection and management of water resources have been developed. A key aspect of state policy in the field of water relations is active international cooperation on water use and protection. A number of projects have been prepared and are being implemented on transboundary monitoring and use of water resources in the river basins of the Dnieper (with Ukraine and the Russian Federation), the Western Bug (with the Republic of Poland) and the Western Dvina (with the Republic of Latvia and the Russian Federation) in accordance with the planned and executed bilateral and multilateral intergovernmental agreements of the Republic of Belarus with these states. Within the framework of the agreements, cooperation in basin management of water resources is being developed. The percentage of the country's area covered by the cooperation mechanism within the transboundary river basins is 67.6%. There is a tendency towards improvement in the ecological condition of surface water bodies - 72.4% of them have a good or higher ecological status.

Informing stakeholders about international approaches to managing drinking water supply and ensuring equitable access to drinking water, organized in compliance with safety requirements, about the Protocol on Water and Health, is carried out on an ongoing basis at republican and international events (conferences and seminars) and advanced training courses (described in detail in the section of target area XX). Six large-scale events of the republican level were held in 2021 alone).

To inform the public about the main provisions of the Protocol and the activities carried out in the Republic, a web page about the Protocol with up-to-date information has been created on the website of Republican Unitary Enterprise "Scientific and Practical Centre of Hygiene". A number of thematic initiatives on the Protocol including under the guidance of the Secretariat have been conducted. The Republic of Belarus participated in the 2021/2022 GLAAS assessment.

In the context of the pandemic, the Ministry of Health of the Republic of Belarus has developed a number of documents to mitigate the risks of the spread of COVID-19 and maintain the health of the employees of organisations in the Republic, and ensure the safe provision of services to the population (including Sanitary Standards and Regulations "Requirements for organizing and implementing sanitary and anti-epidemic measures aimed at preventing the importation, contraction and spread of influenza and

COVID-19,” Guidelines for the Prevention of Coronavirus Infection (COVID-19) in Organizations, and Guidelines for Organizing an Educational Process in Educational Institutions in the Context of the Spread of COVID-19 that are intended for use in all types of educational institutions for children and adults), which define the requirements and the need to provide conditions to observe the rules of personal hygiene, including hand hygiene (handwashing with soap and water or hand sanitizer), hand hygiene rules. From February 2020 to date, wastewater monitoring has been carried out on the premises of the State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology” of the Ministry of Health of the Republic of Belarus to detect SARS-CoV-2 RNA in them, followed by a molecular epidemiological analysis of the detected infection pathogens. The data obtained suggest that wastewater studies can potentially be carried out for operational epidemiological surveillance of the circulation of the COVID-19 pathogen in the context of the ongoing morbidity in order to assess the epidemiological situation and identify new and emerging gene variants to predict possible scenarios for situation development and take adequate preventive measures in a timely manner.

The Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” conducted a cross-sectional study to research the prevalence of behavioural risk factors that cause COVID-19 contagion among the population of the Republic of Belarus, covering the main behavioural risk factors that cause the COVID-19 contagion in the context of compliance with recommendations for physical and social distancing, use of personal protective equipment, and personal hygiene. An information campaign is being conducted among the population to promote hand hygiene, including with a focus on various target groups.

As part of the chairmanship and inter-country cooperation, on 22 April 2021, the International Scientific and Practical Conference on the Protocol on Water and Health (online) was organized and held on the premises of the National Focal Point of the Protocol. The conference was attended by representatives of government authorities in charge of issues covered by the Protocol, national focal points, scientific organisations of the EECCA countries – of the Republic of Belarus, the Russian Federation, the Republic of Armenia, the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Moldova, the Republic of Azerbaijan, Georgia, the Republic of Tajikistan, Turkmenistan, Republic of Uzbekistan, and Ukraine (96 people). Participants recognized the importance of promoting the Protocol at the national level as a tool for setting goals in the water sector, taking into account the impact of water supply and sanitation on health, the achievement of the Sustainable Development Goals on water and sanitation in the region (SDGs 3, 6) and at the national level; the important role of WASH in the fight against COVID-19, and the increasing relevance of the Protocol in this context. Participants noted the importance of setting targets under the Protocol, taking into account the provision of access to water and sanitation in schools and health care facilities (not only at home), COVID-19-related aspects, climate change (including blue-green algae blooms). Countries were offered assistance in ratifying the Protocol at the national level. An information briefing was also held to promote the Protocol on Water and Health in the region “Protocol on Water and Health: crucial for delivering water, sanitation and hygiene for all” (6 November 2020, Geneva, online), together with the Permanent Mission of the Republic of Belarus to the UN office and other international organizations in Geneva, Switzerland, and the Joint Secretariat).

The implementation of the Protocol was additionally considered within the framework of the International Scientific and Practical Conference “Health and the Environment” (2019, 2020, 2021), scientific and practical conference dedicated to the World Water Day (22 March 2022) and the 6th International Water Forum “Springs of Belarus” (03-05 June 2021), International Scientific and Practical Conference “New Methods and Technologies in Water Supply and Sanitation” (17-18 February 2022), organized respectively at the sites of the Ministry of Health of the Republic of Belarus, the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus, and the Ministry of Housing and Communal Services of the Republic of Belarus.

In general, the Review of Progress in Implementing the Protocol allows us to conclude that the main provisions are being implemented by the Republic, and there is progress in implementing the priority targets set.

The following should be noted as the most important results of the work carried out in this area:
a significant reduction in the incidence of infectious potentially water-related diseases (viral hepatitis A, bacillary dysentery);

a positive trend in the quality of drinking water supplied to the population (decrease in the proportion of non-standard water samples);

a progressive increase in the coverage of the population with centralized water supply and sanitation systems, access to high-quality and safe drinking water;

putting into practice validated analytical methods for drinking water;

adoption of the National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030, which establishes the basic principles of the state policy in the field of use and protection of water resources and defines the main activities for the protection and use of water resources of the Republic of Belarus that ensure the protection of water bodies and groundwater from pollution, the guaranteed supply of the population with high-quality drinking water, the protection of the

population and territories from the negative impact of waters, the need to develop the principle of basin management of water resources in the context of climate change;

National sustainable development indicators have been defined, including on the main aspects of water and health (within the framework of SDGs 3 and 6).

Despite the progress made in implementing the Protocol, the following issues require additional attention:

Strengthening cross-sectoral interaction and coordination of actions among different authorities in the sphere of water supply and sanitation, hygiene, water resources management;

Complex water resources management in a changing climate;

Prioritizing national and local activities;

Involving the public in the implementation of the Protocol.

Key priority activities for the Republic of Belarus under the Protocol for the coming period are:

- synergies with SDGs and activities to combat COVID-19;
- prevention of water related disease (infectious and non-infectious),
- providing the population with equal access to the safe and high-quality drinking water, improved sanitation (taking into account geographical disparities, pricing policy, the most vulnerable groups of the population);
- implementing the best practices on quality management and safety of the drinking water with an emphasis on the risk assessment practice,
- mitigating risks and improving the sustainability of small-scale water supply and sanitation systems;
- protecting surface- and groundwater from pollution, introducing a basin management principle in the water sector,
- ensuring safe recreational water use,
- improving the management of supply and sanitation sector;
- updating legislation with due regard to the best international practices;
- conducting scientific research to justify national requirements, taking into account local natural, socio-economic and environmental conditions; and
- strengthening the aspects that are most susceptible to climate change, including from the perspective of impact on health.

The Republic of Belarus is interested in studying the situation with water supply and sanitation (WASH) in health care facilities and schools using international methodology and would be grateful to the Secretariat for providing support in data collection and organization of consultations. The research will contribute to the implementation of the decisions set out in the World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities”, the achievement of targets under the Protocol on Water and Health and SDGs 6.1 and 6.2. (SDGs in terms of equitable access to water, sanitation and hygiene, including vulnerable population groups such as children and patients).

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Part one

General aspects

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

YES NO IN PROGRESS

Targets under the Protocol on Water and Health for the Republic of Belarus were revised with the support of the Joint Secretariat of the Protocol within the framework of the European Union Water Initiative Plus for the Eastern Partnership project (the “EUWI+ project”) in 2018-2019. The updated targets were defined in the Set of Measures to Meet the Obligations undertaken by the Republic of Belarus under the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes until 2030, as approved by the Ministry of Health, the Ministry of Natural Resources and Environmental Protection, and the Ministry of Housing and Communal Services on 17-18 March 2021 (the “Set of Measures”).

The Set of Measures was developed following the interagency consultations and based on the analysis of the current situation in the water supply and sanitation sector and with the protection of water resources, subject to the achievement of targets under the Protocol until 2015, strategic priorities of the republic by analogy and in synergy with the SDGs until 2030. It includes:

- the list of targets and target dates under the Protocol (29 targets in 17 target areas relevant for the Republic Belarus and 43 target indicators to assess their achievement),
- activities to achieve target indicators,
- bodies responsible for implementation of the activities, including republican government bodies, other organizations subordinate to the Government in terms of competence, executive and regulatory bodies operating sanitation systems and other stakeholders;
- synergies between individual targets and the nationalized SDGs (column 6).

While under development, the draft Set of Measures was repeatedly sent to stakeholders for consideration, was discussed at seminars and workshops with a wide range of participants, as well as at the Interdepartmental Council for the EUWI+ project, and was made publicly available on the websites of the Ministry of Natural Resources and Environmental Protection and the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene.” The proposals and comments received were taken into account in the draft Set of Measures.

The Set of Measures reflects the activities carried out within the framework of state programmes and strategies (including in the State Programme “Comfortable housing and friendly environment for 2021-2025”, as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus of 28/01/2021 (targets for water supply and sanitation), the National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030 (<https://pravo.by/document/?guid=12551&p0=C22200091&p1=1>) (3 targets and 5 target indicators); the Environmental Strategy of the Republic of Belarus until 2035 (<https://www.minpriroda.gov.by/ru/strat-ohr-okr-srdo2035g/>) (5 indicators), and a number of number of additional tasks relevant for the republic in accordance with Article 6, paragraph 2, of the Protocol.

2. Were the targets and target dates published and, if so, how?

The Set of Measures is publicly available on the website of the National Focal Point of the Protocol – Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene – http://rspch.by/ru/protocol_water_and_health and was brought to the attention of all stakeholders through the state authorities’ document management system. The Set of Measures was sent to the Joint Secretariat of the Protocol on 22 March 2021 in Russian and English.

3. Has your country established national or local arrangements for coordination between competent authorities for setting targets?

Decree No. 159 of the President of the Republic of Belarus “On the Accession of the Republic of Belarus to the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes” dated 31/03/2009 designated the Ministry of Health and the Ministry of Natural Resources and Environmental Protection as responsible for fulfilment of the obligations of the Republic of Belarus under the Protocol. The Protocol Implementation Council was established to coordinate the activities of the authorities and agencies responsible for the fulfilment of obligations under the Protocol (Resolution No. 52 of the Ministry of Health of the Republic of Belarus dated 27/05/2010, updated by Resolution No. 71 dated 15 October 2018).

The Council includes the representatives of the ministries and agencies concerned, academia, NGOs, the Ministry of Health, the Ministry of Natural Resources and Environmental Protection, the Ministry of Housing

and Communal Services, the Ministry of Emergency Situations, and the National Academy of Sciences of the Republic of Belarus. The main task of the Council is to develop a system of measures aimed at fulfilling the obligations of the Republic of Belarus under the Protocol. The overall coordination and the organizational and technical support of the Council's work are provided by the Ministry of Health of the Republic of Belarus.

4. Was a programme of measures or action plan developed to support implementation of the targets? If so, please briefly describe that programme or plan, including how financial implications were taken into account.

The Set of Measures to Meet the Obligations undertaken by the Republic of Belarus under the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes until 2030, as approved by the Ministry of Health, the Ministry of Natural Resources and Environmental Protection, and the Ministry of Housing and Communal Services on 17-18 March 2021, defines, in addition to targets, the key activities to achieve target indicators, and bodies responsible for their implementation.

In addition to the Ministry of Health, the Ministry of Natural Resources and Environmental Protection, and the Ministry of Housing and Communal Services, the key responsibilities to achieve the targets provided for by the Set of Measures are assigned to local executive and regulatory authorities, as well as to the National Statistical Committee of the Republic of Belarus, the Ministry of Labour and Social Protection, the Ministry of Internal Affairs, the Ministry of Economy, the Ministry of Finance, the Ministry of Energy, the Ministry of Education, regional executive committees, the Minsk City Executive Committee, etc.

The main measures to achieve the targets affecting the improvement of the drinking water supply and sanitation infrastructure, the protection of water resources and requiring financial investments are correlated with:

- Subprogramme "Clean Water" of the State Programme "Comfortable housing and friendly environment for 2021-2025" as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28/01/2021 (setting water supply and sanitation targets),

- **The National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030** (containing an Action Plan aimed at achieving the targets),

- **The Environmental Strategy of the Republic of Belarus** until 2035 (identifying the main mechanisms and tools for solving priority strategic tasks and achieving the goals in the field of environmental protection). A number of measures will be implemented as part of the implementation of the main activities of bodies and organizations, and scientific programmes.

Decree No. 292 of the President of the Republic of Belarus dated 29/07/2021 approved the Programme for Socio-Economic Development of the Republic of Belarus for 2021-2025:

Clause 9.2. Creating a comfortable and safe living environment: The replacement of heat networks managed by housing and public utility organizations, as well as water supply and sanitation networks with expired statutory service life is planned to be carried out every year. The republic plans to build over 800 water deferrization stations and 300 water wells in regions, connect settlements to existing centralized water supply systems with water that meets water quality standards, introduce new and reconstruct (upgrade) existing wastewater treatment plants, including by decommissioning filtration fields, with due regard to economic feasibility. Minsk is planned to be switched to water supply from underground sources. By 2025, 100% of consumers are expected to be provided with high-quality drinking water.

Clause 9.3. Ensuring environmentally friendly life of the population, improving environmental protection, efficient use of natural resources

In the field of rational use of water resources, it is planned to develop a strategy for managing water resources in the context of climate change. One of the main tasks is to reduce the discharge of insufficiently treated wastewater into surface water bodies through the construction and reconstruction of wastewater treatment facilities by 30% of the 2015 level (to 3.99 million m³ in 2025).

When setting the targets, the following national and international strategies and instruments of legislation were taken into account:

Decree No. 575 of the President of the Republic of Belarus "On Approval of the National Security Concept of the Republic of Belarus" dated 09/11/2010 (as amended on 24/01/2014);

the Law of the Republic of Belarus "On Sanitary and Epidemic Well-Being of the Population" dated 7 January 2012;

Law No. 271-Z of the Republic of Belarus "On Drinking Water Supply" dated 24 June 1999;

the Water Code of the Republic of Belarus;

the Law of the Republic of Belarus "On Environmental Protection" dated 26 November 1992,

the State Programme "People's Health and Demographic Security" for 2021-2025;

Directive No. 7 of the President of the Republic of Belarus "On the Improvement and Development of the Housing and Utility Industry in the Country" dated 4 March 2019

Resolution No. 1037 of the Council of Ministers of the Republic of Belarus “On the Concept of Improvement and Development of the Housing and Public Utility Sector until 2025” dated 29 December 2017.
the Environmental Strategy until 2025;
the 2030 Sustainable Development Agenda;
the Ostrava Declaration on Environment and Health;
the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 1992;
the Decree of the President of the Republic of Belarus “On Approval of Priority Areas of Scientific and Technical Activities in the Republic of Belarus for 2021-2025,”
and other regulatory legal acts in the field of water supply and sanitation, health care, and protection and use of water resources.

For reference.

The State Programme “Comfortable housing and friendly environment for 2021–2025” - (subprogramme “Clean water”), approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28/01/2021, was developed to further improve the quality of drinking water supplied to consumers, develop drinking water supply and sanitation systems and improve the quality of treatment of wastewater discharged into water bodies. The priority tasks include providing consumers with high-quality drinking water and improving the quality of wastewater treatment.

As a result of the work carried out in 2016 to 2020, more than 500 water deferrization stations were put into operation, about 30 settlements were reconnected to existing centralized water supply systems with water that meets water quality standards, which made it possible to provide about 400 thousand people with drinking water of adequate quality and increase the percentage of consumers provided with drinking-quality water by 7.2%. In Minsk, the percentage of the consumers of high-quality drinking water has been equal to 100% since 2016.

The objectives of this subprogramme are:

to provide consumers with drinking-quality water supply;

to provide the population with centralized water supply and sanitation systems;

to improve the quality of wastewater treatment and the reliability of water supply and sanitation systems.

In order to meet the objectives and achieve the goals, the following measures are planned:

building 800 water deferrization stations;

reconnecting over 100 settlements to existing centralized water supply systems with drinking-quality water,

building about 300 water wells, taking other measures aimed at providing consumers with drinking-quality water supply;

switching Minsk to water supply from underground sources;

improving the quality of wastewater treatment through the construction and reconstruction of 70 wastewater treatment facilities;

developing centralized water supply and sanitation systems by building about 11.5 thousand kilometres of water supply networks and 11.2 thousand kilometres of sewage networks, including within the framework of Decree No. 488 of the President of the Republic of Belarus “On the Construction of Water Supply and Sanitation Networks” dated 22 December 2018 (“Decree No. 488”);

replacing water supply and sanitation networks used beyond their standard operating life.

Improving the reliability of water supply and sanitation systems will also make it possible to reduce water losses and unaccounted-for water consumption on an annual basis in order to reach their value not exceeding 12%.

The targets of the subprogramme in respect of the organizations included in the system of the Ministry of Housing and Communal Services are as follows:

percentage of consumers supplied with high-quality drinking water from underground sources – 100% by 2025;

provision of the population with centralized water supply and sanitation systems – 93.2% and 79.3% by 2025, respectively;

construction and reconstruction of 70 wastewater treatment facilities;

replacement of water supply and sanitation networks used beyond their standard operating life - on an annual basis at least 3 percent of the total length of water supply and sanitation networks used beyond their standard operating life.

When setting the targets, due regard was given to the availability of resources for implementation of the targets and the risks associated with a failure to take the relevant measures.

5. What has been done in your country to ensure public participation in the process of target setting in accordance with article 6, paragraph 2, and how was the outcome of public participation taken into account in the final targets set?

While under development, the draft Set of Measures was repeatedly sent to stakeholders for consideration, was discussed at interdepartmental seminars (in 2018-2019) involving the public that were organized with the support of the EUWI+ project, the Interdepartmental Council for the EUWI+ project, and was made publicly available on the websites of the Ministry of Natural Resources and Environmental Protection, and the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene.” The proposals and comments received were taken into account in the draft Set of Measures. It was agreed with local executive and regulatory authorities and approved by the Ministry of Health, the Ministry of Natural Resources and Environmental Protection, and the Ministry of Housing and Communal Services.

In 2019, the Draft National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030 was put out for consultation with the public, ministries, government authorities and was finalized taking into account comments received, and underwent public consultation. It was approved by Resolution No. 91 of the Council of Ministers of the Republic of Belarus dated 22 February 2022.

The Draft Environmental Strategy of the Republic of Belarus until 2035 underwent public consultation, was agreed with the ministries and government authorities and approved by Order No. 370-OD of the Ministry of Natural Resources and Environmental Protection dated 24 December 2021.

6. Please provide information on the process by which this report has been prepared, including information on which public authorities had the main responsibilities and what other stakeholders were involved.

The report was prepared with the participation of the representatives of:

the Ministry of Health of the Republic of Belarus and its subordinate organizations (Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene,” State Institution “Republican Centre for Hygiene, Epidemiology and Public Health”),

the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and its subordinate organizations (Republican Unitary Enterprise “Central Research Institute for Complex Use of Water Resources,” State Enterprise “Research and Production Centre for Geology,” and Belgidromet),

the Ministry of Housing and Communal Services of the Republic of Belarus,

the National Statistical Committee of the Republic of Belarus

the Ministry of Education of the Republic of Belarus,

the Ministry of Agriculture and Food of the Republic of Belarus,

the Ministry of Labour and Social Protection of the Republic of Belarus, and

Scientific Production Association “Ecoproject Partnership.”

Coordinating functions were performed by the Ministry of Health of the Republic of Belarus.

The data of the State Reports “On the Sanitary and Epidemiological Situation in the Republic of Belarus” for the reporting period, the data regarding implementation of the State Programme “Comfortable housing,” the data from the State Water Cadastre for the reporting period, and surface water and groundwater monitoring data obtained as part of the National Environmental Monitoring System of the Republic of Belarus for the reporting period were used to prepare this report.

7. Please report any particular circumstances that are relevant for understanding the report, including whether there is a federal and/or decentralized decision-making structure.

Law No. 271-Z of the Republic of Belarus “On Drinking Water Supply” dated 24 June 1999 (hereinafter – the Law) stipulates legal guarantees of satisfying the needs of individuals and legal entities in drinking water at the state level in compliance with the drinking water quality standards, as well as state guarantees of reliability and safety of the drinking water supply.

According to the Law, the basic principles of the drinking water supply (hereinafter – DW) include:

state guarantees to prioritize water supply to consumers, social facilities, technological processes of food industry and health care organizations;

provision of affordable and uninterrupted drinking water supply;

provision of safe drinking water supply systems;

rational use of drinking water;

effective operation and development of drinking water supply systems;

introduction of modern energy and resource saving technologies;

priority use of underground drinking water sources and centralized drinking water supply systems;

accounting for drinking water consumption from centralized drinking water supply systems;

billing for drinking water supply, except as provided by this Law, other legislative acts, and resolutions of the Council of Ministers of the Republic of Belarus.

Drinking water consumers are eligible to:

be provided with drinking water in accordance with this Law and other legislative acts in the field of drinking water supply and in line with the terms and conditions of a water supply services agreement;
receive complete and reliable information about drinking water supply;
bring an action in court for compensation for damage to life or health of individuals caused to them as a result of the provision of drinking water that does not meet drinking water safety standards;
exercise other rights in accordance with this Law and other legislative acts.

In the context of drinking water supply, legal entities and individuals, including individual entrepreneurs, are entitled to:

receive complete and reliable information;
construction of centralized drinking water supply systems;
be connected to the centralized drinking water supply system in the manner prescribed by the Use Rules, unless otherwise provided by legislative acts;
exercise other rights in accordance with this Law and other legislative acts.

The state regulation in the sphere of drinking water supply is carried out by the President of the Republic of Belarus, the Council of Ministers of the Republic of Belarus, the Ministry of Housing and Communal Services, the Ministry of Natural Resources and Environmental Protection, the Ministry of Health, local Councils of People's Deputies, local executive and regulatory authorities, and other government bodies.

DW supply systems may be state-owned (republican- and municipal-owned). Centralized drinking water supply structures and facilities built at the expense of non-state legal entities, individual entrepreneurs may be privately owned. Water intake facilities and water supply networks built at the expense of individuals may be privately owned. The transfer of ownership or change in the form of ownership of centralized or non-centralized DW supply systems is allowed provided that the transfer or change does not disrupt an operating mode of these systems.

The Ministry of Health organizes the state sanitary and hygienic examination of the projects of sanitary protection zones of drinking water sources used for centralized drinking water supply systems; state sanitary supervision over compliance by legal entities and individual entrepreneurs with legislation in the sphere of sanitary and epidemiological well-being of the population (establishing drinking water safety standards, requirements for the maintenance and operation of drinking water sources and drinking water supply systems; the mode of economic and other activities carried out in the zones of sanitary protection of drinking water sources used for centralized drinking water supply systems; requirements for organizing and conducting industrial control of drinking water safety; and exercises other powers in accordance with the law).

The Ministry of Natural Resources and Environmental Protection implements a unified state policy in the field of environmental protection and rational use of natural resources, including water resources. The main tasks in the field of water protection and use include: integrated management of water use and protection in the republic, coordination of activities of republican government bodies, organizations and legal entities; development and implementation of draft state programmes, strategies, action plans and other documents in the field of use and protection of waters, subsoil, adaptation and mitigation of climate change, hydrometeorological activities; organization and exercise of control over the use of waters (rationing and accounting in the field of protection and use of waters); organizing and implementing analytical (laboratory) control and monitoring in the field of water protection and use; organization and implementation of water protection.

Control over the construction of DW supply facilities is part of control over compliance with the requirements of TRLAs during construction, the approved design documentation when performing construction and installation works, and also over the compliance of materials, products and structures used in construction with design solutions and requirements of mandatory technical regulatory legal acts in the field of technical regulation and standardization to ensure operational reliability and safety and is carried out by state construction supervision authorities.

The supervision and control procedure is established by the regulatory legal acts of the Republic of Belarus.

Over the past years, the Republic of Belarus has developed a number of regulatory legal acts regulating activities in the field of water supply and sanitation, rational use and protection of water resources (as provided in relevant sections).

Regulatory legal acts, technical regulatory legal acts and methodological documents are developed according to plans: long-term, medium-term, and short-term ones. The general trend is the implementation of progressive international approaches in the national legislation of the Republic of Belarus.

Part two

Targets and target dates set and assessment of progress

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

1. Current target(s) and target date(s).

The Set of Measures identified 3 targets under Article 6, paragraph 2 (a) of the Protocol (1.1. Improving drinking water safety by microbial indicators; 1.2. Improving drinking water safety by chemical indicators; 1.3. Improving the sustainability and reliability of the drinking water safety monitoring system in modern conditions), for which targets the relevant target indicators were set with 2/5, 2/4, 2/(4-4) activities, respectively (Table 1.1):

Table 1.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|---------------------------|--|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. Quality of the drinking water supplied (Article 6, para. 2 (a)) – target area I | | | | | |
| 1.1. Improving drinking water safety by microbial indicators | 1.1.1. share of water samples that do not meet the requirements of microbiological safety indicators - no more than 1 % in centralized drinking water supply systems | 2030 | <i>Activity 1:</i> Conducting a baseline analysis of the situation with the decentralized drinking water supply systems for general use in rural areas (compliance with the requirements for maintenance and operation of the sources, compliance with the water hygiene standards) (2021). <i>Activity 2:</i> Development of activities aimed at improving water quality in rural areas in administrative territories (2021). <i>Activity 3:</i> Annual replacement of at least 3 % of the networks exceeding standard operating life. <i>Activity 4:</i> Strict compliance with the requirements of the rules for technical operation of drinking water supply systems, including water source protection, water disinfection, and network flushing. <i>Activity 5:</i> Awareness raising on the rules of maintenance and operation of decentralized drinking water supply systems among rural population and executive committees. | Local executive and regulatory authorities (1, 2, 3) Water supply and sanitation (WSS) enterprises (3, 4) Ministry of Health (1, 5) | 3.9.2. 6.1.1. |
| | 1.1.2. share of water samples that do not meet the requirements of the microbiological safety indicators - no more than 10 % in decentralized drinking water supply systems | 2030 | | | |
| 1.2. Improving drinking water safety by chemical indicators | 1.2.1. compliance of water in municipal centralized drinking water supply systems with hygienic standards for | 2030 | <i>Activity 1:</i> Construction of water deferrization stations in settlements with high iron content in drinking water in municipal centralized drinking water supply systems. | Local executive and regulatory authorities (1-3) WSS enterprises (3, 4) | 3.9.2. 6.1.1. |

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|---|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | content of iron, manganese and organoleptic indicators – 100 % | | <i>Activity 2:</i> Connecting settlements to the existing centralized water supply systems that meet water quality standards. | Owners of drinking water supply systems (4) | |
| | 1.2.2. share of water samples from decentralized water supply sources that do not meet hygienic standards for nitrate pollution indicators - no more than 20 % (reduction by at least 5 % as compared to the level of 2015 (24.5 %)) | 2030 | <i>Activity 3:</i> Annual replacement of at least 3 % of the networks exceeding standard operating life. <i>Activity 4:</i> Compliance with the requirements on maintenance and operation of drinking water systems. <i>Activity 5:</i> Awareness raising on the rules of maintenance and operation of decentralized drinking water supply systems among rural population and executive committees | Ministry of Health (5) | |
| 1.3. Improving the sustainability and reliability of the drinking water safety monitoring system in modern conditions | 1.3.1. development of regulatory legal acts (hereinafter – RLAs) and methodological documents in the field of sanitary and epidemiological welfare, drinking water supply and research methods | constantly until 2030 | <i>Activity 1:</i> Development and implementation of updated safety indicators for drinking water and packaged water (2021). <i>Activity 2:</i> Development of a methodological framework for implementation of risk analysis and risk management approaches in drinking water supply systems (by 2025). <i>Activity 3:</i> Conducting scientific research activities to provide a scientific rationale for updating hygienic standards determining the safety indicators for drinking water, packaged water, materials, reagents and equipment used in drinking water supply, requirements for monitoring drinking water safety indicators, taking into account modern approaches and health risks assessment. <i>Activity 4:</i> Development and implementation of high-precision and highly sensitive methods for indication of chemicals and biological agents in drinking water, packaged water, water in water bodies for drinking and domestic, cultural (recreation) use, extracts from materials, reagents and equipment used in drinking water supply. | Ministry of Health (1-4) | 3.9.2. |
| | 1.3.2. improvement of the drinking | constantly until 2030 | <i>Activity 1:</i> Development and financial justification of the sectoral | Ministry of Health (1-4) | 3.9.2. |

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|--------|--------------------------------|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | water safety monitoring system | | <p>“Plan for modernization of hardware and software of the sanitary and epidemiological service” and its integration with the portal of the Central Healthcare Information System within the framework of the project “Modernization of Healthcare System of the Republic of Belarus” and perspectives for the development of e-healthcare” (2025).</p> <p><i>Activity 2:</i> Implementation of modern methods for assessing compliance of drinking water, packaged water, materials, reagents and equipment used in drinking water supply with hygienic safety standards.</p> <p><i>Activity 3:</i> Adapting the international methodology for assessing SDG indicator 3.9.2 and developing a methodology to form this indicator at the national level (2022)</p> <p><i>Activity 4:</i> Developing and monitoring SDG indicator 3.9.2 (from 2022).</p> | <p>Accredited laboratories (in the field of testing drinking water, packaged water, materials, reagents and equipment used in drinking water supply) (2)</p> <p>National Statistical Committee of the Republic of Belarus (hereinafter – Statistical Committee) (4)</p> | |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in columns 4-5 of Table 1.1 above.

Activities to achieve target indicators 1.1.1, 1.1.2, 1.2.1, 1.2.2

In order to achieve the target of “Providing consumers with drinking-quality water supply,” the subprogramme “Clean water” under the State Programme “Comfortable housing and friendly environment for 2021–2025,” as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28/01/2021, provided for a number of activities in the field of water supply and sanitation and determined the volumes and sources of financing for each activity. The main sources of financing are the funds of the republican and local budgets, organizations’ own funds, and loans. The task to achieve the target is annually communicated by the Ministry of Housing and Communal Services to the customers of the activities (regional executive committees and the Minsk City Executive Committee).

To achieve this target, the following activities are being implemented within the framework of the State Programme:

- construction of water deferrization stations;
- reconnection of settlements to existing centralized water supply systems with drinking-quality water.

A total of 871 water deferrization stations were built for the period of 2016 to 2021. About 700 water deferrization stations are required to be built by 2025. For the period of 2016 to 2021, 61 settlements were reconnected to the existing centralized water supply systems with water that meets drinking water quality standards (allowing to increase the proportion of the population supplied with water from more reliable sources). By 2025, the Republic plans to reconnect about 80 more settlements.

The standard for the replacement of water supply networks used beyond their standard operating life is determined on the basis of Directive No. 7 of the President of the Republic of Belarus “On the Improvement and Development of the Housing and Utility Industry in the Country” dated 4 March 2019 and Resolution No. 1037 of the Council of Ministers of the Republic of Belarus “On the Concept of Improvement and Development of the Housing and Public Utility Sector until 2025” dated 29 December 2017 within the framework of the State

Programme and is equal to 3 percent of the total length of the networks used beyond their standard operating life. In 2021, the percentage of the water supply networks replaced was 3.3% (434.83 km).

The supervision over compliance with the requirements for the maintenance and operation of drinking water supply systems is carried out within the framework of the discharge of functions of the bodies and institutions responsible for state sanitary supervision. There is a positive trend in the percentage of drinking water sources that meet sanitary and epidemiological requirements (87.5% in 2021 and 86.3% in 2018).

As part of the discharge of their functions, the bodies and institutions exercising state sanitary supervision carry out educational work among the population and rural executive committees to inform them about the rules for the maintenance and operation of decentralized drinking water supply systems.

Activities to achieve target indicators 1.3.1 and 1.3.2.

Development of regulatory legal acts and methodological documents in the field of sanitary and epidemiological welfare, drinking water supply and research methods, a methodological framework for implementation of risk analysis and risk management approaches in drinking water supply systems is carried out under the instructions of state administration bodies (the Ministry of Health) and based on the results of scientific research activities. Implementation of the developments listed below [1, 2, 8, 9, 11, 14-16] will enable to improve drinking water safety monitoring systems.

For the period of 2019 to 2021, the following documents have been developed:

- regulatory documents in the field of sanitary and epidemiological welfare:

[1] Specific sanitary and epidemiological requirements for maintenance and operation of sources and systems of drinking water supply (approved by Resolution No. 914 of the Council of Ministers of the Republic of Belarus dated 19 December 2018);

[2] hygienic standard “Drinking water safety indicators” (approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021);

[3] hygienic standard “Safety and harmlessness indicators for water in water bodies for household, cultural and domestic (recreational) use and water in swimming pools” (as approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021);

[4] hygienic standard “Safety and harmlessness indicators for materials, reagents and equipment used in drinking water supply systems” (Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021);

[5] hygienic standard “Safety indicators for packaged drinking water, including natural mineral water” (approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021);

[6] hygienic standard “Safety indicators for active substances of plant protection products in habitat entities, food raw materials, and food products (approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021);

[7] Resolution of the Council of Ministers of the Republic of Belarus “On Amendments to Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021” in Table 2 of the hygienic standard “Drinking Water Safety Indicators” (draft);

- methodological documents in the field of sanitary and epidemiological welfare:

[8] Guidelines on the Procedure for Organizing State Sanitary Supervision of Drinking Water Supply, Responses to Accidents (Emergencies) in Centralized Drinking Water Supply Systems (approved by the Ministry of Health of the Republic of Belarus on 11 January 2021);

[9] Instructions for Use No. 015-1121 “Method for assessing public health risk from exposure to chemicals that influence the organoleptic properties of drinking water in case of accidents (emergencies) in centralized drinking water supply systems” (approved by the Ministry of Health of the Republic of Belarus on 14/12/2021);

[10] Instruction on the procedure for predicting the health status of the population living in administrative territorial units, taking into account an integral socio-hygienic index (approved by Order No. 735 of the Ministry of Health dated 23 June 2021);

[11] Instructions for Use No. 019-1118 “Method of hygienic assessment of drinking water” (approved by the Ministry of Health of the Republic of Belarus on 23/04/2019);

[12] Instructions for Use No. 015-1118 “Method of hygienic safety assessment of water disinfection methods” (approved by the Ministry of Health of the Republic of Belarus on 19/12/2018);

[13] Instructions for Use No. 011-1118 “Methods of hygienic assessment of materials, reagents, equipment and technologies used for water purification and treatment” (approved by the Ministry of Health of the Republic of Belarus on 19/12/2018);

[14] Instructions for Use No. 019-1221 “Method of assessing public health risk from exposure to chemicals polluting drinking water” (approved by the Ministry of Health of the Republic of Belarus on 28/01/2022);

[15] Instructions for Use No. 020-1221 “Method of quantification of microbiological health risk in drinking water”;

[16] Instructions for Use No. 021-1221 “Method of hygienic standardization of chemicals in drinking

water according to health risk criteria”;

[16] Instructions for Use No. 031-1221 “Method of integral assessment of health risks associated with water use”;

[17] Instructions for Use No. 003-0519 “Method of sampling from man-made water consumption facilities to detect pathogenic Legionella species” (approved by the Ministry of Health of the Republic of Belarus on 20/06/2019);

[18] Instructions for Use No. 006-0618 “Method of assessing the efficacy of the biocidal effect of disinfectants against legionellosis pathogens” (approved by the Ministry of Health of the Republic of Belarus on 26/11/2018),

[19] Instructions for Use No. 011-1115 “Laboratory diagnosis of legionellosis. Methods of Legionella detection in environmental objects” (approved by the Ministry of Health of the Republic of Belarus on 08/12/2015).

- metrologically certified measurement methods (high-precision and highly sensitive ones):

Measurement technique MVI.MN 6319-2020 “Uniform Measurement System. Mass concentration of carbon disulphide in water. Spectrophotometric measurement technique (Measurement Technique Certificate No. 1269/2020 dated 26/11/2020, developed by the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene”);

over 100 methods for determination of active substances of plant protection products in water, soil, workplace air, atmosphere, and plant materials by means of high-performance liquid chromatography or capillary gas chromatography (approved by the director of the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene”).

