REPORT ON THE JOINT UNESCO WORLD HERITAGE CENTRE / IUCN REACTIVE MONITORING MISSION TO LAKE BAIKAL WORLD HERITAGE PROPERTY, RUSSIAN FEDERATION

FROM 12 TO 16 DECEMBER 2023

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Contents

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We are also grateful to the scientific community for helping us to better understand the Baikal Natural Territory and to solve management issues. We also sincerely thank citizens, civil society and businesses for sharing their views, knowledge and work towards the safeguarding of the iconic Lake Baikal – sparing no effort.

Our last word is for Lake Baikal, the Pearl of Siberia that has withstood time beyond human imagination. The Earth's most outstanding example of a freshwater ecosystem.

"Baikal Forever".

Cover photo: Lake Baikal © IUCN/Hervé Lethier

ABBREVIATIONS AND ACRONYMS

AED	Accumulated environmental damage
BPPM	Baikalsk Pulp and Paper Mill
CEZ	Central Ecological Zone
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
FTP	Federal Target Program
GEF	Global Environment Facility
IUCN	International Union for Conservation of Nature
OUV	Outstanding Universal Value
RDP	Research and Development Programme
RSOUV	Retrospective Statement of Outstanding Universal Value
SCWPI	Specific Combinatorial Water Pollution Index
SEA	Strategic Environmental Assessment
SOC	State of Conservation
SOUV	Statement of Outstanding Universal Value
ToR	Term(s) of Reference
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization

EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

Inscribed on the World Heritage List in 1996 based on four criteria (vii, viii, ix, x), the Lake Baikal World Heritage property is among the top ten largest properties included on the UNESCO World Heritage List to date. Despite its superlative qualities and relatively remote location, human activities are having a growing negative impact on the property and its Outstanding Universal Value (OUV).

By its Decision **44 COM 7B.107** (2021), the World Heritage Committee (the Committee) requested the State Party of the Russian Federation to invite a joint World Heritage Centre/IUCN reactive monitoring mission to assess the property's state of conservation. The mission was conducted on 12–16 December 2023, and had an ambitious agenda to review the status of several major issues raised in the past Committee decisions (**Annex 1**).

Notwithstanding the efforts made towards addressing some of the issues threatening it, the property is affected by significant and growing anthropogenic threats which, combined with the effects of climate change, may have a direct negative impact on its OUV and degrade its integrity. According to the mission, the main current threats on the property are as follows:

- **Incomplete application, high instability and weaknesses of the Law "On the Protection of Lake Baikal" (Baikal Law):** The absence of certain implementing texts and the frequent and numerous legal amendments have reduced the predictability, consistency and security of the legal framework dedicated to the protection of the property. The draft amendment on Article 25 of the law on protection of Lake Baikal as adopted on first reading by the Federal Assembly of the Russian Federation in June 2023 could further weaken the legal protection of the property if it were to be definitively voted in the proposed form, constituting a potential threat to the preservation of the OUV of the property.

- **Degradation of water quality**: The environmental degradation of Lake Baikal is continuing and illustrated by, among other signs, the development of unprecedented algal blooms and bacterial pollution (e.g. cyanobacteria), the presence in the water of polluting chemical substances used in everyday consumption (e.g. phthalates, phosphates), increasing plastic pollution, and the decline of certain endemic species that are bio-indicators of the lake health (e.g. sponges). This degradation is partly due to industrial and domestic discharges and inadequate wastewater treatment that is poorly adapted to certain forms of pollution (e.g. phosphates, heavy metals, complex molecules), the effects of which are probably influenced by those of climate change. These factors affect the inherent water quality of Lake Baikal (criterion vii), as well as its outstanding biodiversity (criteria ix and x). A long-term degradation of water quality of Lake Baikal would certainly affect the integrity of the property and therefore compromise its OUV, if it is not urgently stopped and reversed.

- **Growing pressure on land:** Land use pressure remains a crucial concern for the preservation of the property, affecting its integrity and the water quality and regime of the lake (see above). The absence of an overall strategic approach and a common vision among stakeholders leads to non-integrated, sometimes unauthorised, territorial development. While presented as a mechanism to better manage this pressure, the two special economic zones (SEZ) could exacerbate this challenge further as their full extent and cumulative impacts are not yet known. Overall, these pressures may increase to the detriment of the inherent characteristics of the property, particularly its aesthetic and landscape features, based on which it was inscribed on the World Heritage List under criterion (vii), if these features are not specifically taken into account by the overall construction concepts and socio-economic development, and are not guided by a

comprehensive vision and land-use strategy defined and implemented at the scale of the property.

- **Recreational activities and mass tourism lacking coordination, planning and management:** Exacerbated by the increasing land use pressure mentioned above, tourism and recreational activities are impacting the property's environmental integrity through waste, pollution, and degradation, having negative effects on the OUV of the property. The mission reported on various initiatives to increase the tourism offerings within the property, such as cruise tourism; however, in the absence of clear measures to manage the direct, indirect and cumulative impacts of these activities and an overall strategic approach to socio-economic and tourism development, they may lead to further deterioration of the property. Unorganized recreational and tourism activities, as well as mass tourism in general, should be managed with a clear vision at the scale of the property, compatible with the high sensitivity of the lake ecosystem.

- **Lack of strategic vision for the integrated management and socioeconomic development in the property:** Coordination among stakeholders appears to have been improved over time; however, further legal reinforcement may be needed in key areas, such as control of water pollution, tourism development, and land use planning. The Committee has also repeatedly requested the State Party to develop an integrated management plan for the property that would foster coordination between federal, regional and local stakeholders and meet the requirements of the Convention and its Operational Guidelines. This would enable the harmonisation and coordination of the management regime and legal protection of the property across various actors and frameworks, making it comprehensible to stakeholders. The State Party should also fulfil its statutory requirements under the Convention and complete, in close coordination with the World Heritage Centre and IUCN, the retrospective inventory for the property boundaries and the Retrospective Statement of the Outstanding Universal Value. The importance of these tools in guiding coherent management and protection cannot be overstated; they will contribute to meet the World Heritage requirements and will help ensure the preservation of the OUV of the property.

- **Projects for the construction of hydroelectric facilities in the upstream part of the Selenga catchment area:** Two hydropower projects have recently been abandoned by the State Party of Mongolia, while the design of a third project, the Egiin Gol hydropower project, is being pursued and defined. The State Party of Mongolia is committed to developing an Environmental Impact Assessment (EIA) in accordance with international standards to assess the potential effects of the project on the Selenga catchment area and therefore on its delta, located within the property and recognised as being a wetland of international importance under the Ramsar Convention. The technical concept of this project should be completed to inform the EIA, and the EIA report submitted to the World Heritage Centre and IUCN for review and advice.

- **Regulation of the lake's water level by way of derogation**: The regulation of the lake water level should be secured through a strong legal framework that ensures the functional integrity of the property and the preservation of the terrestrial and aquatic ecosystems located within the property, defined on a scientific basis and with a clear objective of avoiding negative impacts on the OUV of the property. A research and development programme has been conducted, resulting in a set of conclusions that were presented to the mission and that only partially respond to the Committee's request for an assessment of the impact of the water level regime on the property. These conclusions should lead to a way out of the current practice of derogation and to the strengthening of the current legal framework in order to ensure the preservation of the OUV of the property, according to a timetable to be defined by the State Party. Until the above is achieved, the State Party

should refrain from renewing legislative amendments allowing for the extension of the water level variation beyond one metre, as requested by the Committee.

- **Forestry and silvicultural management practices:** Large scale and clear-cut logging, as well as artificial plantations following mechanical soil works within the property may affect the preservation of the values and attributes that convey its OUV, in particular the environmental processes that have shaped its distinctive landscapes, supported the integrity of the watershed, and led to the evolution and development of the ecosystems and communities that characterise the property based on criteria (ix) and (x). Forest management should therefore take account of the initial characteristics of the property while meeting the legitimate expectations of the local population.

- **Preventing and fighting forest fires:** Fires particularly affected the integrity of the property in 2015. The State Party has made significant efforts since then to prevent such events and improve methods, techniques, coordination and capacities devoted to fight forest fires in the future. There is, however, a real risk that fires will reoccur despite the measures taken to prevent such natural hazards, particularly in the face of climate change, which, in turn, will increase the level of risks and anthropogenic effects on the property. Prevention efforts should be pursued and strengthened to minimize potential impacts on the OUV of the property, while preserving the forest ecosystem characteristics and environmental processes (see above).

- **Pollution from the accumulated environmental damage of the former industrial site**: The Baikalsk Pulp and Paper Mill (BPPM) was definitively closed in 2013, and the elimination of the polluting substances (e.g. black liquors) stored on the industrial site has started. In addition, general remediation of the site is also underway. However, the final detailed rehabilitation concept and precise timetable for its implementation in all affected sites have not yet been determined, and not all EIAs have been submitted in response to Committee's repeated requests. While it is positive that the State Party is finally taking important measures to resolve this issue, the property is still facing major environmental risks as long as the waste remains stored on the lake shores, prone to flooding, mudslides and other external events.

The mission concurs with the past decisions of the Committee that there are significant risks resulting from the uncertain and weakened legal protection of the property at a time when the overall environmental condition of the property is deteriorating, and other anthropogenic pressures persist and grow. While many of the factors listed above may individually be less significant due to the size and inherent resilience of the property, together they negatively affect the state of conservation of the property, posing an important ascertained and potential threat to its OUV, if those pressures are not addressed and reduced properly in the near future by a decisive set of concrete actions.

If the unfolding ecological degradation of Lake Baikal as clearly evidenced in scientific reports is not urgently stopped and reversed, the property will undoubtedly fulfil the conditions for its inscription on the List of World Heritage in Danger. While it is acknowledged that some actions are being implemented to address this, the mission considers that they are not sufficient and that further decisive actions are needed in the short term.

Yet, the State Party has demonstrated its willingness to meet the World Heritage protection and management requirements and taken important measures to revise the environmental deterioration of the property. These efforts include the endorsement of strategic priorities on the preservation of Lake Baikal and its environmental rehabilitation at the top government level, the significant federal and regional funding allocated for remedial action such as for the

commencement of the work to eliminate the accumulated environmental damage of the BPPM, a massive undertaking. Other enabling factors include the broad mobilisation of government expert bodies and the extraordinary interest and support of the scientific and business communities, citizens, and the civil society for the protection of the property. These are evidenced by the ongoing efforts on all fronts to support the protection of the property and continuing rich debate on the future of Lake Baikal.

The mission therefore recommends the Committee to not inscribe the property on the List of World Heritage in Danger at its 46th session in 2024, as remedial actions are underway seeking to stop and reverse the current deteriorating trend of the property's state of conservation.

In view of the 2015 Policy on the integration of a sustainable development perspective into the processes of the World Heritage Convention[1], the mission is also sensitive to the legitimate demands to improve the well-being of local people. At the same time, all changes affecting the legal or actual protection of the property should be carefully considered to not compromise its OUV for which it is recognised as humanity's shared heritage. Specific guidance and tools for planning and impact assessment are therefore applied in the context of the World Heritage Convention to find solutions that can serve multiple aims simultaneously.

The mission recommends to the Committee to endorse the below recommendations and continue to monitor their full implementation closely and regularly. Furthermore, in view of the significant number of complex issues reviewed in a very short time, the mission recommends that a new reactive monitoring mission be invited to the property in 2026 to review progress made. This next mission should be organised in the summer to facilitate monitoring of key issues related to tourism pressure, water quality, and forest management. It should also reconsider the possible need to inscribe the property on the List of World Heritage in Danger, should the threats affecting the OUV of the property persist in their trends and magnitude.

In the meantime, a decision to significantly further weaken the legal protection of the property and a lack of progress in halting and reversing its environmental degradation should result in the inscription of the property on the List of World Heritage in Danger in order to preserve its OUV.

Recommendation 1: with regard to the legal protection of the property**,**

- secure and stabilize the property's legal status and avoid any modification of the Law "On the Protection of Lake Baikal" (Baikal Law) and other legislation that may lead to potential deleterious effects on the inherent characteristics of the property;
- expedite the study to review the impact of legislative changes on the property to provide full clarity on prior changes, and use the findings of the study to strengthen the Law on the Protection of Lake Baikal as requested by the Committee;
- assess the impacts on the property and its OUV of the proposed additional changes to modify the Baikal Law, prior to approval of these legal amendments. Changes as currently proposed should not be adopted as they are not compatible with the protection requirements of the property;
- provide full details of the activities for which the law is requested to be modified (location, size, limits);
- submit the study and the draft law under discussion for review by the World Heritage Centre and IUCN, and for the Committee's advice, before this draft is put to the vote in the Federal Assembly of the Russian Federation.

[1] https://whc.unesco.org/document/139747

Recommendation 2: with regard to the regulation of the water regime of Lake Baikal,

- noting the efforts to assess the environmental and socio-economic impacts of the Lake Baikal water level regime, as requested by the Committee,
- invite the State Party to share a full copy of the study including the final recommendations, with the World Heritage Centre and to publish this study on the Lake Baikal ecological portal (https://baikalake.ru/) for public access and to improve scientific understanding of the property;
- by the end of 2024, elaborate detailed proposals for adapting the current regulations setting the water level of Lake Baikal, preserving the environmental processes that are necessary for maintaining the property's OUV under criteria (ix) and (x), and restoring its integrity as it was when the property was inscribed. Those proposals should be submitted to the World Heritage Centre, and reflected in the federal regulation by the end of 2025;

Recommendation 3: with regard to the monitoring of the property,

- whilst noting the State Party's efforts to set up a comprehensive framework for monitoring the property and to provide open access to information and data on the Lake Baikal Ecological Portal,
- strengthen this monitoring framework, including in demersal and coastal zones;
- improve coordination between the diverse public agencies and academic bodies, with a view to ensuring that monitoring guides management decisions and enables the State Party to deliver timely, reliable and public annual reports on the overall state of conservation of the property. This monitoring framework should form part of the integrated management plan requested by the Committee and be based on the most up-to-date knowledge and reliable data collected by both administrative and scientific stakeholders.

Recommendation 4: with regard to the pollution of the property,

- as committed to by the State Party, prohibit all direct wastewater discharges in Lake Baikal, whatever their source – domestic, agricultural, industrial, or other;
- minimize and work towards eliminating all main sources of pollution in Lake Baikal and its watershed, prioritising those that have been identified as the main polluters;
- specific efforts should be made to increase knowledge on the following forms and sources of pollution: complex molecules, persistent pollutants, plastic, as well as on ecological responses, and cross cutting themes in relation to climate change, water flow regulation and condition of the watershed as they are important drivers for water quality;
- conduct a permanent annual inventory of the main sources of pollution in the Lake Baikal watershed, including detailed information on progress made and results achieved to minimize and eliminate their impacts on the property;
- among the solutions, consider adjusting the boundaries of the water protection zone and land use planning to control direct and diffuse pollution;
- as a matter of priority, improve the capacity and performance of the sewage treatment facilities within central ecological zone, applying the highest environmental standards and best technological solutions that will enable tightening the standards of maximum permissible impacts on the unique ecological system of Lake Baikal.

Recommendation 5: with regard to remediation of the Baikalsk Pulp and Paper Mill,

- in view of the high toxicity of the industrial waste stored in the immediate vicinity of Lake Baikal, apply the highest environmental standards in the selection and application of the technological solutions in eliminating the industrial substances stored in the industrial site;
- ensure regular risk assessment and audited environmental monitoring, in close cooperation with expert and scientific bodies;

- provide regular updates to the public and reports to the Committee as part of Reactive Monitoring on progress made with the remediation works, and development of the Research and Development Programme (RDP) for the Solzanskiy landfill, expected to be concluded only in 2028;
- submit the pending EIA for the factory site and any other forthcoming EIAs to the World Heritage Centre, as requested by the Committee, before any decision is taken.

Recommendation 6: with regard to the Baikalsk Master Plan,

- conduct a Strategic Environmental Assessment of the Baikalsk Master Plan, in order to ensure full compatibility with World Heritage requirements as requested by the Committee and to inform strategic decision-making for individual projects and their potential cumulative impacts; the assessment could be conducted as part of the SEA for the SEZ Gate of Baikal (see recommendation 7), or as a separate SEA, depending on the overlap between these two initiatives;
- clarify the status of this plan with regard to the other planification initiatives (e.g. SEZ, urban planning documents).

Recommendation 7: with regard to the development of the two Special Economic Zones (SEZs),

- conduct a Strategic Environmental Assessment in each SEZ as requested and for examination by the Committee, in line with the principles and methodology of the *Guidance and Toolkit for Impact Assessments in a World Heritage Context to* assess the cumulative impacts of the existing and proposed activities in the SEZs on the property's OUV;
- based on the assessments, develop and implement an environmental management plan for each SEZ to avoid any adverse impact on the property's OUV, including its ecological, aesthetic and landscape values;
- ensure that EIAs for individual projects in SEZs are conducted in accordance with the above guidance to mitigate negative impacts on the OUV.

Recommendation 8: with regard to growing pressure on land and unorganised recreational activities and mass tourism,

- provide more precise information on all large-scale initiatives for tourism (e.g. cruise tourism, resorts), and assess their impacts on the property and its OUV in accordance with *Guidance and Toolkit for Impact Assessments in a World Heritage Context*;
- minimise the negative impacts of tourism and construction on the property and its OUV, by adapting land use in settlements and through human and technical means with respect to the carrying capacity of the ecosystems;
- as part of the integrated management plan requested by the Committee for the whole property, develop a sustainable tourism strategy which provides clear vision, objectives, targets, and governance framework to minimize negative impacts of the tourism sector on the property and optimize its potential positive effects on its OUV.

Recommendation 9: with regard to fire prevention and management,

- pursue the commendable efforts on forest fire management to prevent fires and secure human, technical and financial capacities devoted to minimizing the potential threats of fire in the future within the property, considering also the higher risk of fires with the impacts of climate change;
- elaborate and implement a clear and comprehensive plan and programme of activities for fire management and forest ecosystem restoration throughout the property, using management methods and techniques that preserve the integrity of the forest ecosystem and are fully compatible with the natural features of the original forests located in the property; this plan and programme should form part of the integrated

management plan requested by the Committee for the whole property and should be examined by the Committee prior its adoption.

Recommendation 10: with regard to the hydropower projects in Mongolia,

- noting the State Party of Mongolia's progress to assess the potential effects of the Egiin Gol hydropower project on the biodiversity of the Selenga basin and the property, and its commitment to develop an updated EIA of the project in accordance with international best practice and the *Guidance and Toolkit for Impact Assessments in a World Heritage Context*,
- request that this EIA include measures to mitigate the effects of the project on the Selenga ecosystem, and be shared with the State Party of the Russian Federation and submitted to the World Heritage Centre;
- request the State Party of Mongolia to clarify the final technical concept of the Egiin Gol hydropower project;
- requests the States Parties of the Russian Federation and Mongolia to continue cooperate on the sustainable management of the shared Lake Baikal watershed.

Recommendation 11: with regard to the overall management of the property and general provisions of the Convention,

- in compliance with the *Operational Guidelines* and as repeatedly requested by the Committee, develop an integrated management plan for the property involving all Government entities and other stakeholders;
- ensure mandatory public consultation and scientific review of the management plan, amendments to the legal regime, and major development initiatives which could affect the property and its OUV;
- in close consultation with the World Heritage Centre and IUCN, finalise the Retrospective Statement of Outstanding Universal Value for the property (RSOUV);
- submit the map of the boundaries of the World Heritage property as part of the Retrospective Inventory and the corresponding GIS data to be integrated into the World Heritage Online Map Platform;
- formalise the property's buffer zones under the Convention.

1. LAKE BAIKAL WORLD HERITAGE PROPERTY

Situated in south-east Siberia, the magnificent Lake Baikal – the "Pearl of Siberia" – was included on the World Heritage List in 1996 as the most outstanding example of a freshwater ecosystem based on four criteria (vii, viii, ix and x) reflecting the property's superlative characteristics and its scenic, geological, and ecological importance.[2] The Statement of Outstanding Universal Value[3] (SOUV) of the World Heritage property (the property hereafter) has not been adopted by the Committee to date, but the values that make the site a globally exceptional conservation area are well established.

Lake Baikal is the deepest, the largest by volume, and among the oldest of the world´s lakes. The Lake contains some 20% of the planet's unfrozen freshwater reserve and an outstanding variety of endemic flora and fauna inhabit the lake, which is of exceptional value to the study of evolutionary processes and biodiversity conservation. The altitudinal gradients and ecosystem variety of the lake's surrounding lands support not only the integrity of the lake but also important biodiversity and have high scenic value. There are also important littoral wetland ecosystems, such as the Selenga Delta, parts of which are recognized as a wetland of international importance and listed as a Ramsar site[4]. In addition, two UNESCO Biosphere Reserves are located within the property.[5]

Table 1 summarises some of the key values and attributes that convey the property's OUV; this draft text is provisional pending the approval of the complete Retrospective Statement of Outstanding Universal Value (RSOUV) by the Committee. It is recalled that the OUV of a natural World Heritage property is also determined by its integrity, as well as legal protection and management.

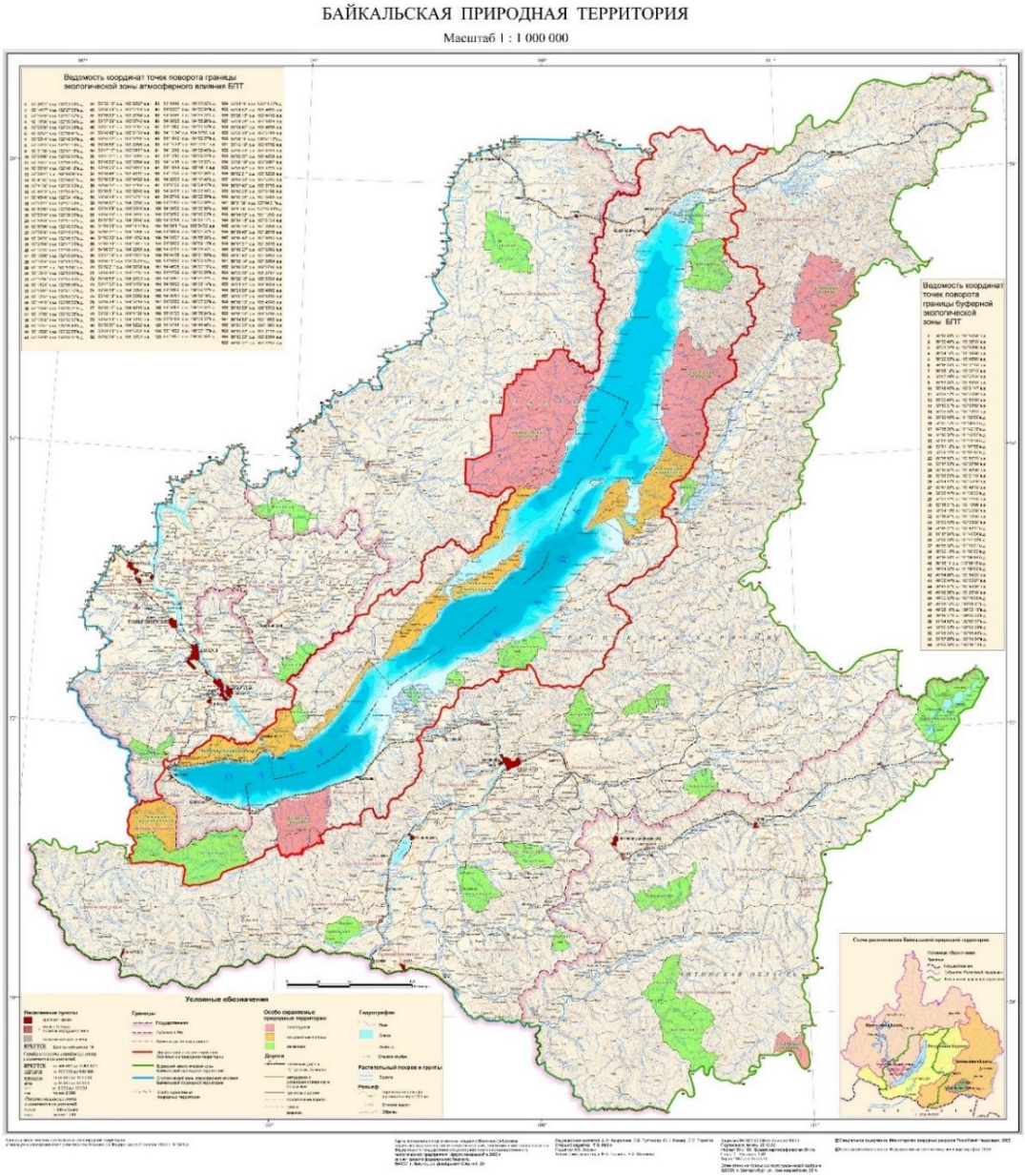
Table 1. Examples of key values and attributes associated with the significance of the area as a World Heritage property.

Criteria	Values and Attributes (examples)
(vii) to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance	The lake and its mountainous surroundings jointly form stunningly beautiful landscapes at an exceptionally large scale. Lake Baikal's transparent water permit views of up to 40 meters below surface, adding to the extraordinary visual experience; scientists attribute it to an exceptional combination of highly active zooplankton, low mineral content, still relatively low levels of contamination and natural processes purifying the lake. Being the largest by volume, deepest, and oldest lake in the world, the lake itself is a *superlative natural phenomenon*.

[2] https://whc.unesco.org/en/list/754 .
[3] *The Operational Guidelines for the Implementation of the World Heritage Convention* define the statement of Outstanding Universal Value (SOUV) as "the key reference for the future effective protection and management of the property", drafted retrospectively for properties which did not have such statements at the time of their inscription on the World Heritage List.
[4] The Selenga Delta Ramsar site (https://rsis.ramsar.org/ris/682?language=en).
[5] The Baikalsky biosphere reserve (https://en.unesco.org/biosphere/eu-na/baikalsky) and the Barguzinskyi Biosphere Reserve (https://en.unesco.org/biosphere/eu-na/barguzinskyi).

(viii) to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features	Lake Baikal is a rift lake, i.e. of tectonic origin, situated in the centre of the still tectonically and seismically active Baikal Rift Zone, creating the deepest lake in the world. The deep-reaching and ancient lake sediments offer a unique long-term and high-resolution record of climatic, tectonic and environmental changes in the Earth's history.
(ix) to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals	Thanks to its isolation and the environmental conditions over long periods of time, Lake Baikal boasts one of the richest and most unusual freshwater fauna and flora in the world. This has enabled the ongoing evolution of animal and plant species as well as the formation of unique biological communities such as the freshwater sponge reefs and shrimp fauna. Majority of the complex ecosystems, habitats, communities and species are of global importance, and are irreplaceable, both for the study of evolutionary processes and biodiversity conservation.
(x) to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation	Lake Baikal is among the most biodiverse lakes in the world, with majority of its freshwater species endemic, including the Baikal Seal and several large fish species such as the Baikal Omul and the Baikal Sturgeon. Numerous rare and endemic forms of aquatic invertebrates inhabit the highly transparent cold and oxygen-rich water. The mountains, rivers, forests and steppes surrounding Lake Baikal are an integral part of the catchment area, and provide large habitats for boreal flora and fauna, including large predators and many rare and endemic species. The Selenga Delta is a unique type of wetland that supports diverse lakeshore habitats and numerous threatened and endemic species of flora and fauna, hosting seasonally millions of migratory birds.

The boundaries of the property correspond with the Central Ecological Zone (CEZ) of Baikal natural territory as determined in the Federal Law "*On the protection of Lake Baikal*" (the Baikal Law) (**Map 1**), except for the five urban areas excluded from the property (Baykalsk, Slyudyanka, Kultuk, Babushkin and Severobaykalsk). The property is therefore much larger than the lake itself, covering some 8.8 million hectares. It is also among the ten biggest sites included on World Heritage today, and currently the largest 'terrestrial' World Heritage property (although including a significant aquatic component) as other large properties are 'marine' sites. The exceptional size of the property is a commendable response from the State Party to align with the ambition of safeguarding this unique and iconic site and its OUV, while the size also presents specific protection and management challenges.



Map 1 – Map of the Baikal Natural Territory. The central ecological zone corresponding with the boundaries of the World Heritage property is delimited by the red line. *(Credit: State Party)*

The importance of Lake Baikal is also reflected in its national standing and the attention it receives: the site has a unique legal status in the Russian Federation, the State Party engages significant interest and action by various state bodies on its protection, citizens and local stakeholders largely recognise its unique value, the site being sacred to some, and it is of great scientific importance, with an exceptional wealth of research conducted on the property.

Various large-scale initiatives have aimed at improving the property's protection and management, such as the *"Integrated Natural Resource Management in the Baikal Basin Transboundary Ecosystem*"[6] project, supported by the Global Environment Facility (GEF), and the Federal Target Program (FTP) "*Protection of Lake Baikal and Socio-Economic*

[6] http://baikal.iwlearn.org/en

Development of the Baikal Natural Territory for 2012-2020"[7]. In 2019, the President of the Russian Federation approved a list of instructions based on the results of the inspection of the implementation of legislation on the preservation of Lake Baikal and its environmental rehabilitation[8].

Notwithstanding the above – and despite the exceptional size of the property and relatively remote location in south-east Siberia, Lake Baikal and the terrestrial ecosystems around it are affected by growing human pressure. Concerns over the integrity of the property including pollution of the lake and water level management were already noted by the Committee in 1996 when inscribing the site on the World Heritage List. Since then, various factors affecting the state of conservation of the property have been on the Committee's agenda, with many threats persisting over time (**Table 2**). More complete list of Committee Decisions in 2006-2023 is enclosed (**Annex 5**) and available on UNESCO's website (https://whc.unesco.org/en/list/754/documents/).[9]

A reactive monitoring mission[10] visited the property and reviewed its state of conservation in 2005. A UNESCO/IUCN high-level mission[11] visited the property in 2011 to discuss with the Russian authorities and other stakeholders, ways to address the specific impacts of the re-opened BPPM on the OUV of the property.

The most recent World Heritage reactive monitoring mission concerning the property was organised in 2015[12] to review the scope, scale and status of the proposed development of hydropower dams on the Selenga and Orkhon rivers in Mongolia and to have early discussion about the potential impacts of these projects on the property, located downstream. The mission went to two proposed project sites in Mongolia but did not visit the property.

The 2023 reactive monitoring mission therefore had an ambitious agenda to review issues raised by the Committee over a long period.

Table 2. Issues affecting the state of conservation of the Lake Baikal World Heritage property addressed by the World Heritage Committee in its decisions.

