REPORT ON THE JOINT WORLD HERITAGE CENTRE/IUCN REACTIVE MONITORING MISSION TO THE WORLD HERITAGE PROPERTY 'BIAŁOWIEŻA FOREST' (BELARUS, POLAND) FROM 18 TO 27 MARCH 2024

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LIST OF ABBREVIATIONS

BNP	Białowieża National Park
BPNP	Belovezhskaya Pushcha National Park
CMS	Convention on Migratory Species
EIA	Environmental Impact Assessment
FFPS	Forest Fire Prevention and Suppression Plan
FMP	Forest Management Plan
IMP	Integrated Management Plan
IUCN	International Union for Conservation of Nature
NGO	Non-Governmental Organization
OUV	Outstanding Universal Value
SFS	State Forest Service
SOUV	Statement of Outstanding Universal Value
ToR	Terms of Reference
TMP	Transboundary Management Plan
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme

ACKNOWLEDGEMENTS

The mission would like to thank the States Parties of Belarus and Poland for their hospitality and cooperation in organizing this logistically challenging mission.

For the visit in Poland, the mission is thankful to the Minister for Climate and Environment, Paulina Henning-Kloska and the Undersecretary of State Mikołaj Dorożała who took the time to meet with the mission twice. The mission also had the opportunity to discuss the issue of the border barrier and the issue of illegal migration with Maciej Duszczyk, Undersecretary of State of the Ministry of the Interior and Administration.

Special thanks go to Agnieszka Dalbiak and Bożena Haczek of the Ministry of Climate and Environment, who organized the mission in a very efficient manner. The mission is also grateful to Patrycja Zasępa, Director at the Ministry of Climate and Environment, and Bogdan Jaroszewicz, Deputy Director General of the State Forest Service (SFS) who accompanied the mission for part of the field visit and took the time for extensive discussions. The staff of the Białowieża National Park (BNP), the Regional Directorate of State Forests in Białystok, the Hajnówka, Browsk and Białowieża Forest Districts as well as the Polish Border Guard provided important insights to the mission team on the different issues.

For the visit in Belarus, the mission is grateful to Alexandr Korbut, First Deputy Minister of the Ministry of Natural Resources and Environmental Protection, who took time out of his busy schedule to accompany the mission during the entire visit. Sincere thanks are also due to Darya Hrynchyk of the Ministry, Aliaksandre Ovsey and Dmitrij Bernackij of the Belovezhskaya Pushcha National Park (BPNP) for the efficient organization of the field visits and the insights provided. The mission also wants to recognize Andrei Kononov, Head of International Cooperation at the State Border Committee, and Vladislav Teterenok, General Director of the BPNP and his colleagues. Their explanations were fundamental to the understanding of the issues.

The mission team wants to thank all the scientists and researchers in Poland and Belarus who took their time to participate in the mission. Their knowledge has given a fundamental contribution in the understanding of the main issues and challenges for the property and will be crucial in finding possible solutions for the future. The mission team also thanks the Non-Governmental Organization (NGO) representatives for all the information provided during the mission and for the frank discussions, as well as representatives of local communities and local authorities who shared their views and concerns. Special thanks to the interpreters.

Finally, the mission thanks the teams of the United Nations Resident Coordinator in Belarus and United Nations Development Program (UNDP) in Belarus, who provided invaluable assistance for the logistical challenges linked to the border crossing. Without this assistance, the mission would not have been able to take place.

EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

Inscribed on the World Heritage List in 1979, Bialowieza Forest includes a complex of lowland forests, which is characteristic of the Central European mixed forests terrestrial ecoregion and of exceptional significance for conservation, due to the scale of its old-growth forests, which include extensive undisturbed areas where natural processes are on-going. Following its inscription in 1979, the property was extended into a transboundary site by inclusion of the Belovezhskaya Puscha State National Park in Belarus in 1992. In 2014, the property was extended again to include most of the remaining natural tree stands of the Bialowieza forest in both Poland and Belarus, covering an area of 141,855 ha, with a buffer zone of 166,708 ha. Originally inscribed under natural criterion N(iii), in 2014 the criteria were changed to criterion (ix) and (x), highlighting the importance of the old-growth forests and the undisturbed nature of the forest for both criteria and for the integrity of the property.

At its extended 45th session, the World Heritage Committee expressed its utmost concern regarding the construction by the State Party of Poland of a border barrier between the Belarusian and Polish parts of the transboundary property, crossing some of the best preserved and most sensitive areas of the property, which would further affect the ecological connectivity and inevitably result in forest fragmentation, changes in the hydrology, increased spread of invasive species through the construction phase and degradation of important biotopes, and severely affect animal movement across the property. The Committee urged the States Parties of Belarus and Poland to take adequate measures to address the potential impacts and guarantee ecological connectivity, and considered that, if such measures are not taken urgently, the property may meet the conditions for inscription on the List of World Heritage in Danger, in line with Paragraph 180 of the Operational Guidelines. The Committee further requested the States Parties of Belarus and Poland to invite, as a matter of urgency, a joint World Heritage Centre/IUCN Reactive Monitoring mission to the property (Decision **45 COM 7B.21**) to assess the impact of the border barrier in Poland on the Outstanding Universal Value (OUV) of the property, including its integrity, ecological function and wildlife movement. The mission was also tasked to review progress in the implementation of the recommendations of the 2018 Reactive Monitoring mission and previous Committee Decisions. Finally, the mission was requested to assess whether the property meets the criteria for inscription on the List of World Heritage in Danger, in accordance with paragraph 180 of the Operational Guidelines.

The mission team was composed of Guy Debonnet, Head of the Natural Heritage Unit at the UNESCO World Heritage Centre and Glenn Plumb, Chair of the IUCN Species Survival Commission (SSC) Bison Specialist Group, representing IUCN.

The mission was undertaken from 18 to 27 March 2024 and visited the Polish part of the property from 18 to 23 March 2024 and the Belarus part of the property from 23 to 27 March 2024.

In terms of the **impact of the different border barriers on the property**, the mission found that the Polish border security infrastructure combined with the existing Belarusian 'Sistema' are blocking the majority of wildlife movements (other than birds and flying insects). The border area in the property is now characterized by an impressive succession of infrastructure impeding wildlife movements. On the Polish side, border infrastructure consists of a barrier of woven wire netting, a barrier in concertina wire, an 8 m wide service road, the border barrier fence and a 1 m wide construction strip where vegetation was removed. On the Belarus side, the border infrastructure consists of a service road, a ploughed fire strip, an electrified barbed wire fence and a second ploughed area. This makes a total of 9 infrastructure layers.

Lack of action to address this impact through effective mitigation measures will inevitably lead to two functionally disconnected wildlife protected areas. The Polish border barrier with its foundation is disrupting local sub-irrigated and surface hydrology flows leading to degradation of local forest stand health and condition on both sides of the barrier (e.g. flooding in Belarus,

dewatering in Poland). The construction and maintenance of the Polish border security infrastructure appears to be exacerbating the establishment and spread of the alien and invasive species. In addition to acute local site impacts by border security infrastructure and activities, there are also "edge effects" across the property at variable distances away from the border. Human noise and light pollution are likely to disrupt the behaviour and movement patterns of diurnal and nocturnal wildlife. The combination of 24-hour human presence and movement, noise and light in the immediate border zone, and the "edge effect" of wildlife disturbance spreading from the border zone, is likely to contribute to reduced habitat suitability for, and increased competition between, the few remaining adult female lynx on the Polish side; thus increasing the potential for local extinction of lynx in the Polish part of the property. East to west illegal human migration continues despite the combined respective Polish and Belarusian border security infrastructure, leading to acute, distributed and cumulative human effects across the most highly protected areas of the property, including collecting down wood for warming fires, fire effects on soils inside fire pits, fire spread outside of fire pits, trash and debris, discarded medicines, water pollution, human faeces and urine, and disturbance to the soil surface and wildlife.

The mission concludes that the cumulative effects of the establishment of the Polish border barrier and associated infrastructure is negatively impacting the integrity of the property by blocking ecological connectivity for most wildlife, disturbance of wildlife in and adjacent to the border zone, the introduction of invasive species and localized negative impacts on the hydrology. The new barrier is further exacerbating the impacts of the "Sistema" in Belarus, which already hindered wildlife connectivity, without completely blocking it. The mission notes that while the border barrier and its associated infrastructure and activities are impacting the integrity of the entire property, these impacts will especially affect the Polish part of the property, while in Belarus impacts are more localized in the border area.

The mission is concerned that these impacts on the OUV of the property could result in the property meeting the criteria for inscription on the List of World Heritage in Danger in the near future.

The mission notes with concern that the development of further infrastructure being considered in relation to the Polish barrier, such as the installation of permanent lighting and tarmacking of the service road, would further exacerbate these impacts.

To avoid further long-term impacts on the OUV of the property, a set of decisive actions would be needed to restore ecological connectivity, which would require at least modifying or partly dismantling the barrier structures and associated infrastructure in place. This would undoubtedly require a joint effort by Poland and Belarus to address the issue of illegal migration across the joint border.

The mission notes that while a full restoration of ecological connectivity across the entire property has to be the objective, this is unlikely to be feasible in the short to medium term whilst transboundary cooperation remains impacted as a result of the current geopolitical situation.

The mission stresses the urgency to take adequate mitigating measures to prevent a further degradation of the ecological integrity of the property and to avoid an ascertained danger to its OUV and proposes 5 key recommendations to address this.

<u>Recommendation 1 (to the State Party of Poland)</u>

Develop and implement a set of urgent mitigation measures to reduce the impact of the Polish border barrier, including:

a) Urgently implement technical measures to address the localized impacts on the hydrology and allow for a restoration of natural peak water flows, for example by adding more and larger culverts under the barrier wall foundation and adjacent service road,

and putting in place dedicated monitoring and human capacity to ensure the culverts function under peak flow conditions;

b) Develop and rapidly implement a set of actions to support the Polish lynx population in the property to improve habitat quality for increased prey availability combined with reduced noise, light, and road use, and also develop contingency plans to supplement/reintroduce the Polish lynx sub-population as warranted;

c) Provide additional funding for monitoring and mitigation measures to suppress the introduction and spread of invasive species, including screening all human activities for invasive species, rapid detection and eradication programs, etc.;

d) Establish dedicated monitoring and adaptive management capacity to mitigate noise and light pollution and edge effects;

e) Refrain from further development of the barrier infrastructure in the property.

Recommendation 2 (to the States Parties of Poland and Belarus)

Resume transboundary cooperation, at least at the level of technical information exchange, in order to facilitate the development and implementation of recommended mitigation measures. The mission notes that UNESCO and IUCN, and possibly with the involvement of other UN entities, could potentially facilitate a dialogue between the States Parties at the appropriate level.

Recommendation 3 (to the State Party of Poland)

Establish a comprehensive and long-term research and monitoring programme of the OUV of the property in order to allow for adaptive management of the threats and impacts of the border barrier and its associated infrastructure.

Recommendation 4 (to the State Party of Poland)

Take additional measures to increase the resilience of the ecosystem by addressing other stressors on the integrity of the property (see recommendations 9 – 15 below).

Recommendation 5 (to the State Party of Poland)

Conduct further research on the impacts of the border barrier and associated infrastructure on biodiversity and ecological and biological processes of the property, including alternatives to conventional border barriers, wildlife passages and other measures to minimize the impacts of the border barrier, concertina fences and associated road infrastructure.

The mission further recommends that a new Reactive Monitoring mission is invited to the property in 2027 to assess the implementation of these recommendations and re-evaluate if the property then meets the criteria for its inscription on the List of World Heritage in Danger. The proposed mission should also assess the feasibility of implementing additional measures to fully restore the ecological connectivity in the property.

The mission further looked into the other **conservation issues identified during the 2018 Reactive Monitoring mission** and assessed the progress made by the States Parties of Poland and Belarus in implementing the mission's recommendations.

Management planning

The State Party of Belarus prepared a new management plan for the BPNP for the period 2022 – 2031. Unfortunately, as no English translation was provided to the mission, it was not possible for the mission to review the document.

A draft integrated management plan for the Polish part of the property (IMP) was prepared but its approval was suspended by the Ministry of Climate and Environment. The mission notes that the IMP requires revision to take into account impacts of the barrier, bring the proposed revised zoning in line with the recommendations of the 2018 Reactive Monitoring mission and revise the fire protection and suppression plan.

Following the breakdown of the transboundary cooperation between Poland and Belarus, no progress has been made in the development of the Transboundary Management Plan (TMP) for the entire property, which should define the overall management vision for the property in order to conserve its OUV, the transboundary governance system and collaboration issues.

Recommendation 6 (to the State Party of Belarus)

Submit as soon as possible a translation of the management plan of BPNP in one of the working languages of the World Heritage Committee to the World Heritage Centre for review by IUCN.

Recommendation 7 (to the State Party of Poland)

Revise the current draft IMP to improve clarity and include core guidance on the overall management principles for the property in order to inform all relevant management documents for the Polish component of the property, including the Forest Management Plans (FMP), and ensure that they are aligned with the protection of the property's OUV, by including:

a) clear guidance statements for addressing threats to the OUV;
b) guidance for integrating border security issues into the overarching capacity to protect the property's OUV;
c) a catalogue of active forest management interventions which can be accepted in the active protection zone and under which conditions they should be applied;
d) a comprehensive and long-term research and monitoring programme to allow for adaptive management of threats;

and to finalise the draft before the end of 2024 and submit it to the World Heritage Centre for review by IUCN.

Recommendation 8 (to the States Parties of Poland and Belarus)

Resume the development of a TMP and coordinate transboundary management actions to address the various conservation challenges of the property.

Forest management and zoning

The mission concludes that the available draft 2022-2031 FMP and the 2023 proposed zonation are not in line with the recommendations of the 2018 Reactive Monitoring mission. The mission noted that the proposed zonation would lead to a decrease of the partial protection zone to the benefit of active protection zone, which is contrary to the recommendations of the 2018 mission.

While welcoming the development of the Forest Fire Suppression and Prevention Plan (FFPS), the mission is concerned that it includes some proposed actions that contradict the principle of non-intervention in ecological processes or the recommendations of the 2018 mission.

Recommendation 9 (to the State Party of Poland)

As recommended by the 2018 Reactive Monitoring mission, ensure that all habitat management operations in the property comply with the management arrangements described in the 2014 nomination dossier and clearly reassert that "the undisturbed wild nature is the basic principle for the management" by:

a) ensuring that the new zonation fully complies with the principles detailed in the 2014 nomination dossier and does not result in an increase of the active forest protection zone;
b) ensuring that the new FMPs include a clear justification for each of the planned forest management interventions in the active protection zone, indicating how they will contribute to the two objectives of the zone, and distinguishes between the following three sub-zones:
    - a subzone where active management interventions are needed for species protection;
    - a subzone where the conditions of the stand require active forest management interventions to speed up the conversion to a natural oak hornbeam forest; and
    - a subzone with forest stands which do not have the structure and age class to qualify for inclusion in the partial protection zone, but where natural regeneration is the preferred restoration method without further management interventions.

Recommendation 10 (to the State Party of Poland)

Revise the proposed FFPS before integrating it in the IMP to ensure removal of all inconsistencies with the recommendations of the 2018 mission and management arrangements described in the 2014 nomination dossier.

Wildlife management

Recommendation 11 (to the States Parties of Poland and Belarus)

Undertake a new scientific evaluation of the bison and red deer ecological carrying capacity for the entire property and implications for management of dispersal, migration and range expansion movements within and outside the property.

Recommendation 12 (to the States Parties of Poland and Belarus)

Bring wildlife management in the property better in line with undisturbed ecological processes, including by restoring natural predator / prey interactions by:

a) in Belarus, adopting the legal ban on wolf hunting before the end of 2024, covering not only the property but the entire BPNP;

b) in Poland, extending a ban on ungulate hunting in at least zone 3 of the property and banning all forms of artificial feeding targeting other species than bison, including the planting of fruit trees in all management zones.

Climate change and hydrology

The mission notes that the restoration of natural hydrological processes is fundamental to improving the ecological resilience of the property, especially under climate change projections. The mission is concerned that the breakdown in scientific and stewardship collaboration between Poland and Belarus on the shared priority of hydrology restoration is another example of diminished collective capacity to protect the ecological resilience of the property.

Recommendation 13 (to the States Parties of Poland and Belarus)

Continue and further increase efforts to restore the natural hydrology of the property and include the research on, monitoring of, and adaptation to climate change as a core guiding principle in all management planning.

Roads and habitat fragmentation

The mission notes with concern that the main factors determining the impact of the Narewkowska road (traffic, car speed and wildlife mortality) are significantly higher than forecasted in the Environmental Impact Assessment report submitted to the World Heritage

Centre in 2019. Additional measures are also required to reduce habitat fragmentation as a result of the extensive networks of roads and other linear infrastructure in the property.

Recommendation 14 (to the State Party of Poland)

Develop and implement additional measures to further mitigate the impacts of the Narewkowska road, including additional restrictions on the use of the road.

Recommendation 15 (to the States Parties of Poland and Belarus)

Implement measures to further reduce habitat fragmentation by avoiding any further upgrading of roads, significantly reducing the number of forestry roads and diminishing the number of forestry fences.

Sustainable development at local level

Recommendation 16 (to the States Parties of Poland and Belarus)

Develop a vision for how the property can contribute to the sustainable development of the surrounding region, based on a clear strategy for sustainable tourism compatible with the protection of the property's OUV.

The mission notes that decisive action by both States Parties to address the above-mentioned conservation challenges and to implement the recommendations will increase the resilience of the ecosystem of the property and thus contribute to mitigating the impacts of the border infrastructure and security operations.

1. THE PROPERTY[1]

In 1979, the World Heritage Committee inscribed the Bialowieza National Park (BNP) in Poland on the World Heritage List. The inscribed World Heritage property (property) covered a surface of 5,069 ha (figure 1), corresponding to a strictly protected Polish National Park at the time, a very small area compared to the overall Białowieża forest in Belarus and Poland, and to the current property and buffer zone.

The original inscription under natural criterion (iii) corresponded with today's criterion (vii). However, criterion N(iii) at the time was formulated differently[2] and the criterion reflected the fact thatthe site was one of the last intact lowland forest areas in Europe, therefore fitting the description of "one of the important ecosystems for man(kind)"[3].

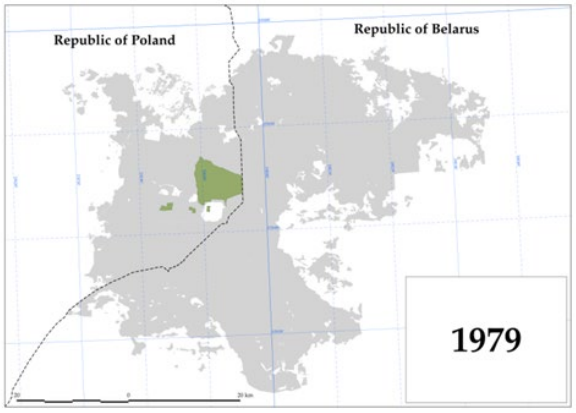

Fig. 1: The Bialowieza National Park property as originally inscribed in 1979.

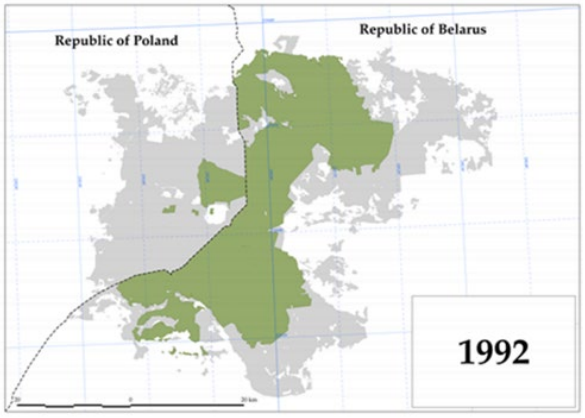

Fig. 2: Transboundary extension in 1992, taking into account the entire BPNP.

In 1992, the Belovezhskaya Puscha State National Park (BPNP) in Belarus was inscribed as a transboundary extension of the property. According to the map submitted with the nomination, the entire State National Park was proposed for inscription. However, based on the IUCN evaluation, the Committee decided to only inscribe the strictly protected core zone of the park (5,235 ha along the international border) (**CONF 002 X.A**) (fig. 3). Nevertheless, this was not documented in UNESCO files and, as a result the World Heritage Centre continued to consider that the entire National Park in its original boundaries (87,606 ha) was part of the property (fig. 2). This discrepancy was only recognized by the 2008 Reactive Monitoring mission to the property. The 2008 mission also recommended the State Parties to work on another extension of the property on the Polish side and to re-nominate the property under criteria (ix) and (x).

In 1996, the BNP in Poland was extended to 10,502 ha (adding the orange area in fig. 3). In 1999, a proposal was tabled to also include this area in the property. IUCN recommended in its evaluation that the standards of protection which apply within the existing property should apply to the entire forest area and that a new nomination proposal should be brought forward, enclosing the whole Polish part of the Białowieża forest. The extension was therefore not approved (Decision 23 COM VIII.A.2).

[1] This chapter was updated from the same chapter of the 2018 Reactive Monitoring Mission report.

[2] The 1977 definition of criterion N(iii) refers to sites which contain unique, rare or superlative natural phenomena, formations or features or areas of exceptional natural beauty, such as superlative examples of the most important ecosystems to man, natural features, (for instance, rivers, mountains, waterfalls), spectacles presented by great concentrations of animals, sweeping vistas covered by natural vegetation and exceptional combinations of natural and cultural elements.

[3] Other « virgin » forest sites, have also been inscribed under the same criterion in the same period. An example is the Salonga National Park in DRC (inscribed in 1984).

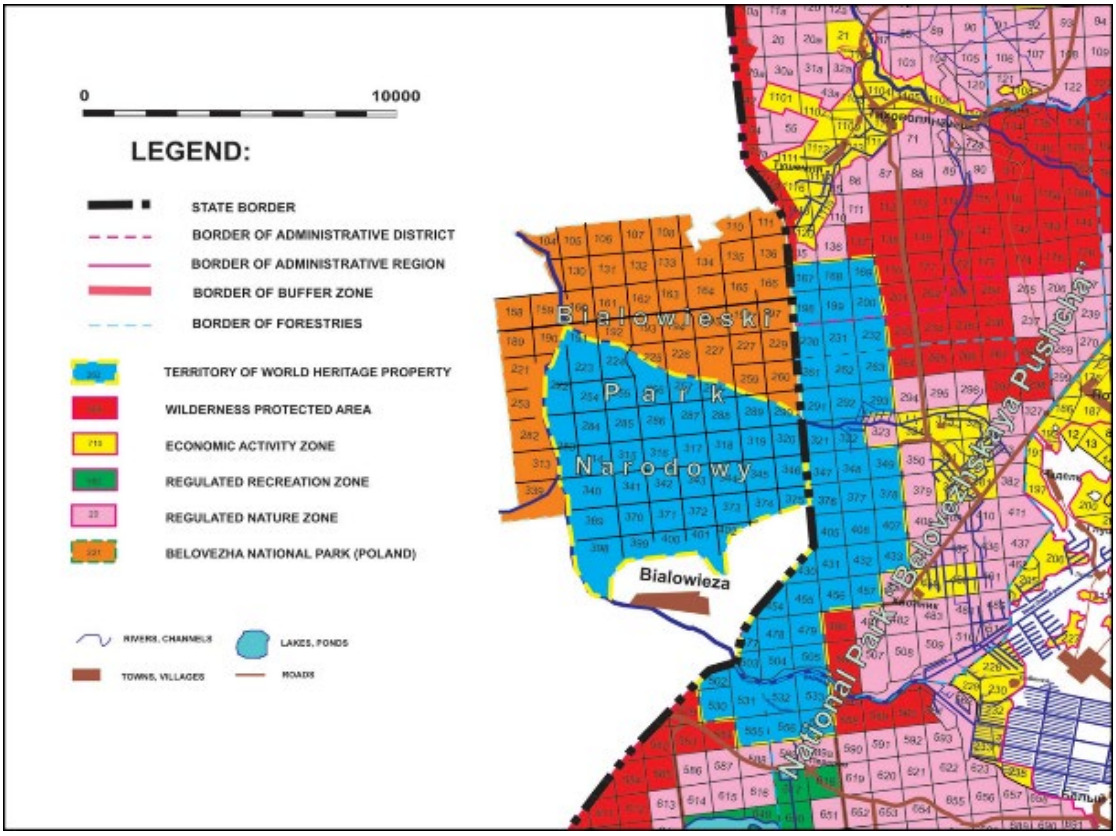

Fig. 3: Area effectively inscribed in 1992 in blue, composed of the original BNP in Poland and the core zone of the BPNP, Belarus. In orange, the extension to the BNP in Poland in 1996 (Source: State Party of Belarus).