For the reporting period (2019-2021), modern compliance assessment methods **have been put into practice in testing laboratories**, which methods are used to assess compliance of drinking water, packaged water, materials, reagents and equipment used in drinking water supply, water in water bodies for household, cultural and domestic (recreational) use, and waters in water bodies with regulatory requirements, including: **over 80 standards** (ISO, GOST ISO, GOST R, STB, ST RK) and **15 metrologically certified** research methods, and **over 100 methods for determining** the active substance of plant protection products in water, soil, workplace air, atmosphere, plant materials by means of high-performance liquid chromatography or capillary gas chromatography (approved by the director of the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene”), including:

Standards:

GOST R 59024-2020 Water. General requirements for sampling

GOST ISO 6222-2018 Water quality. Enumeration of culturable microorganisms. Colony count by inoculation in a nutrient agar culture medium (in effect from 30/08/2018);

GOST ISO 7899-2-2018 Water quality. Detection and enumeration of intestinal enterococci. Part 2. Membrane filtration method (in effect from 30/04/2018);

GOST ISO 11731-2019 Water quality. Enumeration of Legionella (in effect from 30/09/2019);

GOST ISO 14189-2019 Water quality. Enumeration of Clostridium perfringens. Membrane filtration method (in effect from 30/09/2019);

GOST ISO 16266-2018 Water quality. Detection and enumeration of Pseudomonas aeruginosa. Membrane filtration method (in effect from 30/04/2018);

EN ISO 16266-2:2021 Water quality. Detection and enumeration of Pseudomonas aeruginosa. Part 2. Most-probable-number technique

GOST ISO 11731-2019 Water quality. Enumeration of Legionella;

STB ISO 8199-2017 Water quality. General requirements for the enumeration of microorganisms cultured in culture media (in effect from 01/08/2018)

ST RK 3634-2020 Food products and water. Sanitary and bacteriological analysis using an express analyser.

GOST ISO 7027-1-2019 Water quality. Determination of turbidity. Part 1. Quantitative methods (in effect from 30/09/2019);

GOST ISO 17943-2019 Water quality. Determination of volatile organic compounds in water. Method using headspace solid-phase micro-extraction followed by gas chromatography-mass spectrometry (in effect from 30/09/2019);

GOST 34744-2021 Drinking water. Determination of bromide and iodide ions by capillary electrophoresis method (in effect from 14/07/2021);

GOST R 51232-98 Drinking water. General requirements for quality control organization and methods (in effect from 01/02/2021)

GOST R 55684-2013 (ISO 8467:1993) Drinking water. Method for determination of permanganate index (in effect from 01/12/2020)

GOST R 56237-2014 (ISO 5667-5:2006) Drinking water. Sampling at water treatment plants and in pipeline distribution systems (01/09/2018)

GOST R 56989-2016/ISO/TR 15462:2006 Water quality. Evaluation of biodegradability of organic compounds in an aqueous medium. Selection of tests (in effect from 01/05/2020)

GOST R ISO 9439-2016 Water quality. Evaluation of biodegradability of organic compounds in an aqueous medium. Evaluation of ultimate aerobic biodegradability of organic compounds in aqueous medium. Carbon dioxide evaluation test (in effect from 01/05/2020)

GOST R ISO 10634-2016 Water quality. Evaluation of biodegradability of organic compounds in an aqueous medium. Preparation and treatment of poorly water-soluble organic compounds for the subsequent evaluation (in effect from 01/05/2020);

GOST R 58797-2020 Drinking bottled water. Determination of mass concentration of dissolved oxygen. Measurement procedure

ST RK 2.614-2019 State system for ensuring the uniformity of measurements of the Republic of Kazakhstan. Water. Procedure for measuring the mass concentration of oil products by the method of IR spectrophotometry using KN series concentration meters;

STB 17.13.05-49-2021 Environmental protection and nature management. Sampling and measurements, monitoring. Water quality. Determination of the mass concentration of nitrogen-containing substances using photometric tests (in effect from 01/06/2021)

STB ISO 7393-2-2020 Water quality. Determination of free chlorine and total chlorine. Part 2. Colorimetric method using N,N-dialkyl-1,4-phenylenediamine, for routine control purposes (in effect from 01/04/2021)

STB ISO 5814-2021 Water quality. Determination of dissolved oxygen. Electrochemical probe method

STB ISO 14911-2021 Water quality. Determination of dissolved Li⁺, Na⁺, NH₄⁺, K⁺, Mn²⁺, Ca²⁺, Mg²⁺, Sr²⁺ and Ba²⁺ using the ion chromatography. Method for water and waste water

ST ISO 14403-1-2019 Water quality. Determination of total cyanide and free cyanide using flow analysis. Part 1. Method using flow injection analysis

ST RK 3606-2020 Water. Determination of phenol content by gas chromatography

ST RK 3610-2020 Plant products, wine, soil, water. Determination of benzyl methyl ketone and benlate by benzyl methyl ketone by thin-layer chromatography

ST RK 3660-2020 Grain, fruit, vegetables, soil, water. Determination of sym-triazines by chromatography

GOST ISO 17294-2-2019 Water quality. Application of inductively coupled plasma mass spectrometry. Part 2. Determination of selected elements including uranium isotopes (in effect from 30/09/2019);

GOST ISO 13165-3-2019 Water quality. Radium-226. Part 3. Test method using coprecipitation and gamma-spectrometry (in effect from 30/09/019);

STB ISO 9696-2020 Water quality. Gross alpha activity. Test method using thick source (in effect from 01/03/2021);

GOST R 59069-2020 Drinking water. Gamma spectrometric method for determination of specific activity of radionuclides radon-222

EN 14614:2020 Water quality. Guidance standard for assessing the hydromorphological features of rivers

EN ISO 12020:2000 Water quality. Determination of aluminium. Atomic absorption spectrometric methods

EN ISO 13161:2020 Water quality. Polonium 210. Test method using alpha spectrometry

EN ISO 13164-3:2020 Water quality. Radon-222. Part 3. Test method using emanometry

EN ISO 13164-2:2020 Water quality. Radon-222. Part 2. Test method using gamma-ray spectrometry

EN ISO 13164-4:2020 Water quality. Radon-222. Part 4. Test method using two-phase liquid scintillation counting

EN ISO 13165-1:2020 Water quality. Radium-226. Part 1. Test method using liquid scintillation counting

EN ISO 13165-2:2020 Water quality. Radium-226. Part 2. Test method using emanometry

EN ISO 13165-3:2020 Water quality. Radium-226. Part 3. Test method using coprecipitation and gamma-spectrometry

EN ISO 22017:2020 Water quality. Guidance for rapid radioactivity measurements in nuclear or radiological emergency situation

EN ISO 22908:2020 Water quality. Radium 226 and Radium 228. Test method using liquid scintillation counting

ISO 5667-1:2020 Water quality. Sampling. Part 1. Guidance on the design of sampling programmes and sampling techniques

ISO 5667-10:2020 Water quality. Sampling. Part 10. Guidance on sampling of waste water

ISO 12020:1997 Water quality. Determination of aluminium. Atomic absorption spectrometric methods

ISO 13161:2020 Water quality. Polonium 210. Test method using alpha spectrometry

ISO 13166:2020 Water quality. Uranium isotopes. Test method using alpha-spectrometry

ISO 21793:2020 Water quality. Determination of total organic carbon (TOC), dissolved organic carbon (DOC), total bound nitrogen (TNb), dissolved bound nitrogen (DNb), total bound phosphorus (TPb) and dissolved bound phosphorus (DPb) after wet chemical catalysed ozone hydroxyl radical oxidation (COHR)

ISO 21863:2020 Water quality. Determination of alkylmercury compounds in water. Method using gas chromatography-mass spectrometry (GC-MS) after phenylation and solvent extraction

ISO 22017:2020 Water quality. Guidance for rapid radioactivity measurements in nuclear or radiological emergency situation

ISO 22066:2020 Water quality. Determination of total cyanide. Method using segmented flow injection, in-line ultraviolet digestion analysis by gas diffusion and amperometric detection

ISO 22908:2020 Water quality. Radium 226 and Radium 228. Test method using liquid scintillation counting

GOST R 59025-2020 Water quality. Surface water quality research method based on analytes-markers in the regulation and standardization of anthropogenic load

ST RK 3617-2020 Water quality. Turbidimetric method for determination of sulphates

STB ISO 7393-2-2020 Water quality. Determination of free chlorine and total chlorine. Part 2. Colorimetric method using N,N-dialkyl-1,4-phenylenediamine, for routine control purposes

STB ISO 9696-2020 Water quality. Gross alpha activity. Test method using thick source

GOST R 58785-2019 Water quality. Life cycle cost estimation for efficient operation of water supply and sanitation systems and facilities;

STB 2575-2020 Installations for water softening. General specifications (in effect from 01/12/2020)

EN ISO 10703:2021 Water quality. Gamma-ray emitting radionuclides. Test method using high resolution gamma-ray spectrometry.

EN ISO 13160:2021 Water quality. Strontium 90 and strontium 89. Test methods using liquid scintillation counting or proportional counting

EN ISO 13162:2021 Water quality. Carbon 14. Test method using liquid scintillation counting

EN ISO 20236:2021 Water quality. Determination of total organic carbon (TOC), dissolved organic carbon (DOC), total bound nitrogen (TNb) and dissolved bound nitrogen (DNb) after high temperature catalytic oxidative combustion

EN ISO 21676:2021 Water quality. Determination of the dissolved fraction of selected active pharmaceutical ingredients, transformation products and other organic substances in water and treated waste water. Method using high performance liquid chromatography and mass spectrometric detection (HPLC-MS/MS or -HRMS) after direct injection

EN ISO 22515:2021 Water quality. Iron-55. Test method using liquid scintillation counting

ISO 10703:2021 Water quality. Gamma-ray emitting radionuclides. Test method using high resolution gamma-ray spectrometry.

ISO 13160:2021 Water quality. Strontium 90 and strontium 89. Test methods using liquid scintillation counting or proportional counting

ISO 13162:2021 Water quality. Carbon 14. Test method using liquid scintillation counting

ISO 13163:2021 Water quality. Lead-210. Test method using liquid scintillation counting

ISO 20596-2:2021 Water quality. Determination of cyclic volatile methylsiloxanes in water. Part 2. Method using liquid-liquid extraction with gas chromatography-mass spectrometry (GC-MS)

ISO 22104:2021 Water quality. Determination of microcystins. Method using liquid chromatography and tandem mass spectrometry (LC-MS/MS)

ISO 22515:2021 Water quality. Iron-55. Test method using liquid scintillation counting

GOST R 59514-2021 Water quality. System of automatic monitoring of pollutants

STB ISO 5667-3-2021 Water quality. Sampling. Part 3. Preservation and handling of water samples

STB ISO 5667-4-2021 Water quality. Sampling. Part 4. Guidance on sampling from lakes, natural and man-made

STB ISO 5667-6-2021 Water quality. Sampling. Part 6. Guidance on sampling from rivers and streams

GOST R 58525-2019 Protection of nature. Hydrosphere. Water quality. Rules for setting the frequency of control

GOST R 58573-2019 Protection of nature. Hydrosphere. Water quality. Risk based control

GOST R 58574-2019 Protection of nature. Hydrosphere. Water quality. Methodology of economic analysis of conformity assessment with established requirements

GOST R 58575-2019 Protection of nature. Hydrosphere. Water quality. Conflict resolution technique in disputed (arbitration) situations

STB ISO 5667-12-2021 Water quality. Sampling. Part 12. Guidance on sampling of bottom sediments from rivers, lakes and estuarine areas.

Metrologically certified measurement methods

Measurement technique MVI.MN 6319-2020 “Uniform measurement system. Mass concentration of carbon disulphide in water. Spectrophotometric measurement technique (Measurement Technique Certificate No. 1269/2020 dated 26/11/2020, developed by the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene”);

MVI.MN 6098-2018 Gross alpha and beta radionuclide activity concentration in drinking water. Procedure for measurements using RKS-AT1329 radiometers (Measurement Technique Certificate No. 1175/2019 dated 05/07/2019);

MVI.MN 5972-2018 Method for measuring the mass concentration of dimethylamine in surface, underground and waste waters by gas chromatography (Measurement Technique Certificate No. 1094/2018 dated 30/03/2018)

FR.1.38.2018.30404 Total alpha and beta activity of water samples. Method for measuring using alpha-beta radiometer UMF-2000 (Measurement Technique Certificate No. 01.00260-2014/2018-01/03 dated 23/04/2018);

MVI.MN 6153-2019 Mass concentration of caprolactam in natural and treated wastewater. Chromatographic measurement technique (No. 1170/2019 dated 13/06/2019)

FR.1.31.2019.35568 “MRMSO-04/2019 Method for measuring the mass concentration of 2-phosphonobutane-1,2,4-tricarboxylic acid in natural water by high-performance liquid chromatography with mass spectrometric detection including Amendment 1 dated 26/02/2021” (No. 1097/207-(RA.RU.310494)-2019 dated 29/10/2019);

FR.1.31.2019.35829 PND F 14.1:2:4.183-02 (2019 editions) Quantitative chemical analysis of water. Method for measuring the mass concentration of zinc in samples of natural, drinking and waste water by fluorimetric method on Fluorat-02 liquid analyser (No. 026/RA.RU.311278/2019 dated 05/11/2019);

FR.1.40.2019.32834. Measurement technique for determining the activity of radionuclides in water and solid samples taken from natural and technological systems using spectrometric alpha-beta radiometer Tri-Carb (No. 631-RA.RU.311243-2018/450.014, dated 27/12/2018,)

MVI.MN 6234-2020 Mass concentration of cyclohexanone and cyclohexanol in natural and treated wastewater. Measurement technique by gas chromatography with mass selective detection using solid phase extraction (No. 1210/2020 dated 04/02/2020);

MRK 2(2.3)-02-2020 Radiation monitoring technique for gross alpha, beta-activity concentrations and volumetric activity of beta and gamma emitting radionuclides in surface water (017-POCC RU.0001.310112-2020 dated 25/12/2020);

MRK 2(2.3)-03-2020 Radiation monitoring technique for specific gross alpha, beta-activity and specific activity of beta and gamma emitting radionuclides in underground water (including drinking water) (No. 012-POCC RU.0001.310112-2020 dated 25/12/2020)

FR.1.31.2020.38288 MRMSO-02/202 Method for measuring the mass concentration of 2-phosphono-1,2,4-butanetricarboxylic acid and hydrolysed polymaleic anhydride in wastewater by high-performance liquid chromatography with mass spectrometric detection (No. 2068/207-(RA.RU.310494)-2020 dated 17/10/2020);

FR.1.31.2020.38745 MRMSO-03/2020 Method for measuring the mass concentration of amino trimethylene phosphonic acid in natural and waste water by high-performance liquid chromatography with mass spectrometric detection (No. 2080/207-(RA.RU.310494)-2020 dated 07/12/2020)

AMI.MN 0015-2021 Mass concentration of oxyethylidene diphosphonic acid zinc disodium salt in industrial, waste and surface waters when using reagents of Puro Tech trademark. Photometric measurement technique (No. 015/2021 dated 01/12/2021);

MVI.MN 6332-2021 MVI-011-2020 “Mass concentration of hydroxyethylidene diphosphonic acid zinc disodium salt (IUPAC: 1-hydroxyethylidene diphosphonate (4-)zinc disodium salt) in the industrial and process water bodies and wastewater and surface water bodies. Photometric measurement technique” (No. 1281/2021 dated 06/01/2021).

Technical Code of Practice (TCP) 17.13-14-2021 (33140) Environmental protection and nature management. Sampling and measurements. General principles of sampling and measurements in the field of environmental protection when carrying out production observations in the field of environmental protection, rational use of natural resources (in effect from 01/04/2021)

TCP 17.13-23-2018 (33140) Environmental protection and nature management. Sampling and measurements, monitoring. Procedure for collection and preparation of bottom sediment samples to determine content of gamma-emitting radionuclides and strontium-90 (in effect from 01/04/2019)

In 2019-2021, a number of research projects were implemented, aimed at providing a scientific rationale for preventive measures against the risks associated with water use:

- Task 01.01 “To develop and implement a methodology for assessing the safety of water disinfection methods according to the criteria of a potential carcinogenic health risk from exposure to disinfection by-products” of the sectoral scientific and technical programme “Health and Habitat”;

- Task 02.01 “To develop and implement hygienic requirements for water purification and treatment devices, taking into account their impact on the mineral composition of water” of the sectoral scientific and technical programme “Health and Habitat”;

- Task 02.04 “To develop and implement modern hygienic requirements for the safety and quality of drinking water in terms of chemical composition” of the sectoral scientific and technical programme “Health and Habitat”;

- Task 01.01. “To develop a method of the hygienic assessment of volatile chemicals in drinking water” of the State Scientific and Technical Programme “Scientific and Technical Support of the Quality and Accessibility of Medical Services,” 2021-2025;

- Task 01.02. “To conduct an assessment of public health risks associated with the complex intake of barium into the body and justify the adjustment of the hygienic standard for barium in drinking water” of the State Scientific and Technical Programme “Scientific and Technical Support of the Quality and Accessibility of Medical Services,” 2021-2025;

- Task 01.03. “To provide scientific rationale and implement the method of integral assessment of health risks associated with water use” of the State Scientific and Technical Programme “Scientific and Technical Support of the Quality and Accessibility of Medical Services,” 2021-2025;

- Task 03.03 “To develop and implement a metrologically certified method for determining carbon disulphide in water to ensure the hygienic safety of waters for various purposes” of the sectoral scientific and technical programme “Hygienic Safety,” 2019-2021;

- Task “To develop and provide scientific rationale for a method for assessing public health risk from exposure to chemicals that influence the organoleptic properties of drinking water in case of emergencies in centralized drinking water supply systems” of the research & development (T) works to ensure the activities of the Ministry of Health.

Implementation has been started to solve an urgent aspect - the impact of climatic disturbances on the quality and safety of drinking water – Task 01.11. To develop and implement a method for assessing health risks in drinking and recreational water use associated with the blooming of water bodies (2022-2024) as part of the State Scientific and Technical Programme “Scientific and Technical Support of the Quality and Accessibility of Medical Services,” 2021-2025.

In order to adapt the international methodology for assessing **SDG Indicator 3.9.2** and develop a methodology to form this indicator at the national level, the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” (National Focal Point of the Protocol) started in 2022 the implementation of the respective research work “To provide scientific rationale and develop a method for assessing the formation of additional cases of morbidity and mortality of the population from air pollution in residential premises, atmospheric air in settlements and drinking water” (research work timeline: Q1 2022 – Q4 2023).

3. Progress achieved towards meeting the targets and challenges encountered

The change of quantitative values of the targets by programme area over time is presented in Table 1.2, and it is positive. Thanks to the systematic work to carry out the respective assignment, more than 400,000 people living mainly in rural areas have already gained access to high-quality drinking water (high-quality drinking water is understood to be water that meets regulations for the content of iron). The provision of consumers with drinking-quality water (the proportion of the population with access to high-quality drinking water sources) has increased by 9.9% since 2016 and amounted to 95.8% in 2021. By 2025, the level of 100% needs to be achieved.

The change in drinking water quality by microbiological indicators over time is presented in Table 3.I.5 (Part 3, subsection 3) and graphically in Figure 1.1, by sanitary and chemical indicators – in Table 3.I.6 (Part 3, subsection 3), and by individual indicators in Figures 1.2 (centralized drinking water supply systems) and 1.3 (sources of non-centralized drinking water supply).

Table 1.2

| No and Target Indicator (TI) | | Implementation timeframe (year) | TI value | |
|------------------------------|---|---------------------------------|--|--|
| | | | 2018 | 2021 |
| 1.1.1. | share of water samples that do not meet the requirements of the microbiological safety indicators - no more than 1% in centralized drinking water supply systems | 2030 | 1.1% | 1.2% |
| 1.2.1. | share of water samples that do not meet the requirements of the microbiological safety indicators - no more than 10% in non-centralized drinking water supply systems | 2030 | 15.7% | 14.8% |
| 1.2.1. | compliance of water in municipal centralized drinking water supply systems with hygienic standards for content of iron, manganese and organoleptic indicators – 100 % | 2030 | Fe – 21.0% Mn – 2.4% Org. – 15.7%. | Fe – 20,0% Mn – 1.9% Org. – 9.7%. |
| 1.2.2. | share of water samples from decentralized water supply sources that do not meet hygienic standards for nitrate pollution indicators - no more than 20 % (reduction by at least 5 % as compared to the level of 2015 (24.5 %)) | 2030 | 25.8% | 23.0% |
| 1.3.1. | development of regulatory legal acts (hereinafter – RLAs) and methodological documents in the field of sanitary and epidemiological welfare, drinking water supply and research methods | constantly until 2030 | - | Is being implemented. <u>There have been developed:</u> - 7 regulatory legal acts; - 12 methodological documents; - 1 metrologically certified method, - over 100 methods for determining the active |

| No and Target Indicator (TI) | | Implementation timeframe (year) | TI value | |
|------------------------------|--|---------------------------------|----------|---|
| | | | 2018 | 2021 |
| | | | | ingredients of plant protection products <u>in water with metrological characteristics</u> |
| 1.2.3. | improvement of the drinking water safety monitoring system | constantly until 2030 | - | Is being implemented: over 80 standards (ISO, GOST ISO, GOST R, STB, ST RK) and 15 metrologically certified research methods, and over 100 methods for determining the active substance of plant protection products <u>in water</u> have been put into practice in research activities of testing laboratories in the Republic. |

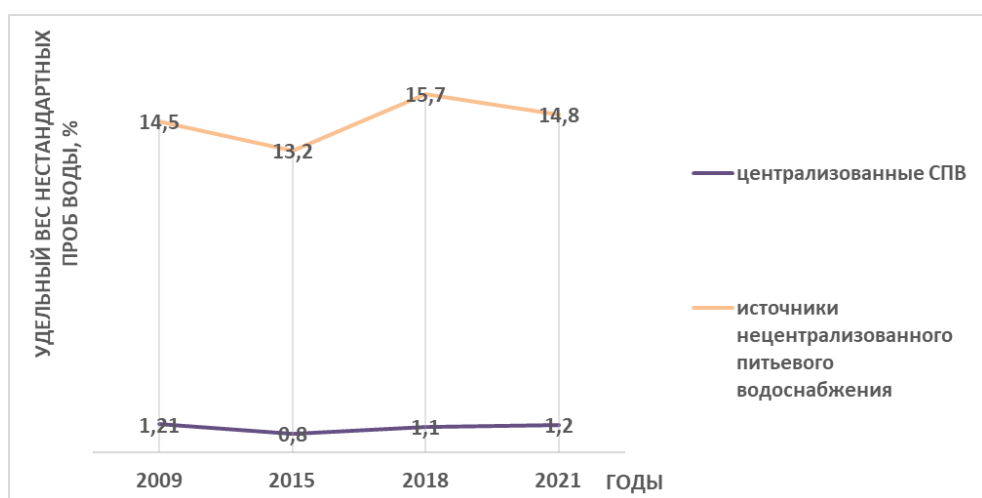


Figure 1.1. Change over time in the proportion of non-standard drinking water samples taken from drinking water supply systems, by microbiological indicators

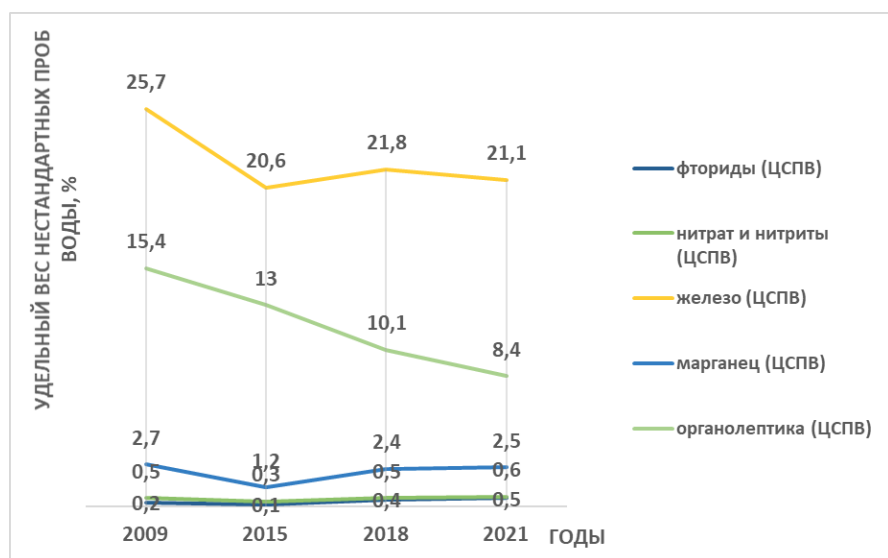


Figure 1.1. Change over time in the proportion of non-standard water samples by sanitary and chemical indicators of centralized drinking water supply systems in general (without division into municipal and departmental ones)

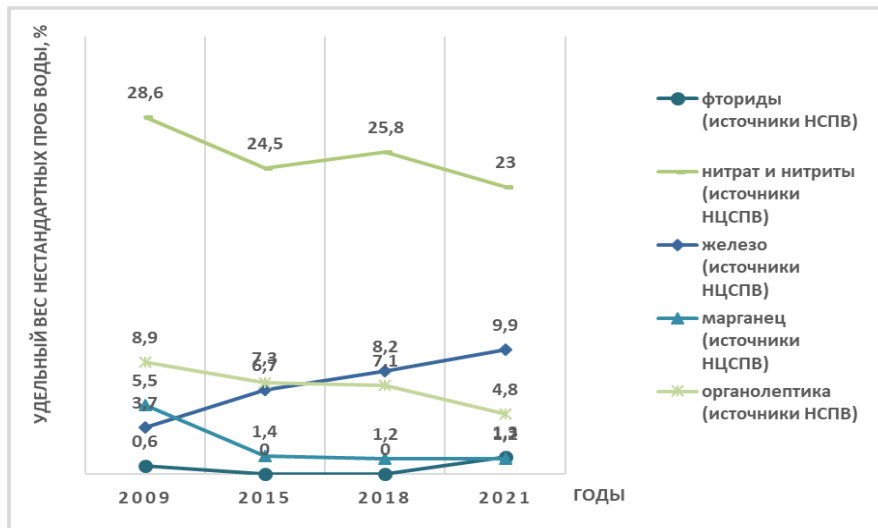


Figure 1.2. Change over time in the proportion of non-standard water samples by sanitary and chemical indicators of the sources of non-centralized drinking water supply

Therefore, there is a steady **progress** towards achieving the targets under target area I.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area I promotes the achievement of the SDGs:

SDG Indicator 6.1.1 “Proportion of population using safely managed drinking water services” (TIs 1.1.1, 1.1.2, 1.2.1, 1.2.2);

SDG Indicator 3.9.2. “Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH))” (TIs 1.1.1, 1.1.2, 1.2.1, 1.2.2, 1.3.1, 1.3.2).

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

1. Current target(s) and target date(s).

The Set of Measures identified 3 targets under Article 6, paragraph 2 (b) of the Protocol (2.1. Ensuring the epidemiological well-being of the population with regard to water-related infectious diseases; 2.2. Ensuring the epidemiological well-being of the population with regard to water-related non-communicable diseases; 2.3. Improving of surveillance system for diseases potentially related to the lack of safe water, sanitation and hygiene for which targets the relevant target indicators were set with 4/4, 1/3, 1/2 activities, respectively (Table 2.1):

Table 2.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|--|---------------------------|--|--|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 2. Reduction of the scale of outbreaks and incidents of water-related diseases (Article 6, para. 2(b)) – target area II | | | | | |
| 2.1. Ensuring the epidemiological well-being of the population with regard to water-related infectious diseases | 2.1.2. maintaining a zero incidence of cholera and typhoid fever | constantly until 2030 | <p><i>Activity 1:</i> Ensuring epidemiological follow-up for cases of infectious diseases to ensure sustainable epidemiological well-being, prevent outbreaks among the population.</p> <p><i>Activity 2:</i> Improving virological and parasitological monitoring of drinking water and water sources.</p> <p><i>Activity 3:</i> Introduction of the requirements for monitoring legionella agents into the legislation in the field of sanitary and epidemiological well-being of the population, including in water facilities with an emphasis on risk groups (2021).</p> <p><i>Activity 4:</i> Awareness raising among the population, especially among risk groups (with water supply from decentralized sources) on the need to control compliance of drinking water with hygienic standards, water purification in case of pollution risk.</p> | Ministry of Health (1-4) | 3.9.2. |
| | 2.1.2. maintaining the incidence of acute viral hepatitis A and dysentery at the level achieved in 2018 (no more than 0.9 and 0.3 cases per 100,000 population respectively) | constantly until 2030 | | | |
| | 2.1.3. maintaining the absence of outbreaks of water-related diseases | constantly until 2030 | | | |
| | 2.1.4. ensuring the monitoring of emerging pathogens of water-related infectious diseases (legionella, viruses, protozoa) | constantly until 2030 | | | |
| 2.2. Ensuring the epidemiological well-being of the population with regard to water-related non-communicable diseases | 2.2.1. ensuring epidemiological monitoring of non-communicable diseases that are potentially water-related | constantly until 2030 | <p><i>Activity 1:</i> Conducting an assessment of the risks to public health due to increased content of nitrogen-containing compounds in water in decentralized sources, with an emphasis on risk groups (children, pregnant women, people who are ill for a long time and frequently sick people).</p> <p><i>Activity 2:</i> Awareness raising among the population, especially</p> | <p>Ministry of Health (1-3)</p> <p>Local executive and regulatory authorities (3)</p> <p>WSS enterprises (3)</p> <p>Owners of drinking water</p> | 3.9.2. |

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|--|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | among risk groups (with water supply from decentralized sources) on the issues of water safety by chemical indicators, on the need to control compliance of drinking water with hygienic standards, water purification in case of pollution risk. <i>Activity 3:</i> Activity in related target area I (Section 1, Target 1.2). | supply systems (3) | |
| 2.3. Improving follow-up of the diseases that are potentially related to the absence of safe water, sanitation and hygiene | 2.3.1. improving follow-up of the diseases that are potentially related to the absence of safe water, sanitation and hygiene | constantly until 2030 | <i>Activity 1:</i> Development and financial justification of the sectoral “Plan for modernization of hardware and software of the sanitary and epidemiological service” and its integration with the portal of the Central Healthcare Information System (2021-2025). <i>Activity 2:</i> Implementation of the epidemiological analysis of non-communicable diseases into the practice of agencies and institutions carrying out state sanitary supervision | Ministry of Health (1-2) | 3.9.2. |

2. Actions taken to reach the target(s).

Activities to achieve TIs are set out in column 4 of Table 2.1 above.

Generally, Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28 January 2021 approved the State Programme “Comfortable housing and friendly environment” for 2021–2025, which provided for a number of activities in the field of water supply and sanitation (subprogramme 5 “Clean water”). Their implementation contributes to improving the reliability of drinking water supply systems.

Target 2.1.

Activity 1: The epidemiological follow-up for cases of infectious diseases is carried out within the framework of the discharge of functions of the bodies and institutions responsible for state sanitary supervision.

A regional reference laboratory for viral pathogen detection operates on the premises of the State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology” of the Ministry of Health of the Republic of Belarus.

Activities 2-3:

Regulatory legal acts and methodological documents in the field of sanitary and epidemiological welfare are developed on the instructions of state administration bodies (the Ministry of Health) and based on the results of scientific research activities. Based on Resolution No. 914 of the Council of Ministers of the Republic of Belarus dated 19 December 2018 “Specific sanitary and epidemiological requirements for maintenance and operation of sources and systems of drinking water supply”, the Ministry of Health of the Republic of Belarus approved the Guidelines on the Procedure for Organizing State Sanitary Supervision of Drinking Water Supply and Responses to Accidents (Emergencies) in Centralized Drinking Water Supply Systems on 11 January 2021.

Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021 approved the Hygienic Standard “Drinking Water Safety Indicators,” which (described in detail in part 3, Table 3.I.3):

- improved the approaches to virological monitoring in drinking water supply systems – established enterovirus monitoring requirements (testing for enteroviruses in water samples is carried out in cities with a population of 100,000 people provided with drinking water from this centralized drinking water supply system. Testing is carried out in surface and underground water supply systems: before water is supplied to the distribution network; water from the distribution network in samples taken at the points of water intake at the end point of the impact zone of water intakes from surface water sources and underground group (fed by a group

of wells) water intakes. The controlled indicator is enterovirus RNA. If the enterovirus RNA is found in the water sample tested, testing is conducted on a water sample taken repeatedly the same day);

- introduced into the legislation on sanitary and epidemiological well-being of the population the requirements for monitoring Legionella agents, including in water use facilities with an emphasis on risk groups (in water samples taken from hot and cold water supply systems in swimming pools, aqua parks, public hot tubs, SPA salons, organizations providing bathing services, hotels, in water samples from hot and cold water supply systems in resuscitation and intensive care units of hospital healthcare organizations).

In order to provide methodological support for laboratory studies as part of the state sanitary supervision of legionellosis in habitat objects, Instructions for Use No. 003-0519 “Method of sampling from man-made water consumption facilities to detect pathogenic Legionella species” have been developed and are being implemented (approved by the Ministry of Health of the Republic of Belarus on 20/06/2019), No. 006-0618 “Method for assessing the efficacy of the biocidal effect of disinfectants against legionellosis pathogens” (approved by the Ministry of Health of the Republic of Belarus on 26/11/2018), No. 011-1115 “Laboratory diagnosis of legionellosis. Methods of Legionella detection in environmental objects” (approved by the Ministry of Health of the Republic of Belarus on 08/12/2015). ISO 11731:20197 Water quality. Enumeration of Legionella has been put into practice.

Instructions for Use No. № 020-1221 (developed by the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” jointly with State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology”) established the method for quantification of the health risk associated with a microbiological factor in drinking water, which provides a list of reference pathogens and a comprehensive MRA methodology. As part of the research work, the State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology” has also developed a Method for Quantification of adenovirus DNA, which makes it possible to determine the presence of this viral pathogen in drinking water.

Activity 4:

As part of the discharge of their functions, the bodies and institutions exercising state sanitary supervision carry out educational work among the population and rural executive committees to inform them about the rules for the maintenance and operation of decentralized drinking water supply systems.

Target 2.2.

Activity 1: An assessment of public health risks from increased content of nitrogen-containing compounds in water in decentralized sources is carried out as part of the discharge of functions of the bodies and institutions responsible for state sanitary supervision in accordance with Instructions for Use No. 019-1118 “Method of hygienic assessment of drinking water” (approved by the Ministry of Health of the Republic of Belarus on 23/04/2019), with the assessment results used to take management measures and plan events. The summary of the key findings is included in the State Reports “On the Sanitary and Epidemiological Situation in the Republic of Belarus” for the reporting period.

Activity 2: As part of the discharge of their functions, the bodies and institutions exercising state sanitary supervision carry out educational work among the population and rural executive committees to inform them about the rules for the maintenance and operation of decentralized drinking water supply systems.

Target 2.3.

Activity 1: A working group has been set up and the work on the development of the financial justification of the sectoral “Plan for modernization of hardware and software of the sanitary and epidemiological service” and its integration with the portal of the Central Healthcare Information System has been started.

Activity 2: Implementation of the epidemiological analysis of non-communicable diseases into the practice of agencies and institutions carrying out state sanitary supervision. Work is being carried out as part of the implementation of social and hygienic monitoring, as well as programmes to achieve the SDGs in the territories.

Epidemiological surveillance work as part of the fight against COVID-19 pandemic

As part of the measures to combat COVID-19, from February 2020 to date, wastewater monitoring has been carried out on the premises of the State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology” of the Ministry of Health of the Republic of Belarus to detect SARS-CoV-2 RNA in them, followed by a molecular epidemiological analysis of the detected infection pathogens.

To date, 721 samples of municipal and hospital wastewater from different regions of Belarus have been studied. SARS-CoV-2 RNA was detected in 1.1% of the analysed samples; in particular the frequency of its detection was 0.7% (398 samples examined) in 2020 and 1.5% (323 samples examined) in 2021. The analysis showed that only 37.5% of all positive tests related to hospital wastewater and the remaining 62.5% to municipal wastewater. The molecular epidemiological analysis of SARS-CoV-2 detected in wastewater in 2020 has revealed that they belong to the Wuhan-Hu-1 strain. Further comparative analysis of the nucleotide sequences of SARS-CoV-2 isolates obtained from patients with COVID-19 showed their 100% similarity with the corresponding fragments of the SARS-CoV-2 nucleotide sequences found in wastewater in the corresponding time period.

The data obtained suggest that wastewater studies can potentially be carried out for operational epidemiological surveillance of the circulation of the COVID-19 pathogen in the context of the ongoing morbidity in order to assess the epidemiological situation and identify new and emerging gene variants to predict possible scenarios for situation development and take adequate preventive measures in a timely manner.

More details on measures to combat the COVID-19 pandemic are set out in Part 6 (Subsection 3).

3. Progress achieved towards meeting the targets and challenges encountered

The change over time in the quantitative values of targets 2.1.1-2.1.4 is presented in Table 2.2, and it is positive.

Table 2.2

| No and Target Indicator (TI) | | Achievement Timeframe (Year) | Target indicator value | |
|------------------------------|---|------------------------------|------------------------------|------------------------------|
| | | | in 2018 | in 2021 |
| 2.1.1. | maintaining a zero incidence of cholera and typhoid fever | constantly until 2030 | 0 | 0 |
| 2.1.2. | maintaining the incidence of acute viral hepatitis A and dysentery at the level achieved in 2018 (no more than 0.9 and 0.3 cases per 100,000 population respectively) | constantly until 2030 | VHA – 0.9 Dysentery – 0.3 | VHA – 0.2 Dysentery – 0.1 |
| 2.1.3. | maintaining the absence of outbreaks of water-related diseases | constantly until 2030 | 0 | 1* |
| 2.1.4. | ensuring the monitoring of emerging pathogens of water-related infectious diseases (legionella, viruses, protozoa) | constantly until 2030 | | is being ensured |
| 2.2.1. | ensuring epidemiological monitoring of non-communicable diseases that are potentially water-related | constantly until 2030 | is being ensured | |
| 1.3.2. | improving follow-up of the diseases that are potentially related to the absence of safe water, sanitation and hygiene | constantly until 2030 | is in the process | |

* In Beshenkovichi, Vitebsk Region, an epidemiological situation complication was registered among the population of the regional centre, due to the implementation of the water route of transmission of infection through a centralized water supply facility.

