



TERMINAL EVALUATION REPORT

“Conservation-oriented management of forests and wetlands
to achieve multiple benefits”

Republic of Belarus

PIMS #5495, GEF ID 7993

GEF Focal Area: Ecosystems and Biodiversity

BD-1 Program 1; LD-3 Program 4; CCM-2 Program 4; SFM-1; SFM-3

UNDP/Ministry of Natural Resources and Environmental
Protection of Belarus (Ministry of Environment)

August 31, 2022

Sabine Schmidt and Viktoryia Kalosha

Terminal Evaluation June – August 2022

Acknowledgements

The TE Team would like to thank UNDP CO Belarus for the opportunity to undertake this assignment, and contribute to sharing the lessons generated by the “Conservation-oriented management of forests and wetlands to achieve multiple benefits” project in Belarus.

The support provided to the TE team by the project team, namely project manager Aliaksei Artiushevskiy, and Scientific Coordinator Alexander Kozulin in making available project documents, assisting in arranging meetings, responding to queries and overall accommodating the needs for TE work under conditions of remote/online working was excellent and is much appreciated. Both the project manager and the Scientific Coordinator took time for in-depth discussions with the TE team, and their insights were invaluable to interpret the achievements of the project. The TE team also thanks the financial officer Dzmitry Mizhyhurski who made available all documentation as requested. The TE team also expresses their sincere thanks to the UNDP CO team for their support, namely Hanna Harbachova for arranging online meetings, and for the overall guidance.

We would also like to express our sincere thanks to all individuals who provided their time and valuable insights during key informant interviews and discussions, namely the National Project Director, representatives of national implementing agencies, the directors and staff of the pilot area reserves, and representatives of private organizations and local communities. These contributions provided valuable insights and experiences essential to the evaluation.

Table of Contents

Acknowledgements.....	1
Acronyms and Abbreviations	4
1. Executive Summary.....	6
Project Information Table	6
Project Description.....	6
Evaluation Ratings Table	10
Summary of Findings, Conclusions and Lessons Learned	10
Recommendations Summary Table.....	15
2. Introduction	17
Purpose and Objective of the Terminal Evaluation	17
Scope.....	18
Methodology.....	18
Data Collection and Analysis	18
Document Reviews.....	18
Key Informant Interviews	19
Project site visits	19
Evaluation Question Matrix	20
Ethics.....	20
Limitations to the Evaluation	20
Structure of the TE Report	21
3. Project Description.....	22
Project Start and Duration including Milestones.....	22
Development Context (environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope).....	24
Problems that the project sought to address, threats and barriers targeted	25
Immediate and development objectives of the project	26
Expected Results	27
Main Stakeholders (summary list)	28
Theory of Change.....	29
4. Findings	29
4.1. Project Design/Formulation	29

Analysis of Results Framework: project logic and strategy, indicators	29
Assumptions and Risks.....	30
Lessons from other Relevant Projects (e.g. same focal area) incorporated into Project Design	31
Planned Stakeholder Participation	32
Linkages between Project and other Interventions within the Sector	33
4.2 Project Implementation	33
Adaptive Management.....	33
Actual Stakeholder Participation and Partnership Arrangements	34
Project Finance and Co-finance.....	36
Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*)	37
UNDP implementation/oversight (*), Implementing Partner execution (*) and overall assessment of implementation/oversight and execution (*)	38
Risk Management	40
4.3 Project Results	41
Progress towards Objective and Expected Outcomes (*).....	41
Relevance	60
Effectiveness	62
Efficiency	62
Overall Project Outcome	63
Country Ownership	63
Sustainability	64
Gender Equality and Women's Empowerment.....	66
Cross-cutting Issues.....	67
GEF Additionality	68
Catalytic/Replication Effect	68
Progress to Impact	69
5. Main Findings, Conclusions, Recommendations & Lessons	71
Main Findings.....	71
Conclusions	73
Recommendations	74
Lessons Learned	75
Annexes.....	77

Acronyms and Abbreviations

APR	Annual Progress Report
APB	Achova Ptushak Batskauschyny (NGO, partner of BirdLife in Belarus)
AWP	Annual Work Plan
BD	Biodiversity
CBD	Convention on Biological Diversity
CC	Climate Change
CR	Critically Endangered
EN	Endangered
EOP	End of Project
FSC	Forest Stewardship Council
GEF	Global Environmental Facility
GHG	Greenhouse Gas
GIS	Geographic Information System
HCVF	High Conservation Value Forest
IUCN	International Union for the Conservation of Nature
JSC	Joint Stock Company
LD	Land Degradation
LULUCF	Land Use, Land Use Change and Forestry
KBA	Key Biodiversity Area
METT	Management Effectiveness Tracking Tool
M&E	Monitoring and Evaluation
MNREP	Ministry of Natural Resources and Environmental Protection
MTR	Mid Term Review
NAS	National Academy of Sciences
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-government Organization
NIM	National Implementation Modality
NPD	National Project Director
NSSD	National Strategy for Sustainable Development
NT	Near Threatened
PA	Protected Area
PB	Project Board
PD	Project Director
PIF	Project Identification Form
PIMS	Project Information Management System
PIR	Project Implementation Report
PMU	Project Management Unit
PPR	Project Progress Report
PSC	Project Steering Committee
PTR	Project Terminal Report
SFM	Sustainable Forest Management
ToC	Theory of Change
ToR	Terms of Reference

UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme Country Office
UNEG	United Nations Evaluation Group
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollars
VU	Vulnerable

1. Executive Summary

Project Information Table

Project Title:	Conservation-oriented management of forests and wetlands to achieve multiple benefits.		
UNDP Project ID (PIMS #):	5495	PIF Approval Date:	June 4, 2015
GEF Project ID (PMIS #):	7993	CEO Endorsement Date:	October 3, 2016
Award ID:	00090217	Project Document (ProDoc) Signature Date (date project began):	November 2, 2017
Country:	Belarus	Date project manager hired:	December 1, 2017
Region:	CIS	Inception Workshop date:	February 27, 2018
Focal Area:	Ecosystems & Biodiversity	Midterm Review date:	May – June 2020
GEF-6 Strategic Programs:	BD-1; LD-3; CCM-2; SFM-1 & SFM-3	Planned closing date:	November 1, 2022
Trust Fund:	GEF-6	If revised, proposed closing date:	n/a
Executing Agency:	Ministry of Natural Resources & Environmental Protection		
Other Execution Partners:	Ministry of Forestry		
Project Financing	at CEO endorsement (USD)	at Midterm Review (USD)	at Terminal Evaluation (USD)
GEF financing:	4,263,561	4,263,561	4,263,561
UNDP contribution (cash):	35,000	35,000	35,000
Government (parallel):	10,900,000	16,000,000	26,241,706
Others (parallel):	3,295,000	2,215,000	2,643,074
Total co-financing [2+3+4]:	14,230,000	18,250,000	28,884,780
Project Total Cost [1+5]:	18,493,561	22,513,561	33,148,341

Project Description

Belarus' forest and wetland ecosystems are of global significance for the unique biodiversity they harbor and the conservation of these ecosystems is important to realize a significant reduction of the current rate of biodiversity loss at the global, regional and national levels. Belarus has 26 Ramsar Sites, three

Biosphere Reserves and 51 Important Bird Areas. The forests and wetlands of Belarus are home to 25 species that are classified by IUCN as vulnerable and critically endangered.

The project introduced changes to management practices of forests and wetlands in and outside of key biodiversity areas (KBAs) to enhance financial sustainability and conservation outcomes. Targeting both KBAs and surrounding landscapes was justified from the Aichi Target and ecosystem approach perspectives, recognizing that protection of natural capital only within PAs is not sufficient.

The formal objective of the project was to introduce a conservation-centered and financially self-sufficient approach to management of forests and wetlands that harbor internationally important biodiversity and are important for climate and land integrity. The objective was to be achieved through three outcomes.

Outcome 1 (Improved institutional, financial and management sustainability of forest and mire protected areas, which are key areas for conservation of globally threatened species) was aimed at improving nature conservation legislation and the introduction of new approaches to Protected Area management that promote financial sustainability of conservation measures of globally threatened species, by updating and expanding the existing management plans for five protected areas.

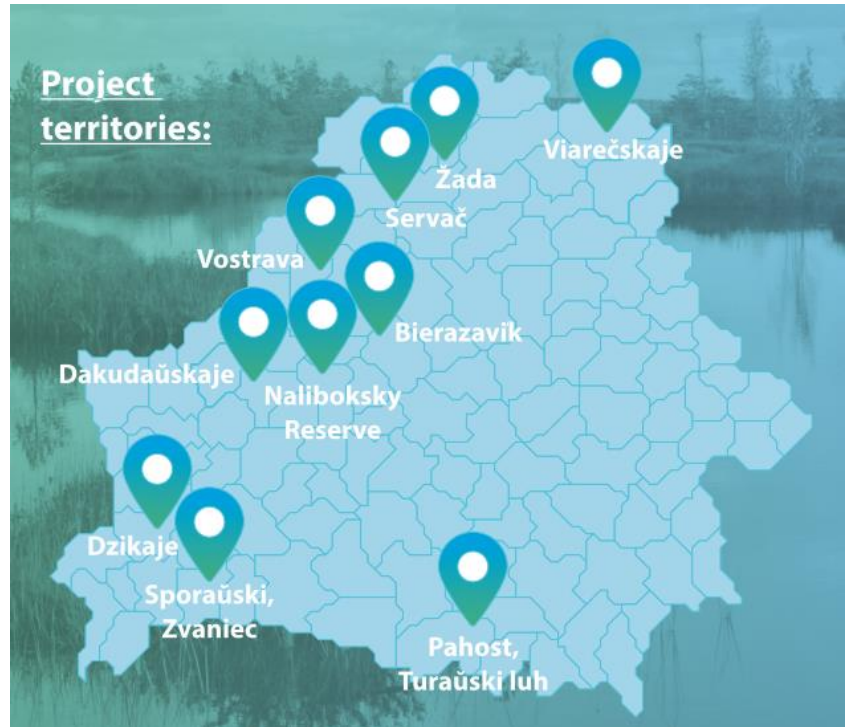
Outcome 2 (Sustainable management of biodiversity-important forest and wetland ecosystems outside protected areas) was focused on the identification of biodiversity-important forests outside PAs and ensuring their sustainable management via assigning special protection status to these territories. It was planned to undertake an inventory of biotopes subject to special protection under the Bern Convention and National Legislation (at least 150,000 ha), to prepare their passports, protection obligations and to transfer them to land users for protection and sustainable use.

Outcome 3 (Increased experience and knowledge of innovative measures for habitat restoration and elimination of the most significant threats to globally threatened species; monitoring of efficiency of the project's measures) was designed to advance the state of monitoring and research on globally important species, and to demonstrate active habitat management and restoration techniques to conserve globally important species whose populations depend on the state of habitats in Belarus.

Outcome 3 was also to ensure monitoring of the project's environmental benefits. Innovative measures were to be tested that eliminate the most significant problems and threats to globally threatened species: fragmentation of distribution area, degradation and reduction of key habitats' productivity, reduction of genetic heterogeneity of populations, lack of knowledge about the status of insufficiently studied globally threatened species, lack of experience in accelerated restoration of globally threatened species' habitats.

The project worked in 9 pilot sites across the territory of the Republic of Belarus; their location is depicted on the map to the right (made available by the project PMU).

The pilot sites included areas currently gazetted as PAs as well as areas in other landscapes that are either to receive a protection status or where species conservation, habitat restoration and protection, or amelioration measures are to be undertaken, or where environmentally sound economic activities to support local livelihoods are piloted or improved.



The 9 project pilot sites were:

- Nalibokski Reserve is situated in the Stolbtsy and Volozhin districts of Minsk region and Novogrudok and Ivie districts of Grodno region. The territory is Republican Landscape Reserve (IUCN category IV), also designated as an Important Plant Area and Important Bird Area (BY048).
- Zvanets mire lies within a national protected area (Reserve, IUCN category IV). It is also considered a Ramsar site. 100% of the area is under nature conservation and is state-owned. 88% is classified as Reserve land (under the Drogichin authority), and 12% is under the ownership of Drogichin Forestry
- Sporovski Reserve is located in the Berioza, Drogichin, Ivanovo and Ivatsevichi districts of Brest region and is a Republican Biological Reserve (IUCN category IV), also designated as a Ramsar site and Important Bird Area (BY022).
- Protected area Olmany Mires is situated in the Stolin district of the Brest Region is a Landscape Reserve of Republican Importance (IUCN category IV), and also a Ramsar site (Olmany Mires Zakaznik) and Important Bird Area (BY018).
- Mid Pripyat (the Pogost Meadow) is located at the mouth of the Stviga River. Pogost Meadow mire lies within a national protected area Mid Pripyat (Reserve, IUCN category IV) and is also a Ramsar site.
- Turov meadow territory lies within a local protected area (Reserve, IUCN category VI). 100% of the area is under nature conservation and is state-owned. A section of PA (147 ha) was managed by APB BirdLife Belarus until the NGO was liquidated.
- Servech mire's territory lies within a national protected area (Reserve, IUCN category IV). The site is also a Ramsar site. 100% of the area is under nature conservation and is state-owned (Glubokoe Forestry).

- Dikoe fen mire lies within a national park “Belovezhskaya Puscha” (Reserve, IUCN category IV). Dikoe fen mire is also a Ramsar site. 100% of the area is under nature conservation (national park) and is state-owned.
- Dokudovskoe mire was, before peat extraction, the largest sedge open fen mire in the region with a total area of 7,000 ha. It had no protection status. 100% of the area is under forestry. The entire area is state-owned (Lida Forestry).

Key stakeholders, planned at project design stage to be represented in the Project Board, included:

- the Ministry for Natural Resource Management and Environmental Protection/BelNIC Ecology
- the Ministry of Economy
- the Ministry of Forestry (Belgosles, Forestries)
- the Ministry of Agriculture and Food
- the National Academy of Sciences and several of its organizations including the Scientific and Practical Center – NPC – on Bioresources, Institute of Botany, Scientific and Practical Centre of Livestock Farming, Forest Institute
- Administrations of state environmental enterprises “Reserve Sporovskii”, “Reserve Zvanets”, Reserve “Nalibokskii”
- JSC “Turovsnina”, and
- NGO “Akhova Ptushak Batskauschyny” (partner of BirdLife in Belarus).

Further stakeholders planned by project design to be involved in implementation and expected beneficiaries of project activities included:

- Local Government Organizations / Counterparts including PA administrations of the selected PAs (pilot sites) Nalibokski, Zvanets, Sporovsky, Olmany mires, Mid Pripyat, Turov meadow, Servech, and Belovezhskaya Puscha
- private sector/JSC entities Turovshchina, Valeotrans and Arzhanitsa
- civil society members including representatives of Local Communities in the project areas, and
- NGO “Bagna”.

The project’s results framework includes 32 indicators, the majority of which are quantitative and measurable through established M&E procedures in biodiversity conservation and natural resource management or through M&E procedures introduced/enhanced by the project itself.