After the 1996 extension, there continued to be discussions to further extend the BNP. A 2016 paper[4] highlighted that, because of strong opposition from some of the local governments and also from the forestry administration, this extension never materialized. A fundamental different management view of the conservationists and the foresters was at the basis of this discussion: while the conservationists argued that priority should be given to natural processes happening in an undisturbed way and therefore a strict non intervention policy should be applied, as it is currently the case in the original national park, foresters believed that active forest management is needed to maintain a healthy forest[4].

In 2014, the property was extended, to cover all the forests of natural character of the Białowieża forest in both Belarus and Poland. The extended property now covers an area of 141,855 ha, with a buffer zone of 166,708 ha (fig. 4) and includes most of the remaining forest stands, as proposed in the 1999 IUCN evaluation. At the same time, the criteria for inscription were changed to criterion (ix) and (x) and a new Statement of Outstanding Universal Value (SOUV) was adopted, which provides a clear justification for both criteria. The SOUV (available in Annex 4) clearly lays out the values for which the site was inscribed and highlights the importance of the old-growth forests and the undisturbed nature of the forest for both criteria and for the integrity of the site.

[4] Krzysztof Niedziałkowski (2016). Why do foresters oppose the enlargement of the BNP? The motivation of the State Forests Holding employees as perceived by social actors engaged in the conflict over the Białowieża Forest. *Leśne Prace Badawcze / Forest Research Papers,* December 2016, Vol. 77 (4): 358–370.

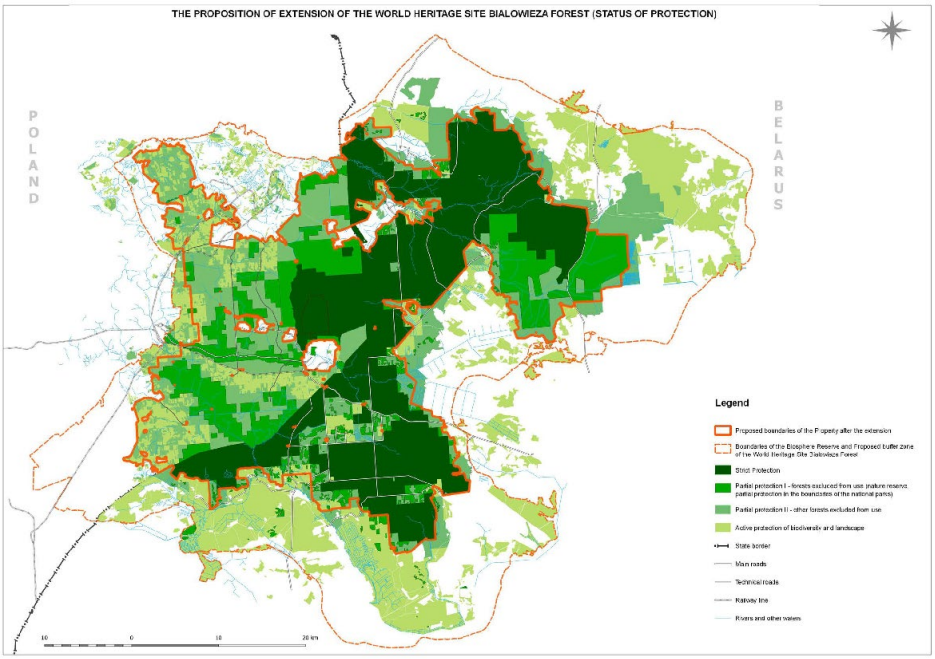

Fig. 4: The 2014 extended World Heritage property with the zoning of the property and the buffer zone (Source: 2014 nomination file).

Previous Decisions on the State of Conservation of the Property

Since inscription, there have been several Committee Decisions related to the state of conservation of the property.

The mission highlights that, at the time of extension in 2014, the Committee also requested the States Parties of Belarus and Poland to undertake a number of urgent measures, including

(1) the establishment of a Transboundary Steering Committee with adequate human and financial resources to coordinate, promote and facilitate the integrated management of the property;

(2) to expedite the preparation, adoption and implementation of a Transboundary Management Plan (TMP) for the property addressing all key issues concerning its effective conservation and management (forest and wetlands management, functional ecological connectivity in the property, reducing the existing large network of roads and fire prevention corridors), and to

(3) maintain and enhance the level of cooperation and engagement of local communities as to ensure their contribution to the effective management of the property (Decision **38 COM 8B.12**).

In 2016, an outbreak of the European spruce bark beetle in the property affected a significant portion of spruce stands in the property. In response to this outbreak, Poland authorized a threefold increase in wood extraction and allowed active habitat restoration interventions in two thirds of each of the three Forest districts. At the invitation of Poland, an IUCN Advisory mission was undertaken in June 2016. The mission stressed that the main objective of the management of the property should be to maintain the overall ecological character of the Białowieża Forest and to restore it, when necessary, by minimizing human intervention and facilitating natural processes. It concluded that further logging should be suspended until a new Integrated Management Plan (IMP) was prepared and approved, with appropriate zoning and regulations, which would be able to guide future preparation and revision of Forest Management Plans (FMP) for the property. The mission further recommended that this

management plan should be fully compatible with the World Heritage requirements and favoring natural ecological and biological processes and be led by a team comprising representatives from all relevant institutions working collaboratively with local communities and stakeholders, local and national NGOs and research communities and associating stakeholders from Belarus and international expertise[5].

In Decision **40 COM 7B.92** The World Heritage Committee recalled that the SOUV of the property emphasized its undisturbed natural processes and the consequent richness in deadwood, standing and on the ground, which leads to a high diversity of fungi and saproxylic invertebrates and urged the State Party to take measures to maintain the continuity and integrity of protected old-growth forest in Białowieża Forest and to ensure that no commercial timber extraction is permitted within the property, noting that such commercial timber extraction would represent a potential danger to the property in accordance with Paragraph 180 of the *Operational Guidelines*.

On 17 February 2017, the Director General of the Polish State Forest Service (SFS) adopted *Decision No 51*, ordering the removal of all trees colonized by the spruce bark beetle and the harvesting of trees constituting a threat to public safety and posing a fire risk in all age classes of forest stands in the three forest districts of the Białowieża forest. This decision triggered an infringement decision issued by the European Commission[6], given that "*increased logging is likely to adversely affect the conservation of the site's habitats and species as well as cause irreparable biodiversity loss, including through removal of 100-year and older trees, and that these measures would, according to the evidence available, exceed those that would be necessary for ensuring the safe use of the forest*".

At its 41st session, the World Heritage Committee reiterated its request to the State Party of Poland to maintain the continuity and integrity of protected old-growth forest in Białowieża Forest and strongly urged it to immediately halt all logging and wood extraction in old-growth forests. It further requested the States Parties to invite a joint WHC/IUCN Reactive Monitoring mission to the property to evaluate current and potential impacts of ongoing and planned forest management operations on the Outstanding Universal Value (OUV) of the property and to assess whether the property meets the criteria for inscription on the List of World Heritage in Danger (Decision **41 COM 7B.1)**.

On 17 April 2018, the European Court confirmed that Poland had failed to fulfill its obligations arising from the Habitats Directive[7] and the Birds Directive[8] due to the adoption and implementation of the Decision No 51. The Court concluded that implementation of the active forest management operations has resulted in the loss of a part of the Puszcza Białowieska Natura 2000 site and stated that the 2016 decision and Decision No 51 would inevitably result in the deterioration or destruction of breeding sites and resting places of certain saproxylic beetles protected by the Habitats Directive as species of European Union (EU) interest in need of strict protection. Furthermore, the Court concluded that the implementation of the contested decisions would inevitably lead to deterioration or destruction of the breeding sites or resting places of the bird species protected under the Bird Directive. Following this Decision, the State Party of Poland repealed Decision No 51 by the SFS.

The 2018 Reactive Monitoring mission[9] observed that in the Polish part, widespread logging activities occurred between 2016 and 2018, including the large-scale removal of deadwood. These activities were also undertaken in the partially protected zone II, which includes old-

[5] The full report is also available at http://whc.unesco.org/en/list/33/documents/

[6] http://europa.eu/rapid/press-release_MEMO-17-1045_en.htm

[7] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ 1992 L 206, p. 7; corrigendum at OJ 1993 L 176, p. 29), as last amended by Council Directive 2013/17/EU of 13 May 2013 (OJ 2013 L 158, p. 193).

[8] Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ 2010 L 20, p. 7), as amended by Directive 2013/17.

[9] The full report is available at https://whc.unesco.org/document/102031

growth forest of more than 100 years old and where no active forest management is allowed. The mission concluded that these activities had disrupted the ecological and natural processes in the property, resulting in negative impacts on its OUV. Taking into account that the State Party of Poland had suspended logging activities in 2018, the mission did not recommend an inscription of the property on the List of World Heritage in Danger, but stressed the importance to fully comply with the management commitments foreseen in 2014. The mission further made recommendations on the development of a TMP, the development of an IMP for the Polish part of the property as well as further recommendations on legal status of the Management Plan and the moratorium on Wolf hunting in Belarus and the upgrading of the Narewkowska road. The full list of priority recommendations is available below. The recommendations were adopted in Decision **43 COM 7B.14.**

At its 44th session, the World Heritage Committee urged the State Party of Poland to ensure that any forest operations in the property, including those that might be envisaged in the new 2022-2031 FMPs, are in line with the recommendations of the 2018 mission and to accelerate the development of an overall Management Plan for its part of the property. (Decision **44 COM 7B.100).**

Priority Recommendations of the 2018 Reactive Monitoring Mission

Recommendation 1 (to the State Party of Poland)

Ensure that all forest operations in the property comply with the following management arrangements in line with the 2014 nomination (see annex 6.5):

- In the strictly protection zone as well as in the partial protection zone I and II, ensure that no forest management interventions are undertaken, including removal of deadwood, sanitary cuttings or any active regeneration activities (including soil preparation and tree planting);
- In the active protection zone, limit forest management activities exclusively to interventions directly aiming at speeding up the process of tree stand replacement to a more natural broadleaved oak – hornbeam forest or at preserving certain associated non-forest habitats, including wet meadows, river valleys and other wetlands and habitats of endangered plants, animals and fungi. The necessary active protection measures should be detailed in the IMP;
- In the entire property, restrict safety cuttings only to areas along specific roads and paths (on 50 m distance from each side) on the basis of a clear risk evaluation plan;
- For the entire property, develop and implement a comprehensive Forest Fire Prevention and Suppression plan (FFPS) based on a rigorous risk assessment, to be included in the IMP and taking into account the observations in this report.

Recommendation 2 (to the State Party of Poland)

Revoke the amendment on the FMP for the Białowieża Forest District and ensure that any new FMP for areas within the property are based on the new overall Management Plan of the Polish part of the property. The existing FMPs should not be amended or only in a very restrictive way to allow for strictly necessary safety measures as stipulated above and on the basis of a clear risk evaluation plan. Any amendment to the existing FMP should be sent to the WHC with a clear justification, for review by IUCN, before approval.

Recommendation 3 (to the States Parties of Poland and Belarus)

Expedite the preparation of a TMP, defining the overall management vision for the property in order to conserve the OUV as defined in the adopted SOUV, defining the transboundary governance system and identifying common areas of collaboration, including restoration of the hydrological regime of the property, connectivity, management of the bison population, etc.

Recommendation 4 (to the State Party of Poland)

As a matter of urgency, develop an overall management plan for the Polish part of the property taking into account the following recommendations:

- Involve all actors and stakeholders (National Park [NP], SFS, scientists of disciplines linked to the attributes, NGOs);
- Place the protection of OUV (as defined in the Decision **38 COM 8B.12**) as the central objective of the management plan;
- Define the management activities based on a mapping of the attributes defining the OUV. The richness of scientific data available will facilitate such mapping;
- Define a possible adjustment of the zoning in areas to simplify the current situation, without decreasing the area excluded from active forest management (strict protection zone and partial protection zones I and II);
- Align all other management plans on the basis of the overall management plan;
- Define a clear joint governance between the BNP, the SFS and the Ministry of Environment;
- Submit a draft of the overall management plan to the WHC before a final approval of the plan.

Recommendation 5 (to the State Party of Belarus)

Strengthen the legal status of the overall Management Plan of the Belarus part of the property, making it obligatory for all other relevant management plans to be aligned with it and adapt the other management plans (Forest, Wildlife) on the basis of the new overall Management plan in order to take into account the protection of the OUV.

Recommendation 6 (to the State Party of Belarus)

Continue the moratorium on wolf hunting in BPNP and consider making this moratorium permanent by legally forbidding wolf hunting in the BPNP, in order for the population to continue its recovery to its historical size and ensure that wildlife management activities further limit the population of red deer and maintain the population of elk.

Recommendation 7 (to the State Party of Poland)

Halt the upgrading works on the Narewkowska road until a detailed Impact Assessment (IA) is prepared and submitted, which assesses the impacts of the road improvement on the OUV of the property, in line with paragraph 172 of the *Operational Guidelines*.

Recommendation 8 (to the States Parties of Poland and Belarus)

Develop a vision on how the property can contribute to sustainable development of the surrounding region, based on a clear sustainable tourism strategy compatible with the protection of the OUV.

On 16 November 2021, the World Heritage Centre sent a letter to the States Parties of Belarus and Poland, requesting information on third party reports concerning the planned building of a border barrier, which could negatively impact the movement of animals across the transboundary property. On 30 November 2021, the State Party of Belarus responded expressing concern over this project and its impacts on the movement of animals across the property. On 10 January 2022, the World Heritage Centre received a letter from the State Party of Poland, confirming plans to construct a barrier along its border with Belarus to prevent illegal migration into Poland. On 14 February 2022, the World Heritage Centre sent a follow-up letter, recalling the need to carry out an IA as foreseen in the Operational Guidelines and requesting Poland to provide more detailed information on the planned border barrier. Noting third party reports that indicate that works within the property had already started, Poland was also requested to suspend construction works within the property until an IA was submitted and reviewed. Further reminders from the World Heritage Centre requesting Poland for a detailed Environmental Impact Assessment (EIA) of the border barrier and its location in relation to the Property, as well as any other relevant technical and visual details, were sent on 20 May, 29 July and 15 November 2022.

On 18 March 2022, and then on 8 June 2022, the World Heritage Centre received letters from the State Party of Belarus expressing further concerns about the legislation adopted by Poland exempting the construction of the border barrier from an EIA, the lack of transboundary consultations on the project and its potential impact on the OUV of the property. On 7 June 2022, the World Heritage Centre received a letter from the State Party of Poland, reiterating its position that the border barrier was required to address the crisis generated by the passage of illegal migrants. To reduce the impact of the border barrier, 20 passages for large animals and 70,000 passages for small mammals, amphibians and reptiles were foreseen. No physical barriers had been constructed along the watercourses. The letter concluded that the border barrier will not have a significant negative impact on protected habitats and species in the Białowieża Forest area.

On 20 October 2022, the State Party of Belarus submitted a detailed analytical note prepared by the Belarus Academy of Sciences with an assessment and forecast of the impact of the border barrier on the biodiversity and natural ecosystems of the property.

On 31 March 2023, information was received from the State Party of Poland on the technical specifications of the border barrier. On 10 May 2023, the State Party of Poland submitted a document entitled “Analysis of the impact of the construction of the barrier on the subjects of protection of the Natura 2000 site Białowieża Forest together with the BNP”. In addition, Poland

submitted on 26 September 2023 an “Assessment of the impact of the barrier on the border between Poland and Belarus on the UNESCO World Heritage Site Białowieża Forest”.

At its 45th extended session, The World Heritage Committee expressed its utmost concern regarding the construction by the State Party of Poland of a border barrier between the Belarusian and Polish parts of the transboundary property, crossing some of the best preserved and most sensitive areas of the property, which will further affect the ecological connectivity and inevitably result in forest fragmentation, changes in the hydrological regime, increased spread of invasive species through the construction phase and degradation of important biotopes, and will severely affect animal movement across the property. The Committee urged the States Parties of Belarus and Poland to take adequate measures to address the potential impacts and guarantee ecological connectivity and considered that, if such measures are not taken urgently, the property may meet the conditions for inscription on the List of World Heritage in Danger, in line with Paragraph 180 of the Operational Guidelines. The Committee further requested the States Parties of Belarus and Poland to invite, as a matter of urgency, a joint WHC/IUCN Reactive Monitoring mission to the property (Decision **45 COM 7B.21).**

2. SUMMARY OF THE NATIONAL MANAGEMENT SYSTEM FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY[10]

2.1. Legal and institutional framework in Poland

The Polish part of the property has different legal statuses: part of the property is a National Park, but a large area has the status of "Managed Forests" and is divided in three Forest Districts, Białowieża, Browsk and Hajnówka.

Protected areas in Poland have been established under the Act of Nature Protection Act of 16 April 2004. The Act defines the concept of a national park as well as other forms of nature protection, whereby national parks in Poland are given the highest degree of protection and are managed directly by the central government. For the managed forests, the priority legal act, being a determinant of activity conducted in the forests, is the Forest Act of September 28th, 1991. The Forest Act determines the model of Polish forestry, both in private and public sectors. It indicates the aims of sustainable forest management and emphasizes the significant meaning of the non-productive role of forest ecosystems. Other relevant acts include the Spatial Planning Act, the Water Law Act, the Hunting Law Act and Forest Reproductive Material Act.

In spite of the fact that a large part of the forests included in the property have a status as managed forests, the nomination file clearly specifies (page 65) that the basic principle for all forests included in the property is "undisturbed wild nature" and that "timber exploitation for economic purposes is banned".

In 2007 the European Commission, in accordance with the Habitats Directive, approved the designation of the Puszcza Białowieska Natura 2000 site. The site comprises the entire Polish part of Białowieża Forest including the three forest districts of Białowieża, Browsk and Hajnówka. The site is also designated under the Birds Directive as a 'special protection area' for birds. The Polish part of the property is also included in the Białowieża Biosphere Reserve, under the UNESCO Man and Biosphere programme.

In terms of the issue of the border barrier, it is also important to mention the 1990 Law on the Protection of the State Border, which foresees a border strip in an area of 15 m wide, counting inland from the line of the state border. The law prescribes that this border strip should be maintained in a condition that ensures the visibility of the state border line and border signs. Owners of land and forests are obliged to clear such land and forest of trees and bushes and other overgrowth to the width established by international agreements. In the case of the Poland / Belarus border, this area to be kept clear is 10 m wide (5 m each way along the border line).

The legal framework for the Polish component of the property is implemented through different management plans. The management plan for the BNP is in force for the period 2015-2034. Each forest district is managed through an FMP. These plans are approved by the Minister of Environment. The FMPs determine all the activities taken as components of forest management, including silviculture, nature protection and assessment of the volume of wood that can be logged. Currently the three forest districts are without an approved FMP.

The institutional setup in the Polish part is relatively complex. The Ministry for Climate and Environment is in charge of both the BNP and the forest districts and hence responsible for the overall management of the property.

The BNP is directly under the Ministry. The tree forest districts are under the General Directorate of SFS. These districts are led by Forest District Directors.

[10] This chapter was updated from the same chapter of the 2018 Reactive Monitoring Mission report.

At the county level, there are entities that are in charge of touristic promotion and environment. At the local level, there are town and village administrations. The fire protection unit is organized at the county and regional level.

Poland is also a signatory of the international Convention on Wetlands (Ramsar) and the Convention on Migratory Species (CMS). For relevance for the issue of the transboundary impact of the border barrier, Poland is a signatory to the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention), which is an international instrument under the umbrella of the United Nations that offers a legal framework to ensure international cooperation in assessing and managing environmental impacts of planned activities, in particular in a transboundary context.

2.2. Legal and institutional framework in Belarus

The designation, gazettement and management of protected areas in Belarus is governed by the Law on Special Protected Natural Areas, which was updated in 2018. The law includes special provisions for the designation and management of special protected areas of international significance, including UNESCO World Heritage Sites and Biosphere Reserves, Ramsar sites, and sites designated under the Emerald Network of the Council of Europe. Other national legislation relevant for the conservation of biological diversity include the Land Code of the Republic of Belarus (1999), the Forest Code (2000), and the Law of the Republic of Belarus on State Ecological Examination EIA (2000) and the Laws on the Environment Protection" (1992), on Use of the Animal World (1996), on Flora (2003) as well as the Forest Code of the Republic of Belarus (2000).

Belarus is also a signatory of the Convention on Wetlands and the CMS, as well as the Convention on Environmental Impact Assessment in a Transboundary Context.

The Belarus component of the property is part of the BPNP. It was granted National Park Status in 1991 (Decree No 352 of September 16, 1991). BPNP is also a UNESCO Biosphere Reserve and was awarded the European Diploma for Protected Areas by the Council of Europe in 1997. A Ramsar site, the Dikoe Fen Mire, is part of the World Heritage property.

The regulations of the national park are laid down in the Decree of the President of the Republic of Belarus "On BPNP" No 460 (2004). Following the updating of the Law on Special Protected Natural Areas, the regulations will be updated in 2025.

The different laws and decrees are applied through management plans. Since the 2018 mission a new management plan was prepared and adopted by the Minister for the period 2022-2031 where all the actions and management objectives are defined. The existing FMPs and Game Management Plans will also be revised following the adoption of the new management plan.

2.3. Protection regime of the property

The 2014 nomination dossier foresaw a complex zoning system, with different management and protection regimes. The different management regimes and authorized uses are summarized in table 1.

In **Poland** there are four zones: the strict protection zone (zone 1), partial protection zone I (zone 2), partial protection zone II (zone 3) and the active protection zone of biodiversity and landscape protection (zone 4).

The strict protection zone is a non-intervention zone with only limited access in order for natural processes to evolve undisturbed. Only the original BNP (before the 1996 extension) has this status. The partial protection I regime is very similar to the strict protection, the only difference being that this zone is accessible with restrictions for mushroom and berry picking. This zone

includes the part of the BNP not included in the strict protection zone (corresponding to the 1996 extension) as well as the Forest Reserves managed by the SFS. The partial protection II zone includes forest areas managed by the Forest Districts, which are excluded from active management. Areas included in this zone include tree stands of over 100 year old, pioneer stands in humid areas with dominant birch and aspen (forming over 50% of tree stand) of over 60 years old and protective zones for species conservation (black stork, lesser spotted eagle, Tengmalm's owl, tree lungwort). Both zone I and II have a restrictive management regime and do not allow for any active forest management activities. These are only allowed in the active protection zone.