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area II promotes the achievement of **SDG Indicator 3.9.2**. “Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH)).”

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

1. Current target(s) and target date(s).

The Set of Measures identified 3 targets under Article 6, paragraph 2 (c) of the Protocol (3.1. Increasing the access of population to centralized drinking water supply systems; 3.2. Increasing the proportion of population using safely managed drinking water supply services) for which target the relevant target indicators were set with 1/1 and 1/5 activities, respectively (Table 3.1):

Table 3.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|--|---------------------------|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 3. Access to drinking water (Art. 6, para. 2 (c)) – target area III | | | | | |
| 3.1. Increasing the access of population to centralized drinking water supply systems | 1.1.3. level of access to municipal centralized drinking water supply systems for urban population and the population of agricultural towns – 100 % | 2030 | <i>Activity 1:</i> Development of centralized drinking water supply systems (construction of water supply networks), including within the framework of Decree No. 488 of the President of the Republic of Belarus of 22 December 2018. | Local executive and regulatory authorities (1) | 6.1.1. |
| 3.2. Increasing the proportion of population using safely managed water supply services | 3.2.1. increasing the proportion of population using safely managed drinking water supply services (SDG 6.1) | 2030 | <i>Activity 1:</i> Activities in related target areas I, V, VII, XIV (Sections 1, 5, 7, 12 of the Protocol). <i>Activity 2:</i> Providing state support to the population in the form of non-cash housing subsidies in accordance with Decree No. 322 of the President of the Republic of Belarus of 29 August 2016 (2021). <i>Activity 3:</i> Conducting an assessment of the proportion of population using safely managed drinking water services (Indicator 6.1.1. of SDG 6) (from 2021). <i>Activity 4:</i> Implementation of activities aimed at ensuring 100 percent access to safely managed drinking water in educational institutions, social institutions and health care facilities, including under World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities.” <i>Activity 5:</i> Inclusion of activities to ensure access of vulnerable groups of the population to safely managed drinking water (persons with disabilities, people in penitentiary facilities, travellers, homeless) when developing national regulatory and regulatory legal acts, strategies, development plans, state programmes (e.g., development of social | Local executive and regulatory authorities (1-2, 4-5) WSS enterprises (1) Owners of drinking water supply systems (1) Statistical Committee (3) Regional Executive Committees, Minsk City Executive Committee (4, 5) Ministry of Health (4) Ministry of Labour and Social Protection (4-5) Ministry of Internal Affairs (5) | 6.1.1. 3.8. 4.A.1.1. |

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|--------|-----------------------|---------------------------|--|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | infrastructure, roadside services, tourism infrastructure, etc.) (including with the involvement of non-governmental organizations of persons with disabilities) | | |

2. Actions taken to reach the target(s).

Activities to achieve TIs are set out in column 4 of Table 3.1 above.

With the support of the Secretariat of the Protocol, an assessment of the situation of equitable access to water and sanitation in the Republic of Belarus was carried out in 2019 using the Protocol’s methodology (integrated assessment - a guiding framework for public administration to ensure equitable access to safe water and sanitation; reduction of geographical disparities in access; affordability of prices (tariffs) for water supply and sanitation services, ensuring access for vulnerable and marginalized groups (persons with disabilities, people in penitentiary facilities, travellers, homeless) to safely managed drinking water). The report was posted on the website of the National Focal Point of the Protocol on Water and Health (http://rspch.by/Docs/self-ass-access-water-rb_rus.pdf; http://rspch.by/Docs/self-ass-access-water-rb_eng.pdf). The results of the assessment were used to update the targets under the Protocol, including for this target area.

Activities 1-2: The target “Providing the population with centralized water supply systems” is being implemented as part of subprogramme 5 “Clean water” of the State Programme “Comfortable housing and favourable environment” for 2021-2025,” as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28 January 2021, which provided for a number of activities in the field of water supply and sanitation.

The target is being achieved through the construction of water supply networks, including in the areas of individual residential development where such networks are not available. In order to achieve the target of “Providing the population with centralized water supply systems”, the State Programme determines the volumes and sources of financing for each activity. The main sources of financing are the funds of local budgets and organizations’ own funds. The task to achieve the target is annually communicated by the Ministry of Housing and Communal Services to the customers of the activities (regional executive committees and the Minsk City Executive Committee). In 2021, the proportion of the population with access to centralized water supply systems was 91.0%. By 2025, the level of 93.2% needs to be achieved.

In order to ensure the affordability of water supply and sanitation services, the population is provided with state support in the form of non-cash housing subsidies in accordance with Decree No. 322 of the President of the Republic of Belarus of 29 August 2016.

Activity 3:

An assessment of the proportion of population using safely managed drinking water services (Indicator 6.1.1 of SDG 6) is carried out by the Statistical Committee based on the Multiple Indicator Cluster Survey for monitoring the situation of children and women (MICS) that was conducted in the Republic in 2005, 2012 and 2019 and, from 2021, – based on the households’ living standards measurement study survey (once in 6 years) and is placed on the National Platform for reporting on Sustainable Development Goals Indicators (sdgplatform.belstat.gov.by).

Activity 4:

The activities aimed at ensuring 100 percent access to safely managed drinking water services in educational institutions, social institutions and health care facilities, including under World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities” are carried out under the effective legislation.

For educational institutions: the Republic has developed and approved the Specific Sanitary and Epidemiological Requirements for the Maintenance and Operation of Educational Institutions, as approved by Resolution No. 525 of the Council of Ministers dated 07/08/2019 (including updated requirements for the provision of drinking water supply and sanitation. If the centralized water supply, sanitation or heating system is not available in a rural settlement, an institution, including a catering facility, can be provided with drinking water from non-centralized sources, organise wastewater disposal through waterproof cesspools with subsequent removal of wastewater on a timely basis).

On 6-8 July 2021, within the framework of the Sub-regional Workshop on WASH in Schools, organized by the WHO European Center for Environment and Health as part of work on the Protocol on Water and Health, health and education experts from 8 countries of the region exchanged their experience, including in the context of the COVID19 pandemic, identified priority areas for country-level work and cooperation.

For health care facilities: the Republic has developed and approved the Specific Sanitary and Epidemiological Requirements for the Maintenance and Operation of Health Care Facilities, as approved by

Resolution No. 130 of the Council of Ministers of the Republic of Belarus dated 03/03/2020, which include, inter alia, updated requirements for the provision of drinking water supply, sanitation and hygiene (https://pravo.by/upload/docs/op/C22000066_1580850000.pdf).

For other vulnerable population groups (social institutions, persons with disabilities): certain measures are implemented within the framework of Law No. 239-Z of the Republic of Belarus “On State Social Benefits, Rights and Guarantees for Certain Categories of Citizens” dated 14/06/2007 (<https://pravo.by/document/?guid=3961&p0=H10700239>) and reflected in the state programme “Social Protection” for 2021 - 2025, as approved by Resolution No. 748 of the Council of Ministers of the Republic of Belarus of 21 December 2020 (subprogramme 1 “Social Services and Social Support”, subprogramme 2 “Accessible Living Environment for People with Disabilities and Physically Handicapped Persons” (https://mintrud.gov.by/system/extensions/spaw/uploads/flash_files/GP-sotszaschita-2021-2025.pdf))

Building codes SN 3.02.12-2020 “Habitat for Physically Handicapped Persons” (covering WASH aspects) have been developed and approved by Resolution No. 81 of the Ministry of Architecture and Construction of the Republic of Belarus dated 13/11/2020.

According to the Ministry of Labour and Social Protection, during the reporting period, the construction and reconstruction of buildings of the organizations subordinated to the Ministry of Labour and Social Protection (7 organizations housing people with disabilities, veterans of war and labour, and disabled children) were carried out in accordance with the building codes, and they ensure 100 % physical access to drinking water and sanitation.

Activity 5.

When considering draft documents of national regulatory and regulatory legal acts, strategies, development plans, government programmes (e.g., the development of social structure, roadside services, tourism infrastructure, etc.), attention is drawn to the need to include measures to create accessibility of vulnerable groups of the population to drinking water supplied in compliance with safety requirements (persons with disabilities, people in penitentiary facilities, travellers, homeless) to safely managed drinking water). Some of the documents already contain mandatory requirements (see activity 4).

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

The change over time in the quantitative values of targets 3.1.1-3.2.1 is presented in Table 3.2, and it is positive.

Table 3.2

| No. | Population category | Percentage of population with access to drinking water (%) | | | | |
|--------------|---|--|--|-------------|----------------|----------------|
| | | Baseline value | Value reported in the previous reporting cycle | | FOR REFERENCE* | Current value* |
| | | 2009 | 2015 | 2018 | 2020 | 2021 |
| 3.1.1 | access of the population to centralized drinking water supply systems | | | | | |
| | TOTAL | 86.1 | 87.53 | 92.8 | 90.8 | 91.0 |
| | Urban population | 95.5 | 98.50 | 98.7 | 98.4 | 98.7 |
| | Rural population | 51.6 | 73.05 | 62.5 | 57.6 | 58.8 |
| | Population of agrotowns | 78.0 | 80.12 | 83.4 | 78.5 | 81.2 |
| 3.1.2 | Population category | 2009 | 2015 | 2018 | 2019 | 2021 |
| | proportion of population using safely managed drinking water supply services (SDG 6.1) | | | | | |
| | TOTAL | – | – | – | 99.5 | 100 |
| | Urban population | – | – | – | 99.5 | 100 |
| | Rural population | – | – | – | 99.5 | 100 |

Note:

* – in 2020, the methodology for accounting for population coverage with access to centralized water supply and sanitation was improved when planning the next cycle of the subprogramme “Clean water” of the State Programme “Comfortable housing” for 2021-2025. The methodology enabled to optimize statistical accounting and improve the reliability of data in 2020 and 2021. This explains why in 2020, compared to 2015 and 2018, an inconsistency (decrease in coverage) was found for certain lines. In general, a positive trend is observed in 2020 to 2021.

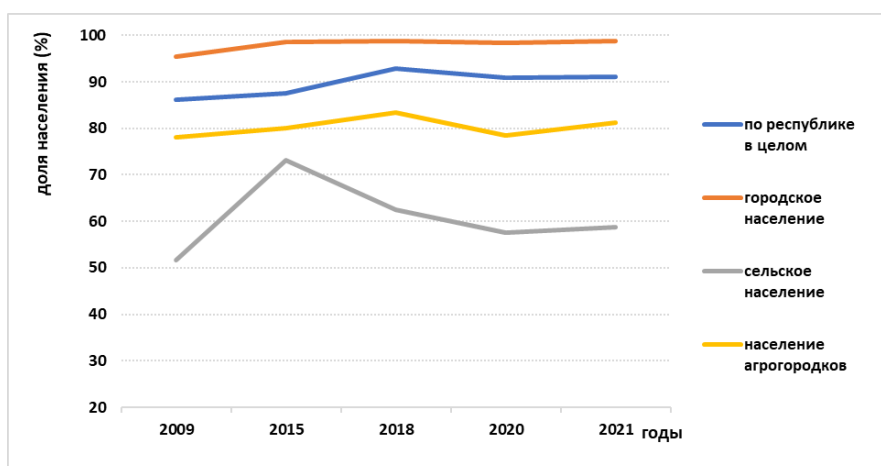


Figure 3.1. Percentage of population with access to centralized drinking water supply systems (%) (see note to Table 3.2)

Therefore, there is a steady **progress** towards achieving the specified target.

However, the following issues need to be addressed:

- Activities need to be strengthened to promote the universal access approaches, taking into account a set of criteria (covering not only physical geographic accessibility, but also affordability, vulnerable population groups, accessibility in public places), institutional access;
- The Republic of Belarus is interested in studying the situation with water supply and sanitation (WASH) in health care facilities using international methodology and would be grateful to the WHO for providing technical and financial support for data collection and organization of consultations. This research will contribute to the implementation of the decisions set out in the World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities” and to the achievement of targets under the Protocol on Water and Health and SDGs 6.1 and 6.2.;
- The Republic of Belarus expresses its interest in studying the situation with UNICEF’s water supply and sanitation (WASH) in educational institutions using international methodology and would be grateful for providing technical and financial support for data collection and consultations. The study would contribute to the achievement of the SDGs in terms of equitable access to water, sanitation and hygiene, including vulnerable population groups such as children.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area III promotes the achievement of the SDGs:

TI 3.1.1: SDG Indicator 6.1.1 “Proportion of population using safely managed drinking water services”,
TI 3.2.1:

- **SDG Indicator 6.1.1** “Proportion of population using safely managed drinking water services”,
- **SDG Indicator 4.a.1.1.** Proportion of schools with access to: d) basic sources of drinking water; e) single-sex basic sanitation facilities; and (f) basic handwashing facilities (as per the WASH indicator definitions);
- **SDG Indicator 3.8.1.** “Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population).”

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

1. Current target(s) and target date(s).

The Set of Measures identified 2 targets under Article 6, paragraph 2 (d) of the Protocol (4.1. Increasing the access of population to centralized and local sanitation systems; 4.2. Increasing the proportion of population using safely managed sanitation services) for which target the relevant target indicators were set with 2/1-1 and 1/5 activities, respectively (Table 4.1):

Table 4.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|---------------------------|---|--|----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 4. Access to sanitation (Art. 6, para. 2 (d)) – target area IV | | | | | |
| 4.1. Increasing the access of population to centralized and local sanitation systems | 1.1.4. level of access of the population to centralized and local sanitation systems for urban population – 92.5%; | 2030 | <i>Activity 1:</i> Development of centralized and local sanitation systems: construction of sanitation systems, including within the framework of Decree No. 488 of the President of the Republic of Belarus of 22/12/2018. | Local executive and regulatory authorities (1) | 6.2.1.1 * |
| | 4.2.1. level of access of the population to centralized and local sanitation systems for rural population – 32.5 %. | 2030 | <i>Activity 1:</i> Development of centralized and local sanitation systems: construction of sanitation systems, including within the framework of Decree No. 488 of the President of the Republic of Belarus of 22/12/2018. | Local executive and regulatory authorities (1) | |
| 4.2. Increasing the proportion of population using safely managed sanitation services | 4.2.1. increasing the proportion of population using safely managed sanitation services (SDG 6.2) | 2030 | <i>Activity 1:</i> Activities in related target areas VI, VIII (2021-2030). <i>Activity 2:</i> Providing state support to the population in the form of non-cash housing subsidies in accordance with Decree No. 322 of the President of the Republic of Belarus of 29 August 2016 (2021). <i>Activity 3:</i> Conducting an assessment of the proportion of the population using safely managed sanitation services (from 2021). <i>Activity 4:</i> Implementation of activities aimed at ensuring 100 percent access to safely managed sanitation services in educational institutions, social institutions and health care facilities, including under World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities.” <i>Activity 5:</i> Inclusion of activities to ensure access of vulnerable groups of the population to safely managed sanitation services (persons with disabilities, people in penitentiary facilities, travellers, homeless) when developing national | Local executive and regulatory authorities (1-2, 4-5) WSS enterprises (1) Owners of drinking water supply systems (1) Statistical Committee (3) Regional Executive Committees, Minsk City Executive Committee (4, 5) Ministry of Health (4) Ministry of Labour and Social Protection (4) | 3.8. 4.a.1.1 . |

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|--------|-----------------------|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | regulatory and regulatory legal acts, strategies, development plans, state programmes (e.g., development of social infrastructure, roadside services, tourism infrastructure, etc.) (including with the involvement of non-governmental organizations of persons with disabilities) | Ministry of Internal Affairs (5) | |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in columns 4-5 of Table 4.1.

With the support of the Secretariat of the Protocol, an assessment of the situation of equitable access to water and sanitation in the Republic of Belarus was carried out in 2019 using the Protocol’s methodology (integrated assessment - a guiding framework for public administration to ensure equitable access to safe water and sanitation; reduction of geographical disparities in access; affordability of prices (tariffs) for water supply and sanitation services, ensuring access for vulnerable and marginalized groups (persons with disabilities, people in penitentiary facilities, travellers, homeless) to safely managed drinking water). The report was posted on the website of the National Focal Point of the Protocol on Water and Health (http://rspch.by/Docs/self-ass-access-water-rb_rus.pdf; http://rspch.by/Docs/self-ass-access-water-rb_eng.pdf). The results of the assessment were used to update the targets under the Protocol, including for this target area.

Activities 1-2: The target “Providing the population with centralized sanitation systems” is being implemented as part of subprogramme 5 “Clean Water” of the State Programme “Comfortable housing and favourable environment” for 2021-2025,” as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28 January 2021, which provided for a number of activities in the field of water sanitation.

The target is being achieved through the construction of sanitation networks, including in the areas of individual residential development where such networks are not available. In order to achieve the target, the State Programme determines the volumes and sources of financing for each activity. The main sources of financing are the funds of local budgets and organizations’ own funds. The task to achieve the target is annually communicated by the Ministry of Housing and Communal Services to the customers of the activities (regional executive committees and the Minsk City Executive Committee).

In order to ensure the affordability of water supply and sanitation services, the population is provided with state support in the form of non-cash housing subsidies in accordance with Decree No. 322 of the President of the Republic of Belarus of 29 August 2016.

Activity 3:

An assessment of the proportion of population using safely managed sanitation services (Indicator 6.2.1.1 of SDG 6) is carried out by the Statistical Committee based on the data of the Multiple Indicator Cluster Survey for monitoring the situation of children and women (MICS) that was conducted in the Republic in 2005, 2012 and 2019 and, from 2021, – based on the households’ living standards measurement study survey (once in 6 years) and is placed on the National Platform for reporting indicators of Sustainable Development Goals (sdgplatform.belstat.gov.by).

Activity 4:

The activities aimed at ensuring 100 percent access to safely managed sanitation services in educational institutions, social institutions and health care facilities, including under World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities” are carried out under the effective legislation.

For educational institutions: the Republic has developed and approved the Specific Sanitary and Epidemiological Requirements for the Maintenance and Operation of Educational Institutions, as approved by Resolution No. 525 of the Council of Ministers of 07/08/2019 (including updated requirements for the provision of drinking water supply and sanitation. If the centralized water supply and sanitation system is not available in a rural settlement, an institution, including a catering facility, can be provided with drinking water from non-centralized sources, organise wastewater disposal through waterproof cesspools with subsequent removal of wastewater on a timely basis).

On 6-8 July 2021, within the framework of the Sub-regional Workshop on WASH in Schools, organized by the WHO European Center for Environment and Health as part of work on the Protocol on Water and Health, health and education experts from 8 countries of the region exchanged their experience, including in the context of the COVID19 pandemic, identified priority areas for country-level work and cooperation.

For health care facilities: the Republic has developed and approved the Specific Sanitary and Epidemiological

Requirements for the Maintenance and Operation of Health Care Facilities, as approved by Resolution No. 130 of the Council of Ministers of the Republic of Belarus of 03/03/2020, which requirements include, inter alia, updated requirements for the provision of drinking water supply, sanitation and hygiene (https://pravo.by/upload/docs/op/C22000066_1580850000.pdf).

For other vulnerable population groups (social institutions, persons with disabilities): certain measures are implemented within the framework of Law No. 239-Z of the Republic of Belarus “On State Social Benefits, Rights and Guarantees for Certain Categories of Citizens” dated 14/06/2007 (<https://pravo.by/document/?guid=3961&p0=H10700239>) and reflected in the state programme “Social Protection” for 2021 - 2025, as approved by Resolution No. 748 of the Council of Ministers of the Republic of Belarus of 21 December 2020 (subprogramme 1 “Social Services and Social Support”, subprogramme 2 “Accessible Living Environment for People with Disabilities and Physically Weakened Persons” (https://mintrud.gov.by/system/extensions/spaw/uploads/flash_files/GP-sotszaschita-2021-2025.pdf)).

Building codes SN 3.02.12-2020 “Habitat for Physically Handicapped Persons” (covering WASH aspects) have been developed and approved by Resolution No. 81 of the Ministry of Architecture and Construction of the Republic of Belarus dated 13/11/2020.

According to the Ministry of Labour and Social Protection, during the reporting period, the construction and reconstruction of buildings of the organisations subordinated to the Ministry of Labour and Social Protection (7 organisations housing people with disabilities, veterans of war and labour, and disabled children) were carried out in accordance with the building codes, and they ensure 100 % physical access to drinking water and sanitation.

Activity 5.

When considering draft documents of national regulatory and regulatory legal acts, strategies, development plans, government programmes (e.g., the development of social structure, roadside services, tourism infrastructure, etc.), attention is drawn to the need to include measures to create accessibility of vulnerable groups of the population to safely managed sanitation (persons with disabilities, people in penitentiary facilities, travellers, homeless). Some of the documents already contain mandatory requirements (see activity 4).

3. Progress achieved towards meeting the targets and challenges encountered

The change over time in the quantitative values of targets 4.1.1, 4.1.2, 4.2.1 is presented in Table 4.2, and it is positive. In 2021, the proportion of population with access to centralized sanitation systems was 78.8% of the population as a whole (by 2025, 79.3% needs to be achieved), 90.4% of urban population (by 2025, 92.5% needs to be achieved), and 26.8% of rural population (by 2025, 32.5% needs to be achieved) (Table 3.IV.1, Part 3, Figure 4.1).

Table 4.2

| No. | Indicator | Percentage of population with access to services (%) | | | | |
|-------|---|--|--|-------------|----------------|----------------|
| | | Baseline value | Value reported in the previous reporting cycle | | FOR REFERENCE* | Current value* |
| | | 2009 | 2015 | 2018 | 2020 | 2021 |
| 4.1.1 | access of urban population to centralized sanitation systems | 87.7 | 92.78 | 89.8 | 87.3 | 90.4 |
| 4.1.2 | access of rural population to centralized sanitation systems | 26.7 | 40.85 | 41.5 | 25.0 | 26.8 |
| 4.1.2 | Indicator | 2009 | 2015 | 2018 | 2019 | 2021 |
| | proportion of population using safely managed sanitation services (SDG 6.2) | - | - | - | 98.3 | 98.3 |

Note:

* – in 2020, the methodology for accounting for population coverage with access to centralized water supply and sanitation was improved when planning the next cycle of subprogramme 5 “Clean water” of the State Programme “Comfortable housing” for 2021-2025. The methodology enabled to optimize statistical accounting and improve the reliability of data in 2020 and 2021. This explains why in 2020, compared to 2015 and 2018, an inconsistency (decrease in coverage) was found for certain lines. In general, a positive trend is observed. In general, a positive trend is observed in 2020 to 2021.

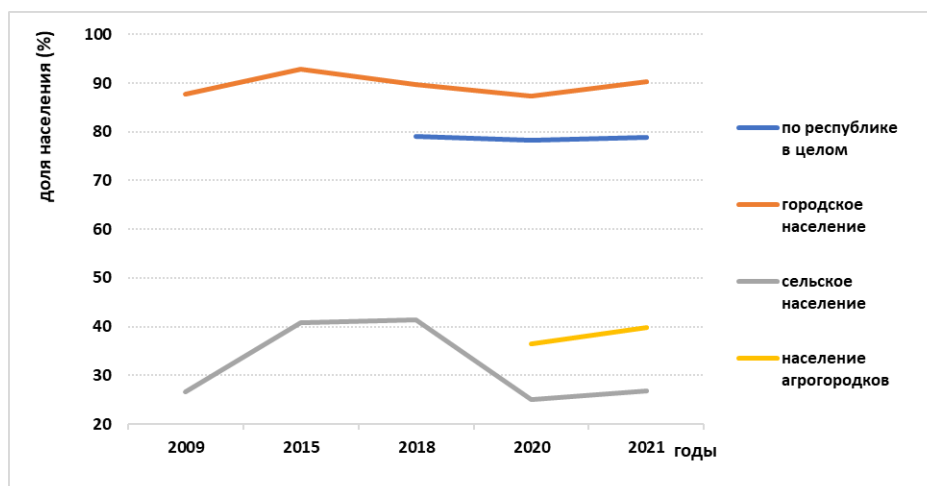


Figure 4.1. Percentage of population with access to centralized sanitation systems (%) (see note to Table 4.2)

Therefore, there is a steady **progress** towards achieving the specified target. However, the following issues need to be addressed:

- Activities need to be strengthened to promote the universal access to safe water and sanitation, taking into account a comprehensive approach (covering not only physical geographic accessibility, but also affordability, vulnerable population groups, accessibility in public places), institutional access;
- The Republic of Belarus is interested in studying the situation with water supply and sanitation (WASH) in health care facilities using international methodology and would be grateful to the WHO for providing technical and financial support for data collection and organization of consultations. This research will contribute to the implementation of the decisions set out in the World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities”, the achievement of targets under the Protocol on Water and Health and SDGs 6.1 and 6.2.;
- The Republic of Belarus expresses its interest in studying the situation with UNICEF’s water supply and sanitation (WASH) in educational institutions using international methodology and would be grateful for providing technical and financial support for data collection and consultations. The study would contribute to the achievement of the SDGs in terms of equitable access to water, sanitation and hygiene, including vulnerable population groups such as children.

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area IV promotes the achievement of the SDGs:

TI 4.1.1, 4.1.2: SDG Indicator 6.2.1.1* “Proportion of population using safely managed sanitation services”,

TI 4.2.1:

- **SDG Indicator 6.2.1.1*** “Proportion of population using safely managed sanitation services”,
- **SDG Indicator 4.a.1.1.** Proportion of schools with access to: d) basic sources of drinking water; e) single-sex basic sanitation facilities; and (f) basic handwashing facilities (as per the WASH indicator definitions);
- **SDG Indicator 3.8.1.** “Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population).”

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (e) (5.1. Improving the operational performance of drinking water supply systems), for which target 1 target indicator was set with 3 activities aimed at achieving it (Table 5.1):

Table 5.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|---------------------------|---|--|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 5. Levels of performance of collective systems and other systems for water supply (Article 6, para. 2 (e)) – target area V | | | | | |
| 5.1. Improving the operational performance of drinking water supply systems | 5.1.1. reduction of the level of losses and unaccounted water consumption to no more than 12 % | 2025 | <i>Activity 1:</i> Taking inventory of water supply networks with subsequent transfer of the derelict networks to municipal ownership in accordance with the national legislation. <i>Activity 2:</i> Annual replacement of at least 3 % of the networks of public water supply systems exceeding standard operating life. <i>Activity 3:</i> Improving legislation in the field of accounting for losses and unaccounted water consumption by adjusting the Guidelines for calculating losses and unaccounted water consumption and implementation of water meters with remote sensing and data transmission. | Local executive and regulatory authorities (1-2) WSS enterprises (1-2) Ministry of Housing and Utilities (3) | 6.4.1. |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in columns 4-5 of Table 5.1 above.

The inventory of water supply networks was taken as part of the implementation of Law No. 271-Z of the Republic of Belarus “On Drinking Water Supply” dated 24 June 1999 and Decree No. 488 of the President of the Republic of Belarus “On the Construction of Water Supply and Sanitation Networks” dated 22 December 2018 by regional executive committees and the Minsk City Executive Committee. Following the inventory of the water supply networks, derelict networks are envisaged to be transferred to municipal ownership in accordance with the law. Work in this direction is carried out on an ongoing basis with its results reflected in the departmental reporting “Information on the operation of water supply and sewerage facilities.”

Target “The standard for the replacement of water supply networks used beyond their standard operating life” is determined on the basis of Directive No. 7 of the President of the Republic of Belarus “On the Improvement and Development of the Housing and Utility Industry in the Country” dated 4 March 2019 and Resolution No. 1037 of the Council of Ministers of the Republic of Belarus “On the Concept of Improvement and Development of the Housing and Public Utility Sector until 2025” dated 29 December 2017 and is being implemented within the framework of the State Programme (the standard for the annual replacement of water supply networks used beyond their standard operating life is 3 percent of the total length of the networks used beyond their standard operating life. The main sources of financing are the funds of local budgets and organizations’ own funds. In 2021, the share of the replaced water supply networks was 3.3% (or 434.83 km),

3. Progress achieved towards meeting the targets and challenges encountered

The implementation of the measures specified helps reduce water losses in water supply networks. Water losses decreased from 18.0% to 15.4% between 2016 and 2021.

Table 5.2

| No. | Indicator | Water losses in water supply networks (%) | | | |
|--------|---|---|----------------|---------------|------------|
| | | Baseline value | FOR REFERENCE* | Current value | Target |
| | | 2016 | 2020 | 2021 | 2025 |
| 5.1.1. | reduction of the level of losses and unaccounted water consumption to no more than 12 % | 18.0 | 14.5 | 15.4 | up to 12 % |

*Note: * – 2020 is used as a baseline year for planning the next cycle of subprogramme 5 “Clean water” of the State Programme “Comfortable housing” for 2021-2025. The growth in 2021 is due to the fact that water and sanitation facilities were transferred from other business entities to municipal ownership in poor condition (i.e., emergency networks, etc.)*

Therefore, there is a steady **progress** towards achieving the target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area V promotes the achievement of **SDG Indicator 6.4.1.** “Change in water use efficiency over time.”

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (e) (6.1. Improving the operational performance of sanitation systems), for which target 1 target indicator was set with 2 activities aimed at achieving it (Table 6.1):

Table 6.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|---|--|---------------------------|--|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 6. Levels of performance to be achieved by collective systems and other sanitation systems (Article 6, para. 2 (e)) – target area VI | | | | | |
| 6.1. Improving the operational efficiency of sanitation systems | 6.1.1. Improving the operational efficiency of centralized public sanitation systems | 2025 | <p><i>Activity 1:</i> Taking an inventory of sanitation networks with subsequent transfer of the derelict networks to municipal ownership in accordance with the national legislation.</p> <p><i>Activity 2:</i> Annual replacement of at least 3% of the networks of public sanitation systems exceeding standard operating life.</p> | Local executive and regulatory authorities (1-2) WSS enterprises (1-2) | 6.1.3. |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 6.1 (columns 4-5).

The inventory of sanitation networks was taken as part of the implementation of Law No. 271-Z of the Republic of Belarus “On Drinking Water Supply” dated 24 June 1999 and Decree No. 488 of the President of the Republic of Belarus “On the Construction of Water Supply and Sanitation Networks” dated 22 December 2018 by regional executive committees and the Minsk City Executive Committee. Following the inventory of the water supply networks, derelict networks are envisaged to be transferred to municipal ownership in accordance with the law. Work in this direction is carried out on an ongoing basis with its results reflected in the departmental reporting “Information on the operation of water supply and sewerage facilities.”

Target “The standard for the replacement of sanitation networks used beyond their standard operating life” is determined on the basis of Directive No. 7 of the President of the Republic of Belarus “On the Improvement and Development of the Housing and Utility Industry in the Country” dated 4 March 2019 and Resolution No. 1037 of the Council of Ministers of the Republic of Belarus “On the Concept of Improvement and Development of the Housing and Public Utility Sector until 2025” dated 29 December 2017 and is being implemented as part of subprogramme 5 “Clean water” of the State Programme “Comfortable housing and favourable environment” for 2021-2025, which provides for a number of activities in the field of water supply and sanitation and their financing. The main sources of financing are the funds of local budgets and organizations’ own funds. The task to achieve the target is annually communicated by the Ministry of Housing and Communal Services to the customers of the activities (regional executive committees and the Minsk City Executive Committee). The standard for the annual replacement of sanitation networks used beyond their standard operating life is 3% of the total length of the networks used beyond their standard operating life.

In 2021, the percentage of the sanitation networks replaced was 3.1% (or 171.31 km), which corresponds to the adjusted value of the indicator of the State Programme.

3. Progress achieved towards meeting the targets and challenges encountered

The implementation of the measures specified contributes to improving the reliability and operation of sanitation systems.

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area VI promotes the achievement of SDG Indicator 6.3.1. “Proportion of wastewater safely treated.”

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

1. Current target(s) and target date(s).

The Set of Measures identified 2 targets under Article 6, paragraph 2 (f) of the Protocol (7.1. Improving drinking water management; 7.2. Implementation of international approaches in the field of drinking water supply management), for which target 2 target indicators were set with 1/4 activities, respectively (Table 7.1):

Table 7.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|--|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 7. Application of recognized good practice to the management of water supply (Article 6, para. 2 (f)) – target area VII | | | | | |
| 7.1. Improving drinking water management | 7.1.1. preparation (adjustment) and adoption of RLAs and technical regulatory legal acts (hereinafter – TRLAs) in accordance with the new version of the Law of the Republic of Belarus “On Drinking Water Supply” | 2021 | <i>Activity 1:</i> Preparation and adoption of RLAs and TRLAs in accordance with the new version of the Law of the Republic of Belarus “On Drinking Water Supply.” | Ministry of Housing and Utilities (1) Regional Executive Committees, Minsk City Executive Committee (1) | 6.1.4. |
| 7.2. Implementation of international approaches in the field of drinking water supply management | 7.2.1. implementation of risk-based approaches to management of municipal centralized drinking water supply systems | 2030 | <i>Activity 1:</i> Informing stakeholders about international approaches in the field of drinking water supply management (constantly). <i>Activity 2:</i> Development of methodological and regulatory framework for implementation of risk assessment and management in drinking water supply systems (2025). <i>Activity 3:</i> Implementation of a pilot project on involving local communities in water resources management through development and implementation of water and sanitation safety plans (2022). <i>Activity 4:</i> Informing stakeholders about international approaches in the field of ensuring equitable access to drinking water provided in compliance with security requirements (constantly). | Ministry of Health (1-2, 4) Ministry of Housing and Utilities (1) Grodno Regional Executive Committee, Masty District Executive Committee (3) | |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 7.1 (columns 4-5).

Target Indicator 7.1.1 Activity 1: Preparation and adoption of RLAs and TRLAs in accordance with the new version of the Law of the Republic of Belarus “On Drinking Water Supply.”

The legislative framework in the field of drinking water supply has undergone significant changes in recent years. It has become necessary to develop a number of new and revise existing sectoral and intersectoral regulatory legal acts. The fundamental work to improve legislation in the field of drinking water supply was the amendment of Law No. 271-Z of the Republic of Belarus “On Drinking Water Supply” dated 24 June 1999. In 2019, a new version of the Law came into effect.

The revised Law provides for a number of changes in the legal regulation of relations in the field of drinking water supply, namely:

- it specified in detail the powers of state bodies in charge of state regulation in the field of drinking water supply, including in line with approaches to the distribution of competences of state control (supervisory) bodies;
- it regulated the competence of local executive and regulatory bodies;

- in order to ensure the public availability and accessibility of information on drinking water supply to the population, the Council of Ministers is empowered to establish the procedure for providing information on water supply;

- it clarified the rights and obligations of subscribers and consumers, other legal entities and individuals, water supply and sanitation organizations operating drinking water supply systems or providing water supply services;

- it envisaged a set of measures aimed at ensuring the safety of drinking water and provided guarantees for the provision of drinking water in case of emergencies or accidents;

- it tightened the requirements for economic and other activities within the boundaries of the sanitary protection zones of drinking water sources and specified the procedure for developing the projects of sanitary protection zones, and the procedure for their coordination and approval;

- it obliged local executive and administrative bodies to take an inventory of existing drinking water supply systems to assess the actual state of drinking water supply systems in settlements;

It established the main directions of international cooperation in the field of drinking water supply.

As part of the implementation of the Law, work has been carried out to improve existing and develop new regulatory legal acts in the field of drinking water supply. In particular, the resolutions of the Council of Ministers that regulate the issues of providing information on drinking water supply, technical operation of drinking water supply and sanitation systems in settlements, and on construction of water intake facilities were prepared and entered into force (Resolution No. 594 of the Council of Ministers of the Republic of Belarus “On Approval of the Rules for Technical Operation of Drinking Water Supply and Sanitation Systems in Settlements,” dated 4 September 2019). It amended the current resolution of the Council of Ministers, which regulates the use of centralized water supply and sanitation systems in settlements (Resolution No. 788 of the Council of Ministers of the Republic of Belarus “On Approval of the Rules for Using Centralized Water Supply and Sanitation Systems in Settlements” dated 30 September 2016 (<https://pravo.by/document/?guid=3961&p0=C21600788>)). Amendments have also been made to the resolutions of the Ministry of Housing and Communal Services that regulate the calculation of water loss and unaccounted-for water consumption, the assessment and calculation of the technological water consumption standard in centralized water supply systems, and the scheduled and preventive maintenance of centralized drinking water supply and sanitation systems. A procedure has been developed providing for the provision of information on drinking water supply - as determined by Resolution No. 456 of the Council of Ministers of the Republic of Belarus “On the Procedure for Providing Information on Drinking Water Supply” dated 5 July 2019.

In the context of ensuring the uninterrupted operation of water supply systems, Resolution No. 59 of the Ministry of Architecture and Construction of the Republic of Belarus dated 31 October 2019 approved SN 4.01.01-2019. “Building Codes of the Republic of Belarus. Water Supply. External Networks and Structures” (<https://tnpa.by/#!/DocumentCard/487802/620157>). The authorities have developed and enacted SN 3.01.03-2020 “Planning and Development of Settlements” (clause 12), as approved by Resolution No. 94 of the Ministry of Architecture and Construction of the Republic of Belarus dated 27 November 2020 (https://pravo.by/upload/docs/op/W22136480p_1617051600.pdf).

Target Indicator 7.2.1. Implementation of risk-based approaches to management of municipal centralized drinking water supply systems.

