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Resolution of the Round Table

“State and the rational use of water resources in the Upper Volga”

Cherepovets State University
(Cherepovets, May the 22th, 2019)

Translated by D.D. Pavlov

The Round Table “State and rational use of water resources of the Upper Volga” (hereinafter – the Round Table), organized by Cherepovets State University, was attended by scientists from I.D. Papanin Institute for Biology of Inland Waters of the Russian Academy of Sciences, the Vologda branch of the FSUE “VNIRO” and Cherepovets State University, specialists from PAO “Severstal”, JSC “Apatite”, the Municipal Unitary Enterprise of the city of Cherepovets “Vodocanal”, representatives of the Department of Natural Resources and Environmental Protection of the Vologda Region and the Standing Committee on Ecology and Environmental Management of the Legislative Assembly of the Vologda region.

Having heard and discussed the reports and presentations of the participants on the current state of the Upper Volga basin and the Rybinsk reservoir in the area of Cherepovets, the participants of the Round Table stated:

1. The Round Table “State and the rational use of water resources of the Upper Volga” is a topical event, in which specialists from scientific and scientific-educational organizations, institutions performing supervisory and control functions in the field of environmental protection, authorities and municipal administration, as well as industrial and resource-supplying enterprises have the opportunity to receive the necessary information and exchange experience in the field of reducing the environmental pressure on water resources of the regions.

2. A great deal of experience in the study of aquatic and riparian ecosystems has been accumulated in the city of Cherepovets through cooperation with specialized academic institutions, and an extensive complex of effective measures have been carried out that have improved the condition of the waters adjacent to the city.

Following the exchange of views on the topics of the Round Table, it was decided:

1. To note the conformity of the topics, research results and practical measures presented in the reports to the priority tasks indicated in the national project “Ecology”, federal projects “Clean Country”, “Integrated system of solid municipal waste”, “Clean Water”, “Recovery of the Volga”, “Preservation of unique water bodies”, “Preservation of biological diversity and development of ecological tourism” and “Introduction of the best available technologies”.

2. To confirm the relevance of research areas and practical activities, which are devoted to the reports of the speakers.

3. To note that the state of water resources within the influence of the city of Cherepovets and its industrial enterprises is assessed as satisfactory and tending to improve according to the results of scientific research.

- The Vologda Oblast is on the penultimate 14th place out of the 15 subjects of the Russian Federation discharging untreated sewage into the Volga basin according to Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing (Rospotrebnadzor) data of 2018. The contribution of the region to these discharges is only 0.7%, which is 30 times less than the Moscow Region, 28.6 times less than the Nizhny Novgorod Region, 16 times less than the Saratov Region. Compared with the neighboring regions, the Vologda region discharges untreated sewage into the Volga River by 11.4 times less than the Yaroslavl region, 4.2 times less than the Tver region and 2.6 times less than the Kostroma region.

- According to the I.D. Papanin Institute for Biology of Inland Waters of the Russian Academy of Sciences on the improvement of the situation in the Volga basin in the area of Cherepovets is also evidenced by the reaction of complex systems of aquatic organisms. The foraging base for fish has improved and they carry less toxic pollutants. At the same time, bottom sediments carry a large load of accumulated pollution (heavy metals, organochlorine compounds, pesticides).

4. Large enterprises of the city of Cherepovets (PAO “Severstal”, JSC “Apatit” and MUE “Vodokanal”) consistently pursue a line to modernize equipment, update and improve water use technologies, reduce water consumed in the production process, and reduce harmful emissions to water bodies in the region. Modern equipment and technologies are crucial for solving problems of further reducing the level of pollution of water basins and preserving their ecological well-being.

- MUP “Vodokanal” has reduced the volume of discharged wastewater by 37% over ten years, performing their full mechanical and biological decontamination and 100% disinfection with ultraviolet light. The modern technology of nitrification-denitrification, which provides deep removal of biogenic elements, has been introduced into the process of decontamination, as a result, their discharge is reduced by 52%. The total amount of pollutants discharged by the enterprise has been reduced by 33%.

- PAO “Severstal” invested 8 billion rubles of their own funds in the water treatment system. Since 2016, the plant has operated a unified filtering station using the best water purification technologies, which allowed reducing the amount of polluted substances discharged into the water by 30%. For a number of metals (for example, iron) discharged water is cleaner than river water. Water intake of PAO “Severstal” plants and facilities is the least among the metallurgical industries of the Russian Federation. 98.3% of the water used in the production is in circulation.

