

Report on the State of Conservation of the UNESCO World Heritage Site "Lake Baikal" (Russian Federation, No. 754) in 2021 - 2022

1. Response of the Russian Federation in accordance with the Decision of the World Heritage Committee 44 COM 7B.107

On the issue of evaluating the environmental impact of existing water resources use and management regulations in terms of the impacts on the "Outstanding Universal Value" (OUV) of Lake Baikal in connection with changes in the permissible amplitude of water level fluctuations in Lake Baikal.

The 42nd session of the UNESCO World Heritage Committee Decision 7B.76 (Manama, 04.07.2018) noted: The World Heritage Committee "...urge the State Party to refrain from any further changes to the legislation regulating the fluctuation of water level of Lake Baikal..".

In 2015, in order to prepare proposals for the balanced regulation of the level regime of Lake Baikal the Federal Water Resources Agency (Rosvodresursy) initiated the research work "Evaluation of the relationship (influence) of level regime of Lake Baikal (Irkutsk Reservoir) with its ecological state and modern socio-economic requirements of the region in conditions of extremely high and extremely low water content. Analysis of the regulatory legal framework for regulating stock and suggestions for their improvement." (hereinafter - R&D). The R&D Terms of Reference were developed by the Expert Group under the Interdepartmental Commission for the Protection of Lake Baikal, established in accordance with Order of the Ministry of Natural Resources and Environment of the Russian Federation dated April 13, 2015 No. 178. R&D was carried out by the Water Problems Institute of the Russian Academy of Sciences together with the Irkutsk Scientific Center of the Siberian Branch of the Russian Academy of Sciences, the Buryat Institute of Nature Management of the Siberian Branch of the Russian Academy of Sciences, VNIIGIM named after Kostyakov and VED LLC.

The result of a comprehensive discussion and consideration of the R&D results are scientifically based proposals for expanding the range of water level regulation in Lake Baikal under conditions of extremely high and extremely low water content.

Taking into account the above proposals, Resolutions of the Government of the Russian Federation

No. 626 "On the maximum and minimum values of the water level in Lake Baikal in 2016-2017" dated July 1, 2016, No. 1667 "On the maximum and minimum values of the water level in Lake Baikal in 2018-2020" dated December 27, 2017, No. 654 "On the maximum and minimum values of the water level in Lake Baikal in 2021" dated April 27, 2021, and No. 379 "On the maximum and minimum values of the water level in Lake Baikal in 2022- 2023" dated March 16, 2022 were issued. Thus, in relation to 2018, in terms of changing the limits of water level fluctuations in Lake Baikal, the regulations of the Government of the Russian Federation were not further introduced, the requirement of the UNESCO World Heritage Committee is being fully met.

We also inform you that at present, the Ministry of Natural Resources and Environment of the Russian Federation has initiated additional scientific research on the "Impact of

changes in the Lake Baikal water level in on the state of the lake ecosystem, determination of damage to economic facilities and infrastructure of the coastal territory of the Republic of Buryatia, the Irkutsk region, depending on the lake levels and discharges from the Irkutsk HPP" with a completion date of 2023.

As part of the planned scientific research, the following will be studied and analyzed:

- the influence of the level regime on the ecosystem with qualitative, quantitative and territorial characteristics and the boundaries of this influence, the formation of environmental requirements when regulating the level of Lake Baikal;
- possible consequences and socio-economic damages under different conditions of water content, lake levels and discharges through the Irkutsk HPS with a list of territories and facilities most exposed to risks and potential damages.

The issue of establishing on a permanent basis the range of limit values of the water level in Lake Baikal for conditions of different water content will be considered based on the results of the scientific research.

On the issue of increasing the number of illegal buildings on the shores of Lake Baikal

Several federal executive bodies (Rosreestr (Federal Service for State Registration, Cadastre and Cartography), Rosprirodnadzor (Federal Service for Supervision of Natural Resources), Federal Bailiff Service of Russia), the General Prosecutor's Office of the Russian Federation, as well as executive authorities (the Governments of the Republic of Buryatia and Irkutsk Region) have the authority to identify illegal buildings and take measures to eliminate them, including within the boundaries of the UNESCO World Natural Heritage site - Lake Baikal - in the Russian Federation.

In accordance with the provisions of the Town Planning Code of the Russian Federation and the Land Code of the Russian Federation, the bodies of federal state land control (supervision) and municipal land control are authorized to inform the local government body of a settlement, urban district at the location of this land plot, the local government body of the municipal district at the location of the land plot on the facts of placement of a capital construction project on a land plot on which placement of such a project is not allowed in accordance with the permitted use, intended purpose of the land plot and (or) established restrictions on the use of land plots.

In order to increase the effectiveness of the powers to detect unauthorized buildings, the territorial bodies of Rosreestr will carry out control (supervisory) measures in relation to 90% of land plots categorized as medium and moderate risk in 2023-2024 for the purpose of determining the presence (absence) on such land plots of facts of placement of capital construction projects which placement is not provided for by the permitted use, the intended purpose of the land plot and (or) established restrictions on the use of land plots.

During 2021-2022, the Office of the Federal Register for the Irkutsk Region, within the framework of its competence, did not reveal the placement of unauthorized buildings. The Office of the Federal Register in the Republic of Buryatia revealed 11 facts of placement of

capital construction projects on land plots where their placement is not allowed. Relevant notifications about the detection of unauthorized buildings were duly sent to local governments to take action within the existing powers. Local governments reported the demolition of 1 unauthorized building.

Rosprirodnadzor reported that, in accordance with Article 6 of Federal Law No. 94-FZ dated May 1, 1999, “On the Protection of Lake Baikal,” it is prohibited to build new economic facilities in the Baikal natural territory, reconstruct existing economic facilities without a positive conclusion of the State Ecological Expertise of the design documentation of such facilities.

Resolution of the Government of the Russian Federation No. 2399 dated December 31, 2020 approved a list of activities prohibited in the central ecological zone of the Baikal Natural Territory, which includes, among other things, the construction of capital construction projects (or parts thereof), the operation of which is not specifically related to the creation and development of protected natural areas of federal and regional significance, tourist and recreational special economic zones.