Activities 1 and 4: Informing stakeholders about international approaches to managing drinking water supply and ensuring equitable access to drinking water, which is organized in compliance with safety requirements, about the Protocol on Water and Health, is carried out on an ongoing basis within the framework of republican and international events (conferences and seminars) (described in detail in the section of target area XX. Six large-scale events of the republican level were held in 2021 alone). These issues are included in curricula of advanced training courses for WASH specialists and specialist training programmes of educational institutions.

The website of the National Focal Point of the Protocol on Water and Health (http://rspch.by/Docs/self-ass-access-water-rb_rus.pdf; http://rspch.by/Docs/self-ass-access-water-rb_eng.pdf) contains the Report on “Assessment of Equitable Access to Water and Sanitation in the Republic of Belarus.”

Every year on 22 March, as part of the celebration of the World Water Day, events are held among various target groups, including children, in order to attract public attention to the safety of drinking water and the protection of water resources.

Activity 2: A methodological and regulatory framework for the application of health risk assessment and management in drinking water supply systems is being developed on the instructions of state authorities (the Ministry of Health) and based on the results of scientific research activities. The following regulatory and methodological documents covering the application of health risk assessment have been developed and approved:

[1] Hygienic standard “Drinking water safety indicators” (approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021);

[2] Instruction on the procedure for predicting the health status of the population living in administrative territorial units, taking into account an integral socio-hygienic index (approved by Order No. 735 of the Ministry of Health dated 23 June 2021);

[3] Instructions for Use No. 019-1118 “Method of hygienic assessment of drinking water” (approved by the Ministry of Health of the Republic of Belarus on 23/04/2019);

[4] Instructions for Use No. 019-1221 “Method for assessing public health risk from exposure to chemicals polluting drinking water” (approved by the Ministry of Health of the Republic of Belarus on 28/01/2022);

[5] Instructions for Use No. 020-1221 “Method of quantification of microbiological health risk in drinking water”;

[6] Instructions for Use No. 021-1221 “Method of hygienic standardization of chemicals in drinking water according to health risk criteria”;

[7] Instructions for Use No. 031-1221 “Method of integral assessment of health risks associated with water use”;

As part of the participation of IPO “Ecopartnership” in the “Water Programme of Belarus and Russia,” implemented by the Coalition Clean Baltic and its partners, a practical guide has been developed to improve safety in drinking water supply and sanitation systems in small settlements of the Republic of Belarus “WATER AND SANITATION SAFETY PLAN” (https://www.ecoproject.by/sites/default/files/publications/rukovodstvo_pobvv.pdf).

Activity 3: Implementation of a pilot project on involving local communities in water resources management through development and implementation of water and sanitation safety plans (2022).

The international technical assistance (ITA) project “Public Participation and Effective Water Governance in Masty District” was implemented (registered with the Ministry of Economy under No. 2/18/000959 on 20 December 2018), financed by the EU (implementation period - 01/01/2021-31/12/2021), ITA recipient - Masty District Executive Committee, project partner - IPO “Ecopartnership”.

The overall goal of the project was to strengthen the role of local authorities in the development of transparent and participatory sustainable water management in Masty District. Project objectives: 1) building the institutional and professional capacity of local authorities and other stakeholders, 2) integrating the principles of integrity and transparency into the processes of water resources management in Masty District; 3) stimulating the participation of local population in the management of water resources through the development of communication channels.

A training programme on the preparation of Water and Sanitation Safety Plans was developed and implemented (trainings were held in Masty on 23/10/2019, 05/12/19, 10/01/2020, 04/03/2020), a manual on the preparation of the Water and Sanitation Safety Plans was developed, a Water Council of the project was established (on 18/04/2019), and seven meetings were held (on 06/08/2019, 13/02/2020; 26/05/2020, 16/12/2020, 27/04/2021; 19/08/2021, 12/01/2022). Seven water and sanitation safety plans (WSSPs) (6 for village councils and 1 for Masty) were developed and approved by Decision No. 133 of the Masty District Council of Deputies “On Approval of Water and Sanitation Safety Plans” dated 22/06/2020. A contest of pilot initiatives for the implementation of the WSSPs was held (on 10/07/2020), 5 pilot initiatives were selected and implemented, including 4 initiatives funded by the ITA project:

improvement of water supply and sanitation systems in the Gudevichi Village Council of Masty District, repairing and bringing wastewater treatment facilities in line with existing standards;

construction of water deferrization stations in the village of Zapole of the Dubno Village Council and in the village of Goluby of the Kurilovichi Village Council;

provision of the population of the agrotown of Mikelevshchina, the small village of B. Stepanishki and the small village of Lyada of the Masty Village Council with high-quality drinking water; purchase of more efficient pumping equipment for additional installation at the water deferrization station in Masty;

improvement of the water supply in the agrotown of Streltsy of the Lunno village council and the city of Masty, installation of stand-by modern pumping equipment of greater capacity.

One initiative was implemented using budget financing, namely “Providing the population of the agrotown of Peski with clean drinking water.” This initiative was submitted for the contest of initiatives by the Peski village executive committee.

A training information centre on water was established and opened in Masty (on 19/08/2021), a training programme for the training information centre on water in Masty was developed and approved, an interest club “Secrets of Water” started its work (on 01/09/2021), with children grouped into three groups to attend the club. A leaflet on “Water and Sanitation for Everyone” (<https://ecoproject.by/ru/publications/voda/voda-i-sanitariya-dlya-kazhdogo>), Ecologika, a series of posters about water (A4 format, 3300 pcs.), including one on equitable

access to water, and the second one on equitable access to sanitation, and a children's fairy-tale on water "Vam Dapamozha Kva" (<https://ecoproject.by/ru/publications/voda/vam-dapamozha-kva>) were published.

The project tasks were completed in full; more detailed information is available at <https://www.ecoproject.by/ru/projects/voda/uchastie-obschestvennosti-i-effektivnoe-upravlenie-vodnymi-resursami-v-mostovskom>.

3. Progress achieved towards meeting the targets and challenges encountered

Improving drinking water management is aimed at providing comfortable living conditions for citizens and creating a favourable environment for their life and it also contributes to solving issues related to the development and operation of water supply systems and enhancing the quality provision of water supply services.

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area VII promotes the achievement of **SDG Indicator 6.1.1** "Proportion of population using safely managed drinking water services."

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (f) of the Protocol (8.1. Implementation of international approaches in the field of sanitation management), for which target 2 target indicators were set with 1/4 activities, respectively (Table 8.1):

Table 8.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|---------------------------|--|--|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 8. Application of recognized good practice to the management of sanitation (Article 6, para. 2 (f)) – target area VIII | | | | | |
| 8.1. Implementation of international approaches in the field of sanitation management | 8.1.1. implementation of risk-based approaches to management of sanitation systems | 2021-2030 | <p><i>Activity 1:</i> Informing stakeholders about international approaches in the field of sanitation management (constantly).</p> <p><i>Activity 2:</i> Development of methodological and regulatory framework for implementation of risk assessment and management in sanitation systems (2025).</p> <p><i>Activity 3:</i> Implementation of a pilot project on involving local communities in water resources management through development and implementation of water and sanitation safety plans (2022).</p> <p><i>Activity 4:</i> Informing stakeholders about international approaches in the field of ensuring equitable access to sanitation provided in compliance with security requirements (constantly).</p> | <p>Ministry of Health (1-2, 4)</p> <p>Ministry of Housing and Utilities (1)</p> <p>Grodno Regional Executive Committee, Masty District Executive Committee (3)</p> | 6.1.3. |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 8.1 (columns 4-5).

Activity 2:

In order to ensure the uninterrupted operation of centralized sanitation systems and the efficiency of wastewater treatment, legislative requirements and restrictions on the acceptance of industrial wastewater into the sewerage networks of settlements, including a list and permissible concentrations of pollutants and their quality indicators in the composition of wastewater, subject to the technical capacity of wastewater treatment facilities in settlements.

The main document in this area is Resolution No. 788 of the Council of Ministers of the Republic of Belarus “On Approval of the Rules for Using Centralized Water Supply and Sanitation Systems in Settlements” dated 30 September 2016 (hereinafter – the Rules). The Rules regulate relations between individuals, legal entities and water supply and sanitation enterprises in the field of use of centralized sanitation systems, including the execution and performance of water supply and/or sanitation services agreements, payments for services rendered, as well as safety requirements for such systems, and an industrial wastewater intake process in respect of industrial wastewater discharged into centralized sanitation systems.

The republican rules establish a unified approach to the discharge of industrial wastewater into the centralized sanitation systems of settlements, the procedure for monitoring the quality of wastewater, including

a sampling procedure, the requirements for the qualitative composition of industrial wastewater and the installation of local wastewater treatment plants on subscribers' facilities intended for preliminary treatment of difficult-to-oxidize and aggressive pollutants that adversely affect the technological process of wastewater treatment at wastewater treatment plants in settlements. Additionally, the Rules establish the maximum permissible concentrations of pollutants in subscribers' wastewater discharged into the centralized sewerage system, as well as the procedure for calculating the excessive concentrations of pollutants in industrial wastewater discharged into the centralized sewerage system, which makes it possible to increase the responsibility of subscribers for the quality of industrial wastewater discharged into centralized sewerage systems of settlements.

The provision on the installation of local treatment plants at subscribers' facilities in areas where wastewater is discharged into sewerage networks of settlements was provided as part of the implementation of Article 47 of the Water Code of the Republic of Belarus.

In order to ensure the efficiency of wastewater treatment, a provision has been enshrined in the law, which allows water supply and sanitation (hereinafter – WSS) organizations to allocate funds for the reconstruction of wastewater treatment facilities by reducing an environmental tax on the discharge of wastewater into water bodies by the amount of capital investments in the construction and/or reconstruction of wastewater treatment facilities designed to remove pollutants from wastewater (Article 251 (5) of the Tax Code of the Republic of Belarus).

In the context of ensuring the uninterrupted operation of sanitation systems, Resolution No. 59 of the Ministry of Architecture and Construction of the Republic of Belarus dated 31 October 2019 approved Building Codes (SN) 4.01.02-2019. “Sewerage. External Networks and Structures” (<https://tnpa.by/#!/FileText/620159/487804>).

Activity 3:

State support for the construction and reconstruction of municipal wastewater treatment plants is provided by allocating budget funds and funds from international financial organizations to finance the highest-priority projects. The state programme for the period of 2021-2025 provides for the construction and reconstruction of 70 wastewater treatment plants.

The international technical assistance (ITA) project “Public Participation and Effective Water Governance in Masty District” was implemented (registered with the Ministry of Economy under No. 2/18/000959 on 20 December 2018), financed by the EU (implementation period - 01/01/2021-31/12/2021), ITA recipient - Masty District Executive Committee, project partner - IPO “Ecopartnership” (more detail on the content and results is provided in Section VII). The overall goal of the project was to strengthen the role of local authorities in the development of transparent and participatory sustainable water management in Masty District. Project objectives: 1) building the institutional and professional capacity of local authorities and other stakeholders, 2) integrating the principles of integrity and transparency into the processes of water resources management in Masty District; 3) stimulating the participation of local population in the management of water resources through the development of communication channels.

A training programme on the preparation of Water and Sanitation Safety Plans was developed and implemented (trainings were held in Masty on 23/10/2019, 05/12/2019, 10/01/2020, 04/03/2020), a manual on the preparation of the Water and Sanitation Safety Plans was developed, a Water Council of the project was established (on 18/04/2019), and seven meetings were held (on 06/08/2019, 13/02/2020; 26/05/2020, 16/12/2020, 27/04/2021; 19/08/2021, 12/01/2022). Seven water and sanitation safety plans (WSSPs) (6 for village councils and 1 for Masty) were developed and approved by Decision No. 133 of the Masty District Council of Deputies “On Approval of Water and Sanitation Safety Plans” dated 22/06/2020. A contest of pilot initiatives for the implementation of the WSSPs was held (on 10/07/2020), with 5 pilot initiatives selected and implemented, including 4 initiatives funded by the ITA project:

- improvement of water supply and sanitation systems in the Gudevichi Village Council of Masty District, repairing and bringing wastewater treatment facilities in line with existing standards;

- construction of water deferrization stations in the village of Zapole of the Dubno Village Council and in the village of Goluby of the Kurilovichi Village Council;

- provision of the population of the agrotown of Mikelevshchina, the small village of B. Stepanishki and the small village of Lyada of the Masty Village Council with high-quality drinking water; purchase of more efficient pumping equipment for additional installation at the water deferrization station in Masty;

- improvement of the water supply in the agrotown of Streltsy of the Lunno village council and the city of Masty, installation of stand-by modern pumping equipment of greater capacity.

One initiative was implemented using budget financing, namely “Providing the population of the agrotown of Peski with clean drinking water.” This initiative was submitted for the contest of initiatives by the Peski village executive committee.

Activities 1, 4:

Work is carried out on an ongoing basis to inform stakeholders about international approaches to managing drinking water supply and sanitation and ensuring equitable access to safely managed drinking water

and sanitation (described in detail in the section of target area XX) within the framework of republican and international events (conferences and seminars; 6 events of the republican level were held in 2021 alone). These issues are included in the curricula of advanced training courses for WASH specialists and specialist training programmes of educational institutions.

The website of the National Focal Point of the Protocol on Water and Health (http://rspch.by/Docs/self-ass-access-water-rb_rus.pdf; http://rspch.by/Docs/self-ass-access-water-rb_eng.pdf) contains the Report on “Assessment of Equitable Access to Water and Sanitation in the Republic of Belarus” and provides relevant information along with links to useful data sources.

Every year on 22 March, as part of the celebration of the World Water Day, events are held among various target groups, including children, in order to attract public attention to the safety of drinking water and the protection of water resources.

Within the framework of the participation of IPO “Ecopartnership” in the “Water Programme of Belarus and Russia,” implemented by the Coalition Clean Baltic and its partners, a practical guide has been developed to improve safety in drinking water supply and sanitation systems in small settlements of the Republic of Belarus “Water and Sanitation Safety Plan.”

3. Progress achieved towards meeting the targets and challenges encountered

The sanitation management mechanisms prescribed by the Rules contribute to:

improving the level of wastewater treatment and the reliability of centralized sanitation systems;

tightening the responsibility of business entities for the quality of industrial wastewater discharged into centralized sanitation systems;

reducing the impact of business entities on municipal wastewater treatment plants by removing specific pollutants that are not removed at municipal wastewater treatment plants from industrial wastewater discharged into centralized sewerage systems.

As part of the implementation of the activities under the State Programme, 4 municipal wastewater treatment plants were reconstructed in 2021.

Therefore, there is a steady progress towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area VII promotes the achievement of **SDG Indicator 6.2.1.1** “Proportion of population using safely managed sanitation services.”

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

The target indicator in this area has not been set due to the fact that no cases of untreated wastewater discharge into water bodies have been registered in the Republic of Belarus, except for surface wastewater discharge (see section X).

X. Occurrence of discharges of untreated storm water overflows from wastewater collection systems (art. 6, para. 2 (g) (ii))

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (g) (ii) of the Protocol (9.1 “Improving storm water runoff system management”), for which target 2 target indicators were set with relevant activities (Table 10.1):

Table 10.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|---|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 9. Occurrence of discharges of untreated storm water overflows (Article 6, para. 2 (g) (i)) – target area X | | | | | |
| 9.1. Improving storm water runoff system management | 9.1.1. improving account of the amount (volume of discharge) and quality control of surface wastewater discharged into surface water bodies | 2025 | <i>Activity 1:</i> Taking inventory of wastewater discharges to surface water bodies, mapping the coordinates of wastewater discharges to water bodies in settlements with population of 50,000 people and more. <i>Activity 2:</i> Obtaining permits for special water use by enterprises involved in discharge of surface wastewater into surface water bodies | Ministry of Natural Resources (1) Enterprises owning storm water runoff systems (2) | 6.3.1. |
| | 9.1.2. taking inventory of storm water runoff networks in settlements with population of 100,000 people and more | 2025 | <i>Activity 1:</i> Taking inventory of storm water networks in 15 towns to determine the need for construction of storm water treatment facilities on discharges of surface wastewater into surface water bodies | Local executive and regulatory authorities (1) Enterprises owning storm water runoff systems (1) | |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 10.1 above.

A legal framework has been established enabling enterprises involved in discharge of surface wastewater into surface water bodies to obtain permits for special water use (Resolution No. 152 of the Council of Ministers of the Republic of Belarus “On Some Measures to Implement the Water Code of the Republic of Belarus” dated 2 March 2015).

The Environmental Strategy of the Republic of Belarus until 2025 provides for the rainwater and meltwater treatment in settlements with population of more than 50,000 people, as well as in resort and industrial areas, which can be implemented by installing storm water runoff systems in these areas. Measures related to the organization of surface wastewater disposal and treatment are also planned in state programmes for the development of certain territories and regions.

The National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030 includes the following activities in its Section VI “Development of Water Supply and Sanitation Systems” of Annex 2 “Action Plan”:

- development of scientifically based requirements for the sustainable management of surface wastewater in settlements, taking into account international experience (it is planned to develop a TRLA providing for the procedure for organizing the collection, transportation, treatment and use of surface wastewater in settlements);
- development of storm water runoff systems.

Additionally, the National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030 specifies that it is necessary to organize the reuse of surface wastewater after its treatment and disinfection.

In 2020, Resolution No. 29 of the Ministry of Natural Resources “On Amendments to Resolution No. 9 of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus of 1 February 2007,” dated 30 December 2020, included industrial and surface wastewater discharges into water bodies through the storm water runoff system into the list of the discharges to be monitored at the local level (where the industrial wastewater is discharged in the amount of 200 to 2000 cubic meters per day, the monitoring frequency is once per month, and where the amount of discharges is 2,000 cubic meters per day and more, the monitoring frequency

is twice per month).

3. Progress achieved towards meeting the targets and challenges encountered

Measures to achieve the targets set are planned to be started in 2022.

Presently, inventory of surface wastewater discharges has been taken in some cities only, with industrial surveillance carried out selectively in respect of surface wastewater discharges only. In a number of settlements, part of the storm water runoff systems was transferred to the balance sheet of specialized organizations, and the diagrams of existing storm water runoff networks are missing.

However, work in this area is continuing: the quantity of surface wastewater discharges reported by water users in state statistical reports in Form 1-Water (the Ministry of Natural Resources) is increasing annually.

According to the State Water Cadastre (SWC), the amount of surface wastewater discharges nationwide in the Republic of Belarus accounts for 15% of the total amount of wastewater discharged into surface water bodies (Table 10.2).

Table 10.2

Dynamics of surface wastewater discharges into water bodies of the Republic of Belarus for the period of 2015-2020

| Indicator | Unit | 2015 | 2017 | 2020 |
|---|------------------------------|---------------|--------------|---------------|
| Surface wastewater discharge into surface water bodies | million m ³ /year | 151.73 | 149.7 | 167.5* |
| without pre-treatment | million m ³ /year | - | 78.0 | 91.8 |
| effluent treated to standard quality | million m ³ /year | - | 71.1 | 75.5 |
| insufficiently treated | million m ³ /year | - | 0.6 | 0.2 |

*Note: * - includes 57 million m³ of a mixture of surface wastewater and industrial wastewater where a combined sewerage system is available at enterprises.*

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The implementation of activities within Target 9.1 will make it possible to adjust the reporting under **SDG Indicator 6.3.1** “Proportion of wastewater safely treated.”

XI. Quality of discharges of wastewater from wastewater treatment installations (art. 6, para. 2 (h))

1. Current target(s) and target date(s).

The Set of Measures identified 3 targets under Article 6, paragraph 2 (h) of the Protocol (10.1. Reducing the discharge of heavy metals with wastewater to surface water bodies after treatment facilities, 10.2. Reducing the volume of discharge of insufficiently treated wastewater into surface water bodies, 10.3. Increasing the proportion of surface water bodies with environmental ratings of “good” and higher), for which targets 3 target indicators were set with 2/7/4 activities, respectively (Table 11.1):

Table 11.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|----------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 10. Quality of discharges of wastewater from wastewater treatment installations (art. 6, para. 2 (h)) - target area XI | | | | | |
| 10.1. Reducing the mass of the discharge of heavy metals in waste water to surface water bodies after treatment facilities | 1.1.10. Decrease in the release of heavy metals (copper, lead, total ferrum, total chromium, nickel, zinc) in wastewater composition of surface water bodies (in % vs. the 2015 levels): – by 20%; – by 25%. | 2021-2030 2025-2030 | <i>Activity 1:</i> Creating mechanisms of economic incentives to reduce pollutant discharge in industrial wastewater into the municipal sanitation system, including elaborating the issue of setting environmental tax rates for wastewater discharge that would depend on the mass of pollutant discharge. <i>Activity 2:</i> Development of RAs on establishment of common requirements for the reception, transportation and treatment of industrial wastewater at discharge into the municipal sanitation system to reduce the load on municipal wastewater treatment facilities. <i>Activity 3:</i> Activities in related target area VIII. | Ministry of Economy (1) Ministry of Taxes and Duties of the Republic of Belarus (1) Ministry of Finance (1) Ministry of Housing and Utilities (1,2) Ministry of Natural Resources (3) Local executive and regulatory authorities (3) WSS enterprises (3) | 6.3.1. |
| 10.2. Reducing the volume of discharge of insufficiently treated wastewater into surface water bodies | 10.2.1. Index of discharge of insufficiently treated wastewater discharged into surface water bodies after treatment facilities (in % vs. the 2015 levels): – 30%; – 30%. | 2021-2030 2025-2030 | <i>Activity 1:</i> Development of RLAs on establishment of common requirements for the reception, transportation and treatment of industrial wastewater at discharge into the municipal sanitation system to reduce the load on municipal wastewater treatment facilities. <i>Activity 2:</i> Organizing metering of wastewater discharged into centralized municipal sanitation systems in settlements (2025). <i>Activity 3:</i> Construction, reconstruction and modernization of local wastewater treatment facilities by the users-industrial enterprises placing the greatest burden on municipal wastewater treatment facilities (2030). <i>Activity 4:</i> Construction, reconstruction and modernization of treatment facilities for complete biological wastewater treatment of centralized municipal wastewater systems (at least 5), including with the funds from | Ministry of Housing and Utilities (1) Enterprises and organizations (2, 3) Public authorities and other state organizations subordinate to the Government and operating in the respective sector (2, 3) Local executive and regulatory authorities (4, 7) Ministry of Natural Resources (5, 6) WSS enterprises (7) | 6.3.1. |

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | international financial organizations (2030). <i>Activity 5:</i> Development and implementation of the Plan of Action to reduce the discharge of insufficiently treated wastewater into surface water bodies. <i>Activity 6:</i> Development of TRLAs with environmental requirements for allocation and operation of swine breeding farms and other livestock facilities. <i>Activity 7:</i> Activities in related target area VIII. | | |
| 10.3. Increasing the proportion of surface water bodies with environmental ratings of “good” and higher. | 10.3.1. Proportion of surface water bodies with environmental ratings of “good” and higher, %: at least 75%; at least 80%. | 2025 2030 | <i>Activity 1:</i> Development of requirements for classification of surface water bodies to determine the basis for classifying surface water bodies as heavily modified. <i>Activity 2:</i> Monitoring of surface waters, local monitoring within the framework of the National Environmental Monitoring System (NEMS) <i>Activity 3:</i> Deployment of the hydro-morphological monitoring network. <i>Activity 4:</i> Development and adjustment of projects of water protection zones and coastal strips | Ministry of Natural Resources (1-3) Local executive and regulatory authorities (4) | 6.3.2.1 |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 11.1 above.

The Environmental Strategy of the Republic of Belarus until 2025 provides for the local treatment of industrial wastewater discharged into centralized sewerage systems; reduction of discharges of heavy metals and persistent pollutants into water bodies by 95%, and nitrogen and phosphorus by 50%. The National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030 includes in Section III “Economic Mechanisms for Water Resources Management” of Appendix 2 of the Action Plan a measure aimed at reducing the discharge of pollutants in wastewater into water bodies: “Creating mechanisms of economic incentives to reduce pollutant discharge in wastewater, including elaborating the issue of setting environmental tax rates for wastewater discharge that would depend on the mass of pollutants discharged with wastewater.”

Resolution No. 29 of the Ministry of Natural Resources “On Amendments to Resolution No. 9 of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus of 1 February 2007,” dated 30 December 2020, defines the criteria for including enterprises that discharge domestic wastewater and their mixtures with other types of wastewater (urban wastewater) into water bodies. This made it possible to expand the list of water supply and sewerage enterprises (housing and public utility enterprises) that are obliged to carry out local monitoring of wastewater.

The Ministry of Natural Resources approved under No. 9-2/177-DZ “The Plan of Action to Reduce the Discharge of Insufficiently Treated Wastewater into Surface Water Bodies” dated 12 May 2020 (hereinafter – the Plan), under which the territorial bodies of the Ministry of Natural Resources provide information on the following activities:

- preparing a list of inefficiently operating wastewater treatment facilities that regularly discharge insufficiently treated wastewater into surface water bodies;
- interacting with local executive and regulatory bodies: when developing measures for the rational (sustainable) use of natural resources and environmental protection that are financed from local budgets, providing for the necessary funds for the modernization and reconstruction of inefficient wastewater treatment

facilities; intensifying work to attract foreign direct investment, borrowed funds from commercial organizations, loans, on the basis of the preparation and adoption by regional executive committees of decisions on the approval of the list of inefficient municipal wastewater treatment plants and sending them to the Ministry of Housing and Communal Services for preparing the list of facilities whose construction (reconstruction) is planned to be implemented using foreign bank loans; taking measures to establish in all administrative territorial units (district, city of Minsk) the conditions for industrial wastewater reception into the sewerage system of settlements by making appropriate decisions by the MIRO in coordination with the territorial bodies of the Ministry of Natural Resources with the mandatory legal review.

- monitoring the progress of construction and repair work carried out by water users at wastewater treatment plants, during which work the required standards for permissible discharges of chemical and other substances in wastewater (hereinafter – the PD standards) are not complied with;

- monitoring of issued permits for special water use or comprehensive environmental permits, in which temporary PD standards continue to be in force for more than 3 years, as well as their revision, if the water user does not actually carry out work that is not directly associated with improving the efficiency (quality) of wastewater treatment;

- considering the issue of the efficiency of wastewater treatment plants, which provide for the discharge of wastewater into surface water bodies, at the collegiums of the regional and Minsk city committees of natural resources and environmental protection of the Republic of Belarus together with the representatives of the MIRO and interested water users.

The implementation of these activities will further make it possible to adjust the reporting under SDG Indicator 6.3.1 “Proportion of wastewater safely treated.”

3. Progress achieved towards meeting the targets and challenges encountered

According to the State Water Cadastre, the amount of pollutants discharged with wastewater nationwide in the Republic of Belarus tends to decrease for heavy metals, nitrogen and to increase for phosphorus as compared to 2010 (Table 11.2):

the amount of heavy metals in wastewater discharged into water bodies was 296.24 tonnes in 2017 (500.63 tonnes in 2010). This accounted for 59.2% of the 2010 level – the progress in the implementation of the target has been achieved;

the amount of nitrogen in wastewater discharged into water bodies was 9.04 thousand tonnes in 2017 (9.09 tonnes in 2010). This accounted for 99.4 % of the 2010 level – the progress in the implementation of the target has not been achieved;

the amount of phosphorus in wastewater discharged into water bodies was 1.41 thousand tonnes in 2020 (0.8 tonnes in 2010). This accounted for 176 % of the 2010 level – the progress in the implementation of the target has not been achieved. This indicator demonstrates an increase in volumes compared to previous years. The main reasons are an increased load on wastewater treatment plants, an increase in domestic use of phosphates, and the absence of chemical phosphate reagent treatment units in most urban wastewater treatment plants in the country.

The content of persistent organic pollutants in bottom sediments of surface water bodies is monitored at 35 transboundary monitoring sites for surface water monitoring of the National Environmental Monitoring System of the Republic of Belarus. The content of POPs in bottom sediments by all determined indicators was below the detection limit, which allows to conclude that persistent organic pollutants occur both in water and in bottom sediments in trace amounts.

Table 11.2
Mass of priority pollutants discharged with wastewater into water bodies of the Republic of Belarus for 2010-2020

| Indicator | Unit of Measurement | Indicator value | | | | |
|---|---|-----------------------------|----------------------|-----------------------|-----------------------|-----------------|
| | | Baseline (2010) | Previous | | Current (2020) | Targeted (2025) |
| | | | (2015) | (2017) | | |
| Heavy metals (copper, lead, total ferrum, total chrome, nickel, zinc) | <u>tonnes</u> % of 2010 level | 500.63 | <u>314.1</u> 63 % | <u>311.89</u> 62 % | <u>296.24</u> 59 % | 95 % |
| persistent organic pollutants | <u>tonnes</u> % of 2010 level | less than a detection limit | | | | 95 % |
| nitrogen (sum of ammonium ion, nitrate ion and nitrite ion) | <u>thousand tonnes</u> % of 2010 level | 9.09 | <u>8.20</u> 90 % | <u>9.54</u> 105 % | <u>9.04</u> 99 % | 50 % |
| Total phosphorus | <u>thousand tonnes</u> % of 2010 level | 0.8** | <u>1.30</u> 163 % | <u>1.63</u> 203 % | <u>1.41</u> 176 % | 50 % |

Note: ** - estimated value according to 2010 data

According to the State Water Cadastre, the amount of insufficiently treated wastewater discharge nationwide in the Republic of Belarus accounts for less than 1% of the total amount of wastewater discharged into surface water bodies (Table 11.3) and has reduced by 24% compared to the 2017 level.

Table 11.3

Dynamics of wastewater discharges into water bodies of the Republic of Belarus for 2015-2020

| No. | Indicator | Unit | 2015 | 2017 | 2020 |
|-----|---|------------------------------|------------|--------------|--------------|
| 1 | Domestic, industrial* and surface wastewater discharge into surface water bodies | million m ³ /year | 870 | 1,053 | 1,035 |
| 1.1 | without pre-treatment | million m ³ /year | 246 | 354 | 339 |
| 1.2 | effluent treated to standard quality | million m ³ /year | 618 | 694 | 693 |
| 1.3 | insufficiently treated | million m ³ /year | 6 | 4 | 3 |
| 1.4 | percentage of insufficiently treated wastewater | % | 0.69 | 0.38 | 0.29 |

Note: * - includes volumes of wastewater from the following economic activities: "Agriculture" – Nationwide Classification of Economic Activities (OKED) code 01-03 (agriculture, forestry and fishing); "Industry" - OKED codes 05-35, 41-43 (mining and quarrying; manufacturing; electricity, gas, steam, hot water and air conditioning supply; construction).

Information on Target 10.3. "Increasing the proportion of surface water bodies with environmental ratings of "good" and higher is provided in Section V (I) – Table 3.V.1. The analysis of data on the hydrobiological and hydrochemical class of water bodies indicates as follows:

In 2021, there were no water bodies classed as "very bad", and only 1.4% of watercourses were rated as "bad." Most of the water bodies and streams are classified as "excellent" or "good";

Compared to the previous reporting cycle, the number of watercourses rated as "excellent" and "good" for their hydrochemical characteristics has significantly decreased and the number of those classed as "satisfactory" has increased from 5.1% to 18.3%. A less noticeable, but similar trend is also observed in terms of the hydrobiological status. In water bodies, on the contrary, an increase from 39% to 57.4% in the number of water bodies with "excellent" hydrochemical characteristics and a smaller increase from 8.8% to 12.3% in the number of water bodies in terms of their hydrobiological indicators are observed.

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of Indicators 10.1.1 and 10.2.1 contributes to the improvement of **SDG Indicator 6.3.1** "Proportion of wastewater safely treated."

The achievement of Indicator 10.3.1 contributes to the improvement of the **SDG Indicator 6.3.2.1** "Proportion of surface water bodies with environmental (hydrobiological) ratings of "good" and higher."

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (i) of the Protocol (11.1. Implementation of the processing and use of sewage sludge), for which target 1 target indicator and 3 activities were set (Table 12.1):

Table 12.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|--|--|---------------------------|---|---|-------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 11. Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations (Article 6, para. 2 (i)) – target area XII | | | | | |
| 11.1. Implementation of the processing and use of sewage sludge | 11.1.1. implementation of economically and environmentally sound methods of processing and using sewage sludge | 2030 | <p><i>Activity 1:</i> Implementation of economically and environmentally sound methods of processing and using sewage sludge including for alternative energy sources.</p> <p><i>Activity 2:</i> Improving legislation in the field of regulation of sewage sludge management (biogas production, incineration, composting).</p> <p><i>Activity 3:</i> Justifying strategic activities in the field of sewage sludge treatment and reuse for the Republic of Belarus.</p> | <p>Local executive and regulatory authorities (1)</p> <p>WSS enterprises (1)</p> <p>Ministry of Housing and Utilities (2, 3)</p> <p>Ministry of Natural Resources (2, 3)</p> <p>Ministry of Health (2, 3)</p> <p>Ministry of Energy (2)</p> | SDG 6 as a whole |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 12.1 above. Activities in this area are implemented on an ongoing basis within the framework of the current legislation, state programmes, and strategies.

The Concept of Improvement and Development of Housing and Utility Services until 2025, as approved by Resolution No. 1037 of the Council of Ministers of the Republic of Belarus dated 29 December 2017 provides for the development of a republican strategy on the use and neutralization of sewage sludge.

3. Progress achieved towards meeting the targets and challenges encountered

Industrial waste, including sewage sludge, is managed in accordance with the waste management laws. The methods of treatment (stabilization, dewatering and neutralization) of sewage sludge in accordance with the building codes in force are determined when designing wastewater treatment facilities and depend on the local climatic, hydrogeological, urban planning, agrotechnical and other conditions. Sewage sludge is not used as fertilizer, etc. due to the presence of salts of heavy metals and other hazardous compounds in it. Currently, sludge from wastewater of the centralized sewerage systems that remains after treatment is mostly stored at special facilities (sludge drying beds) of the complex structures of the wastewater treatment facilities; it results in the accumulation of large enough amounts of sewage sludge in the Republic of Belarus.

In recent years, sewage sludge recycling and reuse procedures have been started to be implemented to produce alternate energy sources (biogas complexes and installations) in the Republic. Biogas complexes for reuse of the sewage sludge and production of heat and electricity have already been built in a number of enterprises. Such activities were carried out under the State Programme of Innovative Development of the Republic of Belarus for 2016-2020 (approved by Decree No. 31 of the President of the Republic of Belarus dated 31 January 2017).

Environmental Rules and Regulations (EcoNiP) 17.13.05-001 “Environmental protection and environmental management. Hydrosphere. Environmental safety requirements for operation, decommissioning and liquidation of filtration fields.”

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of Indicator 11.1 promotes the achievement of **SDG 6 as a whole**.

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

Targets for this section were not set in the Republic of Belarus.

Rationale.

The reuse of municipal treated wastewater for irrigation purposes is not practiced in the Republic of Belarus and there is no national legislation in this area.

The Republic of Belarus is at the level of Central European countries as for water resources availability. According to the State Water Cadastre, in 2010-2018, 3 to 6 million m³ of water were used for irrigation purposes in the country, which accounts for 1 % of the total amount of the water used in the Republic of Belarus. Taking into account climatic conditions, the total area of the irrigated lands in Belarus is a bit more than 30 thousand hectares. Correspondingly, there is no economic rationale for using wastewater for irrigation purposes.

Due to the insignificance of these amounts, it is unreasonable to introduce this target.

Furthermore, this target area overlaps with target area XI “Quality of discharges of wastewater from wastewater treatment installations,” in which a number of measures are suggested to be taken to achieve the indicator “Proportion of surface water bodies with environmental (hydrobiological) ratings of “good” and higher”, which measures are aimed at reducing the inflow of pollutants from agricultural facilities: in respect of developing methods for assessing the adverse effects of dispersed (non-point) sources of surface water pollution and developing environmental requirements for the location and operation of pig breeding complexes and other livestock facilities.

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (j) of the Protocol (12.1. Improving the reliability of drinking water sources), for which target 1 target indicator and 6 activities were set (Table 14.1):

Table 14.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|--|---------------------------|---|--|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 12. Quality of waters which are used as sources for drinking water (Article 6, para. 2 (j)) – target area XIV | | | | | |
| 12.1. Improving the reliability of drinking water sources | 12.1.1. increasing the proportion of drinking water sources that meet sanitary and epidemiological requirements | 2021-2030 | <p><i>Activity 1:</i> Analysis of compliance with sanitary protection zones (hereinafter – SPZ) of the sources of centralized drinking water supply systems (annually).</p> <p><i>Activity 2:</i> 2. Development of SPZ projects for all sources of centralized drinking water supply.</p> <p><i>Activity 3:</i> Compliance with the requirements for organizing and maintaining SPZs of centralized drinking water supply sources</p> <p><i>Activity 4:</i> Scheduled grouting of decommissioned water wells.</p> <p><i>Activity 5:</i> Development of TRLA establishing the requirements for monitoring the groundwater regime.</p> <p><i>Activity 6:</i> Development and implementation of updated hygiene standards for water bodies for drinking and domestic and cultural (recreational) purposes</p> | <p>Local executive and regulatory authorities (1)</p> <p>Ministry of Health (1, 6)</p> <p>WSS enterprises (2, 3, 4)</p> <p>Organizations operating within the 2nd and 3rd belts of SPZs (3)</p> <p>Ministry of Natural Resources (5)</p> | 6.1.1. |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 14.1 above.

Activities 1-4.

