



ЦЕЛИ УСТОЙЧИВОГО РАЗВИТИЯ В БЕЛАРУСИ



Public review of the implementation of the Sustainable Development Goals No. 6/14 (SDG 6/14) in Belarus

Minsk, Belarus
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Public review of the implementation of Sustainable Development Goals 6 “Ensuring the availability and sustainable management of water and sanitation for all” and 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development” in the Republic of Belarus was prepared within the framework of the project “Institutional integration of the 2030 Agenda in Belarus and other Eastern Partnership countries”, implemented by the Dortmund International Education Center on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ) and the German Society for International Cooperation (GIZ).



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Introduction

In September 2015, UN member states adopted the 2030 Agenda for Sustainable Development (2030 Agenda). The document consists of 17 global sustainable development goals (SDGs) that must be achieved by 2030.

Belarus actively participates in the process of achieving the Sustainable Development Goals at both the state and public levels. The country has a [national architecture for managing the achievement of SDG¹](#). An important part of it is [the National Platform for Reporting on Sustainable Development Goal Indicators](#), which accumulates all current information on achieving the SDGs in accordance with accepted national indicators².

To globally assess progress in achieving the Sustainable Development Goals, there is a system of global and national indicators, as well as other tools, including analysis of the implementation of certain Goals. One of these tools is public or expert (informal) reviews of the implementation of all or individual Goals in countries. Such reviews can be seen as complementary to the national voluntary SDG reviews that countries periodically undertake. In 2022, the Republic of Belarus presented the second [Voluntary National Review on the implementation of the 2030 Agenda³](#). This review, in particular, notes sufficient progress and good results on SDGs 6 and 14. At the same time, the Voluntary National Review provides only a general idea of the official position on the situation with the SDGs and does not examine in detail individual targets and indicators within specific SDGs.

This review is an expert informal assessment of the process of achieving SDGs 6 and 14 in Belarus, carried out as of 2022, with a focus on analyzing the situation for individual targets and indicators.

Among the main objectives that the authors set when preparing the review was to assess the overall progress in achieving SDGs 6 and 14 from the point of view of indicators of individual SDG targets, as well as based on the ambitious promises set by the wording of the targets themselves. Looking ahead, it can be noted that, from our point of view, existing global indicators do not fully allow us to assess progress towards achieving the SDGs. The goal was also to demonstrate the importance of SDG 14 for Belarus, as well as the role that Belarus plays in international work to achieve SDG 14. An essential and significant part of the review are recommendations for strengthening national work on both SDGs, since despite the existing progress there remains not much time until 2030, but as the analysis shows, there are still many areas in which active steps need to be taken to achieve the SDGs.

The focus of this review was on water, which, within the framework of the Sustainable Development Goals, is addressed in SDG 6, “Ensuring the

availability and sustainable management of water and sanitation for all” and SDG 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”.

These goals were combined into one review so that it was possible to take a comprehensive look at the area of water resources management in Belarus in the context of the SDGs. For Belarus, as a country that has a very large amount of water resources, this topic is very important.

If SDG 6 is generally perceived in Belarus as one of the main goals in the environmental block of the SDGs, then SDG 14 is rather optional, not directly related to Belarus, since it does not have direct access to the seas or ocean. Moreover, half of the country’s territory belongs to the Baltic Sea basin, and half to the Black Sea basin, and, given the presence of a number of large transboundary rivers, the country is closely connected with two seas.

The sources of information for preparing the review were official statistical data posted on the National Platform for Reporting on Sustainable Development Goal indicators, materials from relevant government organizations, scientific, public and international organizations, publications in various media, expert interviews and materials.

SDG 6



General information on SDG 6 and approaches to national reporting

Sustainable Development Goal 6, “Ensuring the availability and sustainable management of water and sanitation for all,” is a central goal aimed at addressing water-related challenges. For Belarus, SDG 6 is very important, especially taking into account the considerable amount of water resources in the country.

At the international level, SDG 6, “Ensuring the availability and sustainable management of water and sanitation for all,” has 8 targets and 11 associated indicators to measure progress towards each target.

At the country level, all 11 indicators are recognized as relevant for the Republic of Belarus and, accordingly, should be used for monitoring at the national level.

Almost all environmental SDGs (and, accordingly, most of the tasks within the framework of their implementation) are assigned to the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus entirely or jointly with other republican government bodies.

Belarus has adopted and developed [the National Strategy for Water Resources Management under Climate Change for the period up to 2030](#)⁴.

Various international organizations and projects have made a significant contribution to the implementation of SDG 6 in the past period. As an example, it is worth noting the Water Initiative+ (EUWI+), implemented in Belarus with the support of the European Union, which helped in achieving many targets under SDG 6. A [synthesis report](#)⁵ was also released on the situation and prospects for water resources management in the country, which is perhaps, one of the most important publications in recent years in this field

► ***In terms of the formation of SDG 6 target indicators, the majority is distributed between the Ministry of Natural Resources and Belstat.***

Certain indicators of SDG 6 targets are elements of national reporting regarding the implementation of obligations under bilateral and international agreements that address issues of rational use and protection of water and to which the Republic of Belarus has joined.

In particular, indicator 6.5.2 under target 6.5 “By 2030, ensure integrated management of water resources at all levels, including, if necessary, on the basis of transboundary cooperation” is included in national reporting under the UNECE Convention on the Protection and Use of Transboundary Watercourses and International lakes, which the Republic of Belarus joined in 2003.

Achieving SDG 6 is also closely linked to the implementation of [the Protocol on Water and Health](#) to the UNECE Helsinki Convention, which Belarus joined in 2009, since the PWH is directly aimed at the sustainable provision of safe drinking water and sanitation (SDG 6 targets 6.1 and 6.2), recycling wastewater and reducing pollution entering water bodies (SDG 6 target 6.3), improving water use efficiency to address water shortages (SDG 6 target

6.4), improving water management and water use (SDG 6 target 6.5) and creating a healthy environment for people (SDG 6 target 6.6).

The principles of the PWH are fully consistent with SDG 6 due to its integrated, cross-sectoral approach, as well as its emphasis on security aspects. In 2020-2022 Belarus served as Chairman of the Parties to the Protocol. [The National Contact Center](#) for the Protocol on Water and Health issues operates on the basis of the Republican Unitary Enterprise “Scientific and Practical Center for Hygiene” of the Ministry of Health.

Protocol on Water and Health

Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (PWH). By Decree of the President of the Republic of Belarus dated March 31, 2009 No. 159, the Republic of Belarus joined the PWH. The purpose of the PWH is to contribute at all levels (i.e. nationally, as well as in transboundary and international contexts) to the protection of human health and well-being as part of sustainable development by improving water management, including the protection of aquatic ecosystems and reducing the spread of diseases associated with water. Parties to the PWH must take all appropriate measures to provide the population with drinking water of good quality, including effective protection of water resources used as sources of drinking water from pollution from other sources (agriculture, industry, etc.), water purification, creation and maintenance of water supply systems and drainage. It is also necessary to take certain measures to protect human health from water-related diseases.

Once every three years, the parties to the PWH must submit to the Secretariat a short report containing an assessment of the progress made under the Protocol in accordance with the established form. The Republic of Belarus provided such reports in 2010, 2013, 2016, 2019 and 2022.

To help achieve the targets, the country develops water management plans at the transboundary, national and/or local level, which may be an integral part of other relevant plans, programs or documents.

In accordance with Decree of the President of the Republic of Belarus dated March 31, 2009 No. 159, the Ministry of Health and the Ministry of Natural Resources are identified as the bodies responsible for fulfilling the obligations assumed by the Republic of Belarus under the PWH.

To coordinate activities to ensure the fulfillment of obligations under the PWH, the Council for the Implementation of PWH was created by Resolution of the Ministry of Health dated May 27, 2010 No. 52. The Council includes representatives of interested ministries and departments (Ministry of Health, Ministry of Natural

Resources, Ministry of Housing and Public Utilities, Ministry of Emergency Situations), scientific institutions, and representatives of NGOs.

As part of the PWH, the Republic of Belarus, on March 17-18, 2021, approved a Set of measures to implement the obligations assumed 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. The set of measures was developed jointly by the Ministry of Health, the Ministry of Natural Resources and Environmental Protection and the Ministry of Housing and Communal Services with the support of the Joint Secretariat of the Protocol within the framework of the EUWI+ project.

As part of the Set of Measures, 17 target areas that are relevant for the Republic of Belarus are determined, 29 tasks and 43 target indicators are identified to assess their achievement. A set of measures to implement the obligations assumed by the Republic of Belarus under the PWH until 2030 is posted on the official website of the Republican Unitary Enterprise “Scientific and Practical Hygiene Center” in the section of the [National Contact Center for PWH](#).

Assessment of the situation in achieving individual targets under SDG 6 in Belarus

Target 6.1

By 2030, ensure universal and equitable access to safe and affordable drinking water for all

► *Brief summary:*

Significant progress can be noted in completing this target. In general, the situation with access to drinking water in Belarus is satisfactory. At the same time, there is a certain difference in the situation with access to safe drinking water for the urban and rural population: in rural areas there is a problem with the contamination of some wells with nitrates, which is a significant problem.

It can also be noted that the consumption of bottled drinking water among the urban population has been growing in recent years, which has certain negative environmental consequences associated with the generation of a significant amount of packaging waste.

The photo is for illustrative purposes only.



Official national indicators:

6.1.1 Share of the population using water supply services organized in compliance with safety requirements (percentage) (Belstat): **99.5%** (as of 2019).

This indicator means the share of the population using improved sources of drinking water in the total population (percentage). In this case, improved sources of drinking water are understood as a water supply piped to a house or land plot, a stand-pipe on the street, a well, a protected well, and bottled water. Official data indicate almost 100% achievement of this indicator by the Republic of Belarus in 2021.⁶ It should be noted that such a highly aggregated indicator does not allow assessing the implementation of aspects of water safety, equitable access and cost of water, which includes the formulation of target 6.1.

► *Discussion of the target implementation:*

Drinking water supply in the Republic of Belarus is based on the use of centralized drinking water supply systems, the supply of which is quite high for the population of cities – 98.7% and agricultural towns – 83.5%, and significantly lower for the rural population – 62.52%⁷. Thus, non-centralized drinking water supply systems (mine wells and individual wells) can be periodically used by about 1-1.4 million people, the bulk of whom are the rural population.

In case of centralized drinking water supply systems, groundwater is used as a source of water supply, from which 93% of drinking water comes. In the water of 70% of artesian wells in Belarus, the level of iron content is above the maximum permissible concentration (0.3 mg/l). This problem is being



Ecocenter student Anna Kozlova on an expedition in the village of Karsakovichy, Barysaw district Source: ecoidea.me



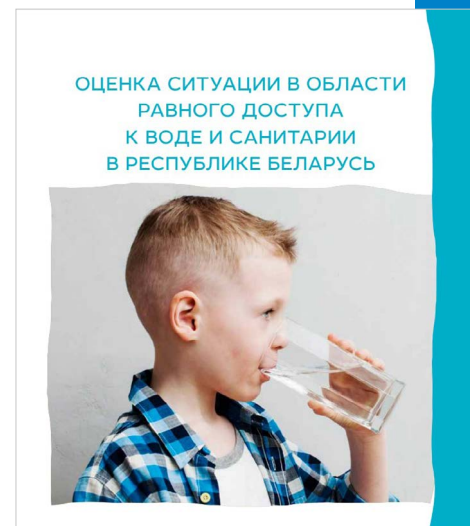
Meetings with residents during an expedition in the village of Malaja Uhaloda, Barysaw district Source: ecoidea.me

solved in the country through the construction of iron removal stations. It should be noted that the need for iron removal stations significantly exceeds their availability and the pace of construction, so many residents, especially in rural areas and small towns, receive water that exceeds the established standards for iron content and must use additional purification.

In case of decentralized water supply systems, i.e. using mine wells as a source of water supply, there is a serious problem of increased content of nitrogen-containing compounds (nitrates, nitrites, ammonium compounds) in water. According to the sanitary service of the Ministry of Health, up to 30% of water samples from wells annually do not meet the standards for nitrate content⁸. According to studies of water from individual wells conducted by public organizations in Belarus in 2016-2020 with the use of Merckoquant[®] nitratetest test strips, it was found that a significant number of samples do not meet sanitary standards for nitrate content (45 mg/l), while in quite a large number of wells the water significantly exceeds the standard for nitrate content.