State of conservation of the World Heritage property	Factors affecting the property
Since the 2005 Reactive Monitoring mission to the property, the Committee has noted various proposed and approved legislative changes and requested the State Party to provide clarification on these changes and assess their impact on the OUV of the property. The changes have concerned zoning of the property, notably the reduction of the water protection zone, provisions on impact assessments, the amended list of prohibited activities in the	Management systems/ management plan Changes to legal protection of Lake Baikal World Heritage property

[7] https://baikalake.ru/
[8] http://kremlin.ru/acts/assignments/orders/61524
[9] A similar compilation has also been made by Russian researchers (Байкал в решениях Комитета всемирного наследия / авт. вступ. ст. и науч. ред. пер. Р. Ю. Колобов; пер. с англ.; Н. Н. Ефимова, Е. А. Федина. – Иркутск : Издательство ИГУ, 2023. – 114 с. ISBN 978-5-9624-2214-5).
[10] Report on the UNESCO World Heritage Centre/IUCN Reactive Monitoring Mission to Lake Baikal (Russian Federation), 21 – 31 October 2005, https://whc.unesco.org/document/9037
[11] Report on the UNESCO/IUCN High-level Mission to Lake Baikal (Russian Federation), 10-15 July 2011, https://whc.unesco.org/document/117100
[12] Report on the Reactive Monitoring Mission to Mongolia concerning the World Heritage Property of Lake Baikal (Russian Federation), 13-17 April 2015, https://whc.unesco.org/document/137186

property, and the relaxed standards for allowable impacts on the Lake Baikal ecosystem along with levels of pollutants. The Committee has also repeatedly requested the State Party to develop an integrated management plan for the property.	
In 2009, the Committee noted the State Party's proposal to increase the amplitude of regulating the water level of Lake Baikal. Based on the findings of the 2015 Reactive Monitoring mission that visited Mongolia, the Committee requested the State Party to provide information on the existing provisions and regulations for water use and management in Lake Baikal and their subsequent effects on the hydropower plant management downstream of the property. From 2016, the Committee has expressed its concern over the regulation on maximum and minimum water level of Lake Baikal and made a repeated request to conduct an Environmental Impact Assessment on impacts on the property's OUV prior to authorising further derogations. The temporary legislation, issued for the fourth time in 2022 for the 2022-2023 period, continues to allow an extended range of 2.31 m compared to the earlier established 1 m water level variation of Lake Baikal for hydropower dam regulation.	Water use and management regulations affecting lake water level
The wastewater discharges of the Baikalsk Pulp and Paper Mill (BPPM) into Lake Baikal have been among the issues most extensively discussed by the Committee since the property's inscription in 2006. It was also the focus of the 2011 UNESCO/IUCN high level mission to the property and addressed by all missions before it. The Committee made repeated requests to the State Party to develop and implement a closed-loop water treatment system for BPPM to reduce its negative environmental impacts, considered to represent a clear ascertained danger to the property's Outstanding Universal Value in line with paragraph 180 of the *Operational Guidelines*. The Committee also encouraged and welcomed the State Party's efforts to develop alternatives for the socio-economic development of the town of Baikalsk and its surroundings. Following the closure of BPPM in 2013, the Committee has continued to express its concern over the BPPM and its industrial legacy notably the accumulated waste that is stored in the industrial site, requesting the State Party to develop an Environmental Impact Assessment on the remediation and future use of the industrial site, including an assessment on potential impacts on the OUV of the property.	Remediation and reuse of the former Baikalsk Pulp and Paper Mill (BPPM) (operation closed in 2013)
The Special Economic Zones of "Baikal Harbour" and "Gate of Baikal" which were established by the State Party to encourage and coordinate large-scale tourism development within the property, have been subject to Committee decisions since 2012, although these zones have been legally established already in 2007. The Committee has repeatedly requested the State Party to conduct an impact assessment on the SEZs and the proposed projects, and since 2014, to conduct a Strategic Environmental Assessments to assess the cumulative impact of these developments. Prior to this, in 2010-2012, the Committee requested more information on the marina developed in Baikal	Special Economic Zones (SEZs), tourism development and regulations of construction

Harbor SEZ, and the State Party to submit the EIA of this project. The Committee has also requested for adequate land-use planning and a tourism management strategy be developed for the property and raised excessive and illegal construction within the property as matters of concern.	
Already at the time of its inscription on the World Heritage List in 1996, the Committee expressed its concern over pollution threatening the integrity of the property. Discharge of untreated wastewater into Lake Baikal, high levels of pollution in the Selenga River, pollution from industrial activities such as the BPPM and air pollution have been among the key issues referred to in Committee's decision. In 2016 and in 2018, the Committee noted the scientific information about alarming ecological changes in Lake Baikal, including algae and cyanobacteria blooms, and requested the State Party to develop a property-wide ecological monitoring system to better understand the scale and causes of these changes and responses needed to protect the property's integrity.	Hydro-ecological conditions of the lake, pollution
In 2015, the property was heavily impacted by severe forest fires, which led the Committee requesting the State Party to assess the impacts of these fires on the property, and later, a request for a fire management and prevention plan as part of an overall integrated management plan for the property. In 2023, the Committee noted the improved fire management in the property and encouraged these efforts be continued, accounting for the impacts of climate change. The Committee also requested the State Party to expedite the assessment on the impacts of fires on the forest and lake ecosystem, initially requested in 2016.	Forest fires
In 2013, the World Heritage Committee noted with concern the potential impacts on the property from the planned construction of a dam on the Orkhon river in Mongolia and requested the State Parties of the Russian Federation and Mongolia to report on these plans and to conduct the required environmental impacts assessments. A year later in 2014, the Committee noted with concern that the State Party of Mongolia continues to consider the development of dams on the Selenga and Orkhon rivers, requesting the State Party to invite a Reactive Monitoring mission, which was conducted in 2015. In its subsequent sessions the committee has followed on progress of implementation of the mission's recommendations.	Hydropower projects in the water basin of Lake Baikal
In 2011, the Committee had recalled its clear position that mining was incompatible with the World Heritage status, and in 2013 the State Party had confirmed that such activities would indeed be prohibited in the property. The issue of the mining licence for the Kholodninskoe deposit was also resolved in 2016/2018. In April 2022, the World Heritage Centre had transmitted third-party information to the State Party, requesting verifications regarding a proposed coal mining project and associated road construction in the vicinity of the property. The State Party has not confirmed the status of this project.	Mining and resource extraction

In 2005, the Committee expressed its concern over the planned construction of the Eastern Siberia – Pacific Ocean oil pipeline and considered that pipeline development crossing the watershed of Lake Baikal and main tributaries would make the case for inscription of Lake Baikal on the List of World Heritage in Danger. The issue was examined in detail by the 2005 Reactive Monitoring mission. In 2006, the State Party had confirmed the re-routing of the pipeline at 250 to 450km from the lake and outside of the boundaries of the World Heritage property, the Committee commending the State Party for this courageous decision. In 2021 and 2023, concern over the power of Siberia 2 gas pipeline, including its potential route in relation to Baikal and its potential impacts on the OUV of the property was transferred by the World Heritage Centre to the State Party, which has confirmed that the route would not overlap with the central ecological zone. No new information on the final decisions concerning the route and its potential impacts on the property has not been available.	Oil/gas pipeline

2. SUMMARY OF THE NATIONAL MANAGEMENT SYSTEM FOR PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

The legal protection of the property is defined by the federal law "*On the Protection of Lake Baikal*"[13], modified 18 times since its adoption. This law provides the legal basis for the protection and management of the Baikal Natural Territory and Lake Baikal, also as a World Heritage property.

The Baikal Natural territory includes three main zones, defined and limited as follows (see **Map 1**)[14]:

- the central ecological zone (CEZ) the boundaries of which coincide with those of the World Heritage property, which includes Lake Baikal and its islands, the water protection zone as well as the specially protected natural areas adjacent to the lake;
- a buffer ecological zone located outside the CEZ and including the Russian part of the catchment area of Lake Baikal[15];
- an ecological zone of atmospheric influence that covers the area outside the catchment area of Lake Baikal within the territory of the Russian Federation, a 200 km wide territory to the west and northwest outside the catchment area.

The boundaries of each zone were established by law, as well as the legal regime of activities that are allowed, restricted or prohibited within each of them. The Baikal Natural Territory overlaps with three administrative regions in the Russian Federation: Irkutsk oblast (region), the Republic of Buryatia, and Zabaikalsky Krai (Transbaikal Territory), the third region having no overlap with the CEZ and hence the World Heritage property. In addition, 159 settlements are included within the CEZ (77 in Irkutsk region and 82 in Buryat side).

The Baikal Law also fixes the main principles for utilization of natural resources, including wildlife and water, in each of the three zones listed here above, as well as the legal regimes of traditional uses, recreational and tourism activities, and regulation on waste. Various other

[13] Law No. 94-FZ, dated May 1st, 1999.
[14] Order N°1641-p dated November 27th, 2006.
[15] Order N°368-r dated March 5th, 2015.

federal laws, legal acts and regional and local regulations[16] determine the protection and management of the property compiled under the government monitoring portal for Lake Baikal.

The protection of Lake Baikal is under the responsibility of the federal government, coordinated by the Government Commission for the Protection of Lake Baikal[17] established to ensure concerted action by federal executive bodies, and the executive bodies of the Republic of Buryatia, the Trans-Baikal Territory and the Irkutsk Region. The Ministry of Natural Resources and Environment of the Russian Federation has the responsibility for the oversight of the protection of the property, determining the executive bodies in charge of specific monitoring, protection and management activities according to their competencies. The legal protection of the property if overseen by the Federal Prosecutor's Office.

In accordance with the law on environmental protection, the Baikal Law imposes a registration of objects that may have negative impact on the property, as well as various rules for economic activities and facilities, information and monitoring, federal programmes targeted on protection of the lake and related to the law enforcement and liability. The Baikal law also details provisions on specific activities that are allowed for a limited period (e.g., modernization and expansion of railways facilities within the CEZ[18]) (**Photo 1**).

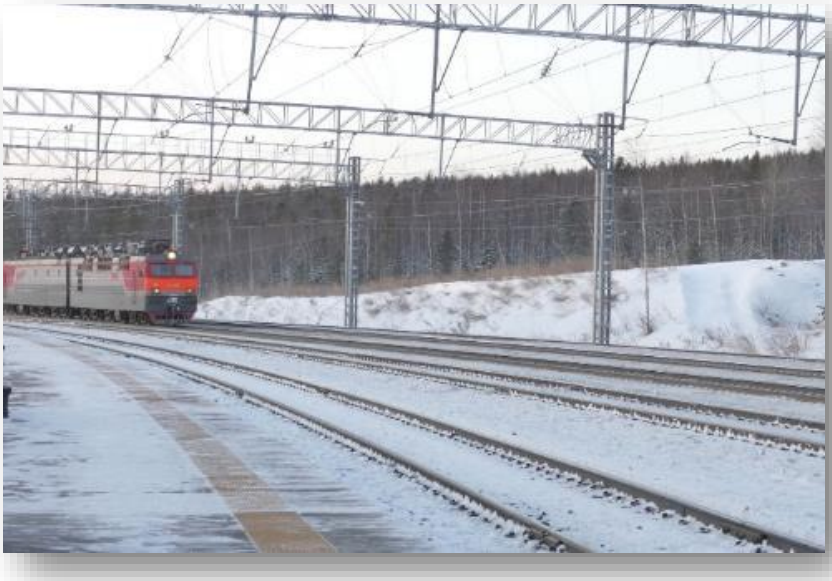


Photo 1 – Rehabilitation works of railways *(Credit: Lethier/IUCN).*

Conducting state monitoring of Lake Baikal is stipulated by Article 20 of the Baikal Law, with the regulations most recently approved by the federal government[19]. Monitoring is executed by the authorized federal executive bodies, in collaboration with regional executive bodies of the Republic of Buryatia, the Irkutsk region, the Transbaikal territory. The government posts the results for public access under its portal which is currently being piloted.[20] The monitoring

[16] This includes 10 Federal laws; 26 normative legal acts of the Government of the Russian Federation, federal ministries and departments; 4 laws and resolutions in the Irkutsk Region; 9 laws and order in the Republic of Buryatia; and 2 degrees or orders in the Transbaikal Territory (https://baikalake.ru/law/).
[17] http://government.ru/department/589/about/
[18] Federal Law N°254-FZ dated July 31st, 2020 and Order N°2774-r dated October 26th, 2020.
[19] Decree No. 260 of the Government of the Russian Federation dated February 18th, 2023 (as amended on 14.03.2024)
[20] https://baikalake.ru/monitoring/

focuses on the following aspects, with detailed information provided on monitoring of water quality in chapter 4.3. (Lake Baikal water quality and pollution):

- monitoring of the state and pollution of the environment, including hydrometeorological conditions and radiation situation, pollution of ambient air, soil, surface waters of water bodies (including hydrobiological indicators) (implemented by Federal Hydrometeorology and Environmental Monitoring Service—Roshydromet);
- monitoring of lands (except for agricultural lands) (implemented by Federal Service for State Registration, Cadastre, and Cartography—Rosreestr);
- monitoring of agricultural lands (implemented by Ministry of Agriculture of the Russian Federation);
- monitoring of wildlife in federal level specially protected natural areas and state monitoring of hunting resources located in federal level specially protected natural areas and their habitat, as well as what concerns the organization and implementation of state monitoring in the territories of state nature reserves and national parks (implemented by Ministry of Natural Resources and Ecology of the Russian Federation);
- monitoring of forest pathology, forest reproduction and use, forest fires (implemented by Federal Agency for Forestry – Rosleskhoz);
- monitoring of subsoil conditions (implemented by Federal Subsoil Agency – Rosnedra);
- monitoring of water bodies with the participation of Roshydromet and Rosnedra (implemented by Federal Water Resources Agency – Rosvodresursy);
- monitoring of aquatic biological resources, including overseeing the distribution, quantity, quality, reproduction of aquatic biological resources, their habitat, fishing and conservation of aquatic biological resources (implemented by Federal Fisheries Agency – Rosrybolovstvo).

The property is governed also by the federal law 33-FZ dated March 14th, 1995 "*On specially protected natural areas*" which provides the basis for protected areas and activities permitted in their territories. This autonomous legislation lists diverse types of protected areas such as, at the federal level, strict nature reserves, national parks, wildlife reserves and nature monuments and, at the regional level, nature parks, nature reserves and nature monuments. It also regulates the organization and the management regime of those areas and is applicable to the protected areas located within the property. At present, there are 13 specially protected natural areas within the property, representing 30 % of the total area, and making a significant contribution towards protecting the property and its values.

Specially protected natural areas of federal significance:

- Baikal State Natural Biosphere Reserve
- Barguzinsky State Natural Biosphere Reserve
- Baikal-Lensky State Natural Biosphere Reserve "Baikal-Lensky"
- Transbaikal National Park
- Tunka National Park (partially)
- Pribaikalsky National Park
- Kabansky State Nature Reserve
- Frolikhinsky State Nature Reserve

Specially protected natural areas of regional significance:

- Verkhne-Angarsky State Nature Reserve
- Pribaikalsky State Nature Reserve
- Snezhinsky State Nature Reserve
- Enkhaluksky State Nature Reserve
- Kochergatsky State Nature Reserve

Moreover, all uses, activities and rules that are not specified in the Baikal Law follow the ordinary legal regimes that regulate them in other legal instruments, laws and by-laws (e.g., for environmental impact assessments, water protection, forest and land management), in so far as they are consistent with and do not conflict with the Baikal Law. The Baikal Law as well as the overall legal framework supporting the management and protection of the property, has undergone various changes in the past years which are addressed in the chapter on the assessment of the state of conservation of the property (see chapter 4.1.).

Concrete conservation and management activities include the FTP "*Protection of Lake Baikal and Socio-Economic Development of the Baikal Natural Territory for 2012 – 2020*" mentioned above[21] and providing for a set of measures to protect Lake Baikal and the Baikal natural territory from the negative impact of anthropogenic, man-made and natural factors through:

- reduction of pollutant discharges into water bodies of the Baikal natural territory;
- reducing the level of waste pollution in the Baikal natural area, including ensuring the restoration of areas subjected to high and extremely high pollution;
- increasing the efficiency of the use of the recreational potential of specially protected natural areas;
- preservation and reproduction of biological resources of the Baikal natural territory;
- development of state environmental monitoring of the Baikal natural territory;
- development of a system for protecting the shores of Lake Baikal, rivers and other water bodies of the Baikal natural territory.

Later, in 2019, and as said above, the President of the Russian Federation approved a list of instructions based on the results of the inspection of the implementation of legislation on the preservation of Lake Baikal and its environmental rehabilitation[22].

3. THE MISSION

In its Decision **44 COM 7B.107** (2021) (**Annex 2**), the Committee requested the State Party of the Russian Federation to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the property to review the threat posed to it by the different legislative changes, the existing and proposed developments in the Special Economic Zones (SEZs) and the remediation plans for the former Baikalsk Pulp and Paper Mill, ensuring that, given the complexity of the issues, the mission members can meet with all the relevant national and regional authorities and has access to all relevant legislative documents, including the comprehensive review of recent legislative changes, which should be compiled prior to the mission.

The Committee further requested "the States Parties of the Russian Federation and Mongolia to organize a meeting, through appropriate means, with the Reactive Monitoring mission team to allow the mission to assess the full range of issues potentially affecting the hydrological and ecological conditions of the property".

The mission was initially scheduled to take place from 28 February to 5 March 2022 but had to be postponed due to logistical constraints.

By its Decision **45 COM 7B.24** (2023) (**Annex 3**), the Committee took note of the State Party's proposal to organize the postponed mission to the property, recalling the mission's objective of "reviewing the threat posed to the property by various legislative changes, the existing and

[21] Order N°847 dated August 12th, 2012 (https://baikalake.ru/law/183/).
[22] http://kremlin.ru/acts/assignments/orders/61524

proposed developments in the SEZs and the property, and the remediation plans for the former BPPM, as well as assessing the conditions of the property which may warrant its inclusion on the List of World Heritage in Danger, and requests the State Party to ensure that the mission programme includes an opportunity for meetings with the States Parties of the Russian Federation and Mongolia to allow the mission team to assess the full range of transboundary issues potentially affecting the hydrological and ecological conditions of the property".

The joint World Heritage Centre/IUCN Reactive Monitoring mission to the Lake Baikal World Heritage property was organised from 12 to 16 December 2023, and conducted by Ms Susanna Kari representing UNESCO and Mr Hervé Lethier representing IUCN. The mission was accompanied by representatives of the Ministry of Natural Resources and Environment of the Russian Federation and the Secretariat of the Commission of the Russian Federation for UNESCO. The full programme of the mission prepared by the Ministry and people met are enclosed (**Annex 4**).

Based on its TOR, complete text of which is enclosed (**Annex 1**), the mission was specifically tasked to review status of the following issues affecting the state of conservation of the World Heritage property:

1. Uncertain and rapidly changing legal protection.
2. Lake Baikal water level regime.
3. Water quality and pollution.
4. Remediation and development of the former Baikalsk Pulp and Paper Mill.
5. Large scale tourism development through the establishment of two Special Economic Zones in the property.
6. Illegal construction.
7. Extensive wildfires and subsequent forest degradation.
8. Hydropower development in Mongolia affecting water regime of Lake Baikal.
9. Overall state of conservation of the property and review if the conditions for the inscription of the property on the List of World Heritage in Danger are met.

Despite the number and complexity of the issues to be addressed as well as the significant size of the property, the mission was regrettably restricted to 5 days.
The mission visited the Irkutsk Region and the Republic of Buryatia overlapping with the property however it did not have the possibility to visit the property's northern part. Furthermore, most documents that the Committee and the mission's TOR had requested be shared preferably no later than one month prior to the mission were only available in January and late February 2024 after the onsite visits which did not allow the mission to discuss further on the various topics with the stakeholders and specialists as expected during Reactive Monitoring missions.

During the 5 days of the formal programme, the mission travelled over 1,200 kilometres (**Map 2**) in extreme winter conditions with the temperature getting as low as −30ºC/−40ºC on most days, utilising various vehicles (minivan, trains, helicopter and ferry). While having the possibility to visit several important locations on its route, the mission team regrettably had almost no time to visit municipalities and settlements, nor forests affected by fire and other degradations, therefore limiting the possibility to familiarise with the context.

Furthermore, the mission regrettably had very limited time to exchange with the people met, owing to the dense programme. The mission also did not have the possibility to discuss sufficiently with civil society, or with national authorities on the overall management regime of the property and the approved and proposed legal changes.

These limitations, together with the fact that last on-site mission to this property had been organised more than a decade earlier, made reporting particularly challenging. To conclude,

whilst an important effort was made by the State Party to mobilise authorities and stakeholders in supporting the mission, the mission team was of the view that the time admitted was not in line with the very ambitious mission TOR, noting the size of the property and the complexity of the issues to be addressed.

Map 2 – Route of the reactive monitoring mission
(*Credit: State Party/M. Stafeev).*

4. ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY

4.1. Uncertain and rapidly changing legal protection

The mission was tasked to assess the adequacy and effectiveness of the legal protection of the property to safeguard its OUV, based on the State Party's review of the approved and proposed legislative changes and their interdependencies that could potentially affect the property. This task stems from the Committee's request to the State Party to review the legislative changes prior to their approval, and not to pursue with changes that weaken the property's protection when its ecological condition is already deteriorating, posing a potential danger to the property in line with Paragraph 180(b) i) and iv) of the *Operational Guidelines*.

The numerous amendments made to the Baikal Law and the overall regulatory framework have been of concern to the Committee because they have weakened the legal protection of the property since its inscription and made the legal regime more unstable and fragmented. The list of legal texts is enclosed (**Annex 6**), indicating the years when the laws were last updated. These have included but are not limited to the following legal amendments noted by the Committee:

- Order N°083 dated February 21st, 2020 (as amended on July 4th, 2022) "*On approval of standards for maximum permissible impacts on the unique ecological system of Lake Baikal and the list of harmful substances, including substances belonging to the categories of especially hazardous, highly hazardous, hazardous and moderately hazardous for the unique ecological system of Lake Baikal*" replaced the Order N° 63

dated March 5th, 2010 and significantly relaxed several rules on the discharge of pollutant substances in the Lake Baikal ecosystem.

- Decree of the Government of the Russian Federation N° 2399 dated December 31st, 2020 (as amended on January 26th,2023) "*On approval of the list of activities prohibited in the CEZ of the Baikal natural territory*". The law underwent a major revision in 2020 to amend the list of prohibited activities, authorising now construction within the water protection zones of settlements and sanitary cutting of forests, amongst other amendments. Additional changes were introduced in 2023 to allow for the construction of the air transport infrastructure facilities in the currently closed Goryachinsk Airport in the Republic of Buryatia, located a kilometre from the shores of Lake Baikal.
- Federal Law No. 254-FZ dated July 31st,2020 "*On the Specifics of Regulating Certain Relations for the Purpose of Modernization and Expansion of Backbone Infrastructure and on Amendments to Certain Legislative Acts of the Russian Federation*". The federal law abolished the environmental expertise for transport infrastructure facilities in federal protected areas, and authored forest cuts until end of 2024 in the CEZ of Baikal Natural Territory to increase the capacity of the existing Baikal-Amur Mainline and the Trans-Siberian Railway passing through the property. The mission was presented with the environmental management programme of the Russian Railways related to these works within the property, however the mission did not have the time to review this issue in depth.

The mission notes that the review of the regulatory legal framework for the protection of Lake Baikal and the Baikal Natural Area, submitted by the State Party does not constitute the study to assess the impacts of the adopted and proposed legislative changes on the property and its OUV, as requested by the Committee. This study should be completed in view of providing full details of the prior legal changes made and complemented with an assessment on any additional proposed changes to the Baikal law (see below).

Researchers, in turn, have been active in producing compilations on changes introduced on the legal regime for protecting Lake Baikal.[23] The mission also welcomes the publicly available reviews on *Implementation of the Federal Law 'On the Protection of Lake Baikal'*[24], whilst outdated and incomplete. The created government web portal is an important initiative to improve public access to information, including about the legal protection of the property, however, a simple list of laws and legal acts should be complemented with adapted and easy understandable information to citizens and stakeholders.

The mission notes that the framework applicable to the protection and management of the property is very complex. There are many sector-specific regulations setting out the legal regime for local uses and socio-economic activities (see **Annex 6**). It is on this basis that autonomous targeted action plans and programmes are drawn up and implemented, often lacking overall strategic unity, as is the case with tourism development (see chapters 5 and 6). The mission observed, for example, that tourism planning and management, which is the prerogative of the regions, may complicate the establishment of a coherent strategic approach to tourism development, at the scale of the property, even though the Baikal Law (Art. 12) requires the rules applicable in this area to be approved by all stakeholders.

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[23] E.g. Kolobov R.Y. & Dietsevich Y.B. (2021) - Problems of International Legal Protection of Lake Baikal: Results of the 44th Session of the World Heritage Committee International law. International law. № 3. S. 26-39. DOI: 10.25136/2644-5514.2021.3.36699
Brown, K.P. et al. (2021) - Human impact and ecosystemic health at Lake Baikal. Wires Water, Volume8, Issue 4, July/August 2021, 36 p.
https://www.researchgate.net/publication/350999398_Human_impact_and_ecosystemic_health_at_Lake_Baikal

[24] https://baikalake.ru/law/1218/

This weakness is also particularly noticeable in land use and planning, where legal commitments may conflict with regional and local expectations, to the detriment of harmonious, sustainable development within the property and to its OUV. The mission has noted that this lack of an overall strategic vision between the stakeholders has led to strong local tensions, culminating in disputes before the Constitutional Court of the Russian Federation concerning respect for the fundamental citizen rights, particularly in terms of land use and construction, and in relation to the State Party's international commitments under the World Heritage Convention.

Furthermore, a complex legal context may lead to problems of compatibility between the Baikal Law and other federal regulations. For example, the authorisation for clear-cutting that may be given exceptionally for certain works under the Baikal Law is in direct conflict with the Forest Code applicable in protected areas. The mission observed that with the ongoing proposal to amend the Baikal Law (Art. 25), this subject was particularly topical and had led to internal and public debates in the press[25]. Moreover, some issues are not yet covered by federal or local law, such as plastic pollution, which is currently a major cause for concern for the preservation of the OUV of the property and its functional integrity.

The mission concludes that the current legal regime of the property that has been adapted over the years and since the property's inscription on the World Heritage list, is very complex, unstable, and leading to further fragmentation of the public action.

The mission was informed of the draft federal law, amending Article 25 of the Baikal Law and Article 11 of the Federal Law on Environmental Expertise, in Russian, in the version approved on first reading in June 2023, by the Federal Assembly of the Russian Federation. As a reminder, the Baikal Law has already been amended 18 times since the adoption of the initial text, significantly weakening the level of legal protection of the property, since its inscription (see above).

The mission was not aware of any more recent version, which would have to be resubmitted to the assembly in an adapted form before final adoption. The mission is also unaware of the parliamentary timeframe for the adoption of the draft. The following observations should therefore be regarded as provisional pending a new version of the amended legal text.

The legislative process was still underway at the time of delivery of this report, due to internal controversies linked to its content, especially with regards to the possibility for forest clearcutting in the CEZ of the territory, *aka* the World Heritage property. The mission has observed the ongoing debates held at the national and regional levels on the draft legal amendments, leading to several issues and controversies.

Essentially, the draft under discussion in the current version aims to amend the two federal laws as follows:

- **Article 25 of the Federal Law on the Protection of Lake Baikal.**

  The draft authorises transferring forest fund lands into other categories until 31 December 2025, and clear-cutting of forests until 30 December 2030 within the CEZ of the Baikal Natural territory for the following purposes:
  - the construction, reconstruction and equipping of structures to combat flooding and other water damage;

[25] https://www.themoscowtimes.com/2023/08/03/new-bill-puts-russias-lake-baikal-at-risk-of-deforestation-harmful-urbanization-a82048; https://www.themoscowtimes.com/2023/12/25/siberian-officials-wage-denunciation-campaign-against-baikal-defenders-a83559.

- the construction, reconstruction and operation of various public facilities for existing settlements (e.g., power supply facilities, heat facilities, gas and water supply);
- the construction, reconstruction and operation of various permanent and temporary public and private facilities within the Gates of Baikal Special Economic Zone (SEZ), on 75 plots of land listed in Appendix 2 to the draft law, in connection with the implementation of tourism and recreation development programmes;
- the construction, reconstruction and operation of federal, regional and inter-municipal roads, listed in Appendix 3 to the draft law;
- the implementation of a set of fire protection measures in the vicinity of settlements listed in Appendix 4 to the draft law, located in the Republic of Buryatia and the Irkutsk region;
- the construction, reconstruction and operation of linear infrastructure designed to facilitate the operation of buildings and facilities; their list will be drawn up by the Government of the Russian Federation, taking into account of environmental constraints;
- regularisation of land plots within and boundaries of settlements.

– **Article 11 of the Law on environmental expertise**:

The draft law adds to the current text an additional paragraph setting out an obligation to carry out an environmental impact assessment in the case of the actions referred to above; this measure ensures consistency between the two laws and has no additional direct effect on the above provisions.

The mission notes that the envisaged actions would be located within the property but are not, at this stage, precisely defined and delimited. Their potential environmental impacts have not yet been assessed, so it is not currently possible to draw conclusions on the potential direct, indirect, and cumulative effects on the property and its OUV, in particular on its environmental integrity, resulting from actions that would be authorised by these legal amendments.
It was reported several times in the past that significant large-scale forest logging has continued in the area since the property was inscribed on the List in 1996. Forest use is also visible in the satellite images accessed through public sources (**Photo 2**), indicating ecosystem degradation and slow regeneration owing to the climatic and bio-geographic context of the property. For the mission, this specific issue remains unclear, and it is likely that if such clear cuts, whatever the purposes, including for sanitary purposes, were to be authorised within the property, without specifying their location, size and frequency, they may have negative effects on the property and its OUV, and threaten its functional integrity (§ 180 of the Operational Guidelines). Forest use and management should be reviewed in detail by the next mission to the property.

Photo 2 – An example of past forest cuts in the property *(Credit: World Heritage Online Map Platform, https://whc.unesco.org/en/wh-gis/).*

The mission readily acknowledges that because of the property's size and the presence of numerous settlements occupied by several hundred thousand permanent and seasonal inhabitants in the immediate vicinity of the property, and within the two SEZs created to date in the CEZ and not yet fully constructed and equipped, it may be necessary to carry out works and improve facilities to take account of the expectations and needs of the local population. However, the mission considers that the current draft amendment to Article 25 of the Baikal Law does not provide sufficient security with regards to the preservation of the property's OUV.

If certain projects and programmes may have possible positive effects on protection, should they be designed in view to the environmental sensitivity of the property and preserving its intactness (for example, they can help to reduce current damages linked to uncontrolled tourist pressure within the property, and to improve the quality of deficient or inadequate local public services and facilities, for forest fire prevention, water resource management and sewerage), they may also conversely negatively affect the OUV of the property (§ 172 of the Operational Guidelines) and constitute a serious threat to it (§ 180, b), paragraph ii), depending on their nature, size and exact location.

Furthermore, according to the current draft, reforestation as well as tree and shrub planting would be taken to compensate for the logging operations during the above works. This restoration effort would be subject to prior environmental impact assessments, in accordance with the Federal Law on environmental expertise. However, as noted above, neither the size, precise location nor frequency of these reforestation measures are specified in the draft law.

The mission questions also the potential effects of those compensatory reforestation measures, based partly on artificial plantation after soil preparation, on the functioning of the environmental processes for which the property has been listed. These measures could in fact be inappropriate and detrimental to the property's OUV – for example by exacerbating prevalence of fires and erosion already visible in parts of the property, and harming biodiversity – depending on the species of trees selected and the forest management practised. The

mission also wishes to point out that the integrity of the property is part of its OUV, and it is based particularly on the presence of a series of attributes such as the wholeness and the intactness of the property (§ 89-95 of the Operational Guidelines) which could be affected not only by logging, but also by the measures intended to compensate for their effects.

For all reasons above and based on the information available at present, the mission cannot appraise properly the opportunity of such compensation measures, as well as their potential effects, positive or negative, on the property's OUV including its integrity.

The draft law stipulates that particular attention will be paid to the effects of the planned works on the unique ecosystem of Lake Baikal and the natural and water protection zones, in accordance with the established standards for maximum environmental impact and taking into account the lake's protection regime. However, it is impossible to determine at this point the potential impacts of these works in the absence of full details of the works to be conducted following the vote on the Law.

The draft legal amendments prohibit the enlargement of the Gates of Baikal SEZ and the creation of any new SEZ within the property (Article 10). While this provision may provide for a valid and hopefully sustainable option for limiting the economic development pressure in the property, this may not fully resolve the issue if the pressure for constructing more facilities within the property moves to the settlements instead (see chapters 4.5. and 4.6).

The legal draft also does not provide sufficient clarity on the change of land use categories including for territorial planning within settlements, or the intended purpose of these amendments. The mission was informed that work has already been done to establish the settlement boundaries and advance land use planning, therefore opportunities to solve some of the issues under the current legal regime – without having to amend the Baikal Law and expose the property to the resulting risks – could be explored in priority.

Finally, the draft law authorises the change of land use (Article 11), until 31 December 2025, in the vicinity of settlements, for the purpose of creating civil and military cemeteries. The location and extent of these facilities are also not mentioned in the draft Law. The mission is therefore not able to conclude on the potential effects of those changes on the OUV of the property, given the lack of information available (cf. §. 182 b. of the Operational Guidelines).

In conclusion, the mission considers that there are clear risks associated with the legal amendments under discussion, in the context of already deteriorating ecological integrity. The current draft amendments to the Baikal Law would accentuate the instability of the legal framework and further weaken and fragment the legal regime for protecting the property if it were adopted as it stands. Moreover, the proposed changes would not address some of the concerns mentioned in this report as well as priorities set out by the State Party in its reporting, among others:

- absence of an integrated management plan and a strategy on tourism at the property level;
- lack of regulation on prevention and treatment of plastic pollution;
- needed improved capacity for wastewater management within the property (e.g., tertiary treatment in municipal wastewater treatment plants);
- insufficient coordination between the federal and regional stakeholders, public and private, in several legal sectors (e.g., land use and management, forestry, water use, construction sector);
- desirable strict ban on the direct discharge of all types of wastewater in Lake Baikal;
- ban on clearcutting and protection of old growth forests in the CEZ;
- strengthening of the water and sanitary protection zones;
- provision of strategic environmental assessments of plans and programmes.

The mission therefore considers that the legislative changes should not result in erosion of the property's legal protection but secure it and recommends that any changes be considered on the condition of systematic review of their potential impacts on the property and its OUV, with legal and scientific expertise ensured in the process. The study should systematically consider the potential impacts on the property and its OUV in accordance with international standards as set out on the guidance and toolkit for impact assessments in a World Heritage Context[26]. It should also include an assessment of the intended compensatory measures, in the context of the property which has been inscribed on the World Heritage List on the basis of criterion (ix), as being an outstanding example "*representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals*". In conducting the assessment, the State Party can benefit from the experiences gained to develop the multidisciplinary research and development programme to assess the impacts of water level regulation of Lake Baikal (chapter 4.2.).

4.2. Lake Baikal water level regime

In 2009, the Committee noted for the first time the State Party's proposal to increase the amplitude of regulating the water level of Lake Baikal[27] for operating the hydropower dams (notably the Irkutsk hydroelectric power station) downstream from the property on the Angara River. This topic came again on the agenda of the Committee in 2016[28] and was recalled in its decisions thereafter (2017-2023), requesting the State Party to undertake a complete and comprehensive EIA and measures to mitigate any potential negative impacts of the existing water use and management regulations, including on water level variation, on the OUV of the property.

In parallel and based on the recommendations made by the 2015 Reactive Monitoring mission that visited Mongolia to discuss dam projects in the Selenga watershed – the main tributary of Lake Baikal, the Committee requested the State Party to provide information on the existing provisions and regulations for water use and management in Lake Baikal and their subsequent effects on the hydropower plant management downstream of the property.