Table 1: Zoning and regulation (Source 2016 IUCN Advisory mission report, adapted from nomination file[11], see also annex 6).

Zones	Wood extraction	Hunting	Fire prevention	Road maintenance for safety	Recreational Activities	Berries and Mushroom Picking	Other
Strict Protection	N	N	Y	Y	N	N	NA
Partial protection I	N	N	Y	Y	Y	Y	Maintenance of meadows allowed
Partial Protection II	N	Y	Y	Y	Y	Y	Maintenance of meadows allowed
Active protection zone	Y	Y	Y	Y	Y	Y	Maintenance of meadows allowed; sanitary cutting allowed

The active protection zone allows interventions with the aim of habitat restoration. The active protection zone covers 26 % of the Polish part of the property (16,558 ha) and is subjected to active forestry management, including wood extraction[12]. Nevertheless, the nomination specifies that the basic principle for these forests is "undisturbed wild nature". As a result, the amount of wood allowed to be cut in this zone was greatly limited in the FMP approved after the inscription to approximately 48,000 m^3 and timber can not be exploited for economic purposes. It is also mentioned in the nomination that any cutting needs to be justified by ecological reasons, including limiting bark beetle infestations or re-modelling of tree stands which were altered in the past (page 46 of the nomination file)[13]. It needs to be noted that it is very exceptional to have active forest management, in particular logging, inside World Heritage properties unless these management activities are directly linked to the conservation of the OUV of the property. It needs to be noted that the 15 m wide border strip foreseen by law was included in the active protection zone to allow for the removal of vegetation in line with the above cited 1990 Law on the Protection of the State Border.

In **Belarus** the park has a zoning that defines the activities that are allowed. The Park has 5 zones. The strictly protected zone is a non-intervention zone, with only research activities permitted and no habitat management. The regulated zone allows habitat management but only when justified for conservation purposes. The recreational zone is managed to permit the tourism activities, while protecting the ecological features. The economic activities zone allows

[11] This table is based on the supplementary information to the nomination submitted by the States Parties in November 2013 and considered an integral part of the nomination document and reproduced in annex 6.
[12] The Active Protection Zone is actually larger, but the SFS has instated a so-called reference zone, partly overlapping with the Active Protection Zone, where currently no active forest management activities are implemented for research purposes. This is however not a permanent legal status and can be reversed easily.
[13] Available at http://whc.unesco.org/en/list/33/documents/

sustainable use activities but most of this area is situated outside of the World Heritage property, with the exception of two areas linked to the BPNP facilities.

It needs to be noted that the size of the BPNP was increased significantly in 2004. Figure 5 shows the current zonation of the Belarus part of the property. Over time the zoning has evolved: the strictly protected zone (red) has been enlarged significantly and is now covering a major part of the property, with the economic activities (yellow) situated almost entirely outside the World Heritage property.

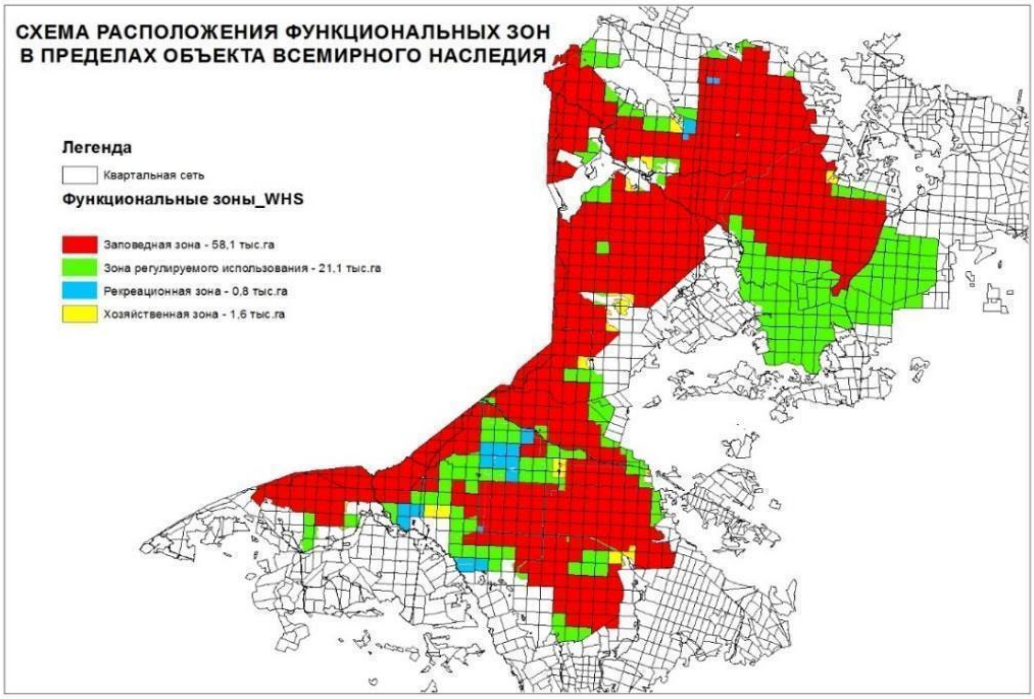

Fig. 5 Perimeter and zoning of the Belarus component of the Property. The strictly protected zone is marked in red, the regulated zone in green, the recreational zone in blue and the economic activities zone in yellow (Source: State Party of Belarus).

3. THE MISSION

At its extended 45th session, the World Heritage Committee requested the States Parties of Belarus and Poland to invite a joint WHC/IUCN Reactive Monitoring mission (Decision **45 COM 7B.21)**. The objectives of the mission as detailed in the Terms of Reference (ToR) were to:

1. Assess the impact of the border barrier in Poland on the OUV of the property, including its integrity, ecological function and wildlife movement, which are vital for the viability of populations of key species;
2. Assess whether the animal crossings and breaks across watercourses put in place represent sufficient mitigation measures to maintain the OUV of the property, with regards to the movement of key species;
3. Review progress in the implementation of the recommendations of the 2018 Reactive Monitoring mission and previous Committee Decisions, including those related to connectivity within the property, taking into account the so-called 'sistema' in Belarus, as well as the various management documents recently developed, or under development, to establish their alignment with the conservation of the property's OUV;
4. 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, protection and management.

The mission was also requested to assess whether the property meets the criteria for inscription on the List of World Heritage in Danger, in accordance with paragraph 180 of the Operational Guidelines for the Implementation of the World Heritage Convention. The full ToR and relevant Committee Decision are available in Annex 1. The mission programme and list of people met is available in Annex 2 and 3.

The mission team was composed of Guy Debonnet, Chief of the Natural Heritage Unit at the UNESCO World Heritage Centre and Glenn Plumb, Chair of the IUCN Bison Specialist Group, representing IUCN.

The mission was undertaken from 18 to 27 March 2024. The mission started in Poland with a meeting in Warsaw on 18 March presided by the Minister of Climate and Environment, which brought together representatives from different Ministries and Government Services, including the Undersecretary of State of the Ministry of Climate and Environment in charge of nature conservation, the Undersecretary of State of the Ministry of Interior and Administration as well as staff from the Ministry of Defence, the Polish Army, the Border Guard and the SFS. The mission then travelled to the Polish part of the property, where further meetings were held with representatives of the BNP, the SFS, the Border Police and the Polish Army. The mission also met with researchers, local administration, NGOs, and local stakeholders. The mission conducted several field visits, including a day long visit to the Polish border barrier in the property.

On 23 March, the mission team travelled to Belarus. Due to the geopolitical situation, only one land border crossing is open between Poland and Belarus at Terespol (Poland) / Brest (Belarus). The border crossing was facilitated by colleagues from the UNDP in Belarus at the request of the UN Resident Coordinator. In Brest the mission team was met by BPNP staff.

In the Belarus part of the property, the mission team spent 2 days in the field visiting the border area and other parts of the property to look at the progress made in implementing the recommendations of the 2018 mission. During the field visits, the mission team was accompanied by the First Deputy Minister for the Environment and Natural Resources, staff of the BPNP, Officers from the Border Guard, representatives of the local administration as well as scientists. The third day, two round table meetings were held with representatives of scientific institutions, the BPNP authorities and relevant national and regional administrations, presided by the First Deputy Minister for the Environment and Natural Resources.

4. ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY

4.1. Impact of the border barriers and illegal migration

4.1.1 Previous and current situation

A physical border barrier situated close to the international border has existed within the Belarus part of the property since the early 1980s, the so-called “Sistema”. This structure follows the international border at varying distances (up to 2,5 km from the border). This structure is composed of a fire break, a dirt road for service vehicles with a total width of about 15 meters and an electrified barbed wire fence with a height of about 2,5 meters and electronic detection cables (fig. 6).

Fig. 6: Border barrier in Belarus, the so-called “Sistema” (Source: BPNP, Belarus).

The issue of ecological connectivity linked to the presence of the “Sistema” was raised by the 2014 IUCN evaluation of the nominated extension of the property, which noted that this barrier prevents exchanges of large mammals, in particular bison, between the Polish and Belarus part of the property. At the same time, the IUCN evaluation noted the ongoing scientific debate concerning the potential benefit of separating the Poland and Belarus bison population for the management of genetic diversity (*see also 4.1.3*). Nevertheless, IUCN recommended that the two States Parties monitor the impacts of the border fence and consider the options to improve connectivity within the property, and to facilitate wildlife movement. This was also reflected in the inscription Decision of the Committee, which requested to expedite the preparation and adoption of a TMP for the property addressing all key issues concerning the effective conservation and management of this transboundary property, including the need to increase functional ecological connectivity in the property (Decision **38 COM 8B.12)** (*see also chapter 1*)**.**

The 2018 Reactive Monitoring mission also addressed the issue of ecological connectivity, and while noting that there was evidence that wolf and lynx were able to move between the Belarus and Polish components of the property in spite of the existing barrier (*see also 4.1.3*), the 2018 mission reiterated the need to take up again the discussions on how to improve connectivity in the overall Białowieża forest ecosystem, including across the state border between Belarus and Poland. In response to this recommendation, the mission notes that the newly adopted 2022 – 2031 Management Plan for the BPNP in Belarus actually foresees under Action 1.2.9 to “*Improve elements of barriers on the Belarusian-Polish border section to ensure functioning*

of migration routes for large mammals, including development of design and estimate documentation (2029-2031)".

In 2021, illegal migration increased exponentially along the so-called "Eastern Borders Route", the 6000 km land border between Belarus, Moldova, Ukraine, the Russian Federation and the eastern EU Member States - Estonia, Finland, Hungary, Latvia, Lithuania, Norway, Poland, Slovakia and Romania. According to Frontex, the European Border and Coast Guard Agency, a record 8,184 illegal border-crossings were detected in 2021 along this eastern border, a more than tenfold increase in comparison to 2020[14]. According to information provided by the State Party, Poland was directly affected by this steep increase of illegal migration, and in 2021 recorded a total of 39,664 attempts to illegally cross the Poland / Belarus State border, compared to 129 in 2020[15].

In response to this increased illegal migration, the Government of Poland decided first to erect a makeshift barrier made of concertina wire[16] on the international border with Belarus, including the 55,9 km of the border situated in the property. On 29 October 2021, the Polish parliament adopted the "Act on the construction of state border protection", establishing the legal basis for constructing a border barrier. On 10 January 2022, the World Heritage Centre received a letter from the State Party of Poland, confirming plans to construct a permanent physical border barrier along the entire international border with Belarus including in the property. Works on the main border barrier started in January 2022 and were completed in June 2022 (see figs. 7 and 8).

The border barrier was erected along the international border in the property, approximately 1 m into the Polish territory (to allow for a 1 m band to facilitate the construction works). As mentioned in chapter 2, a 15 m strip along the international border in Poland is included in the active forest management zone (zone 4), given its legal status as a border zone. This border strip in Poland is immediately adjacent to the strictly protected zone of the BNP (zone 1), the partially protected zone of the BNP and several forest reserves (zone 2) and areas included in the partial protected zone II (zone 3). On the Belarus side, almost all areas directly adjacent to the international border are within the strictly protected zone. Hence the border strip and the barrier cross the most pristine and ecologically valuable areas of the property.

The newly constructed border barrier consists of 5 m steel posts with a 0.5 m foundation, topped with a 0.5 m concertina wire (see fig. 7, Annex 5 photo 1). Every 5 meters, two small holes are provided in the concrete base of the barrier (Annex 5 photo 2), supposedly to allow for the movement of small animals. In addition, there are three larger gates foreseen with a width of 5 m and a height of 4.5 m, which in theory could be opened to facilitate movements of larger animals (Annex 5 photo 3). However, it was confirmed to the mission that to date, these passages remain permanently closed. In addition, there are smaller "technical gates" at regular intervals, to allow for maintenance work. The barrier is completed with electronic surveillance equipment, including motion sensors and cameras.

To construct the barrier, an 8 m service road of approximately 0,5 m height and 8 m width was constructed allowing heavy machinery to put in place the panels. On sandy soils, the construction of the road only required levelling but in humid and swampy areas, the roadbed was excavated, a geofabric was put in place followed by a gravel bed. Although the border barrier and service road were created inside the 15 m border strip situated in zone 4, in several areas trees were also cut in zone 1 and zone 2. In areas where small streams cross the service road, culverts were put in place, although the width and number of the culverts seem insufficient to cope with peak water flows. No culverts were foreseen on the smaller water courses (*see also 4.1.4*).

[14] See https://www.frontex.europa.eu/what-we-do/monitoring-and-risk-analysis/migratory-routes/eastern-borders-route/.
[15] Data provided by Poland in a letter addressed to the WHC dated 29 December 2022.
[16] Concertina wire is a type of razor wire that is formed in large coils which can be expanded like a concertina.

In October 2023, the main barrier was complemented by a second barrier made of concertina wire on the edge of the service road (Annex 5 photo 4). This second barrier was protected with so-called woven-wire forest netting on the side facing the forest, to avoid animals getting entangled in the concertina wire. The mission was informed that the objective of the second barrier was to slow down illegal migrants who were able to cross the main border barrier in order to allow more time for the Border Guard to apprehend the trespassers before they vanished into the adjacent forest. The woven wire fence appears to be successful at preventing wildlife entanglement, yet the consequence of that success is that mid- and large-body sized wildlife cannot move west to east across the closely layered woven wire/concertina fences. The border barrier structure is absent from the section of the border formed by Leśna and Podcerkówka rivers (fig. 8). However, in this section a double barrier of concertina wire was put in place (Annex 5 photo 5), which is protected by woven-wire forest netting on the side facing Poland, but not on the side facing Belarus, creating risks of entanglement for animals trying to cross from the Belarus side.

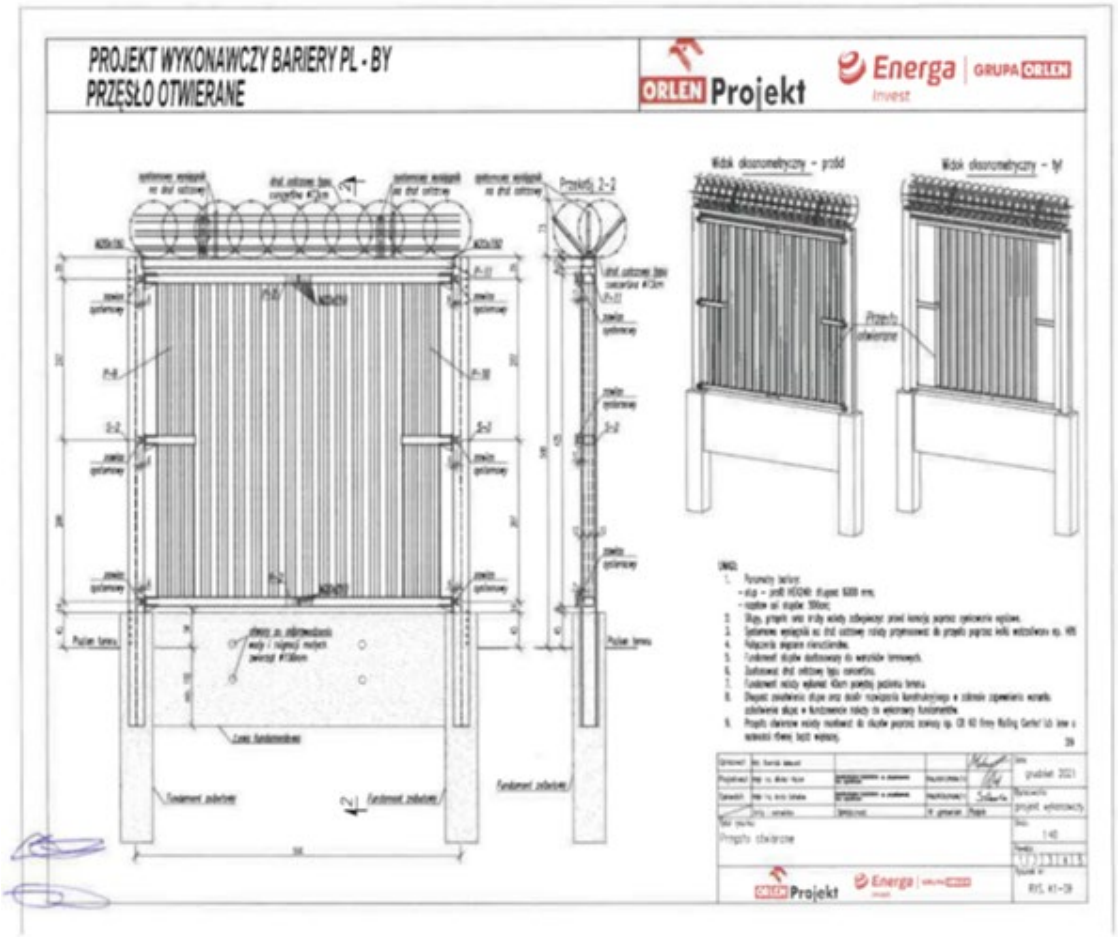

Fig. 7. Design of the main border barrier in Poland (Source: Ministry of Climate and Environment, Poland).

The service road is currently used as a patrol road, to allow for rapid movement of Border Guard and Army staff. Makeshift guard post shelters are situated every few 100 meters with removable toilet facilities and wood stoves. The service road is constantly patrolled on a 24-hour basis by Polish Border Guard and Army personnel on foot and in vehicles, resulting in constant movement and noise.

Fig. 8: Position of the Polish border barrier on the 66 km international border inside the property. Red: steel / concrete border barrier with service road and second barrier of concertina wire, blue: double barrier of concertina wire along the Leśna and Podcerkówka rivers. (Source: Ministry of Climate and Environment, Poland).

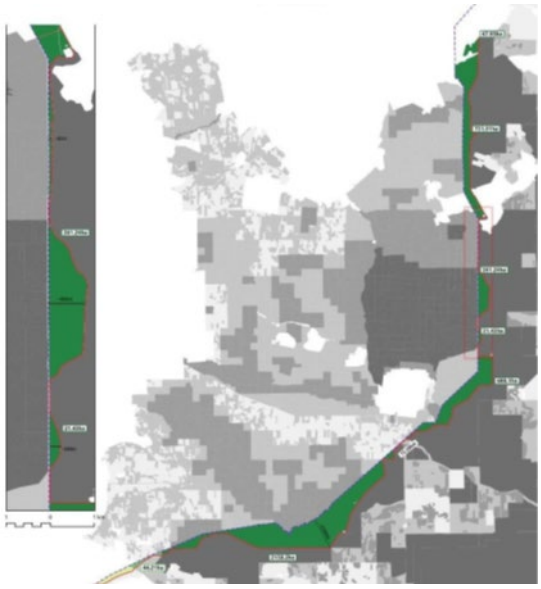

Fig. 9: Areas situated between the Polish barrier and the Belarus "Sistema". The largest part, 3947 ha is situated in the strict protection zone (zone 1) (Source: BNP, Poland).

The mission was informed by the Border Guard officials of plans to add additional surveillance cameras on the Belarus facing side of the border barrier to allow for early detection of approaching migrants as well as the installation of cross beams to the metal poles to strengthen it. Further potential development of the barrier is also being considered by the Ministry of the Interior and Administration, including tarmacking of the service road, the erection of watch towers at regular intervals, the installation or permanent lighting to illuminate the border strip at night and having continuous surveillance by drones.

As the "Sistema" is situated up to 2,5 km away from the international border in certain areas, the erection of the border barrier in Poland also created several larger areas that are currently "squeezed" between the two State Party barriers (fig. 9). These areas are almost exclusively situated in the strict protection zone (3947 ha in zone 1). The mission was informed that there are animals, including bison, that are trapped in these areas between the two State Party border barriers.

In conclusion, the border area in the property is now characterized by an impressive succession of infrastructure impeding wildlife movements. On the Polish side, border infrastructure consists of woven-wire forest netting, a barrier of concertina wire, an 8 m service road, the actual border barrier wall and a 1 m construction strip where vegetation was removed. On the Belarus side, the border barrier is composed of a service road, a ploughed fire strip, an electrified barbed wire fence and a second ploughed area. This makes a total of 9 infrastructure layers (see Fig. 10).

In spite of the construction of the border barrier and the constant patrolling by the Polish Army and Border Guard, the pressure of illegal migrants is reported to remain high. Increasingly, pressure is now mainly concentrated in the border area situated in the property. Fig. 11 and 12 show that while overall pressure of illegal migrants in many areas along the Polish / Belarus border has decreased since 2021, at the level of the border situated in the property, the number of attempted crossings has significantly increased, especially in 2023, and remains very high in 2024.

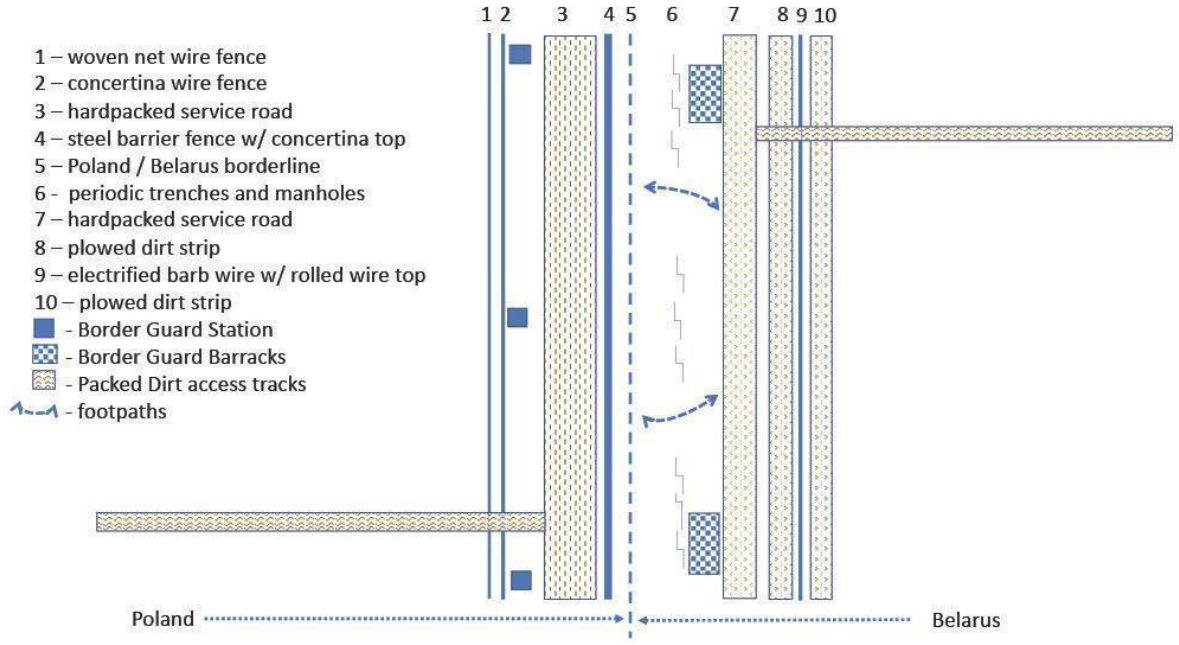

Fig. 10: Overhead schematic of Poland-Belarus border management infrastructure within the Białowieża Forest World Heritage property. Representative image drawn from memory by mission expert GE Plumb, March 2024, not to actual scale.