The situation is aggravated by the low level of awareness of residents about the problem of nitrate contamination of water, the lack of regular inspections of private wells, as well as difficult access for the rural population to simple methods of testing water for nitrates.

The impacts of climate change are also becoming increasingly relevant in the water sector. Wells are particularly vulnerable to climate change because they receive water from the first aquifers from the surface. Lowering groundwater levels leads to drying up of wells and reduced water availability. It can be assumed that projected climate changes will have a particularly negative impact on water supply in rural areas, where access to centralized water supply sources is significantly limited.



The photo is for illustrative purposes only. Cover page of the report.

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In 2019, [an analysis of the situation](#) in the field of equal access to water and sanitation was carried out in the Republic of Belarus using the mechanism for assessing equal access developed under the Protocol on Water and Health. This assessment showed that the country ensures a high level of affordability of tariffs for water supply services through subsidized tariffs, preferential tariffs and the provision of non-cash subsidies. At the same time, access to drinking water in case of centralized water supply is maintained through government subsidies. If a well is used as a source of water supply, its maintenance services must be covered entirely by the budget of the households themselves. Considering the generally lower level of income of the population in rural areas, as well as the insufficient level of awareness about the rules for maintaining wells, this is quite problematic and in some cases leads to unsatisfactory maintenance of the water supply source.

The results of this analysis also showed a low level of awareness among stakeholders (local authorities, water supply companies, local public organizations, etc.) about an integrated approach to equal and fair access to water, especially the needs of vulnerable and marginalized groups, which is a significant obstacle to achieve Goal 6.1.

Thus, based on the above, we can conclude that, despite significant achievements in providing residents with inexpensive drinking water, in the Republic of Belarus, target 6.1 has not yet been fully implemented, because

the problem of water safety in non-centralized water supply sources has not been resolved, including the absence of a financial support mechanism to ensure safety. Also, for many territories, increased iron content in centralized water supply continues to be an urgent problem. In addition, no mechanism has been created to support households that find themselves without a source of water supply if it dries up.

Example of social activities:

Introduction of risk-based approaches to managing centralized drinking water supply systems

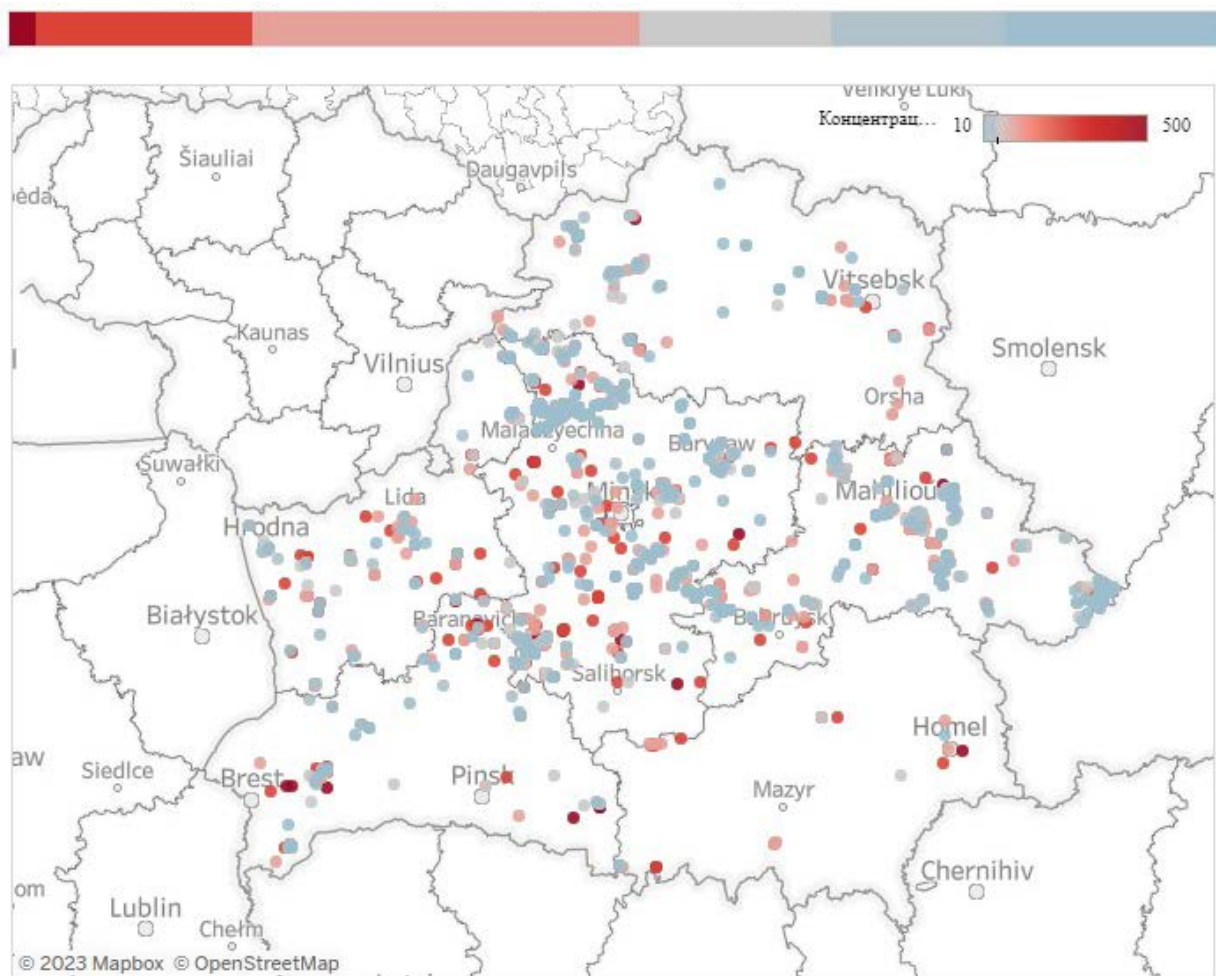
With the active participation of the Eco-Partnership MOO in the Republic of Belarus, the first experience of using water safety plans (WSPs) in 2018-2020 was obtained. WSPs are recommended by the World Health Organization as a tool, the use of which allows you to organize the management of the water supply system in such a way as to ensure the availability sufficient quantities of acceptable quality and safe water for the local community.

In 2020, in the Masty district of the Grodna region, WSPs were developed for all six village councils of the Masty district and the city of Masty. The WSPs were approved by the decision of the Council of Deputies of the Masty District dated June 22, 2021 No. 133.

The development of the WSPs was carried out by a special working group, which included representatives of the district water management enterprise, village councils, Eco-Partnership MOO, etc. The process of preparing the WSPs was accompanied by a training program and advisory support from the Eco-Partnership MOO. The work was coordinated by the Water Council, created under the Masty District Executive Committee in 2019.

Priority WSP activities were implemented in the Masty district in 2021. As a result, the water supply and quality of drinking water was improved in 9 rural settlements of the Masty district.

DIAGRAM 1. NITRATE CONTENT IN WELLS OF BELARUS
(Including all non-centralized sources of water supply (wells, standpipes, boreholes, etc.)



Source: <https://ecoidea.me/ru/article/1316>

Water control

In 2013-2021 In Belarus, the “Water Control” project was operating, which was engaged in public monitoring of nitrates in non-centralized water sources in rural areas and the search for hidden sources of pollution, as well as educating the local population on the topic of nitrate pollution. More than 4,000 qualitative studies of water from various sources were conducted for nitrate content.

Target 6.2

By 2030, achieve universal and equitable access to adequate sanitation and hygiene and put an end to open defecation, paying particular attention to the needs of women and girls and those in vulnerable situations

► *Brief summary:*

There has been significant progress in achieving this goal. Almost the entire population has access to sanitation and hygiene facilities. At the same time, there is a significant difference in the situation with access to effective and comfortable sanitation facilities for urban and rural populations: sanitation facilities available in rural areas are generally significantly less effective from an environmental point of view and have a significant local impact on the environment.

Official national indicators:

6.2.1.1 Share of population using sanitation services organized in compliance with safety requirements (percentage) (Belstat): 98.3% – 2019

This formulation of the indicator in practice includes the following types of sanitation services: a flush toilet connected to a sewerage system, a septic tank or cesspool, a well-equipped toilet with a cesspool. Official data indicate that the Republic of Belarus achieved almost 100% of this indicator in 2019. This indicator includes both centralized sewerage and local drainage and improvement systems. At the same time, the formulation of the indicator does not allow for a comprehensive assessment of the implementation of the task, in particular, taking into account the gender aspect specified in the formulation of the target. In addition, the vagueness of the wording (“...taking into account safety requirements”) makes it difficult to evaluate the available sanitation services in terms of environmental efficiency.

► *Discussion of the implementation of the target:*

In the Republic of Belarus, centralized disposal of domestic wastewater includes the following elements:

- collection and transportation of wastewater through sewer networks;
- wastewater treatment.
- discharge of treated wastewater. Wastewater is discharged mainly into surface water bodies – 89.8% of the total volume of wastewater discharged into the environment.

Despite the fact that centralized wastewater disposal is the safest way to collect and treat household wastewater, there are a number of problems in this area that pose a risk to the efficiency of the system. About 30.8% of sewer networks have an excessive service life, 52 units of treatment facilities operate ineffectively and 55 filtration fields have a negative impact on the

environment⁹. Existing wastewater treatment plants in cities and regional centers were built mainly in the 1970s, have great physical wear and tear and cannot meet modern requirements in the quality of wastewater treatment, primarily in terms of removing nutrients – nitrogen and phosphorus. These factors increase the risk of emergency situations and environmental pollution, which in turn creates risks of negative impacts on public health.

In the Republic of Belarus, population coverage with centralized sewerage is more than 76%. At the same time, this indicator differs significantly in urban and rural areas. According to official data, in 2018, the coverage of the urban population with centralized sewerage was 89.8%, and the rural population – 29.7%. Thus, there are significant geographic disparities in the provision of sewerage services.

According to a study by the Eco-Partnership MOO, the provision of private houses with a sewerage system in small settlements of the Minsk region is 33%. The following types of drainage are used:

- connection to centralized sewerage – 10.5%;
- disposal of wastewater into septic tanks with subsequent removal of wastewater (18%);
- disposal of wastewater into septic tanks with subsequent filtration of wastewater into the ground (4.5%).

67.0% of private houses are not equipped with sewerage. In such houses, as a rule, out-door toilets with a cesspool with filtration of wastewater into the ground are used. Checks for the correct design of cesspools (for example, their tightness and isolation from seepage into the ground) are carried out only when new houses are commissioned. But often these checks can only be carried out formally, since by the time they are put into operation, cesspools are usually already in active use.

The lack of a drainage and wastewater treatment system in private homes in rural areas leads to pollution of the environment, in particular groundwater, by human waste products, which, in turn, creates an increased risk to the health of rural residents.

The key program document in the field of water supply and sanitation is the “Clean Water” subprogram of the State Program “Comfortable Housing and Favorable Environment”¹⁰, which is adopted for 5 years. A significant drawback of the “Clean Water” subprogram for 2016-2020 was the lack of tasks and measures to develop the sanitation system in rural areas, i.e. there was no budget funding for this area. Subprogram “Clean Water” for 2021-2025. was supplemented by tasks to provide the population with centralized water disposal (sewage) systems and improve the quality of wastewater treatment and the reliability of water disposal (sewage) systems. It is planned to provide 79.3% of the population with centralized sewerage. To accomplish these tasks, measures are envisaged for the construction and reconstruction of 70 wastewater treatment plants, construction of about 11.2 thousand kilometers of sewer networks, and replacement of at least 3% of wastewater (sewage) networks with excess service life.

The photo is for illustrative purposes only.
Source: depositphotos.com



Nevertheless, the “Clean Water” subprogram for 2021-2025. does not provide for the development of local sewerage systems in the absence of the possibility of connecting to a centralized sewerage system.

It should also be noted that issues of information work with the population require great attention. Residents often do not see the connection between improper installation practices of an out-door toilet or sewer well, household activities (laundry, grey water from the kitchen, handling of pet manure) and contamination of drinking water in the well, or are not aware of their proper installation and operation. Information work with the population on these issues was carried out mainly by public organizations and requires significant strengthening at the present time.