Evaluation Ratings Table

The evaluation ratings table below consolidates ratings as described in this report, based on the scales provided in Table 9 of the Guidance document for Conducting UNDP/GEF financed Terminal Evaluations (2020), attached as Annex 1 to this report.

1. Monitoring & Evaluation (M&E)	Rating
M&E design at entry	Moderately Satisfactory (MS)
M&E Plan Implementation	Satisfactory (S)
Overall Quality of M&E	Satisfactory (S)
2. Implementing Agency (IA) Implementation & Executing Agency (EA) Execution	Rating
Quality of UNDP Implementation/Oversight	Highly Satisfactory (HS)
Quality of Implementing Partner Execution	Highly Satisfactory (HS)
Overall quality of Implementation/Execution	Highly Satisfactory (HS)
3. Assessment of Outcomes	Rating
Relevance	Highly Satisfactory (HS)
Effectiveness	Satisfactory (S)
Efficiency	Highly Satisfactory (S)
Overall Project Outcome Rating	Highly Satisfactory (S)
4. Sustainability	Rating
Financial sustainability	Moderately Likely
Socio-political sustainability	Moderately Likely
Institutional framework and governance sustainability	Likely
Environmental sustainability	Likely
Overall Likelihood of Sustainability	Likely

Summary of Findings, Conclusions and Lessons Learned

Main Findings

Project rationale and design were logical and appropriate to target the three identified drivers of degradation of forest and wetland ecosystems. The project logic is sound also in terms of building on both in-country and international experiences, applying an approach that targets landscapes both within and outside Protected Areas, and re-introducing measures of sustainable natural resource use based on traditional practices in the country and specifically in the project regions.

Design hierarchies were clear with overall objective, outcomes, and outputs; activities under each output were described in technical/scientific detail. Project formulation was inclusive of all relevant stakeholders; their roles and responsibilities in activity implementation and oversight were clearly defined.

Indicators and targets for the results framework were defined with a maximalist approach, assuming that optimal ecological/hydrological conditions would be achieved and underestimating the severity of climate change impacts (namely lack of snow cover, droughts) and the speed of their acceleration during the

project life. Complex interactions among species impacting populations of indicator species could not be foreseen in the setting of targets.

Despite challenging conditions including the COVID-19 pandemic and political developments both effecting travel and collaboration in-country and cross-border and eliminating civil society organizations as implementing partners in the later project phase, the project was implemented successfully, with a high level of effectiveness and efficiency.

The project achieved its objective “To introduce a conservation-centered and financially self-sufficient approach to management of forests and wetlands that harbor internationally important biodiversity and are important for climate and land integrity”. For biodiversity, sustainable forest management, land degradation and climate change mitigation targets have been exceeded; for protected area management, the target was achieved.

While financial sustainability to maintain all practices demonstrated at the pilot sites is not secured yet, nevertheless the project did introduce options for conservation-centered and financially self-sufficient approaches to management of forests and wetlands. In particular at Sporovsky Reserve, self-financing was successfully demonstrated, relying on the sale of biomass, production of woodchips and services to other entities.

Key achievements under Outcome 1 include the creation of a total of 430 hectares of highly productive meadows as natural forage habitat for bison maintained by mowing and grazing bison and tarpan horses; mowing and bush removal on over 11,000 of open sedge mire in Sporovsky and Zvanets reserves.

Not all quantitative targets under Outcome 1 are fully achieved. Factors impacting achievements towards targets included unforeseen severe climate change impacts (drought, lack of snow cover and therefore of spring flooding), the political situation and liquidation of NGOs as implementing partners, lack of activity implementation/non-compliance by private enterprise, unsustainable use of water resources upstream of project sites, and reduced tourist numbers as a result of the COVID-19 pandemic.

Outcome 2 has been achieved, and exceeded with regard to numbers of revised management plans for forestries and areas with future use of forest hydro amelioration systems. Key achievements under Outcome 2 include the transfer of 182,222 ha (against target of 150,000 ha) of forest lands with rare biotopes into protection; 16 forestries (against target of 10) envisage forestry management plans in line with sustainable use of protected biotopes; development of the sectoral national program on sustainable use of hydro forestry reclamation systems, and agreement with over 104 forestries¹ on the use of forest hydro ameliorative systems on 474,700 ha.

Outcome 3 was largely achieved. Some targets for indicators species could not be fully achieved when populations were impacted by decline in food sources or growth of predator species, and international bison transfers were not possible due to pandemic and political situation. Key achievements under Outcome 3 include the development of National Action Plans for the conservation of 17 species and their

¹ including 99 forestries of the Ministry of Forestry, 2 educational and experimental forestries, and 3 forestries under the Presidential Affairs Management Department

submission for approval to the Ministry of Environment; and issuance of 9 genetic passports for the Nalibokski micro population of the European bison.

The achievements towards targets are testimony to effective management; all reporting, M&E and financial data confirm effectiveness and efficiency in implementation. The fact that in 2020, despite the pandemic and related restrictions, nearly all tasks planned for the year in the annual work plan were completed, speaks to the high standard of implementation.

Stakeholder cooperation and a well-functioning oversight body (project board) with all national stakeholders represented was a key success factor in implementation. The project team facilitated stakeholder dialogue and cooperation throughout the project, enabling a smooth process of consensus building for the draft and submission of the Law on Protection and Sustainable Use of Peatlands, as well as for the development and approval by the Ministry of Forestry of a sectoral program to optimize usage of hydro-reclamation systems in forestry until 2035. The law on Protection and Sustainable Use of Peatlands is the first in Europe to establish a legal framework for peatland protection and sustainable use of their resources.

Civil society participation was compromised due to the liquidation of NGOs in March 2022. Management of Turov PA by “BirdLife Belarus” ceased upon liquidation of the organization, and resulted in a significant decline of the METT score for Turov PA.

The project practiced adaptive management responding to the COVID-19 pandemic and political situation in the country by focusing on online communication strategies, as well as to unforeseen impacts of climate change and ecological processes effecting project outcomes by developed engineering solutions and investment plans.

Project design did not include specific activities and expected results to benefit vulnerable groups. The only aspect related to livelihood improvements in project design and reflected in the results framework is the profitable involvement of private enterprises in sustainable habitat management of two PAs. The evaluation team found no evidence that the project's activities had a direct impact on improving the situation of ordinary people in Belarus, including vulnerable groups. However, indirect benefits for local communities were found to be generated by project activities; these included an increase in the flow of customers for agro-ecotourism facilities near Nalibokski and Sprovsky nature reserves, and the popularization of the value of wild-growing types of berries for end-users of products on packages of OAO Arzhanitsa. These results did not explicitly affect vulnerable groups.

Conclusions

The project achieved its objective and three planned outcomes, though a number of quantitative targets were not achieved as climate change impacts had been underestimated and optimal ecological conditions had been assumed for the years of project implementation

The project made significant contributions to safeguard peatland and forest ecosystems in the Republic of Belarus. The likelihood of the project's long term impact is enhanced in particular through the project's successes developing the law on protection and sustainable use of peatlands, the sectoral national

program on sustainable use of hydro forestry reclamation systems into the legal framework, and National Action Plans for the conservation of 17 species.

The project was instrumental in developing a body of knowledge and experiences on peatland conservation practices and species conservation, namely Aquatic Warbler and European bison, which place the country in a leading position in these fields, recognized regionally and internationally. The project assisted in achieving the first law on peatland conservation as well as the first national digital register of peatlands.

While not succeeding in creating financially sustainable mechanism for all pilot areas, mechanisms were implemented in Sporovsky reserve successfully to demonstrate financial self-sufficiency for PAs to invest generated income back into law enforcement and conservation from which lessons can be adopted to scale up countrywide. Economic activities in other reserves still need further development, and options identified with project support need to be evaluated further. Exporting pellets abroad as foreseen by project design could not be realized under current conditions of cross border restrictions.

For local livelihoods and green economic development, the project has enhanced enabling conditions by creating improved infrastructure for ecotourism development, and supporting sustainable natural resource use, i.e. improved processing and marketing of cranberries. Recent trends in tourism, with more affluent visitors frequenting the reserves, suggest that there is a growing potential for tourism development as an income source. The project contributions are also to be seen in the light of the economic value of restored peatlands; for example, the restoration of the drained Zhada bog in the Vitebsk region of Belarus could equal an economic value of more than USD 10 million per year based on its social and environmental services.²

Project results enjoy a high degree of institutional and governance sustainability due to the successes in developing the legal and regulatory framework, in building capacity and awareness and as a result of good country ownership. However, challenges remain for financial sustainability, and environmental and socio-political sustainability are impacted by climate change and current political trends.

Lessons Learned

Identifying Indicators and Targets at Project Design Stage

- Targets related to indicator species populations are of limited suitability as many factors are beyond the control of the project and their impact on indicator populations is unpredictable. It is better for project design and setting targets to take a realistic, not maximalist approach assuming that optimal ecological conditions (hydrological) can be achieved. It is better to choose

² <https://www.undp.org/belarus/news/economics-restored-peatlands-why-we-invested-rehabilitation-zhada-bog>. The economics of restored peatlands: why we invested in the rehabilitation of Zhada bog. January 29, 2021

indicators and targets that are more directly related to output and activity level, rather than ecological indicators influenced by too many external factors.

Monitoring of indicator species population to measure achievement toward target also requires lots of human resources and equipment, and is expensive therefore.

- Climate change impacts on specific targets are difficult to predict, despite good in-country data on observed and projected climate change. As a result, under-achievement of certain (ecological) targets could lead to misinterpreting the actual overall achievements of the project. Climate change impacts were more severe and happened faster than anticipated during the project life. The risk of climate change impacts should not be underestimated.

Facilitating Stakeholder Dialogue and Collaboration

- Efficient, productive and open dialogue between project stakeholders at early stage, and representation of all national stakeholders in project board, promoted good coverage on the project in national media in early implementation stage.
- The project's role in facilitating stakeholder collaboration was key to successfully and efficiently developing legal and sector program drafts for submission; examples include:
 - The project's facilitation of stakeholders to work together on preparing the draft law "On conservation and sustainable use of peatlands" was effective; as a result, the draft law was agreed without fundamental changes and submitted to the government in accordance with national procedures.
 - Close collaboration with the national partners of the project has allowed to institutionalize the relevant scientific and practical innovations by including them in the new law on peatland conservation.
 - Project's role in facilitation of interactions between the Academy of Sciences, relevant ministries and Leskhozes (governmental forest enterprises) resulted in the development and approval by the Ministry of Forestry of a sectoral program to optimize usage of hydro-reclamation systems in forestry until 2035.

Planning and Implementing Sequence of Project Activities

- Early procurement of equipment for partners in the sustainable management of mire ecosystems (completed 2018), allowed for practical testing of the proposed methodologies during following field seasons of the project making assessment of environmental and economic results of the project activities with a high degree of veracity possible.

Lack of Mechanism to Ensure Activity Implementation based on MoU with private enterprise

- Despite efforts to strengthen cooperation with JSC Turovshchizna enterprise and make them prioritize implementation of agreed activities, ultimately the activities were not implemented. Based on MoU, project has no leverage to enforce compliance with MoU.

There is also no effective mechanism to ensure equipment provided by the project is maintained and used for the purposes it was provided for. This problem is not a problem of the project management, but a consequence of UNDP's established and applied equipment transfer practices over a long period of time.

COVID-19 pandemic – Adaptation, Electronic Media/social Media suitable for Public Outreach

- The project team shifted the focus of its outreach efforts to working with electronic media in the wake of the COVID-19 pandemic. This allowed the project to expand its outreach to the general public.

NGOs with relevant expertise and experience are important implementing partners

- The NGO APB (“Birdlife Belarus”) played an important role in implementing activities in education (Turov ecological center), monitoring species and managing Turov meadows reserve. Upon their liquidation, METT score dropped from 88 to 60, impacting negatively on project final achievement at this reserve.

Financial self-sufficiency of Reserve is possible – depending on human resources and environmental conditions. There is not one model to fit all reserves.

- Sporovsky reserve was able to not only cover operating costs but make a profit. Success factors included the initiative and enthusiasm of reserve leadership (manager), and the fact that biomass could be brought out easily.
- Other reserves were not as successful; it was not easy to bring out biomass due to landscape features; other factors: manager changed several times; leadership less enthusiastic and capable to pursue income generation opportunities.

Recommendations Summary Table

Rec #	TE Recommendation	Entity Responsible	Time frame
B	Category 2: Scaling up Project Experiences/Practices		
B.1.	Discuss scale-up plan with relevant stakeholders to scale up project experiences/practices beyond project areas and implement the law on “conservation and sustainable use of peatlands”. During final conference or in a separate meeting. Such a scale-up plan could be utilized (in the future) for further funding proposals.	PMU	Before project closing
B.2.	Discuss with Project Board whether its coordinating function among national stakeholders will be required beyond project life for scale up, and for implementation of the law on “conservation and sustainable use of peatlands”. (this is based on experiences many projects have made. The project or its oversight body fulfilled a function for example in cross-sectoral coordination, which needs to be maintained to make project results sustainable).	PMU	Before project closing
B.3	Convene a round table meeting in order to explore how good practices can be scaled up especially in the context of GEF 8 programming.	UNDP	2022
C	Category 3: Knowledge Management		
C.1.	Share project achievements and lessons, and ensure they are available to the public beyond project life. Upload documents (technical and popular) on project achievements, lessons learnt, and other to open platforms and ensure they remain accessible to the public. Place information on social media about the availability of documents. Organize online events (webinars) for different audiences to educate about project achievements and their significance.	PMU	Before project closing
D	Category 4: Developing Follow-up projects – long term		
D.1.	Prepare project proposal on tourism development in selected reserves (tourism capacity assessment, visitor management plans, destination marketing plans, tourism infrastructure development)	UNDP	2022 - 2025
D.2.	Develop more detailed proposals including business plans for the development of pellet production from plant biomass and biodegradable disposable tableware, taking into account relevant foreign experiences in this field.”	UNDP	2022 - 2025

D.3.	Prepare proposals to support regional collaboration projects on Aquatic Warbler, European Bison conservation, to scale up project experiences	UNDP	2022 - 2025
E	Category 5: Ensuring sustainable maintenance and use of transferred equipment, and implementation by partners of agreed activities	UNDP	
E.1.	Explore options to design agreement format with implementing partners that will make it binding (more than an MoU) to maintain and use equipment received from projects for the agreed purpose and to implement activities as agreed. "Standard agreements" and MoU give projects no mechanism to enforce proper use and implementation or to penalize for non-compliance. (see A.1.)	UNDP	2022/23

2. Introduction

Purpose and Objective of the Terminal Evaluation

The project "Conservation-oriented management of forests and wetlands to achieve multiple benefits" is a full-sized, UNDP-supported, GEF-financed project and therefore a Terminal Evaluation is required at project end in accordance with UNDP and GEF M&E policies and procedures.