During the same period and in application of Article 7 of the Baikal Law, the State Party has repeatedly derogated from the initial rules fixing the maximum and minimum limits of the water level of Lake Baikal (456.00-457.00 m) during a year, as implemented since 2001. This derogation was repeated once again in 2023 authorising water level variation between 455.54 m and 457.85 m above sea level (2.31 m variation). The negative environmental consequences of the lake water level regulation had also raised the attention of the scientific community, appealing for the return to regulating the water level of Lake Baikal in the set meter range[29].

In that context and in response to the reiterated requests of the Committee, the State Party has undertaken a Research and Development programme (a study) to clarify the impacts of the change in the water level of the lake on the state of conservation of the aquatic and coastal ecosystems and the damage suffered by the coastal socio-economic infrastructures in the Republic of Buryatia and in Irkutsk oblast, in connection with the discharges and lockage of

[26] https://whc.unesco.org/en/guidance-toolkit-impact-assessments/
[27] Decision 33 COM 7B.28, § 6.
[28] Decision 40 COM 7B.97, § 10.
[29] E.g., Open Letter to the Members of the Interdepartmental Council on Lake Baikal of the Ministry of Natural Resources and Environment of the Russian Federation, the Scientific Council of the Siberian Branch of the Russian Academy of Sciences on the Problems of Lake Baikal and the Public, https://www.baikal-daily.ru/news/16/400687/

the Irkutsk hydroelectric station. The stated objective of the study was to prepare proposals for minimising environmental and socio-economic risks and potential damage when regulating the level of Lake Baikal.

According to the information provided to the mission, this study was undertaken from December 2021 to December 2023, with the participation of the Siberian branch of the Academy of Sciences, the government and 13 specialist agencies (e.g., Rosshydromet and Rosrybolovstvo), involving more than 170 experts and specialists and including 3 stages:

Stage 1 **Formation of information and analytical base:**

- review of existing information on socio-economic and ecological impacts of the water level variation; identification of areas most exposed to variations in water level; analysis of the legal and regulatory framework for water use and protection of natural resources; analysis of the socio-economic risks associated with variations in water level; analysis of the gaps in monitoring the level of Lake Baikal and the flows and variations of water affecting this level.

Stage 2 **Scientific assessment of the effects of water level variations on ecosystems and of the socio-economic costs**:

- assessment of the impact of changes in the level of Lake Baikal on the ecosystem of its shallow water zone and coastal areas including effects on chemical and biological characteristics such littoral habitats and species dependent on these zones; justification of the socio-economic assessment of the consequences (damages) of changes in the level of Lake Baikal and regulation of the costs of the Irkutsk hydroelectric station; justification for the development of proposals to improve the methodology for monitoring the level of Lake Baikal.

Stage 3 **Impacts of operating Irkutsk hydropower station under different water level scenarios on the state of the lake ecosystem and damage to economic facilities and infrastructure of the coastal territory:**

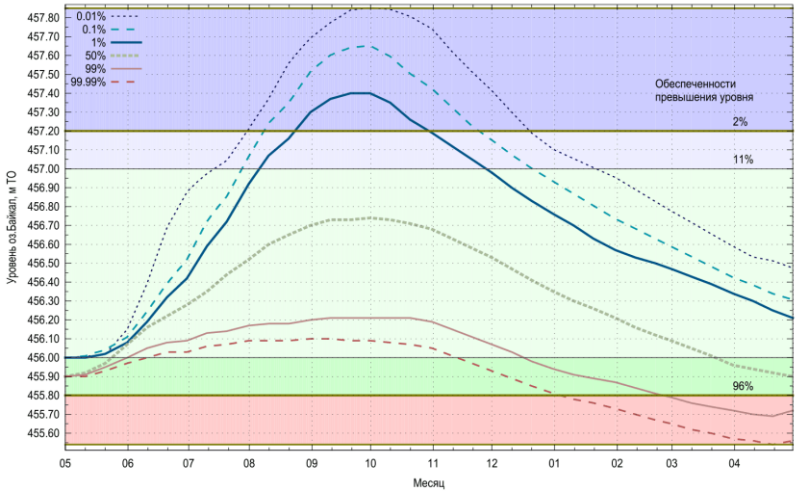
- development of environmental and fishery requirements for regulating the water level of Lake Baikal (plankton, benthos, fish, amphibians, reptiles, waterfowl and semi-aquatic birds, mammals); assessment of the socio-economic consequences (damages) incurred by changes in the water level and regulation of the Irkutsk hydropower plant; probabilistic study of the net water inflow and effects of climate change on the water flows in Lake Baikal; development of regulations for water level regime of Lake Baikal and the Irkutsk reservoir in consideration of environmental and socio-economic factors.

The summary results of this assessment presented to the mission show that the second quarter of the year – spring time from April to June – is the most crucial period for preserving the littoral habitats, which support Baikal's unique biological communities for which the property was listed as World Heritage (criterion x), and for maintaining the ecological functioning of the lake and coastal ecosystems (criterion ix) that contribute to establish its OUV. This period is also critical to maintaining the values of the Selenga Delta, a Ramsar-designated wetland of international importance and which functions as a vital filter helping to clean the river water before it reaches Lake Baikal. At this time of year, not only the level but also the daily, weekly and monthly variations in this level, are key factors for maintaining the environmental flows as well as the property's features.

The study also indicated that the socio-economic effects of a high-water level, at a level of around 457.2 m, should be considered critical, reached only in years of extreme high-water availability. Furthermore, according to the conclusions of the modelling work, and in light of climatic change, the natural flow of useful water into Lake Baikal should increase between

October and April by 2050 and decrease between June and September; the net annual inflow should not change significantly over the reference period.

Based on the study, considering both ecological and socio-economic requirements, the optimal range of Lake Baikal water level would be 456.00-457.00 (exceptionally, 455.80 in low water years and 457.20 m in high water years) with the need to consider seasonal variation to ensure ecological integrity and optimal filling periods to reduce coastal erosion among other impacts on the lake ecosystem.



Security, %	Level range, m TO
90- 11	455.90 – 457.00
95–5	455.85 –457.15
96–2	**455.80 –457.20**
99–1	455.70 –457.40
99.9–0.1	455.60 –457.65
99.99–0.01	455.54 –457.85

Figure 1 – Borders of regulation of the level regime of the Lake Baikal considering environmental and socio-economic factors (*Source: State Party/Research and Development Programme).*

Only summary results of the study were presented to the mission, the detailed proposals for changes in the regulatory and legal framework apparently remaining to be completed. This follow up stage should lead to an interpretation of the results in the form of a water regulation regime for Lake Baikal, based on the scientific analyses, and which should be clearly set out in the regulatory texts and replace the current practice of derogation. These regulations should guarantee the ecosystem functioning and maintenance of the environmental processes (criterion ix), which sustain the property's unique biodiversity (criterion x) – the basis for its inscription on the World Heritage List. The study also points to the need to simultaneously amend territorial planning schemes and zoning of coastal areas and the Irkutsk reservoir, suspending the issuance of construction permits in risky zones until the needed regulatory framework is in place.

Overall, the study confirms that regulating the water level of Lake Baikal is a very complex issue, from both environmental and socio-economic points of view, and that it is closely interconnected with not only the water flow and regime, but also the quality of water. Time is required to address this issue properly, with high level of expert input from a variety of fields. However, those difficulties should not lead to delaying the establishment of clear permanent regulations that meet the immediate requirements of preserving the OUV of the property, in the context of deteriorating integrity linked in part to the weak water management system applied for nearly 10 years by the State Party.

4.3. Lake Baikal water quality and pollution

Already at the time of its inscription on the World Heritage List in 1996, the Committee expressed its concern over pollution threatening the integrity of the property. Discharge of untreated wastewater into Lake Baikal, high levels of pollution in the Selenga River, pollution from industrial activities[30] such as the BPPM and air pollution have been among the key issues referred to in the Committee's decisions since then.

In 2016, the Committee noted the scientific information about alarming ecological changes in Lake Baikal, including algae and cyanobacteria blooms[31], which are non-typical to the cold oligotrophic waters of Lake Baikal, and requested the State Party to develop a property-wide ecological monitoring system to better understand the sources and responses needed to protect the property's integrity. This request was reiterated in 2017[32] and 2018[33], in which the State Party were requested to develop a property-wide ecological monitoring system in order to identify the scale and causes of the changes observed in the water quality of the lake and the responses required to preserve the integrity of the property.

The water quality of Lake Baikal is an extremely complex subject, partly owing to its unique characteristics. In the property's context, the water quality is affected by very diverse forms of pollution: physical, chemical and biological, having likely cumulative effects, and the sources of which are numerous, complex, direct and indirect, even historical in some cases.

The State Party shared with the mission summary information on water quality in Lake Baikal, rivers within its watershed, as well as groundwater based on statutory monitoring conducted in 2022.[34] The data indicates that the monitored rivers remain in poor quality, including the Selenga River, Lake Baikal's most important tributary, and ground water contaminations are detected at various sites, notably in the zone of influence of the BPPM and the Kultur oil depot. The filamentous algae species of the genus Spirogyra, atypical to Lake Baikal, were found throughout surveyed areas.

According to Roshydromet data[35], the development of spirogyra is seasonal and confined to places of high nitrate and phosphate content in the water and phosphates, which enter the lake with sewage discharges. Spirogyra is most frequently observed along the western shore of the northern part of the lake from Cape Slyudyansky to the mouth of the Upper Angara River, in the southern part of the lake from the mouth of the Bezymyannaya River to the mouth of the Malaya Osinovka River, and in the Kultuk-Slyudyanka area. Spirogyra development is observed sporadically in other areas.

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[30] Marinaite I.I. et al. (2022). Oil Products in Lake Baikal and Its Tributaries. Water Resource 49, 458–466. https://doi.org/10.1134/S0097807822030101.

[31] *Inter alia*: Timoshkin, O.A. et al (2016) - Rapid ecological change in the coastal zone of Lake Baikal (East Siberia): Is the site of the world's greatest freshwater biodiversity in danger? Journal of Great Lakes Research. 42, 487–497. https://doi.org/10.1016/j.jglr.2016.02.011;
Olga I. Belykh, O.L. et al. (2016) - First detection of benthic cyanobacteria in Lake Baikal producing paralytic shellfish toxins. Toxicon, Volume 121, p. 36-40. https://doi.org/10.1016/j.toxicon.2016.08.015
Vadeboncoeur, Y et al. (2021) - Blue Waters, Green Bottoms: Benthic Filamentous Algal Blooms Are an Emerging Threat to Clear Lakes Worldwide. Vol. 71 No. 10. BioScience 1027. https://doi.org/10.1093/biosci/biab049

[32] Decision 41 COM 7B.6, § 4.

[33] Decision 42 COM 7B.76, § 5.

[34] During the review of the mission report, the State Party additionally referred to the Surface Water Quality Yearbook of the Russian Federation. However, this report was not provided by the State Party.

[35] Source: Communication from the State Party during the review of the mission report.

However, although the eutrophication of the lake and its physicochemical pollution in general seems to be observed mostly in the coastal zone, nearby the surface and large settlements (e.g. Listvyanka, Severobaikalsk, Baikalsk, and Slyudyanka) and in bays[36] – due to unsatisfactory operations of sewage treatment plants, growing tourist activity, and intense ship traffic[37], and also partly due to global warming[38] – deterioration of the physicochemical quality of water of the lake is also reported by the scientific literature within the southern part of the lake[39] as well as in its pelagic zone[40].

The mission received no information on water quality in the watershed and Selenga water basin within the Mongolian territory[41]; however, the scientific literature is abundant, concluding that the upper Selenga watershed in Mongolia is significantly polluted by farming, industrial and mining activities, and suffering from number of anthropogenic pressures[42].

In the absence of data over a longer period, the mission relied on readily available scientific literature to establish a better understanding on water quality and pollution in Lake Baikal. The overall and constant degradation of the Lake Baikal water quality over decades seems recognized by all parties. It has led part of the scientific community to hypothesize that the eutrophication of Lake Baikal – with an increase of its surface water temperature by 2 degrees during the 1977-2003 period – could partly be caused by the effects of climate change[43], as appears to be the case for other large lakes worldwide[44]. For Lake Baikal, this could result into a major "ecological regime shift"[45].

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[36] E.g. Galina I. Kobanova, G.I. et al. (2016). Lake Baikal Ecosystem Faces the Threat of Eutrophication. International Journal of Ecology (401):1-7. https://doi.org/10.1155/2016/6058082

[37] E.g. Khodzher, T. et al. (2017) - Current chemical composition of Lake Baikal water. Inland Waters 7(3):250-258. https://doi.org/10.1080/20442041.2017.1329982

[38] E.g. Bondarenko N.A. et al. (2021) - *Dolichospermum lemmermannii* (Nostocales) bloom in world's deepest Lake Baikal (East Siberia): abundance, toxicity and factors influencing growth. Limnology and Freshwater Biology, Issue 2021: No 1. DOI: 10.31951/2658-3518-2021-A-1-1101

[39] E.g. Eletskaya, E.V. and Tomberg, I.V. (2020) - The concentration of mineral and total phosphorus in the coastal water of southeast coast of Lake Baikal. Limnol. Freshw. Biol. 2020, 4, 896–898. https://doi.org/10.31951/2658-3518-2020-A-4-896

[40] E.g. Domysheva, V.M. et al. (2020) - Dynamics of nutrients in the water of the pelagic zone of Lake Baikal. Limnology and Freshwater Biology September 2020. DOI:10.31951/2658-3518-2020-A-4-836; Gorshkov, A.G. (2017) - Priority Phthalates in the Lake Baikal Pelagic Zone and Coastal Area. Chemistry for Sustainable Development, 25, 351–359. DOI: 10.15372/CSD20170403.

[41] Cited in some scientific papers, *inter alia*: Kasimov et al. (2017) - Environmental change in the Selenga River—Lake Baikal Basin. Regional Environmental Change. Editorial. Volume 17, p. 1945–1949. https://link.springer.com/article/10.1007/s10113-017-1201-x

[42] Narangarvuu, D. and al (2023) - Mining and urbanization affect river chemical water quality and macroinvertebrate communities in the upper Selenga River Basin, Mongolia. Environ Monit Assess (2023) 195:1500. https://doi.org/10.1007/s10661-023-12022-x;
Gomboev, B.O., Tsybikova, A.B., Ul'zetueva, I.D. *et al.* (2020) - Assessing the Anthropogenically Caused Pollution of Water Bodies Within the Selenga River Basin on the Territory of Mongolia and Russia. *Geogr. Nat. Resour.* 41, 372–380 (2020). https://doi.org/10.1134/S1875372841040083;
Hiller, B.T., & Jadamba, N (2012) - Groundwater use in the Selenge river basin, Mongolia, updated: 10,12,2012. Journal of Groundwater Science and Engineering 1(1):11-32. DOI:10.26599/JGSE.2013.9280002.

[43] Lyubov R. Izmest'eva, L.R. (2016) - Lake-wide physical and biological trends associated with warming in Lake Baikal. Journal of Great Lakes Research. Vol. 42, Issue 1, p. 6-17; also: Moore, M.V. et al. (2009) - Climate Change and the World's "Sacred Sea"—Lake Baikal, Siberia. Vol. 59 No. 5 BioScience. https://doi.org/10.1016/j.jglr.2015.11.006

[44] Jenny, J.P. et al. (2020) - Scientist's warning to humanity. Rapid degradation of the world's large lakes. Journal of great lakes research. Volume 46, Issue 4,, p. 686-702. https://doi.org/10.1016/j.jglr.2020.05.006

[45] McKinnon J. (2023) - Our Ancient Lakes: A Natural History. MIT Press, 2023.

However, high concentration of nitrates and phosphates have been also observed repeatedly in various sectors of the lake's coastline where anthropogenic pressure is also high (e.g. Severobaikalsk)[46]. High nutrient concentration from anthropogenic sources is generally considered by the scientific community as among the main reasons for eutrophication of the lake ecosystem. The effects were accentuated in 2014-2017 due to a particularly low water level in the lake, an issue that may be linked with water flow management within the watershed, in addition to climate change. Researchers also argue that the excess of nutrients as well as other pollutants originate from polluted groundwater sources[47] and sewage waters discharged from coastal settlements, therefore being caused by socio-economic activities, such as industry, transportation, agriculture and increasing tourism-related construction in the lake watershed[48].

In addition to the organic pollution confirmed over the past years by the presence and expansion of algae and cyanobacteria blooms, microbiological (e.g. *Enterococci* and *Escherichia coli*) and hydro-chemical pollution have also been recorded in the last decade, especially at the mouth of the largest lake tributaries and near the main settlements (e.g. Listvyanka).[49] The State Party reports that no direct discharge is made into the lake – which needs to be confirmed – however the presence of heavy metals and various phthalates in the surface layers of the lake's bottom sediments prove the lake's chronic contamination. According to the scientific community, this is a potential threat not only to the lake ecosystem, but also to human health.[50]

Moreover, plastic pollution has emerged recently as a new major concern.[51] Excessive concentration of microplastics, composed of fragments and fibres of diverse polymers, were recorded in the lake waters.[52] Additional research is needed to better understand this issue, in particular, the presence of microplastics in the lake sediments, and its sources. In response to this worrying new form of pollution, the Assembly of the Russian federation has introduced in June 2022, a draft law to ban the sale and distribution of plastic bags, bags and kitchen utensils in the CEZ. The mission did not get updated information on this proposal during its visit.

Despite the State Party's report that the general physico-chemical water quality of Lake Baikal has not further deteriorated in recent years, the degradation of the surface and groundwaters reported since the property's inscription on the World Heritage List is a major concern for the long-term preservation of its OUV. Some researchers argue that the growing anthropogenic

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[46] Khodzher, T.K. et al. (2017) - Current chemical composition of Lake Baikal water. Inland Waters, 7:3, 250-258. https://doi.org/10.1080/20442041.2017.1329982

[47] Valerii V. Malnik et al. (2021) - Lacustrine, wastewater, interstitial and fluvial water quality in the Southern Lake Baikal Region 2021. Journal of Water and Health Vol 00 No 0, 1. https://doi.org/10.2166/wh.2021.064. (also: Semenov, M.Y. et al. 2024 - Revealing the Sources of Nutrients in the Surface Waters of the Selenga River Watershed Using Hydrochemical and Geospatial Data. Water 16(5):630. https://doi.org/10.3390/w16050630)

[48] Timoshkin, O.A. et al. (2018) - Groundwater contamination by sewage causes benthic algal outbreaks in the littoral zone of Lake Baikal (East Siberia). Journal of Great Lakes Research, Volume 44, Issue 2, April 2018, Pages 230-244. https://doi.org/10.1016/j.jglr.2018.01.008

[49] Nikitina, E.P. et al. (2023) - Phthalates in Bottom Sediments of Lakes on the Eastern Coast of Baikal. Dokl. Earth Sc. 513, 1417–1421. https://link.springer.com/article/10.1134/S1028334X23601852

[50] Brown, K.P. et al. (2021) - Human impact and ecosystemic health at Lake Baikal. Wires Water, Volume8, Issue 4, July/August 2021, 36 p. https://wires.onlinelibrary.wiley.com/doi/abs/10.1002/wat2.1528

[51] Moore, M.V. et al. (2021) - Lake-wide assessment of microplastics in the surface waters of Lake Baikal, Siberia. Limnology 23, 265–274 (2022). https://doi.org/10.1007/s10201-021-00677-9

[52] Il'ina, O.V. et al. (2021) - Plastic pollution of the coastal surface water in the middle and southern Baikal. Water Resour 48, 56–64 (2021). https://doi.org/10.1134/S0097807821010188

load has contributed to the significant decrease of endemic species, such as *Lubomirskia baikalensis*, the freshwater sponges which are an attribute of the property's OUV and an important bioindicator. This is alarming as these species are also known as vital biofilters, helping to keep the Baikal waters clean – another attribute for which the property is known.

In looking at the existing wealth of knowledge, understanding and addressing the impacts of pollution on the property's OUV and water quality of Lake Baikal is a very complex subject, requiring a high-level of scientific effort and increasingly sophisticated technical capacities. The challenge is partly met with an impressive number of scientific publications dedicated to this topic each year. Decisive effort should be made by the State Party and the scientific community to better exploit this knowledge to help address the growing amount and variety of pollution affecting the lake ecosystem.

The mission observes that the existing monitoring system intended to monitor these changes in the overall water quality of the lake has been improved and strengthened since the property's World Heritage listing. The monitoring process is defined by the law[53] and it covers various matters: air, surface and underground water protection and management, wildlife and their habitats, forest, soils and natural heritage in general, as well as hunting resources. The standards of maximum permissible impacts on the unique ecological system of Lake Baikal and the list of harmful substances, including substances belonging to the categories of especially dangerous, highly dangerous, hazardous and moderately dangerous for the unique ecological system of Lake Baikal are also regulated[54], albeit the standards having been weakened in the recent past (see below).

The boundaries of the water protection zone within the property were set up in 2015 based on a landscape-hydrological approach [55], and revised in 2018 to rationalise these boundaries. At the time, the changes we preceded by a scientific assessment, but the adopted legal text was a compromise that led to significant reduction of the water protection zone to 200 m within settlements (while the fish protection zone was set at 500 m), with a view to mitigating social tension among the population living on the lake shore. Yet, the boundaries of the CEZ have remained the same, which raises the concern for their outdated description in the law. The water protection zone is currently based on the article 1 of the federal Law on "*Environmental protection*"[56] and on the articles 13 and 20 of the federal Law "*On protection of lake Baikal*"[57].

As noted in chapter 3, various public services and agencies are involved in monitoring of the property, each in its respective field of expertise, Roshydromet and Rosnedra, among others, being responsible for monitoring the water resources and water pollution. According to the law, this monitoring is centralized at the federal level in a single system within which a subsystem is dedicated to monitoring the Lake Baikal ecosystem. All collected data are publicly accessible and subject to annual reports, available on the government portal (https://baikalake.ru/en/monitoring/gosecomonit/).

The monitoring of the water quality is based on a network of monitoring plots distributed throughout the lake ecosystem, but mostly on the pelagic zone, in both surface and deep waters, as follows (**Map 3**):

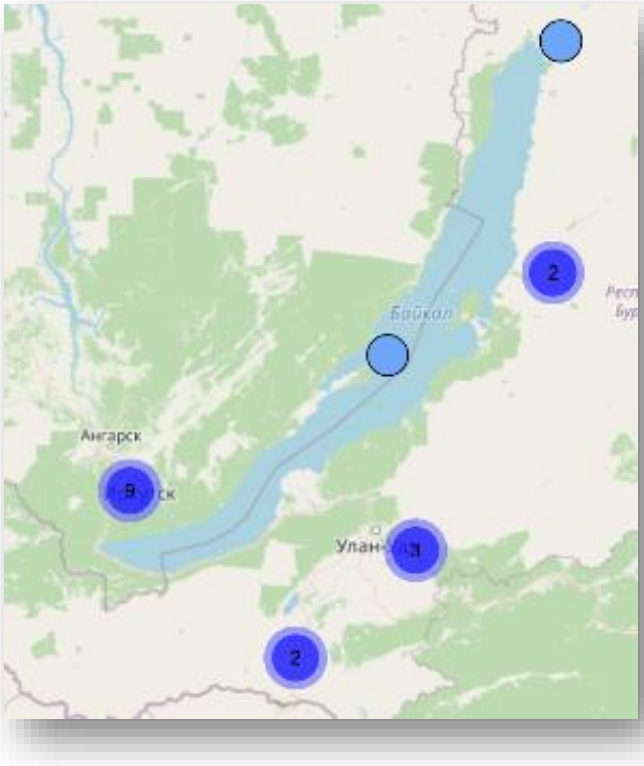
- 16 deep water plots, located in transect, in the central part of the lake;
- 1 plot located near the Baikalsk waste treatment plant;
- 5 plots located near ports located in the southern part of the lake;
- 1 plot near the source of the Angara River;

[53] Order N°260 dated February 18th, 2023
[54] Order N°. 83 dated.February 21st, 2020.
[55] Order N°368-p dated March 5th, 2015.
[56] Law N°7-FZ dated 10 January 2002.
[57] Law N°94-FZ dated 01 May 1999.

- 1 surface water plot near Selenginsky;
- 1 plot in the Kultuk-Slyudyanka sector;
- 1 plot in the northern part of the lake, near the “Baikal Amour” route;
- 1 plot in Barguzinsky Bay;
- 1 plot in the “small sea” sector.

A total of 43 plots distributed across 25 rivers and 1 lake, and 10 plots located on 7 rivers, are monitored in the Republic of Buryatia and in the Transbaikal region respectively. In addition, a network of 14 groundwater plots distributed in 6 sites located in the Republic of Buryatia[58] are also monitored.

In addition, according to the State Party and based on information provided to the mission during the review process of its report, hydrobiological monitoring conducted by Roshydromet covers the areas of the lake most exposed to anthropogenic pollution. Since 2023, additional observations have been conducted in the areas of five southern ports (Baikalsk, Baikal Port, Kultuk, Vydrino, Bolshoye Goloustnoye), in the Kultuk-Slyudyanka area, and in the coastal area of the northern part of the lake from Cape Slyudyansky to Cape Kurla.



Map 3 – Network of plots for monitoring surface water bodies in the Baikal Natural Territory. *(Source: https://baikalake.ru/monitoring/operatmonit/water/roshydromet/).*

The water quality is assessed on the basis of an integrated index, the Specific Combinatorial Water Pollution Index (SCIWPI), which is a relative index of the degree of pollution of surface waters, conditionally evaluating the proportion of the polluting effect contributing to the overall degree of water pollution, due to the simultaneous presence of several pollutants, in the form of a dimensionless number. This index is basically composed of almost 20 physicochemical components[59].

[58] No plot was monitored in the Transbaikal region for the year 2022.
[59] E.g. BOD5, COD, ammonium, nitrites, sulfates, chlorids, phosphorus, aluminium, iron, copper, zinc, lead, nickel, manganese, phenol, oil, mineralisation.

In addition, bacteriological and hydrobiological observations are conducted in specific areas, for example in the area influenced by sewage treatment plants (e.g. in Baikalsk) or near other important infrastructures (e.g. Baikal-Amour Mainline, Maloye More Strait). They include studies on plankton, sediments and zoo benthos[60].

As reported by the State Party and requested by the Committee, monitoring has led to identify polluters on the territories of both the Republic of Buryatia and the Irkutsk oblast, most of them coming from public sewage treatment plants and companies discharging wastewater in Lake Baikal tributaries, concentrated in the southern and central parts of the property. The mission did not receive information from the northern part.

National and regional authorities confirm that the main sources of pollution entering the lake ecosystem come from municipal facilities in particular sewage treatment plants, as well as from coal-fed power and heating facilities, agriculture, industries, transportation, as well as unregulated recreation and tourism activities. The same has been confirmed by the scientific community[61], and in 2021 the Siberian Branch of the Russian Academy of Sciences submitted a proposal to the Ministry of Natural Resources and Environment of the Russian Federation on the scientific justification for the necessity to prohibit direct wastewater discharges into Lake Baikal[62].

The mission was unable to investigate further the spatial organization of the monitoring network and scheme in the allotted time, nor to assess its relevance and effectiveness. The technical exchanges with the relevant authorities were also too brief to get more details on the monitoring methods and protocols[63]. Furthermore, the information received on the proposed integrated indicator for measuring anthropogenic impact and environmental condition of Lake Baikal were insufficient to conclude on this issue.

As noted in chapter 4.1. and above, the mission draws the attention again to the regulatory standards to limit the discharge of harmful substances, revised in 2020[64] and again in 2022, to replace the standards adopted in 2015. The new standards for the discharge of pollutants authorise higher concentrations of several substances, such as sulphates and organic halogens, while the ecosystem has continued to deteriorate since 2015 and significant sources of pollution remain[65]. This regulatory change has generally been linked with the insufficient capacity of the wastewater treatment facilities to meet the initially set requirements, therefore operating in contradiction with the legislation, as well as the need to organize work to eliminate the accumulated environmental damage generated by the BPPM. For the mission, such a decision nevertheless may jeopardize the attempt to reduce the physical and chemical pollution affecting the water quality of Lake Baikal, at the risk of further compromising the long-term preservation of the property's integrity to the detriment of its OUV.

[60] E.g. number, biomass, diversity.
[61] E.g. Scientific Council of the Siberian Branch of the Russian Academy of Sciences on the problems of Lake Baikal in 2022 (new.ras.ru). https://new.ras.ru/activities/news/nauchnyy-sovet-so-ran-po-problemam-ozera-baykal-v-2022-godu/
[62] https://www.sbras.ru/files/news/docs/218_20210805_zapret_sbrosa_pismo_kozlovu.pdf.
[63] Based on regulatory standards set for the water bodies of fishery importance, with maximum permissible concentration of harmful substances in the water of those water bodies (Order of the Ministry of agriculture of the Russian Federation n°552 dated 13 December 2016).
[64] Order n°83 of the Minister of Natural resources and environment of the Russian Federation dated February 21st 2020.
[65] E.g. Listvyanka, Severobaikalsk, Baikalsk and Slyudyanka (Khodzher, T.V. et al (2017) - Current chemical composition of Lake Baikal water. Limnological Institute SB RAS, Irkutsk, Russia. Inland Waters, 2017 VOL. 7, NO. 3, 250–258. https://doi.org/10.1080/20442041.2017.1329982.

Despite the improving capacity and protocols to monitor water quality and the effort to increase the coverage of wastewater treatment facilities and identify sources of pollution[66], the mission observes that the three interlinked issues of (1) monitoring, (2) legal framework to preserve/improve water quality, as well as (3) the activities aimed at tackling the volume, quality and sources of pollution, appear to be dealt in isolation from one another, requiring a more holistic approach and strong additional efforts from the State Party.

The accuracy and objectivity of monitoring should be strengthened to respond more effectively and acutely to the issues, and account for variations in water quality across the property. The system should also be better devised to support evidence-based decision making to respond properly to the observed long-term degradation of the lake ecosystem. The mission notably recommends the following in improving the monitoring protocol:

- expand the existing monitoring system to include management effectiveness and performance;
- improve the territorial representation of monitoring, especially in the most affected demersal, littoral and coastal areas, and in the northern part of the lake that is less monitored than the other sectors;
- strengthen integration and cooperation in monitoring between the diverse public agencies and academic bodies;
- ensure that monitoring feeds into management and decision-making;
- increase the knowledge level on specific forms and sources of pollution (e.g. complex molecules, persistent pollutants, plastic), and promote interdisciplinary research and monitoring efforts. A specific and comprehensive federal programme could be targeted on the concrete preservation the hydro-system of Lake Baikal, for the mid and long-terms, mobilizing and optimizing the current governmental and academic capacities (e.g. public agencies, Academy of Science, Universities);
- enhance and support further research on cross-cutting themes in relation to climate change, water flow regulation, and the integrity of the watershed, among other drivers of water quality, in view of restoring high-quality water resources in the property;
- strengthen the capacities devoted to knowledge improvement, monitoring and management of the hydro-ecological changes and tendencies of the lake Baikal ecosystem, as a whole, and secure long-term funding to undertake the studies and other works needed;
- ensure continued transboundary cooperation with the State Party of Mongolia, in view of the largest part of the watershed being on the territory of Mongolia.

4.4. Remediation and development of former Baikalsk Pulp and Paper Mill

4.4.1. Elimination of accumulated waste of the Baikalsk Pulp and Paper Mill

The former BPPM which operated on the southern shore of the lake from 1966 until 2013, has been a permanent matter of concern for the Committee[67] and among the most debated issues in the environmental history of Lake Baikal.

[66] E.g. Baikalsk sewage treatment facilities, Baikal vodokanal (Tyya); Kamenskoye housing and communal services (Kamensk); Sewerage Systems (Babushkin); Teplovodoseti (Vydrino); Kishera company (Kichera); Solnechny (North Baikal district); Irkutsk sewage treatment facilities (Irkutsk); Slyudyankza sewage treatment facilities (Kultuk settlement).
[67] Decisions 22 BUR V.B.30, 22 COM VII, and all subsequent Committee decisions addressing the preservation of Lake Baikal.

After years of discussions and a long series of decisions taken by the Committee urging the State Party to appropriately manage the discharge of wastewater from the mill due to its potential impacts on the OUV of the property[68], the BPPM was finally closed in 2013. A plan and a timeframe were adopted by the State Party, including measures to address the industrial legacy of the plant[69]. The State Party was then requested several times by the Committee to develop a detailed EIA on the remediation and future use of the industrial complex[70], urging the State Party to develop it as a matter of priority[71].

In 2018, an action plan for the remediation of the former industrial complex was developed and consultations were launched for the EIA including an assessment of possible future uses and potential impacts on the property's OUV, which were requested to be submitted to the World Heritage Centre and for review by IUCN, by the end of 2019[72]. No information was provided on the implementation of this project or the EIA, leading the Committee to reiterate its request[73] and urge the State Party to suspend implementation of the plan until the mission has provided recommendations[74].