Thus, based on the above, we can conclude that, despite significant progress in the Republic of Belarus, target 6.2 has not yet been fully implemented, because the problem of sewerage safety in rural areas has not yet been resolved.

Assessment methodology

Government agencies (organizations), under the methodological guidance of Belstat, are working on adapting international and developing national indicators to assess progress in the implementation of SDG targets, in particular, characterizing the population access to water supply and sanitation services organized in compliance with safety requirements (6.1.1 and 6.2.1.1), which are studied by Belstat as part of the Multi-Indicator Cluster Survey to Assess the Situation of Children and Women (MICS).



For reference:

MICS is an international household survey program developed by the United Nations Children's Fund (UNICEF) to collect statistically reliable, internationally comparable indicators to monitor progress towards national goals and global commitments, including the Sustainable Development Goals.

The Republic of Belarus participated in three rounds of MICS: MICS 3 in 2005, MICS 4 in 2012 and MICS 6 in 2019. The sample population of households selected for the MICS survey is sufficient to obtain nationally representative data, in urban and rural areas, as well as by region. The general population for selection is the total number of households living in the Republic of Belarus (according to the latest population census), with the exception of collective households (living in boarding homes for the elderly, boarding schools, etc.), as well as students living in dormitories.

SDG indicator 6.1.1 is assessed using international methodology and is defined as the share of the population using improved drinking water sources in the total population (percentage). Improved sources of drinking water include a water supply piped into the house or property, an outdoor standpipe, a well, a protected well, and bottled water.

MICS 6 in 2019 examined for the first time the question of whether households have enough drinking water when it is needed. However, when calculating indicator 6.1.1 for 2019, this was not taken into account in order to ensure comparability with data from previous years. However, according to data for 2019, the share of the population who always have enough drinking water in case of need in the republic as a whole was 96.1%, in cities and towns - 96.5%, in rural areas – 94.9%.

SDG indicator 6.2.1.1 in the National Indicator System for monitoring the achievement of SDGs is defined as a proxy, since the calculation methodology does not fully comply with that proposed at the global level. To calculate the global indicator, there is no information on the availability of a handwashing facility with soap and water in households. During sample surveys, this issue is not studied, since it is not relevant for the population of the republic.

SDG indicator 6.2.1.1 is defined as the percentage of the total population using improved sanitation facilities with members of their household only. Improved sanitation facilities include a flush toilet connected to a sewer system, a septic tank or cesspool, and a well-equipped toilet with a cesspool.

On the National SDG Reporting Platform, indicators 6.1.1 and 6.2.1.1 are presented for the entire country and by place of residence.

Target 6.3

By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

► *Brief summary:*

This target, based on its formulation, is very complex and multi-component. It is possible to state certain progress in its implementation, but it is quite difficult to assess in detail the extent of this progress. Existing indicators do not allow a qualitative assessment of all the semantic objectives that are included in the formulation of the goal. There has been a significant reduction in the proportion of untreated wastewater, while emissions of hazardous chemicals and materials are increasing or not decreasing.

Official national indicators:

6.3.1 Share of safely treated domestic and industrial wastewater (percentage) – Belstat/Ministry of Natural Resources: more than 99% for the last 5 years, 99.7% in 2020.

Indicator 6.3.1 “Share of safely treated wastewater” (SSTW) is one of the main indicators of SDG 6, which allows assessing national trends in reducing the flow of pollutants into water bodies as part of wastewater and the efficiency of wastewater treatment facilities.

In accordance with the Water Code of the Republic of Belarus¹¹, the discharge of wastewater into the environment using hydraulic structures and devices, including through a rainwater drainage system, as well as the discharge of wastewater into the environment after treatment at biological treatment facilities in natural conditions (in filtration fields, underground filtration fields, filter trenches, sand and gravel filters) refers to special water use and is carried out on the basis of permits for special water use or integrated environmental permits (IEP) issued by territorial bodies of the Ministry of Natural Resources. At the same time, the water user is obliged to keep records of wastewater discharged into the environment and annually fill out statistical reporting in Form 1-water (Ministry of Natural Resources), reflecting the volume of wastewater discharge for each wastewater release, broken down by category:

- without pre-treatment (the quality of wastewater allows it to be discharged into a surface water body without pre-treatment);
- insufficiently treated (discharge of wastewater in violation of current legislation, including as a result of an emergency discharge, or the content of pollutants in wastewater exceeds the standards for permissible discharge of chemicals and other substances in wastewater, established in permits for special water use or IEP);

- normatively treated (discharge of wastewater, the content of pollutants in which does not exceed the standards for permissible discharge of chemicals and other substances in wastewater, established in permits for special water use or IEP).

Statistical reporting in Form 1-water (Ministry of Natural Resources) is the main initial information base for calculating indicator 6.3.1.

Indicator 6.3.1 is defined as the ratio of the sum of standardly treated wastewater and wastewater discharged into surface water bodies without preliminary treatment to the total volume of wastewater discharged into surface water bodies.

When calculating indicator 6.3.1 by type of economic activity in accordance with the National Classifier of the Republic of Belarus OKRB 005-2011 “Types of Economic Activities” (OKED), the calculation is carried out in aggregate for three main sectors based on the annual volume of water used for production needs for the corresponding type of activity.

- 1) agriculture, forestry and fishing (OKED A);
- 2) DOPES sector (Mining; Manufacturing Industry; supply of electricity, gas, steam and air conditioning; Construction) (OKED B, C, D and F);
- 3) service sector (OKED 36-39 and OKED 45-99).

Since the smallest unit of aggregation is the water user, the calculation of indicator 6.3.1 can be carried out with any level of aggregation.

Currently, the calculation of indicator 6.3.1 is carried out for the republic as a whole, in the context of regions and the city of Minsk, as well as for the main river basins and types of economic activity (in aggregate).

Dynamic series of indicator 6.3.1 for the Republic of Belarus for 2013-2020. are given in table 1.

TABLE 1 – DYNAMIC SERIES OF INDICATOR 6.3.1 FOR THE REPUBLIC OF BELARUS FOR 2013-2020.

N°	Index	Unit	2013	2014	2015	2016*	2017	2018	2019	2020
1	Discharge of water into surface water bodies	million m ³ /year	973,9	954,2	869,6	1048,4	1052,7	1034,0	1019,1	1033,9
1.1	without pre-treatment	million m ³ /year	317,02	315,74	245,73	339,13	354,02	340,90	325,84	338,65
1.2	normatively treated	million m ³ /year	653,92	635,02	618,17	702,96	694,40	689,07	689,21	692,57
1.3	insufficiently treated	million m ³ /year	2,92	3,43	5,71	6,36	4,27	4,0	4,06	2,67
	Indicator 6.3.1 SAI	%	99,70	99,64	99,34	99,39	99,59	99,61	99,60	99,74

* – starting from 2016, data are provided taking into account the discharge of surface wastewater.

The photo is for illustrative purposes only.



Republican Unitary Enterprise "Central Research Institute for Integrated Use of Water Resources" (RUE "TsNIIKIVR") in 2018-2019. As part of the implementation of the international technical assistance project "European Union Water Initiative Plus for Eastern Partnership Countries" ("WIES+"), work was carried out to adapt international methodologies and develop national methodologies with their subsequent approval for the formation of indicators for SDG 6 targets 6.3-6.5.

Analysis of international methods for developing indicators for targets 6.3-6.5 of SDG 6 from the Global List of Indicators made it possible to assess the possibility of application at the national level with some clarifications of indicators 6.3.1, 6.4.1, 6.4.2, 6.5.1 and 6.5.2; to create indicator 6.3.2, due to national characteristics, a methodology for its assessment at the level of a proxy indicator has been developed.

The methods were approved by decision of the Board of the Ministry of Natural Resources dated November 22, 2019 No. 91-R. After the methods were approved, calculations of indicators and construction of time series were carried out for various time periods and at various levels of aggregation: territorial-administrative (regions and the city of Minsk), basin (for the main five river basins – Dniepr, Prypiac, Western Dzvina, Nioman and Western Bug), by type of economic activity.

Currently, RUE "TsNIIKIVR" regularly calculates national indicators 6.3.1, 6.4.1, 6.4.2, 6.5.1 and 6.5.2 with the provision of data to the Ministry of Natural Resources and the National Statistical Committee (Belstat) for subsequent placement of these data on the National SDG reporting platform.

6.3.2.1 Share of surface water bodies that are assigned “good” or higher ecological (hydrobiological) status (percentage) – Ministry of Natural Resources: for watercourses – 69%, for reservoirs – 92% (2020).

Indicator 6.3.2.1 is key for assessing the ecological state of surface water bodies in Belarus.

In accordance with the Water Code of the Republic of Belarus¹¹, the ecological state (status) of surface water bodies (their parts) is determined on the basis of hydrobiological indicators using hydrochemical and hydromorphological indicators. At the same time, hydrobiological, hydrochemical and hydromorphological indicators are determined during monitoring of surface waters as part of [the National Environmental Monitoring System in the Republic of Belarus \(NEMS\)](#).

To provide methodological support for determining the ecological status of surface water bodies (their parts), a number of technical regulatory legal acts (TNLA) have been developed and approved, allowing the assessment of the hydrobiological and hydrochemical status of surface water bodies. As a result of determining the status, the ecosystem is assigned one of five classes: I – excellent status; II – good status; III – satisfactory status; IV – poor status; V – very bad status. The status of the river ecosystem is determined for individual sections of the river at the NSMOS observation point, and the ecological status of the lake ecosystem is determined for the lake as a whole.

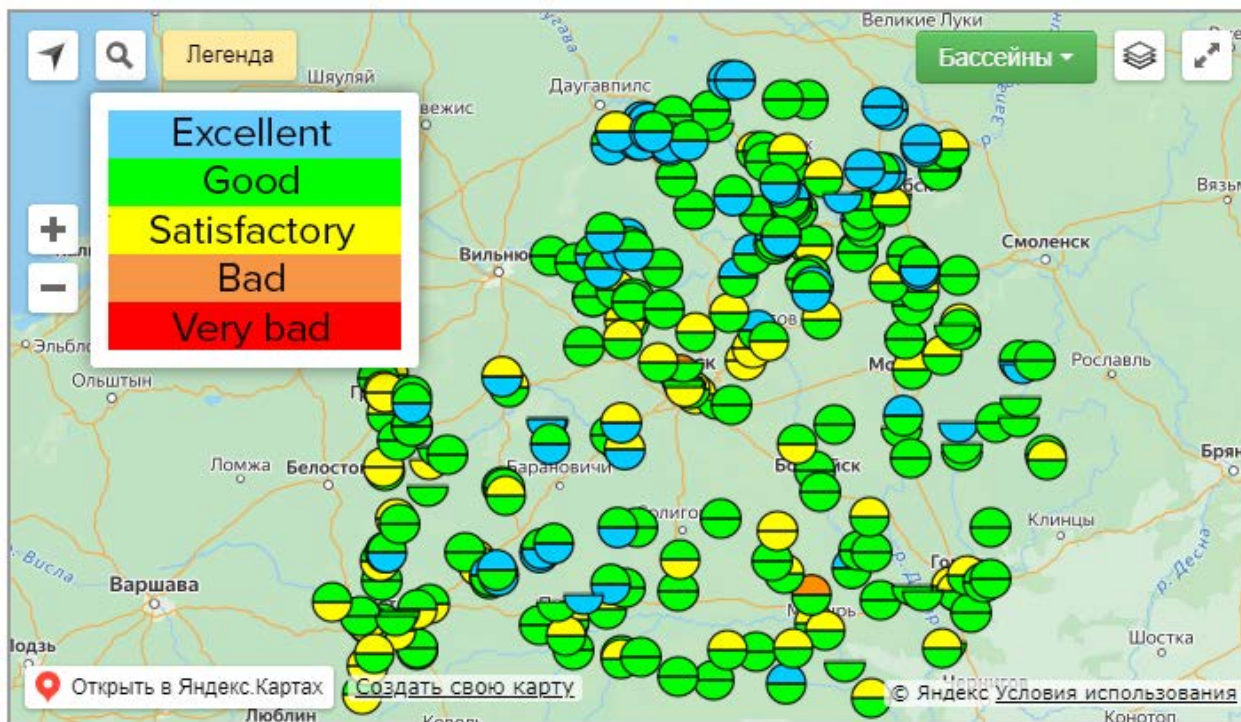
Currently, within the framework of the NEMS, the hydrochemical and hydrobiological statuses of reservoirs and watercourses (their parts) covered by a stationary network of observations of the state of surface waters are determined, respectively. Assessment of the state of watercourses based on hydromorphological indicators is currently not carried out within the framework of the NEMS. Research to assess the condition of water bodies and their typification for hydromorphological assessment is currently carried out only as part of the development of river basin management plans.