The "Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects" describes the complementary purposes of Terminal Evaluations for GEF-financed projects as:

- To assess and document project results, and the contribution of these results towards achieving GEF strategic objectives aimed at global environmental benefits;
- To synthesize lessons that can help to improve the selection, design and implementation of future UNDP-supported GEF-financed initiatives; and to improve the sustainability of benefits and aid in overall enhancement of UNDP programming;
- To promote accountability and transparency;
- To gauge the extent of project convergence with other priorities within the UNDP country program, including poverty alleviation; strengthening resilience to the impacts of climate change, reducing disaster risk and vulnerability, as well as cross-cutting issues such gender equality, empowering women and supporting human rights.

The TE assessed project performance against expectations set out in the project's Logical Framework/Results Framework. The Terms of Reference outlined the objectives of the Terminal Evaluation, stating that the TE Report will:

- assess the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.
- promote accountability and transparency, and assess the extent of project accomplishments.

Scope

The TE assessed project performance against expectations set out in the project's Logical Framework/Results Framework, covering the entire project implementation period from November 2017 to July/August 2022 when the TE took place, and all three intended outcomes of the project.

Document reviews and key informant interviews sought to assess achievements against targets, challenges and lessons learnt across all interventions supported and facilitated by the project. All discussions had an emphasis on relevance and significance of the project outcomes for the country and for the project areas. Key informant interviews were arranged so as to capture the perspectives and experiences of as many project implementing partners, including government agencies at all levels, academic/research and conservation organizations, local authorities, private enterprises, and beneficiaries among local communities affected by/benefitting from project activities as possible within the time frame and logistical limitations of the TE.

The national member of the TE team was originally expected to conduct field missions to the project pilot administrative districts (Bereza, Drohichin in Brest region, Zhitkovichi in Gomel region, Volozhin in Minsk region and Oshmyany and Lida in Grodno region). These were planned for the period July 5 – 10, 2022, but the travel itinerary had to be adjusted several times due to scheduling issues of stakeholders as well as severe weather conditions.

Methodology

The evaluation team applied a qualitative approach to gain insights on the design of the project, namely the formulation of indicators and targets, on its relevance on local and national level, on achievements towards targets and success factors leading to effective implementation, on impacts and sustainability, and on how the development of capacities, awareness, scientific knowledge and new practices, as well as legal and regulatory framework developments supported by the project contribute to safeguarding lasting results.

Data Collection and Analysis

Document Reviews

Document reviews of all relevant sources of information provided the framework for designing and conducting the evaluation. Project management made available a comprehensive package of documents on project design and implementation progress, annual planning documents, minutes of meetings of PB meetings, other outputs and publications, workshop reports, and links to online updates and educational materials on project activities, and links to numerous social media posts sharing updates and specific information on project interventions and successes in habitat and species recovery. A list of reviewed documents is included as Annex 2.

Key Informant Interviews

Semi-structured interviews with key informants – at national and sub national level were the main data collection tool to learn about project implementation, its achievements, impacts and the sustainability of outcomes. Interviews with experts/researchers of implementing partner organizations and several rounds of meetings with the PM and project scientific coordinator were important steps in the TE to understand the rationale of the design/choice of indicators, determination of targets and the factors that influenced progress towards defined targets.

The project had as strong basis of scientific field research on habitat and species populations, on experimenting for and developing of methods for ecological restoration, for gene pool management of target species, for translocation of specimens to recover and manage populations of target species. Therefore, in-depth discussions were held to identify best practices, challenges for sustainability and draw lessons learnt both for the scaling up/sharing of practices and for the design of M&E frameworks relying on ecological indicators that are subject to many influences beyond project control.

The team carried out a total of 13 online meetings, using Zoom as a platform, with PMU, UNDP CO, NPD, and representatives of implementing partners including Institute of Experimental Botany, Ministry of Forestry, Centre on Bioresources of the National Academy of Science (NAS), Centre on Animal Husbandry of the National Academy of Science (NAS), Forest Institute (Gomel), and "Arzhanitsa" enterprise.

In the field, meetings were held with directors and experts of Nalibokski, Sporovsky and Zvanets reserves, Striginsky Village Council Chairman, Representatives of Agroecotourism enterprises/local community, Agroecotourism Center, and the Ecological Center/Turov School. The list of individuals who provided their input in key informant interviews is included as Annex 3.

Project site visits

The national evaluator visited Nalibokski Reserve on July 14, 2022, meeting with Vladimir Aliseyko (Director of Naliboksky reserve), and Yuri Rudovich (Forester), and Sporovsky Reserve on July 20/21, meeting with Vadim Prokopovich (Director of Sporovsky reserve), Aliona Sinilo (Tourism Specialist), Ivan Kagin (Chairman of the Striginsky Village Council), Valentina Karpuk and Ivan Karpuk (Representatives of local agroecotourism enterprises/local community). The national evaluator also met with Vitaly Shkapich (Director of Zvanets reserve), and Ekaterina Kruk (Leading Specialist) who had traveled to Sporovsky as their site could not be visited by the evaluator due to its proximity to the border with Ukraine.

Questionnaires

Questionnaires (Annex 4) were developed according to the level of involvement in the project – national/sub national, private sector, community/beneficiary level and addressed the topics of project relevance/design, effectiveness of implementation, impacts and sustainability in terms of changes to capacities, financial sustainability, awareness, skills and knowledge and changes, and enabling legal and regulatory framework. The questionnaire also addressed gender sensitive design of the project and activities and the participation, benefitting and empowerment of women.

Evaluation Question Matrix

The Evaluation Question Matrix (EQM) provided in Annex 5, guided the design of the questionnaires, and other data collection tools, to ensure all required elements of a TE for GEF funded projects were covered. As per ToR, the EQM was developed for the criteria: Relevance, Effectiveness, Efficiency, Sustainability, Impact, Gender Equality.

Ethics

The evaluation was conducted in accordance with the principles outlined in the UNEG ‘Ethical Guidelines for Evaluation’,³ and the TE team members adhered to the required ethical standards and both consultants accordingly signed a code of conduct upon acceptance of the assignment (Annex 6).

The TE team in their data collection activities observed protocols to safeguard the rights and confidentiality of information providers, interviewees and stakeholders, to ensure security of collected information before and after the evaluation, maintain the anonymity and confidentiality of sources of information. The information and data gathered in the evaluation process will be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

This report does not assign specific comments to individuals unless with the express permission or wish of the individual.

Limitations to the Evaluation

The Republic of Belarus is still affected by the COVID-19 pandemic at the time of the TE, and evaluation activities were adjusted according to both international and in-country travel restrictions. The international consultant/team leader worked remotely (based in Mongolia), and to maximize safety of the national TE team member and adhere to safety regulations in-country during the evaluation period, field visits were limited. Severe weather conditions, scheduling challenges as well as the political situation affected field travel, for example pilot sites near the border to Ukraine could not be visited.

Key informant interviews held online were effective thanks to the skills (translation, interpretation) and diligence of the national team member; yet, the nature of remote meetings with translation poses some

³ <http://www.unevaluation.org/document/detail/100>

challenges in communication and at times internet connections were unstable and communication not as clear and easy as in face to face meetings.

The national evaluator approached stakeholders with requests for interviews, however not all those contacted agreed to meet with the TE team. Of the stakeholders originally listed in the project document, (or approached by the PMU to cooperate) the ones listed below could not be met for the reasons explained:

- Ministry of Agriculture and Food - never took part in a board activity, refused to participate in the project according to a letter to Project Manager
- JSC “Turovshina” – It was not possible to establish communication. They did not collaborate with the project, did not implement activities as per Memorandum of Understanding
- NGO “Akhova Ptushak Batskauschyn” (partner of BirdLife in Belarus) - the organization is in the process of liquidation, the former director refused to communicate, because by law he cannot speak on behalf of the organization. But he commented that the project was “well done, I have no complaints about them».
- NGO “Bagna” – refused to communicate except for a brief meeting with the national evaluator; they said that some years ago they took part in a working group that had developed a national wetland management strategy (under a different project). It was some years ago and they didn't remember details of that work. They also stated that during project implementation the NGO only took part in information activities and that they have nothing significant to share with the TE team.

Information and data on economic benefits for beneficiaries in the private sector were available only to a very limited extend, as private entities are not obliged or willing to disclose this information to authorities or share with other parties. Likewise, data on tourist numbers for Turov meadows were not available due to the liquidation of the NGO APB (BirdLife Belarus) which had been responsible for management of the reserve and likely would have relevant data, while local authorities didn't collect the data on visitation.

Structure of the TE Report

This report is structured into the following sections:

1. Executive Summary (above), providing a brief synopsis on project design and TE findings, conclusions, lessons learnt and recommendations. It includes the evaluation ratings table.
2. Project Description, providing a brief overview of a) project start, duration and milestones, b) Development context in terms of environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope, c) Problems the project sought to address including threats and barriers targeted, d) Immediate and development objectives of the project, e) Expected results, f) Summary list of main stakeholders.
3. Findings, providing a descriptive assessment, as well as ratings for required Criteria 4. The section

4 M&E Design at Entry, M&E Plan implementation, Overall Quality of M&E; Quality of UNDP Implementation/Oversight, Quality of Implementing Partner Execution, Overall Quality of Implementation/Execution; Relevance, Effectiveness, Efficiency, Overall Project Outcome Rating; Sustainability (Financial, Socio-political, Institutional Framework and Governance, Environmental, Overall Likelihood of Sustainability)

on findings assesses:

- Project design (Analysis of Results Framework, Lessons from other relevant projects incorporated into project design, planned stakeholder participation, linkages between project and other interventions within the sector).
 - Project Implementation (Adaptive management, Actual stakeholder participation and partnership arrangements, Project Finance and Co-finance, Monitoring & Evaluation, Implementation and Execution, coordination, and operational issues, Risk Management incl. Social and Environmental Standards (Safeguards)
 - Project Results (Progress towards objective and expected outcomes including Relevance, Effectiveness, Efficiency, Overall Outcome, Sustainability, Country Ownership, Gender equality and women's empowerment, Cross-cutting Issues, GEF Additionality, Catalytic Role / Replication Effect, Progress to Impact)
4. Main Findings, Conclusions, Recommendations & Lessons
 5. Annexes (TE ToR, TE Mission itinerary, List of persons interviewed, List of documents reviewed, Summary of field visits, and others)

3. Project Description

Project Start and Duration including Milestones

The project commenced November 2, 2017 (Project Document signed) following a preparation period with stakeholder consultations. An inception workshop with implementing partners and other key stakeholders was held February 27, 2018; it confirmed the design of the project including the results framework and consolidated implementation arrangements.

The project implementation period was planned for 5 years, with the project closing date set for November 2022. It is implemented under the NIM modality, with the Ministry of Natural Resources & Environmental Protection of the Republic of Belarus as the Executing Agency/ Implementing Partner, and UNDP as the Implementing Agency/Responsible Partner.

A mid-term review (MTR) was undertaken between May and June 2020, concluding that the project was on track to achieve all quantitative targets by October 2022. It recommended a stronger focus in the remaining phase on active participation of the private sector and civil society in the implementation of measures to enhance ownership and sustainability.

Key achievements identified at mid-term (2020) included:

For Outcome 1

- The project supported the development of the Law on the Protection and Sustainable Use of Peatlands, which was approved by the government in December 2019, and the formulation of secondary legislation to improve the legal framework for the conservation of globally threatened species.
- The project had piloted new financially self-sustaining approaches for managing forest and mire protected areas, aiming at the conservation of globally threatened biodiversity and the

improvement of the sustainable management of floodplain meadows.

- Biodiversity indicators showed that the conservation of key threatened species was improving, including the improvement of the European bison habitat conditions while decreasing their negative impacts on adjacent agricultural land, and increasing the population of several bird species.

For Outcome 2

- The project identified a total of 122,866 ha of rare biotopes on the territory of 33 forestries on biodiversity-important forests outside protected areas. Recommendations for the sustainable use of these protected biotopes were being incorporated in forest management plans in several forestries.
- A comprehensive inventory of hydro-forestry systems was carried out on an area of 65,911ha, and guidelines on how to use them were prepared.
- Proposals to use forest hydro ameliorative systems on a total area of 257,000 ha were developed and accepted by forestries.

For Outcome 3

- The project had implemented innovative biotechnological measures seeking to eliminate the most significant threats to globally important species in selected areas including measures to:
 - restore habitats of globally threatened bird species through control of the spread of shrubs and reeds and optimization of the hydrological regime
 - improve the genetic status of the European bison through exchange of individuals across micro-populations of European bison
 - stabilize populations of globally threatened species such as the installation of artificial nests for rare bird species.
- The project had supported the monitoring of key elements affecting biodiversity conservation, including the monitoring of
 - the dynamic state of globally threatened species (such as population dynamics of the Aquatic Warbler and breeding pairs of greater spotted eagle)
 - vegetation dynamics and of ground water levels before and after the project supported measures to optimize and restore ecosystems
 - carbon benefits from a greater carbon dioxide absorption by wetlands and forest ecosystems due to project supported activities.

By 2021, key achievements included (as per 2021 PIR):

For Biodiversity - project pilot reserves (Nalibokski and Sporovski) generated income of approximately USD 218,600.00 to be used for management, exceeding the end of project target which was to reduce the “funding gap” by 50 % against the baseline value of 135,506 USD.

For Sustainable Forest Management - 179,222.1 ha of forest lands with rare biotopes were identified in 41 forestries, and passports for the protection of 24,700.0 ha of rare biotopes outside protected areas were identified and agreed with the respective forestries.

For Land Degradation - engineering projects on re-watering were implemented on five (5) project forested peatlands (Berezovik - 4567 ha, Verechskoye – 773,5 ha, Ostrovo – 854 ha, Dokudovskoye – 1020 ha, Zhada – 5382 ha), encompassing totally 12,596 hectares.

For Climate Change Mitigation - Measures completed by the project are estimated to reduce greenhouse gas emissions on 656,082 hectares including 179,222.1 ha of forest lands with rare biotopes under sustainable management of forest resources; 474.700 ha under planning changes in forest reclamation approaches; 1020 ha restored open peatlands (Dokudovskoe); 240 ha flood plain meadows (Turov meadow, Pogost meadow); 2400 hectares of biomass reproduction in swamps to replace fossil fuels.

Development Context (environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope)

Belarus' forest and wetland ecosystems are of global significance as habitat for 25 species that are classified by IUCN as vulnerable and critically endangered. The conservation of these ecosystems is important to realize a significant reduction of the current rate of biodiversity loss at the global, regional and national levels. The project developed and piloted practices for the management of forests and wetlands in and outside of key biodiversity areas that increased financial sustainability and the efficiency of conservation efforts. The approach of targeting both Key Biodiversity Areas (KBAs) and the surrounding landscapes is justified from the Aichi Target and ecosystem approach perspectives, recognizing that protection of ecosystems and biodiversity only within PAs is not sufficient for lasting results. The project has taken on lessons from several previous projects implemented in the country that showed the need to work in both peatland and non-peatland areas, as well as within and outside PAs.

In line with the more comprehensive project approach, stakeholder involvement in design and implementation reflected all relevant institutions including academic/research organizations under the National Academy of Sciences, government agencies and local authorities mandated with PA, forest and wetland management, as well as NGOs of the environmental sector in the earlier project phases. The project had important objectives in policy formulation to mainstream sustainable approaches and create enabling conditions and economic incentives to maintain practices and continue to monitor the impacts of conservation and sustainable use measures. Key project objectives for policy development included an official policy and document ("The Scheme of Distribution of Forest Hydro Amelioration Systems according to Their Use") on future use of forest hydro amelioration systems, and the draft law on peatland conservation and use.