Failure to comply with the above conditions entails administrative liability under Article 8.4, Article 8.12.1 and Part 1 of Article 8.42 of the Code of Administrative Offenses of the Russian Federation.

In accordance with the powers of the Federal Bailiff Service, as of December 22, 2022, the Main Directorate of the Federal Bailiff Service of Russia for the Irkutsk Region, the Directorate of the Federal Bailiff Service of Russia for the Republic of Buryatia had 58 enforcement proceedings of a non-monetary nature related to compliance with requirements in the field of construction and use of building materials, reconstruction, capital repairs of a capital construction project or commissioning thereof located in the central ecological zone of the Baikal natural territory, including 50 enforcement proceedings on the demolition of 211 unauthorized facilities.

Within the framework of these enforcement proceedings, bailiffs are taking measures provided for in Articles 105, 107 of the Federal Law No. 229-FZ dated October 2, 2007 “On Enforcement Proceedings”, aimed at fulfilling requirements of executive documents: 46 resolutions were issued to collect the enforcement fee, 366 protocols on administrative offenses under Article 17.15 of the Code of Administrative Offences of the Russian Federation were drawn up, and the guilty persons were brought to administrative responsibility in the form of administrative fines. Execution of enforcement proceedings to demolish unauthorized buildings located in the central ecological zone of the Baikal Natural Territory is under the control of the Federal Bailiff Service.

In 2023 and 2024, Rosreestr is planning to carry out land monitoring on the territory of 20 municipalities of the Russian Federation constituents included in the Baikal Natural Territory, of which 19 municipalities are located in the Irkutsk Region and the Republic of Buryatia.

On the issue of providing information about the timing of the environmental impact assessment (hereinafter referred to as the EIA) for the disposal of waste of Baikalsk Pulp and Paper Mill Open Joint Stock Company (hereinafter - BPPM OJSC) and the reclamation of the industrial site, including assessment of possible options for further use of the site of BPPM OJSC, and their impact on the OUV of the Site, as well as providing the best possible options in terms of choice of technologies and executing agencies for disposal of waste and the industrial site of BPPM OJSC.

At present, Federal State Unitary Enterprise Federal Environmental Operator (hereinafter referred to as FEO FSUE) under state contracts concluded with Federal State-Owned Enterprise "Directorate for the organization of work to eliminate accumulated environmental damage, as well as to ensure the safety of hydraulic structures of the Krasny Bor landfill" (hereinafter referred to as FSOE Krasny Bor) No. 4/2020EI dated November 27, 2020 (in part of the Solzansky landfill and the territory occupied by sewage treatment facilities containing black liquor) and No. 4/2021EI (in part of the Babkhinsky landfill) has completed the assessment within the EIA of the planned economic activity on liquidation of the accumulated environmental damage (hereinafter referred to as the AED) in the territory of BPPM OJSC.

The work is being carried out in relation to three AED facilities:

territory occupied by sewage treatment facilities with production facilities containing black liquor (former central sewage treatment facilities) (hereinafter referred to as STF);

Babkhinsky landfill;

Solzansky landfill;

The necessary package of engineering surveys was carried out at all three facilities as part of the design.

The work on technology selection was carried out on the principles of general availability and openness with the participation of the Russian Academy of Sciences and Rosprirodnadzor, including the conduct of primary pilot tests (hereinafter referred to as PT).

On November 22, 2022, Rosprirodnadzor approved the positive conclusion of the state environmental expertise for the design documentation on the AED elimination on the STF territory, and the the Federal Autonomous Institution "Glavgosexpertiza of Russia" also approved the positive conclusion for the design documentation and the results of engineering surveys dated December 29, 2023 No. 38-1-1-3-094704- 2022.

Positive conclusions of the State Environmental Expertise No. 2296/GEE dated December 28, 2022 and Design Documentation and Engineering Survey Results Expertise No. 38-1-1-3-095401-2022 dated December 30, 2022 were received for the design documentation on AED liquidation in the Babkhinsky landfill.

In 2023, FEO FSUE will begin to create infrastructure for treatment facilities on the STF territory, will purchase the necessary equipment and in 2024, after commissioning, will begin to purify the alkaline wastewater.

Also, in 2023, FEO FSUE will begin work to eliminate the AED at the Babkhinsky landfill.

In order to reduce the time needed to start work, contracts for technological connection to the power supply networks for the Babkhinsky landfill and STF were concluded with the Irkutsk Electric Grid Company.

In the part of the Solzansky landfill, two areas of AED elimination were identified within the framework of primary PT: accelerated solid-phase fermentation (composting) and disinfection with deep mass stabilization of sludge (lithification).

At the same time, the above areas on the results of PT have not confirmed the guaranteed result in the form of lowering waste to Hazard Class V, including due to the heterogeneity of waste of various morphological compositions contained in the maps of the Solzansky landfill.

At the meeting on June 21, 2022, the Government of the Russian Federation noted the expediency of conducting a full-scale PT in part of the Solzansky landfill in order to develop an AED liquidation project.

The Ministry of Natural Resources of Russia together with subordinate federal state institutions, including scientific ones, have developed draft terms of reference and regulations for research and development (hereinafter referred to as "R&D").

R&D is proposed to be performed in two stages:

at the first stage, specific operation charts for the production of work within the areas of composting and lithification ("formulations") will be determined in laboratory conditions on prototypes, and a technical and economic analysis of application of "formulations" at production of works on the landfill maps (full-scale PI) will be prepared. The work completion date is November 2023;

at the second stage, the selected "formulations" will be scaled up to tests directly in the landfill maps to confirm the results of application in real conditions. The work completion date is July 2025.

The approximate duration of R&D is 2.5 years. A long period of work is associated with the need to conduct field work in the warm season and carry out a work package on sampling and laboratory analysis of the results of applying field stage technologies to confirm the sustainability of their target indicators.

In 2021 and 2022, top-priority measures were taken at the Babkhinsky and Solzansky landfills to lower and clean above-sludge waters, which made it possible to eliminate the risk of overflow and destruction of storage card dams (in 2021, 40 thousand cubic meters were pumped out, in 2022 - 70 thousand cubic meters).

On the issue of AED liquidation in the territory of the industrial site of BPPM OJSC.