Despite being closed, the industrial complex remains a threat to the property due to the waste stored on the industrial site, which is generally referred to in the Russian Federation as an object of 'accumulated environmental damage' (AED)[75]. The industrial site occupies 192,7 ha of land and contain 6,8 Million m³ of waste cumulated over 50 years of the mill's operation, including lignin sludge, lime mud, fly ash – all typical to pulp production and potentially hazardous to the environment, as well as solid municipal and construction waste. The soil of the industrial site is also highly contaminated by heavy metals, and through polluted groundwater filters into the lake, as confirmed by the State Party and scientific research[76].

The effects of the BPPM on the lake and the region have been broadly studied in scientific literature[77] but the technological solutions to liquidation of the AED caused by the BPPM have not been fully resolved[78]. This is partly due to the challenges and limited capacity of the mill to manage its pollution and waste while still in operation which were extensively discussed by the 2005 and 2011 UNESCO/IUCN missions. The AED remains a major environmental threat to Lake Baikal; the area is seismically active and prone to mudslides and flooding, which could lead the waste washing into the lake, causing an unprecedented environmental disaster due to the high toxicity of this waste to aquatic flora and fauna[79].

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[68] Decisions 26 BUR XII. § 28 and 29; 30 COM 7B.18, § 5; 31 COM 7B.31, § 8; 33 COM 7B.28, § 3; 34 COM 7B.22, § 3, 5 and 9; 36 COM 7B.22, § 4 and 5. See also 2005 and 2011 mission reports.
[69] Decision 37 COM 7B.22, § 3, 4 and 5.
[70] Decisions 38 COM 7B.76, § 3; 39 COM 7B.22, § 4.
[71] Decisions 40 COM 7B.97, § 8; 41 COM 7B.6, § 6
[72] Decision 42 COM 7B.76, § 9.
[73] Decision 43 COM 7B.107, § 7.
[74] Decision 44 COM 7B.24, § 9.
[75] While accumulated environmental damage (AED) is a legal term in the legislation of the Russian Federation (e.g. Government Decree No. 2323 validating the Rules for organizing the elimination of accumulated environmental damage, https://www.fao.org/faolex/results/details/en/c/LEX-FAOC222962/), in this report it is used as a generic term referring to accumulated harm to the environment as requested by the State Party.
[76] Zvereva et al. (2022) - Industrial site of out-of-operation Baikalsk Pulp and Paper Mill as a potential source of pollution in Lake Baikal coastal zone. Limnology and Freshwater Biology 5(5):1630-1638. DOI:10.31951/2658-3518-2022-A-5-1630.
[77] Inter alia: ibid.
[78] Inter alia: Kondratyev, V.V, et al. (2017) - Development of technology of neutralization and binding sludge-lignin in cards sludge collectors of the Baikal Pulp and Paper Mill. International Multidisciplinary Scientific Geo Conference: SGEM; Sofia, Vol. 17. DOI:10.5593/sgem2017/52.
[79] Baturina, M.A. & Kononova, O.N., (2021) - Impact of Wastewater from the Pulp and Paper Industry on Aquatic Zoocenoses: A Review of the Literature. Contemporary Problems of Ecology, Vol. 14, No. 6, pp. 579–587. https://doi.org/10.1134/S1995425521060044

To solve this issue, Russian authorities have initiated a major project with the objectives to eliminate most significant sources of pollution (accumulated waste) and pathways through which they could spread. The mission discussed with a technical team of the State Corporation 'Rosatom' commissioned to undertake the works on the remediation of the AED on three of the four sites that are part of the former BPPM and visited the site of the former sewage treatment plant including facilities containing black liquor[80] (**Photos 3** and **4**). The two landfill sites of Babhinskiy and Solzanskiy also under the responsibility of Rosatom were not visited owing to climate conditions. The mission visited however the former factory site which is under the responsibility of the Baikal Centre.

Photo 3 – BBPM degraded facilities and waste storage pools. *(Credit: Kari/UNESCO).*

Photo 4 – New basins for the neutralisation of the black liquors *(Credit: Lethier/IUCN).*

An overview of the four sites (**Map 4**) and status of works is described below. In addition, emergency works were conducted in Solzansky and Babkhinsky landfills in 2021-2022 to pump out and clean water from the liquid waste storage ponds to lower the pond water levels to mitigate the risk of overflow.

After the mission, the State Party also shared with the mission two documents on the state expert appraisal (in Russian) of the environmental impact assessments related to the disposal and reclamation of waste from the two sites where remediation has actively started: the site of the sewage treatment plan and the Babhinskiy landfill. The documents describe the environmental impacts and the selection of remediation technologies over the lifecycle of the project. The quality of the treated wastewater, discharged into the Solzan and Babkha Rivers flowing into Lake Baikal, shall comply with the order of the Ministry of Natural Resources and Environment of Russia No. 83 mentioned above.

[80] A highly toxic by-product of the pulp production consisting of an aqueous solution of lignin residues, hemicellulose, and anorganic chemicals used in the process.

The mission was informed that an environmental monitoring programme with 93 environmental indicators is in place at two of the sites where remediation works have started. To date, results indicate that majority of environmental indicators meet set ecological requirements, however heavy metal concentration, suspended solids and inorganic ions exceed the ecological standards fixed for the Lake Baikal, due to the historical concentration and release of such toxics in the soils of the complex. Based on modelling during the development of the EIAs, these values are expected to normalize towards the end of remediation.

Map 4 – The four main industrial sites of Baikalsk Pulp and Paper Mill are located in the municipality of Baikalsk, a town established on the southern shore of Lake Baikal to cater for the mill. *(Source: State Party/Rosatom).*

1. The **<u>Factory site of BMMP</u> (Photo 5)** is undergoing active dismantling of the buildings, while parts of the area are already in reuse due to establishment of a museum to record the history of the area and construction of an eco-camp for educational and cultural activities. The mission did not receive information on related impact assessments or what environmental parameters are used to confirm the safety of the site, as it is being managed separately from the three major waste storage sites. Because the site is already in adapted reuse, including by school groups, it will be important to ensure that threats to the environment and human health are monitored and eliminated in the site, possibly considering an environmental monitoring programme that is harmonious with the other three sites.

2. The area of the **<u>Sewage treatment plant</u>** and the production facilities containing black liquor **(Photo 5)** was used in 1966-2013 when the BPPM was still operational. The site includes 288,000 m³ of liquid waste stored in various basins and containers and they have not been yet neutralized, nor treated, and 89 buildings and facilities to be dismantled. The assessment, technical design, and consultation towards the liquidation of AED was undertaken in 2020-2023 and works on active liquidation started in 2023 in the sewage treatment site and Babkhinsky landfill. The site will host the temporary treatment facilities for the alkaline-containing wastewater and sludge as well as the auxiliary structures including the pipelines for polluted and treated wastewater. The remediation works on this site are expected to be concluded by 2027.

Photo 5 – The site of the sewage treatment plant. The factory site is located in the back. *(Credit: Rosatom).*

3. **Babhinskiy landfill** (**Photo 6**), in operation in 1966-2019, has 495,000 m3 of accumulated mixed and mostly environmentally hazardous waste, including wood residue, solid domestic (municipal) and construction waste, ash from coal combustion, and sludge-lignin. It includes 12 buildings and facilities the dismantling of which has started. The site has been identified as the potentially most dangerous of the four sites due to high risk of migration of pollution, including to groundwater where it can enter the lake. A local wastewater treatment plant will be constructed to neutralize and clean accumulated above-sludge-water and industrial wastewater on this site. The treated wastewater is discharged into the Babkha River flowing to Lake Baikal. The remaining waste will be stored through capping techniques to avoid further contact with surface water that transports contaminants and accelerates infiltration.

4. **Solzanskiy landfill** (**Photo 7**) was in operation in 1966-1979 and is technically the most complex of the four sites owing to the composition and significant amount of 4,2 million m3 of waste, including sludge lignin and above-slurry water. The site is also located between two rivers and in a mudflow and seismic hazard zone. Research and Development Programme (RDP) is ongoing for finding the technical solutions to remediation of the site and pilot testing of technologies for treatment based on lithification and composting. Several expert organisations are involved in this research work, including Siberian Branch of the Russian Academy of Sciences. The research is expected to be concluded only in 2028, only after which the waste elimination can start.


Photos 6 and 7 – Babhinskiy landfill (left) and Solzanskiy landfill (right) *(Credit: Rosatom)*.

Due to the high environmental risks and complexity of the AED remediation, it's critical to continue to apply the highest environmental standards in the selection and application of the technologies. Noting that the proposed technologies consider capping (or 'locking') some of the waste instead of aiming at active waste elimination or recycling, potential soil and groundwater contamination and surface runoff could remain a threat, notably in view of the seismicity of the area.

An assessment of the adequacy of the currently proposed technical solutions requires specialised expertise in industrial waste management, hence a technical assessment of the EIA documents is beyond the scope and capacity of the current mission. The State Party and the service provider Rosatom should ensure that such expertise is available to the remediation project and that active and independently audited risk assessment and monitoring of environmental indicators is maintained in cooperation with expert and scientific bodies. Public review and fully transparent communication on the project progress will remain critical, also in view of the role the BPPM has played in the socio-economic history of the region.

Despite the uncertainty about some of the technical solutions and delays in initiating the remediation following the closure of the mill, the mission considers that the State Party has demonstrated the necessary commitment to resolve the significant environmental threat that the accumulated waste from the former mill poses to the lake. This is also reflected in the allocation of funding though the national project "Ecology", and it is critical to maintain this commitment to conclude the works.

4.4.2. Development of the former BPPM industrial site and Baikalsk Master Plan

In discussing the negative environmental impacts of the BPPM on the property, the Committee had on several occasions encouraged the State Party to develop an alternative livelihood strategy for Baikalsk – a city created for and fully depended on the mill for jobs and municipal services. When the plant was finally closed in 2013, sustainable livelihood options became an acute need for the city and an important driver for reclaiming the industrial site of BPPM occupying a third of the city's urban territory.

In 2020, the '*Baikalsk 2040 Strategic Master Plan for Integrated Development'* also knows as the Baikalsk Master Plan was launched as a vehicle to transform the city's economic model, tackling also its rapidly decreasing population number. This shift was already paved in 2007 when the national authorities established the SEZ "Baikal Gate" to attract investors in the tourism sector (see next chapter).

The mission was presented with an overview of the Baikalsk Master Plan (**Photo 8**) and the full plan was shared later. The plan has a dedicated website which outlines the consultative process towards its development, objectives, and progress made to implement it[81]. The plan itself has not been subject to an EIA because it is not a requirement under the Russian legislation, however a state environmental expertise is required for individual development projects.

Photo 8 – A snapshot of some activities planned in Baikalsk town as part of the Master Plan, some initiatives overlapping with the SEZ established in Baikalsk. The area in the lakefront is part of the former BPPM industrial complex. *(Credit: State Party/ KB Strelka LLC)*

Many initiatives are already moving forward, an encouraging example being the eco-camp site established in the former industrial site of BPPM and catering for school groups, events and cultural exhibitions (**Photo 9**). Safety of the sites should be ensured by which the mission requested in the previous chapter that the EIAs and environmental management plans for all four industrial sites are needed.

Photo 9 – An eco-camp created in the former Baikalsk Pulp and Paper Mill industrial site *(Credit: City of Baikalsk).*

[81] https://xn--80avhf.xn--80aab7afbg2c2f.xn--p1ai/

The development of the Baikalsk Master Plan is a commendable effort which aligns with the Committee's prior recommendations to consider alternatives to the BPPM. The implementation of the plan is therefore a major litmus test to the city to demonstrate that it can meet the requirements for a city located as an enclave of a World Heritage property and offer sustainable alternatives to the BPPM, underpinned by environmental protection and well-being of the local people. In doing so, the local and federal authorities should expose the plan and its implementation to critical review as well as peer support, in which initiatives such as the UNESCO Cities Platform and the IUCN Urban Alliance[82] may be helpful.

While describing important goals and activities to pursue the city's vision, the master plan does not currently guide situations when proposals could lead to contradictory outcomes (for example, between economic and environmental targets), nor is the legal status of the plan clear as to how it will guide design of the projects, impact assessments, and be used in the oversight of project execution, including for projects that are part of the SEZ 'Baikal Gate'. An approach to maximise economic benefit and the number of tourists at the expense of environmental and social sustainability would not be compatible with World Heritage standards. Similarly, proposed developments in the immediate shoreline in the water protection zone, close to sensitive watercourses, or those that lead to significant forest loss need particular attention and consideration for potential alternatives and they may not meet the World Heritage Convention requirements.

The World Heritage Committee has requested the State Party to conduct an EIA for the remediation, including the future development of the former territory of BPPM.[83] However, the mission observes that the remediation (elimination of waste) and the future development of the sites are distinct issues. Furthermore, due to the proposal for a series of development initiatives under the Baikalsk Master Plan, many of which appear to overlap with the proposed projects under the SEZ 'Gate of Baikal' (see chapter 4.5), an SEA would be a more suitable tool, enabling better understanding and planning for the global and cumulative impacts of the initiatives proposed under the plan, and to set strategic and generic mitigation measures that apply across these initiatives at the landscape scale. These measures should include guidance on the World Heritage attributes and values to be protected, such as the aquatic and terrestrial biodiversity and unique landscape. An assessment of the master plan therefore helps determining possible adjustments that are required to comply with environmental parameters and World Heritage requirements and establish a monitoring framework to measure progress towards environmental and social targets set out in the plan.

SEAs are not a legal requirement in the country, however they are an important tool in the World Heritage context to design and review development initiatives that concern various projects which may have an important cumulative impact on World Heritage properties and their OUVs. SEAs are therefore routinely requested by the Committee, and they are explicitly referred to in the *Operational Guidelines for the Implementation of the World Heritage Convention*[84] and in the principles of the *Guidance and Toolkit for Impact Assessments in a World Heritage Context*[85] – to be available shortly in Russian language.

[82] https://iucnurbanalliance.org/.
[83] E.g. Decision 45 COM 7B.24 § 9; Decision 44 COM 7B.107 § 7; Decision 42 COM 7B.76 § 9; Decision 41 COM 7B.6 § 6.
[84] Paragraph 118bis of the Operational Guidelines, available at https://whc.unesco.org/en/guidelines/
[85] Guidance and Toolkit for Impact Assessments in a World Heritage Context (UNESCO/ICCROM/ICOMOS/IUCN, 2022) available at https://whc.unesco.org/en/guidance-toolkit-impact-assessments/. The guidance will be published in Russian during 2024.

4.5. Large scale tourism development through the establishment of two SEZ in the property

The mission was requested to assess the threat posed to the OUV of the property by the existing and proposed developments in the SEZ created for fostering the tourism industry in the property, and to assess progress made in undertaking EIAs and a SEA for all SEZs regarding existing and future developments and their cumulative impacts.

The tourism sector appears to evolve in two distinct ways within the property: through seemingly coordinated large-scale tourism development initiatives implemented as part of the two SEZs established in the property, and through rapid emergence of mostly small and medium-scale tourism and recreational facilities in municipalities and settlements (159 in total) located within the property. Benefits and challenges are evident in both approaches, however in the absence of careful coordination and planning based on a global vision and strategy at the lake level, both approaches may pose a threat to the property for their negative impacts on the OUV. This chapter mostly looks at SEZs while general construction pressure is addressed in the next chapter.

The State Party has legally established two SEZs for tourism development in 2007 (**Map 5**): 'Gate of Baikal'[86] (also called as Baikal Gateway) overlapping within the Baikalsk town, and 'Baikal Harbor' in the Republic of Buryatia on the eastern coast of Lake Baikal, both being located in the CEZ. As the town of Baikalsk is excluded from the World Heritage property, the Gate of Baikal SEZ is not within the World Heritage property (assuming that the boundaries of the SEZ are fully inside the settlement boundaries), however, any development occurring within the town will affect the property's protection.

Map 5 – Location of the two SEZ "Gate of Baikal" to the south and "Baikal Harbor" to the east. *(Source: Map created with the UNESCO World Heritage Online Map Platform WHOMP, available at https://whc.unesco.org/en/wh-gis/).*

SEZs are managed through a set of legal provisions providing investors special tax, customs and other preferential conditions for development, and access to infrastructure built with government funding (electricity, heating, water, sewage facilities). The State Party reports that ("more than") 48 infrastructure facilities have been built up to date, and commissioned in the two SEZs, mostly in Baikal Harbor SEZ (47). None of these proposals were submitted to the Committee while they may have impacts on the property's OUV, including on its landscape and aesthetic values as well as its biodiversity due to presence of endangered and endemic species within the property and the SEZ territories.

[86] Special Economic Zone "Gate of Baikal" http://en.baiksez.ru/

In response to Committee's request to conduct EIAs on the SEZs, the State Party has reported that SEZs are not required to undergo EIAs, as they are not development projects in and of themselves. The State Party however informs that during the creation of the SEZs, the state environmental expertise was obtained to ensure a comprehensive assessment of environmental impacts. The mission has not had access to these documents. In addition, specific individual projects, including those within the SEZs, are subject to environmental assessments in accordance with the procedures for State Environmental Expertise established by the law. Furthermore, the mission observes that the realization of a SEA for any complex program composed of several individual projects is a permanent recommendation of the Committee, even if such assessment is not imposed by the internal law of the State Party.

At the same time, the status of a SEZ of tourist-recreational type allows for the construction of facilities outside settlements and within the water protection zone of Lake Baikal. In the view of the mission, this is a particularly problematic clause as it increases the risk of harm to the features and attributes for which the property is listed, including its ecological and visual integrity and may not be always fully adapted to climate change (**Photo 10**).

Photo 10 – SEZ Gate of Baikal, recreational activities and use of artificial snow (*Credit: Lethier/IUCN*).

The mission was presented with an overview of both SEZs and current investments plans. The "Gate of Baikal" SEZ is reflected in the Baikalsk Master Plan, however the mission was unable to establish full clarity on the relationship between the SEZ and the Master Plan. In the case of "Baikal Harbor" SEZ, a territory planning reportedly exists, revised in 2022, but the mission was not presented with any related documents. SEZs should clearly form an integral part of town-planning in view of the infrastructure and service requirements of SEZs, and how the tourism projects will eventually interact with the host community.

Table 3 attempts to establish indicative list of sites and projects in the two SEZs, both for infrastructure and tourism development, and their status of implementation. The visuals are extracted from presentations made to the mission and illustrate the project plans. The mission notes that the list is provisional and indicative as the documents provided by the State Party do not provide a definitive list of residents (investors) that have established a legal agreement with the SEZs.

Table 3. List of projects planned in the SEZ within the World Heritage property.

SPECIAL ECONOMIC ZONE Gate of Baikal

- 763 ha within the town of Baikalsk divided between two main areas: 1) foothill area within the territory of Sobolinaya Mountain, and 2) coastal area along Lake Baikal.
- Prospective development plan approved in 2017, objective to create 2000 new rooms (3990 beds) new accommodation capacity for an annual visitor flow of 400,000 people and over 900 new jobs.
- 23 registered residents, 4 residents have building permits.
- EIAs for projects of Tau-Tour LLC, Baikal-Alpika LLC, and aerial cable car of BGK Gora Sobolinaya LLC, have been completed. Positive conclusions of the state environmental expertise are shared with the mission and contain information on environmental impact assessments.
- Project documentation is under development for 7 residents (Talisman Baikal LLC, Talisman Sobolinaya LLC, BratskTurInvest LLC, Baikal Mountain LLC, Vector Baikalsk LLC, Cosmos LLC). After completing the design stage, projects must undergo a state environmental assessment, the purpose of which is to assess the impact of the project on the environment.
- 1 unit of infrastructure commissioned.
- An EIA of the project documentation for the engineering infrastructure objects, incl. water, heat and power supply networks, sewage network, operational and technical base, and information and communication networks of the SEZ (dated 2020 - in Russian) is shared with the mission. The document concludes that environmental impacts are permissible if properly managed, acknowledging negative impact on vegetation due to permanents loss of green space and indirect negative impact on aquatic biological resources and their habitat due to changes in the surface runoff.

Photo credit: Gate of Baikal SEZ

Photo credit: Gate of Baikal SEZ/ http://en.baiksez.ru/

Area/Resident/project

1. Gora Sobolinaya BGC LLC

– Construction, reconstruction, and operation of ski facilities in the existing Sobolinaya Mountain Ski Resort (established in the 1980s) and other projects entitled “Development of the Sobolinaya Mountain Ski Resort”. The list of projects, expected to be finalized between 2024-2026, as presented to the mission is provided below.

- Construction of 6-chair ropeway at the Sobolinaya Mountain Ski Resort (reconstruction of the existing drag ropeway) – EIA completed
- 10-seater gondola cable car (reconstruction of the existing chairlift)
- Service Center at the Sobolinaya Mountain ski resort for 5,000 people/day
- Hotel with 120 rooms at the Sobolinaya Mountain ski resort
- Artificial snowmaking system for ski slopes at the Mount Sobolinaya ski resort
- Bath complex at the Sobolinaya Mountain ski resort
- Cross-country ski trails (bicycle paths) at least 5 km long
- Thermal spa hotel with 120 rooms in the coastal part of the city of Baikalsk with infrastructure
- International Water Resources Center in BPPM industrial site

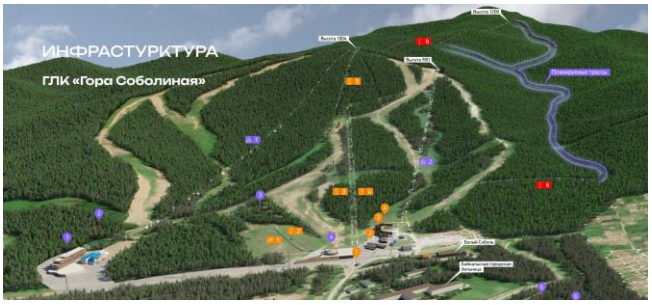

Photo credit: Grand Baikal/EN+ Group

2. Talisman Baikal LLC

Hotel, restaurant, apartment complex, and infrastructure facilities Planned for 2026.

Photo credit: Gate of Baikal SEZ

3. Planet I Ltd.

Planned for 2026.

Photo credit: Gate of Baikal SEZ

4. Cosmos Ltd.

A hotel complex planned for 2025

Photo credit: Gate of Baikal SEZ

5. Tau-Tour LLC

All-season, multifunctional hotel complex with a hotel building of 8 rooms 5 bathhouse buildings, planned for 2024. Project EIA (2020, in Russian) and the certificate of the positive opinion of the expert commission of the State Environmental Expertise on the project documentation (2020, in Russian) are shared with the mission.

Photo credit: Gate of Baikal SEZ

Photo credit: EIA/Tau-Tour LLC

6. Baikalskaya Gora LLC
Planned for 2026

Photo credit: Gate of Baikal SEZ

7. Vector Baikalsk LLC
SPA complex with five hotel houses planned for 2026

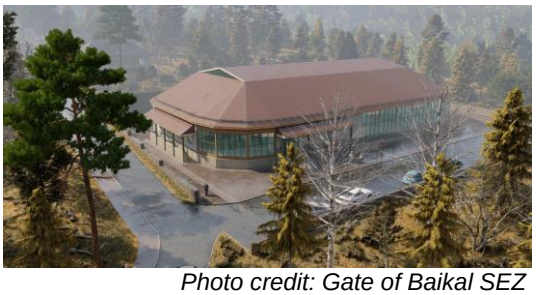

Photo credit: Gate of Baikal SEZ

8. LLC Baikal-Alpika
A hotel complex with fifteen one-story buildings (14 for accommodation and one for administrative purposes), planned for 2026. A document of the positive opinion of the expert commission of the State Environmental Expertise on the project documentation (2022, in Russian) was shared with the mission.

Photo credit: Gate of Baikal SEZ

9. LLC Baikal Atlas
Apartment hotel planned for 2026

Photo credit: Gate of Baikal SEZ

10. Spectrum BC Ltd.
Planned for 2025.

Photo credit: Gate of Baikal SEZ

11. BratskTourInvest LLC
Planned for 2025.

Photo credit: Gate of Baikal SEZ

12. Uyut+ Ltd.
Planned for 2024

Photo credit: Gate of Baikal SEZ

13. OOO Greenwald-Baikal
A hotel complex planned for 2026

Photo credit: Gate of Baikal SEZ

14. OOO Regionenergo
Hotel complex planned for 2026

Photo credit: Gate of Baikal SEZ

15. LLC Sakhalin Group
Hotel complex planned for 2026

Photo credit: Gate of Baikal SEZ

16. Edelweiss Ltd.
Hotel complex planned for 2026

Photo credit: Gate of Baikal SEZ

17. Bioprotect Ltd.
Planned for 2025

Photo credit: Gate of Baikal SEZ

18. Copper Mountain Ltd.
Hotel planned for 2025

Photo credit: Gate of Baikal SEZ

19. OOO VALO PROJECT
Hotel complex planned for 2026/2027

Photo credit: Gate of Baikal SEZ

20. Talisman Sobolinaya LLC
Hotel, restaurant, apartment complex, and infrastructure facilities planned for 2025

Photo credit: Gate of Baikal SEZ

21. OOO Big Baikal
Multifunctional shopping and entertainment complex planned for 2027

Photo credit: Gate of Baikal SEZ

22. Yuzhny Bereg LLC
Planned for 2026

Photo credit: Gate of Baikal SEZ

Other potentials residents mentioned in the documents shared by the State Party (status and relationship to the above residents not established):
LLC SpektrBC
LLC PLANETA I
LLC Baikal Mountain
LLC Biozaschita

SPECIAL ECONOMIC ZONE "Baikal Harbor"

- 3623 Ha divided between five subareas (Bezymyannaya Bay, Goryachinsk, Turka, Peski, and Bychya Mountain) on the eastern shore of Lake Baikal in the Pribaikalsky District of the Republic of Buryatia
- 6 registered residents
- Development plan approved in 2011, with the objective to create 4,500 rooms of new accommodation capacity and 2,300 new jobs.
- 47 units of infrastructure commissioned including wastewater treatment facilities, water intake facilities, storm water sewage, harbour construction in Turka (dredging, bank protection, mooring structures, embankment).
- The State Party reports that an 'environmental impact assessment' of the proposed SEZ was undertaken based on available stock and literature data, without special field and in-situ studies. A summary document was provided to the mission, which describes the characteristics of the areas and possible project interventions and states that as "a result of tourist development of the territory, the ecological balance is disturbed, the way of life of the local population is changed, and cultural identity is lost" and describes how the environmental impacts could be managed through design solutions. The mission did not receive full copy of the study.

Photo credit: Baikal Harbor SEZ

Area/Resident/project

Turka

- The Turka site is most developed of the five sites, including the reconstructed harbour area to serve cruise tourism on Lake Baikal. The infrastructure is managed by the SEZ while residents invest in specific tourism projects.
- Significant works undertaken for embankment, dredging of the river channel, wastewater treatment facilities (serving Turka and Peski), water supply for community, stormwater drainage, power station, and other infrastructure.
- As part of the allocated grant, a network of ecological trails was designed and built, framing the territory of the SEZ and village.
- Positive conclusion of the State Expertise for 1) territorial planning and 2) construction of engineering infrastructure facilities of the Turka and Peski/Sands sites obtained in 2008. These documents have not been shared.

Photo credit: Baikal Harbor SEZ

1. Green Flow Baikal

- A 4-start hotel with 154 rooms, 15 bungalows, apartment complex, with conference facility, restaurant area, viewing tower, and spa/thermal complex by the lake shore.
- Design and EIA approved. Construction of the hotel has started with expected opening in 2025.

Photo credit: Green Flow Baikal

2. Traveler Siberia

- Construction of guesthouses, villas, a 4-star boutique hotel, gastromarket, restaurant, visitor center and water sports school.
- Adjustments to the design underway.

Photo credit: Baikal Harbor SEZ

3. Baikal Hermitage

- A 5-start hotel complex, with an apartment hotel, congress centre, restaurant complex, medical health centre, concert and sports complex, and equipped embankment.
- Design in progress.

Photo credit: Baikal Harbor SEZ

<u>Peski</u> ("Sands")

- New infrastructure at the site is reported to include water intake facilities to serve the Peski and Turka sites.

4. Amar

- Hotel complex with 360 rooms, with centre for spiritual development, restaurant complex, research centre, a viewing tower, and art object mammoth skull.
- EIA underway.



Photo credit: Baikal Harbor SEZ /Amar

5. Youth. Baikal.

- A hotel complex with restaurants, baths complex, beach club with pool and a health complex.
- Design being finalised.

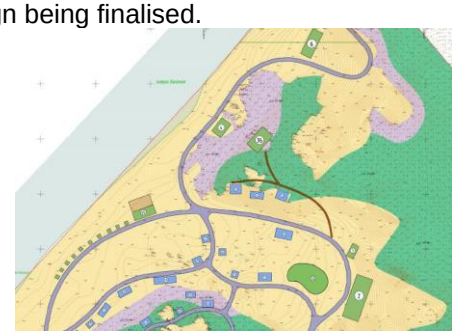


Photo credit: Baikal Harbor SEZ

<u>Bezymyannaya Bay</u>

5. Cosmos Hotel Baikal

- A 5-start hotel and resort complex with 360 rooms, oriental medicine clinic, restaurants, spa and equipped park and beach area.
- Design approved.

Photo credit: Baikal Harbor SEZ

Goryachinsk

- The site has no current residents which are actively being searched. Territory planning, development plan and list of infrastructure facilities has been developed. The site has no existing infrastructure.

Photo credit: Baikal Harbor SEZ

Bychya Mountain

- The site has no current residents. Survey work was carried out to develop design documentation for the engineering infrastructure in the site, which had received positive conclusion of the state expertise. A preliminary concept for the development of a mountain resort exists. The site has no existing infrastructure.

Photo credit: Baikal Harbor SEZ

The SEZs seem to be a good vehicle to improve infrastructure capacity of the existing towns and settlements and therefore can help address problems linked with sewage and household waste. The Republic of Buryatia also reported on an important programme to eliminate unauthorized landfill sites within and outside the World Heritage property (**Photo 11**).

To tap into the tourism potential of the World Heritage to foster socio-economic development of region, for which the SEZs provide an administrative vehicle, is understandable. The national authorities also see SEZs as a tool to address unorganised tourism in the World Heritage property which results into environmental degradation and waste production (**Photo 12**). However, it is unclear to the mission how the provision of high-end services and accommodation will address the existing problems of unorganised tourism which seems driven by camping and low-cost options to enjoy the region's nature. The risk is that new hotel capacity will significantly increase the anthropogenic load on the property due to growing tourism pressure targeted on specific consumers but does not solve existing problems due to mass unorganized tourism. Similarly, the mission notes the social risks of large-scale investor-led tourism, past research indicating negative or sceptical attitudes among the local residents towards the SEZs[87].

[87] E.g. Slipenchuk, M., Sedova, N. & Vorobyevskaya E. (2016) - Sociological research in the tourism and recreation zone "Baikal Harbour". Journal of the Geographical Institute Jovan Cvijic SASA, 66 (2), 325-332. https://doi.org/10.2298/IJGI1602325S

Photo 11 – Former site of an illegal landfill after environmental restoration, Republic of Buryatia (*Credit: IUCN/Hervé Lethier*).

Photo 12 – An example of challenges as a result of unorganised tourism in the property *(Credit: Ministry of Environment, Republic of Buryatia).*

The mission was also informed about a major initiative to increase cruise tourism in Lake Baikal, including introduction of new passenger vessels and cruise ships, new tourism and harbour infrastructure for example in Bolshoye Goloustnoye in Pribaikalski National Park, as well as a significant number of hovercrafts (as many as 200 in SEZ “Baikal Harbor”). The provisions of operating and monitoring the impacts of such operators would need to be established as they potentially cause harm to wildlife, as noted by the officers of the Pribaikalski National Park. Scientific reports also inform that ships are already an important contributor to the eutrophication of the coastal area due to the disposal of untreated wastewater and black and bilge waters.

Without an overall strategic vision or plan for tourism development and management in the World Heritage property, the mission further notes that there is a significant risk of competition between the SEZs and the municipalities and tourism settlements outside the SEZs, which are already heavily relying on tourism, driving mass tourism and runaway development at a significant environmental and social cost.

While SEZs have the potential to contribute to the economic development of the region, help coordinate tourism development, and improve environmental performance of the municipalities and the tourism sector thanks to access to supportive infrastructure, the mission considers that the SEZs may pose a threat to the property in the future, notably due to increase in recreational load on the territory (waste, air and water pollution), loss of natural habitats and impacts on biodiversity. The scale of construction is also such that it could lead to change of the landscape and the property's visual character and aesthetic, however, in view of the big size of the property this impact would be restricted to specific locations.

Integration into the landscape and minimizing the overall effects of those constructions on natural beauty and aesthetic should nevertheless be a strong requirement for all construction projects; some of the architectural concepts presented to the mission would unlikely meet this requirement and they would affect the natural features of the property. Prioritising construction in existing settlements and municipalities can minimize the ecological and aesthetic footprint of these projects, as they are closer to necessary infrastructure and likely to contribute less to fragmentation and disturbance of the natural habitats and environmental processes.

Furthermore, the information shared on the SEZs indicate that in the management of SEZs economic incentives and indicators are prioritised over the protection and management requirements of the World Heritage property. The summary of the EIA of the 'Baikal Harbor' SEZ which was shared with the mission referred to several important measures to manage environmental impacts of the SEZs, such as setting environmental targets, standards and auditing, however the mission understands that no such environmental management plan has been formally adopted for the SEZs. The full EIAs of the SEZs were not available to the mission and have regrettably never been shared with the Committee.