The main activities in this area are those aimed at protecting drinking water sources (centralized and non-centralized). In order to protect centralized drinking water supply sources, their sanitary protection zones (SPZ) are established pursuant to:

Law No. 271-Z of the Republic of Belarus “On Drinking Water Supply” dated 24 June 1999 [1];

Specific sanitary and epidemiological requirements for maintenance and operation of sources and systems of drinking water supply (approved by Resolution No. 914 of the Council of Ministers of the Republic of Belarus dated 19 December 2018) [2];

Sanitary Standards and Regulations “Requirements for organizing SPZs of the sources and centralized systems of drinking water supply” (approved by Resolution No. 142 of the Ministry of Health of the Republic of Belarus dated 30 December 2016) [3].

Calculation methodology for the borders of SPZs of domestic water supply sources, taking into account peculiarities of Belarus and modern tendencies in math modelling (approved by Technical Code of Common Practice 17.06-15-2015 (33140) “Rules of application of hydrogeologic methods for calculation of the borders of SPZs of groundwater sources used for domestic water supply.”

In order to protect the sources of decentralized water supply, the measures were provided in accordance with [1 and 2]. The source of water supply is selected in accordance with the State Standard of the Republic of

Belarus STB 1756-2007 “Sources of centralized domestic and drinking water supply. Hygienic, technical requirements and rules of choice.”

Work is being carried out within the framework of state programmes, including the State Programme “Comfortable housing and favourable environment for 2021-2025” (subprogramme 5 “Clean Water”).

Besides, the following measures can be attributed to this group:

1. improvement of the status (reduced depreciation) of the utility networks and water supply facilities of settlements (see Section III of the report) - construction, reconstruction and repair of water intakes.
2. increasing the provision of the population with centralized and local sanitation systems (Section IV);
3. ensuring standard quality of wastewater treatment within centralized systems of sanitation in settlements (Sections VI, XI);
4. ensuring local treatment of industrial wastewater (Sections IX, X, XI);
5. provision of settlements with the surface wastewater collection and removal systems (Section X);
6. liquidation of water wells that are not subject to further maintenance in order to prevent contamination of the groundwater (it is performed on a permanent basis in accordance with the legislation in force);
7. implementation of the activities stipulated by the duly approved projects of water protection zones for water bodies (it is performed on a permanent basis in accordance with the legislation in force);
8. monitoring of the quality and safety of water supply sources (within the scope of the state supervision by the authorities that carry out the state sanitary supervision, the production control of water supply systems by their owners);
9. improvement of legislative and regulatory legal framework in the field of drinking water supply (access to water, drinking water quality and safety control).

The applicable legislation provides for the need to control water safety in drinking water supply sources within the scope of state and departmental supervision conducted by authorized institutions, as well as production control by water supply organizations (described in detail in Section V (art. 6, para. 2 e)). Supervisory measures for compliance with the law are taken annually, establishing requirements for the protection of the sources of drinking water supply of centralized drinking water supply systems, water supply facilities, water conduits, modes of business and other activities in sanitary protection zones of drinking water supply sources, water supply facilities, and in sanitary protection belts of water conduits. The situational analysis of the quality and safety of water supply sources is carried out on an ongoing basis and annually based on the data submitted in compliance with statistical reporting. A progress report on the implementation of measures is issued annually.

Over the past years, the Republic has developed technical regulatory legal acts and methodological documents that regulate activities in this area (see Sections I and VI). In order to improve the efficiency of water supply systems management, targeted improvement is conducted on the basis of the introduction of a risk analysis methodology. The implementation of developments allows optimizing the approaches to drinking water supply monitoring on the basis of risk assessment, justifying prevention measures aimed at improving the safety of drinking water supply and their priority, ranging the water supply systems depending on the health risks, and planning supervision over the systems.

Activity 5: The draft Standards and Regulations for Rational Use and Protection of Mineral Resources (GeoNiP) “Environmental protection and environmental management. Subsoil. Groundwater monitoring requirements” are pending formal agreement and approval.

Activity 6: Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021 approved the hygienic standard “Safety and harmlessness indicators for water in water bodies for household, cultural and domestic (recreational) use and water in swimming pools” (entered into force on 06/06/2021).

3. Progress achieved towards meeting the targets and challenges encountered

Generally, there is a steady **progress** towards achieving the specified target (Table 14.2).

Table 14.2.

| Target indicator | Indicator value | | |
|---|-----------------|-------|-------|
| | 2018 | 2020 | 2021 |
| 12.1.1. increasing the proportion of drinking water sources that meet sanitary and epidemiological requirements | 86.3% | 88.2% | 87.5% |

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of Indicator 12.1.1 promotes the achievement of **SDG Indicator 6.1.1** “Proportion of population using safely managed drinking water services.”

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (j) of the Protocol (13.1. Improving the quality of water used for bathing), for which target 1 target indicator and 5 activities were set (Table 15.1):

Table 15.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|---|---|---------------------------|--|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 13. Quality of waters used for bathing (Article 6, para. 2 (j)) – target area XV | | | | | |
| 13.1. Improving the quality of water used for bathing | 13.1.1. increasing the proportion of surface water bodies meeting regulatory requirements by microbiological indicators, within the boundaries of recreation zones by 10 % vs. the 2015 levels | 2030 | <p><i>Activity 1:</i> Activities in related target areas VIII, X, XI (Sections 8, 9, 10 of the Protocol).</p> <p><i>Activity 2:</i> Compliance with the requirements for organizing and maintaining recreation zones on surface water bodies.</p> <p><i>Activity 3:</i> Continuing the work on improving regulatory framework – implementation of risk analysis, awareness raising among stakeholders responsible for maintenance of the recreation zones.</p> <p><i>Activity 4:</i> Classifying the recreation zones depending on water quality of water bodies and public health risks based on long-term trends, state of the territory, along with the development and implementation of a system for informing the population and other interested stakeholders.</p> <p><i>Activity 5:</i> Development and implementation of updated hygiene standards for water bodies for drinking and domestic and cultural (recreational) purposes.</p> | <p>Local executive and regulatory authorities (1, 2, 4)</p> <p>Ministry of Health (3, 4, 5)</p> | 3.3 |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 15.1 above.

The target achievement is planned through the measures, which are aimed at protecting surface water bodies from anthropogenic impact and are conducted within the scope of the legislation in force concerning sanitary and epidemiological welfare of the population and natural resources protection:

- disinfection of hazardous wastewater, which can start epidemy and so on;
- implementation of the measures envisaged by the projects of water protection zones of water bodies;
- provision of standard quality treatment of wastewater by centralized sanitation systems in settlements;
- ensuring local treatment of industrial wastewater;
- provision of settlements with the systems of surface wastewater collection, disposal and treatment;
- performance of measures aimed at equipping water disposal systems in the settlements with water treatment facilities, reconstructing and repairing water treatment facilities of water disposal systems, sewage pumping stations, providing enterprises with local wastewater treatment facilities;
- improvement of the legislation and regulatory framework in the field of water resources protection and recreational use of water.

Every year, during the swimming season (June to August), the sanitary and epidemiological service of the Republic of Belarus carries out weekly monitoring of the sanitary maintenance of the territories of recreational zones near surface water bodies used for public recreation (swimming, water sports) that are allocated for these purposes by local executive and regulatory bodies. As part of the monitoring, samples of water are taken from reservoirs for laboratory testing for compliance of water with hygienic standards for

microbiological indicators (primarily) as well as sanitary and chemical safety indicators. Based on the laboratory testing results, proposals are submitted to local authorities to restrict or prohibit swimming and water sports in water bodies. Similar information is made publicly available on the Internet and is distributed in various media.

Over the past years, the Republic has developed regulatory legal documents that regulate activities in this area:

Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021 approved the hygienic standard “Safety and harmlessness indicators for water in water bodies for household, cultural and domestic (recreational) use and water in swimming pools.”

Instructions for Use No. 028-1215 “Technology of microbiological health risk analysis in recreational water use,” as approved by the Chief State Sanitary Doctor of the Republic of Belarus on 21 March 2016.

Instructions for Use No. 029-1215 “Methods of sanitary and microbiological analysis of surface water bodies used for recreational purposes,” as approved by the Chief State Sanitary Doctor of the Republic of Belarus on 21 March 2016.

3. Progress achieved towards meeting the targets and challenges encountered

According to the data for 2021, positive dynamics in the targets was observed: the proportion of non-standard samples according to microbiological indicators of safety for the period of 2015 to 2021 decreased by 2.2% of all samples from 6.9% in 2015 to 4.7% in 2021 (Table 15.2). Thus, a positive trend in achieving the target is observed.

Table 15.2

| Target indicator | Proportion of water samples of surface water bodies for recreational use that meet the requirements in terms of microbiological safety indicators | | |
|--|---|--------|--------|
| | 2015 | 2018 | 2021 |
| 13.1.1. increasing the proportion of surface water bodies meeting regulatory requirements by microbiological indicators, within the boundaries of recreation zones by 10 % vs. the 2015 levels | 93.1 % | 94.9 % | 95.3 % |

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of Indicator 13.1.1 promotes the achievement of **SDG 3.3**. “By 2030, ... combat hepatitis, water-borne diseases and other communicable diseases.”

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

No targets have been set in this area.

Rationale.

Activities in this area are implemented on an ongoing basis within the framework of the current legislation. In accordance with the Water Code of the Republic of Belarus, in order to ensure favourable conditions for the reproduction of aquatic biological resources and the safety of aquatic products, water quality standards for surface water bodies are set:

- 1) water quality indicators for the surface water bodies used for reproduction, fattening, wintering, migration of salmonids and sturgeon fish species, as well as for other surface water bodies;
- 2) maximum permissible concentrations of chemicals and other substances in surface water bodies.

Requirements for water quality in surface water bodies in order to ensure favourable conditions for the reproduction of aquatic biological resources are established by the Ministry of Natural Resources. Conformity of water quality in surface water bodies to the established standards is assessed within the framework of the surface water monitoring conducted under the National Environmental Monitoring System in the Republic of Belarus, the results of which are presented on the official website of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus (<http://www.nsmos.by/content/174.html>).

Conformity of water quality in fish ponds to the established standards is assessed by fish farms. Conformity of water quality to the established standards in rivers and lakes is assessed by the inspections of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus. The quality of water used for aquaculture is subject to indicators and requirements at the design stage of facilities.

Requirements for the quality of water in fish ponds are set on the basis of State Standard of the Republic of Belarus STB 1943-2009 “Water in fish ponds. Requirements” (hereinafter - standard) taking into account permissible limits of the quality parameters variations in order to maintain optimal environmental conditions for fish rearing.

This standard is applicable for the waters of fish-rearing organizations, which rear and breed carp in mono- and polycultures with phytovorous and predatory fish and trout.

Separate goals and objectives in the field are prescribed by a number of state programmes and concepts, namely:

1. The Concept for the Development of Fishing Industry in the Republic of Belarus (as approved by Resolution No. 459 of the Council of Ministers of the Republic of Belarus, dated 2 June 2015, as restated by Resolution No. 493 dated 27 June 2018):

- creation of favourable conditions for the reproduction of valuable indigenous fish species and the preservation of their populations by carrying out a complex of various fish stock replenishment and fish conservation measures aimed at improving the indicators of the hydrological, hydrogeochemical and ecological state of water bodies;
- carrying out a complex of hydrotechnical and reclamation works aimed at improving the living conditions and reproduction of semi-anadromous salmon and other fish species in order to restore their populations;
- improvement of the system of legislation in the field of fishing and fish farming;
- improving the ecological condition (status) of surface water bodies (their parts), including the conservation of biological diversity.

2. The State Programme for the Development of Agricultural Business in the Republic of Belarus for 2021-2025 (subprogramme 5 “Development of Fishing Activities”) (as approved by Resolution No. 59 of the Council of Ministers of the Republic of Belarus, dated 1 February 2021):

- increase in the production of the pond, lake and river fish and valuable fish species;
- increase in the natural productivity of fishing grounds;
- restoration of biological diversity of fish resources;
- application of economically justified innovative technologies for breeding rare and valuable fish species, increasing the efficiency of fisheries;
- maximum use of production areas of fish-rearing organizations and the resource potential of fishing grounds, liming of ponds of fish-rearing organizations, implementation of veterinary and sanitary and anti-epizootic measures;
- stocking of fishing grounds with rare valuable fish species;
- restoration of natural and creation of artificial spawning grounds;
- reproduction and reintroduction of rare and valuable fish species in order to obtain stocking material for rare and valuable fish species (whitefish, pike perch, pike, salmon, sturgeon and others).

We believe that the implementation of the water quality requirements stipulated by these documents fully contributes to the implementation of the Protocol on Water and Health in the Republic of Belarus.

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (k) of the Protocol (14.1. “implementation of the recognized best practice to the management of enclosed recreation bodies generally available for bathing (swimming pools)”), for which target 1 target indicator and 4 activities were set (Table 17.1):

Table 17.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|---------------------------|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 14. Application of recognized good practice to the management of enclosed waters generally available for bathing (Article 6, para. 2 (k)) – target area XVII | | | | | |
| 14.1. Implementation of the recognized good practice to the management of enclosed recreation sites generally available for bathing (swimming pools) | 14.1.1. implementation of the recognized good practice to the management of enclosed recreation sites generally available for bathing (swimming pools) | 2021-2030 | <p><i>Activity 1:</i> Implementation of updated water safety and harmlessness indicators for pools, including control of the legionella agents in at-risk institutions (swimming pools, spas) (2021).</p> <p><i>Activity 2:</i> Development and implementation of a methodology for risk analysis and management in swimming pools and other enclosed recreational facilities generally available for bathing (2024).</p> <p><i>Activity 3:</i> Development and implementation of checklists for assessing the sanitary and epidemiological well-being of swimming pools (2022).</p> <p><i>Activity 4:</i> Promotion of the application of methods alternative to chlorination in children’s pools and in educational institutions.</p> | <p>Ministry of Health (1-4)</p> <p>Local executive and regulatory authorities (4)</p> | 3.9.2. |

2. Actions taken to reach the target(s).

Activities to achieve the target indicator and bodies responsible for their implementation are set out in Table 17.1 above.

Activities in this area are implemented on an ongoing basis within the framework of the current legislation in the field of sanitary and epidemiological well-being of the population. Sanitary-hygienic and anti-epidemic requirements for the design, equipment and operation of the indoor and outdoor swimming pools used for recreational, educational and training exercises and mass sporting activities are contained in the Sanitary Standards, Regulations and Hygienic Standards “Hygienic requirements for design, equipment and operation of swimming pools,” as approved by Resolution No. 105 of the Ministry of Health of the Republic of Belarus dated 22 September 2009, as well as in the General Sanitary and Epidemic Requirements for Maintenance and Operation of Permanent Structures (Buildings and Constructions), Isolated Premises and Other Facilities Owned by Business Entities, as approved by Decree No. 7 “On the Development of Entrepreneurship.” The requirements of the TRLAs are binding upon the owner of the enclosed waters. The quality of water supplied to a pool should meet the hygienic requirements for water quality in the centralized systems of drinking water supply. Indicators

of water quality in pools (physico-chemical, microbiological and parasitological) should not exceed hygienic standards. The owner of the pool is obliged to ensure that production control is exercised with specified frequency. The state sanitary and epidemiological supervision over these objects is performed in the prescribed manner with the frequency specified. Statistical reporting forms do not require the collection of information in this field.

Activity 1: Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021 approved the hygienic standard “Safety and harmlessness indicators for water in water bodies for household, cultural and domestic (recreational) use and water in swimming pools” (entered into force on 06/06/2021). The Hygienic Standard “Drinking Water Safety Indicators,” as approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021 (entered into force on 06/06/2022) introduced into the legislation in the field of sanitary and epidemiological well-being of the population the requirements for monitoring Legionella agents, including in water use facilities with an emphasis on risk groups (in water samples taken from hot and cold water supply systems in swimming pools, water parks, public hot tubs, SPA salons, organizations providing bathing services, hotels, in water samples from hot and cold water supply systems in resuscitation and intensive care units of hospital healthcare organizations).

Activities 2-3: Development and implementation of a methodology for risk analysis and management in swimming pools and other enclosed recreational facilities generally available for bathing (2024). In the second half of 2021, draft sanitary standards and regulations “Sanitary and epidemiological requirements for the maintenance and operation of swimming pools, aqua parks, facilities providing domestic services of baths, saunas and showers, SPA facilities, and sports facilities” were prepared. The document is now in the process of approval and submission for official publication.

Activity 4: Promotion of the application of methods alternative to chlorination in children’s pools and in educational institutions.

As part of the research work on Task 01.01 “To develop and implement a methodology for assessing the safety of water disinfection methods according to the criteria of a potential carcinogenic health risk from exposure to disinfection by-products,” the sectoral scientific and technical programme “Health and Habitat” developed Instructions for Use No. 015-1118 “Method for hygienic safety assessment of water disinfection methods” (approved by the Ministry of Health of the Republic of Belarus on 19/12/2018). In 2019-2021, the Instructions were put into practice. Additionally, stakeholders are regularly informed in order to promote the use of methods alternative to chlorination in children’s pools and educational institutions as part of sanitary education and review of project documentation.

3. Progress achieved towards meeting the targets and challenges encountered

Generally, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of the targets set for programme area XVII promotes the achievement of **SDG Indicator 3.9.2**. “Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH)).”

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

1. Current target(s) and target date(s).

The Set of Measures identified 1 target under Article 6, paragraph 2 (I) of the Protocol (15.1. Groundwater impact reduction), for which target 2 target indicator and 2 activities were set accordingly (Table 15.1):

Table 15.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|---|---|---------------------------|--|--|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 15. Identification and remediation of particularly contaminated sites (Article 6, para. 2 (I)) – target area XVIII | | | | | |
| 15.1. Groundwater impact reduction | 15.1.1. reduction of impacts on the first aquifer (complex) from the earth's surface at the locations of identified or potential sources of groundwater pollution | 2021-2030 | <i>Activity 1:</i> Conducting groundwater monitoring as part of the NEMS. <i>Activity 2:</i> Conducting works on decommissioning the filtration fields and land reclamation. | Ministry of Natural Resources (1) Enterprises (2) Local executive and regulatory authorities (2) | SDG 6 as a whole |
| | 15.1.2. decommissioning of all mini-landfills for municipal solid waste disposal | 2023 | <i>Activity 1:</i> Step-by-step decommissioning of mini-landfills for the disposal of municipal solid waste (hereinafter – MSW). <i>Activity 2:</i> Reclamation of land plots where the decommissioned mini-landfills for MSW disposal are located. | Regional Executive Committees (1,2) | |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 15.1.

Groundwater is monitored pursuant to Resolution No. 482 of the Council of Ministers of the Republic of Belarus “On Approval of the Regulation on the Procedure for Monitoring Surface Water, Groundwater, Atmospheric Air, Local Environmental Monitoring and Using the Monitoring Data within the National Environmental Monitoring System in the Republic of Belarus” dated 28 April 2004. The groundwater monitoring covers the monitoring of groundwater and artesian groundwater. Additionally, Resolution No. 482 of the Council of Ministers specified that local environmental monitoring is carried out as part of the NEMS, including groundwater in the area where identified or potential sources of pollution are located.

Resolution No. 29 of the Ministry of Natural Resources “On Amendments to [Resolution No. 9](#) of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus of 1 February 2007” dated 30 December 2020 identified criteria for organizing local groundwater monitoring.

Resolution No. 5 of the Ministry of Natural Resources “On Determining the Number and Location of Local Environmental Monitoring Observation Points, the List of Criteria, the Frequency of Observations and the List of Legal Entities Carrying out Local Environmental Monitoring” dated 11 January 2017 specifies the list of entities that carry out economic and other activities having a harmful effect on groundwater, including environmentally hazardous activities, and in respect of which local monitoring of groundwater is carried out.

The National Strategy for the Management of Municipal Solid Waste and Secondary Material Resources in the Republic of Belarus, as approved by Resolution No. 567 of the Council of Ministers of the Republic of Belarus dated 28 July 2017 and the Concept for Creation of Facilities for Sorting and Use of Municipal Solid Waste and Landfills for Their Disposal, as approved by Resolution No. 715 of the Council of Ministers of the Republic of Belarus, dated 23 October 2019, provide for the redevelopment of all mini-landfills until 2023.

3. Progress achieved towards meeting the targets and challenges encountered

The 2022 monitoring observations of water withdrawal, changes in the groundwater level, temperature and quality were conducted at 42 group water intakes in 20 cities of the Republic of Belarus in conditions disturbed by operation and at 95 hydrogeological stations in natural and slightly disturbed conditions. Within the areas of influence of group water intakes, observations of the groundwater level were conducted at 376 observation wells. The chemical composition and quality of groundwater were studied in 127 observation wells. In natural and slightly disturbed conditions, observations of changes in the groundwater level, temperature and quality were conducted in 321 observation wells.

As of 01/01/2021, the actual decrease in the groundwater level in the main operated aquifers and aquifer systems within the water intake areas does not exceed the calculated values of permissible decreases taken when assessing usable groundwater reserves. This indicates the probability of water withdrawal within the approved groundwater reserves.

For the period of 2017 to 2021, 1,446 waste disposal sites (mini-landfills) were reclaimed (since 2017, the number of mini-landfills has decreased by 14 times (from 1,616 in 2017 to 116 in early 2022). Their reclamation continues as planned this year.

The plans for 2022 include the reclamation of at least 53 mini-landfills in the Republic, which is 45% of the total number of MSW mini-landfills to be reclaimed.

As of early 2022, the closure and reclamation of all mini-landfills in Grodno and Vitebsk regions have been fully ensured.

Presently, the operation of all mini-landfills has been terminated, with the exception of 5 mini-landfills located in Gomel Region and 23 mini-landfills located in Brest Region.

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of Target 15.1 promotes the achievement of **SDG 6**.

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

1. Current target(s) and target date(s).

The Set of Measures identified 2 targets under Article 6, paragraph 2 (m) of the Protocol (16.1. Improving the water resources management system, including basin management; 16.2. Development of transboundary cooperation in the sphere of water resources use and protection), for which target 2 and 1 target indicators, respectively, were set with one activity for each of them (Table 19.1):

Table 19.1

| Target | Target Indicator (TI) | Implementation Timeframes | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|---------------------------|--|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 16. Effectiveness of systems for the management, development, protection and use of water resources (Article 6, para. 2 (m)) – target area XIX | | | | | |
| 16.1. Improving the water resources management system, including basin management | 16.1.1. establishing at least 2 basin councils | 2022-2025 | Activity 1: Establishing basin councils | Ministry of Natural Resources (1) | 6.5.1. |
| | 16.1.2. development and implementation of at least 5 river basin management plans | 2022-2025 | Activity 1: Development of the Neman and Western Dvina river basin management plans | Ministry of Natural Resources (1) | |
| 16.2. Development of transboundary cooperation in the sphere of water resources use and protection | 16.2.1. Percentage of the area of transboundary river basins covered by international agreements on cooperation in the field of protection and use of transboundary waters: at least 78 % | 2021-2025 2025 | Activity 1: Drafting and signing agreements on the protection and use of transboundary waters with neighbouring states (2021-2030) | Ministry of Natural Resources (1) | 6.5.2. |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 19.1 above.

For the time being, agreements on cooperation in the field of protection and rational use of transboundary water bodies have been signed **with:**

the Russian Federation (Agreement between the Government of the Republic of Belarus and the Government of the Russian Federation on cooperation in the field of protection and rational use of transboundary water bodies (entered into force on 25 October 2002));

Ukraine (Agreement between the Government of the Republic of Belarus and the Cabinet of Ministers of Ukraine on the joint use and protection of transboundary waters (entered into force on 13 June 2002) and Technical Protocol on cooperation in monitoring and exchange of information on the status of transboundary surface waters between the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and the State Committee for Water Management of Ukraine);

Poland (Agreement between the Government of the Republic of Belarus and the Government of the Republic of Poland on cooperation in the field of protection and rational use of transboundary waters, dated 7 February 2020 (pending ratification)).

The Agreement between the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and the Ministry of Environmental Protection and Regional Development of *the Republic Latvia* on cooperation in the field of protection and rational use of transboundary waters in the Western Dvina/Daugava river basin is being negotiated.

The Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and the Ministry of the Environment of *the Republic of Lithuania* signed a technical protocol dated 10 April 2008 on cooperation in monitoring and information exchange on the status of transboundary surface waters.

3. Progress achieved towards meeting the targets and challenges encountered

The percentage of the country's area covered by the cooperation mechanism within the transboundary river basins is provided in Table 19.2. The area of transboundary water basins covered by the transboundary

cooperation mechanism relative to the area of the Republic of Belarus was calculated as part of the preparation by the Republic of Belarus of the Joint Reporting under the Water Convention and on SDG indicator 6.5.2 based on the 2020 data, taking into account river basins and groundwater aquifers.

Table 19.2

Percentage of the country's area covered by the cooperation mechanism within the transboundary river basins as of 01/01/2021, %

| River basin | River basin area in the Republic of Belarus, km ² | % of the river basin relative to the country's area | Location of the river basin within the Republic of Belarus and other countries | | | | | Percentage of the country's area covered by the cooperation mechanism within the transboundary river basins, % |
|------------------------|--|---|--|---------|-----------|--------|--------|--|
| | | | Russia | Ukraine | Lithuania | Latvia | Poland | |
| Dnieper | 67,460 | 33 | + | + | | | | 32.6 |
| Western Dvina | 33,150 | 16 | + | | | + | | 8.0 |
| Western Bug | 9,990 | 5 | | + | | | + | 2.4 |
| Neman | 45530 | 22 | + | | + | | + | 0.0 |
| Pripyat | 50900 | 25 | | + | | | | 24.6 |
| Total (country) | 207030 | 100.0 | | | | | | 67.6 |

Note:

| | |
|---|---|
| + | location of the river basin within the country |
| | there is an operational transboundary cooperation mechanism |
| | there is no operational transboundary cooperation mechanism |

Therefore, there is a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of Indicators 16.1.1 and 16.1.2 promotes the improvement of **SDG Indicator 6.5.1** “Degree of integrated water resources management implementation (0-100).”

The achievement of Indicator 16.2.1 promotes the improvement of **SDG indicator 6.5.2** “Proportion of transboundary basin area with an operational arrangement for water cooperation.”

XX. Additional national or local specific targets

1. Current target(s) and target date(s).

The Set of Measures identified 2 key targets under target area XX of the Protocol (17.1. Increasing public access to information on water and health; 17.2. Awareness raising of various target professional groups on safe and sustainable drinking water supply, sanitation and water resources protection), for which targets 5 and 1 target indicators, respectively, were set with the relevant activities (Table 20.1):

Table 20.1

| Target | Target Indicator (TI) | Implementation Time frames | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|---|---|--------------------------------------|--|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 17. Additional target indicators – target area XX | | | | | |
| 17.1. Increasing public access to information on water and health | 17.1.1. publishing information in the field of sanitary and epidemiological welfare of the population (drinking, household, recreation water use) | 2021-2030 | <p><i>Activity 1:</i> Development of an information strategy to cover the issues of water and health in the work with the population (2021)</p> <p><i>Activity 2:</i> Publication of the state report on sanitary and epidemiological situation in the Republic of Belarus (section “Hygienic assessment of water bodies, water supply and public health”) on the website of the State Institution “Republican Centre for Hygiene, Epidemiology and Public Health” (annually).</p> <p><i>Activity 3:</i> Publication of relevant information on water quality in public decentralized sources of drinking water supply on the official Internet websites of territorial institutions that carry out state sanitary surveillance (at least once a quarter).</p> <p><i>Activity 4:</i> Publication of relevant information on compliance of water within the recreation areas with hygienic standards on the official Internet websites of territorial institutions that carry out state sanitary surveillance (during the recreation period, weekly).</p> | Ministry of Health (1-4) | 6.b.1 |
| | 17.1.2. publication of information in the field of drinking water supply | Constantly (at least once a quarter) | <p><i>Activity 1:</i> 1. Publication of information on: – quality of drinking water in municipal centralized drinking water supply systems; – implementation of regional sets of measures in the field of drinking water supply, long-term plans for the development of water supply systems in respective administrative-territorial units (hereinafter – ATU), implementation of activities aimed at developing the water supply systems in the respective ATU; – implementing state programmes in the field of drinking water supply;</p> | Local executive and regulatory authorities (1) | |

| Target | Target Indicator (TI) | Implementation Time frames | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SDGs |
|--------|---|----------------------------|--|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | <ul style="list-style-type: none"> – organizing drinking water supply, including in cases when there is no centralized drinking water supply system available and in emergency situations; – future construction of centralized drinking water supply systems; – target indicators for providing consumers with drinking water that meets drinking water safety standards; – tariffs for providing water supply services. <p><i>Activity 2:</i> Publication of information on:</p> <ul style="list-style-type: none"> – general characteristics of the state of centralized drinking water supply systems; – compliance of drinking water with drinking water safety standards; – methods used for drinking water treatment; – water supply sources in settlements; – procedure for connecting to and using centralized drinking water supply systems, as well as the procedure for concluding a contract for water supply services; – implementation of scheduled works on centralized drinking water supply systems and resuming the operation of these systems; – rational use of drinking water and ways to save it; – number and frequency of sampling of drinking water as part of a drinking water production safety control program. <p><i>Activity 3:</i> Monitoring the dynamics of SDG indicator 6.b.1.</p> | <p>WSS enterprises (2)</p> <p>Statistical Committee (3)</p> | |
| | 17.1.3. publication of information on the use and protection of water resources | Annually | <i>Activity 1:</i> Maintaining of the State Water Cadastre, posting its data on official websites | Ministry of Natural Resources (1) Ministry of Health (1) | |
| | 17.1.4. publication of information on implementation of the provisions of the Protocol in the Republic of Belarus | once every 3 years 2021 | <p><i>Activity 1:</i> Publication of the national report on the Protocol on Water and Health on the UNECE website</p> <p><i>Activity 2:</i> Publication of the report “Assessment of equitable access to water and sanitation in the Republic of Belarus” on the Internet</p> | Ministry of Health (1) | |
| | 17.1.5. publication of information on achieving the SDGs relevant to the Protocol | Annually | <i>Activity 1:</i> Publication of the SDG indicators relevant to the Protocol on SDG National Reporting Platform | Statistical Committee (1) | |

| Target | Target Indicator (TI) | Implementation Time frames | Activities to Implement Target Indicator | Bodies Responsible for Implementation of Activities | Synergy with SGDs |
|--|--|----------------------------|---|--|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 17.2. Awareness raising of various target professional groups on safe and sustainable drinking water supply, sanitation and water resources protection | 17.2.1. Awareness raising of various target professional groups on safe and sustainable drinking water supply, sanitation and water resources protection | 2021-2030 (constantly) | <p><i>Activity 1:</i> Holding training and awareness raising events on modern aspects of safe and sustainable drinking water supply, sanitation and water resources protection: at least once a year at the national level.</p> <p><i>Activity 2:</i> Working on the possibility of implementing projects aimed at awareness raising of various target professional groups on safe and sustainable drinking water supply, sanitation and water resources protection.</p> <p><i>Activity 3:</i> Updating the curriculum of university-level educational institutions and postgraduate educational institutions to ensure training, retraining and advanced training for personnel in the field of water supply, sanitation and water resources protection.</p> | <p>Ministry of Health (1, 2, 3)</p> <p>Ministry of Natural Resources (1, 3)</p> <p>Ministry of Housing and Utilities (1, 3)</p> <p>Ministry of Education (3)</p> | 3.d |

2. Actions taken to reach the target(s).

Activities to achieve TIs and bodies responsible for their implementation are set out in Table 20.1 above.

Activities under Target Indicator 17.1.1.

Activity 1:

A framework concept of an information strategy covering the issues of water and health in the work with the population was prepared. It included informing professional groups in the WASH sector, students of educational institutions (general education schools, secondary specialised and higher specialised educational institutions, postgraduate training institutions, as well as the population).

Since 2019, the National Focal Point of the Protocol on Water and Health (Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” of the Ministry of Health – SPCH) has been regularly messaging key stakeholders to inform about:

- events (conferences, webinars), including those held by international organizations online (WHO, UNECE, etc.);
- relevant publications and materials on relevant issues.

The Internet website of the National Focal Point of the Protocol – SPCH contains a page dedicated to the Protocol (http://rspch.by/ru/protocol_water_and_health) where up-to-date information on the Protocol and the most popular aspects of water safety and quality is posted.

It has become a tradition within the framework of the SPCH’s educational project “Hygienic Academy” undertaken on a functional basis and aimed at ensuring a sustainable comprehensive and systematic increase in the level of knowledge of specialists and the formation of a population group informed of health and environmental issues (from children to adults), to celebrate the World Water Day in an online format in March, including:

- in March 2020, the Children’s Drawing Contest “The World of Water and Health” was held for children of various age groups in the Republic of Belarus;
- in March 2021 and 2022, an intellectual and educational quiz “The World of Water and Health” was held online (via Zoom) among students of educational institutions of the Republic to attract public attention to the safety of drinking water and the protection of water resources (informing about relevant aspects of drinking water quality and protection of water resources and about the Protocol on Water and Health). Information was posted in the media and social networks.

During the reporting period, specialists of the National Focal Point of the Protocol (SPCH) also prepared popular materials on various aspects of safe water use and hygiene to widely inform the public, in particular they:

1) published articles in popular journals:

- Live water? (in the Medical Bulletin, March 2019, No. 13);

- Water for children. What you need to know!” (in the Hozyain (Master) Magazine, 2020, No. 3);
- Clean water is essential for health! (in the Hozyain Magazine, 2019, No. 4);
- What you need to know about the quality and safety of water from boreholes, wells and springs (in the Hozyain Magazine, No. 5, 2019);
- What you need to know about the quality and safety of water from boreholes, wells and springs (in the Garden Design Magazine, May 2019, No. 3);
- Topical issues of groundwater quality and safety (in the Khozyain Magazine, 2019, No. 6);
- Safe and high-quality water is a guarantee of good health! (in the Hozyain Magazine, April 2020);
- Water from a spring is the source of life (in the Khozyain Magazine, May 2021, No. 5);
- Source of life and health. Why the body needs water (in the Zdravushka. 100 Years without Troubles Magazine, 2021, No. 4 (178) 2021);
- Rules for safe behaviour on water bodies in summer (in the Zdravushka. 100 Years without Troubles Magazine, August 2021, No. 14 (188) 2021).

2) *published articles on websites of popular periodicals:*

- Doctors told how much water a day you need to drink and what is missing in the diet of Belarusians. 13/08/2019, website tut.by. Electronic version access mode: <https://news.tut.by/society/649333.html>;
- What you need to know about the quality and safety of water from boreholes and wells. Internet portal “Healthy People,” 28/09/2021, <https://24health.by/gde-proverit-kachestvo-bezopasnost-vody/>;
- Important about the hardness of drinking water, Internet portal “Healthy People.” (<https://24health.by/zhestkost-pitevoj-vody-sanitarnye-normy-sposoby-ochistki/>);
- The SPCH hosted a seminar on water supply, sanitation and hygiene in schools, 22/07/2021. Information portal “Medical Bulletin”. <https://medvestnik.by/news/na-baze-npts-gigieny-sostoyalsya-seminar-po-voprosam-vodosnabzheniya-sanitarii-i-gigieny-v-shkolakh>

3) *prepared booklets and brochures for the population, which were posted, in particular, on the SPCH's websites:*

- Water disinfection: everyone should know this (<https://rspch.by/pam0101-1-1>);
- To keep water in your well safe (<https://rspch.by/pam0101-2-1>);
- How to choose the right water filter? (<https://rspch.by/pam0201-1-1>);
- Mineralization of water: everyone should know this (<https://rspch.by/pam0201-3-1>);
- Water for little bogatyrs! (<https://certificate.by>);
- About the need of water disinfection (<https://certificate.by>).
- Memo on rational water use (<https://certificate.by>);
- Promotional leaflet “Analysis of drinking water,” March 2020 (Research Methodology Testing Department);

4) *posted materials on the SPCH's websites:*

- How and how much to drink: safe and healthy water, <https://rspch.by/ru/node/107>;
- Method of assessing the quality and safety of drinking water in centralized water supply systems by chemical composition (<https://certificate.by>);
- Method of assessing the safety of water disinfection methods: essence and application prospects (<https://certificate.by>);
- Method of hygienic safety assessment of water disinfection methods (<https://certificate.by>);
- Technique for hygienic safety assessment of water disinfection methods (<https://certificate.by>);
- Methods of hygienic assessment of materials, reagents and equipment used for water purification and treatment in centralized, non-centralized, and autonomous systems of drinking and hot water supply (<https://certificate.by>);
- Safety and harmlessness indicators for materials, reagents and equipment used in drinking water supply systems (<https://certificate.by>);
- World Water Day-2019, 2020, 2021 www.certificate.by;

5) *developed the board game “Hygi and Ene” for the easy assimilation of the basics of prevention and effective memorization of the rules of personal hygiene by children as part of the implementation of the Health and Safety programme (a series of games titled “Healthy lifestyle for children”) and its electronic version in the form of an educational and gaming application for children from 3 years old for mobile Android devices (<https://play.google.com/store/apps/details?id=com.JustIceMobileStudio.GigiEna>). The game is aimed at broadening children’s outlook, including gaining knowledge about a healthy lifestyle, teaching personal hygiene as the basis for disease prevention. The game has three levels of difficulty; intended for 2 to 4 players, can be played with parents (“Children’s mode”); has hosts (fairy-tale characters “Hygi” and “Ene”), which help players acquire healthy lifestyle skills (training cards with useful tips on health building and recommendations on how to avoid losing health), and the settings offer an option to select from one of two languages (Russian, English). The game has been tested as a board game for children, approved by hygienists, psychologists, and teachers. Available on Google Play and here <https://play.google.com/store/apps/details?id=com.JustIceMobileStudio.GigiEna>.*

During the reporting period, the experts of the National Focal Point of the Protocol (SPCH) also:

1) demonstrated at exhibitions the possibilities of the Centre's work with the population within the framework of the "Health and Safety" programme – "Water Analysis" package of services for the population, distributed information materials for the population on the safety and quality of tap water (booklets, brochures), water from boreholes and wells, and advised visitors on the quality of drinking water consumed.