The primary objectives of the project were in biodiversity conservation, sustainable land management, sustainable forest management, and climate change mitigation; however, in pursuing these, it was to also generate socio-economic benefits for local people living near the pilot sites of the project. Namely Component/Outcome 1 addresses economically profitable and ecologically sustainable use of natural resources at pilot sites. Improved income generation through cranberry gathering, eco-tourism, hay harvesting, and other measures supported by the project are designed to maintain wetlands in an optimal ecological state and thus keep them accessible and viable for traditional sustainable natural resource use. Maintaining and supporting these traditional uses was to help maintain habitats for globally significant biodiversity, GHG mitigation and sequestration, and to arrest peatland degradation.

Measures for socio-economic benefits, and estimated numbers of beneficiaries, included sustainable management of meadows through regular mowing at Nalibokski (40), cranberry harvesting at Olmany mires (400) and in the Vitebsk region (900), wetland biomass harvesting at Sporovsky and Zvanets (45),

sustainable livestock (beef cattle) grazing at Turov and Pogost meadows (140), and ecotourism at Olmany Mires, Turov Meadow, Servech, Zvanets, Sporovsky, and Nalibokski (300).

Problems that the project sought to address, threats and barriers targeted

The three project components/outcomes were designed to address what had been identified as the three main drivers of degradation of forest and wetland ecosystems:

1. Effectiveness and sustainability of management of forest and wetland ecosystems in globally important protected areas is inadequate with respect to protection of species.
 - The conservation priorities stipulated in the PA management plans are not embedded in forest and wetland management practices in these key protected areas (PAs)
 - For example, mosaic forest planning and management in the habitat of the European bison was needed to maintain its population. A financially sustainable mechanism for creation or restoration of meadows within forests, and carefully designed paths and observation points (for research and tourism purposes) need to become a standard forest management approach to help to sustain the food base of this species that is associated with meadow communities and their productivity in spring and fall.
 - The tourism sector, and local communities engaged in it, lacks appropriate marketing and promotion approaches as well as a revenue-sharing mechanism with the conservation sector.
 - In wetland PAs, the primary cause of the loss of habitat is disruptions in the ground water table. The biodiversity value of open fens and bogs of Belarus was the result of long-term human-nature interaction. Before the 1950s reeds, shrubs and woody vegetation did not emerge as local people cut peatland vegetation by hand for hay. Once large neighboring areas had been drained in the mid-1950s, local farmers got easy access to large neighboring newly dry areas for hay-making and vegetation cutting in undrained areas ceased. Due to lowered ground water tables through drainage, shrubs proliferated resulting in disappearance of unique species of flora and fauna found only on open peatlands. The populations of threatened bird species such as great snipe, curlew and aquatic warbler were badly affected by this process
2. Forest management in biodiversity important areas outside of PAs does not fully meet the requirements of these ecosystems conservation.
 - Despite the fact that over 85% of production forests of Belarus are certified either under the Forest Stewardship Council (FSC) or the European Certification scheme, biodiversity values are not accounted for properly in the management of forests. There are about 150,000 ha of such forests where forest management plans need to be adjusted to take cognizance of the biodiversity values of these forests. But there is a deficit of technologies for effective (from conservation and financial perspective) use of forest and wetland resources in harmony with biodiversity conservation principles. One of the root-causes of this is that information on the distribution of globally important species in forests is missing. In the process of forest use planning, only National Red Data book species (census as of early 1980s) are taken into account. Changes in the distribution ranges of many bird species are not considered; distribution of numerous rare plants is ignored

- Inappropriate management (or complete lack of management) of the groundwater table in drained peatland forests results in degradation of habitat, drying out of peat soil, release of carbon dioxide through soil mineralization, and loss of small rivers. While an inventory of all drainage facilities in peatland forests was conducted, only the condition of the drainage canals and sluices was described, and no account taken of the natural successions on peatland forests, changes in forest productivity. The impact of forest drainage on the state of species was not assessed. Without such analysis it is impossible to decide on the most appropriate peatland forest use regimes.
3. Inadequate state of research and monitoring of globally important biodiversity, and lack of demonstration of the potential of species and habitat management and restoration work on survival of threatened species.
- For several globally important species there is a gap in the monitoring data (population, distribution, and threats) and poor understanding of their habitat requirements. 13 invertebrates and 5 mollusks with EN and VU status were registered in Belarus, including *Dolomedes plantarius*, *Dytiscus latissimus*, *Graphoderus bilineatus*, *Cerambyx cerdo*, *Lycaena helle*, *Lopinga achine*, *Euphydryas maturna*, *Phyllodesma ilicifolia*, *Unio crassus*, *Pseudanodonta complanata*. But up to now there has been no stocktaking of the species: data on their population sizes, habitat requirements, distribution, threats and conservation measures are not available. There is a need to include all globally important species in the GIS-based monitoring network managed by the Academy of Sciences.
 - Belarus has created, by introducing into the wild, a sizeable population of the European bison. Belarus currently has 1,470 individuals (as of January-February 2016) which all originate from just 12 individuals. The overall population size is considered adequate. However, due to cross-breeding the genetic diversity of the population remains low.
 - The Belarus population of the aquatic warbler is 2,900–5,500 singing males, distributed at 15 nesting sites, all of which are located 50-260 km from each other, which significantly impedes the movement of the birds from one group to another. The project would be instrumental in creating new micro populations through re-location of fledglings.

Immediate and development objectives of the project

The formal objective of the project was to introduce a conservation-centered and financially self-sufficient approach to management of forests and wetlands that harbor internationally important biodiversity and are important for climate and land integrity. The objective was to be achieved through three outcomes:

Outcome 1 (*Improved institutional, financial and management sustainability of forest and mire protected areas, which are key areas for conservation of globally threatened species*) was aimed at improving nature conservation legislation and the introduction of new approaches to Protected Area management that promote financial sustainability of conservation measures of globally threatened species, by updating and expanding the existing management plans for five protected areas.

Outcome 2 (*Sustainable management of biodiversity-important forest and wetland ecosystems outside protected areas*) was focused on the identification of biodiversity-important forests outside PAs and ensuring their sustainable management via assigning special protection status to these territories. It was planned to undertake an inventory of biotopes subject to special protection under the Bern Convention

and National Legislation (at least 150,000 ha), to prepare their passports, protection obligations and to transfer them to land users for protection and sustainable use.

Outcome 3 (*Increased experience and knowledge of innovative measures for habitat restoration and elimination of the most significant threats to globally threatened species; monitoring of efficiency of the project's measures*) was designed to advance the state of monitoring and research on globally important species, and demonstrates active habitat management and restoration techniques to conserve globally important species whose populations depend on the state of habitats in Belarus.

The development objectives of the project were designed to contribute to the UNDP Country Programme outcomes 3.1: Solutions developed at national and subnational levels for the sustainable management of natural resources, ecosystem services, chemicals and waste; and 3.2 Legal and regulatory frameworks, policies and institutions able to ensure the conservation and sustainable use of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation, to the UNDP Strategic Plan on “Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded” and to the UNDAF outcome that by 2020, policies have been improved and measures have been effectively implemented to increase energy efficiency and production of renewable energy, protect landscape and biological diversity and reduce the anthropogenic burden on the environment.

Project objectives contribute to several GEF focal area strategies. For Biodiversity Focal Area, the project is consistent with Program 1(Improving Financial Sustainability and Effective Management of the National Ecological Infrastructure). For Sustainable Land Management, the project is consistent with LD-3 (Reduce pressures on natural resources by managing competing land uses in broader landscapes), and specifically Program 4 (Scaling-up sustainable land management through the Landscape Approach). For Climate Change Mitigation the project is consistent with CC 2 (Demonstrate systemic impacts of mitigation options), and specifically Program 4 (Promote conservation and enhancement of carbon stocks in forest, and other land use, and support climate smart agriculture). For Sustainable Forest Management the project is consistent with SFM 1 (Maintained Forest Resources: Reduce the pressures on high conservation value forests by addressing the drivers of deforestation).

Project objectives are aligned with and contribute to national priorities including obligations under international conventions. It directly supports the achievement of Aichi Targets 12, 5 and 15. It is consistent with the National Strategy and Action Plan on Biodiversity, and with the 2009 National Strategy for the Implementation of Ramsar Convention. The project will also help Belarus implement priority actions listed under Belarus’ National Communications to UNFCCC.

Expected Results

Expected results under component/outcome 1 were:

Increased financial self sufficiency of globally important PAs and private sector engagement in Protected Area revenue generation resulting from business plans developed and launched for key biodiversity areas (280,500 ha, home to IUCN threatened European Bison, Greater Spotted Eagle, Aquatic Warbler, etc.),

The effectiveness of management of forest resources increased within the protected habitat of globally threatened European Bison improved over 50,000 ha through introduction of mosaic forest planning, helping to raise productivity of the natural meadows and forests through involvement of local communities.

Financially self-sustainable wetland and woody (shrubs, willow) biomass harvesting and processing program launched over 2,000 ha/y in partnership with private sector at three key PAs improving the status of habitat of over 50% of the global populations of the Aquatic Warbler and Greater Spotted Eagle,

Financial sustainability of key Ramsar sites supported through a community based cranberry picking and processing program at Olmany mires, sustainable livestock management at Turov meadow and community-based eco- and agro-tourism at several sites.

Expected results under component/outcome 2 were:

Changed paradigm of forest management at areas with internationally important biodiversity introduced across 150,000 ha outside PAs: biodiversity-important forests identified and mapped, forest management plans updated with inclusion of biodiversity-conservation requirements; species-focused forest management activities launched (change of logging regimes; change of timing of vehicle and human passage, promotion of mosaic reforestation, etc.); foresters trained in maintaining and enforcing the protection regimes at these sites.

Degradation of peatland forests prevented as a result of: complete up-to-date stocktaking and decision-making mechanism for 250,000 ha of the drained and degrading peatland forests across the country.

Expected results under component/outcome 3 were:

Degraded habitat of Aquatic Warbler, Greater Spotted Eagle, Great Snipe and other Ramsar bird species restored over 1,500 ha within selected Protected Areas through control of the spread of willows and invasive vascular plants, assisted re-vegetation (with native Sedge species), and water table regulation.

The genetic status of Nalibokskaya Puscha micro population of the European Bison improved through a program on the exchange of individuals across micro-populations

Populations of globally threatened Aquatic Warbler supported through placement of fledglings (relocated from neighboring micro-populations) at the restored wetland sites

Population of the globally threatened Greater Spotted Eagle strengthened through artificial nests, regulation of the disturbance factor and advocacy activities with local communities

Up to date research on and monitoring of population status, trends, threats and conservation needs for IUCN threatened species present in Belarus, as well a monitoring of soil and ground water table condition, carbon emissions avoided and carbon sequestered through project interventions.

[Main Stakeholders \(summary list\)](#)

Key stakeholders as per project design included

Government, national level:

The Ministry of Natural Resources and Environmental Protection (MNREP) of Belarus (BelNIC Ecology)

The National Academy of Sciences (Scientific and Practical Center, Scientific and Practical Center – NPC – on Bioresources, Institute of Botany, Scientific and Practical Centre of Livestock Farming, Forest Institute)

The Ministry of Forestry (Belgosles, Forestries)

Government, local level:

Administrations of Protected Areas targeted by project activities (Nalibokski, Zvanets, Sporovsky, Olmany mires, Mid Pripyat, Turov meadow, Servech, and Belovezhskaya Puscha)

Civil Society:

Local communities in/around project sites

Private enterprises (OAO «Turovshchina», «Valeotrans», «Arzhanitsa»)

NGOs APB (BirdLife Belarus) and “Bagna”

Theory of Change

A Theory of Change was not developed for the project. The project’s objectives are primarily in restoring habitat and ecosystem services. Socio economic benefits are a longer term development objective, but specific socio-economic targets to beneficiaries are not detailed as objective. Rather, the project rationale is that economic value of restored ecosystems and their services will primarily constitute the socio economic benefits generated by the project.

The majority of expected results is expressed in areas under protection and sustainable management, hydrological parameters, or related to indicator species population. Project components/outcomes and activities were designed with an understanding of the ecology of the landscapes based on scientific research as well as knowledge of traditional practices of resource management and sustainable use. This approach to project design seems appropriate, rather than a Theory of Change approach, with detailed social and economic development pathways.

4. Findings

4.1. Project Design/Formulation

Analysis of Results Framework: project logic and strategy, indicators

The overall project logic was well defined and justified based on the three main drivers that were identified for the degradation of forest and wetland ecosystem, with the three project components/outcomes designed accordingly to address these drivers. Project design is clear and logical, with outputs designed to contribute to the three outcomes and activities detailed under each output.

The project logic is sound also in terms of building on both in-country and international experiences, applying an approach that targets landscapes both within and outside Protected Areas, and re-introducing measures of sustainable natural resource use based on traditional practices in the country and specifically in the project regions.

The three project components complement each other; they address needs for conducting scientific research and improving monitoring procedures, help develop the legal framework for sustainable use and

conservation of peatlands, and implemented practical measures to restore ecosystems, habitats and target species populations. Importantly, project design foresaw the significance of involving natural resources users.

The rationale of the project is well reflected in the design at overall objective, outcomes, outputs and activities level. However, it could be argued that the choice of indicators and definition of targets in the results framework make the achievements at end of project look less significant. Indicators are not defined on output level, and not directly related to outputs. Rather, a number of indicators is defined based on, for example, expected responses in indicator species population size or nesting success, and number of migratory species individual observed.

While the identified indicators are justified from ecological point of view, the time to achieve the expected changes and defined targets was perhaps underestimated. Targets were set assuming that optimum ecological conditions could be created, such as optimum water levels in flood plain of Pogost, Turov meadows and Zvanets and Sporovsky reserves. Also the severity of climate change impacts, and how fast they would come into effect during the project life, was underestimated, as well as the complexity of processes in the ecosystem and populations as a result of engineering measures, climate change, and unsustainable resource use.

Examples include the decrease/non-recovery of populations of water vole, the main game of Greater Spotted Eagle, after an epizootic because American mink keep their population down; and the increase in white tailed eagle population in the region, with an impact on Great Spotted Eagle populations through eating chicks of the species. These interactions were not, and probably could not be foreseen, yet had significant impacts on certain indicators. Therefore, achieving the targets for these ecological indicators was very challenging, and in some cases beyond the control of the project. While outcomes and expected results on output level have been achieved, the quantitative targets of the chosen indicators could not be realized as the complex processes at work were not under the control of the project.

Revisions to the results framework were considered not necessary by Inception Workshop participants; the results framework as per project document was adopted for project implementation.