As most construction projects in the SEZs are still in their planning stage - or not yet known - the State Party can still guide their sustainable development so that they are fully compatible with the World Heritage standards. To do this, the State Party should conduct the SEAs of the SEZs as repeatedly requested by the Committee, and also assess and minimize the cumulative impacts of the multiple development projects in each SEZ on the property. The assessment should guide decisions to manage and adapt the SEZs if needed and used to develop strategic guidance for resident companies and prospective investors and an environmental management plan for the SEZs.

The legal provisions in the country already support the conduct and review of EIAs, however the mission considers that the SEZ residents and other project proponents should be instructed to also use the "*Guidance and Toolkit for Impact Assessments in a World Heritage Context*" to meet the international standards. This may not have to be a legal requirement but could be integrated as guidance in the SEZ management plan or an integrated management plan for the property. The case proves the value of a property-wide management plan which can provide key information to stakeholders on the values and attributes of a World Heritage property, as well as on its management and protection requirements, without each stakeholder having to interpret this independently.

Finally, tourism development and management are under the responsibility of each administrative unit in the governments of the Republic of Buryatia[88] and the Irkutsk region[89] which have approved separate rules for organizing tourism and recreation in the CEZ. Neither of the two regional instruments refer to the existence of the World Heritage property on their respective territory. The mission is of the opinion that there is a crucial lack of vision at the level of the property, which slows progress towards developing a balanced and sustainable tourism sector that is compatible with the sensitivity of the ecosystem and meets the World Heritage requirements.

Such a vision should be established under the leadership of the federal government and could be the subject of a coordinated action programme, responding to past decisions of the Committee in this area and integrating the recommendations of UNESCO World Heritage and Sustainable Tourism Programme and the guidelines established for this purpose. The State Party may also wish to invite a World Heritage advisory mission to guide the development of a sustainable tourism strategy and integrated management plan for the property.

4.6. Unauthorised construction and overall development pressure in the property

The rapid increase of visitation and the desire to exploit the lake's natural attractiveness and special cultural context for socio-economic development have led to instances of unauthorized construction – a threat to the property raised by the Committee. It has led the Committee to request repeatedly for an enhanced town-planning and land-use regulations and plans.[90]

The State Party reports that in total the environmental prosecutors have registered in the Irkutsk Region 50 court decisions on the demolition and dismantling of 319 illegal buildings between 2018-2023 within the property. Of these, 178 building were legalised, 69 demolished, and in the case of 73 objects, final decision is pending. In the Republic of Buryatia, 33 enforcement proceedings for demolition of 160 unauthorized buildings was ongoing in December 2023. (**Photo 13**)

To address illegal construction, national authorities are conducting inspections to detect unauthorized buildings and other violations of environmental legislation and taking legal actions including issuing court decisions for demolition. Irkutsk Region has also established a specific commission to provide specific legal and practical advice on the use of land plots, buildings, and structures located in the property, aimed at guiding the owners of disputed facilities on conditions to meet the legal requirements, therefore supporting conflict resolution between the authorities and residents.

[88] Resolution N°416 dated August 1st, 2019.
[89] Resolution N°777-pp dated September 19th, 2019.
[90] E.g. Decision 33 COM 7B.28 (2009), § 5.

Photo 13 – Example of illegal construction *(Credit: IUCN/Hervé Lethier).*

The park authorities are taking important measures to assess and manage the impacts of visitation and calculate recreational loads in protected areas, however these efforts will be in vain if the municipalities issuing and monitoring construction permits are not guided by a shared vision to protect the integrity of the property's terrestrial and aquatic ecosystems.

The park authorities reported on the new legislation to assess the recreational capacity of the protected areas.[91] Pribaikalski National Park has been among the pilot sites where they tested the tool for the northern part of Island Olkhon, estimating the carrying capacity at around 4,000 people per day. The tourism service capacity is 23 000 beds in the national park, of which 77 collective accommodation facilities in the Island of Olkhon have the capacity of 1246 rooms or 2,973 beds, indicating rapid saturation (**Photo 14**). The tourism flow inside the national park has increased tenfold over the past decade, with 14,234 people visiting the park in 2012 and 178,854 people in 2023, with over 90,000 people visiting Olkhon which has less than 2,000 permanent residents. This should lead to strict control of tourism load and limit the number of additional tourism facilities, notably in view of a general weakness of municipal infrastructure including for wastewater collection and treatment.

Also considering the significant costs for issuing and enforcing court decisions, collaboration with and guidance to the municipalities on issuance of additional construction permits would seem a useful preventive measure, which should be pursued and strengthened through an assessment on the adequacy and compliance of the land use planning and permitting.

[91] The requirement is established by the Order N°1811 dated October 31st, 2023 "*On approval of the rules for calculating the maximum permissible recreational capacity especially protected natural areas of federal significance with implementation of tourism*".

Photo 14 – A picture depicting the rapid increase of tourism facilities during the past 5 years in the settlement of Khuzir, Olkhon Island. (Material submitted to the World Heritage Centre and shared with the State Party in accordance with paragraph 174 of the Operational Guidelines).

The protected area authorities report on and propose actions to address the increased anthropogenic pressure causing decline of biodiversity, such as through digital permitting system for tourism routes, permitted ground routes, enforced zonation of the Pribaikalski National Park and the creation of an aquatic buffer zone for the Baikal-Lensky Nature Reserve, all of which should be implemented to facilitate management effectiveness in this unique context. The protected area includes some 3,000 km of motorways, 70 km of railways,17,000 heads of livestock actively grazing in the park's management zone, and 16,000 people living permanently within the 54 settlements located inside the park boundaries. Such a human footprint requires active management (**Photo 15**).

Photo 15 – Selective garbage collection in Olkhon Island. *(Credit: IUCN/Hervé Lethier).*

The State Party also reported on the efforts done as part of the national spatial data system to adjust master plans and rules for land use and development in the existing 3 districts, 16 municipalities and 77 settlements located in the property on the territory of the Irkutsk Region. Comparative information was not provided for the Republic of Buryatia. The mission is unsure how this process has strengthened the protection of the property and relates to the rules issued by the Government of the Irkutsk Region and the Republic of Buryatia, respectively, for organizing tourism and recreation in the CEZ of the Baikal natural territory. Construction of economic facilities and tourism are closely related issues within the property and hence need to be addressed in an integrated manner.

Information about the overall evolution of construction pressure within the property was not available to the mission, however media reports[92] indicate that as many as 14,500 new land plots may have been formed in the property since 2017. The mission notes that construction activities – whether unauthorized or authorized – often result in increased waste, sewage discharge, and landscape alteration, which may have direct, indirect and cumulative negative impacts on the lake's water quality and the property's biodiversity. Construction also put additional pressure on local infrastructure, including roads, waste management systems, and water supply, which may not have the capacity to handle increased loads. This can exacerbate environmental problems and degrade the quality of life for local residents. Controlled and uncontrolled construction can also compete with the requirement to maintain the property's landscape integrity as mentioned in the previous chapter and recognized in its exceptional natural beauty and aesthetic features and importance, under criterion vii.

The pattern of unsustainable development pressure is already evident within the property, where the massive increase of hotel and tourism facilities and socio-economic activities in general, is resulting into eutrophication due to large amount of wastewater entering directly and indirectly the lake. Many municipalities lack the proper infrastructure to adequately or at all treat the wastewater whereby operators may have to rely on their on-site storage and treatment. Violations of water, land use and protection legislation within the property have been broadly referenced in media and scientific reports[93], notably in settlements where tourism flow is also significant. These include the Olkhon Island and Lytsvianka, which are reported to suffer from severe signs of coastal eutrophication, loss of biodiversity, and habitat degradation despite being located within the Pribaikalski National Park.

The mission fully supports the national priorities as set out in the presidential instructions to assess the wastewater disposal systems of the settlements, and assess the potential and current impact of tourism and recreational activities to improve the protection and ecological rehabilitation of Lake Baikal. The mission is also of the view that the authorisation of new tourism facilities should be conditional on the State Party's capacity to build up a strategic approach for sustainable tourism at the property level and minimize the cumulative impacts of those activities on the property and its OUV. Moreover, the tourism sector itself depends on the beauty and aesthetic appeal of the property and clean nature for its value and attractivity.

4.7. Extensive wildfires and subsequent forest degradation

The subject of forest fires on the Baikal Natural Territory and within the property appeared in 2015 on the Committee's agenda. At that time, the Committee noted that although the natural values of the property were not significantly damaged, a number of protected areas around

[92] E.g. https://www.pnp.ru/social/fetisov-prizval-proverit-zakonnost-obrazovaniya-uchastkov-na-baykale.html?ysclid=llvsevo8je155265103.

[93] E.g. Rudykh, L. & Shilova, O. 2020. Tourism Investment Development of The Baikal Region: Basic Issues, Challenges And Prospects. The European Proceedings of Social and Behavioural Sciences. https://doi.org/10.15405/epsbs.2020.12.68

the lake appeared to have been significantly affected which could have negatively impacted the OUV of the property[94].

The State Party was urged to assess those impacts, taking into account the interrelationship between the lake waters and the forests around the lake which are included in the property[95]. The Committee also requested the State Party to prepare guidelines for the future development of management plans for all protected areas around the lake, with a view to develop an integrated management plan for the whole property, including a fire management and prevention plan.

During its visit, the mission was briefed of the impact of fires on the ecosystem of the property, and it had the opportunity to discuss on this topic with the regional authorities. The year 2015 was the most dramatic, with 2 676 fires recorded in the Baikal Natural Territory, on a total area of more than 1 Million ha, representing almost a quarter of all fires occurred during the same year in the whole Russian Federation. During 2018-2023, more than 3 000 fires occurred in the forests of the territory[96], with fire incidents reported in the buffer ecological zone (60%), in the CEZ (12%) and in the atmospheric influence zone (28%). According to the State Party, these wildfires are generally caused by lightning, the anthropogenic factors considered as a less important source.

As requested by the Committee, the State Party has assessed the fire occurrence in the Baikal Natural Territory (this information has not been specified to the property). The impact assessment of fires is however a very complicated process due to the variability of the fire incidents (e.g. types, intensity, recurrence), and also due to the diversity of the ecological and environmental contexts (e.g. topography, precipitation, species, habitats, biodiversity). Appraising fire effects on species and their habitats, both aquatic and terrestrial, as well as on the environmental processes leading to the evolution of a natural area in the mid and long-terms, is also very challenging. It is known that forest fires have effects on trees and plants, and they may also affect the air[97], the soils[98] and the water biotic balance[99] in general, increase the degradation of organic matter, and may aggravate and accelerate soil erosion, especially in coastal zones.

Based on the results of the research efforts undertaken in the region in recent years, it was not possible to conclude on the effects of fire on the property. Overall, it appears that fire incidents would not have significantly affected the aquatic part of the property, namely Lake Baikal, which would have shown resilience to fire and climate change effects[100].

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[94] Decision 40 COM 7B.97, § 5.
[95] Decision 42 COM 7B.76, § 7 a) to c).
[96] This area covers a total of 510 000 ha, spreading over the territories of the Republic of Buryatia (57,1%), Irkutsk Oblast (28,5%) and Zabaikalsky Krai (14,4%).
[97] Khodzher T. V. et al. (2022) - Monitoring and assessment of hazardous natural phenomena (forest fires) and anthropogenic sources on the quality of the atmosphere in the Baikal region based on complex remote and ground-based local measurements, and mathematical modelling. DOI: 10.31554/978-5-7925-0621-3-2022-111-115
[98] Shcherbov B.L. (2011) - Forest fires as a geochemical threat. Journal "Science first hand", p. 120–127. Electronic resource. – cyberleninka.ru.article.
[99] Belan S.V., Rybalova O.V. (not dated). Analysis of the influence of forest fires on the ecological state of water bodies. Electronic resource. – cyberleninka.ru.article.
Shesterkin V.P., Shesterkina N.M. (2017) - Long-term dynamics of the chemical composition of waters of taiga rivers in the burnt areas of Northern Sikhote-Alin. PEMME. T. XXVIII. No. 2. S. 56 – 68.
[100] *Inter alia*: Pinardi, M et al. (2023) - Assessing the impact of wildfires on water quality using satellite remote sensing: the Lake Baikal - case study. Front. Remote Sens. 4:1107275. https://doi.org/10.3389/frsen.2023.1107275

However, the mission did not have the opportunity to visit the impacted sites on the ground. It was only able to discuss the subject with relevant national and regional authorities for two hours, indoors, during its visit. Moreover, no map of the impacted sites was shared, which could have facilitated the appreciation of not only the extent but also the precise location of the damage. Furthermore, the data referred to on the size of the surface of the land area impacted in the property (see above) cannot be seen as sufficient to provide information alone on the environmental effects of these fire incidents, in particular on the species and habitats as well as on the environmental processes on the basis of which the property has been listed on the World Heritage List under criteria (ix) and (x). Finally, the information provided to the mission did not allow it to understand the effects of these fires on the beauty and aesthetic value of the site in the affected areas.

No precise analysis was provided either on the natural processes for restoring degraded forest ecosystems. Moreover, the mission is aware that the State Party is concentrating its forest restoration efforts on promoting natural regeneration but the measures taken, in 2023 in particular, to replant the impacted sites following fires, over several thousand hectares, after soil preparation, could lead towards an artificialization of the forest ecosystem which, in the long term, may negatively impact the OUV of the property, including its integrity. The mountainous landscape is particularly prone to erosion, therefore both fires and human-induced soil manipulation may exacerbate this problem.

Thus, the conclusion that the property would not have been significantly impacted by the fires should be interpreted carefully. If the biological and physicochemical quality of the lake waters may not have been severely impacted according to certain scientific work, monitoring of these potential effects on the aquatic ecosystem should be ensured over the long term.

The mission also recommends that the potential impacts of fires be assessed further on the terrestrial part of the property, particularly on the forest ecosystems. The State Party should also be invited to develop a detailed and comprehensive forest restoration plan of the forest ecosystem impacted by fires, based on natural regeneration and in favoring natural processes, aiming in priority to maintain the intactness of the property, as a necessary part of its integrity. This plan should be submitted to the World Heritage Centre for review by IUCN. Fire management should be part of the integrated management plan for the whole property as called by the Committee, including a comprehensive monitoring scheme[101].

Since 2015, the State Party has revisited its fire prevention and control strategy in the Baikal region. The federal Law on forest fire protection[102] was amended to strengthen emergency response and firefighting equipment, and 8 federal protected areas[103] from the Baikal Natural Territory are now under the protection of the “Avialsookhkhrana” FBO agency. The protected area authorities that met with the mission also confirmed this strengthened capacity. During 2018-2023, a series of measures were also taken to restore the forest ecosystem such as tree plantations (see above), and improvement of technical equipment; fire control plans were also consolidated, and specific intervention plans were elaborated for each forest area. These measures were supported by the federal Project “Forest conservation” of national Project “Ecology” and they sought to:

- ensure fire protection of forest in priority in the CEZ;
- improve proactive interventions and coordination between all stakeholders;

[101] Decisions 25 COM VIII.89-94, § 93; 31 COM 7B.31, § 7; 40 COM 7B.97, § 9; 41 COM 7B.6, § 4; 42 COM 7B.76, § 5.
[102] Law n°343-FZ dated July 24th, 2023.
[103] Djerginsky State Natural Reserve, Baikal State Natural Biosphere Reserve, Sokhondinsky State Natural Biosphere Reserve, Tunka National Park, Zabaikalsky National Park, Baikal-Lensky State Natural Reserve, Barguzinsky State Natural Biosphere Reserve and Pribaikalsky National Park (Source: State Party).

- set up a comprehensive and efficient information, communication and fire control system, involving the various forces and capacities;
- strengthen and improve the intervention technical capabilities;
- increase the level of protection of forest within the Baikal nature area.

The mission concludes that, since 2015, the State Party has significantly improved its capacity in fire prevention and control at the regional level; for example, aerial patrolling and firefighting activities appear to have significantly increased and improved during the past few years and coordination has been reinforced while intervention capacities have been strengthened.

4.8. Hydropower development in Mongolia

A Reactive Monitoring mission was conducted in 2015 on three specific hydropower projects planned in Mongolia, in the Selenga River basin. This mission recommended that the State Party of Mongolia should be requested:

- to ensure that the EIA developed for the Egiin Gol Project includes assessment of potential impacts not only on the hydrology, but also on the ecological processes and biodiversity of the property, and to provide the Committee with the full EIA report;
- to revise the terms of reference developed for the preparation of EIAs for the Shuren Hydropower plant and the Orkhon Gobi projects in order to include a request for a specific assessment of any potential impacts of the projects on the OUV and integrity of the property, including on its biodiversity and ecological processes, and to develop an assessment of the potential cumulative impacts of all three projects;
- to submit the full EIAs reports to the World Heritage Centre, when available;
- not to approve any of those projects until the provided information has been reviewed by the World Heritage Centre and IUCN.

It was also recommended that the State Party of the Russian Federation be requested to submit to the Committee an updated report on the state of conservation of the property, including specifically on the existing provisions and regulations for water use and management in Lake Baikal and their subsequent effects on the hydropower plant management downstream the property, for examination by the Committee at its next session, and to invite both States Parties to continue and strengthen their cooperation for Lake Baikal water management and to jointly develop a SEA for any future hydropower and other large water management projects which could potentially affect the property, taking into account all planned and existing infrastructure in both countries.

Those recommendations were endorsed by the Committee in its Decision **39 COM 7B.22** and subsequently raised up in other more recent decisions.

The potential impacts of the Egiin Gol hydropower project on the environment were assessed in 2014 and an additional study on the impact of the project on biodiversity of the Selenga river and Lake Baikal was delivered in November 2022, upon request of the Committee. The 2014 EIA and the 2022 biodiversity study were submitted to the World Heritage Centre in January 2023, for review by IUCN.

During its visit, the mission met a delegation of Mongolia, providing the opportunity to exchange on the status of the three projects. The mission was informed that the Mongolian State Party has taken the decision to abandon two of the initially planned three hydropower projects, and to pursue solely the development of the “Egiin Gol Hydropower Plant project”.

This information was confirmed officially by a letter from the Minister of Environment and Tourism of Mongolia n°01/506 dated 30 January 2024 to the World Heritage Centre reporting

that, based on a “new revival policy” approved by the Parliament of Mongolia, the State Party intended to proceed only with the Egiin Gol project and concluded on the abandonment of the Shuren and Orkhon river projects.

The Egiin Gol project is still currently being designed; its content, the type and location of the infrastructures as well as the regional environmental impacts of the project on the Selenga hydrosystem are not yet finalized and, therefore, will require further investigations. The State Party therefore reports on its intention to develop a new EIA in accordance with international best practice and standards, which should include the guidance and toolkit for impact assessments in a World Heritage Context.

At this stage, the additional 2022 assessment on biodiversity concluded that this project may have various (positive and negative) impacts on biodiversity and create barriers for fish migration while no species of fish will likely be threatened. According to the report, it would not impact significantly ground water reserve and forest ecosystems, except in the vicinity of the infrastructure and mostly during the construction period. It would have low or medium acceptable effects on water temperature and oxygenation. The assessment concludes as well that the project would have only negligible effects on the flow regime of the Selenga River, especially on its lower part and its delta located almost 600 km downstream, neither during the reservoir filling nor in the operation period. The main impacts of the project on ecological functioning and biodiversity, both terrestrial and aquatic, would appear mainly on the Mongolian part of the area submerged by the reservoir and on the floodplains downstream, between Khyalganat and Sukhbaatar.

Based on the information collected during the mission, it is not clear however whether the final project will contain a regulation reservoir downstream at Hyalganat or not, as this option still appears on some working documents. There is also a need for clarification on the characteristics and exact location of all infrastructures and on the detailed measures that would be taken to minimize the impacts of the plant on the Selenga hydrosystem, especially on the river delta’s ecological functioning throughout the year[104].

Due to the reported abandonment of two of the three planned projects, the mission concludes that it is not necessary to assess any more the cumulative effects of the three projects initially planned on the territory of Mongolia, in the Selenga River basin. However, both States Parties have agreed on the necessity to cooperate on the sustainable management of the shared watershed at the transboundary level, the work of which should be continued to address water use, pollution and other issues that may affect the property’s OUV.

4.9. Management effectiveness and provisions under the Convention

To conclude on few other issues affecting the state of conservation of the property, the mission wishes to highlight management effectiveness and specific provisions under the Convention on protection and management of World Heritage properties.

As stated earlier, the management regime of the property is governed by diverse management tools ranging between protected area management plans, a monitoring system for the property, town and land-use planning, forest and fire management plans, etc. However, these management tools cannot be seen as meeting the Convention requirements and as responding properly to the Operational Guidelines[105] (§ 108 et seq.). They do not constitute a comprehensive framework building up a management system directly dedicated to the

[104] The area hosts also a Ramsar site (https://rsis.ramsar.org/ris/682?language=en).
[105] The Operational Guidelines for the Implementation of the World Heritage Convention, https://whc.unesco.org/en/guidelines/

preservation of the OUV of the property. Furthermore, their purposes, objects and effects do not meet the objective to preserve the property's OUV over time nor, except for protected areas in some cases, have they been designed on the basis of the inherent characteristics of the property and with regard to the criteria which led to its inscription on the World Heritage List (notably vii, ix and x).

Since 2012, the Committee has repeatedly expressed its request for an integrated management and land use plan for the property, to ensure the overall coherence and effectiveness of this management system and providing a clear roadmap to stakeholders for the mid- and long-term. Such an integrated management plan does not currently exist, and the above analysis and comments have highlighted the weaknesses and limits of the property's management and the doubtful compatibility between the various existing management tools. Major issues such as climate change will likely further exacerbate the environmental risks within the property, and such crosscutting issues can also be most effectively addressed though an integrated management system.

The mission can therefore only report and regret this current lack of strategic vision; certain principles legally expressed in the Baikal Law – and which should be strengthened and supplemented in certain respects – should be expressed and elaborated further into an operational form and in an integrated management framework built inclusively between all stakeholders, and which considers the vulnerability of the property to social, economic and environmental pressures and changes, including climate change that will likely further exacerbate the environmental threats on the World Heritage property (§ 111, c), d) and e)).

Furthermore, the State Party has not fulfilled all statutory requirement under the World Heritage Convention, as the Committee is yet to approve the property's Retrospective Statement of Outstanding Universal Value (RSOUV)[106] and the Retrospective Inventory for the boundaries of the property. These should be concluded as a matter of priority in view of their importance in guiding strategic planning and EIAs, among other processes. The State Party should also formalise the buffer zone of the property under the Convention[107], the buffer zone being already approved under national legislation.

The mission further witnessed several good examples of professional and effective communication, interpretation and education on the property's unique values and global significance; however, these do not appear uniform or coordinated. The mission acknowledges that different regimes and identities exist within the property due to its size and complexity, however, the State Party is invited to explore how the World Heritage brand, alongside existing local brands, and visual identities, could be further strengthened within the property through guidance and support to local authorities and stakeholders.

[106] Paragraph 155 of the Operational Guidelines.
[107] Paragraphs 103-107 of the Operational Guidelines.

5. CONCLUSIONS AND RECOMMENDATIONS

At the time of its inscription on the World Heritage List in 1996, Lake Baikal World Heritage property was already a subject of concern to the Committee due to various factors affecting its integrity, such as weak legal protection, industrial pollution from the pulp and paper mill, and pollution of the Selenga River.

Later, pressures linked with lack of resources dedicated to the management of the property, absence of a monitoring system, and deleterious effects of logging were added to the list of pressures. In this context, the Bureau of the Committee concluded in 1998 that the property was seriously threatened, and the State Party did not oppose to its possible inscription on the List of World Heritage in Danger.

Since then, several issues have been addressed in the debates of the Committee, some having been resolved by the State Party, while others have persisted over time.

- The adoption of the Federal Law N°94-FZ "*On the Protection of Lake Baikal*" in May **1999** was an important and positive step towards solving the issues affecting the property's state of conservation. However, this law, which was subsequently amended on numerous occasions, did not fully satisfy the expectations of the Bureau and the Committee, nor did it adequately meet the requirements of the Convention. A new amendment is currently under discussion which would further weaken the current legal regime for the protection of the property, if voted in the version adopted at first reading by the Assembly of the Russian Federation.
- In **2006**, the State Party had confirmed the re-routing of an oil pipeline threatening the property. In 2021 and 2023, respectively, the World Heritage Centre had received information about the Power of Siberia-2 gas pipeline possibly passing south of Lake Baikal. The State Party has clarified that the routing will not overlap with the CEZ. The mission did not have the possibility to further discuss this issue with the State Party.
- The boundaries of the property were fixed officially in **2007**; however, the State Party has still to submit a map delimiting the property boundaries to the World Heritage Centre for the Committee's approval (Retrospective Inventory of boundaries). Moreover, the Retrospective Statement of Outstanding Universal Value for the property has not yet been finalised and adopted by the Committee.
- The development of mining projects within the property were officially abandoned in **2013**, following a firm reminder by the Committee that this type of activity was incompatible with the World Heritage status. In 2022, the World Heritage Centre had received information about a proposed coal mining project and associated road construction in the vicinity of the property. The State Party has not clarified the status of this project.

In addition, the decline in seal and omul populations, endemic species to Lake Baikal, appear to have been halted, according to the information provided to the mission. However, the population of omul remains significantly lower than before, according to State Party's reports. Some scientists attribute this decline to unfavourable ecological and climatic conditions for its reproduction[108], also potentially linked with the water regime caused by the Irkutsk hydropower plant affecting the littoral zone and the most important food sources of the omul[109]. Whilst visiting a fish farm (**Photo 16**) aimed at reversing the negative population trend of key commercially valuable fish species, the mission did not have the possibility to examine this matter more closely.

[108] Anoshko et al. (2020) - Restriction on the catch of the Baikal omul Coregonus migratorius (Georgi, 1775) and probable ecological consequences. South of Russia: ecology, development. T.15. No 3. P.132-143. 10.18470/1992-1098-2020-3-132-143.

[109] Jaguś, A. et al. (2015) - Water storage possibilities in Lake Baikal and in reservoirs impounded by the dams of the Angara River cascade. Environ Earth Sci 73, 621–628. https://doi.org/10.1007/s12665-014-3166-0

Photo 16 – Omul fish farming
(Credit: Lethier/IUCN).

The illegal development of buildings within the property has also led to several hundred administrative and legal proceedings being brought against unauthorised construction. Although most of these cases are ongoing, the fact that they are now handled by the Public Prosecutor's Office is a significant improvement and could reduce this type of offences in the future.

Notwithstanding the efforts made towards addressing some of the issues threatening it, the property continues to be affected by significant and growing anthropogenic threats which, combined with the effects of climate change, may have a direct impact on its OUV and degrade its integrity in the future. According to the mission, the main current threats on the property are as follows:

- **Incomplete application, high instability and weaknesses of the Law "On the Protection of Lake Baikal" (Baikal Law):** The absence of certain implementing texts and the frequent and numerous legal amendments have eroded the predictability, consistency and security of the legal framework dedicated to the protection of the property, creating risks of further deterioration of the property's state of conservation. The proposed draft amendment on Article 25 of the Baikal Law could further weaken the legal protection of the property if it were to be definitively voted in the form the draft was adopted on first reading by the Assembly of the Russian Federation in June 2023, constituting a potential threat to the preservation of the OUV of the property.

- **Degradation of water quality**: The environmental degradation of Lake Baikal is continuing and illustrated by, among other signs, the development of algae blooms and bacterial pollution, the presence in the water of polluting chemical substances used in everyday consumption, increasing plastic pollution, and the decline of certain endemic species that are bio-indicators of the lake health. This degradation is partly due to industrial discharges and inadequate wastewater treatment that is poorly adapted to certain forms of pollution the effects of which are probably influenced by those of climate change. These factors affect the inherent water quality of Lake Baikal (criterion vii), as well as its outstanding biodiversity (criteria xi and x).

- **Growing pressure on land:** Land use pressure remains a crucial concern for the preservation of the property, affecting its integrity and the water quality and regime of the lake (see above). The absence of an overall strategic approach and a common vision among stakeholders leads to non-integrated, sometimes unauthorised, territorial development. While aimed as a mechanism to better manage this pressure, the two SEZ could exacerbate this challenge further as their full extent and cumulative impacts are not yet known. Overall, these pressures are increasing to the detriment of the inherent characteristics of the property, particularly its aesthetic and landscape features, based on which it was inscribed on the World Heritage List under criterion (vii).

- **Recreational activities and mass tourism lacking coordination, planning and management:** Exacerbated by the growing land use pressure mentioned above, tourism and recreational activities are impacting the property's environmental and landscape integrity through waste, pollution, and degradation, having negative effects on the OUV of the property. While important efforts are taken to manage the tourism load, notably in protected areas, the mission reported on various initiatives to increase the tourism offerings within the property, such as cruise tourism, however in the absence of clear measures to manage the direct, indirect, and cumulative impacts of these activities and an overall strategic approach to socio-economic and tourism development, they may lead to further deterioration of the property.

- **Lack of a strategic vision for the integrated management and development of the property, and insufficient coordination between stakeholders:** Coordination among stakeholders appears to have been improved over time however, further legal reinforcement may be needed in key areas, such as control of water pollution, tourism development, and land use planning. The Committee has also repeatedly requested the State Party to develop an integrated management plan for the property that would meet the requirements of the Convention and its Operational Guidelines. This would help harmonise the management and protection of the property across various actors and frameworks and make it more comprehensible to stakeholders. The State Party should also fulfil its statutory requirements under the convention and complete, in close coordination with the World Heritage Centre and IUCN, the Retrospective Inventory for the property boundaries and the RSOUV. The importance of these tools in guiding coherent management and protection cannot be overstated.

- **Projects for the construction of hydroelectric facilities in the upstream part of the Selenga catchment area:** Two hydropower projects have recently been abandoned by the State Party of Mongolia, while the design for a third project, the Egiin Gol hydropower project, is being pursued and defined. The State Party of Mongolia is committed to developing an EIA in accordance with international standards to assess the potential effects of the project on the Selenga catchment area and therefore on its delta, located within the property.

- **Regulation of the lake's water level by way of derogation**: The regulation of the lake water level should be secured through a strict legal framework that ensures the functional integrity of the property and the preservation of the terrestrial and aquatic ecosystems located within it, defined on a scientific basis and with a clear objective of avoiding negative impacts on the OUV of the property. A research and development programme has been concluded in December 2023 in response to the Committee's request for assessing the impacts of the water level regime on the property and should inform in the nearest future the updated legal framework.

- **Forestry and sylvicultural management practices:** Encouraging large scale or clearcut logging and mechanical restoration, the exploitation and management of forest resources

within the property affect the preservation of the values and attributes that convey its OUV, in particular the processes that have shaped its distinctive landscapes and led to the evolution and development of ecosystems and communities that characterise the property based on criteria (ix) and (x). The absence of specific forest management rules that take account of the property's OUV while meeting the legitimate expectations of the local population, would threaten the maintenance of these characteristics.

- **Preventing and fighting forest fires:** Fires particularly affected the integrity of the property in 2015; there is a real risk that they will reoccur despite the measures taken by the government to prevent such natural disasters, particularly in the face of climate change, which, in turn, increase the risks and anthropogenic effects on the property.

- **Risk of pollution from the accumulated environmental damage of the former industrial site**: The BPPM was definitively closed in 2013, and the elimination of the polluting substances stored on the industrial site has started. In addition, general remediation of the site is also underway. However, the final detailed rehabilitation plan and precise timetable for its implementation have not yet been determined, and not all EIAs have been submitted in response to Committee's repeated requests. While positive that the State Party is finally taking important measures to solve this issue, the property is faced with major environmental risks as long as the waste remains stored on the lake shores, prone to flooding, mudslides and other external events.

The mission concurs with the past decisions of the Committee that there are significant risks resulting from the uncertain and weakened legal protection of the property at a time when the overall environmental condition of the property is deteriorating, and other anthropogenic pressures persist and grow. While many of the factors listed above may individually be less significant due to the size and inherent resilience of the property, together they negatively affect the state of conservation of the property, posing an important ascertained and potential threat to its OUV, if those pressures are not addressed and reduced properly in the near future by a decisive set of concrete actions.

If the unfolding ecological degradation of Lake Baikal as clearly evidenced in scientific reports is not urgently stopped and reversed, the property will undoubtedly fulfil the conditions for its inscription on the List of World Heritage in Danger. While it is acknowledged that some actions are being implemented to address this, the mission considers that they are not sufficient and that further decisive actions are needed in the short term.

Yet, the State Party has demonstrated its willingness to meet the World Heritage protection and management requirements and taken important measures to revise the environmental deterioration of the property. These efforts include the endorsement of strategic priorities on the preservation of Lake Baikal and its environmental rehabilitation at the top government level, the significant federal and regional funding allocated for remedial action such as for the commencement of the work to eliminate the accumulated environmental damage of the BPPM, a massive undertaking. Other enabling factors include the broad mobilisation of government expert bodies and the extraordinary interest and support of the scientific and business communities, citizens, and the civil society for the protection of the property. These are evidenced by the ongoing efforts on all fronts to support the protection of the property and continuing rich debate on the future of Lake Baikal.