At present, the Government of the Russian Federation, executive authorities of the federal and regional level, and state organizations are taking the following measures:

1. A strategic master plan for the integrated development of the Baikal municipality, including the territory of BPPM OJSC, was developed and approved at an extended meeting of the Urban Planning Council of the Irkutsk Region under the Governor of the Irkutsk Region.

2. A concept for the development of the former territory of BPPM OJSC was developed, taking into account the synchronization of work related to the transformation of the legacy of the mill's activities, and the solution of the problem of the heat source in the city of Baikalsk.

3. A draft order of the Government of the Russian Federation “On Approval of the Program for Social and Economic Development of the Baikal Municipality, including the territory of BPPM OJSC” was submitted to the Government of the Russian Federation.

4. Measures are being taken to create a working group on the issues of synchronization of work on the liquidation of the accumulated environmental damage formed during the activities of BPPM OJSC and the development of the territory of BPPM OJSC under the Government Commission on the Protection of Lake Baikal.

On the issue of assessing the impact of legislative changes on Lake Baikal.

The Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, February 25, 1991) (hereinafter referred to as the Convention) has been signed but not ratified by the Russian Federation. In addition, the Russian Federation is not a party to the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context at the National Level (Kyiv, 21.05.2003) – this international legal act has not been signed or ratified by the Russian Federation.

The laws of the Russian Federation do not contain regulations determining the procedure for assessing the impact on the environment of changes made to the laws.

At the same time, in order to implement the decisions of the UNESCO World Heritage Center, the Ministry of Natural Resources and Environment of the Russian Federation together with the Federal State Budgetary Institution "Russian Academy of Sciences" (hereinafter - FSBI RAS) decided to conduct research and development on the impact of legislative changes in the Russian Federation which may weaken the existing regulatory framework and entail a potential threat to the state of conservation of Lake Baikal as a UNESCO World Heritage Site (hereinafter referred to as R&D).

At present, the above R&D is scheduled for 2023.

The Ministry of Natural Resources and Environment of Russia together with the Ministry of Education and Science of Russia is working on the issue of its implementation, the R&D completion date is scheduled for the end of 2023.

Taking into account the final conclusions of the above-mentioned R&D, the Ministry of Natural Resources and Environment of Russia will prepare a report on the assessment of the impact of legislative changes on Lake Baikal and send it to the UNESCO World Heritage Center.

On the issue of environmental impact assessment for Special Economic Zones (hereinafter referred to as SEZ), as well as strategic environmental assessment (hereinafter referred to as SEA) for all SEZ in relation to existing and future developments and their cumulative environmental impact on the Site.

The creation and functioning of SEZ are regulated by the Federal Law No. 116-FZ dated July 22, 2005 "On Special Economic Zones in the Russian Federation" according to which the decision on creation of SEZ is taken by the Government of the Russian Federation based on the SEZ creation criteria approved by the Government of the Russian Federation.

The SEZ creation criteria were approved by Resolution of the Government of the Russian Federation No. 398 dated April 26, 2012 and provide, among other things (clause 12), for an analysis of the environmental risks of a project to create a special economic zone and (or) an environmental efficiency management strategy.

SEZ are a preferential treatment (a measure of state support) that provides investors in the relevant territory with special tax, customs and other preferential conditions. The creation of SEZ in itself does not carry environmental risks, since infrastructure and investment projects on their territory are implemented in accordance with the regulations of the current laws, including in the field of environmental protection and cultural heritage. Environmental assessment is carried out in relation to specific projects, regardless of whether the effect of preferential treatments (state support measures) extends to the territory of their implementation.

The environmental assessment procedure in the Russian Federation consists of an environment impact assessment (hereinafter referred to as the EIA) conducted out by its initiator, and a state environmental expertise (hereinafter referred to as the SEE) conducted by authorized executive authorities, including for the purpose of assessing the quality of EIA materials .

In accordance with the laws of the Russian Federation (Federal Law No. 7-FZ dated January 10, 2002 "On Environmental Protection"; Requirements for environmental impact assessment materials approved by the Ministry of Natural Resources and Environment of Russia No. 999 dated December 1, 2020, earlier - Order of the State Committee for Ecology of Russia No. 372 dated May 16, 2000), as well as international practice, the EIA is conducted in accordance with the procedures established by laws for specific projects that are planned for implementation, including those within SEZ.

At the same time, environmental impact assessment studies of planned economic and other activities include an analysis of the state of the territory that may be affected by the planned (proposed) economic and other activities (including the state of the environment, the existing anthropogenic load and its nature, the presence of specially protected natural territories and their protected zones, the central ecological zone of the Baikal Natural Territory, protected shoreline belts, water protection zones of water bodies or their parts; other territories (water areas) or zones with a limited nature management regime and other economic activities established in accordance with the laws of the Russian Federation environmental protection purposes), that is, the impact assessment is carried out taking into

account the already existing man-made load and the presence of "environmentally sensitive" zones.

Project documentation of facilities, the construction and reconstruction of which is expected within the Baikal Natural Territory (hereinafter referred to as the BNT), including within SEZ, in accordance with the laws of the Russian Federation (Federal Lws No. 94-FZ "On the Protection of Lake Baikal" dated May 01, 1999, No. 174-FZ "On Environmental Expertise" dated November 23, 1995) is the object of state environmental expertise (hereinafter also referred to as SEE) of the federal level.

Within the framework of environmental expertise, compliance of documents and (or) documentation justifying economic and other activities planned in connection with the object of environmental expertise, with environmental requirements established by the laws in the field of environmental protection, in order to prevent the negative impact of such activities on the environment, shall be established.

SEE materials, including materials of public discussions, shall be submitted in the set of materials for the SEE.

Thus, in accordance with the laws of the Russian Federation, an environmental assessment is carried out in relation to all projects planned for implementation within the BNT, including those within the SEZ. An analysis of the environmental risks of the SEZ project itself shall also be carried out.

Resolution of the Government of the Russian Federation No. 2399 dated December 31, 2020 approved a list of activities prohibited in the central ecological zone (CEZ) of the BNT, the effect of which is aimed at limiting the negative impact on the unique ecological system of Lake Baikal. These restrictions are also taken into account when planning and implementing activities within the SEZ in the BNT CEZ.