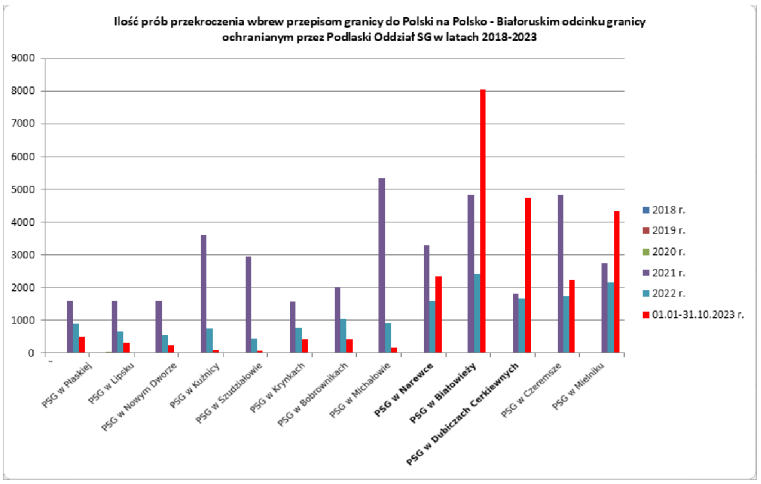

Fig. 11: Number of attempted crossings of illegal migrants in different border areas in Poland from 2018 to 2023, showing the steep increase in the property in 2023 – crossing points inside the property in bold(Source: BNP, Poland).

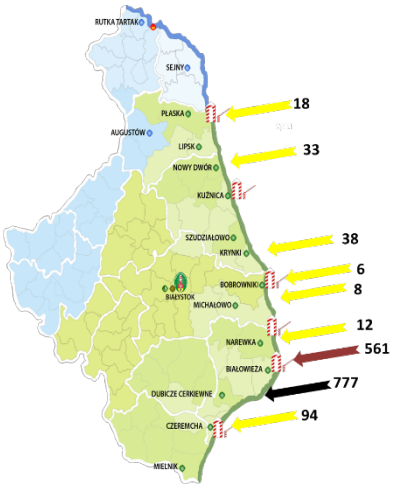

Fig. 12: Number of attempted crossings of illegal migrants in the property in 2024 (Source: Polish Border Guard).

According to the figures provided by the Polish Border Guard, 87% of all attempted illegal border crossings on the Belarus / Polish border in 2024 took place inside the property, showing that the border area in the property has become the focus area of migration. Although no figures were provided to the mission, the Polish Border Guard acknowledged that there continue to be a large number of illegal migrants crossing the border barrier successfully. According to figures quoted in the press and by NGOs, from January 1 to September 17 there were 17,488 "prevented border crossings". However, data from migrants arriving in Germany indicate that in the same period 12,971 were able to cross the border barrier into Poland without being apprehended and arrive in Germany.

4.1.2 Environmental Impact Assessment of the Polish border barrier

Following the official confirmation by Poland of its decision to construct a physical border barrier[17], the World Heritage Centre on 14 February 2022 sent a follow-up letter, recalling the need to carry out an impact assessment as foreseen in the *Operational Guidelines*. The mission points out that the October 2021 Act on the Construction of State Border Protection Installations[18] foresees that existing regulations, including those relating to construction law, water law and environmental protection law, as well as the regulations on the provision of environmental information and the regulations on the protection of farmland and forestland as well as environmental land, do not apply to the border barrier construction project[19]. This means that the Act made it possible for the construction to go ahead without the normal legal provisions, including the preparation of an EIA.

In its reply to the February letter on 13 May 2022, the Ministry for Climate and Environment clarified that the Act foresees a special procedure to consider environmental impacts of the construction project:

The Act provides for establishing a Team for the preparation and construction of the state border protection, whose tasks include, inter alia, monitoring and evaluating the implementation of the project. The Team will be composed of the Minister of the Environment or the authorized Secretary or Undersecretary of State. Pursuant to Article 6(2) of the aforementioned Act, the Team, upon request of the Commander-in-Chief of the Border Guard, provides support in connection with the implementation of the project, including through the possible minimization of environmental threats. It should be assumed that the environmental protection issues, including the best interests of the natural environment, are properly considered in this project, which serves the security of the state. Under this Act, also the General Director for Environmental Protection, as a central administration body specializing in pursuing the environmental protection policy with regard to nature conservation and control of the project process has been appointed to the inter-ministerial Team for the preparation and construction of the state border protection, established pursuant to the aforementioned Act. The rights of the General Director for Environmental Protection related to EIA result from the Act of 3 October 2008 on the provision of information on the environment and its protection, public participation in environmental protection and EIA (Journal of Laws of 2021, items 2373, 2389).

On 10 May 2023, the State Party of Poland submitted a document entitled "*Analysis of the impact of the construction of the barrier on the subjects of protection of the Natura 2000 site Białowieża Forest together with the BNP*". The IUCN review of this document noted that this analysis failed to consider the property as a whole, including important attributes of its OUV and integrity, such as connectivity and habitat fragmentation, and only considered direct impacts on the Natura 2000 sites included in the Polish part of the property. It also did not assess the impacts of different options for the project, including the "no project option". It cannot therefore be considered as an EIA in line with the *Guidance and Toolkit for Impact Assessments in a World Heritage Context*.

On 9 September 2023, the day before the 45th extended session of the World Heritage Committee, the World Heritage Centre received an additional document on the impact assessment in Polish.[20] This 52 page document entitled "*Assessment of the impact of the barrier on the border between Poland and Belarus on the UNESCO World Heritage Site Białowieża Forest*" includes an analysis of the impacts of the border barrier on the OUV of the property, as well as an analysis of so-called variants, including a "zero variant". The document concludes: "*Thanks to the technology used and the location of animal crossings, the Polish fence, compared to the Belarusian systiema (sic), will not constitute a significant obstacle for wild animals on a migration route of pan-European importance. The constructed barrier will not increase the disruption of forest continuity, nor will it violate the external coherence (among other things, there is no threat to natural migration corridors) relevant to the functioning of*

[17] Letter from Poland to UNESCO of 10 January 2022
[18] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20210001992
[19] This is confirmed in the State of Conservation report submitted by Poland in February 2023.
[20] The English translation was received on 26 September 2023.

species populations both inside and outside the Białowieża Forest World Heritage Site. The barrier in question on the Polish-Belarusian border is designed to strengthen the security of the State while respecting the interests of nature. Taking care of the migration needs of wild animals, it is equipped with special animal crossings to eliminate the barrier effect. Border rivers are not fenced. Perimeterization has been applied to these sections, allowing wild animals to cross the border freely."

The IUCN review of this document[21] notes a number of limitations to the assessment, including a lack of clarity on the methodology used to assess the impacts on the attributes of criteria (ix) and (x), the lack of analysis on the potential negative impacts of the barrier on bison, the lack of consideration of the additional and cumulative impacts of the new barrier in addition to the Belarus "Sistema" on wolf and lynx, the fact that only the impacts of the barrier on the integrity of the Polish component of the property are considered and not the transboundary property as a whole, and the lack of full and effective participation of all relevant rights holders and stakeholders. It is further noted that the assessment on habitats and species was initiated with the commencement of construction and concludes that the OUV of the property has not been assessed adequately.

The mission team further notes that in its most recent State of Conservation report submitted in February 2024[22], the State Party of Poland confirmed that the barrier constitutes an obstacle to the dispersion of medium-sized and large terrestrial animals and acknowledges that there is no evidence indicating that the technical solutions applied to act as animal crossings are effective in ensuring free migration of wild animals.

From the above, it can therefore be concluded that no proper assessment of impacts of the border infrastructure put in place by Poland on the OUV of the property were conducted prior to its construction, as is required under the *Operational Guidelines*.

4.1.3 Impact on wildlife connectivity and viability

The flagship wildlife species of the property remains the European bison (*Bison bonasus*). The potential for the Belarus "Sistema" fence to have historically maintained desirable separation of two 20th century captive breeding lines (e.g. Poland: lowland *B. b. bonasus* and Belarus: lowland-Caucasian cross of *B. b. bonasus* and *B. b. caucasicus*) is no longer relevant as recent genetic analyses have confirmed little genetic differentiation between these two subpopulations[23,24]. This means that from an ecological point of view, it would be desirable to restore the connectivity for bison across the entire property. While both of the respective sub-populations of the property now exceed minimum viable sub-population size (e.g.> 150 adults) and exhibit reasonably good reproductive fitness and exhibit relatively uniform genetics[22]; they are now completely segregated for the foreseeable future, with no opportunity for any meaningful demographic or genetic exchange through transboundary movement, due to an array of historic and recent border control infrastructure that includes spatially layered electrified barbed wire, concertina wire, woven wire, and steel barriers (see Figure 10). As with bison above, respective red deer (*Cervus elaphus*) and elk (*Alces alces*) subpopulations are also now completely separated for the foreseeable future, with no opportunity for any meaningful demographic or genetic exchange through transboundary movement due to border control infrastructure.

[21] Submitted to the State Party on 31 January 2024.
[22] Available at https://whc.unesco.org/document/205555.
[23] Machova K, Struncova P, Calta J, Tichy L, Vostry L (2022) Genealogical analysis of European bison population revealed a growing population despite very low genetic diversity. PLoS ONE17(11): e0277456. https://doi.org/10.1371/journal.pone.0277456.
[24] Olech, W.; Wojciechowska, M.; Kloch, M.; Perlinska-Teresiak, M.; Nowak- Zyczynska, Z. 2023. Genetic Diversity of Wisent Bison bonasus Based on STR Loci Analyzed in a Large Set of Samples. Diversity 15, 399. https://doi.org/10.3390/d15030399.

The Eurasian lynx (*Lynx lynx*) is considered of “Least Concern” for risk of extinction in the wild under IUCN Red List criteria. Although the lynx as a species is not at risk of extinction across Europe, the property is at the southern extent of the species range, and there is low genetic diversity and kitten survival for lynx in the property[25,26]. The Belarusian “Sistema" border fence historically resulted in limiting bison movements, but research evidence indicates that some lynx movements still occurred between Belarus and Poland sides of the property (Figure 13). In addition to the physical barriers described above for bison and red deer, there are also conflated disturbance zones on both sides of the border arising from 24-hour border security activities (e.g. noise, human and vehicle movement, smell, light, etc.) that are expected to now serve collectively as an impervious barrier to transboundary lynx movements. Presently, there are approximately 9 adult lynx in the Polish part of the property that likely include only 2 adult females exhibiting increased intra-specific competition[27]. As the only source for lynx to move into the Polish part of the property is from Belarus, there is increasing likelihood that if lynx reproduction in the Polish part collapses, local extinction could occur there within 5-10 years.

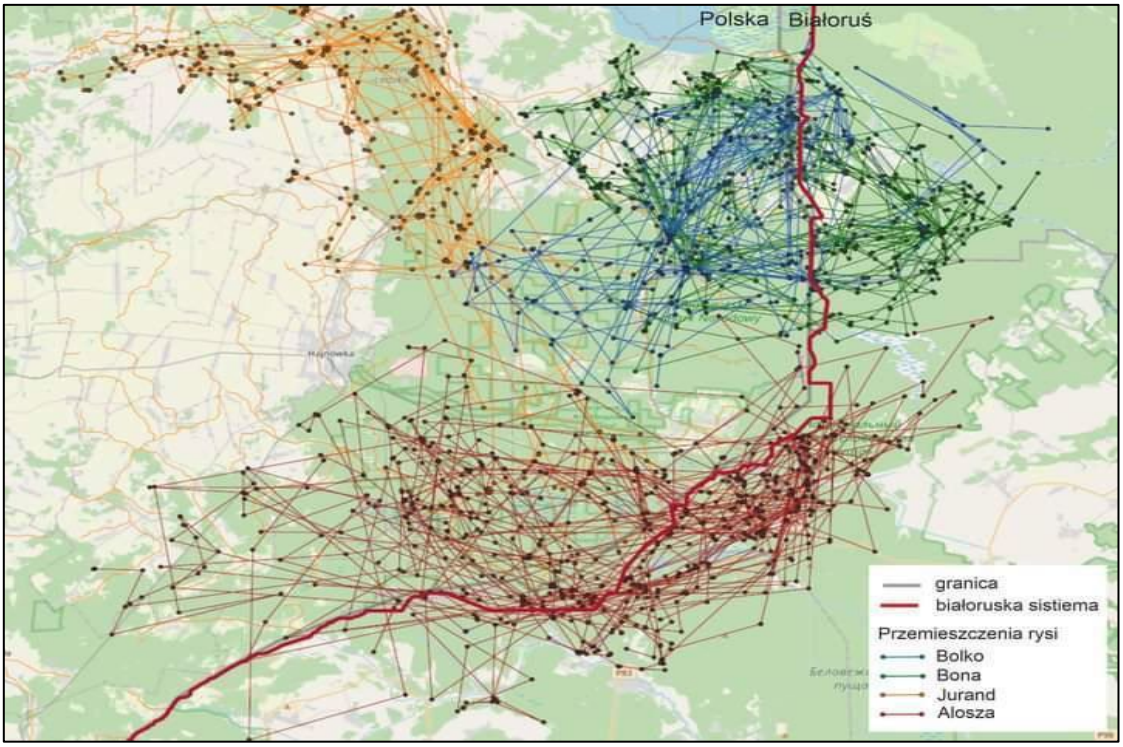

Fig. 13: *Telemetric maps of individual Eurasian lynx (Lynx lynx) crossing the “Sistema” 40-50 times per year between 2008-2012 (Source: BNP, Poland).*

Globally, the wolf (*Canis lupus*) is considered stable and of “Least Concern” for extinction in the wild under IUCN Red List criteria. There are 58 - 76 wolves living across the full property (35 - 48 in Poland, 23-28 in Belarus[28]). As described for lynx, individual wolves also were shown to be able to occasionally cross the “Sistema” when it was the only border barrier, and now the conflated physical barriers and disturbance zones on both sides of the border within and adjacent to the property are expected to limit or prevent wolf transboundary movements[29].

[25] Kowalczyk, R., M. Górny & K. Schmidt. 2015. Edge effect and influence of economic growth on Eurasian lynx mortality in the Białowieża Primeval Forest, Poland. Mamm Res. 60:3–8. DOI 10.1007/s13364-014-0203-z.
[26] Mattisson, J. et al. (2022). Timing and synchrony of birth in Eurasian lynx across Europe. Ecology and Evolution, 12, e9147. https://doi.org/10.1002/ece3.9147.
[27] Personal communication Mammal Research Institute, Polish Academy of Sciences.
[28] Schmidt K. pers. comm.; Smith et al. 2022 https://doi.org/10.1016/j.biocon.2022.109811.
[29] Smith et al. 2022. Quiet islands in a world of fear: Wolves seek core zones of protected areas to escape human disturbance. Biological Conservation 276: 109811.

The wolf is not only a flagship species, which contributes to criterion (x), the SOUV also explicitly mentions the importance of mammalian predators (e.g. wolf, lynx and otter) and their role in supporting complete food webs as a justification for criterion (ix).

The Eurasian brown bear (*Ursus arctos*) was hunted to extinction in Białowieża in the 19th century, yet bears have again been sighted in the property, apparently moving from other regions in Belarus. Recent sightings of brown bear cubs in Belarus indicate the species might be able to successfully reestablish itself in the Belarusian side of the property. Before the erection of the Polish border barrier, sightings in Poland indicated the species was also able to cross the "Sistema". However, with the Polish border barrier in place, it seems now unlikely that the species will be able to re-establish itself in the Polish part of the property.

In addition to the focal species discussed above, the property supports a robust wildlife species diversity (54 mammal, >250 bird, 13 amphibian, 7 reptile, and ~12,000 invertebrates)[30]. The combined historic and recent physical barriers described above, conflated with disturbance zones on both sides of the border arising from aforementioned 24-hour border security activities, are expected collectively to function as a non-porous barrier to landscape scale movement by small and mid-sized terrestrial vertebrates, but not for birds or flying invertebrates. At present, there is no indication that the physical barriers and disturbance zones described above will negatively impact subpopulation viability for small and mid-sized terrestrial vertebrates, birds or flying invertebrates. Of note, there may be emerging "edge effect" of border security noise and light on localized nocturnal species movement and feeding ecology, especially with further upgrades to the barrier which are currently under discussion, such as the installation of permanent lighting to illuminate the border strip at night and having permanent surveillance by drones.

4.1.4 Impact on hydrology

The hydrology of the property straddles two distinct watersheds, e.g. the Polish side is situated amidst the Narew and Bug River watersheds draining to the Baltic Sea, while the Belarus side strides the hydrology divide between the Baltic and Black Seas. Natural waterways flow from Belarus into Poland in the northern part of the property, and from Poland into Belarus in the southern part of the property. While the natural and man-made networks of hydrology features are not yet comparably mapped in detail across the property, there is a density index of 3.44 km/km^2 for natural rivers, tributaries, meanders, etc. for the Polish side; and a density index of 1.15km/km^2 for natural flows for the Belarus side. As described in section 4.1.1, the new Polish barrier wall includes not only a below- and above-ground concrete foundation, but also includes an adjacent service road of approximately 0,5 m height and 8 m width that was constructed to support heavy machinery used to place the concrete foundation panels. On sandy soils, the construction of the service road only required levelling but in humid and swampy areas, the roadbed was excavated, a geofabric was put in place followed by a gravel bed. Thus, the Polish service road now serves as a compacted earthen dam that blocks year-long and seasonal transboundary hydrology flows, creating new areas of waterlogged/flooded soils on the Belarusian side, and drying soils in the Polish side adjacent to the service road/barrier wall (Annex 5 photo 6). The mission was advised that approximately 200 ha in the Belarusian side adjacent to the Polish barrier wall/service road have become flooded with standing water up to 0.5-0.7 m depth that cannot drain away, with an additional 800 ha of waterlogged soils that could in the near term also become flooded with standing water.

[30] Gutowski, J.M. and B. Jaroszewicz. 2001. Katalog fuany Puszczy Bialowieski. Instytut Badawczy Leśnictwa, Warszawa. 403 pp.

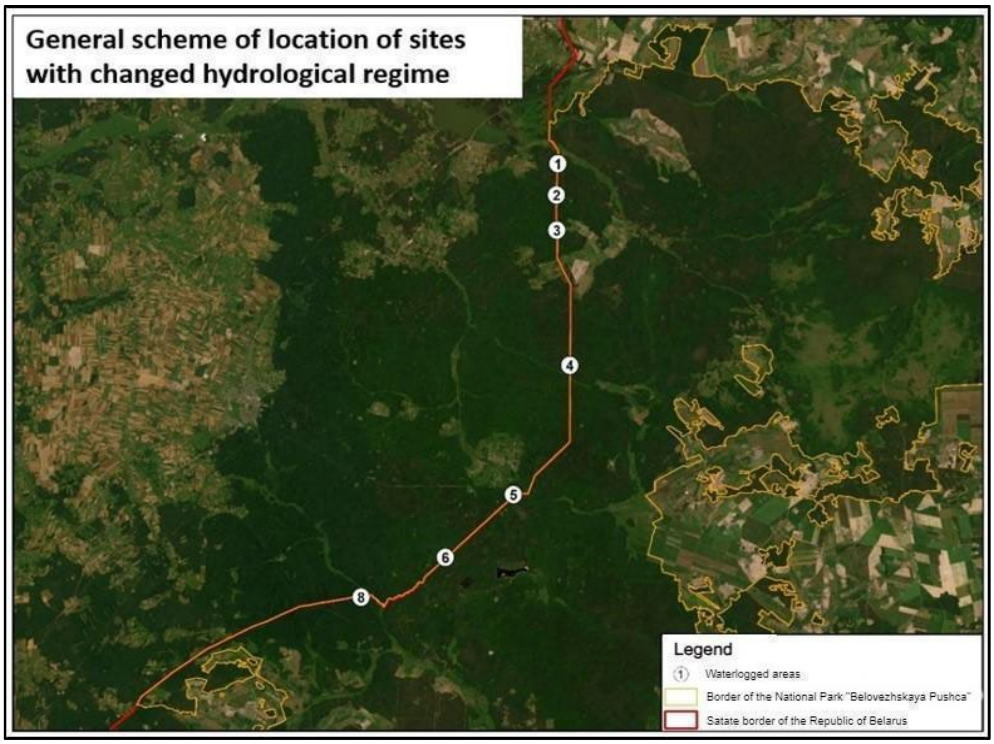

Fig. 14. Map of transboundary sites experiencing changes to local hydrology (surface and subsurface) due to the Polish border barrier wall and adjacent service road (Source: State Party of Belarus).

4.1.5 Impacts from disturbance and edge effects

Advances in our understanding of the impacts of anthropogenic disturbance on wildlife confirms that the majority of species across taxa respond to noise rather than a few species being particularly sensitive to noise, and thus noise must be considered as a serious form of environmental change and pollution[31]. Wildlife responses to noise can be recognized as behavioural and physiological impacts. Behaviourally, noise pollution or "masking" can reduce foraging success of echolocating species like owls and bats, and stimulate species to invest energy into adapting their echolocation frequencies and amplitudes. Mammalian carnivores can be particularly sensitive to human disturbance, both along edges and within protected areas. Lynx are known to adjust their spatial and temporal behaviour patterns and shift habitat use in response to seasonal variation in human-caused noise and light pollution, specifically avoiding relatively high-intensity noise zones. Many carnivore species are highly sensitive to habitat fragmentation by roads and noise corridors. Negative impacts of noise and light pollution for mid- and large-body sized carnivores are exacerbated when such human caused disturbances are localized along the edge of a protected area as a barrier to animal movements. Thus, edges of protected areas defined by roads, fences and regular human presence/movement appear to have the most pervasive negative impact on carnivore occupancy[32]. The simple presence of a road and distance to edge, and not necessarily always how often it is used, is what most negatively affects carnivore behaviour and distribution[33]. In addition to the physical border barriers described above, there are also conflated disturbance zones on both sides of the border arising from 24-hour border security activities (e.g. noise,

[31] Kunc HP and R. Schmidt. 2019. The effects of anthropogenic noise on animals: a meta-analysis. Biol. Lett. 15: 20190649.

[32] Baker A.D. and PL Leberg. 2018. Impacts of human recreation on carnivores in protected areas. PLoS ONE 13(4): e0195436.

[33] Theobald, D. et al. 1997. Estimating the cumulative effects of development on wildlife habitat. Landscape and Urban Planning 39: 25-36

human and vehicle movement, smell, light, etc.) that are expected to collectively reduce habitat suitability for wildlife across taxa within and adjacent to the border management zone, and also serve as an impervious barrier to transboundary movements by mid- and large-body size wildlife. With east to west illegal human migration continuing despite the combined respective Polish and Belarusian border security infrastructure; the mission was informed that there are also acute, distributed and cumulative illegal migrant effects across the most highly protected areas of the property, including collecting down wood for warming fires, fire effects on soils inside fire pits, fire spread outside of fire pits, trash and debris, abandoned medicines, water pollution, human faeces and urine, and disturbance of soil surface and wildlife.