The mission therefore recommends the Committee to not inscribe the property on the List of World Heritage in Danger at its 46th session in 2024, as remedial actions are underway seeking to stop and reverse the current deteriorating trend of the property's state of conservation.

In view of the 2015 Policy on the integration of a sustainable development perspective into the processes of the World Heritage Convention[110], the mission is also sensitive to the legitimate demands to improve the well-being of local people. At the same time, all changes affecting the legal or actual protection of the property should be carefully considered to not compromise its OUV for which it is recognised as humanity's shared heritage. Specific guidance and tools for planning and impact assessment are therefore applied in the context of the World Heritage Convention to find solutions that can serve multiple aims simultaneously.

The mission recommends to the Committee to endorse the below recommendations and continue to monitor their full implementation closely and regularly. Furthermore, in view of the significant number of complex issues reviewed in a very short time, the mission recommends that a new reactive monitoring mission be invited to the property in 2026 to review progress made. This next mission should be organised in the summer to facilitate monitoring of key issues related to tourism pressure, water quality, and forest management. It should also reconsider the possible need to inscribe the property on the List of World Heritage in Danger, should the threats affecting the OUV of the property persist in their trends and magnitude.

In the meantime, a decision to significantly further weaken the legal protection of the property and a lack of progress in halting and reversing its environmental degradation should result in the inscription of the property on the List of World Heritage in Danger in order to preserve its OUV.

Recommendation 1: with regard to the legal protection of the property**,**

- secure and stabilize the property's legal status and avoid any modification of the Law "On the Protection of Lake Baikal" (Baikal Law) and other legislation that may lead to potential deleterious effects on the inherent characteristics of the property;
- expedite the study to review the impact of legislative changes on the property to provide full clarity on prior changes, and use the findings of the study to strengthen the Law on the Protection of Lake Baikal as requested by the Committee;
- assess the impacts on the property and its OUV of the proposed additional changes to modify the Baikal Law, prior to approval of these legal amendments. Changes as currently proposed should not be adopted as they are not compatible with the protection requirements of the property;
- provide full details of the activities for which the law is requested to be modified (location, size, limits);
- submit the study and the draft law under discussion for review by the World Heritage Centre and IUCN, and for the Committee's advice, before this draft is put to the vote in the Federal Assembly of the Russian Federation.

Recommendation 2: with regard to the regulation of the water regime of Lake Baikal,

- noting the efforts to assess the environmental and socio-economic impacts of the Lake Baikal water level regime, as requested by the Committee,
- invite the State Party to share a full copy of the study including the final recommendations, with the World Heritage Centre and to publish this study on the Lake Baikal ecological portal (https://baikalake.ru/) for public access and to improve scientific understanding of the property;
- by the end of 2024, elaborate detailed proposals for adapting the current regulations setting the water level of Lake Baikal, preserving the environmental processes that are necessary for maintaining the property's OUV under criteria (ix) and (x), and restoring its integrity as it was when the property was inscribed. Those proposals should be

[110] https://whc.unesco.org/document/139747

submitted to the World Heritage Centre, and reflected in the federal regulation by the end of 2025;

Recommendation 3: with regard to the monitoring of the property,

- whilst noting the State Party's efforts to set up a comprehensive framework for monitoring the property and to provide open access to information and data on the Lake Baikal Ecological Portal,
- strengthen this monitoring framework, including in demersal and coastal zones;
- improve coordination between the diverse public agencies and academic bodies, with a view to ensuring that monitoring guides management decisions and enables the State Party to deliver timely, reliable and public annual reports on the overall state of conservation of the property. This monitoring framework should form part of the integrated management plan requested by the Committee and be based on the most up-to-date knowledge and reliable data collected by both administrative and scientific stakeholders.

Recommendation 4: with regard to the pollution of the property,

- as committed to by the State Party, prohibit all direct wastewater discharges in Lake Baikal, whatever their source – domestic, agricultural, industrial, or other;
- minimize and work towards eliminating all main sources of pollution in Lake Baikal and its watershed, prioritising those that have been identified as the main polluters;
- specific efforts should be made to increase knowledge on the following forms and sources of pollution: complex molecules, persistent pollutants, plastic, as well as on ecological responses, and cross cutting themes in relation to climate change, water flow regulation and condition of the watershed as they are important drivers for water quality;
- conduct a permanent annual inventory of the main sources of pollution in the Lake Baikal watershed, including detailed information on progress made and results achieved to minimize and eliminate their impacts on the property;
- among the solutions, consider adjusting the boundaries of the water protection zone and land use planning to control direct and diffuse pollution;
- as a matter of priority, improve the capacity and performance of the sewage treatment facilities within central ecological zone, applying the highest environmental standards and best technological solutions that will enable tightening the standards of maximum permissible impacts on the unique ecological system of Lake Baikal.

Recommendation 5: with regard to remediation of the Baikalsk Pulp and Paper Mill,

- in view of the high toxicity of the industrial waste stored in the immediate vicinity of Lake Baikal, apply the highest environmental standards in the selection and application of the technological solutions in eliminating the industrial substances stored in the industrial site;
- ensure regular risk assessment and audited environmental monitoring, in close cooperation with expert and scientific bodies;
- provide regular updates to the public and reports to the Committee as part of Reactive Monitoring on progress made with the remediation works, and development of the Research and Development Programme (RDP) for the Solzanskiy landfill, expected to be concluded only in 2028;
- submit the pending EIA for the factory site and any other forthcoming EIAs to the World Heritage Centre, as requested by the Committee, before any decision is taken.

Recommendation 6: with regard to the Baikalsk Master Plan,

- conduct a Strategic Environmental Assessment of the Baikalsk Master Plan, in order to ensure full compatibility with World Heritage requirements as requested by the Committee and to inform strategic decision-making for individual projects and their

potential cumulative impacts; the assessment could be conducted as part of the SEA for the SEZ Gate of Baikal (see recommendation 7), or as a separate SEA, depending on the overlap between these two initiatives;
- clarify the status of this plan with regard to the other planification initiatives (e.g. SEZ, urban planning documents).

Recommendation 7: with regard to the development of the two Special Economic Zones (SEZs),
- conduct a Strategic Environmental Assessment in each SEZ as requested and for examination by the Committee, in line with the principles and methodology of the *Guidance and Toolkit for Impact Assessments in a World Heritage Context to* assess the cumulative impacts of the existing and proposed activities in the SEZs on the property's OUV;
- based on the assessments, develop and implement an environmental management plan for each SEZ to avoid any adverse impact on the property's OUV, including its ecological, aesthetic and landscape values;
- ensure that EIAs for individual projects in SEZs are conducted in accordance with the above guidance to mitigate negative impacts on the OUV.

Recommendation 8: with regard to growing pressure on land and unorganised recreational activities and mass tourism,
- provide more precise information on all large-scale initiatives for tourism (e.g. cruise tourism, resorts), and assess their impacts on the property and its OUV in accordance with *Guidance and Toolkit for Impact Assessments in a World Heritage Context*;
- minimise the negative impacts of tourism and construction on the property and its OUV, by adapting land use in settlements and through human and technical means with respect to the carrying capacity of the ecosystems;
- as part of the integrated management plan requested by the Committee for the whole property, develop a sustainable tourism strategy which provides clear vision, objectives, targets, and governance framework to minimize negative impacts of the tourism sector on the property and optimize its potential positive effects on its OUV.

Recommendation 9: with regard to fire prevention and management,
- pursue the commendable efforts on forest fire management to prevent fires and secure human, technical and financial capacities devoted to minimizing the potential threats of fire in the future within the property, considering also the higher risk of fires with the impacts of climate change;
- elaborate and implement a clear and comprehensive plan and programme of activities for fire management and forest ecosystem restoration throughout the property, using management methods and techniques that preserve the integrity of the forest ecosystem and are fully compatible with the natural features of the original forests located in the property; this plan and programme should form part of the integrated management plan requested by the Committee for the whole property and should be examined by the Committee prior its adoption.

Recommendation 10: with regard to the hydropower projects in Mongolia,
- noting the State Party of Mongolia's progress to assess the potential effects of the Egiin Gol hydropower project on the biodiversity of the Selenga basin and the property, and its commitment to develop an updated EIA of the project in accordance with international best practice and the *Guidance and Toolkit for Impact Assessments in a World Heritage Context*,
- request that this EIA include measures to mitigate the effects of the project on the Selenga ecosystem, and be shared with the State Party of the Russian Federation and submitted to the World Heritage Centre;

- request the State Party of Mongolia to clarify the final technical concept of the Egiin Gol hydropower project;
- requests the States Parties of the Russian Federation and Mongolia to continue cooperate on the sustainable management of the shared Lake Baikal watershed.

Recommendation 11: with regard to the overall management of the property and general provisions of the Convention,

- in compliance with the *Operational Guidelines* and as repeatedly requested by the Committee, develop an integrated management plan for the property involving all Government entities and other stakeholders;
- ensure mandatory public consultation and scientific review of the management plan, amendments to the legal regime, and major development initiatives which could affect the property and its OUV;
- in close consultation with the World Heritage Centre and IUCN, finalise the Retrospective Statement of Outstanding Universal Value for the property (RSOUV);
- submit the map of the boundaries of the World Heritage property as part of the Retrospective Inventory and the corresponding GIS data to be integrated into the World Heritage Online Map Platform;
- formalise the property's buffer zones under the Convention.

6. ANNEXES

Annex 1. Terms of Reference of the 2023 Reactive Monitoring Mission

Terms of Reference
Joint World Heritage Centre/IUCN Reactive Monitoring mission
Lake Baikal, Russian Federation

(from 12 to 16 December 2023)

At its extended 44th session, the WHC requested the State Party of the Russian Federation to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the World Heritage property 'Lake Baikal'. The objectives of the Reactive Monitoring mission are to review the overall state of conservation of the property as well as progress in the implementation of the Committee's Decision **44 COM 7B.107** (Annex 2) and previous Committee decisions and mission recommendations.

In accordance with Decision **44 COM 7B.107,** the Reactive Monitoring mission is specifically tasked to review the existing and potential threats posed to the World Heritage property by the different legislative changes, the remediation plans for the former Baikalsk Pulp and Paper Mill (BPPM), and the existing and proposed developments in the Special Economic Zones (SEZ) located within or overlapping with the property.

In particular, the mission team shall:

1. Based on the State Party's review of the approved and proposed legislative changes and their interdependencies that could potentially affect the property, assess the adequacy and effectiveness of the legal protection of the property to safeguard its Outstanding Universal Value (OUV).

2. Assess progress made in undertaking a complete and comprehensive Environmental Impact Assessment (EIA) and the measures taken by the State Party to mitigate any potential negative impacts of the existing water use and management regulations, including on water level variation, on the OUV of the property.

3. Review the activities and plans as well as the EIA for the remediation and development of the former Baikalsk Pulp and Paper Mill (BPPM) site, in view of protecting the OUV of the property.

4. Assess the threat posed to the property's OUV by the existing and proposed developments in the Special Economic Zones (SEZ) located within or overlapping with the property, and assess progress made in undertaking the EIAs for each Special Economic Zone (SEZ) or a Strategic Environmental Assessment (SEA) for all SEZs regarding existing and future developments and their cumulative impacts.

5. Assess the existing or potential threat posed by the illegal constructions on the lake shore and within the protected areas, and assess the measures taken by the State Party to address this threat.

6. Review the available data on water quality and asses the impacts of water pollution on the OUV of the property.

7. Assess the impacts of wildfires to the property and the measures put in place to avoid and fight wildfires in the future.

8. Review the progress made by the State Party in addressing decisions of the WHC and the recommendations of the 2015 Reactive Monitoring mission with regard to jointly developing a transboundary Strategic Environmental Assessment (SEA) by the States Parties of the Russian Federation and Mongolia for any existing and planned hydropower and water management projects ensuring that its results guide the elaboration of EIAs of any specific individual projects, including the planned Shuren hydropower and Orkhon river projects. In order to assess the full range of issues affecting the hydrological and ecological conditions of the property, a meeting should be held prior to or during the on-site mission to ensure that the mission team and the concerned authorities of both States Parties could share updated information and make sufficient preparations for the on-site visit.

9. Assess the overall state of conservation of the property and evaluate factors and conservation issues that could potentially impact on its OUV, including its conditions of integrity and protection and management.

Based on the above, the mission should make a recommendation if the property fulfils the criteria for inscription on the List of World Heritage in Danger, in line with Paragraph 180 of the *Operational Guidelines.*

Given the complexity of the issues, the mission should meet with all the relevant national and regional authorities as well as representatives of NGOs and local communities. The mission should have access to all relevant legislative documents, including the comprehensive review of recent legislative changes, which should be compiled prior to the mission. The mission team should be able to discuss with the relevant experts of the States Parties of the Russian Federation and Mongolia to allow the mission to assess the full range of issues potentially affecting the hydrological and ecological conditions of the property.

The State Party should facilitate necessary field visits to key locations inside the property and its setting.

To enable the mission's preparation, the State Party should cooperate with the World Heritage Centre and IUCN for preparing the detailed programme of the mission, and in addition, no later than two weeks prior to the mission, provide the World Heritage Centre with the following documentation:

a. A overview of the regulatory framework including a comprehensive review of all approved and proposed legislative changes that could potentially affect the property, indicating where relevant how new amendments are linked to the protection and management of the property;
b. The most recent versions of relevant protection and management regimes of the property and any other relevant document, including the status on the following:
    - results of the EIAs for each Special Economic Zone (SEZ) located within or overlapping with the property or a SEA for all SEZs regarding existing and future developments and their cumulative impacts on the OUV of the property,
    - the requested Environmental Impact Assessment (EIA) of the impacts of existing water use and management regulations on the OUV of the property,
    - the requested EIA for the remediation and development of the former BPPM site,
    - joint transboundary SEA by the States Parties of the Russian Federation and Mongolia on hydropower and water management projects;
c. An overview of the situation of fires in the property in the past 10 years, information on the regeneration of the affected areas and measures in place to respond to wildfires;

d. Information on the status of the Power of Siberia 2 gas pipeline and its route in relation to Baikal;
e. Information on the status of illegal constructions on the lake shore and within the protected areas;
f. Data on water quality and pollution as well as on pollution sources and impacts on the aquatic fauna and flora;
g. Data on the trends of biodiversity (inc. key indicator species);
h. Information on the management and environmental monitoring system of the property such as a management plan and a monitoring protocol.

It should be noted that recommendations will be provided within the mission report and not during the mission.

Following the on-site mission, the World Heritage Centre and IUCN will prepare a report for review by the WHC at its 46th session. The mission team may request additional information from the State Party following the mission for the preparation of the mission report. The mission report will be made available to the State Party to comment on potential factual errors.

Annex 2. Decision 44 COM 7B.107 (Fuzhou, China/Online, 2021)
https://whc.unesco.org/en/decisions/7823

The World Heritage Committee,

1. Having examined Document WHC/21/44.COM/7B,

2. Recalling Decisions **39 COM 7B.22**, **40 COM 7B.97**, **41 COM 7B.6** and **42 COM 7B.76**, adopted at its 39th (Bonn, 2015), 40th (Istanbul/UNESCO, 2016), 41st (Krakow, 2017) and 42nd (Manama, 2018) sessions respectively,

3. Notes with utmost concern several proposed amendments to existing legislation and new laws, which would significantly weaken the existing regulatory framework in terms of requirements for impact assessments and allowable levels of pollutants, and considers that the scale of this weakening of the regulatory provisions, at the time when the property's ecological conditions continue to deteriorate, is such that, if all proposed changes proceed, the property would face potential danger in line with Paragraph 180(b) i) and iv) of the *Operational Guidelines*;

4. Requests the State Party to undertake a comprehensive review of all proposed legislative changes and their interdependencies, that could potentially affect the property and urges the State Party not to approve any changes that would weaken the existing protection regime of the property and strengthen the Law on the Protection of Lake Baikal to ensure that the protection of the Outstanding Universal Value (OUV) of the property can be guaranteed through a cross-sectoral approach;

5. Notes the information provided by the State Party that no damage has been observed on the environment as a result of measures taken on water level fluctuations, but regrets that its request to undertake a complete and comprehensive Environmental Impact Assessment (EIA) of the impacts of existing water use and management regulations on the OUV of the property has not been implemented;

6. Urges again the State Party to revoke all amendments introducing changes of the limits on fluctuation and not to introduce any further regulatory changes providing for further extension of the range of allowed water level fluctuation until the impacts of all existing water use and management regulations on the OUV of the property are fully understood through a complete and comprehensive EIA and also requests the State Party to submit the EIA to World Heritage Centre for review by IUCN;

7. Also regrets that no information has been provided by the State Party regarding the remediation of the former Baikalsk Pulp and Paper Mill (BPPM) site, nor regarding the planned EIA for this process, and reiterates its request to the State Party to develop and submit this EIA including an assessment of possible options for the future uses of the site and their potential impacts on the OUV of the property, for review by IUCN, and also urges the State Party to ensure that the best possible options are chosen in terms of selection of technologies and implementing entities;

8. Regrets once again that the State Party did not submit either the results of the EIAs for each Special Economic Zone (SEZ) located within or overlapping with the property or a Strategic Environmental Assessment (SEA) for all SEZs regarding existing and future developments and their cumulative impacts on the OUV of the property, and further urges the State Party to complete these assessments as a matter of priority and to submit them to the World Heritage Centre, for review by IUCN, as soon as they are available;

9. Expresses concern about the reported increase of illegal constructions on the lake shore, even within protected areas and urges furthermore the State Party to address this threat as a matter of urgency;

10. Welcomes the draft action plan to improve the system for forest fire protection within the property, and also reiterates its request to the State Party to also provide an update on the assessment of impacts of forest fires on the lake ecosystem;

11. Takes note of the information provided by the State Party of Mongolia that the Terms of Reference for the Regional Environmental Assessment for the proposed Shuren and Orkhon hydropower projects have been finalized, and further requests the State Party to clarify how this process will be linked with the development of a transboundary SEA, as requested by the Committee;

12. Acknowledges the further progress on the planned study on the impacts of the Egiin Gol hydropower plant project (EGHPP) on the biodiversity of the property, and further reiterates its request to the State Party of Mongolia to take into account the findings and recommendations of the 2015 mission, especially regarding assessing impacts on the habitats of endangered migratory freshwater species of the Selenga/Lake Baikal complex, and to submit this study to the World Heritage Centre, for review by IUCN, as soon as it is available;

13. Reiterates furthermore its request to the States Parties of Mongolia and the Russian Federation to implement the recommendations of the 2015 mission as well as the requests in Decisions **39 COM 7B.22, 40 COM 7B.97, 41 COM 7B.6** and **42 COM 7B.76**, and to jointly develop a transboundary SEA for any existing and planned hydropower and water management projects ensuring that its results guide the elaboration of EIAs of any specific individual projects, including the planned Shuren hydropower and Orkhon river projects;

14. Requests furthermore the State Party of the Russian Federation to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the property to review the threat posed to it by the different legislative changes, the existing and proposed developments in the SEZ and the remediation plans for the former BPPM, ensuring that, given the complexity of the issues, the mission members can meet with all the relevant national and regional authorities and has access to all relevant legislative documents, including the abovementioned comprehensive review of recent legislative changes, which should be compiled prior to the mission;

15. Requests moreover the States Parties of the Russian Federation and Mongolia to organize a meeting, through appropriate means, with the Reactive Monitoring mission team to allow the mission to assess the full range of issues potentially affecting the hydrological and ecological conditions of the property;

16. Finally requests the State Party to submit to the World Heritage Centre, by **1 February 2022**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 45th session, **with a view to considering, in the absence of substantial progress in addressing the above, the possible inscription of the property on the List of World Heritage in Danger.**

Annex 3. Decision 45 COM 7B.24 (Riyadh, Kingdom of Saudi Arabia, 2023)
https://whc.unesco.org/en/decisions/8298

The World Heritage Committee,

1. Having examined Document WHC/23/45.COM/7B.Add.2,
2. Recalling Decisions **40 COM 7B.97** and **44 COM 7B.107** adopted at its 40th (Istanbul/UNESCO, 2016) and extended 44th (Fuzhou/online, 2021) sessions respectively,
3. Urges again the State Party to refrain from renewing legislative amendments which allow extending the water level variation beyond one metre due to potential negative impact on the property and its Outstanding Universal Value (OUV), until the impacts of all existing water use and management regulations on the OUV are fully assessed and the requirements for its protection are set, and reiterates its request to the State Party to submit the ongoing impact study, which should be submitted to the World Heritage Centre for review by IUCN;
4. Notes with utmost concern the numerous proposed and approved legal amendments, including those that would weaken the requirements for Environmental Impact Assessments (EIAs) and standards for allowable impacts on the Lake Baikal ecosystem along with levels of pollutants, and which would relax permissible activities, and recalls that it considers that the scale of the weakening of the regulatory provisions, at a time when the property's ecological conditions continue to deteriorate, is such that, if all the proposed changes proceed, the property would face potential danger in line with Paragraph 180(b) i) and iv) of the Operational Guidelines;
5. Requests the State Party to submit to the World Heritage Centre, no later than end of 2023, the overdue study to analyse and review the impact of legislative changes on the property, and use the findings of the study to strengthen the Law on the Protection of Lake Baikal, and again urges the State Party not to approve any changes that weaken the protection regime of the property;
6. Welcomes the reported significant federal funding for research, conservation and sustainable development of the property as well as the measures to identify and demolish illegal buildings, prevent further illegal construction and improve waste and tourism management, and encourages the State Party to continue these efforts to strengthen the protection of the property;
7. Also reiterates its request to the State Party to develop an Integrated Management Plan involving all Government entities and other stakeholders involved in the property, with a detailed land-use plan for the property, including management objectives, an implementation strategy and a monitoring plan with clear performance and environmental indicators;
8. Also requests the State Party to provide a complete list and details of all existing and planned development projects within Special Economic Zones (SEZs), within the property and its wider setting, and to ensure they are subject to rigorous EIAs in accordance with the Guidance and Toolkit for Impact Assessments in a World Heritage Context, and to undertake a comprehensive assessment of the potential cumulative impacts of such multiple projects on the OUV of the property, including within the SEZs;
9. Urges the State Party to submit the EIA for the remediation of the former Baikalsk Pulp and Paper Mill (BPPM), along with the Master Plan for Baikalsk Municipality and the concept for the development of the former territory of BPPM to the World Heritage Centre, suspending implementation until the mission has provided recommendations to the State Party with regards to the project;

10. Also welcomes the reported improvements over the past five years in fire management and encourages the State Party to increase the efficacy and efficiency of such measures, accounting for the future impacts of climate change, and furthermore to expedite the proposed assessments of the impact of fires on forest and lake ecosystems;

11. Requests furthermore the State Party of Mongolia to clarify the status of the Regional Environmental Assessment (REA) process and to undertake this assessment as a matter of priority and requests moreover the States Parties of Mongolia and the Russian Federation to jointly develop, based on the findings of the REA, an assessment of the cumulative impacts of all existing and planned hydropower and water management projects on the OUV of the property, prior to approving any further individual projects and to guide the subsequent elaboration of EIAs for all such projects;

12. Takes note of the State Party's proposal to organize the postponed joint World Heritage Centre/IUCN Reactive Monitoring mission to the property after 25 November 2023, with the objective of reviewing the threat posed to the property by various legislative changes, the existing and proposed developments in the SEZs and the property, and the remediation plans for the former BPPM, as well as assessing the conditions of the property which may warrant its inclusion on the List of World Heritage in Danger, and requests the State Party to ensure that the mission programme includes an opportunity for meetings with the States Parties of the Russian Federation and Mongolia to allow the mission team to assess the full range of transboundary issues potentially affecting the hydrological and ecological conditions of the property;

13. Finally requests the State Party to submit to the World Heritage Centre, by **1 February 2024**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 46th session, **considering that the urgent conservation needs of this property require a broad mobilization to preserve its Outstanding Universal Value, including the possible inscription on the List of World Heritage in Danger.**

Annex 4. Mission programme

Mission programme of the Joint World Heritage Centre/IUCN Reactive Monitoring mission to the World Heritage property «Lake Baikal» (compiled by the Ministry of Natural Resources and Environment of the Russian Federation)

Members of the monitoring mission delegation and permanent accompanying persons:

1. Susanna Kari, Project Officer, UNESCO
2. Hervé Lethier, Expert, IUCN
3. Maksim Stafeev, Head of the project office «Preservation of Lake Baikal», Ministry of Natural Resources and Environment of the Russian Federation
4. Alexandr Turkov, Deputy director of the Department of International Cooperation and Climate Change, Ministry of Natural Resources and Environment of the Russian Federation
5. Fedor Kalaydov, 1st Secretary, Secretariat of the Commission of the Russian Federation for UNESCO

Interpreters, Irkutsk region: Anastasia Mikhailovna Besschastyanaya and Alexandra Evgenievna Kapulenko
Interpreters, Republic of Buryatia: Darima Romanovna Togosheeva and Ivan Sergeevich Khanzhin

Date Time	**Event**	**Compliance with the terms of reference**	**Participants (Not including members of the mission)**
December 11th			
	Arrival in Irkutsk		
	Accommodation at the Sayen Hotel		
December 12th			
08.00 – 11.00 11.00 – 11.20	Transfer to Baikalsk Accommodation in "BGK Gora Sobolinaya"		

11.30 – 14.30	Visit to the territory of BCBK OJSC: 1. The Solzansky and Babkhinskylandfills 2. Territory of the central experimental station 3. Industrial site. Questions for discussion: 1. Object of adverse effect 2. Waste disposal project 3. Plans for the Solzansky landfill 4. Plan for the development of the entire territory of BCBC	Point 3. Review the activities and plans, as well as the project for the reclamation and development of theterritory of the former Baikal Pulp and Paper Mill (BPPM) from the point of view of protecting the outstanding universal value of thesite.	1. Georgy Georgievich Kuzmin, Deputy Chairman of the Government of the Irkutsk region 2. Svetlana Mikhailovna Trofimova, Minister of Natural Resources and Ecology of the Irkutsk Region 3. Vasily Vyacheslavovich Temgenevsky, Head of the Baikal municipality 4. Stanislav Yurievich Zhabrikov, Director for the Implementation of Environmental Projects of the Federal State Unitary Enterprise "Federal Environmental Operator" 5. Alexander Evgenyevich Voitseshko, Head of the Baikal Project Office of the Federal State Unitary Enterprise "Federal Environmental Operator" 6. Vladimir Igorevich Pashkov, Advisor on cooperation with regions of the Federal State Unitary Enterprise "Federal Environmental Operator" 7. Svetlana Nadyrovna Shchelkina, Leading specialist of the Federal State Unitary Enterprise "Federal Environmental Operator" 8. Tatyana Ospanova, Specialist in office and document management at the Federal State Unitary Enterprise "Federal Environmental Operator"
14.30 – 14.50	Return from industrial site		
14.50 – 15.30	Lunch		
15.30 – 15.40	Moving to Sobolinaya Gora		

16.00 – 18.00	Visit to the Baikal Gate SEZ Meeting with investors (location –Sobolinaya Gora) Questions for discussion: 1. Objects of adverse effect in theinvestment projects 2. Measures for environmental protection 3. SEZ development plans	Point 4. Assess the threat posed to the site's central observation board by existingand proposed developments in Special Economic Zones (SEZs) located on or overlapping with the site and assess the progress of the SEZs for each Special Economic Zone (SEZ) or the Strategic Environmental Assessment (SEA) for all SEZs with respect to existing and future developments and their cumulative impacts.	1. Natalia Gennadievna Gershun, Minister of Economic Development and Industry of the Irkutsk region 2. Svetlana Mikhailovna Trofimova, Minister of NaturalResources and Ecology of the Irkutsk Region 3. Maria Dmitrievna Demchenko, Commercial Director, Deputy General Director of JSC SEZ Irkutsk. 4. Viktor Vladimirovich Grigorov, General Director of Grand Baikal LLC (resident of BGCGora Sobolinaya LLC)
18.30 – 20.30	The development program of the cityof Baikalsk (location – Gora Sobolinaya) Discussion of the sustainable development of the Baikal municipality on the basis of a strategic master plan	9. Assess the overall state of preservation of the site and assess the conservation factors and issuesthat could potentially affect its FireLookout Posts, including the conditions for its integrity, securityand management.	1. Vasily Vyacheslavovich Temgenevsky, Head of theadministration of the BaikalUrban Settlement 2. Georgy Georgievich Kuzmin, Deputy Chairman of the Government of the Irkutsk region 3. Teymur Talekhovich Magomedov, Director of Development at VEB.RF 4. Grigorov Viktor Vladimirovich, General Director of Grand Baikal LLC 5. Tsydypov Tumun Leonidovich First Deputy General Director ofBAIKAL.CENTER, VEB.RF.
20:40	Dinner		
December 13th			
7.30 – 8.50	Transfer from Baikalsk toAndrianovskaya station		
8.50 – 9.10	Andrianovskaya Station. Demonstration of the completedreconstruction of the station in compliance with environmentalstandards. Demonstration of the work of a mobile ecological complex	h. Information on the site's management and environmental monitoring system, for example, a management plan and monitoringprotocol	1. Maxim Igorevich Polishchuk, Deputy Head of the Department of Ecology and Technosphere Safety of Russian Railways JSC 2. Vyacheslav Olegovich Zdor, Head of the Center for Environmental Protection of Russian Railways JSC 3. Dmitry Borisovich Mikhnev, Head of the

	(MEC)based on a FORD car.		administrative and economic Center of Russian Railways JSC 4. Elbaskin N.A., Head of theBusiness Relations Center of Russian Railways JSC 5. Khokhryakov M.E., Technologist of scientific and technical information and librariesof Russian Railways JSC
9.10 – 10.00	Transfer from Andrianovskaya st.–Slyudyanka I station		
10.00 – 10.30	Slyudyanka I Station Inspection of the railway station at theSlyudyanka I station, visit to the interactive exposition dedicated to Lake Baikal	Point 9. Assess the overall state of preservation of the site and assess the conservation factors and issuesthat could potentially affect its FireLookout Posts, including the conditions for its integrity, securityand management.	
10.30 – 12.40	Transfer along the Circum-BaikalRailway (CBR) to Kirkirei stop point On the way, second breakfast, discussion of the progress of work onthe reconstruction of the BAM and Trans-Siberian Railway. 1. The progress of the reconstructionof the BAM and Trans-Siberia. Implementation of environmental protection measures 2. Environmental monitoring of Russian Railways 3. State environmental monitoring onthe Baikal natural territory. Geoportal development. Integral security indicators. 4. Historical excursion about theCircum-Baikal Railway	h. Information on the site's management and environmental monitoring system, for example, a management plan and monitoring protocol	
12.40 – 13.00	Kirkirei station Familiarization (historical excursion)		

13.00 – 13.34	Moving along the CBR to Polovinnaya station		
13.34 – 13.44	Polovinnaya station Familiarization (historical excursion)		
13.44 – 14.01	Moving along the CBR toItalianskaya Stenka station		
14.01 – 14.11	Italianskaya Stenka station Familiarization (historical excursion)		
14.11 – 15.30	Moving along the CBR to Port Baikal		
15.30 – 16.00	Crossing the Lake Baikal to Listvyanka village (ferry)		
16.00 – 17.00	Showing illegal construction sites	Point 5. To assess the existing or potential threat posed by illegal buildings on the lake shore and within protected areas, and to assess the measures taken by the State party to eliminateany such threat.	1. Georgy Georgievich Kuzmin, Deputy Chairman of the Government of the Irkutsk Region 2. Olga Sergeevna Tyurina, Chief Counsellor of the Main Legal Department of the Governor of the Irkutsk Region and the Government of the Irkutsk Region 3. Poturnak Marina Vasilievna, Head of the Department for Supervision of the Enforcement ofLaws on Nature Protection of the Baikal Interregional Environmental Prosecutor's Office.
17.00 – 17.15	Transfer to Dolina Mechtatelei		
17.30 – 19.00	Discussion of the problems of illegal construction on the territory of the World Heritage Site	Point 5. To assess the existing or potential threat posed by illegal buildings on the lake shore and within protected areas, and to assess the measures taken by the State party to eliminate any such threat. e. Information on the status of illegal buildings on the lake shore and within protected areas.	
19.00 – 20.00	Supper		
20.00 – 21.00	Transfer to Irkutsk		
December 14th			
05.00 – 09.30	Transfer to Olkhon Island by helicopter from the Irkutsk Airport		