Regarding the SEA of all SEZ, it should be noted that in accordance with international practice (for example, the Protocol on Strategic Environmental Assessment to the Espoo Convention), the SEA is carried out in relation to strategic plans and programs and means an assessment of probable environmental consequences, including those related to public health, of such plans or programs.

Thus, the conduct of SEA in relation to existing SEZ does not fully correspond to the procedures accepted in international practice.

It should also be noted that currently the laws of the Russian Federation do not provide for the conduct of SEA.

Since 2018, the construction of supporting infrastructure has been carried out on the territory of the SEZ of tourist and recreational type "Gate of Baikal". Water supply and sanitation networks, stormwater mains, stage 1 of the street and road network with outdoor lighting and on-site power supply networks of the Predgorny region of the SEZ are at the stage of creation.

In accordance with the positive conclusions of the state environmental expertise, the design documentation for the specified facilities provides for environmental protection measures to the extent sufficient to prevent the negative consequences of man-made impact

on the environment and justifies the environmental feasibility of the planned activities. The work is carried out in strict accordance with the approved design documentation.

At present, the tourist infrastructure facilities is also being constructed by two SEZ residents in accordance with the established regulations of the current laws of the Russian Federation. Another four residents are carrying out design and survey work with the subsequent receipt of state expertise in construction and state environmental expertise. Construction and installation work is scheduled to 2022.

In the period from 2008 to 2015, planning designs (hereinafter referred to as PD) were developed for the territory of the sites "Turka" and "Peski", an engineering infrastructure, including power supply, water supply, wastewater disposal, heat supply, street and road network and improvement of the territory, the construction of shore protection, berthing facilities on the Turka River and social infrastructure facilities in the surrounding area were created for the special economic zone of tourist and recreational type "Baikal Harbor", created on the territory of the municipality of the Pribaikalsky District of the Republic of Buryatia (hereinafter referred to as the SEZ TRT).

Design documentation was developed for all the abovementioned facilities and construction was carried out in accordance with the requirements of regulatory and legislative acts of the Russian Federation.

The design and construction of facilities declared by residents of the SEZ TRT, provided for by agreements on the implementation of tourist and recreational activities on the territory of the SEZ, is carried out strictly in accordance with the requirements of the current regulatory and legislative acts in the Russian Federation, including in accordance with the Federal Law No. 174-FZ dated November 23, 1995 "On Environmental Expertise".

On the issue of providing updated information on the assessment of the forest fire impact on the ecosystem of the Site.

Forest fires are the main cause of forest weakening and death in the Baikal Natural Territory (hereinafter referred to as BNT). As of December 25, 2022, standing plantations damaged by fires were registered on an area of 557.2 thousand hectares, including 106.4 thousand hectares in the Central Ecological Zone. The proportion of plantations damaged by fires from the total damage area is about 70%.

The main factor in the death of plantations in the BNT is also forest fires, primarily crown and sustained creeping forest fires of high intensity.

Plantations that died from forest fires of different age were registered on an area of 48.6 thousand hectares, including 4.4 thousand hectares in the Central Ecological Zone. The proportion of standing plantations that died from fires is 90.5% and 100%, respectively.

The impact that fires have on forest ecosystems in the BPT does not end only with the death of plantations, leading to a decrease in the area of land covered by forest vegetation. Reforestation is extremely difficult on large burned areas due to the remote location of seed sources and the overgrowth of these areas with grasses that form a thick turf, making natural regeneration of forests difficult. It is most often absent in dry growing conditions. Successful renewal is possible on burned areas and clearings confined to soils with a sufficient and

excessive degree of moisture, but in most cases there is a change from coniferous species to small-leaved ones. After repeated fires, undergrowth is most often absent on unforested areas of forest lands in all habitat conditions or is represented by single specimens of small-leaved species.

As a result of fires, the degradation of forest ecosystems and the transition of lands covered with forest vegetation into uncovered, and in the case of repeated fires, forest lands into non-forest (wastelands, barns) are possible. In waterlogged areas, the death of the stand leads to waterlogging of the soil. In the southern regions of the BNT and in the lower parts of the slopes of the southern exposure, there is a stepping of areas after fires on large burned areas.

In 2021, the reforestation fund in the Baikal Natural Territory in the Irkutsk Region amounted to 263.6 thousand hectares, more than 50% of which (144.3 thousand hectares) were burned areas and dead plantations.

In 2021, reforestation of 7.8 thousand hectares in the BNT of the Trans-Baikal Territory was completed, including 0.8 thousand hectares of newly planted forests. 0.9 thousand hectares of young trees Introduced to the category of valuable tree plantations. The area covered with forest vegetation in the Trans-Baikal Territory increased by 6.1 thousand hectares, or by 0.13%, compared to the previous year.

In 2021, the number of fires decreased by 80.6% compared to 2020 and amounted to 165 fires (in 2020 - 849 fires). The area of the BNT covered by fires decreased by 93.3% compared to 2020 and amounted to 8.04 thousand hectares (in 2020 - 120.2 thousand hectares).

On the issue of joint development by the Russian Federation and Mongolia of a transboundary SEA for any ongoing and planned hydropower and water management projects, while ensuring that its results guide the development of EIA principles for any specific projects, including the planned construction of the Shuren Hydro-Electrical Power Plant and other projects on the Orkhon River.

With regard to the development of a transboundary strategic environmental assessment (hereinafter referred to as the SEA) for existing and future hydro-electrical power plant and water projects, it should be noted that the process of SEA is regulated by Directive 2001/42/EC of the European Parliament and of the Council of the European Union dated 27 June 2001. “On the assessment of the impact of certain plans and programs on the environment”, the UNECE Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (Protocol on SEA dated May 21, 2003).

The Russian Federation is not a party to the Protocol and currently does not have a legal framework for SEA. At the same time, Russian laws have tools that allow achieving the goals set within the framework of the SEA: environmental impact assessment and environmental expertise, provided for by Federal Law No. 7-FZ dated January 10, 2002 “On Environmental Protection” (Art. 1, 3, 32, 33).