It can therefore be concluded that the disturbance created by the Polish border barrier and the increased activity in the border area and in the Polish part of the property in general will have a significant impact on wildlife in the property.

4.1.4 Impact on invasive species

In addition to the array of direct and indirect impacts of the border security infrastructure and operations that conflate with disturbance and edge effects on wildlife and hydrology described above, there are also concerns about potential cascading consequences from infrastructure construction and continuing maintenance. Foremost is concern about road construction and maintenance materials brought into the property without apparent screening for alien or invasive species (e.g. vascular and nonvascular plants, invertebrates, and fungi). While not all alien species become invasive at the large landscape scale, the lack of screening of road materials (soil, aggregate, gravel, etc.) has raised a strong concern about the full scope of invasive species that may have been introduced into the property. It was unclear to the mission whether materials expected to be used for maintenance of both the Polish and Belarusian border service roads are being sufficiently screened for alien or invasive species. Additionally, there is continuing surface maintenance of the extensive network of roads and trails across the property in Poland and Belarus used for access for fire detection and suppression. The mission was shown a ~1km stretch of a longer overgrown access trail in the Polish part of the property that had recently been scraped clear by heavy equipment (large mechanized vehicle tracks were clearly evident), along with mechanized cutting and removal of small, and medium sized trees (evidenced by 10-20 cm fresh stumps cut at ground level within the previously overgrown trail). The mission was informed that this had occurred in other access trails, yet upon enquiry by the mission, no participant in the field trip was able to identify who had cleared the access trail or why it was done. Such scouring creates extensive bare ground surfaces that would be highly suitable for invasive plant species establishment and reproduction. The mission was also shown large recently deposited piles of soil (located at road junctions) that were said to be used in road/trail maintenance on the Polish side. Upon enquiry, the mission was told that the material had come from local sand pits (no specific location), and upon further enquiry, no participant in the field trip could confirm whether or not these piles of road maintenance material had been evaluated or screened for alien or invasive species seeds or propagules. BPNP and BNP have identified a set of cross-border areas of greatest concern for inoculation and spread of invasive species, in particular Canada goldenrod *(Solidago canadensis)* that have potential to occupy suitable habitats and outcompete native species (Fig. 15 & 16).

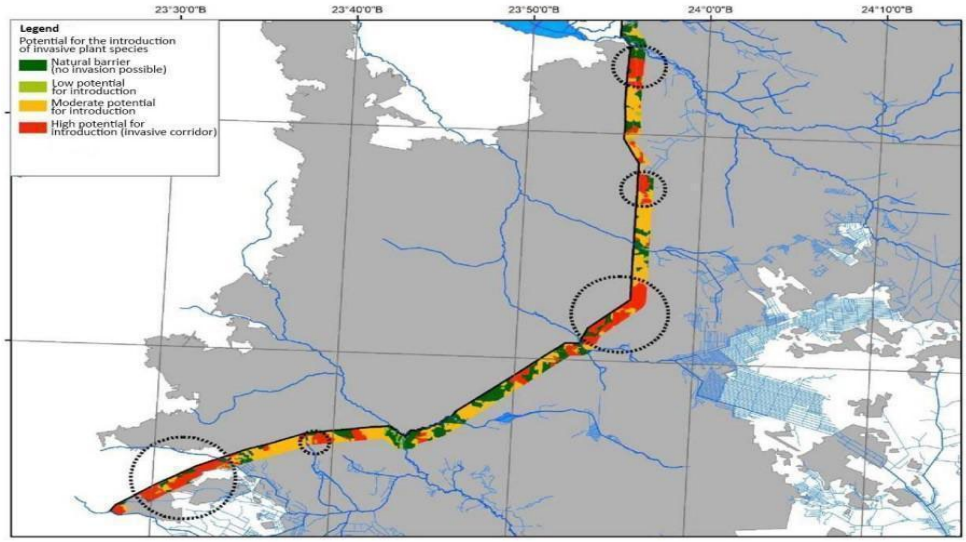

Fig. 15: Map of transboundary areas of concern for invasive species due to construction and maintenance of the Polish border barrier wall and adjacent service road (Source: BPNP, Belarus).

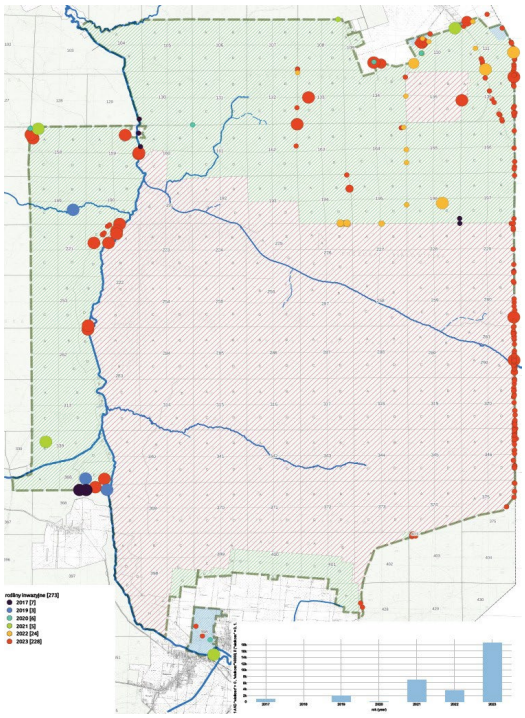

Fig. 16: Map of locations in 2023 of invasive species Canada goldenrod (Solidago canadensis) and red oak (Quercus rubra) in BNP showing the border as an important area for invasive species (Source: BNP, Poland).

4.1.7 Efficiency of mitigation measures

Culverts and gates were included into the Polish border barrier infrastructure as mitigations to address local hydrology and wildlife movements. Several larger culverts were placed under the Polish steel barrier wall and adjacent service road at locations where sub irrigated and surface stream flows from Belarus to Poland were known to occur. These few larger culverts do not appear to allow sufficient flows during peak periods and become choked with debris, causing east-to-west water flows to backup in the Belarus side, and causing some erosion under the service road. The regularly spaced small culverts built into the barrier wall foundation do not appear to support any meaningful groundwater movement or small wildlife movement. Indeed, it does not appear from multiple inspections from the Polish and Belarusian sides by

the mission, that the small culverts provide any meaningful mitigation function. The mission visited several areas where water has “backed-up” in Belarus causing local flooding of 0.5-0.7 m deep. The Polish border barrier rests on a concrete foundation wall set ~1m below ground level and ~0.5 m above ground that appears to block all ground-surface level movements by invertebrates or small vertebrates. The steel barrier wall itself is impenetrable by design for humans, yet also has the same consequence for mid- and large-body sized wildlife.

The mission was shown several large and mid-sized hinged gates built into the Polish barrier wall that were designed to be opened to support wildlife movements, and were informed that none of the gates have ever been opened for such purpose. Polish Border Guard noted that opening the gates is impossible as long as the migration pressure remains high. It is therefore not evident that the gates currently achieve their designed purpose. However, even if they would be opened, researchers from Poland and Belarus pointed out that the gates have not been placed on animal movement routes and are too small to allow for meaningful movement of wildlife. The mission saw fresh bison tracks moving north-south on the Belarusian side of the Polish border barrier and were advised that several adult bison were living in the area between the Belarusian “Sistema" and the Polish border barrier, though it was not clear whether there are any contingency plans in place to address this situation. Cumulatively, the layered Polish border security infrastructure (Fig. 10) essentially serves to sever both local hydrology and small-, mid- and large-body size wildlife terrestrial movements between the Polish and Belarusian sides of the property.

4.1.8 Overall impacts on the property

The mission concludes that the layered Polish border security infrastructure combined with the Belarusian “Sistema" are now functioning as an essentially impenetrable barrier to wildlife movement (other than birds and flying insects) affecting the integrity of the property. Lack of action to address this impact through effective mitigation measures will inevitably lead to two functionally disconnected wildlife protected areas. The Polish border barrier and its foundation are disrupting local sub irrigated and surface hydrology leading to degradation of local forest stand health and condition on both sides of the barrier wall (e.g. flooding in Belarus, dewatering in Poland). The construction and maintenance of the Polish border security infrastructure appears to be exacerbating the establishment and spread of alien and invasive species, and it is not clear whether Poland or Belarus are now screening construction and maintenance materials for alien and invasive species, or indeed have any plans to actively address the establishment and suppress the spread of such species arising from border security activities. In addition to acute local site impacts by border security infrastructure and activities described above, there are also “edge effects” across the property at variable distances away from the border. Human noise and light pollution are very likely to disrupt diurnal and nocturnal wildlife behaviour and movement patterns. For example, the combined 24 hour per day human presence and movement, noise and light in the immediate border zone, and the wildlife disturbance “edge effect” spreading out from the border zone, are likely contributing to reduced habitat suitability for, and heightened competition between, the remaining two adult female lynx in the Polish side; thus increasing the potential for local extinction of lynx in the Polish part of the property.

The mission concludes that the construction of the border barrier and associated infrastructure and activities is negatively impacting the integrity of the property by blocking ecological connectivity for the majority of wildlife, disturbance of wildlife in and adjacent to the border zone, the likely introduction of invasive species, and localized negative impacts on the hydrology. The new barrier is further exacerbating the impacts of the “Sistema” in Belarus, which already hindered wildlife connectivity, without completely blocking it.

The mission notes that while the border barrier and its associated infrastructure and activities are impacting the integrity of the entire property, these impacts will especially

affect the Polish part of the property, while in Belarus impacts are more localized in the border area. The development of further infrastructure that is being considered in relation to the Polish barrier, such as installing permanent lighting and tarmacking of the service road, would further exacerbate these impacts.

To avoid further long-term impacts on the OUV of the property, a set of decisive actions would be needed to fully restore ecological connectivity, which would require at least modifying or partly dismantling the barrier structures and associated infrastructure in place. This would undoubtedly require a joint effort by Poland and Belarus to address the illegal migration across the border. The mission notes that while a full restoration of ecological connectivity across the entire property has to be the objective, this is unlikely to be feasible in the short to medium term whilst transboundary cooperation remains impacted as a result of the current geopolitical situation.

The mission therefore recommends a set of activities to be implemented as soon as possible to better mitigate the impacts, including:

a) ***Urgently implement technical measures to address the localized impacts on the hydrology and allow for a restoration of natural peak water flows, for example by adding more and larger culverts under the barrier wall foundation and adjacent service road, and putting in place dedicated monitoring and human capacity to ensure the culverts function under peak flow conditions;***

b) ***Develop and rapidly implement a set of actions to support the Polish lynx population in the property to improve habitat quality for increased prey availability combined with reduced noise, light, and road use, and also develop contingency plans to supplement/reintroduce the Polish lynx sub-population as warranted;***

c) ***Provide additional funding for monitoring and mitigation measures to suppress the introduction and spread of invasive species, including screening all human activities for invasive species, rapid detection and eradication programs, etc.;***

d) ***Establish dedicated ecosystem monitoring and adaptive management capacity to mitigate noise and light pollution and edge effect;***

e) ***Refrain from further development of the barrier infrastructure in the property.***

The mission considers that in order to develop and implement these mitigation measures, cooperation between the States Parties of Poland and Belarus will be required, at least at the level of technical information exchange. The mission notes that UNESCO and IUCN, and possibly with the involvement of other UN entities, could potentially facilitate a dialogue at the technical level between the States Parties.

The mission further recommends establishing a comprehensive and long-term research and monitoring programme of the OUV of the property in order to allow for adaptive management of the threats and impacts of the border barrier and its associated infrastructure.

Given that at this stage it seems impossible to fully mitigate the impacts of the border infrastructure and that its impacts are disproportionally affecting the Polish component, the mission recommends the State Party of Poland to take additional measures to increase the resilience of the ecosystem by addressing stressors on the integrity.

The mission also considers further research is required on the impacts of the border barrier and associated infrastructure on biodiversity and ecological and biological processes of the property, including alternatives to conventional border barriers, wildlife passages and other measures to minimize the impacts of the border barrier, concertina fences and associated road infrastructure.

4.2. Management planning

The complexity of the management structure of this property results in the need for multiple management plans (See Fig. 17, see also chapter 2).

Fig. 17: Hierarchy of management planning for the Białowieża Forest World Heritage property (prepared by the mission team).

4.2.1 Belarus-Poland Transboundary Management Plan[34]

The need to establish a transboundary management approach for the property was highlighted in the 2014 IUCN evaluation of the extension of the property. In its decision **38 COM 8B.12**, the World Heritage Committee requested the States Parties of Belarus and Poland to establish, as a matter of urgency, the Transboundary Steering Committee that will coordinate, promote and facilitate the integrated management of the property, and to expedite the preparation and further official adoption of the TMP for the entire property. The 2018 mission noted that while a Transboundary Steering Committee had been established and was meeting regularly, progress on the development of a TMP had been limited. The mission recommended the States Parties of Poland and Belarus to expedite the preparation of a TMP, defining the overall management vision for the property in order to conserve the OUV as defined in the adopted SOUV, defining the transboundary governance system and identifying common issues of collaboration.

Unfortunately, no progress has been made in implementing this recommendation. On the contrary, transboundary cooperation was abruptly halted in 2022 as a result of a deterioration of the bilateral relations between Poland and Belarus. There have been no more transboundary meetings and all contact between the management authorities of the Poland and Belarus components, including at the technical level, was abruptly halted. This is also reflected in the submission of state of conservation reports for the property, where the States Parties had submitted joint reports since 2015, however in 2022 and 2024 reports were again submitted separately.

The mission regrets that all transboundary cooperation in the management of the property at the technical level has been halted. It stresses again that certain conservation and management challenges can only be addressed through effective transboundary cooperation.

[34] Follow up to recommendation 3 of 2018 Reactive Monitoring mission

The construction of the border barrier, which as shown above has resulted in the loss of ecological connectivity between the Polish and Belarus components, has created additional conservation challenges including increased spread of invasive species and disturbance of the hydrology in the border area. Other issues mentioned in this report, including management of the bison population, restoration of the hydrology, addressing the impacts of climate change etc. also would require greater transboundary coordination.

The mission stresses that it would be important to restart the transboundary cooperation process at the technical and scientific level in order to coordinate management actions to address the various conservation challenges addressed in this report, including the development of urgent mitigation measures to address the impact of the border barrier (see also 4.1).

The mission considers that the development of a TMP remains a necessity to address the complex conservation challenge the property is faced with. This should be done as soon as the IMP for the Polish component is finalized as far as politically feasible.

4.2.2 Management plan for the Belarus component[35]

The 2018 Reactive Monitoring mission recommended to strengthen the legal status of the overall Management Plan of the Belarus part of the property, making it obligatory for all other relevant management plans to be aligned with it and adapt the other management plans (Forest, Wildlife) on the basis of the new overall Management plan in order to take into account the protection of the OUV.

Following the expiration of the 2008 – 2020 management plan, a new management plan was prepared for the period 2022 – 2031. An electronic copy of the management plan was made available to the mission in Russian. The management plan is approved by the Minister for Environment and Natural Resources and includes a detailed action plan of activities to be undertaken. Unfortunately, as no English translation is available, it was not possible for the mission to do a further review of the document.

As mentioned in chapter 2, the law relevant to the management of protected areas in Belarus, (Law on Special Protected Natural Areas) was updated in 2018 and according to the information provided to the mission team, management plans are now approved by the Minister and are legally binding and will guide other management documents such as FMP and hunting management plans, as recommended by the 2018 mission. The law also foresees that regulations are to be established for each protected area once the management plan is adopted, which prescribes what activities can be allowed in each management zone. The mission was informed that the regulations for the BPNP will be updated in 2025. New FMP and hunting management plans will also be approved in 2025 based on the 2022 – 2031 management plan. Currently, the forest inventories in preparation of the new FMP are underway.

Based on the information received, the mission concludes that the 2018 mission recommendation 5 has been implemented. However, a translation of the management plan of BPNP in one of the working languages of the World Heritage Committee should be submitted to the World Heritage Centre as soon as possible in order for it to be reviewed by IUCN.

4.2.3 Integrated Management Plan for the Polish component[36]

The 2018 Reactive Monitoring mission stressed the importance of developing an overarching management plan for the Polish part of the property that explicitly characterizes a unifying

[35] Follow up to Recommendation 5 of 2018 Reactive Monitoring mission
[36] Follow up to recommendation 4 of the 2018 Reactive Monitoring mission

framework that would ensure that all management plans across multiple jurisdictions (e.g. BNP, the SFS and the Ministry of Climate and Environment, see Fig. 17) are effectively and efficiently aligned with the central objective to protect the property's OUV. The 2018 mission further suggested that the State Party consider seeking advice from IUCN during the process of developing this plan.

The mission was informed that, in 2021, the Ministry of Climate and Environment contracted the Institute of Environmental Protection to develop a draft IMP. A steering committee was created including representative stakeholders. A total of 14 thematic expert dialogues were conducted, and 30 stakeholder workshops and meetings were organized, with a wide participation. A project website provided current information, including information on all the planned workshops for stakeholders. A draft IMP was published in November 2023 for public consultation.

A consultation meeting was also organized for scientists and NGOs on 30 November 2023 at the Forest Research Institute in Białowieża. While most stakeholders confirmed to the mission team that the process was indeed very participatory, the mission received complaints that two essential annexes to the plan, the updated forest zone plan and the Forest Fire Prevention and Suppression Plan (FFPS) were imposed by the SFS outside of the participatory process described above. In December 2023, the Ministry of Climate and Environment reviewed the draft IMP and concluded that the impact of the border barrier was not sufficiently considered in the plan and that the proposals for revisions of the forest zonation and the FFPS were not sufficiently aligned with the recommendations of the 2018 Mission or the protection of the property's OUV. The Minister ensured the mission that the IMP would be completed by the end of 2024 and that these issues would be satisfactorily addressed. The Minister also confirmed to the mission that no new plans for the 3 forest districts would be formally adopted before the IMP is finalized so as to ensure appropriate alignment between forest plans and the IMP (see also the issues of the zonation and FFPS discussed in 4.3).

During the mission's visit to the Polish component of the property, an English copy of the draft IMP was provided to the mission team. While an in-depth detailed review of the draft IMP is beyond the scope of the current mission, preliminary feedback is included here. Noting that at the time of drafting this report the State Party of Poland had also requested a separate IUCN Advisory mission to specifically advise on this process (as suggested by the 2018 mission) and then postponed this request[37], the mission team reiterates the opportunity for the State Party to request an IUCN Advisory mission.

The mission agrees with the Ministry that the current draft IMP does not satisfactorily address how issues associated with border security infrastructure and operations (see 4.1) will be reconciled or integrated in the existing management in support of the property's OUV. Essentially, for the foreseeable future, the full scope of border security operations and interventions must now be critically addressed and explicitly integrated on par with how SFS and BNP operations support the property's OUV.

The mission finds that the draft IMP should be substantially reorganized to clearly and succinctly present core formal guidance statements to be adopted by all specific management plans in order to achieve the desired integration across multiple existing and emerging threats (climate change, forestry practices, invasive species, disruption of the hydrology, fire, fragmentation, human activities, etc.), and existing and emerging barriers (e.g. law/policy, organizational, financial and stakeholder engagement, etc.). As shared with the mission, the draft IMP presents an overwhelming amount of highly detailed information regarding the planning process, public dialogue, existing law and policy, and existing and modified responsibilities, which could more appropriately be presented as an annex of the administrative record of the planning process.

[37] Letter to World Heritage Centre received April 2024.

The mission thus suggests that the IMP should focus on succinctly presenting formal guidance statements, supported by directions to the respective agencies that ensure their respective plans will be fully aligned with the overarching guidance statements. For example, the IMP could articulate clearly the guidance to mitigate organizational barriers and thus direct the BNP and SFS to regularly coordinate (through meetings and public correspondence) and cooperatively integrate/implement their respective responsibilities at the local level so as to ensure alignment of their shared commitments for the property's OUV. The draft IMP could also thus articulate what extent of coordination and integration with border security will be agreed upon and achieved to maintain a comprehensive focus on mitigating border security impacts on the property's OUV.

The draft IMP also lacks sufficient clarity and emphasis on adaptive management, wherein there would be a commitment for science and monitoring information (e.g. agency, research institutes, academia) to be regularly presented (e.g. annually) and formally evaluated for purposes of making and documenting decisions to adjust respective and collaborative management prescriptions to mitigate existing and emerging impacts and better protect the property's OUV. The mission considers that the IMP should also clearly identify a "catalogue" of higher order management actions to improve the property's OUV. For example, to address the threat of fragmentation, the IMP could provide clear guidance that decommissioning unnecessary roads, trails, fencing, avoiding non-natural patterns of forestry plantings, etc. within the property will be required whenever possible, and thus delegate to the respective agencies to determine how best to utilize the catalogue of approved management actions to accomplish the overarching guidance.

The mission notes that from an editorial point of view, much of the detailed information presented in the main body should be moved into Annexes without diminishing the report's transparency or integrity. These and other such editorial steps could greatly improve the readability and clarity of the IMP core guidance that will hold all subsequent plans and their implementation accountable to the core objective of protecting the property's OUV.

The mission recommends revising the current draft IMP to improve clarity and include core guidance on the overall management principles of the property in order to inform all relevant management documents for the Polish component of the property, including FMPs, and ensure that they are aligned with the protection of the property's OUV by including:

a) ***clear guidance statements for addressing threats to the OUV;***
b) ***guidance for integrating border security issues into the overarching capacity to protect the property's OUV;***
c) ***a catalogue of active forest management interventions which can be accepted in the active protection zone and under which conditions they should be applied;***
d) ***a comprehensive and long-term research and monitoring programme to allow for adaptive management of threats;***

and to finalize the draft before the end of 2024 and submit it to the World Heritage Centre for review by IUCN.

4.3. Forest management and zoning[38]

It is important to recall again that all forest management interventions have to serve the management objective of the conservation of the OUV, which is underpinned by the scale of the old growth forest present in the property, which includes extensive undisturbed areas where natural processes are on-going (see SOUV). As indicated in the 2014 nomination file,

[38] Follow up to recommendations 2 and 4 of the 2018 Reactive Monitoring mission

“the undisturbed wild nature is the basic principle for the management” (page 7) of the property. This principle is at the basis of the zonation of the property as included in the 2014 nomination file, whereby areas which contain undisturbed, relatively undisturbed and old-growth forests are included in the strict protection zone and the partial protection zone I and II and have to follow a regime of non-intervention, with some exceptions for safety reasons. Active forest management is allowed only in the active protection zone in the Polish part and in the regulated zone of the Belarussian part and has to respond to strict conservation objectives: (1) to create conditions to allow for these areas to evolve more quickly to a natural oak hornbeam forest, by speeding up the process of tree stand replacement to a more natural one or in some rare cases or (2) to preserve certain associated non-forest habitats, including wet meadows, river valleys and other wetlands and habitats of endangered plants, animals and fungi recognized under criterion (x).