According to the NEMS data as of 2021, [monitoring of surface waters](#) on the territory of the Republic of Belarus was carried out at 109 hydrological observation points on 75 water bodies, 297 observation points for hydrochemical indicators on 160 water bodies and at 143 hydrobiological observation points on 55 water bodies¹².

Analytical information on the state of the country’s water bodies and information on the assigned hydrobiological and hydrochemical status of surface water bodies (their parts) is generated in Belhydromet and reflected in the State Water Cadastre¹³.

Indicator 6.3.2.1 is defined at the proxy level and is calculated as the ratio of water bodies within a river basin with “good” and higher ecological (hydrobiological) status to the total number of water bodies of the NEMS network, where observations of the state of surface waters are carried

DIAGRAM 2. CONDITION (STATUS) OF SURFACE WATER BODIES (THEIR PARTS) ACCORDING TO HYDROCHEMICAL AND HYDROBIOLOGICAL INDICATORS BASED ON THE RESULTS OF SURFACE WATER MONITORING FOR 2022



- ◐ - Condition (status) according to hydrobiological indicators
- ◑ - Condition (status) according to hydrochemical indicators

Source: <https://rad.org.by/monitoring/aqua.html>

out according to hydrobiological indicators, including transboundary observation points.

In accordance with the current legislation on monitoring of surface waters at observation points of the NEMS, observations of hydrobiological indicators are carried out annually at transboundary monitoring points and once every two years at other points of the hydrobiological observation network with an annual rotation of river basins (for example, in 2015 observations were carried out in the basins of the Nioman, Western Bug and Prypiac rivers, in 2016 in the basins of the Western Dzvina and Dniepr rivers).

Accordingly, the calculation of indicator 6.3.2.1 is carried out for the republic as a whole once every two years (starting from 2016 - data for 2015 and 2016) and annually for river basins for which observations were carried out in the reporting year.

Time series of indicator 6.3.2.1 for the Republic of Belarus and river basins for 2015-2021 are given in table 2.

TABLE 2 – DYNAMIC SERIES OF INDICATOR 6.3.2.1 FOR 2015-2021.

River basin	2015	2016	2017	2018	2019	2020	2021
1. Western Dzvina River basin	-	70 %	-	85 %	-	73 %	-
2. Nioman River basin	58 %	-	88 %	-	65 %	-	67 %
3. Western Bug River basin	27 %	-	53 %	-	59 %	-	82 %
4. Dniepr River basin	-	75 %	-	66 %	-	71 %	-
5. Prypiac River basin	73 %	-	75 %	-	78 %	-	68 %
Republic of Belarus	-	70 %	-	77 %	-	72,4 %	-

► *Discussion of the target implementation:*

As data from the State Water Cadastre¹² show, the volume of discharge of insufficiently treated wastewater in the Republic of Belarus as a whole is 0.3-0.7% of the total volume of wastewater discharged into surface water bodies, or 0.4-0.9% of volume of wastewater discharged into surface water bodies after treatment, which is a fairly good indicator for the country. At the same time, the discharge of insufficiently treated wastewater is approximately at the same level – 3-5 million m³/year. However, more than 80% of the total volume of discharge of insufficiently treated wastewater comes from water supply and sewerage (WSS) enterprises and housing and communal services (HCS) that collect, transport and treat wastewater from populated areas, due to the high physical wear and tear of individual treatment facilities and insufficient implementation of modern technologies and methods for treating wastewater containing a wide range of pollutants (treatment plants in regional centers were built mainly in the 1970s and cannot meet modern requirements for the quality of wastewater treatment, primarily for the removal of nutrients – nitrogen and phosphorus, which was simply not provided for by the technologies implemented in them).

Goal indicators for this target and the time frame for their achievement are enshrined in the National Strategy for Water Resources Management under Climate Change for the period up to 2030¹⁴ in the Environmental Protection Strategy of the Republic of Belarus for the period up to 2035¹⁵.

The successful solution of target 6.3 directly depends on two main aspects:

- 1) development and implementation of measures (including economic ones) to reduce the flow of pollutants into water bodies as part of wastewater, primarily from municipal wastewater treatment plants;
- 2) development and improvement of a monitoring system for the flow of pollutants into water bodies and the condition of surface water bodies, incl. in places of intense impact on them, as well as on small watercourses. At the moment, there are practically no regular observations of the state of most small watercourses within populated areas¹⁶.

An important aspect for solving this problem is the implementation of one of the activities of subprogram 5 “Clean Water” of the State Program “Comfortable Housing and Favorable Environment” for 2021-2025¹⁰ – construction and reconstruction of 70 wastewater treatment plants. The issues of increasing the efficiency of wastewater treatment plants are currently a serious challenge for Belarus, therefore the solution to this problem is quite problematic – significant amounts of financing for the reconstruction of wastewater treatment plants were supposed to be carried out through international grants and borrowed funds from international banks, which is currently difficult.

A significant aspect that also affects the implementation of this target is the national format for collecting environmental taxes.

In Belarus, an environmental tax is levied for the discharge of wastewater into the environment: into surface water bodies and underground horizons, both normatively clean and after treatment by various methods. The tax base is solely the actual volume of wastewater discharge (tax rate in Belarusian rubles per 1 m³) without taking into account their quality. In other words, when calculating the tax, the mass of specific pollutants discharged is not taken into account. According to the Tax Code of the Republic of Belarus, tax rates are differentiated depending on the wastewater receiver: discharge into a surface water body (watercourse or reservoir) or into underground horizons after treatment at biological treatment facilities in natural conditions. Discharge of surface wastewater (rain and melt water) is not subject to environmental tax.

Since independence, Belarus has moved away from the Soviet system of pollution charges, under which the polluter paid both for the volume of wastewater discharged and for its composition, i.e. the concentration and mass of certain pollutants in it. The tax was assessed for the discharge of specific pollutants, and the rate varied depending on their toxicity and hazard class.

The current taxation system for water pollution in Belarus is not optimal. First, it does not provide any economic incentives to reduce the total mass of pollutants discharged into the environment. Secondly, it does not contribute to the gradual abandonment of the use of more dangerous and toxic substances in favor of less dangerous and toxic ones. Finally, it does not allow for economic consideration of the use of more environmentally friendly wastewater treatment methods.

Target 6.4

By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

► *Brief summary:*

A very multi-component task. Positive dynamics are noted in most of the subtargets, but it seems difficult to comprehensively assess progress in achieving the target based only on available indicators.

Official national indicators:

6.4.1 Dynamics of changes in water use efficiency – Belstat/Ministry of Natural Resources:

6.4.2 Intensity of use of fresh water reserves (water stress) – Belstat/Ministry of Natural Resources.

- **Indicator 6.4.1 “Dynamics of changes in water use efficiency”** allows us to assess the efficiency of the economic use of water resources due to the added value generated from the use of water in the main sectors of the economy.

Provided that it is measured in constant prices (in base year prices, in rubles, dollars or euro) and relative stability of prices in the economic sector under consideration*, this indicator highlights economic sectors where water use efficiency is growing or lagging behind, which provides important information for analysis and making decisions aimed at improving the efficiency of water use in the main sectors of the economy. To eliminate the effect of changes in current prices for products of the sector of the economy under consideration, incl. caused by inflation or a sharp change in the ruble exchange rate, it is proposed to use the value of gross value added in the sector in Belarusian rubles at comparable prices by 2015.

The information base for calculating indicator 6.4.1 is national statistics data on the amount of gross value added (in comparable prices) by type of economic activity, region and the Republic of Belarus, generated by Belstat and data on the volume of water used by water users based on statistical reporting 1-water (Ministry of Natural Resources).

Indicator 6.4.1 is defined as value added (in comparable prices) per volume of water used, expressed in rubles/m³ for the period of time of a single main sector of the economy and their subsequent reduction to a single aggregate value.

In this case, the calculation is carried out taking into account the change in water use efficiency (WUE), which is calculated as the ratio of water use

* With high price volatility, it is difficult to determine whether the change in this indicator is due to changes in the efficiency of water use in the sector, or the next “jump” in prices for products in this sector.

efficiency (WUE) for year t minus water use efficiency for year t-1, divided by water use efficiency for year t-1 and multiplied by 100:

Calculation of indicator 6.4.1 is carried out annually for the republic, regions and the city of Minsk, types of economic activity (aggregated).

Time series of indicator 6.4.1, assessing the efficiency of water use, for the Republic of Belarus and by region, as well as by main sectors of the economy for 2015-2020. are given in the State Water Cadastre¹² in section [Indicator 6.4.1 Dynamics of changes in water use efficiency](#).

- **Indicator 6.4.2 “Intensity of use of fresh water reserves (water stress)”** allows you to assess the level of pressure on water resources and determine how sustainable water use is in the country in relation to available resources. The indicator allows us to assess the pressure of water use on the country's renewable freshwater resources. However, a low level of pressure on water resources indicates a situation where the combined water withdrawals of all sectors are insignificant in relation to the resources and therefore have little impact on the sustainability of the resources or on potential competition between water users. And high levels of pressure on water resources indicate a situation in which combined withdrawals by all sectors constitute a significant proportion of total renewable freshwater resources, potentially impacting resource sustainability through competition between water users.

The calculation of indicator 6.4.2 is based on data on the volume of production and withdrawal of fresh water by water users based on statistical reporting 1- water (Ministry of Natural Resources), data on the volume of average annual river flow, data on natural resources (renewable reserves) of fresh groundwater and information on environmental runoff (for surface water bodies).

Indicator 6.4.2 is defined as the ratio of total freshwater production and withdrawal to the country's total renewable freshwater resources minus environmental flow, expressed as a percentage. In turn, the environmental flow for surface water bodies is determined by calculation in accordance with the manual in the field of environmental protection and natural resource management P-OOS 06/17/03-2017 “Environmental protection and natural resource management. Hydrosphere. The procedure for calculating the limiting hydrological and hydraulic characteristics of surface water bodies.”

The results of calculating the environmental flow for surface water bodies were carried out by the Republican Unitary Enterprise “TsNIIKIVR” based on data on river flow in the context of the basins of the main rivers of the Republic of Belarus and are comparable with the data presented on the website of the Global Environmental Flow Information System (<http://gef.iwmi.org/>), – 17600 million m³/year (recommendation of the Step-by-step monitoring methodology for SDG indicator 6.4.2).

The gradation of the intensity of use of fresh water reserves (water stress), in %, is estimated as follows:

- less than 15% – low water stress;
- from 15% to 30% – moderate water stress;
- from 30% to 45% – medium-high water stress;
- from 45% to 60% – high water stress;
- over 60% – acute water stress.

Calculation of indicator 6.4.2 is carried out annually for the republic and river basins.

Dynamic series of indicator 6.4.2 for the Republic of Belarus for 2012-2020 is given in the State Water Cadastre¹².

TABLE 3 – DYNAMIC SERIES OF INDICATOR 6.4.2 FOR THE REPUBLIC OF BELARUS FOR 2013-2020.
((According to [the State Water Cadastre](#))

Indicator	Unit	2014	2015	2016	2017	2018	2019	2020	2021
Environmental flow	Million m ³	16039	16039	16039	16039	16039	16039	16039	16039
Water stress	%	2,72	2,5	2,51	2,42	2,41	2,35	2,30	2,46

► *Discussion of the target implementation:*

In general, analysis of the dynamics of water use indicates stability in indicators for water consumption and wastewater disposal in the country. The dynamics of water production (withdrawal) are quite stable (since 2016) and are at the level of 1380-1450 million m³ · while the extraction of groundwater annually is in the range of 56-60% of the total volume of water production (withdrawal). The withdrawal of surface water is at the annual level of 585-600 million m³ or in the range of 40-44% of the total volume of water extraction (withdrawal).

The main volumes of water in the country are used for household and drinking needs of the population and workers of enterprises and organizations (about 500 million m³ per year or more than 40% of the total volume of fresh water used), followed by the needs of agriculture (including fish pond farming) and the needs of industrial production and energy.