In order to comprehensively consider the above issues, within the framework of the 20th meeting of the Russian-Mongolian Intergovernmental Commission on Trade, Economic, Scientific and Technical Cooperation (December 2016) “The Parties agreed to exchange

information on assessing the impact on the Selenga River and Lake Baikal of the possible construction of the Shuren Hydro-Electrical Power Plant and hydraulic structures on the Orkhon River, and reached an agreement to create a "joint working group for a comprehensive review of issues related to the planned construction of hydraulic structures in the watercollecting area of the Selenga Кумык. As a result, an appropriate working group was created at the site of the Ministry of Natural Resources and Environment of Russia.

The working group discussed the main issue of conducting a comprehensive environmental, social and economic assessment of all planned energy and water projects in Mongolia and their impact on the Selenga River, its tributaries and Lake Baikal, in accordance with the relevant provisions of the 1972 World Heritage Convention and the 1971 Ramsar Convention on Wetlands.

At the second meeting of this working group in October 2019 (Ulaanbaatar) the Mongolian side informed about the development of a project on REO/SEO for construction of hydraulic structures in the Mongolian part of the Selenga River basin.

The final minutes of the meeting recorded that "the parties agreed to ensure the exchange of information necessary to carry out work to assess the impact of the construction of a hydro-electric power station in the catchment area of the Selenga River on the ecosystem of Lake Baikal, as well as regular consultations and meetings of experts of the working group."

In order to promptly review the materials submitted by the Mongolian party (draft terms of reference for the development of a regional EIA, etc.), the working group established a scientific subgroup to review the issue of conducting a comprehensive environmental, social and economic assessment of the planned hydraulic projects in the transboundary Selenga River basin in Mongolia and their impact on the Selenga River and Lake Baikal.

Its first meeting was held in April 2018 in Irkutsk, where the experts reviewed the draft Terms of Reference for the development of the Regional Environmental Assessment, the Cumulative Impact Assessment and Environmental and Social Impact Assessment of planned hydraulic structures in the transboundary Selena River basin in Mongolia (ToR for REO), taking into account the recommendations of the 41st session of the Committee. The final protocol also recorded that "the parties agreed with the expediency to analyze the current, known, planned projects and consumers of water resources and electricity in the next 20 years (depending on the available strategic planning data) as potential sources of cumulative impact (Shuren HPP, Orkhon River, Egiin-gol HPP, etc.). "The parties also noted the commitment to involve Russian experts in reviewing and developing the terms of reference for the regional (strategic) environmental assessment, cumulative impact assessment and environmental and social impact assessment, taking into account the recommendations and decisions of the 41st session of the UNESCO Committee."

In 2016-2017, The Irkutsk Scientific Center of the Siberian Branch of the Russian Academy of Sciences by order of the Federal State Budgetary Institution "Information and Analytical Center for the Development of the Water Management Complex" (Ministry of Natural Resources and Environment of Russia) carried out research and development on

"Scientific research to assess the impact on the transboundary Selenga River basin within the Russian Federation in connection with plans to build hydropower facilities in Mongolia".

2. State of the Environment

Lake level

The water level of Lake Baikal in 2021 varied depending on the useful inflow into the lake and regulation of the operation modes of the Angara HPPs, which was carried out on the basis of the instructions of the Federal Agency for Water Resources in accordance with "Basic Rules of Use of Water Resources of Angara HPP Cascade Reservoirs", provisions of the Russian Federation Government Resolution No. 654 dated April 27, 2021 "On the maximum and minimum values of the water level in Lake Baikal in 2021" (hereinafter referred to as Resolution No. 654), recommendations of the "Interagency Working Group on Regulation of Operation Regimes of Angara-Yenisei Cascade and Northern Hydropower Plants Reservoirs, Lake Baikal Water Level" (hereinafter - the Interagency working group). In 2021, the water level of Lake Baikal was regulated in conditions of high water content. The limit values of the level determined by Resolution No. 654 have not been reached.

Fauna

Monitoring of wildlife objects not classified as objects of hunting and fishing is carried out by nature reserves, national parks and scientific organizations. Information from scientific organizations about this group of animals is irregular and fragmentary.

The fauna of the Irkutsk Region is represented by 86 species of mammals, 414 species of birds, six species of reptiles and six species of amphibians. Of these, 43 species of birds and six species of mammals - the Baikal black-capped marmot, the Altai-Sayan population of reindeer, red wolf, manul and snow leopard (irbis) - are among the specially protected species included in the Red Book of Russia (2001).

The Red Book of the Irkutsk Region (2020) includes three species of amphibians (Mongolian toad and common toad, as well as the Far Eastern tree frog), two species of reptiles (Dione's ratsnake and green snake), 57 species of birds (saker falcon, gyrfalcon, eagle owl, peregrine falcon, etc.), 16 species of mammals (red wolf, otter, bighorn sheep, etc.), 15 species of crustaceans (Angara river gammarus, bicorn propygammarus, etc.), 11 species of fish (Siberian sturgeon, sterlet, tugun, etc.), 10 species of insects (Apollo common, Lyonedra Mongolian, etc.), five species of leeches (Acanthobdella pelage, glossiphonia warty, etc.), three types of sponges (Lubomirskia baikalensis, Rezinkovia arbuscula and Rezinkovia echinata) and one species of mollusks (chilanonodon Gerstfeldt) and amoeboid animals (Trochammina bami).

The fauna of Buryatia is quite diverse and is represented by six species of amphibians, seven species of reptiles, 92 species of mammals and 383 species of birds. Of these, the Red Book of Russia includes three species of insects (Osmoderma barnabita, Bombus czerskii, Parnassius apollo), five species of fish (Baikal sturgeon, Arctic char, taimen, lenok and Coregonus baunti), 33 species of birds (bar-headed goose, gyrfalcon, Siberian white crane and etc.) and seven species of mammals (Daurian hedgehog, black-capped marmot, red wolf, snow leopard, manul, wild reindeer and gazelle). The Red Book of the Republic of Buryatia (2013) includes 185 animal taxa: 56 vertebrate species, six fish species, two amphibian species, five reptile species, 93 bird species, and 22 mammal species.