09.30 – 10.00	Breakfast		
10.15 – 11.15	Organization and development oftourism on the territory of OlkhonIsland	Point 9. Assess the overall state of preservation of the site and assess the conservation factors and issuesthat could potentially affect its FireLookout Posts, including the conditions for its integrity, securityand management.	1. Ekaterina Sergeevna Slivina, Deputy Director for Environmental Education and Development of Educational Tourism of the Federal State Budgetary Institution "Zapovednoe Pribaikalye" 2. Babina Svetlana Gennadievna, Deputy Director for Scientific Work of the Federal State Budgetary Institution "Zapovednoe Pribaikalye"; 3. Myasnikov Yuri Petrovich, Senior state inspector in the field of environmental protection, Head of the Island Forestry of the Federal State Budgetary Institution "Zapovednoe Pribaikalye" 4. Kozlova Svetlana Alekseevna, Head of the Department of Environmental Education of the Federal State Budgetary Institution "Zapovednoe Pribaikalye" 5. Sibiryakova Galina Stanislavovna, Head of the excursion sector of the Federal State Budgetary Institution "Zapovednoe Pribaikalye" 6. Radziminovich Elizaveta Vladimirovna, Specialist in tourism development of the Federal State Budgetary Institution "Zapovednoe Pribaikalye" 7. Azizova Lada Vladimirovna, Press secretary of the Federal State Budgetary Institution "Zapovednoe Pribaikalye".
11.30 – 12.30	On measures for the conservation of biodiversity, integration into the natural environment of economic activity, urbanized urban areas in theterritory of protected areas.	Point 9. Assess the overall state of preservation of the site and assess the conservation factors and issuesthat could potentially affect its Fire Lookout Posts, including the conditions for its integrity, security and management. g. Data on the dynamics of biodiversity (including key indicatorspecies, in particular, the Baikal seal).	
12.30 – 13.30	Transfer to the temporary storage point of MSW		
13.30 – 14.00	Inspection of the temporary storagepoint of MSW	Point 9. Assess the overall state of preservation of the site and assess the conservation factors and issuesthat could potentially affect its FireLookout Posts, including the conditions for its integrity, security and management.	
14.00 – 15.00	Transfer to the helipad		
15.00 – 16.00	Transfer to Turku (helicopter)		
The Republic of Buryatia			
16.00 – 18.00	Visit to the Baikal Harbor SEZ Meeting with investors Questions for discussion:	Point 4. Assess the threat posed to the site's central observation board by existing and	1. Alexey Gennadievich Yesekin, Environmental Prosecutor 2. Krivykh Marina Viktorovna, Specialist in initial

	1. Objects of adverse effect in the investment projects 2. Measures for environmental protection 3. SEZ development plans	proposed developments in Special Economic Zones (SEZs) located on or overlapping with the site, and assess the progress of the SEZs for each Special Economic Zone (SEZ) or the Strategic Environmental Assessment (SEA) for all SEZs with respect to existing and future developments and their cumulative impacts.	permits and construction engineering of AMAR LLC 3. Bazarov Sanji Tsybanovich, Executive Director of AMAR LLC 4. Alla V.Verkhozina, Scientific Consultant on biodiversity conservation at AMAR LLC, Head of the Department of Biodiversity and Biological Resources of the Siberian Branch of the Russian Academy of Sciences 5. Molodchenko Yuri Sergeevich, General Director of Cosmos Hotel Baikal LLC 6. Mehmet Peker, Director of Construction, Greenflow Baikal 7. Trofimova Olga Vladimirovna, Head of the SEZ Development Department of SEZ Baikal Harbor JSC 8. Maxim Yurievich Sharipov, General Director of SEZ Baikal Harbor JSC 9. Tumureeva Natalia Nikolaevna, Minister of Natural Resources and Ecology of the Republic of Buryatia 10. Budunov Anton Alexandrovich, Deputy Minister of Natural Resources and Ecology of the Republic of Buryatia.
18.00 – 21.00	Transfer to Ulan-Ude Accommodation at the Kosmos Hotel		
December 15th			
09.00 – 09.30	Visit to the WWTP in Ulan-Ude	Point 9. Assess the overall state of preservation of the site and assess the conservation factors and issuesthat could potentially affect its FireLookout Posts, including the conditions for its integrity, securityand	1. Evgeny Nikolaevich Polyakov, Deputy Minister of Construction and Modernization of Housing and Communal Services 2. Ivanov Sergey Leonidovich, Chief Engineer of the MunicipalUnitary Enterprise Vodokanal; 3. Avramenko Evgeny Alexandrovich, Director of

		management. Point 6. Analyze the available water qualitydata and assess the impact of waterpollution on the outstanding universal value (OUV) of the site. f. Data on water quality and pollution, as well as on the sources of pollution and its impact onaquatic fauna and flora;	the municipal government agency Directorate for the Reconstructionof Sewage Treatment Plants
09.30 – 11.30	Transfer to Kolesovo village and Borki village of Kabansky district		
11.30 – 12.10	Inspection of landfill disposal sites in the village of Kolesovo and the village of Borki	Point 9. Assess the overall state of preservation of the site and assess the conservation factors and issues that could potentially affect its Fire Lookout Posts, including the conditions for its integrity, security and management.	1. Gennady Vasilievich Osetrov, Deputy Head of the Municipality "KabanskyDistrict" 2. Mashanova Yulia Olegovna, Chief Ecologist of Ecoalliance LLC 3. Perevoznikov Sergey Vladimirovich, Head of the jointventure "Kolesovskoye"
12.10 – 13.10	Transfer to the Fish hatchery in the village of Bolshaya Rechka		
13.10 – 13.40	Inspection of the fish hatchery	g. Data on the dynamics of biodiversity (including key indicatorspecies, in particular, the Baikal seal).	1. Leonid Alekseevich Mikhailik, Head of the Baikal branch of the Federal State Budgetary Institution Glavrybvod 2. Stepanov Roman Alexandrovich, Acting director of the Bolsherechensk Fish hatchery 3. Fedorova Elena Timurovna, Representative of Remstroy LLC 4. Osetrov Gennady Vasilyevich, Deputy of the Head of the Kabansky District Municipality 5. Valery Vladimirovich Metelkin, Head of the Bolsherechenskoye joint venture
13.40 - 14.40	Transfer to the village of Klyuyevka		

14.40 – 14.50	Visit to the cemetery in Klyuyevka	Point 9. Assess the overall state of preservation of the site and assess the conservation factors and issuesthat could potentially affect its FireLookout Posts, including the conditions for its integrity, security and management.	1. Gennady Vasilievich Osetrov, Deputy Head of the Municipality "KabanskyDistrict" 2. Shimyan Elena Nikolaevna, Head of the Klyuyevskoye jointventure
14.50 – 15-30	Transfer to the visit center of theBaikal Nature Reserve	g. Data on the dynamics of biodiversity (including key indicatorspecies, in particular, the Baikal seal).	1. Vasily Ivanovich Sutula, Director of the Federal State Budgetary Institution "BaikalReserve" 2. Osetrov Gennady Vasilyevich, Deputy Head of the Kabansky DistrictMunicipality 3. Titoruk Marina Dmitrievna, Head of the joint venture Tankhoiskoye
15.30 – 16.30	Lunch		
16.30 – 19.00	Discussion of questions on topics: Organization and development of tourism on the territory of protectedareas. On measures for the conservation of biodiversity, integration into the natural environment of economic activity, urbanized urban areas in the territory of protected areas.	g. Data on the dynamics of biodiversity (including key indicatorspecies, in particular, the Baikal seal).	1. Vasily Ivanovich Sutula, Director of the Federal State Budgetary Institution "BaikalReserve" 2. Anisimova Maria Andreevna –Head of the Baikal Nature Reserve Visit Center 3. Lisota Irina Viktorovna, Deputy Director for Environmental Education of theFederal State Budgetary Institution "Baikal Nature Reserve; 4. Kuzminykh Karina Romanovna, Assistant Director of the FederalState Budgetary Institution "Baikal Reserve" 5. Gennady Vasilievich Osetrov, Deputy Head of the Kabansky District Municipality 6. Titoruk Marina Dmitrievna, Head of the joint venture Tankhoiskoye.
19.00 – 23.00	Transfer to Ulan-Ude		
December 16th			

09.00 – 11.00	Discussion of the state of the forest fund. Restoration of fire-affected areas and measures taken to respondto forest fires.	Point 7. To assess the impact of forest fires on the site and the measures taken toprevent and combat forest fires in the future.	1. Tumureeva Natalia Nikolaevna, Minister of Natural Resources and Ecology of the Republic of Buryatia 2. Boroshnoev Sergey Gennadievich, Head of the Republican Forestry Agency 3. Seredkin Alexander Dmitrievich, Director of the Forest Protection Center of the Republic of Buryatia 4. Budunov Anton Alexandrovich, Deputy Minister of Natural Resources and Ecology of the Republic of Buryatia 5. Baklashkin Dmitry Viktorovich, First Deputy Head of the Republican Forestry Agency 6. Grigoriev Eduard Vladimirovich, Deputy Director of the branch of the Federal State Budgetary Institution "Roslesozashchita" "Forest Protection Center of the Republic of Buryatia" 7. Budaev Bair Namkhaevich, Deputy Director of the branch of the Federal State Budgetary Institution "Roslesozashchita" "Forest Protection Center of the Republic of Buryatia" 8. Sekin Alexey Gennadievich, Deputy Baikal Interregional Environmental Prosecutor 9. Poturnak Marina Vasilievna, Head of the Department for Supervision of the Enforcement of Laws on Nature Protection of the Baikal Interregional Environmental Prosecutor's Office
11.15- 13.00	Discussion of the existing rules of water use and management of water resources, including water levels.	Point 2. Assess the progress of a full and comprehensive environmental impact assessment (EIA) and the measures taken by the State party to mitigate the possible negative impact of existing water use and management regulations,	1. Tumureeva Natalia Nikolaevna, Minister of Natural Resources 2. Kapustin Sergey Viktorovich, Head of the Yenisei Basin WaterDirectorate 3. Vlasik Pavel Valentinovich,Deputy Head of the Yenisei BasinWater Directorate 4. Kolomeets Olga Platonovna, Deputy Head of the

		including water levels, on the Outstanding Universal Value of the site.	Yenisei BasinWater Directorate 5. Garmaev Roman Vasilyevich, Head of the Angara-Baikal Territorial Administration of Rosrybolovstvo 6. Garmaev Endon Zhamyanovich, Director of the Baikal Instituteof Environmental Management SORAN 7. Nina Borisovna Usova, Head of the Buryat CGMS – branch ofthe Federal State Budgetary Institution Zabaikalskoye UGMS 8. Nikitin Vyacheslav Mikhailovich, Head of the Laboratory of Hydropower Water Management Systems, Doctor of Technical Sciences of the Instituteof Energy Systems of L.A. Melentyev, SiberianBranch of the RAS 9. Sekin Alexey Gennadievich, Deputy Baikal Interregional Environmental Prosecutor of the Baikal Interregional Environmental Prosecutor's Office 10. Poturnak Marina Vasilievna, Head of the Department for Supervision of the Enforcement of Laws on Nature Protection of the Baikal Interregional Environmental Prosecutor's Office.
13.00 -14.00	Lunch		
14.00 - 16.00	Meeting with public organizations. Discussion.	Point 1. Based on the State Party's review of approved and proposed legislative changes and their interdependencies that could potentially affect the site, assess the adequacy and effectiveness of the legal protection of the site to preserve its Outstanding Universal Value (OUV). a. Review of the legal and regulatory framework, including a comprehensive	1. Tatyana Gavrilovna Dumnova, Chairman of the Public Chamber of the Republic of Buryatia 2. Sherkhoeva Irina Georgievna, Deputy Head of the Interdepartmental Working Group on the Protection of Lake Baikal and Interaction with the Interfractional Working Group of the State Duma of the Russian Federation “Baikal” of the Public Chamber of the Republic of Buryatia 3. Maxim S. Kireenko, Member of the Interdepartmental Working Group on the

		review of all approved and proposed changes in legislation that could potentially affect the site, highlighting, where appropriate, how new changes relate to the protection and management of the site.	Protection of Lake Baikal and Interaction with the Interfractional Working Group of the State Duma of the Russian Federation “Baikal” of the Public Chamber of the Republic of Buryatia 4. Bilikto Borisovich Dugarov, Member of the Interdepartmental Working Group on the Protection of Lake Baikal and Interaction with the Interfractional Working Group of the State Duma of the Russian Federation “Baikal” of the Public Chamber of the Republic of Buryatia 5. Leontieva Inna Mikhailovna, Member of the Commission on Ecology, Nature Management, Environmental Protection and Protection of Lake Baikal of the Public Chamber of the Republic of Buryatia 6. Maksanova Lyudmila Batozhargalovna, Doctor of Economics, Leading Researcher at the Baikal Institute of Environmental Management SB RAS 7. Kislov Evgeny Vladimirovich, Member of the Public Chamber of the Republic of Buryatia of the 3rd convocation, Head of the laboratory of the Federal State Budgetary Scientific Institution "Geneological Institute of the Siberian Branch of the Russian Academy of Sciences" 8. Bolotov Genghis Ayakovich, Environmental activist, author of the youth project on ecology and patriotic education “Garbage from the head” 9. Avdzevich Svetlana Dmitrievna, Member of the Interdepartmental Working Group on the Protection of Lake Baikal and Interaction with the Interfractional Working Group of the State Duma of the Russian Federation “Baikal” of the Public Chamber of the Republic of Buryatia 10. Studennikova Olesya Alexandrovna, Chief of Staff of the Public Chamber of the Republic of

			Buryatia 11. Zimireva Larisa Vladimirovna, Chief specialist - expert of the office of the Public Chamber of the Republic of Buryatia
14.00 - 18.00	Meeting with representatives of Mongolia	Point 8. Analyze the progress made by the State Party in implementing the decisions of the World Heritage Committee and the recommendations of the 2015 Reactive Monitoring Mission regarding the joint development by the States Parties Russian Federation and Mongolia of a Transboundary Strategic Environmental Assessment (SEA) for all existing and planned hydropower and water use projects so that its results form the basis for the development of SEA for any specific individual projects, including the planned projects for the construction of the Shuren hydroelectric power station and the Orkhon River. In order to assess the full range of issues affecting the hydrological and environmental status of the site, a meeting should be held before or during the field visit so that the mission team and the concerned authorities of both States Parties can exchange updated information and make sufficient preparations for the site visit.	1. B. Yeren-Olziy, Head of the Political Planning Department of the Ministry of Energy, Mongolia 2. Z. Batbayar, Head of the Department of Water Resources, Water Agency, Mongolia 3. M. Battulga, Executive Director, Egiin gol Hydropower Plant" Limited liability company 4. S. Boldsaikhan, Secretary General, Mongolian National Comission for UNESCO 5. S. Tumurchudur, Surface Hydrology Engineer, Prestige Engineering Co. Ltd 6. E. Nomin, Culture Programme specialist, Mongolian National Comission for UNESCO 7. S.Anar, Specialist, Ministry of energy, Mongolia 8. Tumureeva Natalia Nikolaevna, Minister of Natural Resources and Ecology of the Republic of Buryatia 9. Kapustin Sergey Viktorovich, Head of the Yenisei Basin Water Directorate 10. Vlasik Pavel Valentinovich, Deputy Head of the Yenisei Basin Water Directorate 11. Kolomeets Olga Platonovna - Deputy Head of the Yenisei Basin Water Directorate 12. Garmaev Roman Vasilyevich, Head of the Angara-Baikal Territorial Administration of Rosrybolovstvo 13. Ponomoreva Alexandra Ivanovna, Head of the territorial body, representative of the Russian Ministry of Foreign Affairs in Ulan-Ude 14. Garmaev Endon Zhamyanovich, Director of the Baikal Institute of Environmental Management of

			the Siberian Branch of the Russian Academy of Sciences 15. Usova Nina Borisovna, Head of the Buryat CGMS — branch of the Federal State Budgetary Institution Zabaikalskoye UGMS 16. Nikitin Vyacheslav Mikhailovich, Head of the Laboratory of Hydropower Water Management Systems, Doctor of Technical Sciences of the Institute of Energy Systems of L.A. Melentyev, Siberian Branch of the RAS 17. Sekin Alexey Gennadievich, Deputy Baikal Interregional Environmental Prosecutor of the Baikal Interregional Environmental Prosecutor's Office 18. Poturnak Marina Vasilievna, Head of the Department for Supervision of the Enforcement of Laws on Nature Protection of the Baikal Interregional Environmental Prosecutor's Office 19. Anastasia Zhdanova, Director of the Sustainable Development Projects Department, En+ Group 20. Alexey Vladimirovich Malynev, Division manager of the Department of Sustainable Development Projects, En+ Group
December 17th			
	Transfer to Irkutsk Accommodation at the Sayen Hotel		
December 18th			
	Departure from Irkutsk		

Annex 5. Relevant Decisions of the World Heritage Committee

Related Decisions of the World Heritage Committee	Issue/concern
Decision 45 COM 7B.24 (2023): § 4. Notes with utmost concern the numerous proposed and approved legal amendments, including those that would weaken the requirements for Environmental Impact Assessments (EIAs) and standards for allowable impacts on the Lake Baikal ecosystem along with levels of pollutants, and which would relax permissible activities, and recalls that it considers that the scale of the weakening of the regulatory provisions, at a time when the property's ecological conditions continue to deteriorate, is such that, if all the proposed changes proceed, the property would face potential danger in line with Paragraph 180(b) i) and iv) of the Operational Guidelines; § 5. Requests the State Party to submit to the World Heritage Centre, no later than end of 2023, the overdue study to analyse and review the impact of legislative changes on the property, and use the findings of the study to strengthen the Law on the Protection of Lake Baikal, and again urges the State Party not to approve any changes that weaken the protection regime of the property; § 6. Welcomes the reported significant federal funding for research, conservation and sustainable development of the property as well as the measures to identify and demolish illegal buildings, prevent further illegal construction and improve waste and tourism management, and encourages the State Party to continue these efforts to strengthen the protection of the property; § 7. Also reiterates its request to the State Party to develop an Integrated Management Plan involving all Government entities and other stakeholders involved in the property, with a detailed land-use plan for the property, including management objectives, an implementation strategy and a monitoring plan with clear performance and environmental indicators; **Decision 44 COM 7B.107 (2021):** § 3. Notes with utmost concern several proposed amendments to existing legislation and new laws, which would significantly weaken the existing regulatory framework in terms of requirements for impact assessments and allowable levels of pollutants, and considers that the scale of this weakening of the regulatory provisions, at the time when the property's ecological conditions continue to deteriorate, is such that, if all proposed changes proceed, the property would face potential danger in line with Paragraph 180(b) i) and iv) of the *Operational Guidelines*; § 4. Requests the State Party to undertake a comprehensive review of all proposed legislative changes and their interdependencies, that could potentially affect the property and urges the State Party not to approve any changes that would weaken the existing protection regime of the property and strengthen the Law on the Protection of Lake Baikal to ensure that the protection of the Outstanding Universal Value (OUV) of the property can be guaranteed through a cross-sectoral approach; **Decision 42 COM 7B.76 (2018):** § 6. Also notes with serious concern the reported reduction in area of the water protection zone of Lake Baikal, and also urges the State Party to provide	Changes to the legislation protecting Lake Baikal World Heritage property Management systems/ management plan

detailed information on these changes and their potential to impact on the OUV of the property;

§ 7. Also requests the State Party to provide an update on: -- Preparation of guidelines for the future development of management plans for all protected areas around Lake Baikal, with a view to develop an Integrated Management Plan for the whole property, including a fire management and prevention plan;

Decision 40 COM 7B.97 (2016):

§ 3. Welcomes the information that according to the recent amendments to the Federal Law on Environmental Impact Reviews a federal level EIA will be required for any construction and reconstruction project within the natural region around Lake Baikal and that the Water protection zone and the Fisheries protection zone of the lake were extended;

§ 6. Further welcomes the information that new guidelines are being prepared for the future development of management plans for all protected areas around Lake Baikal, and encourages the State Party to build on this process in order to develop an integrated management plan for the property, which should include a fire management and prevention plan;

Decision 39 COM 7B.22 (2015):

§ 4. Reiterates its requests, expressed in Decision 38 COM 7B.76, to the State Party of the Russian Federation: -- To expedite the development of management plans for the protected areas which constitute the property as well as an integrated management plan for the property as a whole, in line with Paragraph 112 of the *Operational Guidelines;*

Decision 38 COM 7B.76 (2014):

§ 8. Also expresses its concern over reported proposals to introduce changes to Federal Law N 94-FZ which would weaken the protection of the property, and requests in addition the State Party to provide further information on these proposed changes;

§ 9. Urges the State Party to expedite the development of management plans for the protected areas which constitute the property as well as an integrated management plan for the property as a whole, in line with Paragraph 112 of the *Operational Guidelines*;

Decision 37 COM 7B.22 (2013):

§ 9. Expresses its concern on a number of important existing and potential threats to the property in particular on-going and planned developments in the “Baikal Harbour” and “Gate of Baikal” Special Economic Zones, changes to federal legislation that permit development of tourism infrastructure in Barguzinskiy Strict Nature Reserve Biosphere Polygon; reported changes in the regulations in Baikalo-Lenskiy Strict Nature Reserve; pollution of the Selenga river and air pollution;

§ 10. Reiterates its request to the State Party to develop, under the umbrella of the Special Law for Baikal, an integrated management plan and land-use plan for the property that fully considers all proposed projects, including those inside the Special Economic Zones “Baikal Harbour” and “Gate of Baikal”, to ensure that they are implemented in a way that is compatible with the Outstanding Universal Value and conditions of integrity of the property;

Decision 36 COM 7B.22 (2012):

§ 6. Further considers changes in the Baikal special law which would allow for the development of mineral deposits inside the CEZ would represent a clear potential danger to the Outstanding Universal Value of the property, in line with Paragraph 180 of the *Operational Guidelines* and *reiterates its established position* that mining is incompatible with World Heritage status;

§ 7. Also requests the State Party to implement the 2011 joint World Heritage Centre/IUCN Reactive Monitoring mission recommendations, in particular to:-
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c) develop, under the umbrella of the Special Law for Baikal, an integrated management plan and land-use planning for this World Heritage property that fully considers all proposed projects, including the mega-project proposed for the development of a Special Economic Zone for tourism in Buryatia, to ensure that they are implemented in a way that is compatible with the Outstanding Universal Value and conditions of integrity of this property. Such an integrated management plan should also consider options to address the impact associated to the pollution coming into the lake from the Upper Angara and the Selenga rivers;

§ 9. Expresses its utmost concern about Federal Law No. 365-FZ dated 30 November 2011, which significantly weakens the protection status of Strict Nature Reserves and therefore could affect the Outstanding Universal Value of World Heritage properties in the Russian Federation and also reiterates its request to the State Party to take appropriate legal measures to maintain a high level protection of the World Heritage properties on its territory, in accordance with Paragraph 15(f) of the Operational Guidelines;

§ 10. Recommends that all legal issues concerning natural properties in the Russian Federation, which are composed of federal and regional protected areas, be addressed through a comprehensive national legal framework for the protection and management of natural World Heritage properties in order to ensure the fulfillment of the State Party's obligations under the Convention and requests furthermore the State Party to convene a high-level workshop to assist in developing such a framework, in consultation with the World Heritage Centre and IUCN;

Decision 33 COM 7B.28 (2009):

§ 5. Requests the State Party to further enhance its efforts in relation to the conservation of the property, including the following actions:
a) Clarify the effectiveness and strengthen, if necessary, the legal provisions relevant to the protection of the property, including on the draft resolution 'On amendment of the list of categories of activities prohibited in CEZ of the Baikal natural territory',
b) Rapidly establish enhanced town-planning and land-use regulations to prevent illegal development in the property, and increase its control over such development,
c) Develop and implement a comprehensive tourism strategy for the property,
d) Enhance the regulation and monitoring of pollution in Lake Baikal;

Decision 32 COM 7B.24 (2008):

§ 5. Requests the State Party to complete its review of the legal provisions relevant to the property and to ensure that the law "On protection of Lake Baikal" and other laws and regulations are effectively implemented ;

§ 6. Also requests the State Party to provide detailed information on any exemptions or amendments to the prohibited activities listed in Resolution 643

of the Baikal Law, and to confirm that activities incompatible with the World Heritage status, including mining, will continue to be prohibited; **Decision 31 COM 7B.31 (2007)** § 5. Requests the State Party to provide detailed information and expert legal advice to clarify potential conflicts associated with the new amendments to the Federal Law "On Environmental Impact Assessment", as well as those related to the implementation of the Federal Law "On Special Economic Zones in the Russian Federation" and the special Federal Law "On Protection of Lake Baikal", which might lead to reducing the protective status of Lake Baikal § 7. Urges the State Party to set up a legal and administrative framework to manage recreation and tourism within the property to ensure adequate funding of the monitoring of the property, including water pollution, and to further develop the current monitoring effort into a comprehensive monitoring system to support the implementation of the management plan; § 8. Also urges the State Party to complete, as soon as possible, the re-establishment of the Baikal Commission and to finalise the implementation of the re-conversion plan for the Baikalsk Pulp and Paper Mill within the proposed timeframe; **Decision 30 COM 7B.18 (2006):** § 3. Commends the State Party for the progress achieved in setting up a basic monitoring programme, its efforts to agree with the Government of Mongolia on acceptable pollution standards for the Selenga River, its efforts to modernize sewage treatment systems in the watershed, the preparation of a management plan for the property and preparatory work implemented to define the boundaries of the CEZ of Lake Baikal; § 5. Urges the State Party to increase its efforts on implementing the other recommendations of the 2005 joint World Heritage Centre/IUCN mission, in particular the urgent approval by the Government of the proposed CEZ of Lake Baikal, the re-establishment of the Baikal Commission, and the implementation of the re-conversion plan for the Baikalski Pulp and Paper Mill which should lead to achieving a closed water circuit system by 2007;	
Decision 45 COM 7B.24 (2023): § 3. Urges again the State Party to refrain from renewing legislative amendments which allow extending the water level variation beyond one metre due to potential negative impact on the property and its Outstanding Universal Value (OUV), until the impacts of all existing water use and management regulations on the OUV are fully assessed and the requirements for its protection are set, and reiterates its request to the State Party to submit the ongoing impact study, which should be submitted to the World Heritage Centre for review by IUCN; **Decision 44 COM 7B.107 (2021):** § 5. Notes the information provided by the State Party that no damage has been observed on the environment as a result of measures taken on water level fluctuations, but regrets that its request to undertake a complete and comprehensive Environmental Impact Assessment (EIA) of the impacts of existing water use and management regulations on the OUV of the property has not been implemented;	Water use and management regulations affecting the lake's water level fluctuations

§ 6. Urges again the State Party to revoke all amendments introducing changes of the limits on fluctuation and not to introduce any further regulatory changes providing for further extension of the range of allowed water level fluctuation until the impacts of all existing water use and management regulations on the OUV of the property are fully understood through a complete and comprehensive EIA and also requests the State Party to submit the EIA to World Heritage Centre for review by IUCN;

Decision 42 COM 7B.76 (2018):

§ 3. Noting with serious concern the resolution extending the use of increased limits on the fluctuation between the maximum and minimum water levels of Lake Baikal for 2018-2020, urges the State Party to stop introducing further changes of the limits on fluctuation until the impacts of all existing water use and management regulations on the Outstanding Universal Value (OUV) of the property are fully understood through a complete and comprehensive Environmental Impact Assessment (EIA), undertaken in line with IUCN's World Heritage Advice Note on Environmental Assessment, and requests the State Party to submit this EIA to the World Heritage Centre, for review by IUCN, by 1 December 2019;

Decision 41 COM 7B.6 (2017):

§ 3. Takes note of the information provided by the State Party regarding existing regulations on water use and management of Lake Baikal, but notes with concern the resolution increasing the allowed fluctuation between the maximum and minimum water levels of Lake Baikal in 2016-2017 and urges the State Party to elaborate an Environmental Impact Assessment (EIA) of potential impacts of existing water use and management regulations on the Outstanding Universal Value (OUV) of the property, in line with IUCN's World Heritage Advice Note on Environmental Assessment, and not to introduce any further changes in the regulations until their effects on the property are fully understood;

Decision 40 COM 7B.97 (2016):

§ 10. Also regrets that the State Party did not provide any information on the existing provisions and regulations for water use and management in Lake Baikal, as was requested in its Decision 39 COM 7B.22 in line with the recommendation of the 2015 Reactive Monitoring mission, notes furthermore with concern that a draft Resolution of the Government of the Russian Federation "On maximum and minimum water level of Lake Baikal" has recently been prepared which, if adopted, could have implications for the management and protection of the property and could have potential direct impacts on its OUV, and urges furthermore the State Party to submit to the World Heritage Centre detailed information on the current status of the proposed legislation, as well as the assessment that was used to define the proposed water levels, including an assessment of potential impacts on the OUV of the property, including on its freshwater ecosystem and biodiversity, in line with IUCN's World Heritage Advice Note on Environmental Assessment, and not to approve the legislation until these assessments have been reviewed by IUCN;

Decision 39 COM 7B.22 (2015):

§ 6. Requests the States Parties of the Russian Federation and of Mongolia to implement the mission recommendations, in particular:
a) For the Russian Federation, to provide, within the report on the state of conservation of the property specific information on the existing provisions and regulations for water use and management in Lake Baikal and their

subsequent effects on the hydropower plant management downstream the property, for examination by the WHC at its next session; **Decision 33 COM 7B.28 (2009):** § 6. Also requests the State Party to provide detailed information on the proposal to lower the water level of the lake and its possible impact on the Outstanding Universal Value of the property;	
Decision 45 COM 7B.24 (2023): § 9. Urges the State Party to submit the EIA for the remediation of the former Baikalsk Pulp and Paper Mill (BPPM), along with the Master Plan for Baikalsk Municipality and the concept for the development of the former territory of BPPM to the World Heritage Centre, suspending implementation until the mission has provided recommendations to the State Party with regards to the project; **Decision 44 COM 7B.107 (2021):** § 7. Also regrets that no information has been provided by the State Party regarding the remediation of the former Baikalsk Pulp and Paper Mill (BPPM) site, nor regarding the planned EIA for this process, and reiterates its request to the State Party to develop and submit this EIA including an assessment of possible options for the future uses of the site and their potential impacts on the OUV of the property, for review by IUCN, and also urges the State Party to ensure that the best possible options are chosen in terms of selection of technologies and implementing entities; **Decision 42 COM 7B.76 (2018):** § 9. Appreciates the development of an Action Plan for the remediation of the former Baikal pulp and paper mill site as well as the consultations for an EIA, and further requests the State Party to submit this EIA, including an assessment of possible options for the future uses of the site and their potential impacts on the OUV of the property, to the World Heritage Centre, for review by IUCN, by 1 December 2019; **Decision 41 COM 7B.6 (2017):** § 6. Regrets that the State Party did not report on the development of a detailed EIA on the future use of the Baikal Paper and Pulp Mill site and its impact on the OUV of the property, as was requested in Decision 38 COM 7B.76 and reiterated in Decisions 39 COM 7B.22 and 40 COM 7B.97, and also urges the State Party to develop such an assessment as a matter of priority and to submit a copy of it to the World Heritage Centre, for review by IUCN, as soon as it is completed; **Decision 40 COM 7B.97 (2016):** § 8. Regrets that the State Party did not report on the development of a detailed EIA on the future use of the Baikal Paper and Pulp Mill site and its impact on the OUV of the property, as was requested its Decision 38 COM 7B.76 and reiterated in its Decision 39 COM 7B.22, and further urges the State Party to develop such an assessment as a matter of priority and to submit a copy of it to the World Heritage Centre for review by IUCN as soon as it is completed; **Decision 39 COM 7B.22 (2015):**	Remediation of the former Baikalsk Pulp and Paper Mill (BPPM) (operation closed in 2013)

§ 4. Reiterates its requests, expressed in Decision 38 COM 7B.76, to the State Party of the Russian Federation: To develop a detailed Environmental Impact Assessment (EIA) on the future use of the Baikal Paper and Pulp Mill site and its impact on the Outstanding Universal Value (OUV) of the property; **Decision 38 COM 7B.76 (2014):** § 3. Welcomes the information provided by the State Party that the Baikalsk Pulp and Paper Mill (BPPM) has been shut down, although it continues to produce heat, and requests the State Party to develop a detailed Environmental Impact Assessment (EIA) on the future use of the BPPM site and its impact on the Outstanding Universal Value (OUV) of the property; **Decision 37 COM 7B.22 (2013):** § 3. Welcomes the State Party's decision to close down the Baikalsk Paper and Pulp Mill (BPPM), as well as the brief outline of a closure plan and timeframe which was submitted to the World Heritage Centre including the measures foreseen to address the industrial legacy of the plant; § 4. Urges the State Party to submit to the World Heritage Centre, by 1 February 2014 , a detailed closure plan with a precise timeframe; § 5. Requests the State Party to ensure that any plans for the future use of the BPPM site are subject to rigorous Environmental Impact Assessment, including specific assessment of potential direct, indirect and cumulative impacts on the Outstanding Universal Value of the property, and to submit the results of such assessments to the World Heritage Centre in line with paragraph 172 of the *Operational Guidelines*; In Decision 36 COM 7B.22 (2012) and before, the Committee examines the threat posed to Lake Baikal by the discharge of toxic wastewaters from Baikalsk Paper and Pulp Mill (BPPM), in operation until 2013.	
Decision 45 COM 7B.24 (2023): § 8. Also requests the State Party to provide a complete list and details of all existing and planned development projects within Special Economic Zones (SEZs), within the property and its wider setting, and to ensure they are subject to rigorous EIAs in accordance with the Guidance and Toolkit for Impact Assessments in a World Heritage Context, and to undertake a comprehensive assessment of the potential cumulative impacts of such multiple projects on the OUV of the property, including within the SEZs; **Decision 44 COM 7B.107 (2021):** § 8. Regrets once again that the State Party did not submit either the results of the EIAs for each Special Economic Zone (SEZ) located within or overlapping with the property or a Strategic Environmental Assessment (SEA) for all SEZs regarding existing and future developments and their cumulative impacts on the OUV of the property, and further urges the State Party to complete these assessments as a matter of priority and to submit them to the World Heritage Centre, for review by IUCN, as soon as they are available; § 9. Expresses concern about the reported increase of illegal constructions on the lake shore, even within protected areas and urges furthermore the State Party to address this threat as a matter of urgency; **Decision 42 COM 7B.76 (2018):**	Special Economic Zones (SEZs), tourism development and regulations of construction