Assumptions and Risks

The risk analysis undertaken during project preparation phase identified a number of risks, rated as low or medium, including one at project objective level and at four at outcome level. They included, at project objective level “The project is too ambitious for the amount of resources available” (M), for Outcome 1 “Use of machinery during restoration and management of habitat might damage flora and fauna of wetlands (soil compaction, ditches formation, etc.)” (L), and “Demand and price dynamics in wetland biomass (pellets) might influence project activities adversely”(M), for Outcome 2 “Climate change leads to catastrophic impacts on high conservation value forests and peatlands” (M), and for Outcome 3 “Innovative biotechnical measures such as “stepping stones” of threatened species habitats, translocation, and artificial nests cannot be easily applied in Belarus” (M).

The risk analysis in the project document describes detailed mitigation measures for each risk; for the objective level risk the process for re- assessing risk and decision making for mitigation is described. The project team reviewed the risk analysis during the inception phase and found that no changes in risk level assessment and mitigation approaches were required. The risk analysis as per project document was adopted for project implementation.

Lessons from other Relevant Projects (e.g. same focal area) incorporated into Project Design

Several projects with objectives of conservation and sustainable use of healthy peatlands have preceded this project, including the medium sized project “Re-naturalization and Sustainable Management of Peatlands to Combat Land Degradation, Ensure Conservation of Globally Valuable Biodiversity, and Mitigate Climate Change (GEF ID 2057); “Catalyzing Sustainability of the Wetland Protected Areas System in Belarusian Polesie through Increased Management Efficiency and Realigned Land Use Practices” (GEF ID 2104), “Landscape Approach to Management of Peatlands Aiming at Multiple Ecological Benefits” (GEF ID 4468), and “Conservation and sustainable management of peatlands in Belarus to minimize carbon emissions and help ecosystems to adapt to climate change, 2014-2017 funded by EU”.

The previous projects had created a foundation of knowledge, capacity and lessons learnt onto which this project could built with its design of activities and implementation arrangements. Local and national capacities for conservation of peatlands, namely the technical capacity of the national laboratory of peatland carbon of the National Academy of Sciences, capacities for monitoring GHG emission reductions and biodiversity as well as capacities of hydrotechnical companies to maintain the hydrological regime on disturbed peatlands had been enhanced. Policies for and standards on re-naturalization of degraded non-forested peatlands had been developed. Awareness of the key issues of peatland conservation among government staff, technical experts, and policy makers had been raised. Partnerships between researchers, peat extraction companies and Government had been piloted.

Specific lessons incorporated into the design of this project were:

1. “In order to secure the multiple benefits from peatlands, passive protection is insufficient and there is a need for accompanying active habitat management and conservation. The latter, in turn, requires financing that can be sustained”.

Component 1 focusses on securing financial sustainability for active habitat management measures in protected areas, and Outcome 3 also promotes active habitat management through targeted measures to remove threats to insufficiently studied globally threatened species.

2. “Conservation efforts need to be directed to areas that harbor globally significant biodiversity but lie outside formal PAs”.

Outcome 2 of the project is designed to meet this need.

3. “Resources need to be dedicated to regular monitoring of the biodiversity, water tables, and soil and carbon benefits of the project so that measures can be appropriately adapted”

Outcome 3, namely Output 3.4, addresses this.

Thanks to these lessons, national stakeholders designed the project to focus on

- a subset of areas that harbor globally significant biodiversity that encompass peatland and non-peatland areas, as well as areas within and outside PAs.
- forests and wetlands that harbor internationally important biodiversity and are important for climate and land integrity
- measures that are effective from a conservation perspective and sustainable from a financial perspective.

Planned Stakeholder Participation

Project design clearly details the roles of stakeholders in project implementation and oversight:

The Ministry of Natural Resources and Environmental Protection (MNREP) of Belarus, BelNIC Ecology

- Acts as national implementing agency for the project.
- Heads the cross-ministerial Project Board for the project.
- Ensures regular monitoring of project progress and, with UNDP, takes measures to address problems in implementation.
- Oversees the implementation of the conservation activities related to conservation and sustainable management of European bison populations.
- Takes the lead on project activities aimed at ensuring the financial sustainability of protected areas.

The National Academy of Sciences (Scientific and Practical Center – NPC – on Bioresources; Institute of Botany); Scientific and Practical Centre of Livestock Farming; Forest Institute)

- Provides its substantial technical expertise and resources for the scientific assessments needed to implement project activities under all three components.
- Provides in-kind co-financing in the form of laboratory, equipment, and research facilities

The Ministry of Forestry (Belgosles, Forestries)

- Takes the lead in the identification and designation of High Conservation Value Forests (HCVF)
- Takes the lead on conducting the inventory of peatland forests
- Ensures sustainability and replication of peatland forest restoration and sustainable management activities

Administrations of PAs targeted by project activities (Nalibokski, Zvanets, Sporovsky, Olmany mires, Mid Pripyat, Turov meadow, Servech, and Belovezhskaya Puscha)

- Act as key partners for implementation of financial mechanisms in Component I.
- Ensure coordination with private sector and local communities
- Participate in the habitat and species management activities for aquatic warbler, European bison and greater spotted eagle under Component III.

Local communities

- Actively engage in the development of income-generation activities at protected areas that are a focus of the project, as well as at the forested peatland pilot sites that are to be restored, withdrawn from logging, and designated for sustainable use

Private sector (JSC “Turovshchina”, “Valeotrans”, “Arzhanitsa”, Biomass processing and pellet production industries, and tour operators)

- Implementing the financial mechanisms under Component I

NGOs APB (BirdLife Belarus) and “Bagna”

- Creating a positive public image of the project
- Participation in bird counts in the project areas.

Linkages between Project and other Interventions within the Sector

The project was designed to be complementary to several other projects. A UNDP/GEF project on sustainable management peatlands built the important policy and regulatory basis for peatlands management and expanded the PA network into peatlands.

A World Bank Forest Sector Loan and a GEF-6 project on forestry in the context of climate change, specifically focused on forest structure improvement, forest fire management, forest management information systems, improving effectiveness of silvicultural practices, and managing and embedding conservation values into forest management in the face of climate change.

Project design also promotes active synergies with other interventions such as the project by the Government of Lithuania under the EU Life program aiming at managing the habitat of the aquatic warbler. Activities in Lithuania to improve nesting conditions there, increases the chances for the stabilization of this species. Likewise, the project produces synergy with similar aquatic warbler nesting site management initiatives financed by EU Life in Germany and Poland.

4.2 Project Implementation

Adaptive Management

The project practiced adaptive management in several respects, responding to both social and political situations, such as the COVID-19 pandemic and the overall political situation in the country, as well as to unforeseen impacts of climate change and ecological processes effecting project outcomes.

Project communications and advocacy were reviewed and adapted to the COVID-19 pandemic restrictions and to the ongoing political crisis in the country. According to UNDP guidance, project public awareness and communications activities through state media and with the non-government sector were scaled back so as to avoid the utilization of project achievements for political purposes. Changes in project communications included i) a shift from physical events to online communication and promotion; ii) less engagement with the state media (no large-scale media tours were planned); iii) more focus on knowledge-based communication products, such as blogs and thematic articles; iv) a shift from descriptive, event-based communication and news presentation to more analytical content with deeper insight into the impact of the project’s interventions; v) field visits were modified from report-centered to discussion-oriented allowing communications to be more analytical and strategic.

The project faced unforeseen challenges as climate change impacts were more severe than anticipated and complex ecological processes had effects on the population size, nesting success and seasonal presence of indicator species. This included lack of/reduced winter snow cover and more severe droughts, population increases in bird species preying on (the chicks of) indicator species and decline in species (water vole) that are key food sources of indicator species.

For all the above impacts, the project developed engineering solutions and investment plans or budget estimates and has begun to actively seek funding to implement the solutions after project end. These activities, responses to unforeseen impacts, of course were not planned in the project document, however thanks to the expertise of project staff and implementing partners, response measures could be formulated.

Examples of adaptive responses to emerging challenges included: developing engineering solutions to maintain optimum water levels and working with local authorities to prepare these works; organizing a seminar with leading wetland experts from across Europe to discuss measures for Zvanets and decide on building a filtration system to enhance water quality; introducing controlled burning as a new approach;; additional mowing support of the Sporovsky reserve in 2021.

Other adaptive management practices included, for example, the project's intervention to receive the approval of the park's administration to carry out removal of bushes at National Park "Belovezhskaya Pushcha". The park authority had taken the position to leave Dikoye bog without human interference. However, due to the evident degradation of the swamp ecosystem (continuous overgrowing with bushes and extinction of a number of species), the project took steps to convince the national park to include the required works in their 2022 work plan.

Actual Stakeholder Participation and Partnership Arrangements

During the project design phase, stakeholders were consulted and actively involved; larger stakeholder meetings took place in Minsk (May 12, 2016 with 25 participants) and Stolin (July 7/8, 2016 with 32 participants) and a further 16 local workshops were organized. Participants included heads and staff of the pilot area reserves and representatives of local governments. The meetings determined the roles and responsibilities of stakeholders in project implementation, an overview of which was included in the ProDoc (and as reflected in chapter "Planned Stakeholder Participation" above). Formal NIM agreements on joint implementation of project activities with financial support from the project were concluded with 7 implementing partners, including Sporovski reserve (2018-2021), Zvanets reserve (2018-2020), Nalibokski reserve (2018-2020), National Center on Bioresources (2018-2022), Institute of Experimental Botany (2018-2021), National Center on animal husbandry (2018-2020), and the Belarussian Scientific Center "Ecology" (2018-2019).

Representation of all key implementing partners in the project board was conducive to maintain a high degree of stakeholder collaboration. As evidenced in the record of Minutes of Meeting of PB, which met regularly (in person or online during the pandemic) and by the achieved results, all national stakeholders fully supported the project throughout implementation and fulfilled their agreed roles and responsibilities. The placement of the PMU at the MNREP was a further factor to promote good project ownership by national stakeholders.

Though not mentioned in the Project Document as a stakeholder, the project sought to involve the Ministry of Agriculture and Food in the implementation of measures for the preparation and implementation of technology for the use of floodplain meadows for growing cattle. However, this ministry did not participate in activity implementation, or in board activities; they refused to participate in the project according to a letter to the Project Manager.

The project had Memoranda of Understanding with private entity JSC Turovschina and NGO "Akhova ptushak Batskaushchyny" (BirdLife Belarus), on to use meadows of the Srednaya Pripyat reserve for grazing and mowing, and for the management of a section of Turov PA (147 ha), public awareness and bird population survey activities, respectively.

JSC Turovschina did not implement the activities as agreed under the MoU and prescribed in the Project Document and did not conduct any measures in 2020/21; the project has no effective mechanism to enforce the fulfillment of commitments under an MoU. The non-compliance of JSC Turovschina was in part due to the fact that the director of the organization changed three times over the implementation period; it impacted the achievement towards the target of the indicator "Area of open, sustainably used meadows at Turov and Pogost Meadows" under Outcome 1.

Civil society participation was compromised due to the liquidation of NGOs in March 2022. Management of Turov PA by NGO APB (BirdLife Belarus) ceased upon liquidation of the organization, and resulted in a significant decline of the METT score for Turov PA; project support had enabled the PA to reach a METT score of 88, thereby achieving the planned target; upon liquidation of the NGO as managing body, the METT score was assessed as 60.

It is noteworthy that the project played a significant role in international partnerships of scientific collaboration and cross-border conservation initiatives of key species (bison, aquatic warbler among others), and spearheaded the recognized role of the country's experts as regional leaders in peatland conservation and restoration. While bison transfers could not be put into practice due to border closing, the project established international collaboration on genetic management for European bison.

The project team worked in partnership with expert teams in Lithuania, Germany and Poland under the umbrella of EU-Life project "Conservation of Aquatic Warbler in Belarus". A number of activities were implemented jointly and the EU Life project was represented as an observer on the Steering Committee of the project. The International Study Group "Aquatic warbler Conservation Team" (includes more than 30 representatives from EU and Eastern Europe countries) recognized that a breakthrough in Aquatic warbler conservation had been achieved through the translocation methodology developed by the project.

Other science/conservation partnership activities included joint efforts with an international group of peatland ecologists, most of them members of the International Mire Conservation Group IMCG www.imcg.net. Meetings to evaluate and discuss the current situation and most promising management options for Zvanets took place from 26-28 May 2018 on invitation of the project team of LIFE MagniDucatusAcrola.

Project Finance and Co-finance

Financing amounts as per Project Document were GEF Grant USD 4,263,561, Co-financing USD 14,100,000 comprised of Ministry of Environment and Natural Resources (Grant USD 9,000,000, in-kind USD 100,000), Ministry of Forestry (Grant USD 2,000,000), National Academy of Sciences (Grant USD 300,000), GEF Agency UNDP (Grant USD 1,500,000), Other/Life AW (Grant USD 1,000,000).

Financing amounts as of August 2022 were: GEF Grant USD 4,263,561, Co-financing USD 21,170,337 (Government of Republic of Belarus), Co-financing USD 35,000 (UNDP) and PPG USD 120,000. At the time, the project had fully disbursed TRAC resources from UNDP (35,000 USD), bringing the co-finance amount by “other” (than government) to USD 2, 227, 205.

As per the most recent PIR (2021), delivery rate against Project Document was at 86.25 % (as of June 30, 2021). The cumulative delivery against the annual delivery target was 91.5 %. Cumulative disbursement was USD 3,677,221.

As of August 8, 2022 (at time of TE) project expenditures were at USD 4,113,573.13 without commitments for 2022, and at USD 4,166,726.84 with commitments. This equals delivery rates of approx. 96.5 % and 98 %, respectively.

Based on the documentation provided to the TE team, UNDP project management demonstrated due diligence in the management of funds.

Co-Financing

The project provided the following details on co-financing by implementing partners:

Sources of Co-financing	Name of Co-financier	Type of Co-financing	MTE	2020	2021	Available Amount at TE Stage (US\$)
	SNPO SPC NAS of Belarus on bioresources	In-kind	248 182	131 254	165 380	544,816
	Institute of Experimental Botany of the National Academy of Sciences of Belarus	In-kind	289427	105 483	180,160	575,070
Governmental	Ministry of Forestry	In-kind	12,400,000	3,838,900	4,328,400	20,567,300

Governmental	Ministry of Natural Resources and Environmental Protection of the Republic of Belarus	In-kind	3,053,040	1,104,166	1,517,200	5,574,406
	GPU Republican landscape reserve Naliboksky	In-kind	8,388	9,200	5,600	23,188
	UNDP	In-kind		1,465,000		1,465,000
	UNDP	In cash		35 000		35 000
	JSC Turovschina	In-kind		1,050,000		0
				14,230,000		28,784,780

Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*)

The project document prescribes M&E procedures, key events and reporting requirements, namely an inception workshop, quarterly reporting requirements to log risks, issues and lessons learnt, annual reporting formats (Annual Project Review/ Project Implementation Reports, APR/PIR) to monitor progress both for UNDP and GEF, regular site visits by UNDP CO, MTR and TE and the preparation of the Project Terminal Report (PTR).

The Inception Workshop is emphasized as a key event to build ownership for project results by agreeing on roles, functions, and responsibilities within the project's decision-making structures and M&E system, and to jointly develop the annual work plan for the first project year.