More than 500 species of vertebrates live on the territory of the Trans-Baikal Territory, including more than 80 species of mammals (including conditioned species - muskrat, brown hare and American mink), more than 330 species of birds, five species of amphibians and six species of reptiles. The relatively low diversity and number of amphibians and reptiles is associated with rather harsh climatic conditions for the habitat of these species, as a result of which they do not reach a noticeable diversity and high numbers. Among the animal species found in the Trans-Baikal Territory, one species of insects (*Osmoderma barnabita*), five species of mollusks (*Dahurinaia dahurica*, *Dahurinaia tiunovae*, *Dahurinaia laevis* *Middendorffinaia mongolica*, *Anemina buldowskii*), two species of fish (Amur sturgeon and common taimen), 39 species of birds (including black stork, bustard, peregrine falcon) and five species of mammals (Daurian hedgehog, manul, leopard, dzeren, Mongolian marmot or tarbagan) are listed in the Red Book of Russia.

Ichthyofauna and seal population

The data obtained during the research allow us to draw conclusions about a fairly stable state of the stocks of commercial species of aquatic biological resources of Lake Baikal, with the exception of the Baikal omul. In 2021, the total number of Baikal omul entering spawning rivers was about 2.1 million; this figure is comparable to that of 2015 (2 million specimens), but significantly lower than the long-term average (4.3 million specimens). The positive dynamics of changes in the number of spawning stocks of omul remains in the Upper Angara River (about 1.28 million specimens). The number of omul spawning in the Barguzin River and its tributary, the Ine River, in 2021 (0.09 million specimens) was higher than in 2020 (0.06 million specimens).

The state of other commercial fish stocks, as in previous years, remains fairly stable.

Specially protected natural areas

The network of specially protected natural areas (SPNA) within the boundaries of the Baikal Natural Territory (BNT) includes five nature reserves, four national parks, 21 wildlife preserves, one nature park, 71 natural monuments, and one botanical garden.

Federal State Budgetary Institution "Zapovednoe Pribaikalye" (Irkutsk Region)

In 2021, employees of the institution carried out 1,680 raids to ensure the established regime of special protection of the territories under their jurisdiction. The vast majority of identified violations were registered in the Pribaikalsky National Park and one in the Krasny Yar reserve.

In the reporting year, two wildfires with a total area of 41.6 ha were discovered and extinguished in the Zapovednoe Pribaikalye SPNA, including one steppe fire with an area of 41.5 ha. Both fires were recorded in the Pribaikalsky National Park. The extinguishing costs amounted to 928,887 rubles.

In 2021, the information and analytical department prepared a map of fires on the territory of the Baikal-Lena Reserve, and digitized the data from 1981 to 2021, which will allow to analyze the dependence of location and spread of fires on various factors (steepness and exposure of the slope, moisture, etc.). These data will later form the basis for predicting the flammability of the territory and planning fire prevention measures.

As part of monitoring the effectiveness of biotechnical measures, five tons of salt were laid out on 190 operating solonchaks; 11 hectares of fields were sown with fodder crops, 11 tons of hay and 1,250 brooms were harvested. The institution's subordinate SPNA were equipped with 93 feeding grounds, where in the reporting year 30 tons of grain were laid out (21 tons more than in 2020). In 2021, oral rabies vaccine was put out in areas where foxes live. In total, 3,000 doses were laid out in Olkhon and Slyudyansk regions.

The number of official visitors who visited the territories under the jurisdiction of the Federal State Budgetary Institution "Zapovednoe Pribaikalye" in 2021 amounted to 137,945 people, of which 86 visited the Baikal-Lensky Reserve, the remaining 137,859 visited the Pribaikalsky National Park, including its recreational and tourist clusters: the Circum-Baikal Railway and the Olkhinsky Plateau - 4,125 people, Goloustnensky - 38,330, Olkhonsky - 95,404.

For the first time in the reporting year, the institution together with State Autonomous Institution of Additional Education of the Irkutsk Region "Center for the Development of Additional Education for Children" implemented the art project "Wings over Baikal", in which 336 people took part, 417 works were received. The participants were residents of more than 30 settlements in different regions of Russia (Moscow, St. Petersburg, Irkutsk, Ulan-Ude, Samara and Tula regions), as well as from Italy.

Federal State Budgetary Institution "Zapovednoe Podlemorye" (Republic of Buryatia)

The joint directorate oversees the Barguzinsky State Nature Biosphere Reserve, the Zabaikalsky National Park, and the Frolikhinsky State Nature Reserve of federal significance. All of them are located in the CEZ BNT.

In 2021, 23 violations of the nature protection regime were registered in the Zapovednoe Podlemorye SPNA, of which 16 in the Zabaikalsky National Park, seven in the Barguzinsky Reserve, and 0 in the Frolikha Reserve.

In 2021, no fires were registered in all three SPNA of the joint directorate.

The total number of official visitors in 2021 amounted to 60,592 people, including 138 foreign ones. Of these, 57,267 people were in the Zabaikalsky National Park (including foreign - 125), 1,279 in the Barguzinsky State Natural Biosphere Reserve named after. Zabelin (including foreign - 13), 2,046 - in the Frolikha State Nature Reserve (including foreign - 0).

The main objects for the implementation of environmental education activities of the joint directorate: the Museum of Nature in the village of Dawsha of the Barguzin Nature Reserve (area occupied by the exhibitions - 92 m², the number of visitors - 619 people); visit centers

and information centers - 12 (482 m², 24 576 people). In 2021, 15 exhibitions were organized, which were attended by 91,400 people.

A periodical, Vestnik Zapovednoe Podlemorye, was prepared and distributed (two issues with a total circulation of 1,000 copies).

During the reporting year, seven children's environmental camps, expeditions of youth circles and centers, training practices of specialized schools were organized with a total number of participants - 30 children.

Federal State Budgetary Institution Baikal State Nature Biosphere Reserve

The joint directorate of the Baikal State Nature Reserve manages the Baikal State Natural Biosphere Reserve, as well as Kabansky and Altacheisky Federal Nature Reserves.

In 2021, 36 violations of the nature protection regime were detected in subordinate SPNA: 23 - in Baikalsky State Nature Biosphere Reserve, no violations - in the protective zone of the reserve, two - in Kabansky Reserve, and 11 - in Altacheisky Reserve.

In the reporting year, no fires were registered in all protected areas; fire prevention measures were implemented in full.

The number of visitors for the year as a whole amounted to 35,691 people.