§ 8. Regrets that the State Party did not submit either the results of the EIAs for each Special Economic Zone (SEZ) located within or overlapping with the property or a Strategic Environmental Assessment (SEA) for all SEZs regarding existing and future developments and their cumulative impacts on the OUV of the property, and further urges the State Party to complete these assessments as a matter of priority and to submit them to the World Heritage Centre, for review by IUCN, as soon as they are available;

Decision 41 COM 7B.6 (2017):

§ 5. Also reiterates its request to the State Party to submit to the World Heritage Centre the results of the EIAs for each Special Economic Zone (SEZ) located within or overlapping with the property, for review by IUCN, and to undertake a Strategic Environmental Assessment (SEA) of all SEZs, in order to guide all future developments, including tourism infrastructure projects, in a coherent manner consistent with the conservation of its OUV, which should include a specific assessment of impacts on OUV in line with IUCN's World Heritage Advice Note on Environmental Assessment, and take into account cumulative impacts of all existing and proposed developments;

Decision 40 COM 7B.97 (2016):

§ 7. Also notes with concern the large number of tourism infrastructure projects planned in the special economic zones "Gates of Baikal" and "Baikal Harbours", requests the State Party to submit to the World Heritage Centre the results of the Environmental Impact Assessments (EIAs) for each zone for review by IUCN, and reiterates its request to the State Party to undertake a Strategic Environmental Assessment (SEA) of all special economic zones within the property, in order to guide all future developments in a coherent manner consistent with the conservation of the property's OUV, and also urges the State Party to ensure that all EIAs and the SEA include a specific assessment of impacts on OUV in line with IUCN's World Heritage Advice Note on Environmental Assessment, and identify alternatives that will not have negative impacts on the OUV of the property, and that the SEA takes into account cumulative impacts of all existing and proposed developments;

Decision 39 COM 7B.22 (2015):

§ 4. Reiterates its requests, expressed in Decision 38 COM 7B.76, to the State Party of the Russian Federation: -- To undertake a Strategic Environmental Assessment (SEA) of the Special Economic Zones (SEZs), in particular concerning tourism development within the property and its vicinity, in order to identify alternatives that will not have a negative impact on the OUV of the property;

Decision 38 COM 7B.76 (2014):

§ 7. Expresses its concern over the continued development of the "Baikal Harbour" and "Gate of Baikal" Special Economic Zones and the lack of assessment of the impacts of these developments on the OUV of the property, and requests moreover the State Party to undertake a Strategic Environmental Assessment of the Special Economic Zones (SEZs), in particular concerning tourism development within the property and its vicinity, in order to identify alternatives that will not have a negative impact on the OUV of the property;

Decision 37 COM 7B.22 (2013):

§ 9. Expresses its concern on a number of important existing and potential threats to the property in particular on-going and planned developments in the "Baikal Harbour" and "Gate of Baikal" Special Economic Zones, changes to

federal legislation that permit development of tourism infrastructure in Barguzinskiy Strict Nature Reserve Biosphere Polygon; reported changes in the regulations in Baikalo-Lenskiy Strict Nature Reserve; pollution of the Selenga river and air pollution;

§ 10. Reiterates its request to the State Party to develop, under the umbrella of the Special Law for Baikal, an integrated management plan and land-use plan for the property that fully considers all proposed projects, including those inside the Special Economic Zones "Baikal Harbour" and "Gate of Baikal", to ensure that they are implemented in a way that is compatible with the Outstanding Universal Value and conditions of integrity of the property;

§ 11. Further urges the State Party to assess the potential impact on the Outstanding Universal Value of the property of the above mentioned projects through an Environmental Impact Assessment and submit the results to the World Heritage Centre before a decision is taken to proceed, in line with Paragraph 172 of the *Operational Guidelines*;

Decision 36 COM 7B.22 (2012):

§ 7. Also requests the State Party to implement the 2011 joint World Heritage Centre/IUCN Reactive Monitoring mission recommendations, in particular to:-

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c) develop, under the umbrella of the Special Law for Baikal, an integrated management plan and land-use planning for this World Heritage property that fully considers all proposed projects, including the mega-project proposed for the development of a Special Economic Zone for tourism in Buryatia, to ensure that they are implemented in a way that is compatible with the Outstanding Universal Value and conditions of integrity of this property. Such an integrated management plan should also consider options to address the impact associated to the pollution coming into the lake from the Upper Angara and the Selenga rivers;

§ 8. Expresses its concern about the potential direct and indirect environmental impacts from the development of the "Baikal Harbour" Special Economic Zone for tourism and further requests the State Party to submit an Environmental Impact Assessment, including an assessment of potential impact on the Outstanding Universal Value of the property, to the World Heritage Centre in line with Paragraph 172 of the *Operational Guidelines*;

Decision 35 COM 7B.23 (2011):

§ 9. Reiterates its request to the State Party to clarify the extent of the reportedly planned marina within the territory of the Republic of Buriatia and submit its Environmental Impact Assessment to the World Heritage Centre prior to granting permission for the development, in accordance with Paragraph 172 of the *Operational Guidelines*, and requests furthermore the State Party to verify information regarding the location of this development with the World Heritage Centre;

§ 10. Requests moreover the State Party to submit to the World Heritage Centre a further report, by 1 February 2012, on the state of conservation of the property, and in particular progress made in preventing the discharge of untreated wastewater into Lake Baikal, addressing continuing high levels of pollution in the Selenga River, developing a comprehensive tourism and livelihood strategy for the property, and the confirmation that there are no planned mining activities within the property, for examination by the WHC at its 36th session in 2012.

Decision 34 COM 7B.22 (2010):

§ 6. Encourages the State Party to develop and implement a long-term alternative livelihoods strategy for the town of Baikalsk, and notes that Lake Baikal has significant potential to develop sustainable tourism and other activities based on its natural and cultural values;

§ 7. Reiterates its request to ensure long-term monitoring of the seal population and to halt illegal constructions on the shores of the Lake;

§ 8. Requests the State Party to clarify the extent of the planned marina within the territory of the Republic of Buriatia and submit its Environmental Impact Assessment to the World Heritage Centre prior to granting permission for the development, in accordance with Paragraph 172 of the *Operational Guidelines*;

§ 10. Also requests the State Party to submit to the World Heritage Centre a report, by 1 February 2011, on the state of conservation of the property, and in particular progress made in preventing the discharge of untreated wastewater into Lake Baikal, addressing continuing high levels of pollution in the Selenga River, developing a comprehensive tourism strategy for the property, and monitoring the Baikal seal population and the impacts of climate change on the property, for examination by the WHC at its 35th session in 2011.

Decision 33 COM 7B.28 (2009):

§ 4. Notes with concern that measures to halt illegal constructions on the shores still appear to be ineffective, that ongoing problems of local pollution in the Baikal inshore water area persist and that the contents of heavy metals in the water of the Selenga River and its delta exceed the maximum allowed concentrations;

§ 5. Requests the State Party to further enhance its efforts in relation to the conservation of the property, including the following actions:
a) Clarify the effectiveness and strengthen, if necessary, the legal provisions relevant to the protection of the property, including on the draft resolution 'On amendment of the list of categories of activities prohibited in CEZ of the Baikal natural territory',
b) Rapidly establish enhanced town-planning and land-use regulations to prevent illegal development in the property, and increase its control over such development,
c) Develop and implement a comprehensive tourism strategy for the property,
d) Enhance the regulation and monitoring of pollution in Lake Baikal;

Decision 32 COM 7B.24 (2008)

§ 9. Further requests the State Party to set up legal and administrative frameworks to regulate tourism and recreation, to urgently develop and adopt effective planning regulations, and to establish a sustainable tourism strategy for the property;

Decision 31 COM 7B.31 (2007)

§ 6. Further requests the State Party to clarify measures available and being put in place to control the sale of land within the World Heritage property;

Decision 42 COM 7B.76 (2018): § 5. Also welcomes the environmental monitoring activities undertaken at the property, but notes with significant concern the reported algal blooms and decreases in fish stocks, and reiterates its request to the State Party to develop a property-wide ecological monitoring system in order to identify the scale and causes of such changes and the responses required to preserve the ecological integrity of the property; **Decision 41 COM 7B.6 (2017):** § 4. Also notes with significant concern the reported changes in the property's ecosystem, including algal blooms and decreases in fish stocks, and reiterates its request to the State Party to develop a property-wide ecological monitoring system in order to identify the scale and causes of such changes and the responses required to preserve the ecological integrity of the property; **Decision 40 COM 7B.97 (2016):** § 9. Further notes with concern the recent scientific information about alarming ecological changes in Lake Baikal, including algae and cyanobacteria blooms, and also requests the State Party to develop a property-wide ecological monitoring system in order to identify the causes of such changes and the responses required to preserve the ecological integrity of the Lake; **Decision 37 COM 7B.22 (2013):** § 9. Expresses its concern on a number of important existing and potential threats to the property in particular on-going and planned developments in the "Baikal Harbour" and "Gate of Baikal" Special Economic Zones, changes to federal legislation that permit development of tourism infrastructure in Barguzinskiy Strict Nature Reserve Biosphere Polygon; reported changes in the regulations in Baikalo-Lenskiy Strict Nature Reserve; pollution of the Selenga river and air pollution; **Decision 36 COM 7B.22 (2012):** § 7. Also requests the State Party to implement the 2011 joint World Heritage Centre/IUCN Reactive Monitoring mission recommendations, in particular to: c) develop, under the umbrella of the Special Law for Baikal, an integrated management plan and land-use planning for this World Heritage property that fully considers all proposed projects, including the mega-project proposed for the development of a Special Economic Zone for tourism in Buryatia, to ensure that they are implemented in a way that is compatible with the Outstanding Universal Value and conditions of integrity of this property. Such an integrated management plan should also consider options to address the impact associated to the pollution coming into the lake from the Upper Angara and the Selenga rivers; **Decision 35 COM 7B.23 (2011):** § 5. Considers that further weakening of the norms for the discharge of chemicals into the lake or the continued operation of BPPM without a closed water cycle beyond the 30-month period, which was announced by the State Party at the 34th session (expiring in December 2012), would further threaten the Outstanding Universal Value of the property and provide a clear basis for inscription of the property on the List of World Heritage in Danger;	Hydro-ecological conditions of the lake, pollution

§ 6. Urges the State Party to ensure a careful monitoring and enforcement of the norms established by the State Party in Order No.63 of 5 March 2010 throughout this short-term period of operation; § 10. Requests moreover the State Party to submit to the World Heritage Centre a further report, by 1 February 2012, on the state of conservation of the property, and in particular progress made in preventing the discharge of untreated wastewater into Lake Baikal, addressing continuing high levels of pollution in the Selenga River, developing a comprehensive tourism and livelihood strategy for the property, and the confirmation that there are no planned mining activities within the property, for examination by the WHC at its 36th session in 2012. **Decision 33 COM 7B.28 (2009):** § 4. Notes with concern that measures to halt illegal constructions on the shores still appear to be ineffective, that ongoing problems of local pollution in the Baikal inshore water area persist and that the contents of heavy metals in the water of the Selenga River and its delta exceed the maximum allowed concentrations; § 5. Requests the State Party to further enhance its efforts in relation to the conservation of the property, including the following actions: a) Clarify the effectiveness and strengthen, if necessary, the legal provisions relevant to the protection of the property, including on the draft resolution 'On amendment of the list of categories of activities prohibited in CEZ of the Baikal natural territory', b) Rapidly establish enhanced town-planning and land-use regulations to prevent illegal development in the property, and increase its control over such development, c) Develop and implement a comprehensive tourism strategy for the property, d) Enhance the regulation and monitoring of pollution in Lake Baikal;	
Decision 45 COM 7B.24 (2023): § 5. Also welcomes the reported improvements over the past five years in fire management and encourages the State Party to increase the efficacy and efficiency of such measures, accounting for the future impacts of climate change, and furthermore to expedite the proposed assessments of the impact of fires on forest and lake ecosystems; **Decision 44 COM 7B.107 (2021):** § 10. Welcomes the draft action plan to improve the system for forest fire protection within the property, and also reiterates its request to the State Party to also provide an update on the assessment of impacts of forest fires on the lake ecosystem; **Decision 42 COM 7B.76 (2018):** § 7. Also requests the State Party to provide an update on: a) Planned forest management and forest fire control measures, b) Assessed impacts from past fires on the lake ecosystem, and c) Preparation of guidelines for the future development of management plans for all protected areas around Lake Baikal, with a view to develop an Integrated Management Plan for the whole property, including a fire management and prevention plan; **Decision 40 COM 7B.97 (2016):**	Forest fires

§ 5. Commends the State Party for its efforts to combat the wildfires that occurred in the Baikal region in 2015, but notes with concern that although the natural values of the lake were not significantly damaged, a number of protected areas around the lake appear to have been significantly affected, which could have negatively impacted the integrity of the property, and urges the State Party to assess the impacts from the fires on the Lake ecosystem, taking into account the interrelationship between the lake waters and the forests around the lake, which are included in the property; § 6. Further welcomes the information that new guidelines are being prepared for the future development of management plans for all protected areas around Lake Baikal, and encourages the State Party to build on this process in order to develop an integrated management plan for the property, which should include a fire management and prevention plan;	
Decision 45 COM 7B.24 (2023): § 11. Requests furthermore the State Party of Mongolia to clarify the status of the Regional Environmental Assessment (REA) process and to undertake this assessment as a matter of priority and requests moreover the States Parties of Mongolia and the Russian Federation to jointly develop, based on the findings of the REA, an assessment of the cumulative impacts of all existing and planned hydropower and water management projects on the OUV of the property, prior to approving any further individual projects and to guide the subsequent elaboration of EIAs for all such projects; **Decision 44 COM 7B.107 (2021):** § 11. Takes note of the information provided by the State Party of Mongolia that the Terms of Reference for the Regional Environmental Assessment for the proposed Shuren and Orkhon hydropower projects have been finalized, and further requests the State Party to clarify how this process will be linked with the development of a transboundary SEA, as requested by the Committee; § 12. Acknowledges the further progress on the planned study on the impacts of the Egiin Gol hydropower plant project (EGHPP) on the biodiversity of the property, and further reiterates its request to the State Party of Mongolia to take into account the findings and recommendations of the 2015 mission, especially regarding assessing impacts on the habitats of endangered migratory freshwater species of the Selenga/Lake Baikal complex, and to submit this study to the World Heritage Centre, for review by IUCN, as soon as it is available; § 13. Reiterates furthermore its request to the States Parties of Mongolia and the Russian Federation to implement the recommendations of the 2015 mission as well as the requests in Decisions 39 COM 7B.22, 40 COM 7B.97, 41 COM 7B.6 and 42 COM 7B.76, and to jointly develop a transboundary SEA for any existing and planned hydropower and water management projects ensuring that its results guide the elaboration of EIAs of any specific individual projects, including the planned Shuren hydropower and Orkhon river projects; **Decision 42 COM 7B.76 (2018):** § 10. Takes note of the intention of the State Party of Mongolia to undertake an additional study on the impacts of the Egiin Gol hydropower plant project (EGHPP), including impacts on the biodiversity of the property, and requests furthermore the State Party of Mongolia to take into account the findings and recommendations of the 2015 mission, especially regarding assessing impacts	Hydropower projects in the water basin of Lake Baikal

on the habitats of endangered migratory freshwater species of the Selenga/Lake Baikal complex, and to submit this study to the World Heritage Centre, for review by IUCN, as soon as it is available;

§ 11. Also welcomes the establishment of a joint Mongolian-Russian working group on the planned hydro-technical facilities in the Selenga River basin, also reiterates its request to the States Parties of the Mongolia and Russian Federation to implement the recommendations of the 2015 mission as well as the requests in Decisions 39 COM 7B.22, 40 COM 7B.97 and 41 COM 7B.6, and to jointly develop a transboundary SEA for any existing and planned hydropower and water management projects ensuring that its results guide the elaboration of EIAs of any such projects, including the planned Shuren hydropower and Orkhon River projects, and requests moreover the States Parties of the Russian Federation and Mongolia to also include an assessment of alternative solutions in the SEA;

Decision 41 COM 7B.6 (2017):

§ 7. Welcomes the intention of the State Party of Mongolia to undertake an additional study on the impacts of the Egiin Gol project on the biodiversity of the property, and notes the information provided by the State Party of Mongolia regarding the Shuren hydropower project and the Orkhon river project, including the Terms of References for the development of Regional Environmental Assessments (REAs) and Environmental and Social Impact Assessments (ESIAs) for these projects;

§ 8. Reiterates furthermore its request to the States Parties of the Russian Federation and Mongolia to jointly develop a transboundary SEA for any future hydropower and water management projects which could potentially affect the property, taking into account any existing and planned projects on the territory of both countries, and requests both States Parties to ensure that the results of such transboundary SEA guide the elaboration of ESIAs of any concrete hydropower and water management projects, including the planned Shuren hydropower project and the Orkhon river project;

Decision 40 COM 7B.97 (2016):

§ 11. Further regrets that the State Party of Mongolia did not provide updated information on the implementation of other recommendations of the 2015 Reactive Monitoring mission, and also reiterates its requests to the State Party of Mongolia to:

a) Ensure that the EIA developed for the Egiin Gol Project includes assessment of potential impacts not only on the hydrology, but also on the ecological processes and biodiversity of the property, and specifically on its OUV, and to provide the full EIA report to the World Heritage Centre,

b) Ensure that the Terms of Reference developed for the preparation of EIAs for the Shuren Hydropower Plant and the Orkhon River projects include a specific assessment of any potential impacts of the projects on the OUV and integrity of the property,

c) Provide to the World Heritage Centre the EIAs for the Shuren Hydropower Plant and Orkhon river reservoir complex,

d) Develop an assessment of cumulative impacts of any planned dams and reservoirs in the Selenge river basin that may have an impact on the OUV and integrity of the property and to provide this assessment to the World Heritage Centre,

e) Not approve any of the projects until the above-mentioned EIAs and assessment of cumulative impacts have been reviewed by the World Heritage Centre and IUCN;

§ 12. Further reiterates its request to the States Parties of the Russian Federation and Mongolia to jointly develop a SEA for any future hydropower and water management projects which could potentially affect the property, taking into account any existing and planned projects on the territory of both countries;

Decision 39 COM 7B.22 (2015):

§ 6. Requests the States Parties of the Russian Federation and of Mongolia to implement the mission recommendations, in particular:

a) For the Russian Federation, to provide, within the report on the state of conservation of the property specific information on the existing provisions and regulations for water use and management in Lake Baikal and their subsequent effects on the hydropower plant management downstream the property, for examination by the WHC at its next session,

b) For Mongolia:

i. to ensure that the Environmental Impact Assessment (EIA) developed for the Egiin Gol Project includes assessment of potential impacts not only on the hydrology, but also on the ecological processes and biodiversity of the property, and specifically on its OUV, and to provide the full EIA report to the World Heritage Centre,

ii. to ensure that the Terms of Reference developed for the preparation of EIAs for the Shuren Hydropower Plant and the Orkhon River projects include a specific assessment of any potential impacts of the projects on the OUV and integrity of the property,

iii. to provide to the World Heritage Centre the EIAs for the Shuren Hydropower Plant and Orkhon river reservoir complex,

iv. to develop an assessment of cumulative impacts of any planned dams and reservoirs in the Selenge river basin that may have an impact on the OUV and integrity of the property and to provide this assessment to the World Heritage Centre,

v. not to approve any of the projects until the above mentioned EIAs and assessment of cumulative impacts have been reviewed by the World Heritage Centre and IUCN;

§ 7. Invites the States Parties of the Russian Federation and Mongolia to continue their cooperation under the Intergovernmental Agreement and also requests them to jointly develop a SEA for any future hydropower and water management projects which could potentially affect the property, taking into account any existing and planned projects on the territory of both countries;

Decision 38 COM 7B.76 (2014):

§ 4. Notes with concern that the State Party of Mongolia continues to consider the development of dams on the Selenga and Orkhon rivers, and also requests the State Party of Mongolia to ensure that no dam development on either river proceeds before the potential impacts, including cumulative impacts, of these projects on OUV have been duly assessed, in conformity with IUCN's World Heritage Advice Note on Environmental Assessment, and to provide a copy of the environmental impact assessments of these projects to the World Heritage Centre in line with Paragraph 172 of the *Operational Guidelines* ;

§ 5. Further requests the State Party of Mongolia to invite an IUCN Reactive Monitoring mission, with an invitation also extended to the authorities of the Russian Federation, in order to review the scope, scale and status of the dam projects in Mongolia and to have a discussion early in the planning process about the potential impacts of these projects on the property; **Decision 37 COM 7B.22 (2013):** § 6. Notes with concern the potential impacts on the property from the planned construction of a dam on the Orkhon river in Mongolia and also requests the State Parties of the Russian Federation and Mongolia to provide more information on the status of these plans as well as on the environmental impact assessments which are foreseen to quantify these potential impacts, in line with paragraph 172 of the *Operational Guidelines*:	
Decision 42 COM 7B.76 (2018): § 4. Welcomes the information, publically available on the official website of the federal agency responsible for issuing licenses for mineral resources extraction, that the mining license for Kholodninskoe deposit has been revoked and also requests the State Party to confirm this information; **Decision 40 COM 7B.97 (2016):** § 4. Also welcomes the confirmation that the license of the LLC "Invest-Euro-Company" for the Kholodninskoye deposit was suspended, that the application was officially withdrawn by the company, and that exploration or development of any new deposits within the CEZ of Baikal's natural territory is prohibited, in line with the Committee's established position that mining and mineral exploration are incompatible with World Heritage status; **Decision 39 COM 7B.22 (2015):** § 4. Reiterates its requests, expressed in Decision 38 COM 7B.76, to the State Party of the Russian Federation: -- To ensure that mining at the Kholodninskoye deposit remains prohibited beyond 31 December 2014; **Decision 38 COM 7B.76 (2014):** § 6. Reiterates its position that mining is incompatible with World Heritage status, and requests furthermore the State Party of the Russian Federation to ensure that mining at the Kholodninskoye deposit remains prohibited beyond 31 December 2014; **Decision 37 COM 7B.22 (2013):** § 7. Welcomes the confirmation that mineral exploration remains prohibited in the CEZ of the Baikal Nature Area but notes with concern that the license for the mining of ore at the Kholodninskoye deposit remains in effect until March 2025; § 8. Reiterates that mining is incompatible with World Heritage status, and also urges the State Party to cancel the mining license; **Decision 36 COM 7B.22 (2012):** § 6. Further considers changes in the Baikal special law which would allow for the development of mineral deposits inside the CEZ would represent a clear	Mining and resource extraction and infrastructure

potential danger to the Outstanding Universal Value of the property, in line with Paragraph 180 of the *Operational Guidelines* and *reiterates its established position* that mining is incompatible with World Heritage status; **Decision 35 COM 7B.23 (2011):** § 5. Further requests the State Party to confirm that no mining or mineral exploration will be permitted within the property as inscribed on the World Heritage List, in line with the WHC's clear position that mining is incompatible with World Heritage status, and the international policy statement of the International Council of Mining and Metals (ICMM) of not undertaking these activities in World Heritage properties;	

Annex 6. Legal regime for the protection of Lake Baikal World Heritage property.

As per https://baikalake.ru/law/

Federal Laws:

1. "On the protection of Lake Baikal" dated 01.05.1999 N 94-FZ (as amended on 01.05.2022)
2. "On environmental protection" dated 10.01.2002 N 7-FZ (as amended on 04.08.2023)
3. "On Specially Protected Natural Areas" dated 14.03.1995 N 33-FZ (as amended on 23.03.2024)
4. "Water Code of the Russian Federation" dated 03.06.2006 N 74-FZ (as amended on 25.12.2023)
5. "Code of the Russian Federation on Administrative Offenses" dated 30.12.2001 N 195-FZ (as amended on 30.10.2023) Chapter 8: Administrative Offences in the Field of Environmental Protection and Nature Management
6. "On the Territories of Traditional Nature Management of the Indigenous Peoples of the North, Siberia and the Far East of the Russian Federation" dated 07.05.2001 N 49-FZ (as amended on 08.12.2020)
7. "On Fishing and Conservation of Aquatic Biological Resources" dated 20.12.2004 N 166-FZ (as amended on 29.12.2022)
8. "On the animal world" dated 24.04.1995 N 52-FZ (as amended on 13.06.2023)
9. "On Natural Healing Resources, Medical-Recreational Areas and Resorts" dated 23.02.1995 N 26-FZ (as amended on 26.05.2021)
10. "On the Basics of Tourist Activity in the Russian Federation" dated 24.11.1996 N 132-FZ (as amended on 25.12.2023)

Normative legal acts of the Government of the Russian Federation, federal ministries and departments

1. Decree of the Government of the Russian Federation dated 27.12.2017 N 1667 "On maximum and minimum values of the water level in Lake Baikal in 2018 - 2020"
2. Decree of the Government of the Russian Federation dated 01.07.2016 No. 626 "On the maximum and minimum values of the water level in Lake Baikal in 2016-2017"
3. Decree of the Government of the Russian Federation dated 29.04.2016 N 377 "On approval of the Rules for determining the location of the coastline..." (as amended on 30.11.2019)
4. Decree of the Government of the Russian Federation dated 18.02.2023 N 260 "On approval of the Regulation on state environmental monitoring of the unique ecological system of Lake Baikal and recognition of the Decree of the Russian Federation dated February 2, 2015 No. 85" (as amended on 14.03.2024)
5. Decree of the Government of the Russian Federation dated 09.08.2013 N 681 (as amended on 30.11.2018) "On State Environmental Monitoring (State Environmental Monitoring) and the State Fund of State Environmental Monitoring Data..."
6. Decree of the Government of the Russian Federation dated 05.06.2013 N 476 (as amended on 28.02.2019) "On Issues of State Control (Supervision) and Recognition of Some Acts of the Government of the Russian Federation as Invalid"
7. Decree of the Government of the Russian Federation of June 30, 2021 No. 1074 "On Federal State Mining Supervision"
8. Decree of the Government of the Russian Federation dated 10.01.2009 No. 17 (as amended on 30.11.2019) "On approval of the Rules for establishing the boundaries of water protection zones and the boundaries of coastal protective belts of water bodies"
9. Decree of the Government of the Russian Federation dated 23.07.2007 No. 469 (as amended on 08.06.2011) "On the Procedure for Approval of Standards for Permissible Discharges of Substances and Microorganisms into Water Bodies for Water Users"

10. Decree of the Government of the Russian Federation dated 10.04.2007 N 219 (as amended on 18.04.2014) "On Approval of the Regulations on the Implementation of State Monitoring of Water Objects"
11. Decree of the Government of the Russian Federation dated 03.02.2007 N 72 (as amended on 28.04.2023) "On the creation of a special economic zone of tourist and recreational type on the territory of the Slyudyansky district of the Irkutsk region"
12. Decree of the Government of the Russian Federation dated 03.02.2007 No. 68 "On the creation of a special economic zone of tourist and recreational type on the territory of the municipal formation "Pribaikalsky District" of the Republic of Buryatia"
13. Decree of the Government of the Russian Federation dated 30.12.2006 No. 881 "On the Procedure for Approval of Standards of Permissible Impact on Water Bodies"
14. Decree of the Government of the Russian Federation dated 14.12.2006 N 764 (as amended on 11.06.2021) "On Approval of the Rules for Calculating and Collecting Fees for the Use of Water Bodies in Federal Ownership"
15. Decree of the Government of the Russian Federation dated 02.02.2006 No. 60 (as amended on 25.05.2017) "On Approval of the Regulations on Conducting Social and Hygienic Monitoring"
16. Decree of the Government of the Russian Federation dated 28.01.2002 No. 67 (as amended on 22.10.2012) "On the Features of Protection, Catch (Extraction) of Endemic Species of Aquatic Animals and Collection of Endemic Species of Aquatic Plants of Lake Baikal"
17. Decree of the Government of the Russian Federation of December 31, 2020 N 2399 (as amended on 26.01.2023) "On approval of the list of activities prohibited in the CEZ of the Baikal natural territory"
18. Decree of the Government of the Russian Federation of 06.09.2000 No. 661 "On Ecological Zoning of the Baikal Natural Territory and Informing the Population about the Boundaries of the Baikal Natural Territory, Its Ecological Zones and the Peculiarities of the Regime of Ecological Zones"
19. Decree of the Government of the Russian Federation dated 07.12.1996 N 1425 (as amended on 05.06.2013) "On Approval of the Regulations on Districts of Sanitary and Mountain Sanitary Protection of Therapeutic Areas and Resorts of Federal Significance"
20. Decree of the Government of the Russian Federation of March 5, 2015 No. 368-r (as amended on 26.03.2018) "On Approval of the Boundaries of Water Protection and Fishery Protection Zones of Lake Baikal"
21. Order of the Ministry of Natural Resources and Environment of the Russian Federation dated June 30, 2021 No. 456 "On Approval of the Procedure for Conducting State Monitoring and State Cadastre of Wildlife Objects"
22. Order of the Ministry of Agriculture of the Russian Federation dated April 24, 2020 N 226 "On approval of fishing rules for the Baikal fishery basin" (as amended on 06/22/2022)
23. Order of the Ministry of Natural Resources and Ecology of the Russian Federation dated February 21, 2020 N 83 (as amended on 04.07.2022) "On approval of the standards of maximum permissible impacts on the unique ecological system of Lake Baikal and the list of harmful substances..."
24. Order of the Ministry of Natural Resources and Ecology of the Russian Federation dated December 8, 2020 N 1029 (as amended on 18.08.2022) "On approval of the procedure for the development and approval of waste generation standards and limits for their disposal"
25. Order of the Ministry of Natural Resources of the Russian Federation dated 25.04.2007 N 114 (as amended on 11.08.2011) "On the Interdepartmental Commission on the Protection of Lake Baikal"
26. Order of the Ministry of Natural Resources of the Russian Federation dated 05.03.2007 No. 46 "On Approval of Uniform Samples of Signs for Designation of Ecological Zones of the Baikal Natural Territory and Their Borders"

Irkutsk Region

1. Law of the Irkutsk Region of 10.11.2011 N 107-OZ (as amended on 11.07.2014) "On Regional State Support of Activities Aimed at Preserving and Improving the State of the Unique Ecological System of Lake Baikal"
2. Law of the Irkutsk Region dated 11.06.2008 N 23-oz (as amended on 28.10.2023) "On Certain Issues of Environmental Protection in the Irkutsk Region"
3. Law of the Irkutsk Region of 19.06.2008 N 27-oz (as amended on 30.12.2022) "On Specially Protected Natural Territories and Other Specially Protected Areas in the Irkutsk Region"
4. Resolution of the Legislative Assembly of the Irkutsk Region dated 18.02.2015 No. 21/32-ZS "On holding the Day of Baikal on the territory of the Irkutsk Region"

Republic of Buryatia

1. Law of the Republic of Buryatia dated 05.05.2011 N 2003-IV (as amended on 09.10.2023) "On Administrative Offenses"
2. The Law of the Republic of Buryatia of 16.09.1997 N 559-I (as amended on 25.11.2016) "On Therapeutic Areas, Resorts and Natural Healing Resources in the Republic of Buryatia"
3. Law of the Republic of Buryatia dated 09.03.2010 N 1254-IV (as amended on 01.03.2023) "On Production and Consumption Waste in the Republic of Buryatia"
4. Law of the Republic of Buryatia dated 25.11.2005 N 1348-III (as amended on 06.01.2023) "On environmental protection in the Republic of Buryatia"
5. Law of the Republic of Buryatia dated 29.12.2005 N 1438-III (as amended on 01.09.2023) "On Specially Protected Natural Areas of the Republic of Buryatia"
6. Decree of the Government of the Republic of Belarus of 11.07.2006 N 213 (as amended on 12.08.2022) "On the Procedure for the Organization of Specially Protected Natural Areas of Regional and Local Significance on the Territory of the Republic of Buryatia"
7. Decree of the Government of the Republic of Belarus dated 17.01.2006 N 13 (as amended on 08.06.2020) "On the coordination of the Regulations on recreational areas of local significance in the Barguzinsky, Selenginsky and Severo-Baikalsky districts"
8. Decree of the Government of the Republic of Belarus dated 21.12.2006 N 408 (as amended on 12.07.2021) "On the Procedure for the Protection of Specially Protected Natural Areas of the Republic of Buryatia"
9. Decree of the Government of the Republic of Bashkortostan of 05.06.2001 No. 571-r "On the coordination of the provisions on the recreational areas of local importance "Lemasovo" and "Baikal Surf - Kultushnaya" of the Kabansky District"

Trans-Baikal Territory

1. Decree of the Government of the Trans-Baikal Territory dated 09.09.2014 N 535 (as amended on 29.08.2016) "On approval of the Procedure for the implementation of regional state environmental supervision"
2. Order of the Administration of the Chita Region dated 20.02.2007 No. 107-A/r "On holding the action "Day of Baikal-2007"