With regard to indicator 6.4.1 “Dynamics of changes in water use efficiency”, we can make an unambiguous conclusion that the added value per 1 m³ of water used is critically low in the sector “agriculture, forestry and fishing”

with significant volumes of water use in this sector, which requires, first of all, a conceptual revision and improvement of water use technologies in the industry in general and in fishing activities in particular.

When using fresh water in agriculture, the main volume of fresh water (more than 65% of the total volume of fresh water used) goes to the needs of fish pond farming. The use of water for the needs of industrial production is about 15-16% of the annual use of fresh water, for energy needs – about 6-7% of the annual use of fresh water in the republic.

At the same time, the impact of climate change on water resources increases the likelihood of an increase in the duration of periods of low and high water availability over the course of a year or several years, which may negatively affect the water supply to the population and economic sectors during these periods, primarily with water from surface water bodies, especially when using small watercourses (less than 200 km in length), as well as water from underground sources in case of intensification of their water intake.

Target 6.5

By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

► *Brief summary:*

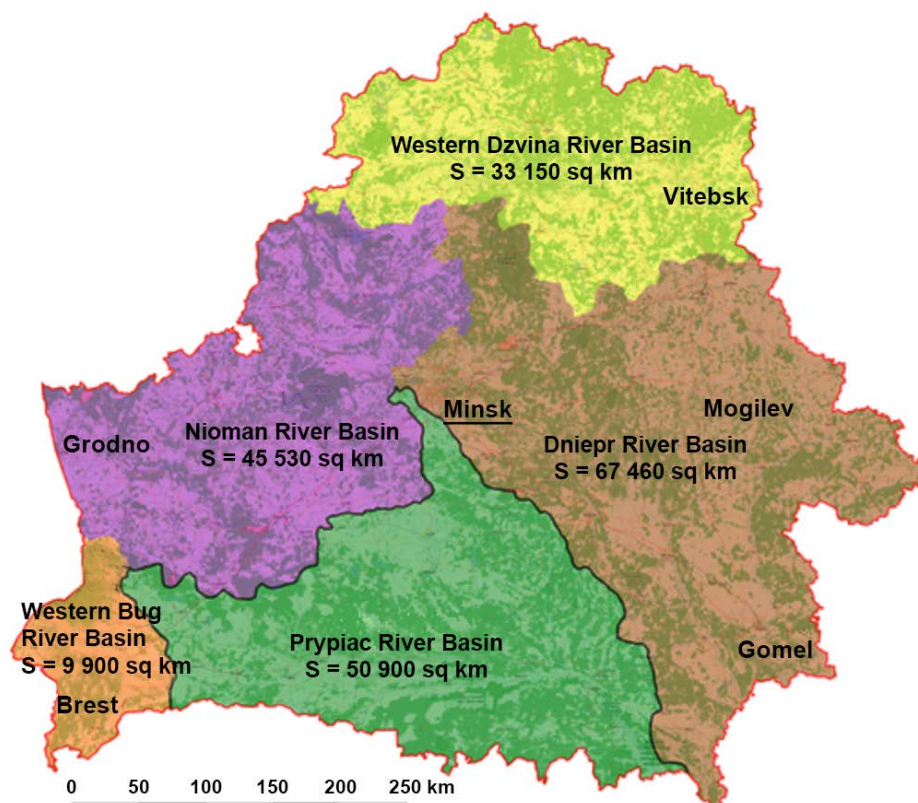
There is some progress in completing this target. Integrated water resources management is currently being developed for transboundary rivers, but action plans for inland rivers have not yet been developed. At the current time, there are serious difficulties with transboundary cooperation in most individual river basins.

Official national indicators:

6.5.1 *Degree of implementation of integrated water resources management (from 0 to 100) – Ministry of Natural Resources: 53 (2019), 54 (2020)*

6.5.2 *Share of the area of transboundary water basins in respect of which the mechanism of transboundary water cooperation operates - Ministry of Natural Resources: 81.0 (2021)*

- **Indicator 6.5.1 “Degree of implementation of integrated water resources management”** allows us to assess the level (degree) of implementation in the country of integrated water resources management (IWRM) as a process



Source: <https://www.oecd-ilibrary.org/sites/063822dd-ru/index.html?itemId=/content/component/063822dd-ru>

that contributes to the integrated development and management of water, land and other related resources to ensure maximum economic and social well-being on an equitable basis, without compromising the sustainability of critical ecosystems.

Integrated (complex) water resources management (IWRM/CWRM) is a management system based on taking into account all types of water resources (surface, groundwater and return water) within hydrographic boundaries, which links the levels of the hierarchy of water use and the interests of various water users, involving all interested parties in decision-making, promotes the efficient use of water, land and other natural resources in the interests of sustainable provision of the needs of nature and society for water.

IWRM/CWRM is based on a number of key principles that determine its practical value. Summarized, these principles are as follows:

- *water resources are managed within hydrographic boundaries, in accordance with the morphology of a particular river basin;*
- *management involves accounting and use of all types of water resources (surface, groundwater and return water), taking into account the climatic characteristics of the regions;*

- *close linkage of all types of water use and all organizations involved in water resource management horizontally between sectors and vertically between levels of the water management hierarchy (basin, sub-basin, irrigation system, farm);*
- *public participation not only in management, but also in financing, maintaining, planning and developing water infrastructure;*
- *priority of the needs of natural ecosystems for water in the activities of water management authorities;*
- *focus on water conservation and combating unproductive water losses of water management organizations and water users; managing water demand alongside resource management;*
- *information support, openness and transparency of the water resources management system;*
- *economic and financial stability of management.*

The calculation of indicator 6.5.1 is carried out by the Ministry of Natural Resources by filling out a country self-assessment questionnaire generated by the United Nations Environment Program (UNEP). At the same time, data collection and reporting on indicator 6.5.1 on the degree of implementation of IWRM in countries is carried out starting from 2017 (basic level of reporting) every three years.

Indicator 6.5.1 for assessing the implementation of the level (degree) of implementation of integrated water resources management in the Republic of Belarus is calculated once every three years, starting in 2017. In 2020, the Republic of Belarus carried out work to fill out a country questionnaire and prepare national reporting on indicator 6.5.1.

The results of calculating the level (degree) of implementation of integrated water resources management in the Republic of Belarus in 2017 and 2020 are shown in Table 4.

TABLE 4 – RESULTS OF ASSESSMENT OF THE IMPLEMENTATION LEVEL (DEGREE) OF INTEGRATED WATER RESOURCES MANAGEMENT IN THE REPUBLIC OF BELARUS IN 2017 AND 2020 (ACCORDING TO UN WATER¹⁷).

Year	Final IWRM indicator	Section 1	Section 2	Section 3	Section 4
		Average value			
		Favorable conditions	Institutions and participation	Management tools	Financing
2017	38	36	35	58	24
2020	54	50	56	66	42

Source: https://sdg6data.org/ru/country-or-area/Belarus#anchor_6.a.1

- ▶ **Indicator 6.5.2 “Share of the area of transboundary water basins in respect of which the mechanism of transboundary water cooperation operates”** allows us to assess the level of development of cooperation in the management of transboundary water resources with neighboring countries.

Taking into account the fact that all five large river basins of the country (Dniepr, Prypiac, Western Bug, Nioman and Western Dzvina) are transboundary and their total area is 99.7% of the republic’s area, the development of transboundary cooperation is one of the strategic tasks in the region management of the country's water resources.

At the same time, cooperation mechanisms should cover both surface and groundwater. Accordingly, to calculate the indicator, it is necessary to have the areas of transboundary river basins and transboundary aquifers within the country and, for each, to assess whether there is a functioning mechanism for transboundary cooperation in the field of water resources.

At the same time, this indicator does not assess the quality of work of cross-border cooperation mechanisms.

It should be noted that indicator 6.5.2 is closely related to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), incl. and in terms of joint reporting on indicator 6.5.2 and the Water Convention, which was completed by countries in 2017 and 2020.

- ▶ **Discussion of target implementation**

In general, the implementation of target 6.5 to improve integrated water resources management and develop transboundary water cooperation, taking into account the geographical location of the Republic of Belarus and the transboundary nature of the country’s main watercourses and all major river basins, is relevant.

Target indicators for this target and the time frame for their achievement are enshrined in the following strategic documents: the National Strategy for Water Resources Management in the Conditions of Climate Change for the period up to 2030, the Strategy for Environmental Protection of the Republic of Belarus for the period up to 2035 and the Set of Measures for implementation of the obligations assumed by the Republic of Belarus under the Protocol on Water and Health until 2030. At the same time, it is noteworthy that the target indicators include quantitative characteristics, but do not affect the qualitative aspects of the work of cross-border cooperation mechanisms.

In terms of the full implementation of IWRM, first of all, it is necessary to strengthen the role of basin management, interdepartmental interaction and coordination in water resources management, as well as ensuring the full participation of the interested public.

Regarding indicator 6.5.2, progress can be noted in its implementation. An important precondition for this is that the Republic of Belarus has agreements on cooperation at various levels with all neighboring countries. At the same time, in the current time period, transboundary cooperation on transboundary water issues is actively occurring only with the Russian

Federation. Therefore, there is a risk that the situation will worsen in the future. The qualitative aspects of cross-border cooperation and their prospects require a separate assessment.

It should be noted that when assessing the level of transboundary water cooperation, there are a number of methodological problems in the formation of indicator 6.5.2, the main of which are:

- lack of methods and mechanisms for generating information on the area of transboundary aquifers on the territory of the country and neighboring states;
- absence of provisions on groundwater (aquifers) in the existing legal mechanisms of transboundary cooperation (agreements, technical protocols, etc.).

These problems require the development of research and exchange of information between neighboring countries on the distribution and identification of aquifers, since it is necessary to strive for a reliable determination of the spatial coverage of transboundary basins and their full inclusion in existing cooperation mechanisms.

A country's progress in implementing transboundary cooperation can be achieved either by creating new existing cooperation mechanisms with neighboring countries, or by bringing existing mechanisms to the current level through the development and streamlining of activities, or by expanding the coverage of cooperation to all surface and groundwater as the final goals.

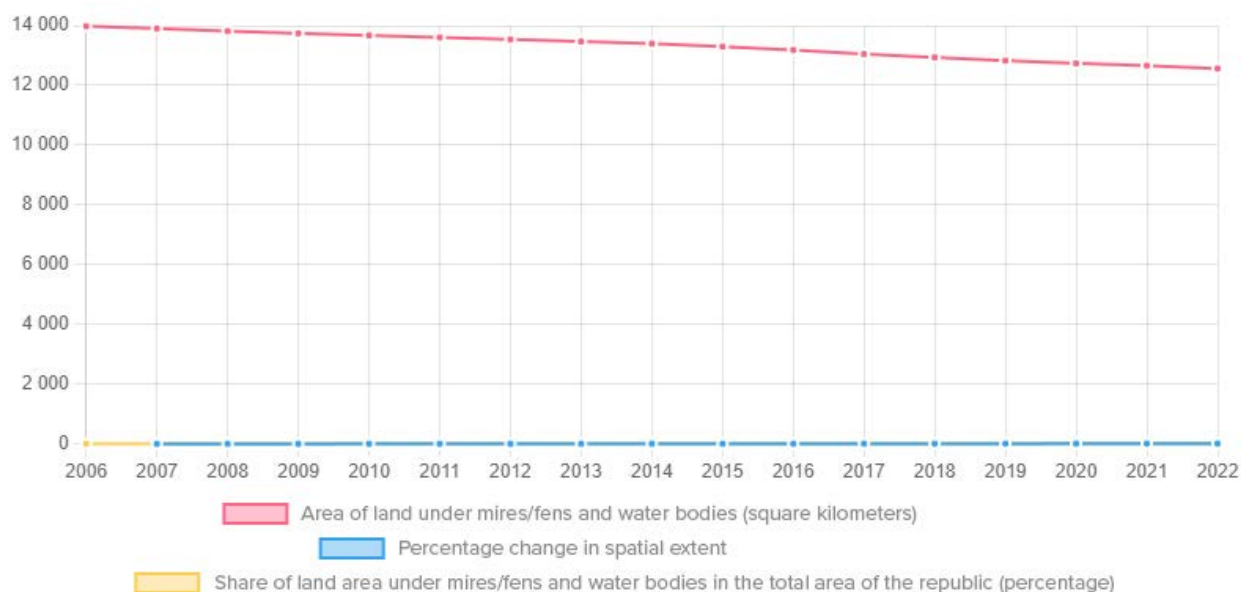
Target 6.6

By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

► *Brief summary:*

Quite multidirectional processes related to this target are underway in Belarus: on the one hand, the protection of many water-related ecosystems continues, on the other hand, peat extraction and reclamation processes are actively continuing, which have a negative impact on biological diversity and the maintenance of ecosystems. Also in Belarus there is still a negative trend in changes in the area of water-related ecosystems.