Project design includes a Monitoring and Evaluation plan detailing M&E activities, responsible parties, budget and time frame. The plan reflects GEF and UNDP requirements.

Project design defined Outcomes (initially referred to as components) 1 – 3, and Outputs under each Outcome. However, output level indicators were not formulated. Instead, more detailed indicators were developed related to population size of indicator species, GHG emissions, water levels and quality, and other ecological parameters. As has been mentioned above, the choice of these indicators made it unrealistic to achieve all targets. Climate change impacts were underestimated, and the complex population dynamics and the many influencing factors could not be foreseen. Therefore, a number of quantitative targets have not been achieved, although the results in landscape restoration and habitat conservation were achieved by the project.

The results framework at design includes few indicators to capture broader development impacts such as income generation. These indicators include “Number of business organizations involved in sustainable habitat management at target PAs (Zvanets, Sporovsky, Mid-Pripyat, Turov Meadows) that is profitable for them”, and “Number of organized tourists” under Outcome 1.

While the descriptions of pilot sites refer to “Benefits for local people” and estimates were provided on increase in income generation for example for “Average increase in the income from cranberry gathering per one family will be more than 50%” at pilot site 1 (PORECHSKI MOKH), these were not reflected in the results framework, and have not been reported on in PIRs.

The project rationale is grounded in science, and project design includes detailed actions plans including protocols on how field measurements/monitoring will be undertaken, based on established procedures by implementing partners and other state of the art methodologies such as GHG emissions calculations, population monitoring and measurements of other ecological changes as a result of project activities.

All M&E activities have been executed as per design throughout project implementation; all reports and documents required according to the M&E plan were included in the documentation made available to the TE by the PMU. The Project Board met ten times throughout the project (up to the time of the TE), if required online or as e-mail surveys during the pandemic. The most up-to date document was a draft PIR for 2022 which covered achievements towards objectives as of August 2022. The documentation also included risk, issues, and lessons learned log for the ATLAS system.

The rating for M&E at entry, during implementation and overall is shown in the table to the right. 5

Monitoring & Evaluation (M&E)	Rating
M&E design at entry	Moderately Satisfactory (MS)
M&E Plan Implementation	Satisfactory (S)
Overall Quality of M&E	Satisfactory (S)

UNDP implementation/oversight (*), Implementing Partner execution (*) and overall assessment of implementation/oversight and execution (*)

Based on all documentation reviewed with regard to procedures, standards, safeguards, and key events pertaining for project initiation, design, implementation/oversight, UNDP support is assessed to be of high standard. This notion was confirmed in meetings during the TE with project team and implementing partners.

In depth discussions with PMU members revealed that project manager and scientific coordinator had very detailed knowledge not only of technical/scientific issues but also of local context of stakeholders and particular challenges in each project site as an excellent basis for decision making and local

5 Rating scales in Annex 1

collaboration; it emanated from interviews with stakeholders that the PMU enjoyed a high level of recognition for their expertise and experience; all these combined, promoted close collaboration with stakeholders and other partners in general. For an extended field visit, a “Back to Office Report” has been prepared by the project manager.

The fact that in 2020, despite the pandemic and related restrictions, nearly all tasks planned for the year in the annual work plan were completed, speaks to the high standard of implementation.

UNDP CO support extended beyond oversight functions as evidenced in PB minutes of meeting; UNDP CO staff undertook field visits and participated in activities such as the construction of cascade dams to block the drainage channel on the Zhada bog in May 2021. UNDP CO website was also used as a platform to educate the public about the project and the significance of its innovations for the sustainable management of peatlands, for climate change mitigation, and for the contribution to maintaining and restoring the economic value of ecosystems.

Implementation by the Implementing Partner (MNREP)

The project is implemented by a good technical team of professionals supported by short-term experts bringing together a broad range of skills and knowledge in conservation of forests and wetlands and peatland management. Additionally, the fact that the PMU is based at the Ministry of Natural Resources and Environmental Protection (MNREP) is also an incentive for developing a good national ownership of the project and its achievements. One particular positive characteristic of these management arrangements is the functioning of the PB.

Project implementation benefited from a strong partnership with key government entities, all represented in the PB, particularly MNREP, Ministry of Forestry, National Academy of Sciences, and the Administration of Reserves. The PB met regularly to evaluate progress by the project, discuss challenges and endorse annual work plans. Key decisions on implementation were made collaboratively by the members of the PB; as a result, well-coordinated coordination and good ownership by national Partners contribute to successful implementation of activities. The record of Detailed Annual Work document a high standard of planning by all national implementing partners. PIRs report annual implementations in accordance with the project document and the corresponding approved annual work plans, and PB meeting minutes document consensus on annual approval of achievement of project results. Ratings for implementation/oversight and execution are provided in the table below.

UNDP Implementation/Oversight & Executing Partner	Rating
Quality of UNDP Implementation/Oversight	Highly Satisfactory
Quality of Implementing Partner Execution	Highly Satisfactory
Overall quality of Implementation/Oversight and Execution	Highly Satisfactory

Risk Management

As referred to in Chapter 4.1., the initial project risk analysis was reflected as table in the Project Document; it identified five risks and mitigation measures at project objective and outcome levels including a) 1) “The project is too ambitious for the amount of resources available”, 2) “Use of machinery during restoration and management of habitat might damage flora and fauna of wetlands (soil compaction, ditches formation, etc.)”, 3) “Demand and price dynamics in wetland biomass (pellets) might influence project activities adversely”, and two environmental risks: 4) Climate change leads to catastrophic impacts on high conservation value forests and peatlands”, 5) “Innovative biotechnical measures such as “stepping stones” of threatened species habitats, translocation, and artificial nests cannot be easily applied in Belarus”. No changes to the risk analysis were found necessary during the inception phase. None of the risks was rated as high. Risks were rated as medium and low.

Since 2018 risk logs documented regular assessment and mitigation of risks. The project implemented mitigation measures, namely by measures or developing engineering solutions for optimal hydrological conditions and by maintaining effective stakeholder cooperation. The planned mitigation approach to rely on climate change data prepared for the country’s communications to UNFCCC turned out not to be sufficient as climate change was faster and more severe than anticipated (lack of snow cover, droughts during project implementation). Also, the measures for sustainable use of biomass could not be implemented as borders closed due to pandemic and political situation. Risks 4 and 5 were found to be reduced in 2019; in 2020, also Risk 3 was found to be reduced.

In the Risk Register documents (available from 2020 onwards) risks 1, 3 and 4 were re-phrased as “Incomplete achievement of all indicators of the project logical matrix”, “Management of the project target ecosystems is not done in an appropriate manner” and “Economic effectiveness of sustainable lowland bogs ecosystem management is not proved”, respectively.

A Social and Environmental Screening Procedure was undertaken at early project design stage and a document signed in August 2016. In the checklist for potential social and environmental risks, all points were checked as NO, except that “project activities are within or adjacent to critical habitats and environmentally sensitive areas”. The SESP document explains that this is obviously not a risk per se, since the project objectives and strategies are in habitat and biodiversity conservation. The overall risk categorization of the project was “Low Risk”.

All PIRs (2019 – 2021) state that in the respective implementation periods no new “social and/or environmental risks (had) been identified”.

In 2020, in line with the national legal framework of Belarus, an Environmental Impact Assessment was prepared for works on hydrological rehabilitation of disturbed peatlands in Zhada reserve. The EIA assessed proposed project works as positive, bearing no negative environmental/biodiversity impact, and the EIA report was duly approved by the respective state body.

In 2021, reported risks due to COVID-19 included delays in implementation of some planned activities such as media tours, educational activities, activities related to ecotourism. As a mitigation measure, activity schedules had to be adjusted considering the epidemiological situation in the country.

4.3 Project Results

Progress towards Objective and Expected Outcomes (*)

Project Objective

- The project objective has been achieved. While financial sustainability to maintain all practices demonstrated at the pilot sites is not secured yet, nevertheless the project did introduce options for conservation-centered and financially self-sufficient approaches to management of forests and wetlands.
- For biodiversity, sustainable forest management, land degradation and climate change mitigation targets have been exceeded; for protected area management, the target was achieved.

Outcome 1

- Key achievements under Outcome 1 include the creation of a total of 430 hectares of highly productive meadows as natural forage habitat for bison maintained by mowing and grazing bison and tarpan horses; mowing and bush removal on over 800 ha of open sedge mire in Sporovsky and Zvanets reserves.
- Not all quantitative targets under Outcome 1 are fully achieved. Factors impacting achievements towards targets included unforeseen severe climate change impacts (drought, lack of snow cover and therefore of spring flooding), the political situation and liquidation of NGOs as implementing partners, lack of activity implementation/non-compliance by private enterprise, unsustainable use of water resources upstream of project sites, and COVID-19 pandemic.
- The project has developed engineering solutions with investment plans/estimates to address remaining barriers to achieve targets and sustain results (to maintain an optimal spring water level in the Yaselda River; to achieve further reduction of water salinity at Zvanets reserve; to ensure the optimization of the Sporovsky Reserve's hydro regime, in order to ensure the sustainability of the ecosystem and facilitate sustainability of the Aquatic warbler population;

Outcome 2

- Key achievements under Outcome 2 include the transfer of 182,222 ha (against target of 150,000 ha) of forest lands with rare biotopes into protection; 16 forestries (against target of 10) envisage forestry management plans in line with sustainable use of protected biotopes; development of the sectoral national program on sustainable use of hydroforestry reclamation systems, and agreement with over 104 forestries on the use of forest hydro ameliorative systems on 474,700 ha.
- Outcome 2 has been achieved, and exceeded with regard to numbers of revised management plans for forestries and areas with future use of forest hydro amelioration systems.

- The project developed the sectoral national program on sustainable use of hydroforestry reclamation systems, which was passed to the Ministry of Forestry for consideration and adoption as legal sectoral act. Capacity building included training of foresters identification of rare and typical biotopes during forest inventory and subsequent sustainable use.

Outcome 3

- Outcome 3 was largely achieved. Some targets for indicators species could not be fully achieved when populations were impacted by decline in food sources or growth of predator species, and international bison transfers were not possible due to pandemic and political situation.
- Key achievements under Outcome 3 include the development of National Action Plans for the conservation of 17 species and their submission for approval to the Ministry of Environment; and issuance of 9 genetic passports for the Nalibokski micro population of the European bison.

Progress towards project objectives has been documented in the table below. It details key activities, milestones and end of project status as a basis to assess each indicator and each outcome. As explained above, the choice of indicators and underestimated speed and severity of climate change resulted in some under achievements of quantitative targets, while the expected project results and outputs have been achieved.

Project Objective: To introduce a conservation-centered and financially self-sufficient approach to management of forests and wetlands that harbor internationally important biodiversity and are important for climate and land integrity.	
Biodiversity	
Indicator 1	Funding gap for management of targeted globally significant PAs of Nalibokski, Sporovsky, Zvanets, Mid-Pripyat (Pogost meadow), Turov Lug, and Olmany Mires
Baseline	Annual financing gap for optimal management scenario (operations): USD 135,506
End of Project Target	Financing gap reduced by half
End of Project-Status	In 2020, project pilot reserves (Nalibokski and Sporovski) generated income of approximately USD 218,600 to be used for reserve management. Reserve's income exceeded funding gap against the baseline value of 135,506 USD. (Source: annual reports of the two pilot reserves' to the Tax Office).
Indicator Assessment	Target exceeded (by approx. three fold/320 %) by 2020
Protected Area Management	
Indicator 2	Protected area management effectiveness score -- METT applied at Nalibokski, Sporovsky, Zvanets, Mid-Pripyat (Pogost meadow), Turov Lug, Olmany Mires, Dikoe and Servech

Baselines and End of Project Targets	PA	B/L METT	Target METT	2020 METT	End of Project METT
	Nalibokski	50	85	75	87
	Zvanets	49	87	75	89
	Sporovsky	53	87	79	89
	Olmany	43	79	66	78
	Servech	24	73	47	72
	Turov	37	84	66	88/60
	<p>METT scores increased due to development and update of management plans, improving financial and institutional capacities, and implementation of PA management plans activities.</p> <p>PAs capacities in scientific research and monitoring of ecosystems improved significantly due to additional financing, capacity building, and acquisition of equipment.</p> <p>The reserve "Turov Meadow" until March 2022 was managed by NGO “Ahova ptushak Batskaushchiny” (BirdLife Belarus) and during that time the METT score reached 88. However, due to the liquidation of the BirdLife Belarus NGO under a court order (March 2022), the management effectiveness of the reserve has significantly decreased (from 88 to 60).</p>				
Indicator Assessment	Target achieved in March 2022. Sustainability for Turov Reserve in question.				
Sustainable Forest Management					
Indicator 3	Area of high conservation value forest identified and maintained				
Baseline	50,000 ha				
End of Project Target	200,000 ha				
End of Project Status	<p>By 2021, 179,222.1 ha of forest lands with rare biotopes had been identified in 41 forestries.</p> <p>Passports for the protection of 24,700.0 ha of rare biotopes outside protected areas were identified and agreed with the respective forestries.</p> <p>By August 2022, 229,222 ha of rare biotopes had been identified and were being maintained on the territory of 43 forestries, including 65,381 ha in the Minsk region, 72,198 ha in the Gomel region, 32,456 ha in the Mogilev region, 12,567 ha in the Grodno region, 16,046 ha in the Brest region, and 30,574 ha in the Vitebsk region.</p>				
Indicator Assessment	Target exceeded – by 14 %				
Land Degradation					
Indicator 4	Application of INRM practices in wider landscapes				
Baseline	0				
End of Project Target	12,456 ha (5 forested peatland pilots)				
End of Project Status	By 2021, engineering projects on re-watering were implemented on five (5) project forested peatlands (Berezovik - 4567 ha, Verechskoye – 773,5 ha,				

	<p>Ostrovo – 854 ha, Dokudovskoye – 1020 ha, Zhada – 5382 ha), covering a total of 12,596 hectares.</p> <p>By August 2022, 6 rewetted peatlands covered a total of 13,519 hectares, including Berezovik (4567 ha), Verechskoye (759 ha), Ostrovo (847 ha), Dokudovskoye (1020 ha), Zhada (4521 ha), Servech (1805 ha).</p> <p>Draft law on peatland conservation and use, prepared by the project, was officially approved on December 27, 2019. This law is the first in Europe to establish a legal framework for peatland protection and sustainable use of their resources.</p>
Indicator Assessment	Target achieved/exceeded – by 9 %
Climate Change Mitigation	
Indicator 5	Area under low GHG management practices with monitoring of low GHG impact undertaken
Baseline	0
End of Project Target	415,385 ha ⁶
End of Project Status	<p>By 2021, measures completed by the project are estimated to reduce greenhouse gas emissions on 656,082 hectares, including:</p> <ul style="list-style-type: none"> • 179,222.1 ha of forest lands with rare biotopes under sustainable management of forest resources; • 474.700 ha under planning changes in forest reclamation approaches; • 1020 ha restored open peatlands (Dokudovskoe); • 240 ha flood plain meadows (Turov meadow, Pogost meadow); • 2400 hectares of biomass reproduction in swamps to replace fossil fuels. <p>By August 2022, measures completed by the project are estimated to reduce greenhouse gas emissions on 720,954 hectares, including:</p> <ul style="list-style-type: none"> • 229,222 ha of forest lands with rare biotopes under sustainable management of forest resources; • 474,700 ha under planning changes in forest reclamation approaches; • 13,519 ha rewetted peatlands; • 240 ha flood plain meadows (Turov meadow, Pogost meadow); • 3,273 hectares were mowed for sustainable management
Indicator Assessment	Target exceeded (by approx. 75 %)
Assessment of Achieving Objective	Objective achieved, and exceeded for targets on Climate Change Mitigation, Sustainable Forest Management, Land Degradation and Biodiversity.