Key exhibitions:

- 26th International Specialized Exhibition "Healthcare of Belarus 2019" (12 – 15/03/2019), Minsk (as part of the exhibition, republican thematic seminars "Health Management" (12/03/2019) and "Safety of the Environment and Products – Protection and Preservation of Health" were held (13/03/2019));
- Exhibition "Modern Technologies in Protecting the Health of Workers" within the framework of the republican scientific and practical seminar "Profession and Health," 07/06/2019, Minsk;
- Exhibition of goods and services "Great Stone 2019", 30/06-02/07/2019, Minsk;
- Festival of Science – 2019, 06-07/09/2019, National Academy of Sciences of Belarus, Minsk;
- International Specialized Exhibition "Healthcare of Belarus 2021" 18–21/05/2021, Minsk;
- Festival of Science – 2021, 11/09/2021, National Academy of Sciences of Belarus, Minsk;
- 27th International Specialized Exhibition "Medicine and Health-2021", innovative developments fair "Medicine and Health," 5-7 October 2021, Minsk.

Major WASH developments were also showcased at:

- SPCH's virtual exhibition, July 2020, Minsk (<http://rspch.by/>);
- online fair of innovative developments "Medicine and Pharmacy," 18/11/2020, Belarusian Institute for System Analysis, Minsk.

2) studied the intensity of water use by the population, including surveyed the population on the drinking water quality (main challenges), the use of filters and bottled water both at home and at work/at educational institutions. The population surveyed were families with young children, as the most vulnerable group, who were selected randomly, in various districts of Minsk (supplied with water from surface and underground sources) to take into account behavioural differences depending on the use of water containing reagent disinfection by-products. The survey covered more than 360 families, a total of 1,003 respondents of different sex and age, including children. The information received was submitted to the Ministry of Health, state sanitary supervision bodies and territorial water management organisations for taking preventive measures.

In addition to state organisations (SPCH, sanitary services), information work was also carried out by non-state organisations within the framework of projects and on their own initiative.

IPO "Ecopartnership"

As part of the international technical assistance (ITA) project "Public Participation and Effective Water Governance in Masty District" (registered with the Ministry of Economy under No. 2/18/000959 on 20 December 2018), financed by the EU (implementation period - 01/01/2021-31/12/2021), ITA recipient - Masty District Executive Committee, project partner - IPO "Ecopartnership":

1. a training information centre on water was established and opened in Masty (on 19/08/2021), a training programme for the training information centre on water in Masty was developed and approved, an interest club "Secrets of Water" started its work (on 01/09/2021), with children grouped into three groups to attend the club;

2. the following publications have been made:

- leaflet "Water and sanitation for everyone" (<https://ecoproject.by/ru/publications/voda/voda-i-sanitariya->),
- a series of posters about water titled "Ecology" (A4 format, 3,300 pcs.), including one on equal access to water and the second one on equal access to sanitation,
- children's fairy-tale on water "Vam Dapamozha Kva" (<https://ecoproject.by/ru/publications/voda/vam->).

The Centre for Environmental Solutions

1. held water-related information events in regions with residents (in June 2021, 2 meetings with residents of Smarhon District, Grodno Region, and Korma District, Gomel Region, dedicated to the topic of nitrate contamination of drinking water from non-centralized water supply sources);

2. organised "Water" lessons for teachers in Braslav Region (on 15-17/06/2021, a training workshop "Aqualogic-21" in the Braslav National Park);

3. published:

- poster: Nitrates. Why it is important to check well water" (together with SPCH);
- booklet: Find out what is in your well!;
- checklist: Water for bathing and drinking: how to protect yourself?
- booklet: Microplastic. Clean water starts with you;
- poster: Medicines have no place in food and water (<https://ecoidea.me/ru/media/4041>);
- Water Explorers Manual (<https://ecoidea.me/ru/media/3970>);
- Guidance manual: Water Week. Materials for classes in Sunday schools, summer church camps on caring for water (<https://ecoidea.me/ru/media/4644>) (guidelines allow to build classes in different formats: in the

form of lectures, master classes, experiments, games. This allows to choose the way of perception that is suitable for a particular age group of children, including young children.)

Activity 2:

The State Report on the Sanitary and Epidemiological Situation in the Republic of Belarus in 2020 was published on the official Internet website of the State Institution “Republican Centre for Hygiene, Epidemiology and Public Health” (available at <https://www.rceph.by/info-analit-block/sanitarno-epidemiologicheskaya-obstanovka-v-respublike-belarus-za-2020-god/>).

Activity 3:

Territorial institutions exercising state sanitary supervision work with the population to provide up-to-date information on the quality of water in public decentralized sources of drinking water supply in available sources.

Activity 4:

During a bathing season (June-August), the Sanitary Epidemiological Service of the Republic of Belarus provides a weekly publication of up-to-date information on the compliance of water within recreation areas with hygienic standards on official Internet websites.

Activities under Target Indicator 17.1.2.

Activities 1-2: A procedure has been developed providing for the provision of information on drinking water supply, as determined by Resolution No. 456 of the Council of Ministers of the Republic of Belarus “On the Procedure for Providing Information on Drinking Water Supply” dated 5 July 2019. Information on water quality is posted regularly on the websites of water management organizations (e.g., on the website of the Unitary Enterprise “Minskvodokanal” available at <https://minskvodokanal.by/water/home/>).

At the same time, this aspect needs to be improved and requires a more systematic approach for individual areas and settlements.

Activity 3: Monitoring the dynamics of SDG Indicator 6.b.1.

For the time being, the Ministry of Health is studying the issue in terms of the development of a methodology for monitoring the dynamics of SDG indicator 6.b.1 as part of the research work, including using the GLAAS methodology.

Activities under Target Indicator 17.1.3:

Activity 1: The State Water Cadastre is published annually by the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus. Republican Unitary Enterprise “Central Research Institute for Complex Use of Water Resources” prepares annual issues of the State Water Cadastre and makes them freely available at its official website at www.cricuwr.by/gvkinfo/.

Activities under Target Indicator 17.1.4.:

Activity 1. The national report is prepared pursuant to the requirements of the Protocol – once every 3 years; the responsible body is the Council for Implementation of the Protocol on Water and Health, coordination is carried out by the Ministry of Health and the National Focal Point of the Protocol (SPCH). The report is made freely available on the official website of the UNECE at www.unece.org/env/water/pwh_targets_set.html and on the official website of the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” at http://rspch.by/ru/protocol_water_and_health.

Activity 2. The report “Assessment of Equitable Access to Water and Sanitation in the Republic of Belarus” is posted on the Internet website of the National Focal Point of the Protocol on Water and Health and is available at http://rspch.by/Docs/self-ass-access-water-rb_rus.pdf; http://rspch.by/Docs/self-ass-access-water-rb_eng.pdf.

Activities under Target Indicator 17.1.5.:

Activity 1 Publication of the SDG indicators relevant to the Protocol on the SDG National Reporting Platform

The Statistical Committee annually publishes SDG indicators relevant to the Protocol (including SDG 6) on the SDG National Reporting Platform (<http://sdgplatform.belstat.gov.by/sites/belstatfront/home.html>).

Activities under Target Indicator 17.2.1.:

Activity 1 Holding training and awareness raising events on modern aspects of safe and sustainable drinking water supply, sanitation and water resources protection: at least once a year at the national level:

For the reporting period (2019-2021), the Republic held more than 15 training and awareness raising events covering modern aspects of safe and sustainable drinking water supply, sanitation, hygiene, and water resources protection (WASH).

The main events:

- *22 April 2021* (Minsk, online): The International Scientific and Practical Conference on the Protocol on Water and Health, organized as part of the chairmanship of the Republic of Belarus on the Protocol by the Ministry of Health on the premises of the National Focal Point (SPCH) with the participation of the Ministry of Natural Resources and Environmental Protection, the Ministry of Housing and Communal Services and with the

support of the Joint Secretariat of the Protocol. The conference was attended by representatives of government authorities in charge of issues covered by the Protocol, national focal points, scientific organizations of the EECCA countries – of the Republic of Belarus (from all sectors), the Russian Federation, the Republic of Armenia, the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Moldova, the Republic of Azerbaijan, Georgia, the Republic of Tajikistan, Turkmenistan, the Republic of Uzbekistan, and Ukraine, a total of 96 people from 14 countries.

- *26 May 2021*: The 3rd Republican Industry Congress “Efficient Heat and Water Supply in the Republic of Belarus” as part of the 22nd International Specialized Exhibition “Water and Heat” (Minsk, Roofed Soccer Arena);

- *3-5 June 2021* (Minsk): The 1st International Specialized Exhibition-Forum “ECOLOGY EXPO-2021” and the XVI Republican Ecological Forum. Organized by: the Ministry of Natural Resources, National Exhibition Centre BelExpo at the Office of the President of the Republic of Belarus, Minsk City Executive Committee. The Ecological Forum was held with the support of the Project “Public Involvement in Environmental Monitoring and Improvement of Environmental Management at the Local Level,” funded by the EU and implemented by the UNDP in partnership with the Ministry of Natural Resources, other stakeholders. As part of the events, a two-day VI International Water Forum “Springs of Belarus,” as well as thematic sections “Public Involvement in Environmental Decision Making,” “On the Conservation and Restoration of Natural Ecosystems,” a round table “Improvement of the Waste Management System,” a workshop “Climate Regulation in the Republic of Belarus with Regard to the Adoption of the Green Deal by the EU”;

- *24 June 2021* (Minsk): Republican seminar “New methods in the practice of state sanitary supervision,” organized by: The Ministry of Health and SPCH (at a thematic section meeting, representatives of the sanitary and epidemiological service of the Republic were acquainted with new methodological documents and regulations in the area of safe drinking water supply, the main provisions of the Protocol on Water and Health, synergy with the SDGs);

- *12-15 October 2021* (Minsk): XXV Belarusian Energy and Ecological Forum and International Specialized Exhibition “Energy. Ecology. Energy saving. Electro” (EnergyExpo - 2021). As part of the exhibition, the territorial bodies of the Ministry of Natural Resources presented scientific achievements in the field of sustainable use of water resources, literature in the field of assessing the current state and rational use of water resources;

- *30 September – 1 October 2021* (Minsk): International Scientific and Practical Conference “Health and Environment,” dedicated to the 95th anniversary of the sanitary and epidemiological service of the Republic of Belarus, organized by: the Ministry of Health and SPCH, State Institution “Republican Centre for Hygiene, Epidemiology and Public Health” (at a breakout session, specialists from the sanitary and epidemiological service, scientific organizations and foreign guests were acquainted with scientific achievements in the field of safe and sustainable drinking water supply, current aspects of legislation, international approaches and the provisions of the Protocol on Water and Health, the SDGs);

- *7-8 October 2021* (Minsk): III International Scientific and Practical Conference “Scientific and Technical Progress in Housing and Communal Services”, which covered modern aspects of managing drinking water supply and sanitation systems (for specialists in the housing and utilities sector);

- *12-13 February 2020* (Minsk): International conference “Advanced Technologies in the Sewerage Community Systems,” organized by: the Ministry of Housing and Communal Services and Unitary Enterprise “Minskvodokanal” (for specialists of the housing and utilities enterprises, academic institutions of the republic, research and design institutes, specialists in the field of water supply, sanitation, water resources protection, preventive health care, equipment manufacturers);

- *24-25 June 2020* (Minsk): Republican seminar “New Methods in the Practice of State Sanitary Supervision,” organized by: the Ministry of Health and SPCH (at a thematic section meeting, representatives of the sanitary and epidemiological service of the Republic were acquainted with new methodological documents and regulations in the area of safe drinking water supply, modern approaches to health risk analysis in drinking water supply and sanitation systems);

- *19-20 November 2020* (Minsk, online): International scientific and practical conference “Health and Environment,” organized by: the Ministry of Health and SPCH (at a breakout session, specialists from the sanitary and epidemiological service, and scientific organizations operating in the WASH sector were acquainted with scientific achievements in the field of safe and sustainable drinking water supply and sanitation, current aspects of legislation, international approaches and the provisions of the Protocol on Water and Health, the SDGs in the WASH sector);

- *13-14 February 2019* (Minsk): International conference “Modern Trends in Water Supply and Sanitation Development,” dedicated to the anniversary of Minskvodokanal (for specialists of the housing and utilities enterprises, academic institutions of the republic, research and design institutes, specialists in the field of water supply, sanitation, water resources protection, preventive health care, and equipment manufacturers);

- *28-31 May 2019* (Minsk): TAIEX Expert Mission on Quality Management of Drinking Water and Prevention of Water-Borne Diseases (No. 67759) modern international approaches to managing the quality and safety of drinking and recreational waters, conducting supervisory and monitoring activities with an emphasis on assessing health risks from chemical and biological factors, substantiating hygiene standards (for specialists

of the system of the Ministry of Health of the Republic of Belarus);

- 5 July 2021 (Minsk): Republican seminar “New Methods in the Practice of State Sanitary Supervision,” organized by: the Ministry of Health and SPCH (at a thematic section meeting, representatives of the sanitary and epidemiological service of the Republic were acquainted with new methodological documents and regulations in the area of safe drinking water supply, modern approaches to health risk analysis in drinking water supply and sanitation systems);

- 29 October 2019 (Minsk): International workshop “Protocol on Water and Health: Equitable Access to Water and Sanitation, Actualising Targets in the Republic of Belarus,” organised by: the Ministry of Health and the National Focal Point of the Protocol (SPCH) (interdepartmental event);

- 14-15 November 2019 (Minsk): International scientific and practical conference “Health and Environment,” organised by: the Ministry of Health and SPCH (at a breakout session, specialists from the sanitary and epidemiological service, and scientific organizations operating in the WASH sector were acquainted with scientific achievements in the field of safe and sustainable drinking water supply and sanitation, current aspects of legislation, international approaches and the provisions of the Protocol on Water and Health, the SDGs in the WASH sector);

- Republican Days of Communal Hygiene where the main issue was water supply. (09/04/2020; 09/03/2021) (Minsk, the Ministry of Health of the Republic of Belarus, Republican Centre for Hygiene, Epidemiology and Public Health, over 100 specialists annually);

- Republican Sanitary and Epidemiological Councils for Hygiene of Drinking Water Supply (07/07/2020; 22/09/2020) (Minsk, the Ministry of Health of the Republic of Belarus, all chief sanitary doctors in the republic).

Activity 2: Working on the possibility of implementing projects aimed at awareness raising of various target professional groups on safe and sustainable drinking water supply, sanitation and water resources protection.

1) In 2021, the National Focal Point of the Protocol (Scientific and Practical Centre of Hygiene), as part of the implementation of Small Grant No. WHO 2021/1094434 with the World Health Organization, translated two WHO publications on chemical risk assessment from English into Russian: WHO, 2017 “Chemical mixtures in source water and drinking-water” (ISBN 978-92-4-151237-4) and WHO, 2021 “WHO human health risk assessment toolkit: chemical hazards” (ISBN 978 92 4 154807 6). Publications in Russian are posted on the WHO website, stakeholders in the Republic of Belarus have been informed, which makes it possible for specialists to get acquainted with the best modern international approaches to assessing chemical health risks in drinking water.

2) On 28-31/05/2019, the National Focal Point of the Protocol (Scientific and Practical Centre of Hygiene), with the support of the European Commission Technical Assistance and Information Exchange Instrument (TAIEX) and the Italian National Institute of Health (ISS) conducted the TAIEX Expert Mission on Quality Management of Drinking Water and Prevention of Water-Borne Diseases (No. 67759). As part of the mission, experts from the Republic of Belarus got acquainted with the modern international approaches to managing the quality and safety of drinking and recreational waters, conducting supervisory and monitoring activities with an emphasis on assessing chemical and biological health risks, and substantiating hygiene standards. The knowledge of 31 specialists of the system of the Ministry of Health of the Republic of Belarus: centres for hygiene and epidemiology of various levels from all over the republic, scientific and practical centres, hygienic departments of all medical universities of the republic, State Educational Institution “BelMAPO” (Belarusian Medical Academy of Postgraduate Education), and the National Academy of Sciences of Belarus has been improved.

3) On 28-29/01/2019, Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene,” with the support of the TAIEX grant and the Ministry of Health of the Republic of Belarus held a training course on non-infectious epidemiology “Conducting Biomedical Research. Epidemiological Aspects and Study Design” for young scientists of the National Academy of Sciences of Belarus, healthcare organizations, scientific medical organizations, and state educational institutions that train specialists with higher medical education (69 people). The purpose of the training course is to provide advice and recommendations to maintain and strengthen participants’ knowledge of how to conduct and interpret biomedical research from an epidemiological point of view in the European Union. The knowledge gained will be used in monitoring the SDGs;

4) In 2020, a grant application was submitted and a positive decision was received from TAIEX for implementation of grant No. 65806 for conducting a series of 5 events “Strengthening Capacities for Effective Implementation of the European and International Approaches in the Field of Environment and Health” in 2020-2021, with involving international experts. As part of the series of events, it was planned to familiarize the specialists of the republic with the latest international trends in this area, in particular to conduct an expert mission “The burden of diseases associated with habitat” and a study visit “Regulation of packaged water.” However, these 2 events from the series were not implemented due to the COVID19 pandemic and changes in the conditions of participation for the republic from 2021.

5) The Ministry of Health worked on the implementation of a project to survey WASH coverage in schools of the Republic of Belarus together with UNICEF (2021).

6) The Ministry of Health worked on the implementation of a project to survey WASH coverage in health care facilities of the Republic of Belarus together with the WHO (2021).

Activity 3. *Updating the curriculum of university-level educational institutions and postgraduate educational institutions to ensure training, retraining and advanced training of personnel in the field of water supply, sanitation and water resources protection.*

Staff training is carried out in accordance with the Education Code of the Republic of Belarus, educational standards, model plans, training plans, and curricula. If necessary, programmes are developed to train specialists in new relevant areas of expertise in various fields, including in the sector of water supply and sanitation, and water resources protection (WASH). The State Programme “Education and Youth Policy” for 2021-2025 is being implemented, as approved by Resolution No. 57 of the Council of Ministers of the Republic of Belarus dated 29/01/2021.

Training of highly qualified specialists

Training of highly qualified engineering and environmental specialists is carried out in the following areas of expertise: “Water supply, sanitation and protection of water resources” (1-70 04 03), “Water engineering” (1-70 04 03), “Economics and organization of production (public utilities and water management)” (1-27 01 01–04) in the following major higher educational institutions (duration of study: 4 years (full-time training), 5 years (distance training)):

Belarusian National Technical University (BNTU), Power Engineering Department (PED), Chair of Water Supply and Sanitation, trains civil engineers in specialty 1-70 04 03 “Water supply, sanitation and protection of water resources” (1-70 04 03; 1-70 04 03; 1-27 01 01–04) in full-time and distance forms of higher education of the first stage according to updated curricula. In 2020, a new curriculum has been developed for specialty 1-70 04 03 “Water supply, sanitation and protection of water resources” for distance higher education of the first stage, integrated with specialized secondary education. The specialty “Waterways and Ports” is planned to be opened at the Chair of Hydraulic and Power Engineering, Water Transport and Hydraulics in academic year 2023/2024; the curriculum includes the discipline “International Law and Protection of Transboundary Watercourses.”

The Brest State Technical University (BSTU), Water Supply and Hydrotechnology Department, Chair of Water Supply, Sanitation and Heat Supply (1-70 04 03). The curriculum of specialty 1-70 04 03 “Water supply, sanitation and protection of water resources” provides for the study of the discipline “Rational use and protection of water resources,” including the topic “Water protection measures,” in which special attention is paid to the issues of safe and sustainable drinking water supply, sanitation and protection of water resources.

Educational institution “Belarusian State University of Transport,” Civil Engineering Department, Chair of Ecology and Rational Use of Water Resources (1-70 04 03)

Polotsk State University, Department of Engineering Technology, Chair of Pipeline Transport, Water Supply and Hydraulics (1-70 04 03).

Training is also carried out in other organisations as part of non-core education.

Baranovich State University amended curricula in the disciplines “Hydrology” and “Fundamentals of Environmental Management” for students of specialty 1-33 01 02 “Geoecology” of the Department of Pedagogy and Psychology, taking into account modern scientific data on the protection of water resources in academic year 2020-2021.

Belarusian State University. Updated curricula for students of the Department of Geography and Geoinformatics: “Environmental Review, Management and Audit. Higher Education Curriculum in the academic discipline for the specialty: 1-33 01 02 Geoecology” (No. УД-795 8/curr. dated 29/04/2020), “Hydrogeology: Curriculum for the discipline for specialty 1-31 02 02 “Hydrometeorology,” No. 9639/curr. dated 30/03/2021).

Brest State A.S. Pushkin University: issues such as safe and sustainable drinking water supply, sanitation and protection of water resources are studied in the first stage of the higher education programme for specialty 1-31 02 01-02 “Geography (Scientific and Pedagogical Activity).” The issues of safe and sustainable drinking water supply, sanitation and protection of water resources are mastered by students in the following academic disciplines: “Hydrology” (2nd year of study); “Management of Water Resources” (4th year of study). Curricula for the specified academic disciplines have been developed according to the standard curriculum for the discipline “Hydrology.” For the purpose of high-quality educational and methodological support of these academic disciplines, a workshop was developed and issued in 2020, which was endorsed by the Ministry of Education of the Republic of Belarus. Currently, an electronic educational and methodological complex is being developed for the discipline “Water Resources Management.”

Vitebsk State University named after P.M. Masharov. Amendments have been made to the curriculum of the first stage of a higher education programme in the discipline “Ecology of the Urban Environment” for academic year 2021-2022. The discipline is taught for 4th-year students in specialty 1-33 01 01 “Bioecology” Full-Time Form of Study, Distance Form of Study. Module 4 “Environmental Challenges of the Cities of Belarus, Optimization Techniques” includes an issue such as “A set of measures to implement the commitments undertaken by the Republic of Belarus under the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses until 2030.” Module 1 “Water and Soil Resources of Urban Areas and Their Quality,” paragraph 1.2, has been supplemented with an issue such as “Measures taken by the Republic of Belarus in the field of water supply and sanitation in cities.”

Amendments have been made to the curriculum of the first stage of a higher education programme in the discipline “Hydroecology” for academic year 2021-2022. The discipline is taught for 4th-year students in specialty 1-33 01 01 “Bioecology” Full-Time Form of Study, Distance Form of Study. Module 4 “Environmental

challenges and ways of managing water resources,” paragraph 4.1, has been supplemented with an issue such as “Water-related diseases and their prevention.”

The following has been developed: a 26-hour long curriculum for the discipline “Water use management and public health” has been included in a retraining curriculum for specialty 1-25 01 75 “Economics and management at an industrial enterprise” in section 5 “Component of the educational institution, curriculum for advanced training in “Water use management and public health”, 36 classroom hours, programme of training courses (seminar) “Organization of research work with students on quality assessment and monitoring of the aquatic environment” for teachers of biology and chemistry.

Francisk Skorina Gomel State University. Educational programmes have been updated for specialties 1-330102 Geoecology, 1-310201 Geography, 1-51 01 01 Geology and exploration of mineral deposits (specialization in hydrogeology and engineering geology), 1-51 80 04 Geology, 1-33 80 01 Ecology to improve the level of training in water supply, sanitation and protection of water resources. The following academic disciplines have been supplemented accordingly: ecological geology, regional hydrogeology, use and protection of natural resources, hydroecology, ecological geology of industrial regions, and environmental health.

Yanka Kupala State University of Grodno. Department of Ecology and Biology updated curricula of disciplines such as “Biotechnology of Industrial Waste Treatment” of the 1st educational stage in “Biology. Biotechnology” 1-31 01 01-03 (laboratory work on “Biocoenosis of Activated Sludge of Industrial Wastewater Treatment Facilities”), “Chemistry of the Environment” and “Environmental Monitoring, Control and Examination” of the 1st educational stage in specialty 1-31 01 01 “Bioecology” (laboratory work “Drinking Water Pollution Standards” has been updated); “Environmental Chemistry” of the 1st educational stage in specialty 1 31 01 01 “Bioecology” (laboratory work on “Nitrate Pollution of Water Bodies” has been developed). A curriculum of the discipline “Use and Protection of Atmospheric Air and Water Resources” of the 2nd educational stage in specialty 1338000 “Ecology” has been developed.

Training of highly qualified specialists in medical institutions of higher education in specialties “doctor-hygienist, epidemiologist,” “doctor-valeologist” is carried out at the Belarusian State Medical University (Department of Preventive Medicine) and at the Gomel State Medical University (Department of Preventive Medicine). Curricula for the courses such as “general hygiene” and “communal hygiene” have been updated based on materials provided by the National Focal Point of the Protocol regarding best practices in water supply and sanitation, and international approaches. In 2019-2021, the Belarusian State Medical University implemented new developments – methodological documents and regulatory legal acts.

Personnel development and retraining, including in the field of WASH, are based on an adult additional education system - Resolution No. 198 of the Ministry of Education of the Republic of Belarus “On Approval of the Regulation on the Institution of Additional Adult Education” dated 28 July 2011 (<https://edu.gov.by/sistema-obrazovaniya/glavnoe-upravlenie-professionalnogo-obrazovaniya/dop-obr/normativno-pravovoe-obespechenie/>). The institutions for additional adult education include: the Academy of Postgraduate Education, the Institute for Professional Development and Retraining, the Institute for the Development of Education, the Advanced Training Centre for Executive Managers and Specialists, the Centre for Training, Advanced Training and Retraining of Workers. The procedure for professional development, retraining and internship of employees is determined by Resolution No. 954 of the Council of Ministers of the Republic of Belarus “On Certain Issues of Additional Education for Adults” dated 15 July 2011. The professional development of executives and specialists:

Within the Ministry of Health, such educational activities are carried out by the following organisations implementing educational programmes of postgraduate education:

- the Belarusian Medical Academy of Postgraduate Education (BelMAPO) (the Chair of Hygiene and Medical Ecology, the Chair of Epidemiology and Microbiology),
Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” (SPCH) (housing the National Focal Point of the Protocol) (License for Educational Activities No. 02100/580);
- State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology” (RRPCEM) (License for Educational Activities - No. 02100/579);
- Belarusian State Medical University (Department of Preventive Medicine).

In order to improve the competencies of doctors-hygienists, researchers of health care organizations, teachers of healthcare educational institutions, professional development programmes have been updated/developed (are updated annually, including the highest priority aspects in the area, best practices and international approaches)*:

1. “Methodology for Analysing Public Health Risk from the Impact of Heterogeneous Factors of the Human Environment” (2020) (40 hours) (covering certain relevant aspects of assessment of health risks associated with drinking water contamination and management of risks within drinking water supply systems, including modern international aspects of hygienic regulation and rating) (developed by: the National Focal Point of the Protocol – SPCH);
2. “Relevant issues of implementation of state sanitary supervision over drinking water supply” (2021) (40 hours) (taking into account current national legislation, best international practices, assessment of health risks associated with drinking water quality and safety) (developed by the Chair of Hygiene and Medical Ecology of the BelMAPO jointly with the SPCH);
3. “Practice of State Sanitary Supervision and Hygienic Monitoring of Habitat”;

4. “Hygienic Aspects of Non-Communicable Disease Prevention”;
5. “Chemical-Analytical and Instrumental Research Methods in the Activities of Hygiene and Epidemiology Centres”;
6. “Modern Laboratory Testing Methods in the Work of Hygiene and Epidemiology Centres”;

* Course 2 was developed as part of the implementation of paragraph 7 of Resolution No. 29.1 of the Collegium of the Ministry of Health of the Republic of Belarus “On Ensuring State Sanitary Supervision of the Drinking Water Supply to the Population” dated 30/11/2020

Courses 3-6 contain relevant issues related to organising and ensuring state sanitary supervision of domestic drinking water supply systems and swimming pools, including in situations associated with deterioration in the quality of drinking water in the amount; duration of the courses is 4 to 16 hours, developers: the Chair of Hygiene and Medical Ecology of the BelMAPO;

In order to improve the competencies of doctors-epidemiologists, laboratory diagnostics doctors, bacteriologists, virologists, laboratory assistants, biologists, microbiologists, researchers of health care organizations, and teachers of healthcare educational institutions, professional development programmes have been updated/developed (are updated annually, including the highest priority aspects in the area, best practices and international approaches)**:

7. “Epidemiology, diagnostics, immunoprophylaxis and molecular epidemiological monitoring of actual viral infectious diseases” (2020) (40 hours, including 12 hours dedicated to “Sanitary Virology,” covering relevant aspects of the regulatory and methodological framework and laboratory support for monitoring the quality and safety of water for various use (drinking water, water sources, open water bodies, wastewater) for human health with respect to pathogens of topical water-borne viral infections) (developed by RRPCEM);

8. “Relevant Issues of Clinical and Sanitary Microbiology”;

9. “Modern Diagnostic Techniques for Infectious and Non-Infectious Diseases: Polymerase Chain Reaction, Gene Diagnostics, Automated Microbiological Technologies, Enzyme-Linked Immunosorbent Assay and Others”;

10. “Risk-Based Approaches in the Epidemiology and Prevention of Infectious and Non-Infectious Diseases”;

11. “Microbiological Diagnosis of Infectious and Parasitic Diseases and Control of the Human Environment”;

12. “Modern Methods of Laboratory Diagnosis and Monitoring of Pathogenic Biological Agents and Opportunistic Microorganisms (Instrumental and Non-Device Methods of PCR, EIA, etc.)”;

13. “Risk-Based Approaches in the Epidemiology and Prevention of Infectious Diseases”;

14. “Algorithms and Technologies of Laboratory Diagnosis and Monitoring of Pathogenic Biological Agents and Opportunistic Microorganisms” (Instrumental and Non-Device Methods of PCR, EIA, etc.)”;

15. “Relevant Issues of Clinical and Sanitary Microbiology: New Decisions”;

16. “Epidemiological Surveillance and Prevention of Infectious Diseases in Modern Conditions”

**-. *Certain topics of Programmes 8-16 include training in classical and modern techniques of microscopic, culture-based, immunological and molecular genetic analysis, risk analysis and management in organising epidemiological surveillance and anti-epidemic support of the population associated with the spread of microorganisms (bacteria, viruses, protozoa, helminths) through water bodies, as well as legionella. The courses have been developed by BelMAPO’s Chair of Epidemiology and Microbiology and are designed for 160 academic hours.*

Overall, for the reporting period (2019-2021), 64 professional development (PD) courses on WASH have been organised for healthcare professionals (doctors-hygienists, doctors-epidemiologists, laboratory diagnostics doctors, bacteriologists, virologists, laboratory assistants, biologists, microbiologists, researchers of health care organizations, and teachers of healthcare educational institutions) on the premises of the National Focal Point of the Protocol (SPCH), RRPCEM and BelMAPO at which 1,229 specialists have been trained, including:

425 specialists trained in 23 PD courses in 2019,

313 specialists trained in 17 PD courses in 2020,

491 specialists trained in 24 PD courses in 2021.

Teaching was delivered by candidates and doctors of sciences, leading experts in the field of hygiene, epidemiology, sanitary virology, bacteriology, molecular epidemiology with a demonstration of the practical use of unique modern equipment.

Additionally, the following professional development programmes were developed in the form of seminars in 2019-2021:

1. “Relevant Issues of Ensuring Food Safety under the Law of the European Union” (developed by: SPCH, 16 academic hours, for executives and specialists of food production enterprises, food exporting organisations, representatives of republican government bodies and other stakeholders, covering aspects of the regulation of drinking water safety and its radiation safety in the EU and best practices (including the EU Council Directive on the quality of water intended for human consumption))

2. “Ensuring Food Safety under the Law of the European Union” (developed by: SPCH, 16 academic hours, for executives and specialists of food production enterprises, food exporting organisations, representatives of republican government bodies and other stakeholders, covering aspects of the regulation of drinking water safety and its radiation safety in the EU and best practices (including the EU Council Directive on the quality of water intended for human consumption))

3. “Scientific, Methodological and Laboratory Support of Epidemiological Surveillance of Viral Hepatitis Transmitted by Fecal-Oral Route” (covering aspects of laboratory testing of viral hepatitis A and E: Regulatory and Methodological Support for Tracking of pathogens in Epidemically Significant Water Bodies, Their Indication, Identification, Molecular Epidemiology)” (developed by: RRPCEM).

A total of 3 professional development programmes have been implemented in the form of training seminars:

On 22-23 February 2021, “Relevant Issues of Ensuring Food Safety under the Law of the European Union,” Minsk (SPCH, 31 food industry experts trained);

On 06-07 April 2021, “Ensuring Food Safety under the Law of the European Union,” Minsk (SPCH, 24 food industry experts trained);

On 26-27 May 2021, “Ensuring Food Safety under the Law of the European Union” (SPCH, 31 food industry experts trained).

On 19 September 2019, “Scientific, Methodological and Laboratory Support of Epidemiological Surveillance of Viral Hepatitis Transmitted by Fecal-Oral Route,” Minsk, RRPCEM (health professionals).

Within the Ministry of Natural Resources and Environmental Protection, professional development of executives and specialists is carried out on the premises of the State Educational Institution “Republican Centre for State Ecological Expertise and Advanced Training of Executives and Specialists” of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus (Training Course on Operation, Maintenance, Repair and Reconstruction of Water Wells. Methods for Calculating Sanitary Protection Zones and Accounting for Water Use, twice a year) and others.

Within the Ministry of the Housing and Communal Services, advanced training of workers and specialists with secondary specialised and higher education is provided on the premises of the Educational Institution “State Training Centre for Training, Advanced Training and Retraining of Personnel “ZhILKOM,” the State Educational Institution “Institute for Advanced Training and Retraining of Leaders and Industry Specialists”.

As part of additional adult education, **the Intersectoral Institute for Advanced Training and Retraining of Personnel** of the Belarusian National Technical University has developed a curriculum and provides retraining in specialty 1-70 04 03 “Water supply, sanitation and protection of water resources.” Following its completion, a standard-form diploma of professional retraining in Civil Engineering is issued.

3. Progress achieved towards meeting the targets and challenges encountered

Therefore, subject to the foregoing, there is generally a steady **progress** towards achieving the specified target.

4. On how the targets set under this area contribute to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The achievement of Indicator 17.1.1 promotes the achievement of SDG Indicator 6.b.1 “Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management (percent).”

The achievement of Indicator 17.2.1 contributes to SDG 3 and SDG 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.”

Part three Common indicators¹

I. Quality of the drinking water supplied

1. Context of the data

1.1. What is the population coverage (in millions or per cent of total national population) of the water supplies reported under sections 2 and 3 below?

Drinking water is provided to the population in the Republic of Belarus using centralized and non-centralized systems of drinking water supply. The statistical reporting on quality control and safety of drinking water in the country is carried out with regard to provision of the population with centralized and non-centralized systems of water supply, including differentiation for both rural and urban population.

In sections 2 and 3 of the Report, the information about drinking water quality is divided into:

- sources of centralized water supply,
- water of centralized systems of water supply - public water supply and institutionalized water supply systems (where appropriate);
- sources of non-centralized water supply.

For reference: Pursuant to Law No. 271-Z of the Republic of Belarus “On Drinking Water Supply” dated 24/06/1999 (<http://pravo.by>):

drinking water is water that meets drinking water safety standards;

centralized system of drinking water supply is a complex of drinking water supply sources, facilities and installations that are functionally interconnected and are intended for the extraction (withdrawal), transportation, distribution and supply of drinking water to the places of its consumption, and, if necessary, for its treatment and storage;

non-centralized system of drinking water supply is isolated facilities and installations (pit well, water catching, tube well) intended to use drinking water;

drinking water safety standards are a set of indicators established by hygienic standards that ensure the epidemic safety of drinking water by microbiological (biological) indicators and its radiation safety, harmlessness of its chemical composition, and favourable organoleptic properties.

Table 3.I.1 – Coverage of the population of the Republic of Belarus with centralized water supply

| Population category | Coverage of the population with centralized water supply (%) | | | | |
|-------------------------|--|---|-------------|-------------|------------------|
| | Baseline value* | Value reported in the previous reporting cycle* | | | Current value*** |
| | 2010 | 2012 | 2015 | 2018** | 2021 |
| Total | 86.1 | - | 87.5 | 92.8 | 95.8 |
| Urban population**** | 96.5 | 97.1 | 98.5 | 98.7 | |
| Rural population | 57.0 | - | - | 62.5 | |
| Population of agrotowns | 78.5 | 79.8 | 80.12 | 83.4 | |

Notes:

* - Sources of information: departmental reports in Form 1-ZhKH (Housing and Utilities), quarterly reports under the programme “Clean water,” the State Statistical Annual Reporting in annual Form 1-ZhKH “Housing Stock Report”;

** - Starting from 2016, the state statistical reporting does not involve the collection of data by given categories; the data for 2018 were submitted as of 01/01/2019 based on the information submitted at the request of the Ministry of Housing and Communal Services;

*** - source – departmental reporting “Information on the operation of water supply and sewerage facilities for 2021”; in 2021, the percentage of provision of consumers with drinking-quality water from centralized water supply systems was 95.8% (or 2.8 million consumers (individuals with whom water supply services agreements have been executed).