GRAPH 1 – DYNAMICS OF CHANGES IN THE AREA OF WATER-RELATED ECOSYSTEMS



Official national indicators

6.6.1 Dynamics of changes in the area of water-related ecosystems – Ministry of Natural Resources: 13979.8 km² (2006), 12560.2 km² (2022)

► Discussion of target implementation

Based on the analysis of data on the national indicator, we can state that in Belarus there is a slow decrease in the area of land under mires/fens and wetlands. Thus, since 2006, the area of land under mires/fens and water bodies has decreased by 10.2%.

The main reason is the intensification of land use in agriculture, including land reclamation, mining, and urbanization.

Peat bogs occupy about 23% of the territory of Belarus, but most of them have been drained. To date, 863 thousand hectares of mires/fens have been preserved in our country in a natural or close to natural state, this is about 1/3 of the area of the mires/fens before they began to be drained. The need to expand arable and forest land, as well as commercial interest in peat as fuel, were the main reasons for a large-scale campaign to drain Belarusian peatlands.

It is important to note that significant efforts have been made in Belarus in recent years to restore disturbed wetlands, in particular depleted peatlands. According to experts, over the past 10 years, with the support of international organizations, including the United Nations Development Program (UNDP), the water regime has been restored to 60,000 hectares of disturbed and ineffectively drained wetlands throughout the country.

*Dakudawskaje peat bog,
photo by UNDP in Belarus
Source: undp.org*



Belarus [has been a party to the Ramsar Convention](#) on Wetlands of International Importance since 1999; to date, the country has committed itself to the conservation of 26 wetlands of international importance with a total area of 778 thousand hectares (3.7% of the territory of the republic), of which four are cross-border.

In December 2020, the Law of the Republic of Belarus “On the Protection and Use of Peatlands” came into force, one of the main objectives of which is the conservation of natural wetlands.

Target 6.a

By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

This target is considered to be irrelevant for Belarus. At the same time, based on the spirit of the Sustainable Development Goals and the message of this goal, it seems important to support and develop participation of Belarus in international cooperation on water issues. Given its high position in [the Human Development Index](#) and its economic ties with many countries in the Global South, Belarus could partially provide assistance to others itself. One of the important regional platforms for international cooperation on water resources, where there is great potential for participation, is the [Helsinki Commission for the Protection of the Baltic Sea \(HELCOM\)](#). Currently, Belarus has observer status in Helcom, but does not actively participate in the work of the Commission.

Baltic Sea
Source:
depositphotos.com



Target 6.b

Support and strengthen the participation of local communities in improving water and sanitation management

This target is considered to be irrelevant for Belarus. At the same time, we believe that the principle of participation of the local population and local communities in solving water problems is very important in Belarusian conditions. It is possible to develop various initiatives aimed at including local interest groups in water management issues, including public monitoring of water resources. An example of such initiatives would be the creation of public river councils that include all interested parties. There are also professional interest groups in Belarus, for example, fishermen, who are interested in improving water management and are already taking part in its improvement.

SDG 14



General information on SDG 14

Sustainable Development Goal No. 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development” is one of the two “water” SDGs and at the same time the only goal in the entire group of SDGs, whose connection with Belarus is not obvious, since the country has no access to the seas or oceans. At the same time, the situation of Belarus in relation to SDG 14 is not unique, since there are 44 countries in the world that are landlocked, but many of them are making significant efforts to achieve this goal, which are described in periodic reviews. Many of these countries are focusing on specific priorities related to impacts on marine ecosystems within SDG 14. For example, Austria, in its review¹⁸, focuses on the problem of microplastic pollution, and Switzerland on setting targets for reducing nitrogen and phosphorus pollution in water.

The latest [voluntary national review of Belarus³](#) in 2022 in the section on SDG 14 focuses on improving the overall condition of water bodies in the Western Dzvina, Dniepr, Nioman and Prypiac basins, as well as on the introduction of basin-based water management principles. At the same time, the report does not provide a detailed analysis of progress towards this goal.

In Belarus, SDG 14 belongs to the group of environmental SDGs, the coordinator of key activities to achieve them is the Ministry of Natural Resources and Environmental Protection.

Information on national indicators and data sets on indicators related to SDG 14 is presented on [the National Sustainable Development Goal Indicators Reporting Platform](#), maintained by the National Statistics Committee. The system of national indicators for SDG 14 in Belarus is based on the corresponding global indicators approved by the UN. In fact, the datasets are loaded on two fisheries-related indicators (see below).

Assessment of the situation in the achievement of individual targets under SDG 14 in Belarus

SDG 14 contains 10 different targets, covering a wide range of topics from marine litter pollution to fisheries.

In case of analyzing progress on SDG 14 in Belarus, as a guideline, the authors of this review focus not so much on national or global indicators, but on the formulation of the goals themselves, since it is them, in the context of the virtual absence of national reporting on indicators, that set the vision of the desired future.

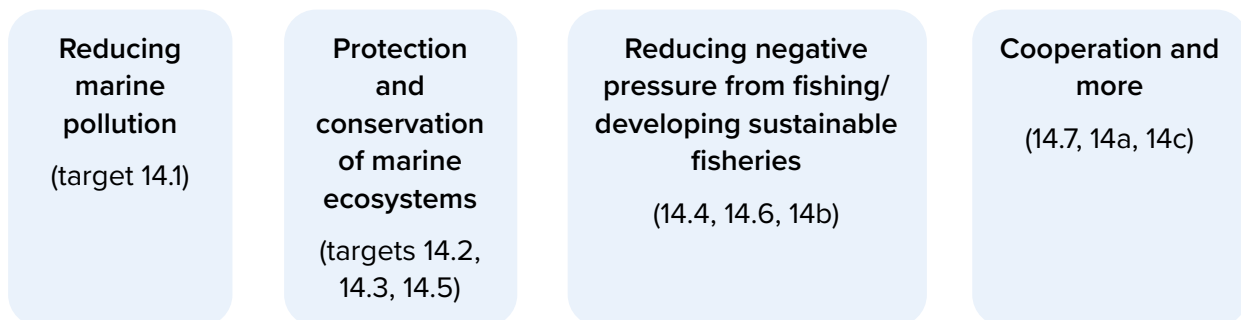
Targets:

- ▶ **14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
- ▶ **14.2:** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
- ▶ **14.3:** Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.
- ▶ **14.4:** By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
- ▶ **14.5:** By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
- ▶ **14.6*:** By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

- ▶ **14.7:** By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.
- ▶ **14.a:** Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.
- ▶ **14.b*:** Provide access for small-scale artisanal fishers to marine resources and markets.
- ▶ **14.c:** Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of «The future we want».

* National indicators and corresponding data sets are available for these targets

An analysis of the problem field of targets within SDG 14 shows that several key thematic areas can be identified:



Let's take a brief look at Belarusian current and potential involvement in each area.

Reducing marine pollution

This thematic area includes one objective, which in its formulation is essentially directly relevant to Belarus – *reduction of any pollution of the marine environment, in particular from land-based activities, including marine debris and nutrient pollution.*

Here we can distinguish two priority categories of pollutants for the marine environment: hazardous substances and marine debris, which mainly consists of plastic, and nutrient compounds, mainly nitrogen and phosphorus compounds.

The territory of Belarus is approximately half divided into the Baltic and Black Sea basins, and due to the presence of a large number of rivers, including large transboundary rivers, it has a direct connection with marine ecosystems. Therefore, the situation and actions on the territory of Belarus also have a direct impact on the general environmental situation in the seas, which, in turn, is directly addressed in target 14.1.

Plastic, marine debris and hazardous substances

Plastic pollution is a very pressing and complex environmental problem for Belarus. Belarus is characterized by almost all current international trends¹⁹ related to plastic: an increase in the number of single-use and non-recyclable plastic items and packaging²⁰, an increase in the amount of plastic waste buried in landfills, an increase in the amount of hazardous substances in plastic²¹, the emergence of the problem of microplastic pollution, etc.

In recent years, the problem of plastic pollution has become recognized at various levels in Belarus and significant efforts have begun to be made to work in this area.

Key areas of activity are reducing the use of single-use plastic, implementing [the National Action Plan for the development of a green economy in the Republic of Belarus](#) for 2021-2025, developing a system for collecting and recycling plastic waste, as well as various educational and information initiatives.

An important identified problem of particular relevance in the context of water pollution is the problem of microplastic pollution. The results of the research²² show that the situation with microplastic pollution of Belarusian water bodies is becoming an urgent problem that requires an integrated approach to its solution. Sources of microplastic pollution in Belarus are the decomposition of macroplastics, microfibers, contaminated stormwater runoff from populated areas, microplastic particles contained in cosmetics and washed down the drain, etc.

Microplastic

The photo is for illustrative purposes only



Microplastic monitoring

The first studies of microplastic content in water bodies of Belarus began in 2015-2017, and were initiated by environmental organizations and educational institutions. School scientific papers have begun to be prepared on the microplastic pollution of individual reservoirs and rivers. In 2017, Guidance on Public Monitoring of Microplastics in Water Bodies was published. Gradually, scientific research in this area began to be implemented. All these actions led to the identification of microplastics as a significant and new environmental problem in Belarus.

It is microplastic water pollution through transboundary rivers that is probably the main source of plastic pollution coming from the territory of Belarus into the waters of the Baltic and Black Seas.

We also note that additional research is required to assess the volume and composition of microplastics that enter Belarusian water bodies, including transboundary ones.

Contamination of water bodies with hazardous substances is a very complex problem for the water resources of Belarus, especially in light of the constant increase in the number of chemicals in industrial circulation and use, limited monitoring capabilities, as well as the limited capabilities of industrial and municipal treatment facilities, many of which require reconstruction or are not designed to capture specific pollutants that have become relevant in recent years.

Container for medicines
in clinic No. 40 (Minsk, 3
Lyutsinskaya str.) Source:
ecoidea.me



In addition to “classical” pollutants – for example, petroleum products, pesticides, heavy metals, which have long been included in the list of controlled substances when monitoring Belarus – in recent years a problem with “new” pollutants has begun to emerge. Such pollutants include, in particular, endocrine disruptors (for example, phthalates, bisphenol A, substances from the group of POPs), pharmaceutical residues (diclofenac, estradiol, ethinyl estradiol), nonylphenols, alkylphenols, etc.

These substances are not regularly monitored in water bodies of Belarus, but [similar studies in other countries in the region²³](#) suggest a similar problem in Belarus.

An important contribution to reducing pollution of water bodies with hazardous substances was the creation of systems for collecting drug waste from the population in 2020-2021, which contributes to reducing the flow of active substances into the environment.

Creation of a drug waste collection system in Minsk

Since 2014, the environmental community began to work to study the situation with the management of drug waste generated by the population, as well as the release of active drug substances into water resources. In 2016, the [results of scientific research](#) were presented, which showed the presence of a number of active ingredients of drugs in various water bodies of Belarus. In 2018, the first container in Belarus for collecting obsolete medicines from the population was installed in Minsk at one of the city clinics. This pilot project helped test how a system for collecting medicines from the public could work. In September 2020, new Rules for the

management of municipal waste in Belarus were adopted, which included the management of drug waste. Also in September 2020, the Minsk City Council of Deputies decided to create a state system for collecting waste of expired medicines from the population. Starting in 2021, special containers for collecting medicines from the population began to be installed in Minsk.

Pollution with nutrient compounds

Water pollution by compounds of nutrients, in particular nitrogen and phosphorus, is a significant source of pollution of water bodies in Belarus and is mainly associated with agricultural sources, as well as due to the ingress of nitrogen and phosphorus into water after municipal wastewater treatment plants.