The 2018 reactive monitoring mission was undertaken in the context of increased logging in the Polish part of the property following a bark beetle outbreak. Measures taken by the SFS in 2016 and 2017 to address the bark beetle outbreak resulted in massive logging activities affecting more than 4000 ha of the property, including zones excluded from active forest management, and involved the harvesting of more than 200,000 m^3 of wood. The 2018 mission concluded that the logging and active forest management activities undertaken by Poland in response to the bark beetle outbreak were not in compliance with the management arrangements foreseen in the 2014 nomination dossier as mentioned above and constituted an ascertained threat to the OUV of the property. It made a clear recommendation to bring all forest management interventions back in line with these management arrangements as follows:

- In the strictly protection zone as well as in the partial protection zone I and II, ensure that no forest management interventions are undertaken, including removal of deadwood, sanitary cuttings or any active regeneration activities (including soil preparation and tree planting);
- In the active protection zone, limit forest management activities exclusively to interventions directly aiming at speeding up the process of tree stand replacement to a more natural broadleaved oak – hornbeam forest or at preserving certain associated non-forest habitats, including wet meadows, river valleys and other wetlands and habitats of endangered plants, animals and fungi. The necessary active protection measures should be detailed in the IMP;
- In the entire property, restrict safety cuttings only to areas along specific roads and paths (on 50 m distance from each side) on the basis of a clear risk evaluation plan;
- For the entire property, develop and implement a comprehensive FFPS based on a rigorous risk assessment, to be included in the IMP and taking into account the observations in this report.

The 2018 mission further recommended that any new FMP for areas within the property are based on tan Integrated Management Plan of the Polish part of the property and that that any proposed changes to the zoning should ensure that the area excluded from active forest management is not decreased.

4.3.1. Development of new FMP and changes to the zonation in the Polish component

The mission team was informed that following the (amended) FMP for the period 2012 – 2021 and in line with the forest act[39], preparations for the new FMP 2022 – 2031 started in 2019, including research on soils and habitats, measurements of tree stands and elaboration of

[39] Pursuant to the provisions of the Forest Act, the director of the Regional Directorate of State Forests is obliged to prepare a FMP for the forest district no later than in the 8th year of the FMP validity.

detailed forest valuation descriptions as well as technical and management meetings to discuss the scale and type of activities in forest districts and adjustments of the divisions to adapt them to the current condition of the forest. The mission was informed that the draft FMP 2022 – 2031 foresaw an average 56,000 m3 of wood harvesting per year, a (limited) increase compared to the original 2012 – 2022 FMP. According to the NGO, the draft FMP included also some logging in the partial protection zone II (zone 3), where normally forest management actions are allowed. This is apparently linked to the proposed changes in the zoning (see below). It also needs to be noted that the draft FMP was prepared before the overall management plan of the Polish component has been finalized, making it difficult to ensure that it is coherent with this overall management plan as recommended by the 2018 reactive monitoring mission.

The mission was informed that the draft 2022 – 2031 FMP so far has not been approved and was currently not being implemented. Following a legal complaint by a conservation NGO in 2021 that the FMP was not in line with Natura 2000 and World Heritage commitments, the implementation of the 2022 – 2031 FMP was provisionally blocked by the court pending a final decision by the court on the complaint. This means that in practice, since 2022, no logging has been taking place in the active forest protection zone. The mission was further informed that following the October 2023 election, the new Minister of Climate and Environment and the new senior management of the State Forests had suspended the approval of the 2022 – 2031 FMP until the adoption of the IMP. The mission was further informed that additional work was needed to bring the new FMP fully in line with the 2018 mission recommendations. In the 2024 State of Conservation report by Poland, it is stipulated the new FMP will be aligned with the IMP and will be adopted at the earliest at the beginning of 2026.

In parallel to the development of the new FMP, work was also undertaken on adapting the zoning of the Polish part of the property in line with the 2018 mission recommendation to define a possible adjustment of the zoning in areas to simplify the current situation, without decreasing the area excluded from active forest management. The new zonation was also discussed in the framework of the working group tasked with the development of the IMP (*see also 4.3*). The changes to the zonation appear to remain one of the topics of debate between the representatives of the SFS, local rights holders and local authorities, scientists and conservation NGOs. A new zonation was finally determined by the SFS in 2023 but is being opposed by different rights holders and stakeholders for different reasons. Comparing the original zonation and the proposal shows that while zone 1 and zone 2 remain the same, there is a shift from zone 3 to zone 4, resulting in a substantial increase in the active forest protection zone. NGOs pointed out to the mission that 2023 proposed zonation would result in the inclusion of several stands with trees of more than 250 years old in the active forest management zone, making it possible to log them and that this was done to bring the zonation in line with the proposed 2022 – 2031 draft FMP[40]. The Minister for Climate and Environment informed the mission that it considers that the 2023 proposed zonation is not in line with the recommendations of the 2018 mission and hence will be adapted further.

The mission concludes that the available draft 2022 – 2031 FMP and the 2023 proposed zonation are indeed not in line with the recommendations of the 2018 Reactive Monitoring mission. The mission noted that the proposed zonation would lead to a decrease of the partial protection zone (zone 3) to the benefit of active protection zone (zone 4), which is in contradiction to R2 of the 2018 mission. While the 2018 mission agreed that the zoning could be simplified for operational reasons and to make some corrections where tree stands were erroneously included in the wrong zone, it should

[40] On 6 September 2023, the WHC received a letter signed by 30 non-governmental organizations and social movements opposing the proposed changes to the zonation. According to the letter, the proposal would result in the exclusion of over 6200 ha, from Zone 3 (partial protection zone II), including forest stands between 100 and 254 years old and would affect approximately 10% of the Polish part of the Białowieża Forest and alter the state of protection of one of the most valuable forests in Europe.

not lead to an overall increase of the active protection zone and definitely not lead to the inclusion of old growth stands in this zone.

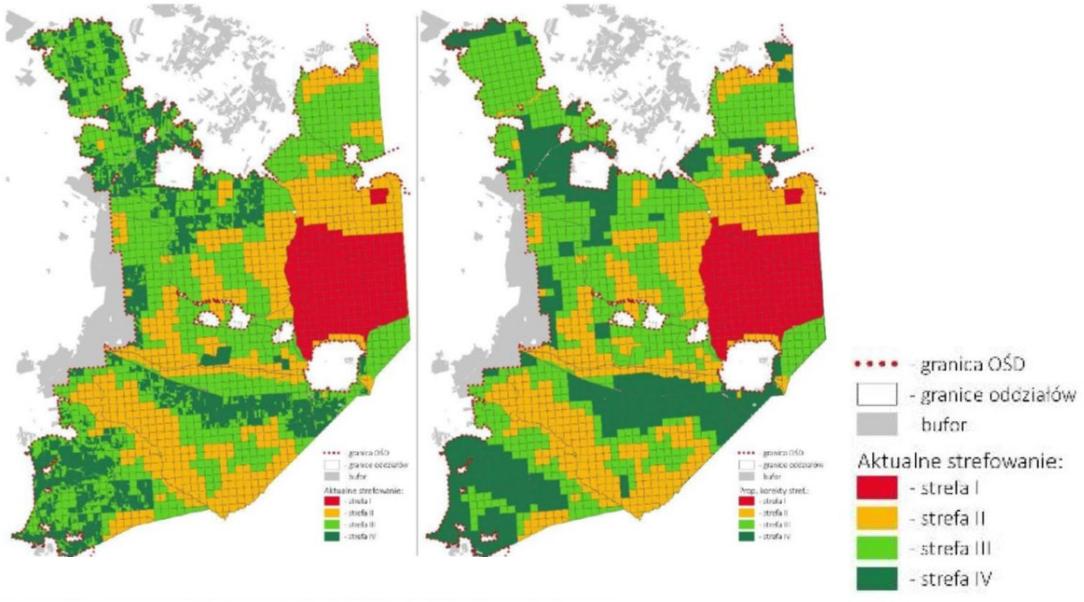

Fig. 18: Original zonation as documented in the 2014 nomination (left) and revised zonation proposed by the State Forests (right). Zone 1(red), zone 2(yellow), zone 3(light green), zone 4(dark green) (Source: IOB PIB based on material submitted by the Ministry of Climate and Environment).

Zone	Zoning in Polish part of the Białowieża Forest according to UNESCO		Revision of zoning proposed for Polish part of the Białowieża Forest	
	[km²]*	[%]	[km²]*/**	[%]**
1	60,667	10,7	59,78	10,62
2	160,099	28,4	159,21	28,28
3	241,893	42,8	208,50	37,03
4	101,984	18,1	135,52	24,07
Total	**564,643**	**100,0**	**563,01**	**100,00**

* the total area of Białowieża Forest does not change. The slight difference in the values presented in the table is due to the updated spatial data used in the mapping.
** data provided by Ministry of Climate and the Environment

Fig. 19: Comparison in the surface of the different zones between the zonation included in the 2014 nomination and the 2023 proposal by the SFS (Source: IOB PIB based on material submitted by the Ministry of Climate and Environment).

The mission wants to stress again that the active protection zone is not a managed forest zone in the property to provide for fuelwood or other wood products and that these activities should be restricted to the buffer zone of the property. As stated above, the objective of the active protection zone is to create conditions to allow for these areas to evolve more quickly to a more natural forest or to create or maintain the ecological conditions necessary for some rare and endangered species recognized under criterion (x). The mission reiterates also in the active protection zone natural regeneration should be the preferred restoration technique, minimizing forest management activities and limiting them strictly to areas where it is considered that they are required to speed up the ecological transition to a more natural stand (for example removal

of trees from uniform planted stands of the same species and age class) or to preserve certain associated non-forest habitats, as habitats of endangered plants, animals and fungi (for example to prevent the overgrowth of the spotted beetle's habitats). The mission considers that this principle should be clearly reasserted in the IMP and recommends that the IMP includes a catalogue of active forest management interventions which can be accepted in the active protection zone and under which conditions they should be applied. Accordingly, the new FMPs should include a clear justification for each of the planned forest management interventions, indicating how they will contribute to the two objectives of the zone. In praxis, the active protection zone could be subdivided in three subzones: (a) a subzone where active management interventions are needed for species protection, (b) a subzone where the conditions of the stand require active forest management interventions to speed up the conversion to a natural oak hornbeam forest and (c) stands which do not have the structure and age class to qualify for inclusion in zone 3 but where natural regeneration is the preferred restoration method. The mission further notes that such a restrictive approach could also lead to important cost savings, which potentially could be reinvested in other priorities including the promotion of ecotourism.

The mission further notes that if the ecological restoration in the active protection zone is successful, over time parts of the zone 4 could be transferred to zone 3 and considers this would constitute a clear indicator for success. The ultimate long term objective is to restore natural old growth forest in the entirety of the property with no further need for active forest management intervention with the exception of some areas where they are required for species conservation. In this respect, the mission welcomes the commitment mentioned in the February 2024 State of Conservation report to include in zone 3 all areas currently proposed to be included in zone 4 which meet the criteria for inclusion in zone 3.

The mission reiterates recommendation of the 2018 mission to ensure that all habitat management operations in the property comply with the management arrangements described in the 2014 nomination dossier and recommends to clearly reassert that "the undisturbed wild nature is the basic principle for the management":

a) ensure that the new zonation fully complies with the principles detailed in the 2014 nomination dossier and does not result in an increase of the active forest protection zone;

b) ensure that the new FMPs include a clear justification for each of the planned forest management interventions, indicating how they will contribute to the two objectives of the zone and distinguishes between the following three sub-zones:

- ***a subzone where active management interventions are needed for species protection;***
- ***a subzone where the conditions of the stand require active forest management interventions to speed up the conversion to a natural oak hornbeam forest;***
- ***a subzone with forest stands which do not have the structure and age class to qualify for inclusion in zone 3 but where natural regeneration is the preferred restoration method.***

4.3.2. Poland Forest Fire Prevention and Suppression Plan

While it is recognized that wildfires are an important potential threat to the OUV of the property, they remain relatively rare and no incidents of catastrophic fire have been recorded since the property was inscribed on the World Heritage List. Since the steep increase of illegal migration, there have been more incidents of wildfires as a result of the lighting of bonfires by migrants while illegally camping in the forest during their journey (*see also 4.1.5*). According to data

provided by SFS, in spite of this increase in the number of incidents, in the period from 1 October 2021 to 31 October 2023, only 19 fires broke out in the Białowieża, Browsk and Hajnówka forest districts, affecting an area of 8.17 ha.

The 2018 mission recommended that a comprehensive FFPS for the Polish part of the property be developed and implemented for the entire property, based on a rigorous risk assessment, to be included in the IMP. This plan was elaborated by the Forest Research Institute, State Fire Service and relevant Directorates of State Forests, and in cooperation with other relevant stakeholders and knowledge-holders, including BNP authorities, the Białowieża, Browsk and Hajnówka Forest Districts, police, Border Guard, NGOs and international experts and submitted to the World Heritage Centre on 22 June 2023.

The mission welcomes the development of this plan, which more accurately identifies the current and projected degree of fire risk and shows that the entire property falls into the third category of forest fire risk, namely small risk. Nevertheless, the document states that the fire risk has increased since the bark beetle outbreak as a result of higher volumes in deadwood and increased grass cover. The mission notes that based on general knowledge on fire behaviour, it is considered that in most circumstances deadwood is not significantly contributing to fire risk[41]. It further notes that salvaging the increased grass cover, including in some areas in the partial protection zone II (zone 3), can be directly linked to the extensive sanitary cuttings in these areas combined with the removal of the wood, which allowed grasses to colonize these areas quickly. While the mission notes that the FFPS includes a useful series of fire preparedness and prevention measures, it is concerned that it includes some proposed actions which could be in contradiction to the principle of non-intervention in ecological processes or recommendations from the 2018 mission. Examples are the proposed felling of dead trees in all zones of the property (even in zone 1 and 2) and removal of the deadwood in zone 3, in spite of the fact that standing dead wood is known to be of ecological importance and contributing to overall biodiversity; increasing the network of fire roads in the property, noting that the road network in the property is already very dense and the general recommendation to diminish road density in the property (*see also 4.6*); and planting deciduous tree species on areas with massive grass cover reducing the future forest fire risk posed by this type of cover in zone 3, in spite of the fact that no active forest management interventions can be implemented in this zone. The mission notes that in the February 2024 State Party report, the inconsistencies of some measures included in the FFPS are acknowledged. The mission was also informed that the plan will be revised to remove these inconsistencies.

The mission therefore recommends to revise the proposed FFPS before integrating it as an Annex to the IMP to ensure that all inconsistencies with the recommendations of the 2018 mission and management arrangements described in the 2014 nomination dossier are removed.

4.4. Wildlife management

The flagship wildlife species of the property remains the European bison with an abundance of 1,600 individuals across the combined respective sub-populations of Poland (~800) and Belarus (~800) that represents ~20 % of the global wild and free roaming population[42]. Under IUCN Red List criteria, the European bison is no longer deemed a “Threatened” species across its historic range and is now upgraded to “Near Threatened” status. Both of the property’s respective sub-populations in Poland and Belarus are deemed stable to increasing with relatively low annual growth rate (~5% per year across 2015-2022). The abundance and demography of the Belarus sub-population is actively controlled through annual translocations

[41] Larjavaarav, Markku, Brotons Lluis, Corticeiro, Sofia et al. (2023). Deadwood and fire risk in Europe, Knowledge Synthesis for Policy. Published by the European Commission Joint Research Centre.
[42] See Plumb, G., Kowalczyk, R. & Hernandez-Blanco, J.A. 2020. *Bison bonasus*. *The IUCN Red List of Threatened Species* 2020: e.T2814A45156279. https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T2814A45156279.en.

and culling of sick and injured animals. The Poland sub-population is covered by the European Union Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and included in the Annex 2 (animal and plant species of community interest whose conservation requires the designation of special areas of conservation) as priority species, and Annex 4 (animal and plant species of community interest in need of strict protection). Thus, the Poland sub-population is not subjected to management control of abundance or demography. The historic winter feeding of bison at stations located inside property is still practiced in Poland and Belarus to curb bison from leaving the forest area during winter and spring to forage in abandoned or active agricultural fields. The mission was informed that Belarusian and Polish authorities continue to subsidize landowners to leave fields adjacent to the property available for use by bison. Recent scientific advances in bison ecology indicate that European bison seasonally utilize an array of habitats within and outside of forests. An old-growth forest like Białowieża includes an array of open habitats within the forest, as well as extensive meadows, old fields and active agricultural lands outside the forest. There is also sufficient scientific evidence that confirms the life-history of the European bison is not limited to only forested habitats. Of particular note is the tendency for bison to move out of forests into open lands to forage in response to seasonally abundant herbaceous vegetation growth. As there is no longer any ecological or genetic need to manage the Polish and Belarus bison sub-populations separately (*see also 4.1.3*), there is now a need for new scientific evaluation of the property's bison ecological carrying capacity and implications for management of dispersal, migration and range expansion dynamics and movements within and outside the property[43].

Under IUCN Red List criteria, the red deer is considered of "Least Concern" for risk of extinction in the wild across its European historic range. However, the practice of winter feeding of bison creates supplemental feeding opportunities for red deer such that the respective sub-populations in Poland and Belarus are both considered above the natural forage-based carrying capacity of the ecosystem, resulting in concerns about negative impacts on natural forest regeneration. This issue was also identified in both the 2008 and 2018 Reactive Monitoring missions. The mission was informed that in Poland the long-term big game breeding and hunting plan foresees a decrease of the red deer population, while proposing an increase in roe deer population size. In Belarus, some efforts have been undertaken to reduce red deer by diminishing the number of feeding areas and to move them away from the World Heritage boundaries. However, red deer numbers remain high and further efforts seem necessary to address this issue. Two hunting reserves have been created in Belarus outside the World Heritage property and it has been proposed that all hunting activities (and supplementary feeding) would be limited to these areas but this has not yet been implemented.

The 2018 mission raised concern that increasing hunting pressure on elk in Belarus could potentially affect its population and it was recommended that conservative hunting quotas are established for elk and that the population trends are carefully monitored. The mission was informed that the elk population in the Belarus component is increasing slightly and is currently estimated at around 200 animals. This increase has been attributed to the increased forest regeneration following earlier bark beetle outbreaks and the restoration of wetlands which both have expanded the feeding base for the species. The mission was also informed that there is no elk hunting inside the property and that hunting quota in the larger ecosystem remains low.

Wolf hunting is no longer permitted in Poland but remains legal in Belarus. Wolf numbers are reported to be stable in Poland and Belarus, although pack size is reportedly much smaller in Belarus as a result of hunting[44]. A wolf hunting moratorium was adopted in the Belarus part of the property in 2015 and the 2018 mission recommended to continue this moratorium and consider making this moratorium permanent by legally forbidding wolf hunting in the BPNP, in order for the population to continue its recovery to its historical size. Although the moratorium

[43] See Plumb et al. 2009. Carrying Capacity, Migration and Dispersal in Yellowstone Bison. Biological Conservation. 142: 2377–2387.
[44] Personal communication Mammal Research Institute, Polish Academy of Sciences.

was apparently discontinued, the mission was informed that the new management plan for Belarus component of the property is foreseeing a wolf hunting ban to be implemented in 2024[45]. However the mission notes that given the large territories of the wolves, it is important that the moratorium does not only cover the World Heritage property but the entire BPNP. A total ban on wolf hunting in the Belarus component would result in a higher population and a larger pack size and will positively contribute to the control of ungulate numbers, in particular red deer.

The mission notes again that the inscription of this property under criterion (ix) is based on the continuation of on-going ecological and biological processes. This is not only relevant for forest management but also for wildlife management. Historically, wildlife populations in Bialowieza were actively managed in order to promote game species prized for hunting including red deer and bison, while keeping predator species such as wolf and lynx down. Supplementary feeding was also widely practiced and continues today for bison. The banning of wolf hunting in Belarus will be a significant step to restore the natural predator / prey interactions in the property. However, the mission notes that while in Belarus, no ungulate hunting is allowed in the strictly protected zone, in the Polish component of the property, it remains allowed in zone 3 and 4, which together cover more than 60 % of the Polish component. The mission therefore considers that extending the ban on hunting at least to zone 3 should be considered. In addition, both States Parties should undertake to stop all forms of artificial feeding, including the planting of fruit trees should be discontinued in all zones. Cessation of artificial feeding should be paired with investigation into the biological carrying capacity for bison and red deer, so as to support stewardship of natural movement ecology of the species. This would increase the quality of wildlife habitat and the availability of food for predator and scavenger species and maintain forest regeneration practices linked to predator-prey dynamics and therefore contribute to the restoration of the natural ecological processes in the property. It would also contribute to supporting the remaining lynx population which is threatened with extinction in the Polish component as a result of the border barrier (*see also 4.1.3*).

The mission recommends the following actions to further improve wildlife management in the property:

- ***Undertake new scientific evaluation of the bison and red deer ecological carrying capacity for the entire property and implications for management of dispersal, migration and range expansion movements within and outside the property;***
- ***Bring wildlife management in the property better in line with the need to ensure undisturbed ecological processes, including by restoring natural predator / prey interactions by:***
    - ***a) in Belarus, adopting the legal ban on wolf hunting before the end of 2024, covering not only the property but the entire BPNP; and***
    - ***b) in Poland, extending a ban on ungulate hunting at least to zone 3 of the property and banning all forms of artificial feeding, including the planting of fruit trees, in all management zones.***

4.5. Climate Change and Hydrology

In general, global climate change is expected to result in subtle, major, and abrupt state-transition changes in natural ecosystem structure and functions[46]. Old-growth forests like the property can be expected to absorb short-duration extremes in the regional climate regime

[45] Action 1.2.7 of the Management Plan *"Adoption of a decision on the ban on wolf hunting on the territory of the UNESCO World Heritage Site in accordance with the established procedure".*

[46] IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001.

(e.g. summer drought, dry winter) without fundamental changes in forest structure and ecological processes. Longer term changes in seasonal timing and amount of precipitations leading towards overall drying of the property have potential to result in outsized changes in forest health and composition, including changes in light penetration at ground level, understory herbaceous dynamics, understory animal biodiversity, soil genesis, seasonal soil moisture profiles, seasonal water runoff dynamics, wildfire risk, and altered fungal communities and decomposition rates.

For the property, natural wetlands such as swampy massifs, swampy forests and meadows play a significant role in seasonal water storage and runoff. The mission was informed that recent analysis of hydrologic data from the Polish and Belarus components of the property indicate a slight decrease in average annual river flows, with decreasing spring flood runoff and an increase in winter runoff in natural watercourses. The hydrological conditions of the property are also responding to climate change dynamics, including increasingly warm winters, reduced amounts and duration of snow and ice, leading to reduced surface and subsurface water retention, with evidence that the groundwater table in the Polish part has declined by approximately 0.4m.

In addition to the drying of the forest as a result of climate change, many parts of the forest have been drained in the past and some rivers were channelized. In addition, wetland areas adjacent to the property were drained for conversion into agricultural land, especially on the Belarus side. As already noted by the 2018 mission, artificial drainage has contributed to the dryer environmental conditions in the property.

The deterioration of the hydrology and drying of the property has been observed for years, and Poland and Belarus are independently undertaking management actions in the property to restore the natural hydrology. The 2018 mission recommended continuation of restoration efforts, to increase the transboundary coordination regarding this point, and to include this in the TMP. This mission further recommends the States Parties to collaborate to develop a comprehensive baseline GIS map of all natural and altered watercourses in the property.

Fig. 20: An example of a small dam constructed of natural materials in Zone 4 of the Polish component of the property (Source: SFS).

The 2018 mission also welcomed the on-going efforts in Belarus to restore some of the wetlands which had been drained for agriculture. The continuation of these activities was included in the new management plan and the mission team was able to visit several sites of wetland restoration as well as sites inside the property where the hydrology was being restored by removing drainage infrastructure. This involves the construction of earthen dam structures to reduce surface flow rates and increase adjacent subsurface water table levels in areas that were extensively channelized and drained tables (Annex 5 photo 7). The mission observed several large beaver lodges in areas where hydrological restoration activities are underway.