Outcome 1: Improved financial sustainability and management effectiveness of protected forest and wetland biotopes harboring globally important biodiversity

⁶ This includes: 150,000 ha of HCVF, 260,000 ha of forested peatlands, 1,025 ha of open peatland, 560 ha improved grassland management, 3,800 ha where biomass production replaces fossil fuels.

<p>Output 1.1: Improvement of nature conservation legislation aimed at conservation of globally threatened species and their habitats, as well as of the system of registration of nature protection areas</p> <p>Output 1.2: Improved habitat conditions for the European bison micro population in the Nalibokski Reserve through creation of mosaic meadow grounds among dense forests</p> <p>Output 1.3: Profitable use of cranberry reserves as an effective way of mire ecosystem conservation.</p> <p>Output 1.4: Financially self-sustaining wetland biomass harvesting and processing program launched at two PAs (Sporovsky and Zvanets) in partnership with private sector</p> <p>Output 1.5: Improved financial sustainability of measures for conservation of floodplain meadows (key habitats of globally threatened species) through introduction of technology of sustainable use of meadows for mowing and grazing and through development of ecological tourism</p> <p>Output 1.6: Ecological tourism developed at key protected areas, resulting in improved financial sustainability of protected areas and raised awareness about importance of globally biodiversity conservation</p>	
Indicator 6	Number of business organizations involved in sustainable habitat management at target PAs (Zvanets, Sporovsky, Mid-Pripyat, Turov Meadows) that is profitable for them
Baseline	No business organizations involved in management of target PAs
End of Project Target	At least one business organization profitably involved at each target PA
End of Project Status	Two (2) business organization involved in sustainable habitat management at two (2) target PAs (Mid-Pripyat and "Servech reserves"). Agricultural JSC "Turovschina" to use meadows of the Srednaya Pripyat reserve for grazing and mowing according to the signed memorandum. Arzhanitsa enterprise organizes cranberry harvesting at the "Servech" reserve.
Indicator Assessment	Target achieved
Indicator 7	Representation of women in sustainable use activities associated with business plans developed under Outcome 1
Baseline	0 %
End of Project Target	50 %
End of Project Status	<p>By 2020, representation of women in the project's target area management activities amounted to 47% (38 out of 81). Of the total number of experts hired by the project in 2020-2021, 54% were women (8 out of 15).</p> <p>By 2021, in 2021 representation of women in the project's target area management activities amounted to 44% (41 out of 92). Of the total number of experts hired by the project in 2021-2022, 25% were women (3 out of 12).</p>
Indicator Assessment	Substantial progress (88 %) towards target achieved
Indicator 8	Area of natural, highly productive foraging grounds within the living territory of the European bison's micro population in the Nalibokski Reserve (50,000 ha)
Baseline	Not more than 100 ha
End of Project Target	More than 300 ha
End of Project Status	By 2021, a total of 430 hectares of meadows in Nalibokski Reserve, which are highly productive natural forage habitats for the bison, have been created and maintained by mowing and grazing bison and tarpan horses.
Indicator Assessment	Target achieved

Indicator 9	Spatial distribution of bison throughout the micro population's living area
Baseline	During late autumn and early spring bison feed mainly on adjacent agricultural lands
End of Project Target	Bison forage in this area (mosaic meadows) during the most important period of the year (late autumn, early spring)
End of Project Status	<p>By 2020, 50% of bison of micro population (about 50 individuals) were foraging in the restored mosaic meadows during late autumn and winter. In early spring, bison were still feeding on adjacent agricultural fields as the formation of highly productive meadows in Belarus takes 2-3 years.</p> <p>It was expected that meadows created by the project in 2018-2019 would become productive in 2020-2021.</p> <p>Due to improved productivity of natural forage habitats during the project implementation, the number of the Nalibokskaya bison population increased by 44.6% (from 83 stags in 2017 to 120 in 2021).</p> <p>By 2021, the proportion of bison that visit winter crops on agricultural lands decreased by 20% (from 70.5% in 2017 to 50.8% in 2021).</p>
Indicator Assessment	Significant progress toward target. Approx. 50 % of bison micro population graze winter crops still. Conflicts between farmers and conservationists/reserve reduced.
Indicator 10	Area of open sedge mires where sustainable resource use and vegetation management is practiced
Baseline	Sporovsky 500 ha Zvanets 100 ha
End of Project Target	Sporovsky 3,000 ha Zvanets 4,500 ha
End of Project Status	<p>Sporovsky:</p> <p>Between 2018 and 2022, grass mowing and shrub harvesting were conducted on a total of 3,273 hectares. (Grass mowing and shrub removal were conducted on 2,588 hectares by 2020, and on 803 hectares during 2021/22).</p> <p>Zvanets:</p> <p>By 2020, grass mowing and shrubbery removal (including controlled burning) were conducted on 8090 ha.</p>
Indicator Assessment	Target exceeded – by 7 %
Indicator 11	Dynamics of water level throughout the year
Baseline	Unstable water level (30-50 cm above or 30 cm below ground level) during May-July Water mineralization between 300 and 450 mg/l
End of Project Target	Optimal water level – 5-20 cm above ground level during May-July Water mineralization between 50 and 300 mg/l
End of Project Status	<p>Water levels Sporovsky:</p> <ul style="list-style-type: none"> By 2020, water level was 5-20 cm below ground due to improper exploitation of water resources at the fish farm and reservoir (located higher on the Yaselda River).

	<ul style="list-style-type: none"> • 2021/22 – water level remained sub-optimal (5-20 cm below ground) due to low snow coverage in winter 2021 and improper exploitation of water resources at the fish farm and reservoir (located higher on the Yaselda River). • To maintain an optimal spring water level in the Yaselda River, the project developed engineering solutions and prepared engineering design estimates. <p>Water levels Zvanets:</p> <ul style="list-style-type: none"> • Due to the active water regulation measures water levels during 2021-2022 have been maintained close to optimal water level of 5-20 cm above ground in May-June despite climate induced changes in the Polesie region. <p>Water levels Servech fens:</p> <ul style="list-style-type: none"> • The water level in the Servech fens fluctuated greatly in different years from very low in 2020, to very high in 2021. • In 2020, water levels in Servech fens were optimal thanks to the construction of an overflow facility on the Servech River. • Measures implemented in 2021/22 (construction of an overflow facility on the Servech River in 2020 and cleaning of the river bed using a dredger in 2022) will ensure stabilization of water levels in different years in Servech fens <p>Water Mineralization Sporovsky:</p> <ul style="list-style-type: none"> • By August 2022, mineralization is reported to be between 150 and 300 mg/l <p>Water Mineralization Zvanets:</p> <ul style="list-style-type: none"> • Reduction of mineralization is observed in Zvanets fen mire from 400-500 mg/l to 190-350 mg/l after implementation of hydro optimization measures between 2017-2021. • To achieve further reduction of water salinity, the project identified engineering solutions and developed an investment documentation. <p>Water Mineralization Servech:</p> <ul style="list-style-type: none"> • No changes in mineralization rates observed in the project area Servech. (appr 220 mg/l)
Indicator Assessment	Partially achieved (not achieved in Sporovsky as several/external factors both climatic and local level anthropogenic (improper utilization of water resources upriver) impact outcomes. Follow-up/mitigation measures have been developed by the project. (Expression of achievement/underachievement in percentage is not meaningful.)
Indicator 12	Population size of indicator species in Zvanets and Sporovsky Reserves

Baseline and End of Project Target	Sporovsky Reserve				
	Species	B/L pop. size	Target	2021	End of Project
	Aquatic warbler	500-700 males	900	100 – 150 singing males	135 – 530
	Greater spotted eagle	pairs	4	1 - 2 pairs	4 pairs
	Zvanets Reserve				
	Aquatic warbler	2,100-4,400 males	5,000	TBD	1800 - 3000
	Greater spotted eagle	0-2 pairs	4	3	3 pairs
	Curlew	0-4 pairs	15	2-3	3 pairs
	<p>Sporovsky Reserve:</p> <ul style="list-style-type: none"> In 2021, water levels were very low, this explains the low numbers of Aquatic warbler. The main reason for decreasing Aquatic Warbler population is a violation of the hydrological regime - lowered water levels, absence of spring floods (almost all the water of the Yaselda River is used for household purposes). In order to ensure the optimization of the Sporovsky Reserve's hydro regime, the project has prepared engineering solutions and developed an investment project, which will ensure the sustainability of the ecosystem and facilitate sustainability of the Aquatic warbler population <p>Zvanets Reserve:</p> <ul style="list-style-type: none"> Project activities only stabilized Aquatic warbler population. The main reason for that is the progressive overgrowth of open sedge marshes with reeds. Taking into account the huge area of the bog and the absence of ways of economically efficient use of bog biomass, it is impossible to ensure annual mowing of about 10,000 ha. Therefore, instead of mowing, controlled winter reed burning is carried out almost annually in the Zvanets reserve. Additionally, it was determined that spreading of reeds can be regulated by reducing the salinity of water. To achieve further reduction of water salinity, the project prepared engineering solutions and developed an investment project 				
	<p>Indicator Assessment</p> <p>Quantitative targets not achieved (due to climate change impacts/no spring flood) and unsustainable water use), but indicator species populations stabilized. Engineering solutions are developed. Expected biomass sales could not be realized due to border closing.</p>				

Indicator 13	Area of open, sustainably used meadows at Turov and Pogost Meadows				
Baseline	Turov Meadow 100 ha Pogost 0 ha				
End of Project Target	Turov Meadow 380 ha Pogost 150 ha				
End of Project Status	<p>In 2020 and 2021, no active measures were undertaken on Turov meadow, due to the unwillingness of the management of JSC Turovschina to fulfill its previously agreed obligations formulated in the Project Document and later confirmed in Memorandum with the project</p> <p>In the Pogost meadow, the number of a herd of Taurus-like cattle has increased to 25 individuals, controlling over the spread of shrubs.</p> <p>By August 2022, the total area of flood plain meadows was 240 ha, including Turov Meadow with 180 ha, and Pogost with 60 ha</p>				
Indicator Assessment	Target not fully achieved (46%), largely due to non-compliance by JSC Turovschina.				
Indicator 14	Population size of species during spring migration (Widgeon, Ruff, Black-tailed godwit)				
Baseline, End of Project Target, and End of Project Status	Turov Meadow				
	Species	B/L pop. size	Target	2021	End of Project Status
	Widgeon	10,000-20,000	50,000	500 – 10,000	500 – 6,500
	Ruff	10,000-30,000	40,000	50,000 – 10,000	10,000
	Black-tailed godwit	3,000	10,000	2,000 - 300	300 – 1,000
	Pogost Meadow				
	Widgeon	100	10,000	500 - 0	20 - 50
	Ruff	0	10,000	1,000 - 0	100 – 300
	Black-tailed godwit	0	500	50 - 0	0
	<p>In 2020, due to lack of snow cover and severe drought in the Polesie region, no spring flooding in the floodplain of the Pripyat River, resulted in a strong decline in the number of migrating and nesting birds in these floodplain meadows.</p> <p>Due to climate change, the height and duration of spring flooding on the Pripyat River is decreasing, which has resulted in low numbers of migrating birds in the Turov meadow. Nevertheless, the Turov meadow continues to play an important role as a stopping place for birds on migration.</p> <p>Numbers of migrating birds in the Pogost meadow remain low due to both low spring floods and the small area of open floodplain meadows.</p>				

Indicator Assessment	Quantitative targets not fully achieved. (approx. 7 %, averaged across species and locations). Climate change impacts were underestimated when setting targets.				
Indicator 15	Population size of nesting indicator bird species (Great snipe, Black-tailed godwit, Terek sandpiper, Redshank)				
Baseline, End of Project Target and Status	Turov Meadow				
	Species	B/L pop. size	Target	2021	End of Project Status
	Great snipe	100 males	150	20 - 30	140
	Black-tailed godwit	30 pairs	80	30 - 45	20 - 58
	Terek sandpiper	5 pairs	20	1	3
	Redshank	120 pairs	200	80 - 120	170
	Pogost Meadow				
	Great snipe	0 males	20	0	0
	Black-tailed godwit	0 pairs	5	0-1	0
	Terek sandpiper	0 pairs	2	0	0
	Redshank	2 pairs	10	2 - 5	2
	<p>Turov Meadows:</p> <ul style="list-style-type: none"> The number of migrating birds concentrating in the Turov meadow depends on the levels and duration of the spring flood in the Pripyat River and on the presence of open meadows not overgrown with bushes. Due to climate change, the height and duration of the spring flood in the Pripyat River are decreasing during last years, which has resulted in low numbers of migrating birds stopping to migrate in the Turov meadow. Nevertheless, the Turov meadow continues to play an important role as a stopping place for birds on migration <p>Pogost Meadows:</p> <ul style="list-style-type: none"> The limited area of open floodplain meadows does not support high density of nesting birds. It is expected that in the future, when the number of Taurus cattle increases to 100 individuals, the area of open meadows will increase thus providing more opportunities for nesting. 				
Indicator Assessment	Targets not fully achieved. 76 % for Turov Meadow (averaged across species). 5 % for Pogost Meadows (averaged across species). Due to climate change impacts (shorter and lower spring floods), and lack of sufficient open meadows (as a				

	result of activities not implemented by private enterprise implementing partner)					
Indicator 16	Numbers of organized tourists in the PAs					
Baseline, End of Project Target and Status	PA	B/L tourist #	Target	2020	2021	End of Project Status
	Nalibokski	250	2,500	9,300	2,300	5,200
	Sporovsky	4,500	5,500	4,800	1,228	5,702
	Turov Meadow	340	2,500	1,850	920	Data not available
	<ul style="list-style-type: none"> For 2020, the increase in the number of tourists is due to dissemination of information on the values of the territories, as well as with the development of tourism infrastructure (construction of the wildlife observation sites, towers). For 2021, tourism numbers declined due to the pandemic and related travel restrictions. End of Project Data for Turov meadow are not available due to the liquidation of the “BirdLife Belarus” under a court order in March 2022. The NGO acted as managerial structure for the reserve and local authorities didn’t collect the data on visitors. (source: Reports of target PAs to the National Statistic Committee) 					
Indicator Assessment	Target exceeded for Nailbokski (by 108 %), for Sporovsky (by 4 %). Target underachieved (37 %) for Turov Meadows by 2021, data for 2022 not available. Based on increase in 2020, it is fair to assume that without pandemic, progress towards targets would have been better. Data collection is limited as private entities do not share information.					
Assessment Outcome 1 of	<p>Targets partially achieved. COVID-19 pandemic, climate change (drought, lack of snow cover and therefore of spring flooding), liquidation of NGOs as implementing partners and lack of activity implementation by private enterprise impacted achievements for species populations and tourist numbers.</p> <p>Enabling conditions for progress under Outcome have been significantly enhanced with infrastructure development for tourism, enhanced monitoring of indicator species populations, with measures to create/enlarge bison habitat/grazing grounds, manage water levels in peatlands, and developing engineering solutions to increase/maintain water levels.</p>					