Human activities have had and continue to have a significant impact on water quality. The drainage of mires and fens has led to an increase in the color of groundwater due to its contamination with water-soluble humic substances. Peat mineralization products such as ammonium and nitrate compounds also enter groundwater. Along the Prypiac and Dniepr rivers, about 1.5 million tons of mineral and about 700,000 tons of water-soluble organic substances annually enter the Black Sea from drained mires²⁴.

Discharge of municipal and industrial wastewater, along with diffuse sources of pollution, such as the removal of pollutants from surface runoff from urban and agricultural areas, also leads to deterioration in water quality. The main sources of water pollution include: leachate from landfills and areas of solid municipal waste, sludge disposal, filtration fields and fertilizer storage facilities. Other major sources of pollution are the discharge of untreated wastewater from livestock farms, as well as municipal and surface wastewater from large cities.

Sewage treatment plants, built in many small and medium-sized cities in the 1970s and 1980s, require modernization or reconstruction. They cannot meet modern requirements for the quality of wastewater treatment, for example, similar to those established in the EU Council Directive on the treatment of urban wastewater, especially for the removal of nitrogen and phosphorus²².

Water pollution by the agricultural sector, both from diffuse and point sources, can lead to exceeding the permissible levels of nitrogen, phosphorus, potassium and sodium in surface runoff in Belarus, which can end up in watercourses and reservoirs, and in groundwater. Such cases are quite often recorded during monitoring or according to reports from the population.

Polluted tributary of the Vilija. Photos of participants of the environmental expedition. 2017
Source: ecoidea.me



► *Brief conclusions*

In general, it is clear that this thematic area (reducing marine pollution) is very relevant for Belarus, there are many different activities taking place and the country both contributes to marine pollution through transboundary rivers and participates in solving the problem through actions on its territory. It can be stated that target 14.1 is relevant for Belarus and reporting on it should be built into national reporting on the SDGs.

It is necessary to pay special attention to the problems associated with the pollution of transboundary water bodies with microplastics, hazardous substances, as well as nutrients, which contribute to the pollution of marine ecosystems.

Protection and conservation of marine ecosystems

Actions in this thematic area are expected in marine and ocean ecosystems, and Belarus cannot have a significant influence on the implementation of these tasks.

At the same time, we note that Belarus plays a role in the conservation of marine and oceanic biodiversity through the management and protection of two migratory and protected fish species – the Atlantic salmon and the European eel.

The Atlantic salmon is the only confirmed species that comes to spawn in Belarus from the Baltic Sea.



Photo from the diary of a salmon expedition participant
Source: wildlife.by

In recent years, significant efforts have been made to prevent poaching during salmon spawning, as well as to improve conditions on spawning rivers, which is an important contribution to the conservation of the Baltic Sea ecosystem. We note the significant role of the public in this issue²⁵.

Public monitoring of salmon spawning

Since 2008, volunteer camps began to be organized on the tributaries of the Vilija, in particular on the Tartak stream, to protect spawning salmon fish (trout and salmon) from poachers. Caring volunteers from different cities of Belarus took part in these camps, held in late autumn and early winter, when fish come to spawn from the Baltic, many of whom were active fishermen themselves. At the same time, efforts began to be made to improve the conditions for salmon spawning in the tributaries of the Vilija – removing garbage, removing rubble and beaver dams, conducting scientific monitoring of the spawning situation, and educational events for local residents and the general public. In 2017, the first information center on the conservation of salmon species was opened on the basis of the State Educational Institution “UPK Varniany Nursery-Kindergarden-Secondary School” in Varniany. By 2021, the situation with the brown trout population on the Tartak has stabilized.

Belarus also has a population of European eel, which links the country to the Baltic Sea and the Atlantic Ocean. At the same time, the situation with the eel requires further action, since there are serious problems with the sustainable maintenance of the eel population in Belarus (physical barriers in the form of a hydroelectric power station on the Western Dzvina/Daugava in Latvia, which prevents eels from getting from Belarus into the sea and, conversely, from seas into the water bodies of Belarus, as well as a ban on

Parts of the exhibition at the Salmon Information Center. Photo by Olga Astapovich

Source: ecoidea.me



the import of European eel larvae by the EU to maintain the eel population due to the impossibility of the eel entering through natural migration)²⁶.

Belarus has an Eel Resource Management Plan and the eel is protected. At the same time, commercial fishing of migratory eel in Belarus is permitted to tenants (users) of fishing grounds, but only in the spring in places strictly specified in the annually adopted resolution of the Ministry of Natural Resources and Environmental Protection. Amateur and sport fishing of eel in all reservoirs and watercourses of Belarus is prohibited²⁷.

► *Brief conclusions*

In Belarus there are isolated, but important, opportunities to contribute to the protection and conservation of marine ecosystems through the protection and creation of favorable conditions for migratory fish species, in particular salmon and European eels. These actions are also very important for maintaining biological diversity within Belarus.

Reducing negative pressure from fishing/developing sustainable fisheries

The targets of this thematic area are related to fishing, and it is for two targets (14.6 and 14b) in this area that Belarus records data on national indicators:

14.6.1.1 Availability of regulatory legal acts regulating measures for the protection and rational use of fishing objects and their habitat, as well as measures to combat violations of the Rules for Fisheries and Fishing.

14.b.1.1 Availability of regulatory legal acts ensuring equal rights of citizens and legal entities to use fishing facilities.

In essence, the indicators simply record the presence of national regulations in the field of fisheries and fishing, but do not allow assessing the qualitative characteristics of changes in the impact of fishing.

The role of Belarus in reducing negative pressure from fishing can be considered in the context of the activities of fish farms within the country, external fisheries, as well as imports of fishery products.

► *Activities of fish farms within the country*

Fisheries in Belarus are developed at a fairly high level and are represented by two main areas: aquaculture (growing fish in artificial conditions) and fishing in natural areas.

The republic has 16 thousand hectares of feeding and 5.4 thousand hectares of nursery areas, 16 pond farms, 18 industrial complexes specializing in valuable species of fish, more than 600 ponds adapted for fish farming have been leased for fish farming (for 2021)²⁸. Pond fish farming is carried out by farms in the system of the Ministry of Agriculture and Food, communal farms, as well as agricultural organizations, farmers, and individual entrepreneurs.

The State Program for the Development of Agricultural Business in the Republic of Belarus for 2016-2020 was called upon to regulate the supply of fish to the country's population²⁹, subprogram 5 "Development of fisheries activities", which planned to increase total fish production by 2020 to 18,158 tons, including about 17 thousand tons through aquaculture and 1,187 tons through fishing from natural reservoirs. For 2021-2025 a new State Program for the Development of Agricultural Business in Belarus has been adopted, which establishes new updated indicators for fishery activities³⁰.

According to the Belvodkhoz State Enterprise, 8.9 thousand tons of marketable fish were grown in ponds of all types in 2020, and 380 tons in nurseries, pools and recirculation systems.

Every year Belarusians consume 150-180 thousand tons of fish and fish products, of which 15-17 thousand tons are freshwater, including their own production.

Fish production in aquaculture has a significant impact on water resources due to the introduction of large amounts of nutrients, as well as the use of chemicals to control vegetation (pesticides).

► *External fisheries*

The Republic of Belarus has access to Russian aquatic biological resources in the exclusive economic zone (EEZ) in the Baltic and Barents Seas. Quotas for production and catch are allocated annually, the decision is made by a session of the Russian-Belarusian mixed commission of the two countries³¹. In total, in 2005-2019, Belarus received free quotas for 75,000 tons of fish in these waters and, according to available data, fully absorbed

the allocated quota volumes. Accordingly, the development of our own sustainable fisheries will make it possible to make a direct contribution to the implementation of this target.

► *Import of fishery products*

Belarus imports a significant amount of fish and seafood. The volume of imported products for domestic consumption reaches 135-160 thousand tons per year. Thus, the country, as an importer of products, can have a certain influence by shaping the requirements for the development of sustainable fisheries. Currently, there is no publicly available information on the share of imports of fish and seafood products from certified production, including organic ones. It is likely that fisheries sustainability criteria are not one of the key criteria for current procurement.

► *Brief conclusions*

Belarus has some opportunities to contribute to reducing negative pressures from fishing through cooperation at the international level to achieve stricter regulation of the use and protection of marine resources.

Also, to contribute to the implementation of SDG 14, it is seen as necessary to combat illegal fishing through the introduction of a national control system to prevent products from illegal fishing from entering the national market.

It is also important to create a system for recording data on the import of fish and seafood products, allowing one to assess the share of these products produced in environmentally certified production.

Belarus can also introduce sustainable fishing practices within its own fisheries in the Baltic and Barents Seas using Russian quotas.

Belarus can also develop and implement sustainable fish farming practices for use in farms within the country, which will reduce negative pressure on water resources.

Cooperation and more

The contribution of Belarus to solving problems in this area can be considered the support and conduct of research within the framework of the scientific subprogram “[Development of the activities of the Belarusian Antarctic station](#)”, as well as other possible similar research programs. The contribution of Belarus is also the participation of Belarus in international agreements on the conservation of biological diversity, including in the marine environment. For example, Belarus is a party to [the CITES Convention](#) – the Convention on International Trade in Endangered Species of Wild Fauna and Flora. As a party to the Convention, Belarus, for example, [participated in the discussion of the eel situation](#). At the same time, there are important platforms where Belarus practically does not participate, for example, HELCOM, or the Helsinki Convention for the Protection of the Baltic Sea, where Belarus is an observer and where there are a large number of thematic expert groups that work on the main directions of the Action Plan for the Protection of the Baltic Sea.

Key findings, issues and challenges

► SDG 6

Sustainable Development Goal 6 is a key “water” goal in the SDG architecture and is of particular importance for Belarus as a country with a large number of water bodies. The goal is complex due to the variety and complexity of the objectives, many of which require very serious resources and capacity to achieve them. In general, we note the overall positive nature of national efforts to achieve this goal in Belarus. We also note the very significant efforts made by the public in achieving SDG 6.

At the same time, despite significant progress in work on SDG 6, based on the analysis of data on national indicators and the ambitiousness of the goals themselves, significant additional efforts are required to achieve them.

It is obvious that for the successful implementation of SDG 6 targets, they must be included in existing and future national strategic documents that address issues of rational use and protection of natural resources, modernization and development of water management systems and structures, and it is advisable to include related indicators as indicators for assessment success in achieving the goals and objectives set in current and developing strategic documents.

Activities to achieve SDG 6 indicators 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 should be carried out within the framework of state programs and strategies with the involvement of funds from the republican and local budgets.

An important area for the successful implementation of SDG 6 targets is strengthening interdepartmental interaction and coordination in the field of water resources management, as well as transparency and accountability in decision-making on water resources management.

A necessary and important element in making effective decisions on water resources management is the participation of the population and the public, which, in turn, requires good public awareness of the state of this issue at the regional, basin and national levels, as well as support from the state.

For the successful implementation of many tasks within the framework of SDG 6 in Belarus, a constant analysis of similar processes occurring in the European Union and the Eurasian Economic Union is required, as well as the synchronization and implementation of the best established regulatory practices. It is important to use elements and approaches from existing instruments such as the EU Water Framework Directive (2000/60/EC), the EU Drinking Water Directive (2020/2184), the EU Nitrate Pollution from

Agricultural Sources Directive (91/676/EEC) etc. The Industrial Emissions Directive (2010/75) also involves achieving pollution reduction through the more effective use of the best available technologies, which since 2014 has been applied in the Russian Federation, in relation to the regulation of safe levels of pollution from a number of industrial sectors.

► **SDG 14**

SDG 14 is an atypical goal in the SDG architecture in Belarus, as the dominant view is that the targets of this goal are relevant only for countries that have access to the sea. At the same time, the analysis shows that many of the goal's objectives are directly related to Belarus and Belarus is already influencing the achievement of SDG 14.

Belarusian activities make a significant contribution to the thematic area of SDG 14 such as reducing marine pollution, as well as a limited contribution to the conservation of marine ecosystems, the development of sustainable fisheries and the development of scientific cooperation for the conservation of the oceans.

At the same time, for a more effective organization of work within the framework of the SDGs, it seems important to develop a separate Action Plan for the implementation of SDG 14 in Belarus, indicating key steps in individual areas and identifying priorities for work.

It is also important to improve the efficiency of assessing progress in implementing SDG 14 in Belarus. To achieve this, it is necessary to consider the inclusion of possible additional indicators in the national reporting system. Such indicators could be associated with the direct formulation of SDG 14 targets. We also note that existing global indicators do not allow for a comprehensive and qualitative assessment of progress towards achieving SDG 14, especially for countries that do not have direct access to seas or oceans.