The main objects of the institution's ecological tourism infrastructure are located outside the SPNA: in the protective zone of the Baikal Reserve and in the cooperation zone of the Baikal Biosphere Reserve.

As part of environmental education activities in 2021, the museum and exhibition has become one of the most popular species in the territories of the Federal State Budget Institution "Baikal State Reserve". During the reporting period, 2,396 people visited the the Nature Museum.

The Baikal Nature Reserve became a participant in the program "Legends of Baikal" (series "Baikal reserved"), held in the Republic of Buryatia within the framework of the national project "Culture".

Dzherginsky State Nature Reserve

The reserve was established to preserve and study the natural course of processes and phenomena, the genetic fund of flora and fauna, individual species and communities of plants and animals, typical and unique ecological systems of the upper reaches of the Barguzin River.

In 2021, the reserve protection service did not detect any violations of environmental legislation.

During the reporting year, no forest fires were registered on the territory of the Dzherginsky State Reserve.

As part of the work of environmental education in 2021, 32 popular science and educational articles were published, printed advertising and environmental education products with a total circulation of 580 copies were published.

In 2021, nine stationary and traveling exhibitions were organized and held, including children's art. The number of visitors amounted to 7,089 people.

Sokhondinsky State Natural Biosphere Reserve

In 2021, no fires were registered in the reserve.

During the year, five violations of the SPNA's nature protection regime were recorded - for being on the territory without permission and illegal grazing and haying.

74 environmental education events were held with a total of 4,500 participants. The visitor center of the Sokhondinsky Reserve provided methodological and resource assistance to teaching staff.

The **Tunkinsky National Park** was established to protect the natural complexes of the Eastern Sayan. The park is located within the administrative boundaries of the Tunkinsky district on an area of 1,183.662 thousand hectares.

In 2021, in general, eight fires were registered in the park on a total area of 60.62 hectares (forest areas affected by fires amounted to 29.62 hectares, unforested - 31.0 hectares).

There were 38,028 officially registered visitors to the park in 2021, including 57 foreign and 37,971 Russian tourists.

In September 2021, employees of the Tunkinsky National Park together with the Give Life to the Planet charity foundation held a large-scale campaign to plant seedlings on the territory of the Turan Inspection Site in the Aerkhan area at an altitude of 1500 m. In total, 3,700 seedlings of pine, larch and cedar were planted. The saplings were dug in places that fall under the seizure and planted at the sites of illegal logging.

Chikoy National Park

In 2021, no fires were registered in the park. A lot of work has been done on fire safety, including the preparation of a video "Fire Safety" to demonstrate to the public in order to

prevent fires. Thirty-five educational events for 920 students and teachers were held in educational institutions of Krasnochikoiisky District.

The total number of violations of the nature protection regime for the reporting year amounted to 116, the vast majority of which is illegal stay, entry and passage through the territory of SPNA.

As part of the institution's environmental education activities, 3,964 people were involved in activities.

Thus, in 2021 there was a sharp decrease in the number of fires within the boundaries of SPNA. The participation of public organizations involved in environmental activities has increased in the SPNA activities, but due to restrictions associated with the spread of the COVID-19 coronavirus infection, the number of actions, as well as the number of participants in them, has been reduced. The work of SPNA directorates to improve environmental protection and educational activities continued. To develop cognitive tourism within SPNA and their protective zones, measures are being taken to improve the arrangement of the visiting infrastructure.

Environmental offenses

In 2021, the number of environmental crimes registered in the Irkutsk region decreased by 42.4% compared to 2020 and amounted to 438 crimes. In 2021, the number of environmental crimes registered in the Trans-Baikal Territory decreased by 46.8% compared to 2020 and amounted to 340 crimes. The main environmental crimes in the Trans-Baikal Territory in 2021 were related to illegal logging of forest plantations (98.8% of the total number of detected crimes).

Programs, projects and activities for the protection of Lake Baikal

The **federal project "Preservation of Lake Baikal"** (hereinafter referred to as the federal project, project) is being implemented within the framework of the national project "Ecology" of the Ministry of Natural Resources and Environment of Russia together with interested federal executive authorities. The project is aimed at preserving and restoring the bioresource potential and biological diversity of water bodies of the Baikal Natural Territory and at reducing the anthropogenic load on the ecosystem of Lake Baikal.

Decrease in the total area of territories subjected to high and extremely high pollution and affecting Lake Baikal

In 2021, as part of the measures to eliminate the accumulated environmental damage resulting from the activities of BPPM OJSC, a contract was signed with FEO FSUE to develop design documentation in part of the Babkhinsky landfill, and work continued on engineering surveys in part of Solzansky landfill, and the territory occupied by sewage treatment facilities with production facilities containing black liquor.

In order to maintain the site in a safe condition, as well as to ensure the safety of Lake Baikal, in 2021, work was carried out to lower the level of above-sludge waters in the storage maps of the Solzansky and Babkhinsky landfills of BPPM OJSC in the amount of at least 40 thousand m³.

Purification of polluted wastewater entering Lake Baikal and other water bodies of the Baikal Natural Territory through the modernization and construction of treatment facilities

Work continued on the reconstruction of sewage treatment facilities on the right bank of the city of Irkutsk. The work is being carried out in 10 stages. In 2021, the 6th stage was commissioned, and work on the 7th–9th stages continued. The start of work on the 10th stage is scheduled for 2023.

In the Trans-Baikal Territory, sewerage treatment facilities are being reconstructed in the city of Khilka and sewage treatment facilities are being built in the village of Zhipkhegen and the village of Tarbagatai with a total capacity of 1,000 m³ per day. Commissioning of the facilities is scheduled for 2022.

The reconstruction of the right-bank sewage treatment facilities in Ulan-Ude will have a significant impact on reducing the volume of polluted wastewater into BNT water bodies. The facility has been under reconstruction since 2017.

Conservation and reproduction of unique aquatic biological resources of Lake Baikal. Release of omul larvae, juvenile omul and juvenile sturgeon

The Federal Agency for Fisheries annually releases aquatic biological resources into Lake Baikal. In the reporting year, 818.24 million larvae of Baikal omul and 0.37 million young sturgeon were released, which significantly exceeds the planned figures for increasing the number of released aquatic biological resources set forth in the passport of the federal project.