**** - for the population of cities, towns and urban-type settlements.

Table 3.I.2 – Size of the population of the Republic of Belarus for the periods analysed**

| Population category | Population size, thousand people as of year end | | | | |
|---------------------|---|--|----------------|----------------|----------------|
| | Baseline value | Value reported in the previous reporting cycle | | | Current value |
| | 2009 | 2012 | 2015 | 2018 | 2021 |
| Total | 9,495.6 | 9,442.5 | 9,469.1 | 9,429.3 | 9,255.5 |
| Urban population | 7,055.4 | 7,150.3 | 7,267.2 | 7,291.7 | 7,232.1 |
| Rural population | 2,440.2 | 2,292.2 | 2,201.9 | 2,137.5 | 2,023.4 |

For reference:

Pursuant to Law No. 154-Z of the Republic of Belarus “On Administrative-Territorial Structure of the Republic of Belarus” dated 05 May 1998 (registered in the National Register of Legal Acts of the Republic of Belarus under No. 2/686 on 20/03/2001), (*source - <http://pravo.by>*) all settlements belong to certain categories, depending on the size of the population, the level of development and specialisation of the production and social infrastructure as well as the public functions carried out in the respective territory.

The category of cities and towns includes: the city of Minsk (the capital), cities of regional subordination (with population of at least 50 thousand people, being administrative, major economic and cultural centres with the developed industrial and social infrastructure), towns of district subordination (with population of at least 6 thousand people, with industrial enterprises and organisational network for socio-cultural and domestic purposes).

The category of urban-type settlements includes:

- urban settlements (population size $\geq 2,000$ people, with industrial, utility, socio-cultural organisations, as well as sales, public catering and consumer service organisations),
- health resort settlements (population size $\geq 2,000$ people; with sanatorium-resort and recreational organisations, as well as sales, public catering, consumer service, cultural and educational organisations),
- industrial settlements (population size ≥ 500 people; located close to industrial enterprises, power plants, construction sites, railway stations and other facilities).

The category of rural settlements includes:

- *communities, villages* - settlements with the production and social infrastructure that do not belong to the agrotowns;
- *hamlets* - settlements that do not belong to agrotowns, villages or communities.
- *agrotowns* — well-maintained settlements with the developed industrial and social infrastructure to provide their population and citizens from adjacent areas with state minimum social standards, including centralized and local water supply (both cold and hot water); central gas supply; paved streets; a network of roads connecting it with settlements in the service area, preschool institutions and schools; general practitioner outpatient departments, etc.

By 2016, the Republic created over 1,500 agrotowns, evenly distributed throughout the country, with more than 50% of the rural population living in them.

2. Information from where the water quality samples reported in sections 2 and 3 below are primarily taken (e.g., treatment plant outlet, distribution system or point of consumption).

The source of the water quality data is data obtained as a result of the state sanitary supervision performed by the institutions of the Ministry of Health of the Republic of Belarus, which perform state sanitary supervision. Sections 2 and 3 of the report contain the data on water quality and safety as obtained as a result of laboratory control in the following points:

- sources of drinking water supply (centralized and non-centralized);
- after drinking water treatment and/or before supplying water to the distribution network of municipal and departmental water supply systems;
- at control points of water draw-off along the distribution network (outdoor water intakes), including dead-end ones and those located most remotely from waterworks supplying drinking water to the distribution network, on elevated sections of the distribution network;
- in points of water withdrawal by consumers (internal network of social infrastructure facilities (mainly educational institutions, welfare institutions, healthcare organizations), food industry organizations, and residential buildings).

3. In sections 2 and 3 below, the standards for compliance assessment signify the national standards. If national standards for reported parameters deviate from the World Health Organization (WHO) guideline values, please provide information on the standard values.

Pursuant to the Law of the Republic of Belarus “On Sanitary and Epidemic Well-Being of the Population” dated 7 January 2012 (as restated by Laws of the Republic of Belarus dated 05/01/2016 No. 355-Z, dated 30/06/2016 No. 387-Z, dated 15/07/2019 No. 217-Z), binding specific sanitary and epidemiological requirements and hygienic standards shall be established by the Council of Ministers of the Republic of Belarus (developed by the Ministry of Health of the Republic of Belarus), including: hygienic standards for quality of drinking water and water for recreational purposes as well as the sanitary and epidemiological requirements for water bodies, drinking water supply, use of water for domestic and other purposes of the population, and for the places of water use.

The requirements for the safety of drinking water are laid down in:

[1] Hygienic standard “Drinking water safety indicators,” as approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus, dated 25 January 2021 (with established lists of monitored drinking water safety indicators and their standard values);

[2] Resolution No. 914 of the Council of Ministers of the Republic of Belarus “On Approval of Specific Sanitary and Epidemiological Requirements for the Maintenance and Operation of Drinking Water Sources and Systems” dated 19 December 2018 (regulating the maintenance and operation of drinking water sources and centralized and non-centralized drinking water supply systems to ensure the quality and safety of drinking water supplied to the population);

[3] Sanitary Standards and Regulations (SanPiN) 10-124 RB 99 “Drinking Water. Hygienic requirements for water quality in centralized drinking water supply systems. Quality control” as approved by Resolution No. 46 of the Chief State Sanitary Doctor of the Republic of Belarus, dated 19 October 1999 (lists of monitored drinking water safety indicators and their standard values for centralized systems);

[4] Sanitary standards, regulations and hygienic standards “Hygienic requirements for sources of non-centralized drinking water supply for the population,” as approved by Resolution No. 105 of the Ministry of Health of the Republic of Belarus, dated 2 August 2010 (with established lists of drinking water safety indicators for non-centralized water supply systems).

Regulatory requirements for drinking water are based on the results of scientific research and correspond to the current level of knowledge about the toxicity and danger of chemicals and are generally harmonized with WHO recommendations. However, they differ in some respects as they take into account the regional characteristics of the aquifers in the Republic and the environmental and social situation.

Table 3.I.3 – National requirements for epidemic safety of drinking water

| Indicator | Unit of measurement | Standard |
|--|--|-----------|
| Thermotolerant coliform bacteria (TCB) | Number of bacteria in 100 cm ³ ¹ | absence |
| Total coliforms (TC) ² | Number of bacteria in 100 cm ³ ¹ | absence |
| Total bacterial count (TBC) ² | Number of bacteria forming colonies (CFU) in 1 cm ³ | Below 50 |
| Coliphages ³ | Number of plaque-forming units (PFU) in 100 cm ³ | absence |
| Giardia cysts ³ | Number of cysts in 50 dm ³ | absence |
| Cryptosporidium oocysts ³ | Number of cysts in 50 dm ³ | absence |
| Sulphite-reducing clostridia spores ⁴ | Number of spores in 20 cm ³ | absence |
| Enteroviruses | Number of genomic equivalents in 1000 dm ³ | absence |
| <i>Legionella pneumophila</i> : | Number of bacteria forming colonies in 1 dm ³ | |
| in water samples from hot and cold water supply systems in swimming pools, aqua parks, public hot tubs, SPA salons, organizations providing bathing services, hotels | | Below 100 |
| in water samples from hot and cold water supply systems in resuscitation and intensive care units of hospital healthcare organizations | | Below 50 |

¹ A triple testing of samples is carried out using 100 cm³ of water.

² Exceeding the standard value is not allowed in 95% of samples taken at the points of water intake of the external and internal water supply network for a period of 12 months, with the number of samples being tested equal to at least 100 per year. The excess is allowed in single, but not in two consecutive samples taken at the same point. In this regard, the level of contamination by TC is no more than 2 CFU (colony forming units) of Enterobacteriaceae per 100 cm³.

³ Tested in drinking water supply systems with water intake from surface water bodies or from groundwater bodies with the impact of surface water.

⁴ Tested when assessing the efficiency of water treatment techniques in centralized drinking water supply systems with water intake from surface water bodies or from groundwater bodies with the impact of surface water.

Notes:

1. Testing for enteroviruses in water samples is carried out in cities with a population of more than 100 thousand people provided with drinking water from this centralized drinking water supply system. Testing is carried out in surface and underground water supply systems: before water is supplied to the distribution network; water from the distribution network in samples taken at the points of water intake at the end point of the impact zone of water intakes from surface water sources and underground group (fed by a group of wells) water intakes. The controlled indicator is enterovirus RNA. If the enterovirus RNA is found in the water sample tested, testing is conducted on a water sample taken repeatedly the same day.

2. Testing for *Legionella pneumophila* in water samples from hot and cold water supply systems is conducted as part of a production control programme developed by business entities, with a testing frequency of at least once a year.

3. If “absence” is specified instead of a standard value, this means that the presence of this indicator in the water from centralized drinking water supply systems is unacceptable.

Table 3.I.4

National requirements for chemical safety of drinking water [1]

| No. | Indicator | Unit of measurement | Standard (maximum permissible concentration – MPC), below or equal to |
|--|---|----------------------|---|
| I. Mandatory chemical parameters: | | | |
| 1. | Fluoride | mg/dm ³ | 1.5 |
| 2. | Nitrate (NO ₃ ⁻) and Nitrite (NO ₂ ⁻) | mg/dm ³ | 45.0 3.0 |
| 3. | Arsenic | mg/dm ³ | 0.01 |
| 4. | Lead | mg/dm ³ | 0.01 |
| 5. | Iron | mg/dm ³ | 0.3 |
| II. Additional chemical parameters: | | | |
| 1. | Ammonia (for nitrogen) | mg/dm ³ | 1.5 |
| 2. | Sulphates | mg/dm ³ | 500 |
| 3. | Chlorides | mg/dm ³ | 350 |
| 4. | Petroleum products (total) | mg/dm ³ | 0.1 |
| 5. | Pesticides: γ-HCH (lindane) DDT 2,4-D | mg/dm ³ | 0.002 0.001 0.03 |
| 6. | Total hardness | mmol/dm ³ | 7.0 (10) |
| 7 | Manganese | mg/dm ³ | 0.1 (0.5) |

2. Bacteriological quality

4. Please indicate the percentage of samples that fail to meet the national standard for *Escherichia coli* (*E. coli*). Parties may also report on up to three other priority microbial indicators and/or pathogens that are subject to routine water quality monitoring.

Table 3.I.5

Drinking water quality for microbiological indicators

| Parameter | Area/category | Percentage of water samples that fail to meet standard requirements (%) | | | |
|---|--|---|--|-------|---------------|
| | | Baseline value | Value reported in the previous reporting cycle | | Current value |
| | | 2009 | 2015 | 2018 | 2021 |
| <i>E. coli</i> (TCB) | Sources of centralized water supply | 0.76 | 0.61 | 0.66 | 0.86 |
| | Sources of non-centralized water supply | 14.51 | 13.20 | 15.70 | 14.8 |
| | Centralized water supply systems (public water supply) | 0.84 | 0.66 | 0.95 | 1.28 |
| | Centralized water supply systems (departmental water supply) | 1.41 | 1.14 | 1.29 | 1.0 |
| Additional parameter 1-2: Percentage of water samples that do not meet the requirements of the microbiological safety indicators | in centralized water supply systems | 1.21 | 0.8 | 1.1 | 1.2 |
| | in non-centralized water supply systems | 14.5 | 13.2 | 15.7 | 14.8 |

3. Chemical quality

5. Please report on the percentage of samples that fail to meet the national standard for chemical water quality with regard to the following parameters: a) Arsenic; b) Fluoride; c) Lead; d) Nitrate.

6. Please also identify up to three additional chemical parameters that are of priority in the national or local context.

Table 3.I.6

Water quality for chemical indicators

| Parameter | Area/category | Percentage of water samples that fail to meet standard requirements (%) | | | |
|--|--|---|--|------|---------------|
| | | Baseline value | Value reported in the previous reporting cycle | | Current value |
| | | 2009 | 2015 | 2018 | 2021 |
| Arsenic | Total | 0.0 | 0.0 | 0.0 | 0.0 |
| | Centralized water supply systems (overall) | 0.0 | 0.0 | 0.0 | 0.0 |
| | Sources of non-centralized water supply | 0.0 | 0.0 | 0.0 | 0.0 |
| | Centralized water supply systems (departmental water supply) | 0.0 | 0.0 | 0.0 | 0.0 |
| | Centralized water supply systems (departmental water supply) | 0.0 | 0.0 | 0.0 | 0.0 |
| Fluoride | Total | 0.3 | 0.1 | 0.5 | 0.8 |
| | Centralized water supply systems (overall) | 0.2 | 0.1 | 0.4 | 0.5 |
| | Sources of non-centralized water supply | 0.6 | 0.0 | 0.0 | 1.3 |
| | Centralized water supply systems (departmental water supply) | 0.0 | 0.02 | 0.4 | 0.3 |
| | Centralized water supply systems (departmental water supply) | 0.5 | 0.6 | 0.4 | 0.8 |
| Lead | Total | 0.0 | 0.0 | 0.0 | 0.0 |
| | Centralized water supply systems (overall) | 0.0 | 0.0 | 0.0 | 0.0 |
| | Sources of non-centralized water supply | 0.0 | 0.0 | 0.0 | 0.0 |
| | Centralized water supply systems (departmental water supply) | 0.0 | 0.0 | 0.0 | 0.0 |
| | Centralized water supply systems (departmental water supply) | 0.0 | 0.0 | 0.0 | 0.0 |
| Nitrate and Nitrite | Total | 9.8 | 8.5 | 12.1 | 9.5 |
| | Centralized water supply systems (overall) | 0.5 | 0.3 | 0.5 | 0.6 |
| | Sources of non-centralized water supply | 28.6 | 24.5 | 25.8 | 23.0 |
| | Centralized water supply systems (departmental water supply) | 0.3 | 0.3 | 0.5 | 0.6 |
| | Centralized water supply systems (departmental water supply) | 0.9 | 0.4 | 0.6 | 0.6 |
| Additional parameter 1: Iron | Total | 30.0 | 25.2 | 24.5 | 24.0 |
| | Centralized water supply systems (overall) | 25.7 | 20.6 | 21.8 | 21.1 |
| | Sources of non-centralized water supply | 3.7 | 6.7 | 8.2 | 9.9 |
| | Centralized water supply systems (departmental water supply) | 22.0 | 17.5 | 21.0 | 20.0 |
| | Centralized water supply systems (departmental water supply) | 36.8 | 27.2 | 23.6 | 24.8 |
| Additional parameter 2: Manganese | Total | 4.3 | 2.9 | 3.8 | 3.9 |
| | Centralized water supply systems (overall) | 2.7 | 1.2 | 2.4 | 2.5 |
| | Sources of non-centralized water supply | 5.5 | 1.4 | 1.2 | 1.2 |
| | Centralized water supply systems (departmental water supply) | 1.8 | 1.0 | 2.4 | 1.9 |
| | Centralized water supply systems (departmental water supply) | 4.5 | 1.7 | 2.5 | 5.1 |
| Additional parameter 3: Organoleptic properties | Total | 16.4 | 14.2 | 10.9 | 9.2 |
| | Centralized water supply systems (overall) | 15.4 | 13.0 | 10.1 | 8.4 |
| | Sources of non-centralized water supply | 8.9 | 7.3 | 7.1 | 4.8 |

II. Outbreaks and incidence of infectious diseases related to water

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

a) For reporting outbreaks, please report confirmed water-related outbreaks only (i.e., for which there is epidemiological or microbiological evidence for water to have facilitated infection);

b) For reporting incidents, please report the numbers related to all exposure routes. In your response:

i) Please report cases per 100,000 population;

ii) Please differentiate between zero incidents (0) and no data available (-).

Please extend the list of water-related diseases, to the extent possible, to cover other relevant pathogens (e.g., enteric viruses, *Giardia intestinalis*, *Vibrio cholerae*).

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

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

Table 3.II.1

Water related infectious diseases

| Disease | Incidence rate per 100,000 population (all exposure routes) | | | | Number of outbreaks (confirmed water-borne outbreaks) | | | |
|---|---|--|------|------------------|--|--|------|------------------|
| | Baseline | Value reported in the previous reporting cycle | | Current value | Baseline | Value reported in the previous reporting cycle | | Current value |
| | 2009 | 2015 | 2018 | 2021 | 2009 | 2015 | 2018 | 2021 |
| Shigellosis | 1.7 | 0.17 | 0.3 | 0.1 | 0 | 0 | 0 | 0 |
| Enterohaemorrhagic <i>E. coli</i> infection | - | - | - | 0.0 | 0 | 0 | 0 | 0 |
| Typhoid fever | 0 | 0.01 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Viral hepatitis A | 0.9 | 1.71 | 0.9 | 0.2 | 0 | 0 | 0 | 0 |
| Legionellosis | - | 0.01 | 0.02 | 0.0 | 0 | 0 | 0 | 0 |
| Cryptosporidiosis | - | - | - | | 0 | 0 | 0 | 0 |
| Additional disease 1: Cholera | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 |
| Additional disease 2: Norovirus infection | - | - | - | 2.89 | 0 | 0 | 0 | 1 |

III. Access to drinking water

If possible, please provide segregated data for urban and rural areas in the table below. If this is not possible, please consider reporting by alternative categories available in your country, for example by “non-centralized versus centralized” sanitation systems or by population number-based categories. If you do so, please indicate the reported categories by renaming the rows in the column “area/category” in the table below accordingly.

If data can be reported neither for urban and rural areas nor for alternative categories, please report total (national) values only.

Please comment on the trends or provide any other important information supporting interpretation of the data with regard to access to drinking water.

Table 3.III.1 – Percentage of population with access to drinking water*

| Population category | Percentage of population with access to drinking water (%) | | | | |
|-------------------------|--|--|-------------|----------------|----------------|
| | Baseline value | Value reported in the previous reporting cycle | | FOR REFERENCE* | Current value* |
| | 2009 | 2015 | 2018 | 2020 | 2021 |
| TOTAL | 86.1 | 87.53 | 92.8 | 90.8 | 91.0 |
| Urban population | 95.5 | 98.50 | 98.7 | 98.4 | 98.7 |
| Rural population | 51.6 | 73.05 | 62.5 | 57.6 | 58.8 |
| Population of agrotowns | 78.0 | 80.12 | 83.4 | 78.5 | 81.2 |

Note:

* **Access to drinking water is defined as the ratio of the population using and having access to centralized water supply systems to the total population living in the area.** The statistical reporting is carried out with regard to provision of the population with centralized and non-centralized systems of water supply, including differentiation for both rural and urban population. Data are presented as of 01/01/2022 based on the information provided at the request of the Ministry of Housing and Communal Services.

** - in 2020, the methodology for accounting for population coverage with access to centralized water supply and sanitation was improved when planning the next cycle of the subprogramme “Clean water” of the State Programme “Comfortable housing” for 2021-2025. The methodology enabled to optimize statistical accounting and improve the reliability of data in 2020 and 2021. This explains why in 2020, compared to 2015 and 2018, an inconsistency (decrease in coverage) was found for certain lines. In general, a positive trend is observed from 2020 to 2021.

National estimates.

The aforementioned indicator “access to drinking water” (%) includes access to:

- Improved drinking water sources (as per JMP definition)
- Supplies located on premises
- Supplies available when needed
- Supplies that provide drinking water free from faecal contamination

Table 3. III.2 – Percentage of population with access to drinking water

| Population category | Percentage of population with access to drinking water (%)* | | | |
|---------------------|---|--|-------------|---------------|
| | Baseline value | Value reported in the previous reporting cycle | | Current value |
| | 2009 | 2015 | 2019 | 2021 |
| TOTAL | - | - | 99.5 | 100 |
| Urban | - | - | 99.5 | 100 |
| Rural | - | - | 99.5 | 100 |

Note:

* Access to drinking water is defined as the ratio of the population using and having access to **improved drinking water sources** to the total population living in the area. Data are provided by the National Statistical Committee of the Republic of Belarus.

- National estimates, access to sanitation includes access to:
 - Improved sanitation facilities (as per JMP definition)
 - Facilities not shared with other households
 - Facilities from which excreta is safely disposed in situ or treated off site.

IV. Access to sanitation

If possible, please provide segregated data for urban and rural areas in the table below. If this is not possible, please consider reporting by alternative categories available in your country, for example by “non-centralized versus centralized” sanitation systems or by population number-based categories. If you do so, please indicate the reported categories by renaming the rows in the column “area/category” in the table below accordingly.

If data can be reported neither for urban and rural areas nor for alternative categories, please report total (national) values only.

Please comment on the trends or provide any other important information supporting interpretation of the data with regard to access to sanitation.

Table 3.IV.1 – Percentage of population with access to sanitation*

| Population category | Percentage of population with access to sanitation (%) | | | | |
|-------------------------|--|--|-------------|----------------|----------------|
| | Baseline value | Value reported in the previous reporting cycle | | FOR REFERENCE* | Current value* |
| | 2009 | 2015 | 2018 | 2020 | 2021 |
| TOTAL | 72.9 | | 79.1 | 78.3 | 78.8 |
| Urban | 87.7 | 92.78 | 89.8 | 87.3 | 90.4 |
| Rural | 26.7 | 40.85 | 41.5 | 25.0 | 26.8 |
| Population of agrotowns | - | - | - | 36.4 | 39.8 |

Note:

* Access to sanitation is defined as the ratio of the population using and having access to **centralized sanitation systems** to the total population living in the area. The statistical reporting is carried out with regard to provision of the population with centralized sanitation systems, including differentiation for both rural and urban population. For 2021, the data are presented as of 01/01/2022 based on information from the Ministry of Housing and Communal Services.

** - in 2020, the methodology for accounting for population coverage with access to centralized water supply and sanitation was improved when planning the next cycle of the subprogramme “Clean water” of the State Programme “Comfortable housing” for 2021-2025. The methodology enabled to optimize statistical accounting and improve the reliability of data in 2020 and 2021. This explains why in 2020, compared to 2015 and 2018, an inconsistency (decrease in coverage) was found for certain lines. In general, a positive trend is observed from 2020 to 2021.

- National estimates, access to sanitation *includes access to*:
- Improved sanitation facilities (as per JMP definition)
 - Facilities not shared with other households
 - Facilities from which excreta is safely disposed in situ or treated off site

Table 3.IV.2 – Percentage of population with access to sanitation

| Population category | Percentage of population with access to sanitation (%)* | | | |
|---------------------|---|--|-------------|---------------|
| | Baseline value | Value reported in the previous reporting cycle | | Current value |
| | 2009 | 2015 | 2019 | 2021 |
| TOTAL | | | 98.3 | 98.3 |
| Urban | | | 98.9 | 98.4 |
| Rural | | | 96.3 | 98.3 |

Note:

* Access to sanitation is defined as the ratio of the population using and having access to **improved sanitation facilities** to the total population living in the area. Data are provided by the National Statistical Committee of the Republic of Belarus.

- National estimates, access to sanitation *includes access to*:
- Improved sanitation facilities (as per JMP definition)
 - Facilities not shared with other households
 - Facilities from which excreta is safely disposed in situ or treated off site

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

1. Water quality

1. On the basis of national systems of water classification, please indicate the percentage of water bodies or the percentage of the volume (preferably) of water² falling under each defined class (e.g., for European Union countries and other countries following the European Union Water Framework Directive³ classification, the percentage of surface waters of high, good, moderate, poor and bad ecological status, and the percentage of groundwaters/surface waters of good or poor chemical status; for other countries, in classes I, II, III, etc.).

b) For other countries

i) Status of surface waters

Table 3.V.1

| Percentage of surface water falling under class ^a | Value | | |
|--|---------------|--|------------|
| | Baseline | Reported in the previous reporting cycle | Current |
| | 2016 | 2018 | 2021 |
| Hydrobiological status | | | |
| <i>water bodies</i> | | | |
| I “excellent” | 2.3 | 9.3 | 7.1 |
| II “good” | 60.3 | 62.9 | 62.1 |
| III “satisfactory” | 33.6 | 23.6 | 29.4 |
| IV “bad” | 3.8 | 0.7 | 1.4 |
| V “very bad” | – | 0.7 | – |
| Total number/volume of water bodies classified | 131 | 140 | 140 |
| Total number/volume of water bodies in the country | 20,800 | | |
| <i>water bodies</i> | | | |
| I “excellent” | 11.1 | 8.8 | 12.3 |
| II “good” | 74.1 | 85.9 | 78.9 |
| III “satisfactory” | 14.8 | 5.3 | 8.8 |
| IV “bad” | – | – | – |
| V “very bad” | – | – | – |
| Total number/volume of water bodies classified | 54 | 57 | 57 |
| Total number/volume of water bodies in the country | 10,000 | | |
| Hydrochemical status | | | |
| <i>water bodies</i> | | | |
| I “excellent” | 47.6 | 38.1 | 35.5 |
| II “good” | 47.6 | 56.8 | 46.2 |
| III “satisfactory” | 4.8 | 5.1 | 18.3 |
| IV “bad” | – | – | – |
| V “very bad” | – | – | – |
| Total number/volume of water bodies classified | 166 | 176 | 197 |
| Total number/volume of water bodies in the country | 20,800 | | |
| <i>water bodies</i> | | | |
| I “excellent” | 26.0 | 39.0 | 57.4 |
| II “good” | 72.0 | 61.0 | 42.6 |
| III “satisfactory” | 2.0 | – | – |
| IV “bad” | – | – | – |
| V “very bad” | – | – | – |
| Total number/volume of water bodies classified | 61 | 59 | 54 |
| Total number/volume of water bodies in the country | 10,000 | | |

Surface water bodies are assigned to an ecological class (status) based on Technical Code of Practice (TCP) 17.13-21-2015 “Environmental protection and nature management. Analytical (laboratory) control and monitoring. Procedure for assigning surface water bodies (their parts) to ecological status classes (hereinafter –

² Please specify.

³ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

TCP) based on data obtained at observation points of the state network of observations of the state of surface waters of the National Environmental Monitoring System. The ecological status is classified as: “excellent,” “good,” “satisfactory,” “bad,” or “very bad.”

In accordance with the TCP, an ecological status is determined based on a set of conditions (statuses) determined by hydrobiological and hydrochemical indicators and depending on a hydromorphological class. The main criterion in determining an ecological status is a hydrobiological status, which is determined by the condition of river ecosystems, i.e., communities associated with stable substrates – bottom macroinvertebrates inhabiting the thickness and surface of bottom sediments, and/or phytoperiphyton represented by algae overgrowing the surface of substrates (macrophytes, driftwood, stones, etc.) in the water. The hydrobiological indicators set the upper and lower levels of the ecological status. Hydrochemical indicators make it possible to assess the ecological status at the level of a hydrobiological class or to step it down by one class. Hydromorphological indicators are only required to assign an “excellent” ecological status if the hydrobiological and hydromorphological indicators are already rated as “excellent.” Accordingly, the given data on the hydrobiological and hydrochemical class more characterize water bodies.

As a result of data analysis, the following can be noted:

- In 2021, there were no water bodies classed as “very bad”, and only 1.4% of watercourses were rated as “bad.” Most of the water bodies and streams are classified as “excellent” or “good”;
- Compared to the previous reporting cycle, the number of watercourses rated as “excellent” and “good” for their hydrochemical characteristics has significantly decreased and the number of those classed as “satisfactory” has increased from 5.1% to 18.3%. A less noticeable, but similar trend is also observed in terms of the hydrobiological status. In water bodies, on the contrary, an increase from 39% to 57.4% in the number of water bodies with “excellent” hydrochemical characteristics and a smaller increase from 8.8% to 12.3% in the number of water bodies in terms of their hydrobiological indicators are observed.

ii) Status of groundwaters

The Republic of Belarus does not have a national system of groundwater classification in accordance with its status (according to the European classification, bad or good status).

In 2020, the results of monitoring observations of the level regime and temperature of groundwaters in the territory of the Republic of Belarus in natural and slightly disturbed conditions at 95 hydrogeological stations were obtained. In order to obtain information about the level regime and temperature of the groundwaters, 85 automatic level gauges have been installed and are operating in the territory of the Republic as of 01/01/2021. The groundwater quality was analysed on the basis of the results of physico-chemical analysis of 40 water samples taken at hydrogeological stations.

Observations in the regime boreholes include gauging groundwater occurrence depth level and temperature 3 times a month and taking water samples for physical and chemical analysis, which is carried out once a year.

A hydrochemical data analysis for 2020 has revealed that:

- groundwaters in natural conditions are mostly magnesium-calcium-bicarbonate and calcium-bicarbonate in their chemical composition, with low to moderate hardness, with an average dry residue of 259.47 mg/dm³. The pH value changed within the range of 4.56 to 8.8 (with an average pH value equal to 7.41).
- subsoil and deep-well water quality according to the content of the main macro elements is mainly in compliance with the requirements specified in SanPiN 10-124 RB 99. The only exception is local sites where exceedances of MPC of nitrogen compounds, oxide of silicon, chemical oxygen demand with permanganate as the oxidant, and organoleptic properties have been found. Besides, practically everywhere the content of iron is increased. Such values, failing to comply with the specified standards, result from both anthropogenic (agricultural, public utility pollution) and natural (high penetration coefficient of covering deposits, presence of fulvic and humic substances in soil, lithological composition of water-bearing material, abundant atmospheric precipitation) hydrogeological factors.

When taking water samples, groundwater temperature regime changed within the limits of 4 °C to 10.0 °C (with an average value of 8.0 °C).

As it follows from the foregoing, in 2020 groundwater quality changed basically due to the increased (above MPC) values of chemical oxygen demand with permanganate as the oxidant (1.02 to 2.11 times higher), silicon oxide (1.08-2.74 times higher), nitrate ion (1.86 times higher), nitrite ion equal to the MPC value, and organoleptic properties: colour (1.79 to 7.02 times higher) and turbidity (1.07 to 65.2 times higher). Besides, everywhere the content of iron is increased. On the whole, compared to 2017, it can be said that no regular groundwater quality impairment in natural conditions has taken place.

A groundwater hydrodynamic regime in 2020 was investigated within the boundaries of five river basins, which allowed to describe the hydrodynamic regime on the whole territory of the Republic of Belarus and to define its formation peculiarities:

- underground hydrosphere constantly changes and depends on the combination of regime conditions and factors: such as physico-geographical, geomorphic, geologic, hydrogeological factors; moreover, the change

of the groundwater hydrodynamic regime in natural and slightly disturbed conditions is mainly due to meteorologic factors (amount of atmospheric precipitation and air temperature);

– fluctuation of deep-well water levels is practically similar to fluctuations of upper groundwater levels, which proves good hydraulic interconnection between water-bearing strata and waters of surface watercourses and water reservoirs;

– the territory of the republic is situated in the area of seasonal spring and autumn aquifer recharge; so annual increases, followed by decreases in the upper-level groundwater and deep-well water levels, are detected in accordance with these seasons.

The analysis of groundwater level seasonal changes has revealed that, in 2020, the groundwater level depth decreased in large areas of the Republic within river basins: the Dnieper - by 0.01 to 0.89 m for upper level groundwater (by 0.35 m on average) and by 0.01 to 0.45 m (by 0.15 m on average) for deep-well waters; the Neman - by 0.02 to 0.89 m for upper level groundwater (by 0.3 m on average) and by 0.02 to 0.62 m (by 0.25 m on average) for deep-well waters; the Western Bug - by 0.01 to 0.46 m for upper level groundwater (by 0.2 m on average) and by 0.04 to 0.14 m (by 0.11 m on average) for deep-well waters; the Pripyat - by 0.05 to 0.59 m for upper level groundwater (by 0.22 m on average) and by 0.02 to 0.33 m (by 0.14 m on average) for deep-well waters; the Western Dvina - by 0.06 to 0.48 m for upper level groundwater (by 0.25 m on average) and by 0.2 to 0.64 m (by 0.27 m on average) for deep-well waters.

At the same time, basins have certain areas where groundwater level has increased for a reporting period: in the Dnieper River Basin – at the locations of Oster and Sverzhen hydrogeological stations – upper groundwater level has increased by 0.1-0.2 m and artesian water – by 0.5 m at the location of the Oster and Novoluchevskiy hydrogeological stations (upper groundwater level increase by 0.5 m); in the Neman River Basin – at the location of the Ponemon hydrogeological station (upper groundwater level increase to 0.58 m); in the Pripyat River Basin – at the location of the Sitno hydrogeological station (upper groundwater and deep-well water level increase by 0.1 m), the Bechi hydrogeological station (deep-well water level increase to 0.23 m); in the Western Bug River Basin – at the location of Glubonets (upper groundwater level increase by 0.21 m) Volchin I, II (upper groundwater level increase by 0.1 m), and Lyatskie (upper groundwater increase by 0.25 m) hydrogeological stations.

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

2. Water use

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

Surface and groundwaters in the Republic of Belarus are used for agricultural, industry, domestic purposes, as well as for hydropower, navigation, and recreation.

The characteristics of water abstraction are based on the data of the state annual statistical report in Form 1-Water (the Ministry of Environment), which is used by water consuming enterprises to report annually about volumes of water abstraction and use. On the basis of water use data and statistics from the State Water Cadastre about river runoff and proved exploitable reserves of groundwater, tables were developed reporting a degree of economy sector impact on quantitative indicators of water resources of the Republic of Belarus.

The Republic of Belarus has sufficiently high potential of water resources and the impact of water abstractions for population needs and economy purposes is generally insignificant. The volumes of water use are stable, and major changes in water resources exploitation are related to the fluctuations in river runoff. On the whole in the Republic, water abstraction volumes tend to increase for agricultural and industrial needs and to decrease for domestic purposes compared to the 2010 levels. The maximum load from the agricultural sector is placed on the Pripyat river basins, from the industrial sector – on the Pripyat and Neman river basins, and from the domestic sector – on the Neman and Dnieper river basins.

Table 3.V.1 – Water exploitation index in the Republic of Belarus (%)***

| Sector | Water exploitation index (%) | | | | Current value |
|--|------------------------------|--|------|----------|---------------|
| | Baseline value | Value reported in the previous reporting cycle | | | |
| | 2010 | 2014 | 2015 | 2017**** | |
| Republic of Belarus | | | | | |
| Agriculture | 0.30 | 0.50 | 0.55 | 0.59 | 0.50 |
| Industry | 0.32 | 0.52 | 0.53 | 0.61 | 0.56 |
| Domestic use** | 0.94 | 1.65 | 0.64 | 0.71 | 0.74 |
| Western Dvina River basin in the territory of Belarus | | | | | |
| Agriculture | 0.10 | 0.17 | 0.17 | 0.16 | 0.16 |
| Industry | 0.06 | 0.13 | 0.52 | 0.47 | 0.39 |
| Domestic use** | 0.59 | 0.76 | 0.26 | 0.35 | 0.35 |
| Western Bug River basin in the territory of Belarus | | | | | |
| Agriculture | 0.69 | 1.23 | 0.51 | 0.69 | 0.49 |
| Industry | 0.47 | 0.82 | 0.34 | 0.37 | 0.37 |
| Domestic use** | 1.75 | 3.39 | 0.79 | 0.80 | 0.80 |
| Neman River basin in the territory of Belarus | | | | | |
| Agriculture | 0.42 | 0.52 | 0.50 | 0.43 | 0.39 |
| Industry | 0.50 | 0.68 | 0.62 | 0.70 | 0.64 |
| Domestic use** | 1.86 | 3.10 | 0.94 | 1.21 | 1.21 |
| Pripyat River basin in the territory of Belarus | | | | | |
| Agriculture | 0.50 | 0.74 | 1.36 | 1.56 | 1.22 |
| Industry | 0.30 | 0.48 | 0.34 | 0.72 | 0.66 |
| Domestic use** | 0.33 | 0.51 | 0.32 | 0.20 | 0.20 |
| Dnieper River basin in the territory of Belarus | | | | | |
| Agriculture | 0.24 | 0.56 | 0.31 | 0.34 | 0.32 |
| Industry | 0.46 | 0.59 | 0.62 | 0.62 | 0.59 |
| Domestic use** | 1.22 | 1.44 | 0.91 | 0.99 | 1.09 |

* – the figure includes both water abstraction for manufacturing industry and for energy cooling.

** – the figure only refers to public water supply systems and does not refer to non-centralized systems; includes water use for drinking and domestic purposes.

Note: *** – information is provided based on data on water users (data from the State Water Cadastre), according to the volumes of **water produced (abstracted)** in the following sectors:

- for “Agriculture” – OKED code 01-03 (agriculture, forestry and fishing);
- for “Industry” – OKED codes 05-35, 41-43 (mining and quarrying; manufacturing; electricity, gas, steam, hot water and air conditioning supply; construction);
- for “Use in the domestic sector”- OKED codes 36-39, 45-99 (water supply; waste collection, treatment and disposal, pollution elimination activities; etc.).

**** - in 2019, when compiling the State Water Cadastre for 2018, Republican Unitary Enterprise “Central Research Institute for Complex Use of Water Resources” adjusted the main indicators of water use for the previous year (2017).

Part four

Water-related disease surveillance and response systems

1. In accordance with the provisions of article 8 of the Protocol:

Has your country established comprehensive water-related disease surveillance and early warning systems according to paragraph 1 (a)?

YES NO IN PROGRESS

Has your country prepared comprehensive national or local contingency plans for responses to outbreaks and incidents of water-related disease according to paragraph 1 (b)?

YES NO IN PROGRESS

Do relevant public authorities have the necessary capacity to respond to such outbreaks, incidents or risks in accordance with the relevant contingency plan according to paragraph 1 (c)?

YES NO IN PROGRESS

2. If yes or in progress, please provide summary information about key elements of the water-related disease surveillance and outbreak response systems (e.g., identification of water-related disease outbreaks and incidents, notification, communication to the public, data management and reporting). Please also provide reference to existing national legislation and/or regulations addressing water-related disease surveillance and outbreak response.