Interestingly, restoration of natural hydrology in Belarus has opened an ecological niche for beaver that are likewise contributing to reduced surface flow rates and have become prey for wolves that exhibit seasonal prey switching between red deer and beaver. The mission notes that in the past, these activities had been supported by donor funding and welcomes the fact that efforts are being continued in spite of the interruption of this external funding.

In Poland the Bureau of Forest Management and Geodesy prepared a detailed inventory of all watercourses (permanent and seasonal) in the Białowieża forest catchment area in 2021. To improve soil water retention in the forest, 50 small structures of natural materials have been installed in management zone 4 of the property to reduce surface flow rates of small seasonal streams and raise adjacent water tables (Fig. 20). These could be repeated in other management zones. However, the mission noted during its field visit that there are still many drainage ditches in the property along the boundaries of forest plots and roads. Many of those could potentially be blocked to further increase water retention in the property.

The mission notes that the restoration of the natural hydrology is fundamental to improving the ecological resilience of the property, especially under climate change projections. The mission is concerned that the breakdown in scientific and stewardship collaboration between Poland and Belarus on the shared priority of hydrology restoration is another example of diminished collective capacity to protect the ecological resilience of the property.

The mission recommends to continue and further increase efforts to restore the natural hydrology of the property, and that the research on, monitoring of, and adaptation to, climate change be included as a core guiding principle in all management planning.

4.6. Roads and habitat fragmentation

4.6.1. Narewkowska road[47]

At the time of the 2018 mission, a major upgrading of a 15,6 km forest road connecting the Białowieża and Narewka villages was underway. This so-called Narewkowska road was an existing dirt road open to the public and classified as a forest road and under the management of the SFS. As the road allowed for a shortening of travel times between the two villages, the SFS decided to upgrade it to a tarmac road. The road crosses Forest Reserves (zone 2) and zone 3 areas as well as Nature 2000 sites and raised concerns about impacts including fragmentation, changes to the hydrology and road kills of wildlife.

The 2018 mission recommended halting the upgrading works until an EIA was prepared assessing the impacts of the road improvement on the OUV of the Property and submitted to the World Heritage Centre. While the road works were never halted, an updated EIA was submitted to the Centre on 2 August 2019, concluding that there would be no impact on the OUV of the Property. Nevertheless, the IUCN review of the updated EIA noted a number of concerns and recommended that strict conditions for the use of the road are imposed and enforced, including speed limits and restrictions on heavy transport. It further noted that the EIA forecasted the road to be used by only 46 vehicles daily and recommended that an assessment of the number of vehicles using the road be undertaken and if the vehicle load exceeds the predictions that additional restrictions on the road use are put in place to reduce potential disturbance.

The upgraded road was opened in February 2020. The set speed limit for the road is 30 km/h, however there are no speed limiting structures (such as speed bumps) foreseen and there is no systematic control of vehicle speed (although sporadic checks are said to take place). The

[47] Follow up to recommendation 7 of the 2018 Reactive Monitoring mission

mission was informed that local police had requested the speed limit to be increased to 50 km/h as it considered the current limit not in line with the existing infrastructure standard.

In 2021, a study[48] was undertaken showing that after the upgrade, traffic increased threefold, from an average of 29 cars to 91 cars with peaks of up to 351 cars a day. Car traffic also showed a clear seasonal and weekly pattern, with more cars using the road in summer months and on weekends. In 75% of the days the vehicle load of 46 cars per day projected in the EIA was exceeded. The study recorded 509 killed vertebrates within a 17 month period and calculated the annual mortality of vertebrates on the road to be 43 animals per km. 55 % of the killed animals were amphibians, 28% reptiles, 12% mammals and 8% birds. In the presentation of SFS to the mission, it was noted that that no accidents were recorded involving the most valuable species such as bison, wolf, lynx. In spite of the 30 km/h speed limit, the average recorded speed was 52,4 km/h with 25% of cars exceeding 60 km/h. NGO also pointed out to the mission that the study dates from 2021 before the steep increase in illegal migration and that since then traffic volumes had further increased significantly on the entire road network in the property as a result of the heightened activity by the military, the border guards and the police linked to the border security.

The February 2024 State Party report recognizes these issues and commits to implementing measures to further minimize the impacts of the road, including putting in place measures other than speed signs to limit vehicle speed, fencing of the roadway to protect small mammals and reconstruction of existing crossings under the roadway for amphibians and small mammals. It is also planning to continuously monitor traffic to enable detailed data collection on traffic.

The mission concludes that the main factors determining the impact of the Narewkowska road (traffic, car speed and wildlife mortality) are significantly higher than forecasted in the EIA report and recommends to foresee additional measures to further mitigate the impacts of the road, including additional restriction on the use of the road.

4.6.2. Habitat fragmentation as a result of dense road network

The 2014 IUCN evaluation noted that there were a large number of roads and fire prevention corridors in the property and some were still maintained without any obvious justification. IUCN therefore recommended that the States Parties carefully assess the real need for maintaining these roads and fire prevention corridors, and to reduce their numbers through a programme of rationalization, accompanied by appropriate monitoring.

The situation remains similar today within both the Polish and Belarus components of the property. The mission welcomes the efforts by the SFS which is planning a total of 117 km of forest roads which will no longer be maintained and hence slowly closed through natural regeneration, in particular in zone 2 and 3 (see Fig. 21). At the same time, the opening of additional fire prevention corridors was planned in the draft FFPS, proposing a further increase in fire roads (Fig. 22). In addition, in the Polish component of the property, several roads, including roads bordering strict and partial protection zones, have been improved to accommodate more frequent use as a result of the border security operations, including by heavy vehicles (*see also 4.1*). The mission also observed numerous fenced areas in the property related to forest management activities which also contribute to further habitat fragmentation.

The mission recommends to avoid any further upgrading of roads and tracks, and to significantly reduce the number of roads and forestry fences in both the Polish and Belarus components of the property. This will contribute to reducing habitat fragmentation and improving the integrity of the property. It will also strengthen the overall resilience of the site in light of the many additional pressures linked to the

[48] Przemysław Chylarecki and Nuria Selva (2021). Car Traffic Changes and wildlife mortality resulting from the upgrade of the Narewkowska road, Białowieża Forest Natura 2000 site.

construction of the border barrier and the increased activities resulting from border security operations in the Polish component.

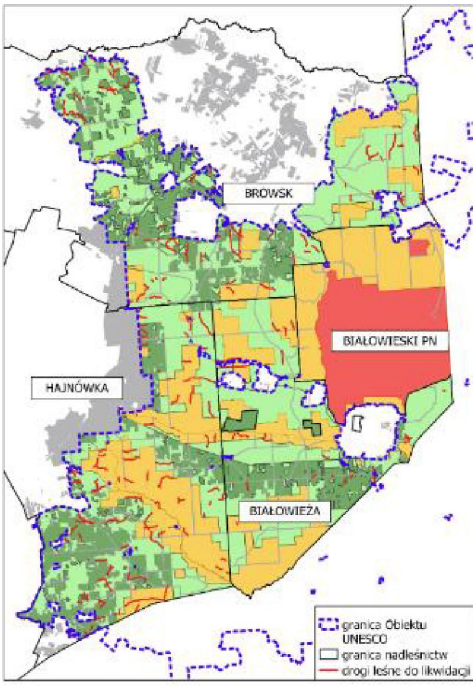

Fig. 21: Forest roads planned for decommissioning (in red) (Source: SFS).

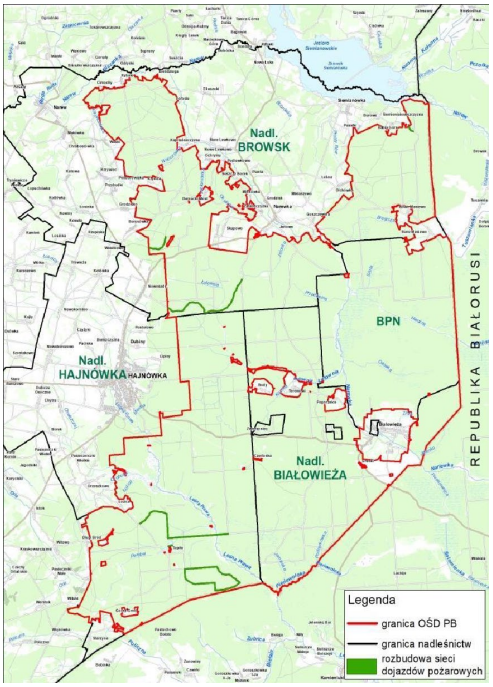

Fig. 22: New fire prevention corridors planned (in green) (Source: draft FFPS).

4.7. Sustainable Development at local level[49]

As was the case in 2018, some local authorities and representatives of the local communities in Poland reiterated their concerns over the lost income and perceived economic decline as a result of the reduction of forestry activities. The importance of forest resources, like fire wood, mushrooms and berries as well as the right to free access to the forest was also often stressed. The mission notes that these concerns are legitimate and acknowledges that the increased protection requirements for Białowieża Forest as a World Heritage Property inevitably have impacted some economic activities linked to the traditional forestry economy of the region. At the same time, the status undoubtedly has facilitated the emergence of new economic opportunities, in particular linked to tourism. However, while tourism revenues in 2016 exceeded 17 million Euro, an amount several times higher than revenue generated by forest activities[50] and benefiting local communities directly, this sector had suffered not only from the impacts of the COVID pandemic and the state of emergency declared as a result of the the steep increase in illegal migration, which was widely reported in the domestic and foreign media.

The 2018 mission recommended developing a vision on how the Property can contribute to sustainable development of the surrounding region, based on a clear sustainable tourism strategy compatible with the protection of the OUV.

The mission considers that the recommendation of the 2018 Reactive Monitoring mission on developing a sustainable development vision remains valid even if currently the tourism sector in the region is impacted by the prevailing situation.

[49] Follow up to recommendation 8 of the 2019 Reactive Monitoring mission

[50] Kowalczyk R. 2018. For the Forest's Sake. On the need to change perceptions of the Białowieża Primeval Forest's value. In Polska Akademia Nauk (Polish Academy of Sciences). Available here: https://journals.pan.pl/Content/112526/PDF/20-21%20Puszcza_kowalczyk_ang.pdf

5. CONCLUSIONS AND RECOMMENDATIONS

As laid out in the SOUV, the unique nature of this property lies in the scale of its old-growth forests, which include extensive undisturbed areas where natural processes are on-going. The property includes large areas with old-growth forest, which have been undisturbed or little disturbed for a very long time, a unique situation for the Central European mixed forests terrestrial ecoregion and in the lowland temperate Western Palearctic region.

To protect the OUV, it is therefore crucial to ensure that the ecological processes can continue to unfold without, or with very little, disturbance and that human impacts on the ecosystem are minimized.

Human impacts on natural systems are expressed in multitudes of ways, and yet the cumulative effect of multiple stressors on ecological communities often remain unaddressed. This is because while individual impacts may seem negligible or within the range of natural variability, the accumulation of these individual impacts over time and within a landscape or region may constitute a major impact[51]. Thus, effective conservation planning to mitigate cumulative effects requires understanding of the temporal and spatial patterns of abundance and density of impacts, as well as whether cumulative effects are additive, synergistic, or antagonistic[52]. Since its initial inscription in 1979, the property has stepwise increased in area by ~2,800 % (~5,000 ha to ~140,000 ha). Concurrently, with increasing overall size, the property is also facing serious emerging threats, including climate change, and is still affected by substantial ecological fragmentation.

The establishment of the border barrier and associated infrastructure in Poland has de facto split the property into two separate subunits, thereby significantly increasing the ecological fragmentation of the property. Associated direct and indirect impacts of the border infrastructure and security operations, the presence of illegal migrants, and edge effects, further exacerbate fragmentation and cumulative pressure on ecological connectivity and processes, including hydrology, wildlife movement, wildlife population ecology, predator-prey dynamics, etc. The breakdown in transboundary cooperation between the States Parties of Poland and Belarus following a deterioration of bilateral relations has also resulted in a lack of coordinated management at the property-wide level.

The mission concludes that the layered and cumulative effects of the establishment of the Polish border barrier and associated infrastructure is negatively impacting the integrity of the property **by blocking ecological connectivity for the majority of wildlife, disturbance of wildlife in and adjacent to the border zone, the introduction of invasive species, and localized negative impacts on the hydrology**. **The new barrier is further exacerbating the impacts of the "Sistema" in Belarus, which already hindered wildlife connectivity, without completely blocking it. The mission is concerned that these impacts on the OUV of the property could result in the property meeting the criteria for inscription on the List of World Heritage in Danger in the near future.**

To avoid further long-term impacts of the OUV of the property, a set of decisive actions would be needed to **restore ecological connectivity**, which would require at least modifying or partly dismantling the barrier structures and associated infrastructure in place. This would undoubtedly require a joint effort by Poland and Belarus to address the issue of illegal migration across the border. **The mission notes that while a full restoration of ecological connectivity across the entire property has to be the objective, this is unlikely to be**

[51] Theobold et al. 1997. Estimating the cumulative effects of development on wildlife habitat. Landscape and Urban Planning 39 (1997) 25-36.
[52] Crain et al. 2008. Interactive and cumulative effects of multiple human stressors in marine systems. Ecology Letters (2008) 11: 1304–1315.

feasible in the short to medium term whilst transboundary cooperation remains impacted as a result of the current geopolitical situation.

Whilst full restoration of the ecological connectivity seems not feasible at this stage, the mission stresses the urgency to take adequate mitigating measures to prevent a further degradation of the ecological integrity of the property and to avoid an ascertained danger to its OUV, and proposes a number of key recommendations (R1 – 5) to address this.

Recommendation 1 (to the State Party of Poland)

Develop and implement a set of urgent mitigation measures to reduce the impact of the Polish border barrier, including:

a) Urgently implement technical measures to address the localized impacts on the hydrology and allow for a restoration of natural peak water flows, for example by adding more and larger culverts under the barrier wall foundation and adjacent service road, and putting in place dedicated monitoring and human capacity to ensure the culverts function under peak flow conditions;

b) Develop and rapidly implement a set of actions to support the Polish lynx population in the property to improve habitat quality for increased prey availability combined with reduced noise, light, and road use, and also develop contingency plans to supplement/reintroduce the Polish lynx sub-population as warranted;

c) Provide additional funding for monitoring and mitigation measures to suppress the introduction and spread of invasive species, including screening all human activities for invasive species, rapid detection and eradication programs, etc.;

d) Establish dedicated monitoring and adaptive management capacity to mitigate noise and light pollution and edge effects;

e) Refrain from further development of the barrier infrastructure in the property.

Recommendation 2 (to the States Parties of Poland and Belarus)

Resume transboundary cooperation at least at the level of technical information exchange in order to facilitate the development and implementation of recommended mitigation measures. The mission notes that UNESCO and IUCN, and possibly with the involvement of other UN entities, could potentially facilitate a dialogue at the technical level between the States Parties.

Recommendation 3 (to the State Party of Poland)

Establish a comprehensive and long-term research and monitoring programme of the OUV of the property in order to allow for adaptive management of the threats and impacts of the border barrier and its associated infrastructure.

Recommendation 4 (to the State Party of Poland)

Take additional measures to increase the resilience of the ecosystem by addressing other stressors on the integrity of the property (*see recommendations 9 – 15*).

Recommendation 5 (to the State Party of Poland)

Conduct further research on the impacts of the border barrier and associated infrastructure on biodiversity and ecological and biological processes of the property, including alternatives to conventional border walls, wildlife passages and other measures to minimize the impacts of the border barrier, concertina fences and associated road infrastructure.

The mission further recommends that a new Reactive Monitoring mission is invited to the property in 2027 to assess the implementation of these recommendations and re-evaluate if the property then meets the criteria for its inscription on the List of World

Heritage in Danger. The proposed mission should also assess the feasibility of implementing additional measures to fully restore the ecological connectivity in the property.

The mission further looked into the other **conservation issues identified by the 2018 Reactive Monitoring mission** and assessed the progress made by the States Parties of Poland and Belarus in the implementation of these recommendations. Based on this assessment, the mission proposes the 11 follow up recommendations, grouped here according to the major conservation issues and threats.

Management planning

Recommendation 6 (to the State Party of Belarus)

Submit as soon as possible a translation of the management plan of BPNP in one of the working languages of the World Heritage Committee to the World Heritage Centre for review by IUCN.

Recommendation 7 (to the State Party of Poland)

Revise the current draft IMP to improve clarity and include core guidance on the overall management principles of the property in order to inform all relevant management documents for the Polish component of the property, including FMP, and ensure that they are aligned with the protection of the property's OUV by including:

a) clear guidance statements for addressing threats to the OUV;
b) guidance for integrating border security issues into the overarching capacity to protect the property's OUV;
c) a catalogue of active forest management interventions which can be accepted in the active protection zone and under which conditions they should be applied;
d) a comprehensive and long-term research and monitoring programme to allow for adaptive management of threats;

and to finalize the draft before the end of 2024 and submit it to the World Heritage Centre for review by IUCN.

Recommendation 8 (to the States Parties of Poland and Belarus)

Resume the development of a TMP and coordinate transboundary management actions to address the various conservation challenges of the property. .

Forest management and zoning

Recommendation 9 (to the State Party of Poland)

As recommended by the 2018 Reactive Monitoring Mission, ensure that all habitat management operations in the property comply with the management arrangements described in the 2014 nomination dossier and clearly reassert that "the undisturbed wild nature is the basic principle for the management" by:

a) ensuring that the new zonation fully complies with the principles detailed in the 2014 nomination dossier and does not result in an increase of the active forest protection zone;
b) ensuring that the new FMPs include a clear justification for each of the planned forest management interventions, indicating how they will contribute to the two objectives of the zone and distinguishes between the following three sub-zones:
    - a subzone where active management interventions are needed for species protection;

- a subzone where the conditions of the stand require active forest management interventions to speed up the conversion to a natural oak hornbeam forest; and
- a subzone with forest stands which do not have the structure and age class to qualify for inclusion in zone 3 but where natural regeneration is the preferred restoration method without further management interventions.

Recommendation 10 (to the State Party of Poland)

Revise the proposed FFPS before integrating it in the IMP to ensure that all inconsistencies with the recommendations of the 2018 mission and management arrangements described in the 2014 nomination dossier are removed.

Wildlife management

Recommendation 11 (to the States Parties of Poland and Belarus)

Undertake new scientific evaluation of the bison and red deer ecological carrying capacity for the entire property and implications for management of dispersal, migration and range expansion movements within and outside the property.

Recommendation 12 (to the States Parties of Poland and Belarus)

Bring wildlife management in the property better in line with undisturbed ecological processes, including by restoring natural predator / prey interactions by:

a) in Belarus, adopting the legal ban on wolf hunting before the end of 2024, covering not only the property but the entire BPNP;

b) in Poland, extending a ban on ungulate hunting in at least zone 3 of the property and banning all forms of artificial feeding targeting other species than bison, including the planting of fruit trees in all management zones.

Climate change and hydrology

Recommendation 13 (to the States Parties of Poland and Belarus)

Continue and further increase efforts to restore the natural hydrology of the property, and include the research on, monitoring of, and adaptation to climate change as a core guiding principle in all management planning.

Roads and habitat fragmentation

Recommendation 14 (to the State Party of Poland)

Develop and implement additional measures to further mitigate the impacts of the Narewkowska road, including additional restrictions on the use of the road.

Recommendation 15 (to the States Parties of Poland and Belarus)

Implement measures to further reduce habitat fragmentation by avoiding any further upgrading of roads, significantly reducing the number of forestry roads and diminishing the number of forestry fences.

Sustainable development at local level

Recommendation 16 (to the States Parties of Poland and Belarus)

Develop a vision for how the property can contribute to the sustainable development of the surrounding region, based on a clear strategy for sustainable tourism compatible with the protection of the property's OUV.

The mission notes that decisive action from both States Parties to address the above-mentioned conservation challenges and implement the recommendations will increase

the resilience of the ecosystem of the property and as such contribute to mitigating the impacts of the border infrastructure and security operations.

6. ANNEXES

Annex 1. Terms of Reference for March 2024 Reactive Monitoring Mission

Terms of Reference

Joint WHC/IUCN Reactive Monitoring mission

to the transboundary World Heritage property 'Białowieża Forest'

(Belarus, Poland)

(18-27 March 2024)

At its extended 45th session, the World Heritage Committee requested the States Parties of Belarus and Poland to invite a joint WHC/IUCN Reactive Monitoring mission to the World Heritage property 'Białowieża Forest'. The main objectives of the Reactive Monitoring mission are outlined in Decision **45 COM 7B.21** (Annex II).

In particular, the mission team shall:

1. Assess the impact of the border barrier in Poland on the OUV of the property, including its integrity, ecological function and wildlife movement, which are vital for the viability of populations of key species;
2. Assess whether the animal crossings and breaks across watercourses put in place represent sufficient mitigation measures to maintain the OUV of the property, with regards to the movement of key species;
3. Review progress in the implementation of the recommendations of the 2018 Reactive Monitoring mission and previous Committee Decisions, including those related to connectivity within the property, taking into account the so-called 'sistema' in Belarus, as well as the various management documents recently developed, or under development, to establish their alignment with the conservation of the property's OUV;
4. 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, protection and management.

Based on the above, the mission should make a recommendation as to whether the property meets the criteria for inscription on the List of World Heritage in Danger, in accordance with paragraph 180 of the Operational Guidelines for the Implementation of the World Heritage Convention.

The States Parties should ensure that the mission is provided with all relevant information and documentation to enable it to review and assess the issues listed in items 1-4 above, and that the mission is able to carry out on-site visits for a comprehensive inspection of the property. The mission will also take into account the report by the States Parties on the state of conservation of the property due by 1 February 2024. In case the mission identifies the need for additional information, this should be provided by the States Parties as soon as possible, and no later than two weeks after completion of the mission.

The States Parties are requested to facilitate necessary consultation through working meetings with stakeholders, including government authorities at the national and local levels, the property management authorities, relevant scientists and scientific institutions as well as any other relevant stakeholders including NGOs and local communities, and facilitate field visits to key locations within the property including the border barrier.

In order to ensure adequate preparation for the mission, the States Parties should provide the following documentation to the World Heritage Centre as soon as possible:

a) Detailed information on the mitigation measures in place to limit the impact of the newly constructed border barrier in Poland, including the location and management of available passages to allow for wildlife movement and the scientific background

justifying the planned mitigation measures (e.g. data on wildlife movements, location and timing);

b) Available data on the impact of the existing border barrier on the Belarusian side (the so-called 'Sistema'), including information on its permeability for different wildlife species;

c) Updated information on the current status of the overall Management Plan for the Polish part of the property (including a draft, if available), the proposed revised zoning plan and the proposals for the new FMPs,

d) An updated report on the implementation of the recommendations of the 2018 reactive monitoring mission.

In order to facilitate the preparation of the mission, the States Parties, in cooperation with the World Heritage Centre and IUCN, should prepare a detailed mission programme, including a list of persons and institutions to be consulted, which should be submitted in draft form to the World Heritage Centre for review, together with the requested documentation, as soon as possible, and no later than two weeks before the start of the mission.

Following the mission, the WHC and IUCN will prepare a concise report on the findings and recommendations using the standard format (Annex III) for examination by the World Heritage Committee at its 46th session. The final draft of the mission report will be made available to the States Parties for comment on any factual errors. It should be noted that recommendations will be provided in the mission report, and not during the course of the mission.