Key possible areas for further work to achieve SDG 14 in Belarus:

- working with the problem of plastic and microplastics, in particular, implementing measures to reduce their entry into water bodies;
- reducing the load on water resources from the use of nitrogen in sensitive areas. Possible measures may include the introduction of the principle of nitrate-sensitive areas, followed by strict regulation of the use of nitrogen-containing fertilizers in these areas;
- development of phosphorus capture capabilities at wastewater treatment plants;
- further protection and creation of favorable conditions for the spawning of Atlantic salmon in Belarus, as well as increasing public awareness on this issue;
- further measures to protect and maintain the European eel population in Belarus;
- introduction of requirements for sustainable fishing in relation to marine fishing conducted within the framework of Belarusian fishing quotas in the Baltic and Barents Seas;

- strengthening control over imported fish products to ensure compliance with the requirements for sustainable fish farming;
- intensification of Belarusian participation in the framework of international maritime and oceanic initiatives.

Baltic Sea Action Plan³² (HELCOM) as a document that sets regional guidelines and targets for taking measures to reduce pollution in the Baltic Sea, including pollution from “hot spots” identified by HELCOM, as well as agricultural pollution (for example, compounds of nutrients).

We note the important role of the public in the work on SDGs 6 and 14 in Belarus, which has manifested itself in recent years in many thematic areas, for example, the protection of Baltic salmon, reducing pollution from plastic, microplastics and hazardous substances, popularizing the topic of the relationship between Belarus and the Baltic /Black Sea, popularizing the topic of water and health, attracting the attention of the population in rural areas to the problem of drinking water contamination with nitrates, etc.

Recommendations

► **General recommendations for SDG 6/14**

- develop and implement practices to adapt the water resources management system to climate change;
- modernize and expand the national reporting system on achieving SDG 6 in Belarus in order to more detailed and comprehensive analysis of progress.
- develop additional national indicators to track progress in achieving SDG 14 in Belarus;
- support active public participation in issues of management, protection and use of water resources in Belarus;
- strengthen Belarusian participation in relevant international conventions, initiatives and organizations dedicated to marine issues, including: HELCOM (Helsinki Commission for the Protection of the Baltic Sea), FAO COFI (FAO Committee on Fisheries);
- increase public awareness and education on the role of Belarus in the protection of marine and ocean ecosystems, in particular the ecosystems of the Baltic and Black Seas, as well as on various other issues related to the protection, use and management of water resources in Belarus.

We also draw attention to the importance of using [general recommendations for the development of water security in Belarus](#), which were developed by the EUWI+ project.

► **Recommendations for selected targets in SDG 6**

Targets 6.1 and 6.2

- prioritize solving the problem of access to safe drinking water in rural areas where there is no access to centralized water sources. Particular attention should be paid to solving the problem of nitrate pollution;
- support the development of local wastewater systems for rural areas in the absence of the possibility of connecting to a centralized sewerage system;
- monitor SDG indicators 6.1.1 and 6.2.1 and progress towards achieving SDGs 6.1 and 6.2 on a regular basis, since monitoring these indicators within the MICS once every seven years, as has been the case until now, is clearly insufficient for the purposes of water sector management and sanitation, including the development and monitoring of the

implementation of state programs and regional plans for water supply and sanitation;

- we consider it important to expand the system of national reporting on these targets and keep track of indicators separately for urban and rural populations (in accordance with the requirements of international indicators for SDG 6):
 - a)** share of the population using water supply services that are organized in compliance with safety requirements, by city and village (percentage);
 - b)** share of the population using sanitation services that are managed in a safe manner, by city and village (percentage);
- include a block of questions on this topic in the program of a sample survey of households on living standards in order to monitor indicators of SDG 6.1.1 and SDG 6.2.1.1 on a regular basis;
- link indicators 6.1.1 and 6.2.1.1 with indicators that are currently used to assess the effectiveness of the implementation of subprogram 5 “Clean Water” of the State Program “Comfortable Housing and Favorable Environment” for 2021-2025. It currently states the following main target indicators:
 - a)** share of consumers in Minsk provided with drinking water from underground water supply sources – 100% by 2025 (in 2021 – 60.4%);
 - b)** provision of consumers with drinking quality water supply – 100% by 2025 (in 2021 – 95.8%);
 - c)** provision of the population with centralized water supply and sewerage systems - 93.2% and 79.3% by 2025 (in 2021 - 90.8% and 78.3%, respectively);
- it is also advisable to use indicators 6.1.1 and 6.2.1.1 of SDG 6 as one of the basic indicators for monitoring the effectiveness of the implementation of the National Strategy for Water Supply and Sewerage, which is planned for development;
- increase the efficiency of informing the population about the quality of drinking water from municipal centralized drinking water supply systems and sources of non-centralized water supply. Currently, such information is not available on the official websites of executive committees.

Target 6.3

- develop and implement a system of economic incentives for water users to reduce the flow of pollutants from wastewater into water bodies. A key element may be to set environmental tax rates for wastewater discharges based on the mass of discharged pollutants in the wastewater, rather than on the volume of wastewater discharged, as is currently the case. Such an approach would be a more accurate reflection of the “polluter pays” principle;
- improve the water resources monitoring system in two directions: in qualitative improvement (expanding the range of monitored indicators and automation of control) and in the territorial development of the monitoring system.

Currently, the object of surface water monitoring is only water resources in a watercourse or reservoir. The national practice of monitoring surface waters requires the inclusion of bottom sediments as an integral indicator of pollution of aquatic ecosystems, as well as monitoring of particularly dangerous pollutants and persistent organic pollutants (POPs), microscopic doses of which in water have a sharply negative impact on aquatic biocenoses and human health and the state of aquatic ecosystems in general;

- to increase the efficiency and reliability of observation data on the quantitative and qualitative characteristics of water bodies, the development of digitalization of monitoring is required, including the technical re-equipment of the state network of hydrometeorological observations, including the installation of automated hydrological and hydrochemical complexes.
- in territorial development, it is necessary to revise the current system for monitoring surface waters in the context of climate change, with a focus on conducting observations in the zones most sensitive to climate change and in areas with intense load on water bodies (small watercourses within large populated areas) with a subsequent forecast of the development of the situation to develop measures for the conservation and restoration of water bodies;
- it is recommended to expand the list of existing national indicators for target 6.3, since existing indicators do not allow us to fully assess progress on increasing the scale of recycling and safe reuse of wastewater. In particular, it is proposed to consider introducing targets for reducing discharges of key hazardous chemicals, as well as targets for recycling and safe reuse of wastewater.

Target 6.4

- development of a surface water monitoring system, in particular, the study of the hydrological regime and hydromorphological state of small watercourses, especially in the zone of influence of large settlements, since there is practically no regime monitoring network for small watercourses within large settlements;
- in terms of groundwater monitoring, it is necessary, first of all, to reassess the natural resources and predicted operational reserves of groundwater both in the republic as a whole and in individual regions, with subsequent optimization of the regime network of wells for monitoring groundwater indicators in natural and disturbed conditions, as well as development of a system of local monitoring of groundwater in places with increased pollution;
- increase the efficiency of water use, the priority is economic incentives for water users to implement the following areas: reducing specific water consumption, reducing unproductive water losses, introducing water-saving technologies, increasing the volume of reuse of treated wastewater, including surface wastewater.

Target 6.5

- create national basin councils for the Nioman and Western Dzvina;
- expand the powers and stimulate the activation of existing river basin councils to implement already developed and approved river basin management plans (Dniepr, Prypiac, Western Bug)
- when opportunities arise, to intensify work in the field of transboundary water cooperation, including conducting transboundary monitoring of surface and groundwater according to the observation and assessment regulations agreed upon by the countries, and the active exchange of monitoring information;
- stimulate active public involvement in integrated water resources management. This can be expressed in support of various public initiatives in the field of water resources management, broad participation of representatives of various public groups in basin councils. An important tool could be the creation and support of public river/water groups at the local level, which would unite local people/representatives of various areas directly interested in the conservation and development of water resources.

Target 6.6

- support the processes of restoration and protection of wetlands;
- it seems important to analyze the impact of land reclamation processes on achieving the indicators of target 6.6, as well as take into account the need to achieve this goal when planning land reclamation processes in the future.

► **Recommendations for SDG 14**

Reducing marine pollution

Plastic, marine debris and hazardous substances

- continue to work to address the problem of plastic pollution in Belarus, with a focus on limiting the most problematic types of plastic packaging and goods, including single-use plastic packaging;
- continue to work on further development of the system for collecting drug waste from the population in order to prevent it from entering water bodies;
- intensify the participation of the Republic of Belarus in the international negotiation process on the creation of a UN Convention on Plastic Pollution;
- begin work to address the problem of microplastic pollution, including regulating the content of microplastics in consumer products, in particular in cosmetics;
- add microplastics, including synthetic microfibers, to the list of controlled parameters when monitoring water resources in Belarus;

- expand the range of hazardous substances in the list of controlled parameters when monitoring water resources in Belarus, in particular, by including substances from the group of endocrine disruptors and active ingredients of key drugs;
- prioritize issues of handling and regulation of hazardous substances that pose a significant risk to human health and water resources, including phthalates, bisphenols, pharmaceutical contaminants, etc.;
- continue to modernize municipal wastewater treatment facilities, including on-site facilities with a focus on micropollutants and phosphorus.

Pollution with compounds of nutrients

- develop a code of best agricultural practices;
- develop a concept of areas sensitive to nitrates, including identification of areas from which significant nitrates are washed into water bodies, as well as areas most susceptible to nitrate pollution;
- support the development of organic agriculture in Belarus, especially in areas sensitive to nitrates.

Protection and conservation of marine ecosystems

Salmon

- intensify the efforts of all stakeholders to ensure the safety of Atlantic salmon spawning in Belarus, including combating poaching, resolving issues of physical barriers on spawning rivers, resolving the issue of pollution of spawning rivers, as well as expanding educational activities in this area;
- we specifically draw attention to the need to support public efforts in the field of protection of salmon species;
- we also recommend expanding the range of scientific research in this area.

Eel

- we recommend intensifying educational work on the conservation of the European eel;
- continue to work with the European Union to resolve the issue of transferring European eel larvae for stocking water bodies;
- initiate transboundary dialogue to discuss and possibly resolve the problem of physical barriers on rivers for migratory eels;
- consider introducing a moratorium on industrial eel fishing.

Reducing negative pressure from fishing/developing sustainable fisheries

Activities of fish farms within the country

- conduct a comprehensive assessment of the environmental impact of fish farms on water resources;

- develop an environmental policy for fish farms aimed at reducing pollution of water resources with nutrients and hazardous substances;
- consider the application of FAO guidance documents on sustainable aquaculture.

External fisheries

- consider the issue of Belarusian membership in the FAO (Agricultural and Food Organization) Committee on Fisheries;
- consider the issue of applying FAO guidelines on sustainable fisheries in the framework of fishing under the “Belarusian quota”;
- prepare an annual note to assess the impact of fishing within the “Belarusian quota” on the environment of the Baltic and Barents Seas.

Import of fishery products

- develop and implement a system for assessing imports of fishery products for compliance with environmental requirements, as well as legality of origin, in order to exclude the import of illegally caught fish;
- begin educational work among the population on the issue of sustainable fishing and trade in fishery products.

► **Recommendations for the population of Belarus**

The range of issues related to water resources and the implementation of SDG 6/14 is very large, so in this section we provide only some recommendations on how to reduce the negative environmental impact on water resources and, conversely, promote their conservation.

- 1)** treat water and water bodies with care, do not pollute them;
- 2)** do not throw out-of-date medications into the sewer; dispose of them in special containers;
- 3)** pay attention to the quality of water in rural areas, especially that which you take from non-centralized sources. If you regularly drink from a source, try to test the water for nitrates;
- 4)** try to reduce the amount of bottled drinking water you buy. Choose drinking water sources where you can fill your own flask or bottle;
- 5)** if possible, pay attention to environmental and sustainability aspects when choosing fish and seafood to purchase;
- 6)** try not to buy products containing microplastics.

You can get up-to-date information about the state of surface water bodies based on monitoring results on the website: <https://rad.org.by/monitoring/aqua.html>

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