- JSC “Apatit” transports the entire volume of effluent through the sewage treatment plant. The new sewage treatment plant that was commissioned in 2018 conducts a 3-stage biological and chemical treatment of water using the best available technologies. It is planned to reduce the discharge of polluted water by at least 2 times by 2025.

5. To mark the remaining problems of water eutrophication, the danger of their toxic and plastic pollution, changes in biodiversity, poaching, the existence of anthropogenic foci of parasitic diseases in the waters of the Upper Volga basin.

6. Consistent efforts to reduce water consumption and improve the purification methods of industrial and domestic wastewater in order to reduce water pollution to the parameters recommended by the legislation of the Russian Federation remain the key practical tasks of industrial and resource-supplying enterprises in Cherepovets.

Participants of the Round Table noted the need for:

- further improvement of practical approaches to the preservation of the ecological well-being of waterbodies;
- development of methods for indicating the well-being of waterbodies in the region and continuing to monitor the state of the water resources of the Upper Volga, using data from regional scientific research in the development of regional components of federal environmental projects;
- familiarization of the participants of the Round Table with the results of scientific studies of the state of water resources, conducted by Papanin IBIW RAS, FSUE “VNIRO”, Cherepovets State University;
- preparation, following the results of the Round Table, of a brief analytical report for the authorities and the supervisory and control bodies regarding perspective measures to further reduce the anthropogenic pressure on water resources of the regions;
- coverage of the issues discussed at the Round Table in the journal “Transformation of Ecosystems” published in Cherepovets State University;
- recognition of the feasibility of conducting research and round tables on topics of biodiversity conservation, the content of heavy metals in the ecosystem of the Rybinsk reservoir.

The Organizing Committee of the Round Table was invited to send relevant materials to the participants. This decision was discussed and agreed with the participants of this Round Table.

The meeting was attended by:

Aleksina Yu.Yu., Junior Researcher, Department of Biology (Faculty of Biology and Human Health), Cherepovets State University

Afanasyev D.V., Rector of Cherepovets State University

Afanasyeva N.B., Head of the Department of Biology (Faculty of Biology and Human Health), Cherepovets State University

Arhipov N.A., Honored Ecologist of the Russian Federation, Member of the Presidium of the Regional Branch of the All-Russian Society for Nature Protection

Bannikov D.A., Head of the Department of Natural Resources and Environmental Protection of the Vologda Region

Belov M.N., Chief Ecologist of the Department of Occupational Safety, Industrial Safety and Ecology of PAO "Severstal"

Ignatieva O.N., Deputy Chairman of the Committee for Environmental Protection of the City Hall of Cherepovets

Ilyin S.N., Director of MUE "Vodokanal", Cherepovets

Ivanova E.S., Head of the Ecological-Analytical Laboratory (Faculty of Biology and Human Health), Cherepovets State University

Khabarova L.S., Junior Researcher, Department of Biology (Faculty of Biology and Human Health), Cherepovets State University

Konovalov A.F., Deputy Head of the Vologda Branch of the All-Russian Research Institute of Fisheries and Oceanography

Krylov A.V., Director of the I.D. Papanin Institute for Biology of Inland Waters (IBIW) RAS, chief editor of the journal "Ecosystem Transformation"

Minchev V.S., Director for Occupational Safety, Industrial Safety and Ecology of PAO "Severstal"

Nazarova L.Yu., Head of the Department of Ecology and Nature Management, JSC "Apatit"

Neporozhnia I.A., Senior Lecturer, Department of Biology (Faculty of Biology and Human Health), Cherepovets State University

Petrova V.V., Associate Professor, Department of Biology (Faculty of Biology and Human Health), Cherepovets State University

Poddubnaya N. Ya., Leading Researcher, Department of Biology (Faculty of Biology and Human Health), Cherepovets State University

Shevtsov G.E., Advisor to the General Director of JSC Severstal Management, Member of the Standing Committee of the Legislative Assembly of the Region for Regulations and Deputies, Deputy Head of the Deputy Association (Faction) of the "Edinaya Rossiya" Party in the Legislative Assembly of the Region

Stavrovsky M.S., Chairman of the Standing Committee on Environmental Ecology of the Legislative Assembly of the Vologda Region

Viktorov D.V., Prosecutor of the Cherepovets Interdistrict Environmental Protection Prosecutor's Office