In accordance with UNESCO and IUCN policy, experts participating in the mission will not engage with the media and will not discuss the findings or recommendations of the mission, which will only be included in the final report.

Decision 45 COM 7B.21
Białowieża Forest (Belarus, Poland)

The World Heritage Committee,

1. Having examined Document WHC/23/45.COM/7B.Add.2,

2. Recalling Decisions **43 COM 7B.14** and **44 COM 7B.100** adopted at its 43rd (Baku, 2019) and extended 44th (Fuzhou/online, 2021) sessions respectively,

3. Expresses its utmost concern regarding the construction by the State Party of Poland, without prior submission to the WHC of an Environmental Impact Assessment (EIA) of the potential impacts on the Outstanding Universal Value (OUV), of a border barrier between the Belarusian and Polish parts of the transboundary property, crossing some of the best preserved and most sensitive areas of the property, which will further affect the ecological connectivity and inevitably result in forest fragmentation, changes in the hydrological regime, increased spread of invasive species through the construction phase and degradation of important biotopes, and will severely affect animal movement across the property;

4. Urges the States Parties of Belarus and Poland to take adequate measures to address the impacts listed above and guarantee ecological connectivity across the border that allows wildlife movement and considers that, if such measures are not taken urgently, the property may meet the conditions for inscription on the List of World Heritage in Danger, in line with Paragraph 180 of the Operational Guidelines;

5. Requests the States Parties of Belarus and Poland to invite, as a matter of urgency, a joint WHC/IUCN Reactive Monitoring mission to the property in order to:

a) Assess the impacts of the border barrier on the OUV of the property, including its integrity, ecological function and wildlife movement, which are vital to the viability of populations of key species,
b) Assess whether the animal crossings and breaks across watercourses put in place represent sufficient mitigation measures to maintain the OUV of the property, with regards to the movement of key species,
c) Review progress in the implementation of the recommendations of the 2018 Reactive Monitoring mission and previous Committee Decisions, including the various management documents recently developed, or under development, to establish their alignment with the conservation of the property's OUV;

6. Notes furthermore with concern that the reports submitted by the States Parties did not provide any details on the ongoing efforts to develop a TMP, and encourages a transboundary cooperation for the conservation of the property;

7. Welcomes the progress in updating the Management Plan (MP) of the Belarus area of the property, also urges the State Party of Belarus to adopt a legal ban on wolf hunting in the Belarusian area of the property, and to ensure that the relevant wildlife and FMPs are updated, based on the updated MP and requests that the draft MP be submitted to the WHC, before its final approval;

8. Also requests the State Party of Poland to finalize the overall MP for the Polish area of the property, taking into account IUCN's technical review of its outline and the recommendations of the 2018 Reactive Monitoring mission, ensuring the full participation of all stakeholders and rights holders, drawing on international expertise as necessary, and reinforcing the protection of the OUV of the property as the central management objective, and to submit the draft MP to the WHC for review by IUCN and prior to its final approval, and reiterates that the MP should guide the development of other management documents, including the new FMPs, to ensure that all plans are aligned with the protection of the OUV of the property;

9. Notes also with concern that the draft revised zoning plan by the State Party of Poland would result in a significant reduction in the partially protected zones and a consequent increase in the area foreseen for active forest management, and thus further urges the State Party of Poland to avoid decreasing the area excluded from active forest management, in line with the recommendation of the 2018 mission;

10. Reiterates the importance for the new FMPs to comply with the management prescriptions included in Decision **43 COM 7B.14**, in line with the forestry management regime outlined at the time of the property's extension in 2014 and the subsequent recommendations of the 2018 mission, and encourages again the State Party of Poland to seek further advice from IUCN on the development of the new FMPs to ensure that these requirements are met, prior to their approval;

11. Further requests the State Party of Poland to provide information on current traffic conditions on the Narewkowska road and reaffirm measures taken to minimize and manage any impacts resulting from traffic;

12. Also welcomes the efforts to restore the hydrological regime of the Narewka River and encourages the two States Parties to jointly implement plans to restore the natural flow of the river and to continue the rehabilitation of wetlands;

13. Requests furthermore the States Parties to submit to the WHC, by **1 February 2024**, an updated joint report on the state of conservation of the property, on the implementation of the above and the recommendations of the 2018 mission, 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 OUV, including the possible inscription on the List of World Heritage in Danger.**

Annex 2. Itinerary and programme of the mission

18 March 2024, Monday
arrival of mission experts to Warsaw, Chopin Airport, meeting with experts at the airport and transport to the Ministry of Climate and Environment;
14:30 lunch (catering)
15:30 – 17:00 -meeting of UNESCO/IUCN experts at the Ministry of Climate and Environment with representatives of the Ministry of Climate and Environment, Ministry of Foreign Affairs, Ministry of Culture and National Heritage, National Heritage Institute, Polish Committee for UNESCO,
17:00 departure to Białowieża;
21:00 arrival in Białowieża and hotel accommodation

19 March 2024, Tuesday
7:00 breakfast
8:00 – 13:00 working meeting at headquarters of National Park with the WHS Białowieża Forest managers (SFS, BNP), Polish Border Guard and the Polish Army;
14:00 lunch;
15:00 – 17:30 the study tour on the Polish side of the WHS Białowieża Forest in 3 forest districts
18:00 return to Białowieża;
19:00 dinner.

20 March 2024, Wednesday
7:00 breakfast;
8:00 – 12:00 study tour of border barrier area adjacent to Białowieża NP;
12:30 lunch;
13:00 – 17:00 study tour of border barrier area adjacent to Białowieża Forest District
17:30 – 20:00 meeting with participation of invited stakeholders, local government, NGO;
20:30 dinner.

21 March 2024, Thursday
7:00 breakfast;
8:00 study tour on the WHS Białowieża Forest led by representatives of scientific institutions and NGO's;
14:00 lunch;
15:00 Meeting with interested groups, including NGO's;
19:00 dinner.

22 March 2024, Friday
5:30: early morning visit to Białowieża National Park
8:30 breakfast;
10:00 - 12:00 wrap-up meeting with the managers of the WHS Białowieża Forest;
12:00 – 10:00 private meeting of mission team with Mikołaj Dorożała, Undersecretary of State
13:00 lunch;
16:00 - 17:00 meeting to discuss draft IMP
19:00 dinner hosted by Paulina Henning Kloska, Minister of Climate and Environment

23 March 2024, Saturday
8:00 breakfast;
9:00 departure of the UNESCO/IUCN Mission to the Belarusian part of the WHS Białowieża Forest - transfer to the border crossing in Terespol.
14:00 Mission members cross the Polish-Belarusian border
15:00 Transfer to the State Nature Protection Institution “National Park “Belovezhskya Pushcha”

16:00 Hotel accommodation
18:00 dinner

24 March 2024, Sunday
8:00 breakfast
9:00-18:00 Study Tour along the route through the territory of Belovezhskaya Pushcha, located in the Brest Region, including border area
18:00 dinner

25 March 2024, Monday
8:00 breakfast
9:00-18:00 Study Tour along the route through the territory of Belovezhskaya Pushcha, located in the Hrodno Region
18:00 dinner

26 March 2024, Tuesday
8:00 breakfast
9:00 – 10:00 technical discussions with staff BBNP
10:00-12:30 Roundtable with representatives of academia and public presided by Alexandr Korbut, First Deputy Minister
13:00-14:00 lunch
14:30-17:30 Roundtable with representatives of governmental bodies and organizations presided by Alexandr Korbut, First Deputy Minister
18:00-20:00 Dinner hosted by Alexandr Korbut, First Deputy Minister

27 March 2024, Wednesday
8:00 breakfast and checkout
9:00 depart for border crossing by mission members
13:00 depart for Warsaw, mission members travel home

Annex 3. List of People Met

POLAND

SURNAME and FIRST NAME	POSITION	INSTITUTION
HENNING-KLOSKA PAULINA	Minister of Climate and Environment	Ministry of Climate and Environment
DOROŻAŁA MIKOŁAJ	Undersecretary of State	Ministry of Climate and Environment
DUSZCZYK MACIEJ	Undersecretary of State	Ministry of the Interior and Administration
JAGIELSKA-BURDUK ALICJA	Secretary General	Polish Committee ds. UNESCO
ZASĘPA PATRYCJA	Director	Ministry of Climate and Environment
JAKUBOWSKI ALEKSANDER	Director	Ministry of Climate and Environment
SZCZEPAŃSKI KRYSTIAN	Director	Institute of Environmental Protection
KOSS WITOLD	Director General	General Directorate of the State Forests
FIJAS JERZY	Deputy Director General	General Directorate of the State Forests
JAROSZEWICZ BOGDAN	Deputy Director General	General Directorate of the State Forests
BOŁBOT ALEKSANDER	Deputy director	Białowieski National Park
WILCZYŃSKI TADEUSZ	Director	Regional Directorate of State Forests in Białystok
ZALASIŃSKA KATARZYNA	Director	National Heritage Institute
GASZYŃSKA EDYTA	Deputy Director, Technology and Supply Office	Headquarters of the Border Guard
ŻUKOWSKI ARTUR	Deputy Director Border Board	Headquarters of the Border Guard
SKIRKO DARIUSZ	Forest District Manager	Forest District Białowieża
ZAMOJSKI KRZYSZTOF	Forest District Manager	Forest District Hajnówka
STOCKI JAROSŁAW	Forest District Manager	Forest District Browsk
RAJKOWSKA BARBARA	Project manager	IEP-NRI
BENDER SŁAWOMIR	Lt. Col – Deputy Head of Unit	Headquarters of the Border Guard
DALBIAK AGNIESZKA	Counselor	Ministry of Climate and Environment
HACZEK BOŻENA	Team Leader	Ministry of Climate and Environment
HURKAŁA WOJCIECH	Counselor	Ministry of Climate and Environment
KRZEŚNICKA ANNA	II Secretary	Ministry for Foreign Affairs
RYDEL KRZYSZTOF	Chief specialist	Ministry of Climate and Environment
PRZYBYSZ ZBIGNIEW	Chief specialist	Ministry of Climate and Environment
KARAŚKIEWICZ JAKUB	Chief specialist	Ministry of Climate and Environment
RAWSKA-OLEJNICZAK JOLANTA	Counselor	Ministry of Climate and Environment
GOŁĘBIEWSKA MAŁGORZATA	Counselor	Ministry of Climate and Environment
KRZYŚCIAK - KOSIŃSKA RENATA	Ekspert	IEP-NRI
MARCONI - BETKA ANNA	Department manager	National Heritage Institute
KOSTAŃCZUK EDYTA	Head of unit	General Directorate of the State Forests
ŻORNACZUK-ŁUBA ANNA	Head of unit	General Directorate of the State Forests
KWIATKOWSKI ADAM	Head of unit	Regional Directorate of State Forests in Białystok
SZYMURA MATEUSZ		Białowieski National Park
JARSKI ARTUR	Chief specialist	Ministry of National Defence
GARDZIELIK ARKADIUSZ	Chief specialist	Ministry of National Defence
LITWINOWICZ ALBERT	wójt	Urząd Gminy Białowieża
ANTCZAK ANDRZEJ	Radny gminy	Urząd Gminy Białowieża
SKIEPKO ANDRZEJ	Starosta Hajnowski	Starostwo Powiatowe w Hajnówce
SACZKO EUGENIUSZ	Przewodniczący Rady Powiatu	Starostwo Powiatowe w Hajnówce
JANOWSKI MIKOŁAJ	Radny sejmiku, Dyrektor Zarządu Dróg	Starostwo Powiatowe w Hajnówce
GOŁUBOWSKI JAROSŁAW	Wójt gminy	Urząd Gminy Narewka
CHOMCZUK JAN	Sekretarz Gminy	Urząd Gminy Narewka
PLESKOWICZ ANDRZEJ	Wójt gminy	Urząd Gminy Narew
POSKROBKO SŁAWOMIR	Inspektor	Urząd Gminy Narew
CHYLARECKI PRZEMYSŁAW		Museum and Institute of Zoology

ŻMIHORSKI MICHAŁ		Institute of Mammal Biology of the Polish Academy of Sciences, Białowieża
KOWALCZYK RAFAŁ		Institute of Mammal Biology of the Polish Academy of Sciences, Białowieża
HILSZCZAŃSKI JACEK		Forest Research Institute
ZIMNY MARCELINA		Białowieża Geobotanical Station, University of Warsaw
CZORTEK PATRYK		Białowieża Geobotanical Station, University of Warsaw
SZCZUTKOWSKA SYLWIA		Pracownia na rzecz Wszystkich Istot
PRZEMYSKI ALOJZY		Usługi Ekologiczne Alojzy Przemyski
BŁACHNO ANNA		Fundacja Siła Lasu!
SYNOWIECKI ŁUKASZ		Fundacja Siła Lasu!
SMYK ARKADIUSZ		Stowarzyszenie na Rzecz Dialogu Tropinka
PAWLUŚKIEWICZ JOANNA		Dom Przyrody i Kultury
Hertz- Pacura Katarzyna		Fundacja Kultura Kresu
KAPOWICZ EDYTA		Polskie Towarzystwo Ochrony Ptaków (*Polish Society for the Protection of Birds*)
CHYRA JAROSŁAW		Polskie Towarzystwo Ochrony Ptaków (*Polish Society for the Protection of Birds*)
MOROZ-KECZYŃSKA EWA		Fundacja Inicjatyw Rozwojowych i Edukacyjnych (*Development and Educational Initiatives Foundation*)
PABIAN OLIMPIA		Fundacja Inicjatyw Rozwojowych i Edukacyjnych (*Development and Educational Initiatives Foundation*)
STEPANIUK MIROSŁAW		Stowarzyszenie Dziedzictwo Podlasia (*Podlasie Heritage Association*)

BELARUS

SURNAME and FIRST NAME	POSITION	INSTITUTION
Khudyk Andrei	Minister	Ministry of Natural Resources and Environmental Protection
Korbut Aliaksandr	First Deputy Minister	Ministry of Natural Resources and Environmental Protection
Kananchuk Tatsiana	Head of the General Directorate for Environmental Policy, International Cooperation and Science	Ministry of Natural Resources and Environmental Protection
Nikolaenko Piotr	Deputy Head of the General Directorate for Waste Management, Biological and Landscape Diversity – Head of the Department of Biological and Landscape Diversity	Ministry of Natural Resources and Environmental Protection
Lukina Larissa	Deputy Head of the General Directorate for Environmental Policy, International Cooperation and Science – Head of the International Cooperation Department	Ministry of Natural Resources and Environmental Protection
Surta Aliaksandr	Head of the Department of Natural Complexes and Industrial Production	Belarus President Property Management Directorate
Rudenik Vasily	Head of the Department for Control of the Work of the Environmental Complex, Forestry and Chernobyl Problems of the State Control Committee	State Control Committee of the Republic of Belarus
Bychkovsky Vyacheslav	First Deputy Chairman of the State Control Committee of the Brest Region	State Control Committee of the Republic of Belarus
Sadovnichy Aliaksandr	First Deputy Chairman of the State Control Committee of the Grodno Region	State Control Committee of the Republic of Belarus
Kononov Andrei	Head of the International Cooperation Department	State Border Committee
Kravchuk Vadim	Deputy Chairman of the Brest Regional Executive Committee	Brest Regional Executive Committee

Venskovich Yan	Chairman of the Brest Regional Committee of Natural Resources and Environmental Protection	Brest Regional Executive Committee
Gagakova Tatsiana	Head of the General Directorate for Ideological Work and Youth Affairs of the Brest Regional Executive Committee	Brest Regional Executive Committee
Shlyk Vasily	Chairman of the Grodno Regional Committee of Natural Resources and Environmental Protection	Grodno Regional Executive Committee
Bazar Sergei	Deputy Chairman of the Grodno Regional Committee of Natural Resources and Environmental Protection	Grodno Regional Executive Committee
Versotsky Aliaksandr	Chairman of the Svisloch District Executive Committee	Grodno Regional Executive Committee
Liger Eduard	Chief Forester of the Grodno State Forestry Production Association	Grodno Regional Executive Committee
Bui Andrei	Head of the Forestry and Reforestation Department of the Grodno State Forestry Production Association	Grodno Regional Executive Committee
Teterenok Vladislav	General Director	State Nature Protection Institution “National Park “Belovezhskaya Pushcha”
Ovsey Aliaksandr	Deputy General Director	State Nature Protection Institution “National Park “Belovezhskaya Pushcha”
Bernadsky Dmitry	Head of the Scientific Department	State Nature Protection Institution “National Park “Belovezhskaya Pushcha”
Goroshko Alexei	Head of the Department of Forest Protection and Forestry	State Nature Protection Institution “National Park “Belovezhskaya Pushcha”
Klimets Denis	Hunting Engineer	State Nature Protection Institution “National Park “Belovezhskaya Pushcha”
Grummo Dmitry	Director of the State Scientific Institution “V.G. Kuprevich Institute of Experimental Botany of the National Academy of Sciences of Belarus”	Scientific organizations of the National Academy of Sciences of Belarus
Tsvirko Ruslan	Deputy Director for Scientific Work of the State Scientific Institution “V.G. Kuprevich Institute of Experimental Botany of the National Academy of Sciences of Belarus”	Scientific organizations of the National Academy of Sciences of Belarus
Rogovsky Nikita	Junior Researcher at the State Scientific Institution “V.G. Kuprevich Institute of Experimental Botany of the National Academy of Sciences of Belarus”	Scientific organizations of the National Academy of Sciences of Belarus
Geshtovt Pavel	Deputy Director General for Research and Innovation Work of the State Scientific and Production Association “Scientific and Practical Center of the National Academy of Sciences of Belarus for Bioresources”	Scientific organizations of the National Academy of Sciences of Belarus
Shakun Vasily	Head of Laboratory of the State Scientific and Production Association “Scientific and Practical Center of the National Academy of Sciences of Belarus for Bioresources”	Scientific organizations of the National Academy of Sciences of Belarus
Solovey Irina	Leading Researcher at the State Scientific and Production Association “Scientific and Practical Center of the National Academy of Sciences of Belarus for Bioresources”	Scientific organizations of the National Academy of Sciences of Belarus
Sozinov Oleg	Head of the Botany Department of the Ya. Kupala State University of Grodno	Scientific organizations of the Ministry of Education
Yanchurevich Olga	Head of the Department of Zoology and Human and Animal Physiology of the Ya. Kupala State University of Grodno	Scientific organizations of the Ministry of Education

Annex 4. Statement of Outstanding Universal Value of Białowieża Forest

Brief synthesis

Białowieża Forest is a large forest complex located on the border between Poland and Belarus. Thanks to several ages of protection the Forest has survived in its natural state to this day. The BNP, Poland, was inscribed on the World Heritage List in 1979 and extended to include Belovezhskaya Pushcha, Belarus, in 1992. A large extension of the Property in 2014 results in a Property of 141,885 ha with a buffer zone of 166,708 ha.

This Property includes a complex of lowland forests that are characteristics of the Central European mixed forests terrestrial ecoregion. **The area has exceptionally conservation significance due to the scale of its old growth forests, which include extensive undisturbed areas where natural processes are on-going.** A consequence is the richness in dead wood, standing and on the ground, and consequently a high diversity of fungi and saproxylic invertebrates. The Property protects a diverse and rich wildlife of which 59 mammal species, over 250 birds, 13 amphibians, 7 reptiles and over 12,000 invertebrate species. The iconic symbol of the Property is the European Bison.

Criterion (ix): Białowieża Forest conserves a diverse complex of protected forest ecosystems which exemplify the Central European mixed forests terrestrial ecoregion, and a range of associated non-forest habitats, including wet meadows, river valleys and other wetlands. The area has an exceptionally high nature conservation value, including extensive old-growth forests. The large and integral forest area supports complete food webs including viable populations of large mammals and large carnivores (wolf, lynx and otter) amongst others. The richness in dead wood, standing and on the ground, leads to a consequent high diversity of fungi and saproxylic invertebrates. The long tradition of research on the little disturbed forest ecosystem and the numerous publications, including descriptions of new species, also contribute significantly to the values of the nominated Property.

Criterion (x): Białowieża Forest is an irreplaceable area for biodiversity conservation, due in particular to its size, protection status, and substantially undisturbed nature. The Property is home to the largest free-roaming population of European Bison, which is the iconic species of this Property. However the biodiversity conservation values are extensive, and include protection for 59 mammal species, over 250 bird species, 13 amphibians, 7 reptiles, and over 12,000 invertebrates. The flora is diverse and regionally significant, and the Property also is notable for conservation of fungi. Several new species have been described here and many threatened species are still well represented.

Integrity

The Property is a large, coherent area conserved via a range of protective designations representing the full range of forest ecosystems of the region, and providing habitat for large mammals. **The presence of extensive undisturbed areas is crucial to its nature conservation values**. Some of the ecosystems represented in the Property (wet meadows, wetlands, river corridors) require maintenance through active management, due to the decrease of water flow and absence of agriculture (hay cutting). The buffer zone that has been proposed by both States Parties appears sufficient to provide effective protection of the integrity of the Property from threats from outside its boundaries. There are some connectivity challenges, from barriers inside the Property, and its relative isolation within surrounding agricultural landscapes, that require continued management and monitoring.

Protection and management requirements

The Property benefits from legal and institutional protection in both States Parties, through a variety of protected area designations.

Protection and management requires strong and effective cooperation between the States Parties, and also between institutions in each State Party. The BNP (Poland), the Polish Forestry Administration and the BPNP authorities have entered into an agreement regarding preparation and implementation of an TMP for the nominated Property, and to establish a transboundary steering group. In addition, the State Party of Poland has developed an agreement establishing a Steering Committee between the National Park and the Forest Administration aiming to achieve a coordinated approach to integrated management. It is essential to ensure the effective functioning of this Steering Committee, including through regular meetings, and its input to transboundary coordination and management. It is essential that the national parks of both States Parties maintain effective and legally adopted management plans, and an adopted management plan for the BNP (Poland), to support its inclusion in the Property, is an essential and long-term requirement.

It is essential to ensure that the IMP plan for the Property addresses all key issues concerning the effective management of this Property, particularly forest, meadows and wetlands management, and that it is adequately funded on a long-term basis to ensure its effective implementation.

Effective and well-resourced conservation management is the main long-term requirement to secure the Property, and maintain the necessary management interventions that sustain its natural values. Threats that require long-term attention via monitoring and continued management programmes include fire management, the impacts of barriers to connectivity, including roads, firebreaks and the border fence. There is also scope to continually improve aspects of the management of the Property, including in relation to ensuring connectivity within the Property, and in its wider landscape, and to also secure enhanced community engagement.

Annex 5. Photos

Photo 1. The newly constructed border barrier consists of 5 m steel posts with a 0.5 m foundation, topped with a 0.5 m concertina wire. Next to the main border barrier is a service road followed by a second barrier (Source: Guy Debonnet).

Photo 2. Every 5 meters, two small holes are provided in the concrete base of the barrier (Source: Guy Debonnet).

Photo 3. Large gates 5 m wide and 4.5 m high, which in theory could be opened to facilitate movements of larger animals (Source: Guy Debonnet).

Photo 4. The main barrier is complemented by a second barrier made of concertina wire on the edge of the service road (Source: Guy Debonnet).

Photo 5. In the section of the border formed by Leśna and Podcerkówka rivers, a double barrier of concertina wire was put in place (Source: Guy Debonnet).

Photo 6. Spring surface water flow (March 2024) from Belarus into Poland within the property disrupted by the Polish security barrier wall and adjacent service road (Source: Glenn Plumb).

Photo 7. A large earthen dam constructed by heavy equipment in the Belarusian component of the property (Source: Glenn Plumb).