In 2021, three boats (KS-951 (1 pc.) and KS-701 (2 pcs.)) were launched as part of the activity to equip the mobile water protection complex on Lake Baikal.

In order to ensure the possibility of preservation and reproduction of unique aquatic biological resources of the lake in the framework of the federal project the planned activities on reconstruction of two fish hatcheries in the Republic of Buryatia have been started. In 2021, work was carried out in the hatchery and rearing facilities of the Bolsherechensk Fish Hatchery. At the same time, in the course of their implementation, the contractor announced the need to make changes to the technical part of the project documentation with a re-examination in the bodies of the Federal Autonomous Institution "Glavgosexpertiza of Russia", due to the discrepancy in the cost of a number of works due to a significant increase in prices in 2021. The provision of duly approved and amended project documentation is scheduled for 2022. The reconstruction of the second Selenga Experimental Fish Hatchery is scheduled for 2022.

Coverage of the Baikal Natural Territory by state environmental monitoring

To ensure 100% coverage of state environmental monitoring (state monitoring of the environment) of the Baikal Natural Territory, the issue was worked out by the Ministry of Natural Resources and Environment of Russia together with the Federal Agency for Subsoil Use, the Federal Forestry Agency, the Federal Service of Russia on Hydrometeorology and Monitoring of the Environment, and the Federal Agency for Fishery worked on the issue. The federal project included the activities of the Federal Forestry Agency to conduct state forest pathological monitoring by performing expeditionary surveys, remote observations of the sanitary and forest pathological condition of forests using high spatial resolution images, which in 2021 increased the reliability of data by 6.62%. The state of forest genetic resources of the BNT was also monitored using the methods of molecular genetic diagnostics by conducting DNA analyzes.

As part of the work planned for the period 2021–2023, the Federal Agency for Fisheries is installing three observation posts (one each year) to monitor the aquatic biological resources of Lake Baikal. Observations are a collection of ichthyological, hydrobiological data and individual parameters of the habitat of aquatic biological resources (temperature, water level, oxygen content). In 2021, an observation point is established within the North Baikal Fishery Area. In addition, in 2021, the design documentation was finalized (the final stage of development) for the planned start of construction of a research vessel scheduled for 2022,

which will carry out hydroacoustic and trawl surveys in areas where aquatic biological resources inhabit.

As part of measures taken by the Federal Service of Russia on Hydrometeorology and Monitoring of the Environment to modernize the state environmental monitoring network, the purchase and installation of automatic air pollution monitoring stations (ASK-A), as well as the purchase of equipment for the modernization of the surface water pollution network for monitoring network for surface water pollution, atmospheric precipitation and fallout, soil and radiation conditions, continued. In 2021, the 26th ASK-A station was installed, which ensured an increase in the indicator for the coverage of the BNT area with state environmental monitoring up to 84%.

The Federal Agency for Subsoil Use, within the framework of the federal project, is conducting the following activities in the Baikal Natural Territory:

- further geological study and monitoring of hazardous exogenous geological processes;
- further geological study and monitoring of hazardous endogenous geological processes;
- further geological study and monitoring of the ecological state of groundwater;
- geological study of hazardous processes associated with the migration of hydrocarbons in the CEZ BNT.

From 2021 to 2023, as part of these activities it is planned to establish 32 additional observation points within the BNT boundaries, equipped with modern automated measuring complexes, including: six observation points for groundwater monitoring, 10 observation points for monitoring hazardous exogenous geological processes and 16 observation points for monitoring hazardous endogenous geological processes. Also, monitoring studies of the natural migration of hydrocarbons from sedimentary deposits under the water area of Lake Baikal were carried out.

In 2021, 10 new points of the observation network for monitoring the state of the subsoil, equipped with modern automated equipment for monitoring and transmitting data on the development of dangerous endogenous (two points) and exogenous geological processes (two points) and the state of groundwater (six points) of the Baikal region, were created within the framework of these activities.

In order to ensure high reliability, efficiency, availability and completeness of information from state environmental monitoring (state monitoring of the environment) of the Baikal Natural Territory, work continued on finalizing a unified information platform on the state of the environment on Lake Baikal - the geoportal "Ecological Monitoring of Lake Baikal" (www.baikalake.ru), which is presented in four languages and is the official source of information about the ecology of the lake.

Measures to improve and develop tourist and other infrastructure facilities, protect natural complexes and facilities in the Baikal Natural Territory A separate area of work within the framework of the federal project is to support specially protected natural areas located in the Baikal Natural Territory. In addition to purchasing the necessary equipment, work was done to ensure that fire and chemical stations can be built in 2022-2023 in Pribaikalsky and Tunkinsky National Parks as part of nature protection measures.

In order to reduce the anthropogenic load on the ecosystem of Lake Baikal and increase the tourist attractiveness of the Baikal Natural Territory, the construction of a guest complex with a parking lot in Monakhovo in the Republic of Buryatia began in 2021 within the framework of the federal project. The Monakhovo area is one of the most popular places for recreation and transit travel, so this guest complex will be an important reference point for

environmental education work, development of educational tourism and recreation directly in the Zabaikalsky National Park.

Formation of Ecological Culture

Irkutsk Region The Ministry of Natural Resources and Environment of the Irkutsk Region together with public environmental organizations annually work within the Days of Protection from Environmental Hazards, approved by Order of the Government of the Irkutsk Region No. 91-rp dated March 27, 2012, aimed at supporting "green" projects, whose main objective is environmental education, education of responsible consumption, active citizenship and the desire to preserve the environment for future generations.

Republic of Buryatia In order to promote respect for nature, the Ministry of Natural Resources and Environment of the Republic of Buryatia works in the field of environmental education and attitude development, supports the volunteer movement, carries out socially significant activities to clean up the territory from garbage, as well as informational and educational work.

In 2021, 20 major environmental campaigns were held, two of which took place in all municipalities of the Republic of Buryatia.

In 2021, a grant from the President of the Russian Federation was used to finance the "Stop Forest Fires!" project in the **Trans-Baikal Territory**. The main objective of the project is to form a volunteer group of students of forestry specialties who will supervise the work of school forestries and conduct information activities with the population to prevent forest fires.

3. No major changes are foreseen within the World Heritage Site in question.