The Republic of Belarus has set up an epidemiological surveillance system, which includes the collection, transmission, processing, analysis and assessment of information on the sanitary and epidemiological situation and is aimed at developing and making management decisions to improve the efficiency of sanitary and anti-epidemic measures. The epidemiological surveillance of communicable and non-communicable diseases, including identification and response to water-related disease outbreaks and incidents, is carried out by the Sanitary and Epidemiological Service of the Ministry of Health. The legal framework for the said activities is provided by Law No. 340 of the Republic of Belarus “On Sanitary and Epidemic Well-Being of the Population” dated 7 January 2012 (available at <https://etalonline.by/document/?regnum=h11200340>).

Basic TRLAs in effect (<http://minzdrav.gov.by/ru/dlya-spetsialistov/normativno-pravovaya-baza/tekhnicheskije-normativnye-pravovye-akty/teksty-tekhnicheskikh-normativnykh-aktov/profilaktika-infekcionnykh-i-parazitarnykh-zabolevaniy.php>):

Sanitary regulations 17-69 RB-98 “General requirements for prevention of infectious and parasitic diseases,” approved by Resolution No. 18 of the Chief State Sanitary Doctor of the Republic of Belarus dated 29 April 1998.

Sanitary regulations 3.4.17-13-2003 “Cholera prevention. General requirements for epidemiological surveillance of cholera,” approved by Resolution No. 78 of the Chief State Medical Doctor of the Republic of Belarus dated 25 July 2003;

Sanitary standards and regulations “Requirements for organizing and implementing sanitary and anti-epidemic measures aimed at preventing the importation, contraction and spread of typhoid fever and paratyphoid fever,” approved by Resolution No. 53 of the Ministry of Health of the Republic of Belarus dated 31 May 2012;

Sanitary standards and regulations “Requirements for organizing and implementing sanitary and anti-epidemic measures aimed at preventing the contraction and spread of viral hepatitis,” approved by Resolution No. 11 of the Ministry of Health of the Republic of Belarus dated 6 February 2013.

Sanitary standards and regulations “Requirements for organizing and implementing sanitary and anti-epidemic measures aimed at preventing the importation, contraction and spread of non-polio enterovirus infections,” approved by Resolution No. 15 of the Ministry of Health of the Republic of Belarus dated 13 March 2014.*

Sanitary standards and regulations “Requirements for organizing and implementing sanitary and anti-epidemic measures aimed at preventing the importation, contraction and spread of acute enteric infections,” approved by Resolution No. 31 of the Ministry of Health of the Republic of Belarus dated 29 March 2012.

The key elements of the water-related disease surveillance and outbreak response systems include identification of water-related disease outbreaks and incidents, notification, communication to the public, data management and reporting. In compliance with statistical reporting forms, an annual analysis of disease incidence is conducted. Data source: www.minzdrav.by, www.rcheph.by.

Pursuant to Order No. 149 of the Ministry of Health of the Republic of Belarus “On Approval of the Instructions on the Procedure for Submitting Extraordinary and Final Information on the Aggravation of the Sanitary and Epidemiological Situation,” dated 14/02/2011, extraordinary and concluding information about aggravation of the sanitary and anti-epidemic situation is provided according to the list of infectious and parasitic

diseases, other aggravation of sanitary and epidemic situation, according to Appendix 1 to the Instruction (e.g., bacterial, viral (including serosal viral meningitis) and other specified intestinal infections, diarrhea and gastroenteritis of supposedly infectious origin, viral hepatitis A with 10 and more cases among the population, 2 and more cases in health care facilities and 5 and more cases in institutions).

3. Please describe what actions have been taken in your country in the past three years to improve and/or sustain water-related disease surveillance, early warning systems and contingency plans, as well as to strengthen the capacity of public authorities to respond to water-related disease outbreaks and incidents, in accordance with the provisions of article 8 of the Protocol

On 11 January 2021, the Ministry of Health of the Republic of Belarus approved Guidelines on the Procedure for Organising State Sanitary Supervision of Drinking Water Supply, Responses to Accidents (Emergencies) in Centralized Drinking Water Supply Systems.

Based on the results of the scientific research activities, regulatory requirements for legionellosis monitoring and methodological documents for its provision have been developed and approved.

Approaches to virological monitoring of water in centralized drinking water supply systems (enterovirus infection monitoring) were improved, microbiological safety indicators were updated, and laboratory control methods were improved.

A Method of Quantification of the health risk associated with a microbiological factor in drinking water and the Method for Quantification of adenovirus DNA, which makes it possible to determine the presence of this viral pathogen in drinking water, have been developed.

A regional reference laboratory for viral pathogen detection operates on the premises of the State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology.”

Part five

Progress achieved in implementing other articles of the Protocol

Please provide a short description of the status of implementation of articles 9 to 14 of the Protocol.

Article 9 Public Awareness, Education, Training, research and Development and Information.

Article 10 Public information

Article 11 International cooperation

Article 12 Joint and coordinated international action

Article 13 Cooperation in relation to transboundary waters

Article 14 International support for national action

The Set of Measures includes indicators covering aspects of Articles 9–14 of the Protocol (especially Section XX), with more detail provided in the relevant sections.

Public Information. Target 2.1. was set.

A framework concept of an information strategy to cover the issues of water and health in the work with the population was prepared, which included informing professional groups in the WASH sector, students of educational institutions (general education schools, secondary specialised and higher specialised educational institutions, postgraduate training institutions, as well as the population).

In order to inform the public about basic provisions of the Protocol and the activities carried out in the Republic, the website of the Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” (hereafter – the Centre) contains a page dedicated to the Protocol where up-to-date information on the Protocol is posted. Moreover, within the scope of the activities conducted in the field of “environment and health,” this information is brought to the notice of the participants.

The new version of the Law of the Republic of Belarus “On Drinking Water Supply” provides for informing the public by posting information on drinking water quality on the Internet. Besides, lately, the information on drinking water quality in recreational zones has been posted on the website of territorial and republican centres for hygiene and epidemiology.

The Republic of Belarus participated in the 2018/2019, 2021/2022 GLAAS process.

Scientific Research. In 2019-2021, high-priority scientific and technological activities in the field of public health protection, sustainable use of natural resources and environmental protection in the Republic were developed by conducting a wide range of scientific research included in the state and state (sectoral) research and technology programmes and in the list of state research and technology programmes to solve the most significant national-economic, ecological and social problems (financed from the republican budget), and research financed from Nature Conservation Funds. The results of the scientific activities are technical regulatory legal acts, methodology and guidance documents regulating this sphere and set forth in the relevant sections of part two of the current report. Target 1.3.1 was set in respect of the scientific research.

As far as the WASH sector is concerned, the Ministry of Health of the Republic of Belarus annually finances scientific research in the field of hygiene of drinking water supply, including, during the reporting period, as part of the sectoral scientific and technical programme “Hygienic Safety” for 2019-2023 and the subprogramme “Safety of the Human Environment” of the State Scientific and Technical Programme “Scientific and Technical Support of the Quality and Accessibility of Medical Services” for 2021–2025, as well as the research & development to ensure the activities of the Ministry of Health. The scientific research activities are practice-oriented. The results of the research underlie the development of regulatory legal acts and methodological documents, are introduced into the practice of health care facilities that carry out state sanitary supervision, and are widely covered at scientific and scientific and practical conferences, republican and international seminars.

In relation to the WASH sector, the Ministry of Natural Resources and Environmental Protection annually finances scientific research in the field of wastewater disposal and treatment as part of the implementation of the State Programme “Environmental Protection and Sustainable Use of Natural Resources” for 2021-2025, as approved by Resolution No. 99 of the Council of Ministers of the Republic of Belarus dated 19/02/2021 (<https://pravo.by/document/?guid=3871&p0=C22100099>).

Staff training and education

Activities to achieve Target Indicator 17.2.1 have been envisaged (see the relevant section).

International cooperation, including in relation to transboundary waters

The Republic of Belarus permanently interacts with major international organisations in the field of health care and environmental protection: the World Health Organization (WHO), United Nations Environment Programme (UNEP), ЕЭКООН), United Nations Economic Commission for Europe (UNECE), United Nations Development Programme (UNDP), and Organisation for Economic Co-operation and Development (OECD).

Much attention is paid to the implementation of international conventions and protocols thereto by the Republic of Belarus, namely:

Convention on the Protection and Use of Transboundary Watercourses and International Lakes of 17 March

1992 (Decree No. 161 of the President of the Republic of Belarus dated 21 April 2003);

Convention on the Transboundary Effects of Industrial Accidents (the Law of the Republic of Belarus dated 30/04/2003);

the Stockholm Convention on Persistent Organic Pollutants (Decree No. 594 of the President of the Republic of Belarus dated 26 December 2003);

Cartagena Protocol on Biosafety to the Convention on Biological Diversity (the Law of the Republic of Belarus dated 6 May 2002).

Bilateral and multilateral contractual relations have been developed. A number of projects have been prepared and are being implemented on transboundary monitoring and use of water resources in the river basins of the Dnieper (with Ukraine and the Russian Federation), the Western Bug (with the Republic of Poland) and the Western Dvina (with the Republic of Latvia and the Russian Federation) in accordance with the planned and executed bilateral and multilateral intergovernmental agreements of the Republic of Belarus with these states.

Joint and coordinated international action. International support for national action

As part of the nationalisation of Sustainable Development Goals, National Sustainable Development Indicators have been defined, including on the main aspects of water and health (within the framework of SDGs 3 and 6).

As part of chairing the Protocol and maintaining intercountry cooperation and aiming to expand the geography of the countries that ratified the Protocol, the Republic of Belarus organised and held the following events:

- **on 6 November 2020** – an information briefing to promote the Protocol on Water and Health in the region “Protocol on Water and Health: crucial for delivering water, sanitation and hygiene for all” (Geneva, together with the Permanent Mission of the Republic of Belarus to the UN office and other international organizations in Geneva, Switzerland, and the Joint Secretariat) – for UNECE countries;

- **on 22 April 2021** – the International Scientific and Practical Conference on the Protocol on Water and Health (online) – for EECCA countries in Russian (on the premises of the National Focal Point of the Protocol). The conference was attended by representatives of government authorities in charge of issues covered by the Protocol, national focal points, scientific organisations of the EECCA countries – of the Republic of Belarus, the Russian Federation, the Republic of Armenia, the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Moldova, the Republic of Azerbaijan, Georgia, the Republic of Tajikistan, Turkmenistan, Republic of Uzbekistan, and Ukraine (96 people). Participants recognized the importance of promoting the Protocol at the national level as a tool for setting goals in the water sector, taking into account the impact of water supply and sanitation on health, the achievement of the Sustainable Development Goals on water and sanitation in the region (SDGs 3, 6) and at the national level; the important role of WASH in the fight against COVID-19, and the increasing relevance of the Protocol in this context. Participants noted the importance of setting targets under the Protocol, taking into account the provision of access to water and sanitation in schools and health care facilities (not only at home), COVID-19-related aspects, climate change (including blue-green algae blooms). Countries were offered assistance in ratifying the Protocol at the national level;

- **April 2021.** Consultations with Russian colleagues on the transfer of experience of the Republic of Belarus in the development of targets under the Protocol on Water and Health;

- **On a regular basis in 2019-2021.** The National Focal Point of the Protocol and the Central Research Institute for Complex Use of Water Resources present reports on the Protocol on Water and Health at international conferences and republican conferences with international participation, which reports specify the main obligations and benefits of implementing the Protocol, the importance of promoting the Protocol on Water and Health at the national level as a tool for setting goals in the water sector, taking into account the impact of water supply and sanitation on health, the achievement of the Sustainable Development Goals on water and sanitation in the region (SDGs 3, 6) and at the national level:

- XI All-Russian Scientific and Practical Conference with International Participation “Health Risk Analysis-2021. External, Social, Medical and Behavioural Aspects”, videoconference, Russian Federation, Perm, 18-20/05/2021,

- International scientific and practical conference “Health and Environment,” Minsk, 30/09. – 01/10/2021, 19-20/11/2020, 14-15/11/2019;

- 6th International Water Forum “Springs of Belarus”, 03-05/06/2021 (Minsk):

- International conference “Advanced Technologies in the Sewerage Community Systems,” 12-13/02/2020 (Minsk);

- International conference “Modern Trends in Water Supply and Sanitation Development,” 13-14/02/2019 (Minsk):

Part six

Thematic part linked to priority areas of work under the Protocol

1. Water, sanitation and hygiene in institutional settings

1. In the table below, please provide information on the proportion of schools (primary and secondary) and health-care facilities that provide basic water, sanitation and hygiene (WASH) services.

Basic services refer to the following:

(a) *Basic sanitation service: Improved facilities (according to JMP definition), which are sex-separated and usable at the school or health-care facility;*

(b) *Basic drinking water service: Water from an improved source (according to JMP definition) is available at the school or health-care facility;*

(c) *Basic hygiene service: Handwashing facility with water and soap available to students (schools) or patients and health-care providers (health-care facilities).*

If the above definitions/categories do not apply in your country, please report for alternative categories for which data are available. In this case, please indicate the reported categories by renaming the rows in the table below accordingly.

Please indicate the source of data. If data is not available, please put (-).

| Institutional setting | Current value (2018, 2021) |
|-------------------------------|----------------------------|
| <i>Schools</i> | |
| Basic sanitation service | 100 % |
| Basic drinking-water service | 100% |
| Basic hygiene service | 100 % |
| <i>Health-care facilities</i> | |
| Basic sanitation service | 100 % |
| Basic drinking-water service | 100% |
| Basic hygiene service | 100 % |

2. Has the situation of WASH in schools been assessed in your country?

YES NO IN PROGRESS

Note: the assessment is based on state sanitary supervision data, without regard to international methodology

3. **Has the situation of WASH in health-care facilities been assessed in your country?**

YES NO IN PROGRESS

4. Do approved policies or programmes include actions (please tick all that apply):

- To improve WASH in schools
 To improve WASH in health-care facilities

5. If yes, please provide reference to main relevant national policy(ies) or programme(s).

www.minzdrav.by, www.rcheph.by

WASH in schools:

There are territorial plans (programmes) aimed at consolidating material and technical facilities of educational institutions. They include improving sanitary condition of WCs up to the standard, repairing water supply and sewage systems.

The Republic has developed and approved **the Specific Sanitary and Epidemiological Requirements for the Maintenance and Operation of Educational Institutions, as approved by Resolution No. 525 of the Council of Ministers of the Republic of Belarus of 07 August 2019** (including updated requirements for the provision of drinking water supply and sanitation. If the centralized water supply, sanitation or heating system is not available in a rural settlement, an institution, including a catering facility, can be provided with drinking water from non-centralized sources, organise wastewater disposal through waterproof cesspools with subsequent removal of wastewater on a timely basis) (<https://pravo.by/document/?guid=3961&p0=C21900525>).

Sanitary Standards and Regulations “Requirements for certain educational institutions delivering an educational programme of special education at the level of general secondary education, an educational programme of special education at the level of general secondary education for pupils with intellectual incapacity,” as approved by Resolution No. 197 of the Ministry of Health of the Republic of Belarus, dated 12 December 2012, including amendments approved by Resolution No. 63 dated 29 July 2014

(<https://minzdrav.gov.by/dlya-spetsialistov/normativno-pravovaya-baza/tehnicheskie-normativnye-pravovye-akty/teksty-tehnicheskikh-normativnykh-aktov/obshcheobrazovatelnye-i-internatnye-uchrezhdeniya.php>).

Sanitary Standards and Regulations “Requirements for general secondary educational institutions”, as approved by Resolution No. 206 of the Ministry of Health of the Republic of Belarus dated 27 December 2012, including amendments approved by Resolutions of the Ministry of Health of the Republic of Belarus No. 63 dated 29 July 2014, No. 35 dated 17 May 2017, and No. 39 dated 3 May 2018 (<https://minzdrav.gov.by/dlya-spetsialistov/normativno-pravovaya-baza/tehnicheskie-normativnye-pravovye-akty/teksty-tehnicheskikh-normativnykh-aktov/obshcheobrazovatelnye-i-internatnye-uchrezhdeniya.php>).

Regarding response to the COVID-19 pandemic, the Ministry of Health of the Republic of Belarus has developed **Guidelines for organising an educational process in educational institutions in the context of the spread of COVID-19** that are intended for use in all types of educational institutions for children and adults (<http://minzdrav.gov.by/upload/dadvfiles/letter/metod-rekomend.pdf>) (2020). The Guidelines include hand hygiene issues. More detail is provided in Part 6 (3) (below).

In order to enhance the knowledge of international experience by experts of the Sanitary and Epidemiological Service, hygienists of the departments of hygiene of children and adolescents of the Republic were widely represented at the Subregional Workshop on WASH in Schools under the Protocol on Water and Health on **6-8 July 2021**, which was organised by the WHO European Centre for Environment and Health.

WASH in health-care facilities:

For health care facilities: the Republic has developed and approved the Specific Sanitary and Epidemiological Requirements for the Maintenance and Operation of Health Care Facilities, as approved by Resolution No. 130 of the Council of Ministers of the Republic of Belarus dated 3 March 2020, which include, inter alia, updated requirements for the provision of drinking water supply, sanitation and hygiene (https://pravo.by/upload/docs/op/C22000066_1580850000.pdf).

Sanitary Standards and Regulations “Sanitary and Epidemiological Requirements for Organisations Providing Medical Care, Including for Organising Sanitary and Anti-Epidemic Measures to Prevent Infectious Diseases in These Organisations,” as approved by Resolution No. 73 of the Ministry of Health of the Republic of Belarus dated 5 July 2017 (<https://pravo.by/document/?guid=12551&p0=W21732216p&p1=1>).

However, the following issues need to be addressed:

- Activities need to be strengthened to promote the universal access approaches, taking into account a set of criteria (covering not only physical geographic accessibility, but also affordability, vulnerable population groups, accessibility in public places), institutional access;
- The Republic of Belarus is interested in studying the situation with water supply and sanitation (WASH) in health care facilities using international methodology and would be grateful to the WHO for providing technical and financial support for data collection and organization of consultations. This research will contribute to the implementation of the decisions set out in the World Health Assembly Resolution WHA 72.2 “Water, sanitation and hygiene in health care facilities” and to the achievement of targets under the Protocol on Water and Health and SDGs 6.1 and 6.2.;
- The Republic of Belarus expresses its interest in studying the situation with UNICEF’s water supply and sanitation (WASH) in educational institutions using international methodology and would be grateful for providing technical and financial support for data collection and consultations. The study would contribute to the achievement of the SDGs in terms of equitable access to water, sanitation and hygiene, including vulnerable population groups such as children.

2. Safe management of drinking-water supply

6. Is there a national policy or regulation in your country, which requires implementation of risk-based management, such as WHO water safety plans (WSPs), in drinking water supply?

YES NO IN PROGRESS

7. If yes, please provide reference to relevant national policy(ies) or regulatory documentation.

In order to improve the efficiency of water supply systems management, targeted improvement of regulatory legal acts is conducted on the basis of the introduction of a risk analysis methodology. **Risk assessment elements** in the field of drinking water supply are set out in the applicable legislation (www.minzdrav.by, www.rsph.by, www.med.by):

[1] Law of the Republic of Belarus “On Sanitary and Epidemic Well-Being of the Population”;

[2] Hygienic standard “Drinking water safety indicators,” as approved by Resolution No. 37 of the Council of Ministers of the Republic of Belarus dated 25 January 2021;

[3] Resolution No. 914 of the Council of Ministers of the Republic of Belarus “On Approval of Specific Sanitary and Epidemiological Requirements for the Maintenance and Operation of Drinking Water Sources and Systems” dated 19 December 2018 (regulates the maintenance and operation of drinking water sources and centralized and non-centralized drinking water supply systems to ensure the quality and safety of drinking water supplied to the population);

[4] Sanitary Standards and Regulations (SanPiN) 10-124 RB 99 “Drinking water. Hygienic requirements for water quality in centralized drinking water supply systems. Quality control” as approved by Resolution No. 46 of the Chief State Sanitary Doctor of the Republic of Belarus, dated 19 October 1999 (lists of monitored safety indicators and their standard values for centralized water supply systems);

[5] Instructions for Use No. 027-1215 “Method of risk analysis in drinking-water supply systems” (approved by the Ministry of Health of the Republic of Belarus on 21/03/2016),

[6] Instructions for Use No. 019-1118 “Method of hygienic assessment of drinking water” (approved by the Ministry of Health of the Republic of Belarus on 23/04/2019);

[7] Guidelines on the Procedure for Organising State Sanitary Supervision of Drinking Water Supply, Responses to Accidents (Emergencies) in Centralized Drinking Water Supply Systems (approved by the Ministry of Health of the Republic of Belarus on 11 January 2021);

[8] Instructions for Use No. 015-1121 “Method for assessing public health risk from exposure to chemicals that influence the organoleptic properties of drinking water in case of accidents (emergencies) in centralized drinking water supply systems” (approved by the Ministry of Health of the Republic of Belarus on 14/12/2021);

[9] Instructions for Use No. 019-1221 “Method for assessing public health risk from exposure to chemicals polluting drinking water” (approved by the Ministry of Health of the Republic of Belarus on 28/01/2022);

[10] Instructions for Use No. 020-1221 “Method of quantification of microbiological health risk in drinking water”;

8. Please provide information on the percentage of the population serviced with drinking-water under a WSP.

Please indicate the source of data. If data is not available, please put (-).

| <i>Percentage of population</i> | <i>Current value (2021)</i> |
|---------------------------------|-----------------------------|
| Total | - |

3. Equitable access to water and sanitation

9. Has the equity of access to safe drinking water and sanitation been assessed?

YES NO IN PROGRESS

- Access to water and sanitation was assessed at the stage of planning subprogramme 5 “Clean water” of the State Programme “Comfortable housing and favourable environment” for 2021-2025,” as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28 January 20210;

- In 2019, an assessment of the situation of equitable access to water and sanitation in the Republic of Belarus was carried out with the support of the Secretariat of the Protocol using the Protocol’s methodology (integrated assessment - a guiding framework for public administration to ensure equitable access to safe water and sanitation; reduction of geographical disparities in access; affordability of prices (tariffs) for water supply and sanitation services, ensuring access for vulnerable and marginalized groups (persons with disabilities, people in penitentiary facilities, travellers, homeless) to safely managed drinking water). The report

was posted on the website of the National Focal Point of the Protocol on Water and Health (http://rspch.by/Docs/self-ass-access-water-rb_rus.pdf; http://rspch.by/Docs/self-ass-access-water-rb_eng.pdf);

- The Republic of Belarus participated in the 2018/2019, 2021/2022 GLAAS process covering aspects of equitable access to water and sanitation.

10. Do national policies or programmes include actions to improve equitable access to water and sanitation (please tick all that apply):

- a) To reduce geographical disparities
- b) To ensure access for vulnerable and marginalized groups
- c) To keep water and sanitation affordable for all

11. If yes, please provide reference to main relevant national policy(ies) and programme(s).

- The Programme for Socio-Economic Development of the Republic of Belarus for 2021-2025, as approved by Decree No. 292 of the President of the Republic of Belarus dated 29 July 2021;
- The Concept of Improvement and Development of Housing and Utility Services until 2025, as approved by Resolution No. 1037 of the Council of Ministers of the Republic of Belarus dated 29 December 2017, aimed to increase access of the population to high-quality drinking water, including with regard to urban and rural population;
- The State Programme “Comfortable housing and friendly environment” for 2021–2025 (subprogramme 5 “Clean water”), as approved by Resolution No. 50 of the Council of Ministers of the Republic of Belarus dated 28 January 2021, aimed to increase access of the population to centralized water supply and sanitation systems, including with regard to urban and rural population;
- Directive No. 7 of the President of the Republic of Belarus “On the Improvement and Development of the Housing and Utility Industry in the Country” dated 04 March 2019;
- The National Strategy for Water Resources Management in the Context of Climate Change for the Period until 2030, as approved by Resolution No. 91 of the Council of Ministers of the Republic of Belarus dated 22 February 2022;
- The System of State Social Standards for Servicing the Population of the Republic, as approved by Resolution No. 724 of the Council of Ministers of the Republic of Belarus dated 30 May 2003 (as amended on 14/12/2020N 720), aimed to ensure access of the population to drinking water - the percentage of the population with access to centralized water supply systems: from 2026 in cities and urban settlements: - 100 %, in agrotowns - 85 %;
- Law No. 239-Z of the Republic of Belarus “On State Social Benefits, Rights and Guarantees for Certain Categories of Citizens” dated 14 June 2007 (<http://www.pravo.by/document/?guid=3961&p0=H10700239>), aimed to provide certain population groups (including people with disabilities (disabled people) with preferential tariffs for utilities (including water supply and sanitation),
- State programme “Social Protection” for 2021 - 2025, as approved by Resolution No. 748 of the Council of Ministers of the Republic of Belarus dated 21 December 2020 (subprogramme 1 “Social Services and Social Support”, subprogramme 2 “Accessible Living Environment for People with Disabilities and Physically Handicapped Persons” (https://mintrud.gov.by/system/extensions/spaw/uploads/flash_files/GP-sotszaschita-2021-2025.pdf), aimed to create barrier-free environment within a facility with due regard to the requirements of technical regulatory legal acts by means of arrangement, in particular, of entrance(s) to buildings, way(s) of movement inside the building and sanitation and hygiene facilities (a target indicator has been set for the accessibility of social infrastructure facilities for people with disabilities and physically handicapped persons in the total number of such facilities: administrative buildings, educational institutions (higher, preschool, general secondary, special, vocational education), health care facilities, pharmaceutical organisations, cultural institutions, physical culture and sports organisations, sales and public catering facilities, consumer service facilities, social service facilities, and labour, employment and social protection authorities, territorial bodies of the Social Protection Fund, post offices and telecommunication service centres, banks and their divisions, sanatorium-resort and recreational organisations, housing facilities, and hotels). Activities to achieve these goals and their funding sources have been determined;
- Decree No. 322 of the President of the Republic of Belarus “On the Provision of Non-Cash Housing Subsidies” dated 29 August 2016 (as amended on 27/05/2021) (the population is provided with state support in the form of non-cash housing subsidies to ensure the affordability of water supply and sanitation services).

4. Protocol-related activities in response to the COVID-19 pandemic

Below is the description of the key measures to combat COVID-19 that are relevant to the activities under the Protocol on Water and Health.

During the pandemic, to mitigate the risks of the spread of COVID-19, maintain the health of the employees of organisations in the Republic and ensure the safe provision of services to the population:

1) **the following documents have been developed and adopted:**

Sanitary Standards and Regulations “Requirements for organising and implementing sanitary and anti-epidemic measures aimed at preventing the importation, contraction and spread of influenza and COVID-19” (amended and restated by Resolutions of the Ministry of Health of the Republic of Belarus No. 37 dated 10/04/2020, No. 44 dated 24/04/2020, No. 92 dated 30/10/2020, No. 105 dated 06/10/2021, and No. 111 dated 20/10/2021, <https://etalonline.by/document/?regnum=W21326822p>).

The sanitary and anti-epidemic measures aimed at preventing the contraction and spread of COVID-19 are specified in comprehensive plans. Comprehensive plans are approved in the prescribed manner by local executive and regulatory bodies, depending on the intensity of the epidemic process, and are adopted for implementation.

Sanitary standards and regulations include hand hygiene requirements:

- providing conditions for employees and visitors (clients and other persons) to adhere to hand hygiene by using hand sanitizers or skin antiseptics, including using installed dispensers - according to the instructions for their use (sub-clause 41.1);
- for patients and healthcare workers to adhere to personal hygiene practices, including hand hygiene (handwashing with soap or using hand sanitizer) (sub-clause 25.1.7);
- providing conditions for employees and visitors (clients and other persons) to adhere to hand hygiene by using hand sanitizers or skin antiseptics, including using installed dispensers - according to the instructions for their use (sub-clause 41.1);
- for patients and healthcare workers to adhere to personal hygiene practices, including hand hygiene (handwashing with soap or using hand sanitizer) (sub-clause 25.1.7).

Bodies of the Ministry of Health carry out supervisory measures to ensure compliance with the requirements of the specified sanitary standards and regulations at various facilities, including schools and health care organisations. An information campaign is being conducted among the population to promote hand hygiene, including with a focus on various target groups.

Guidelines for the prevention of coronavirus infection (COVID-19) in organizations (Ministry of Health of the Republic of Belarus) (<http://minzdrav.gov.by/ru/novoe-na-sayte/metodicheskie-rekomendatsii-po-profilaktike-covid-19/>.) (2020). Intended for employees and visitors of commercial and non-profit organisations, enterprises, institutions, and individual entrepreneurs and aimed at mitigating the risks of the spread of the infection and maintaining health during the COVID-19 pandemic:

- Ensuring that employees adhere to hand hygiene practices (wash hands with soap or using skin disinfectants/hand sanitizers);
- Equipping wash basins in public places with soap containers and dispensers for handwashing with hand disinfectants/sanitizers; Preference should be given to the use of elbow and sensor soap dispensers;
- Creating conditions for compliance with the rules of personal hygiene by tourists in vehicles, in living and eating spaces, as well as on sightseeing sites;
- Hand hygiene rules (Annex 1).

Guidelines for organising an educational process in educational institutions in the context of the spread of COVID-19 that are intended for use in all types of educational institutions for children and adults (the Ministry of Health of the Republic of Belarus) (<http://minzdrav.gov.by/upload/dadvfiles/letter/metod-rekomend.pdf>) (2020).

Based on the provisions of these guidelines and directions (decisions, plans) of the executive and regulatory bodies in each educational institution, depending on its type, existing conditions and specifics of its operating mode, heads of educational institutions shall develop and approve an “Action Plan for Organisational and Sanitary and Anti-Epidemic Measures to Prevent the Contraction and Spread of COVID-19 and Response in Case of Detection of COVID-19 Case(s).” The Action Plan shall identify persons responsible for the implementation of each specific measure, representatives of the management of the educational institution who are in charge of monitoring the implementation, and timelines for the implementation of the measure(s).

The guidelines established a mode of organising the educational process, providing for the observance of the principles of social distancing, including the maximum possible separation of students during training, living, sleeping, eating; restriction of mass events in educational institutions; organising the educational process of students, in whole or in part, using information and communication technologies; restricting (prohibiting) parent meetings, school staff meetings, meetings of educational institutions, etc.

Besides, the guidelines determined measures to reduce the risk of (prevent) the importation of COVID-19 into educational institutions, providing for the exclusion of students and employees of an educational institution with signs of a respiratory infection (cough, cold, fever, etc.) from study/work, the use of personal protective equipment (masks, gloves) by students and employees; installing hand sanitizing stations at entrances to educational institutions, etc.

The guidelines also specified enhanced measures to ensure the proper sanitary condition of the premises of educational institutions; proposed measures to improve the hygiene literacy among students, parents, and employees of educational institutions; and established a clear plan of action to be taken when detecting signs of COVID-19 in students and employees in an educational institution.

- Equipping school entrances with hand sanitizing stations for employees and students aged over 18 years with installed skin disinfectants/sanitizers intended for this purpose (including contactless dispensers) or disinfecting wipes (clause 6.6.);

- Making sure that measures are taken for employees to maintain their personal hygiene and to ensure the proper sanitary condition of the premises, providing for the creation of conditions for the observance of hand hygiene by employees and students (clause 7):

Making sure that cold and hot running water is available in wash basins in public places and at entrances to dining halls of catering facilities of educational institutions, equipping wash basins with soap or liquid soap dispensers (taking into account student age), disposable paper towels (electric hand dryers) or individual towels (preschool-age students);

Providing wash basins for medical, catering and other staff, as well as for students aged over 18 years with additional dispensers with hand disinfectants/antiseptics (preferably elbow and sensor soap dispensers);

Ensuring monitoring and regular filling of dispensers with liquid soap and antiseptics;

Handwashing with soap by students and employees upon arrival at school, after walks, classes, including in the open air, after visiting the toilet, before eating, as necessary;

Additional washing of hands using skin disinfectants/antiseptics by medical, catering staff and by other staff and students aged over 18 years at their discretion;

Observance of hand hygiene;

- Recommendations for glove use (Annex);
- **Hand hygiene rules** (Annex).

2) A **cross-sectional study was carried out to research the prevalence of behavioural risk factors that cause COVID-19 contagion among the population of the Republic of Belarus** under the aegis of the republican unitary enterprise “Scientific and Practical Centre of Hygiene” from April until June 2020 (<https://journal.fcrisk.ru/sites/journal.fcrisk.ru/files/upload/article/486/health-risk-analysis-2020-4-1.pdf>).

The study was conducted using an online survey with a specially designed questionnaire including 23 questions covering the main behavioural risk factors that could cause contagion with COVID-19 in the context of compliance with recommendations for physical and social distancing, use of personal protective equipment, **personal hygiene**, as well as questions about the subjective assessment of health of the respondents and about the presence of specific symptoms.

A total of 7,590 people were surveyed for the period of 17/04/2020 to 23/06/2020.

Data analysis included an assessment of the prevalence of behavioural risk factors, an assessment of the existence of a relationship between individual factors and the values of the prevalence ratio. The study established prevalence levels of the main behavioural risk factors and assessed the effectiveness of the impact of risk factors on the prevalence of subjective complaints about symptoms specific to COVID-19. It has shown that a number of behavioural risk factors have a significant impact on the prevalence of subjective symptoms of the disease.

In addition to data collection, the survey **pursued the goal of health education of the population**, which was achieved by posting recommendations on correcting behavioural risk factors, which recommendations were received by respondents after completing the online survey.

3) Research is conducted to detect SARS-CoV-2 in wastewater

From February 2020 to date, wastewater monitoring has been carried out on the premises of the State Institution “Republican Research and Practical Centre for Epidemiology and Microbiology” of the Ministry of Health of the Republic of Belarus to detect SARS-CoV-2 RNA in them, followed by a molecular epidemiological analysis of the detected infection pathogens.

To date, 721 samples of municipal and hospital wastewater from different regions of Belarus have been studied. SARS-CoV-2 RNA was detected in 1.1% of the samples analysed; in particular the frequency of its detection was 0.7% (398 samples examined) in 2020 and 1.5% (323 samples examined) in 2021. The analysis showed that only 37.5% of all positive tests related to hospital wastewater and the remaining 62.5% to municipal wastewater. The molecular epidemiological analysis of SARS-CoV-2 detected in wastewater in 2020 has revealed that they belong to the Wuhan-Hu-1 strain. Further comparative analysis of the nucleotide sequences of SARS-CoV-2 isolates obtained from patients with COVID-19 showed their 100% similarity with the corresponding fragments of the SARS-CoV-2 nucleotide sequences found in wastewater in the corresponding time period.

The data obtained suggest that wastewater studies can potentially be carried out for operational epidemiological surveillance of the circulation of the COVID-19 pathogen in the context of the ongoing morbidity in order to assess the epidemiological situation and identify new and emerging gene variants to predict possible scenarios for situation development and take adequate preventive measures in a timely manner.

4) An information campaign is being conducted among the population to promote hand hygiene, including with a focus on various target groups. The Ministry of Health of the Republic of Belarus and subordinate organisations have developed materials for professional groups and the public on the rules **of hand hygiene (circulated in the media, brochures, etc.)**.

5) It is still possible for subject matter specialists to receive training **by shifting to a distance learning format** (online).

6) Informing under the Protocol on Water and Health: Since 2019, the National Focal Point of the Protocol on Water and Health (Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” of the Ministry of Health – SPCH) **has been regularly messaging key stakeholders to inform about events** (conferences, webinars), including those held by international organisations online (WHO, UNECE, etc.), **and to share materials and recommendations on COVID19** that have been developed under the Protocol.

PART SEVEN

INFORMATION ON THE PERSON SUBMITTING THE REPORT

The following report is submitted on behalf of **the REPUBLIC OF BELARUS** in accordance with article 7 of the Protocol on Water and Health.

Name of officer responsible for submitting the national report: **Aleksandr Aleksandrovich Tarasenko**
Deputy Minister - Chief State Sanitary Doctor of the Republic of Belarus

Name and address of national authority: Ministry of Health of the Republic of Belarus
39 Myasnikova Str., Minsk, 220048

Signature: [signature]

Date: **20 April 2022**

On behalf of the National Focal Point of the Protocol (coordinating report preparation): Republican Unitary Enterprise “Scientific and Practical Centre of Hygiene” of the Ministry of Health of the Republic of Belarus,
8 Akademicheskaya Str., Minsk, 220012

Director **Sergei Ivanovich Sychik**

Signature: [signature]

Date: **19 April 2022**

Deputy Director for Research Work, Focal Point for the Protocol **Elena Valentinovna Drozdova**

E-mail: drozdovaev@mail.ru, rspch@rspch.by

Telephone number: (+375 17) 370 50 15

Signature: [signature]

Date: **19 April 2022**

Submission

1. Parties are required to submit their summary reports to the joint secretariat, using the present template and in accordance with the adopted guidelines on reporting, 210 days before the next session of the Meeting of the Parties. Submission of the reports ahead of this deadline is encouraged, as this will facilitate the preparation of analyses and syntheses to be made available to the Meeting of the Parties.

2. Parties are requested to submit, to the two addresses below, an original signed copy by post and an electronic copy by e-mail. Electronic copies should be available in word-processing software.

Joint Secretariat to the Protocol on Water and Health

United Nations Economic Commission for Europe

Palais des Nations
1211 Geneva 10
Switzerland

(E-mail: protocol.water_health@unece.org)

World Health Organization Regional Office for Europe

WHO European Centre for Environment and Health
Platz der Vereinten Nationen 1
53113 Bonn
Germany

(E-mail: euwatsan@who.int)