Outcome 2: Sustainable forest and wetland ecosystem management in buffer zones and economic landscapes adjacent to protected areas

<p>Output 2.1: Forest biotopes, subject to special protection, are identified, approved and sustainably managed at an area of 150,000 ha.</p> <p>Output 2.2: Avoided degradation of inefficiently drained forest peatlands (260,000 ha) as a result of development and implementation of the Scheme of Sustainable Use of Drained Forest Peatlands, defining ways of use of each peatland, and ecological rehabilitation of inefficiently drained peatlands demonstrated at an area of about 12,456</p>	
Indicator 17	Area of forest biotopes transferred to the protection category
Baseline	3,000 ha of forest lands with rare biotopes are transferred into protection
End of Project Target	150,000 ha of forest lands with rare biotopes are transferred
End of Project Status	<p>As of 2021, 179,222.1 ha of forest lands with rare biotopes have been identified in 41 forestries.</p> <p>Passports for the protection of 24,700.0 ha of rare biotopes outside protected areas were identified and agreed on with respective forestries.</p> <p>A set of mandatory documents for their transfer under protection have been prepared by the Project and submitted to relevant state bodies for registration of such decisions.</p> <p>A new version of the TCP "Rules for the identification of typical and (or) rare biotopes, typical and (or) rare natural landscapes, registration of their passports and protection obligations" was prepared and came into effect (June 01, 2021).</p> <p>By August 2022, 182,222 ha of forest lands with rare biotopes were transferred into protection, including: Minsk region 12 forestry, Gomel region 14 forestry, Mogilev region 5 forestry, Vitebsk region 6 forestry, Grodno region 2 forestry, Brest region 3 forestry.</p>
Indicator Assessment	Target exceeded by 22%. 182,222 ha of forest lands with rare biotopes were transferred into protection
Indicator 18	Number of Forestries that envisage forestry management plans in line with sustainable use of protected biotopes
Baseline	3 forestry enterprises
End of Project Target	10 forestry enterprises
End of Project Status	<p>By July 2021, 16 forestries envisaged forestry management plans in line with sustainable use of protected biotopes.</p> <p>Forest management plans have been updated and approved for two (3) forestries: Dyatlovskoe, Ivievskoe and Stolinskoe. Revised plans that address sustainable use of biotopes for 13 forestries have been prepared and submitted for approval to respective state bodies.</p> <p>Specific updates to forest management plans include:</p> <p>For Dyatlovskoe, Ivievskoe and Stolinskoe forestries - Changes on sustainable management of forest habitats were included in forest management plans</p>

	<p>For Berezinskoe, Vileyskoe, Volozhinskoe, Kletskoe, Molodechnenskoe, Puhovichskoe, Smolevichskoe, Starobinskoe, Stolbtsovskoe, Uzdenskoe forestries, Dvinskaya, Zhornovskaya, Korenevskaya forestry experimental bases: Recommended changes on sustainable management of forest habitats were prepared for forest management plans</p> <p>By August 2022, 16 forestries envisage forestry management plans in line with sustainable use of protected biotopes, including: Dyatlovskoe, Ivievskoe, Stolinskoe Berezinskoe, Vileyskoe, Volozhinskoe, Kletskoe, Molodechnenskoe, Puhovichskoe, Smolevichskoe, Starobinskoe, Stolbtsovskoe, Uzdenskoe forestry, Dvinskaya, Zhornovskaya, Korenevskaya forestry experimental bases.</p>
Indicator Assessment	Target exceeded – by 60 %
Indicator 19	Number of employees of the Ministry of Forestry trained in the sustainable use of protected biotopes
Baseline	Employees of the Ministry of Forestry do not have experience in sustainable use of rare biotopes needing special protection
End of Project Target	At least 50 employees of the Ministry of Forestry trained
End of Project Status	<p>By 2020, 87 employees of forestries of the Ministry of Forestry were trained in the sustainable use of protected biotopes.</p> <p>A seminar was held in the Stolinski forestry with participation of staff of 13 forestries and State Forestry Planning Enterprise "Belgosles" (47 participants total). Participating forest inventory specialists obtained theoretical knowledge and were trained in identification of rare and typical biotopes during forest inventory and organization of their subsequent sustainable use.</p>
Indicator Assessment	Target achieved by 2020
Indicator 20	Official policy and document on future use of forest hydro amelioration systems
Baseline	Due to the lack of data for evaluation of the current state of forest hydro amelioration systems, there is no coordinated policy on their further use
End of Project Target	Proposals on ways of further use of forest hydro ameliorative systems (260,000 ha) are developed and encapsulated in a Sectoral document of the Ministry of Forestry
End of Project Status	<p>By 2021, proposals on use of forest hydro ameliorative systems on 474,700 ha have been developed and agreed with the respective forestries (more than 104 forestries in 6 regions of the country) and officially adopted by the Ministry of Forestry, including: Brest region 75,369 ha, Gomel region 42,813 ha, Grodno region 53,880 ha, Minsk region 164,316 ha, Mogilev region 28,290 ha, Vitebsk region 110,032 ha.</p> <p>In 2021, the project developed sectoral national program on sustainable use of hydroforestry reclamation systems, the program was passed to the Ministry of Forestry for consideration and adoption as legal sectoral act.</p>

Indicator Assessment	Target exceeded by 83 % (474,700 ha vs 260,000 ha target)
Assessment of Outcome 2	Outcome 2 has been achieved, and exceeded in terms of (numbers of) revised management plans for forestries, and areas with future use of forest hydro amelioration systems

<p>Outcome 3: Increased experience and knowledge of innovative biotechnological measures for eliminating the most significant threats to globally important species, and monitoring of their populations, (or ? Increased experience and knowledge of innovative measures for habitat restoration and elimination of the most significant threats to globally threatened species; monitoring of efficiency of the project's measures)</p> <p>Output 3.1: Restored habitats (about 1,820 ha) of globally threatened species (Aquatic warbler, Greater spotted eagle, Great snipe, Black-tailed godwit) within the most important protected areas (Servech, Dikoe) through control of vegetation succession (control of the spread of shrubs and reeds) and optimization of hydrological regime</p> <p>Output 3.2: Program on exchange of individuals across micro-populations to improve the genetic status of the Nalibokski micro population of the European bison developed and realized</p> <p>Output 3.3: Targeted measures to stabilize populations of insufficiently studied globally threatened species.</p> <p>Output 3.4: Monitoring the efficiency of implementation of project measures (monitoring of globally threatened species, soil and ground water table, carbon emissions avoided and carbon sequestered).</p>	
Indicator 21	Area of territory with associations of sedge mires
Baseline	Dikoe 250 ha Servech 200 ha
End of Project Target	Dikoe 1,250 ha Servech 570 ha
End of Project Status	<p>At Dikoe no changes from the baseline (250 ha). Belovezhskay Puscha National Park (landowner of Dikoe) decided to first optimize the hydro-regime on the pilot territory of Dikoe before starting works on removing excess biomass.</p> <p>A delay of mowing the Dikoye bog is due to the position of the management of the National Park "Belovezhskaya Pushcha" to leave the bog without human interference. However, due to the evident degradation of the swamp ecosystem (continuous overgrowing with bushes and extinction of a number of species), the project was able to receive the approval of the park's administration to carry out removal of bushes. According to the park's management plan, the relevant work is scheduled for September 2022 for appr. 100 ha</p> <p>At Servech - 600 ha were cleaned in 2018-2021 from bushes and reeds. In 2021, works on optimization of the hydrological regime were undertaken, which will prevent overgrowth of the swamp with alder and birch on the whole lowland bog of 100 ha.</p>

Indicator Assessment	Achievement of target delayed at Dikoe; activities (removing biomass) scheduled for September 2022 in protected area management plan are likely to achieve target. At Servech, target exceeded by 5 %.				
Indicator 22	Population size of globally threatened species: Aquatic warbler, Greater spotted eagle, Curlew, Great snipe.				
Baseline End of Project Target End of Project Status	Dikoe				
	Species	B/L pop. size	Target	2021	End of Project Status
	Aquatic warbler	150-200 males	250	About 50 males	30 - 116
	Greater spotted eagle	4-5 pairs	4-5 ⁷	4 – 5 pairs	4 - 5
	Servech				
	Aquatic warbler	31-38 males	90	counts were conducted during the second clutch period due to high water levels in June-July 2021	15 - 48
	Curlew	0-2 pairs	3-4	See above	0
	Great snipe	21-30 males	30-40	See above	15
	<p>Dikoe: Population of Aquatic warbler is lower than expected due to continuous overgrowing the area with bushes. The marsh is scheduled to be mowed in September 2022, which will contribute to increase in Aquatic warbler population.</p> <p>Servech: Indicator numbers of nesting birds were not achieved during the project due to unstable water levels. It is expected that after the implementation of the project activities for stabilization of hydrological regime (cleaning of the Servech river bed and arrangement of the water-regulating structure) implemented in 2020-2022 the number of birds will increase.</p>				
Indicator Assessment	Target was achieved only for Greater Spotted Eagle at Dikoe. Planned activities in 2022 (mowing in Dikoe, cleaning of Servech River bed and water regulation measures) provide potential to achieve targets after project end.				
Indicator 23	Area of restored sedge fen mires				

⁷ The objective is to stabilize the condition for this species. Without the project activities, the number of eagles will decline quickly.

Baseline	There is only one sedge fen mire in the Grodno Region - the "Svisloch" mire – with an area of 200 ha
End of Project Target	Sedge fen mire Dokudovskoe with an area of 1,200 ha is restored (located in northwest Belarus); offers potential key habitats for globally threatened aquatic warbler, greater spotted eagle.
End of Project Status	<p>By 2021, 1020 ha of sedge fen mires (85% of EoP) had been restored (950 ha by the project, and 70 ha by the peat extracting company in the Grodno Region (according to the agreement with the project that they rewet the remaining 250 ha at the factory's expense after the production (in line with the national regulatory framework).</p> <p>In 2021, vegetation and water level dynamics were monitored, and a map of vegetation before and after waterlogging was made.</p> <p>At end of project, sedge fen mire Dokudovskoe with an area of 1,090 ha is restored (located in northwest Belarus); offers potential key habitats for globally threatened aquatic warbler, greater spotted eagle.</p>
Indicator Assessment	Target nearly achieved (90 %)
Indicator 24	Area of vegetation associations on restored mire
Baseline	Sedge communities on the peatland Dokudovskoe (1,200 ha) occupy no more than 20 ha
End of Project Target	Sedge communities on peatland Dokudovskoe occupy at least 700 ha
End of Project Status	<p>By 2020, pilot activities on creation of sedge communities underway on 950 hectares of cultivated peat bog. Dokudovskoe peatland rewetted (950 ha).</p> <p>Activities for accelerated restoration of open sedge marshes were planned for an area of about 700 ha in 2021, using machinery for soil preparation, collection and sowing of seeds of marsh plants. However, for three years in the natural bogs of Sporoske and Zvanets sedge seeds were practically absent for unknown reasons. Therefore, marsh plants were planted and a small amount of sedge seeds were used on an area of 70 ha.</p> <p>On the rest of the area prepared for planting of marsh plants seeds, restoration took place naturally. In this regard, reed and cattail were the first to appear on these areas, which in the process of development will be replaced by sedge communities</p> <p>Mapping of vegetation in the Dokudovskoe peatland conducted in July-August 2021; 2021-2022 monitoring activities determined the area of reinstated bog plant communities: Phragmites-sedge communities (<i>Carex acuta</i>, <i>C. rostrata</i>, <i>C. pseudocyperus</i>, <i>Phragmites australis</i>) on peatland Dokudovskoe occupy at least 398 ha (botanical report).</p>
Indicator Assessment	Target approx. 60 % achieved; 700 ha were prepared but 3 years area did not produce seeds to collect for seeding. Natural restoration processes are ongoing in the area, and sedge communities expected to replace the reed and cattail vegetation which appears first.

Indicator 25	Greenhouse gas emissions at following pilot sites: 12,456 ha of forest peatland; 1,025 ha of open peatlands
Baseline	Carbon dioxide emissions are about 10-20 tons per ha per year
End of Project Target	Carbon dioxide emissions are about 0 tons per ha per year
End of Project Status	Baseline estimates were between 134810 and 269620 tons of GHG emissions on a total of 13,481 ha. Ecological rehabilitation of 5 disturbed peatlands on the area of 12,567 ha was carried out, a total reduction in GHG emission calculated as appr. 125 000 tons per year. Based on research conducted under the project in 2021, carbon dioxide emissions are estimated to be 7.1 tons per ha per year after re-wetting, and 4.9 tons per ha per year after 20 years.
Indicator Assessment	Quantitative target partially achieved. GHG emissions per ha have been reduced by 65 % (compared to baseline) after rewetting, and are anticipated to be reduced by 75 % after 20 years.
Indicator 26	Number of genetically valuable bison transferred from different micro populations in Belarus and Poland to Nalibokski to increase diversity
Baseline	0
End of Project Target	5
End of Project Status	0 Following studies on the genetics of the Nalibokski bison micro population, a recommendation has been made by the National Academy of Sciences of Belarus to transfer genetically valuable bison to enrich the genetic diversity of the local micro population. The main principle of improvement of genetic diversity of the Nalibokski population is the introduction of bison representing lowland lineage and inhabiting Western Europe (from Poland and Moldova). The study and recommendation provided a scientific justification for the transfer and it was planned to exchange two (2) females from Nalibokskaya Pushcha for two (2) males from Moldova. The transfer of bison from Moldova (not originally in the prodoc) is explained by the genetic differentiation between the Moldovan and Belarusian-Polish populations of bison. Both sides are interested in this exchange to increase the stability of national bison populations. By 2022, due to the epidemiological and political situation, it has not been possible to undertake the transfer.
Indicator Assessment	Target not achieved (0%) due to implementation limitations (pandemic and political). Scientific basis and international cooperation established to realize the target.
Indicator 27	Number of genetic passports issued for the Nalibokski micro population of the European bison
Baseline	0
End of Project Target	8

End of Project Status	<p>By 2021, based on the results of the study of the genetic status of the Nalibokski micropopulation, 9 genetic passports for bison were prepared.</p> <p>By 2022, 9 passports issued for the Nalibokski micro population of the European bison.</p> <p>The Nalibokskaya population is characterized by the lowest genetic diversity: the number of alleles in the bison of the Nalibokskaya population is 39 alleles, in the Bialowieza population - 48, in the Polish population - 53</p>
Indicator Assessment	Target exceeded – by 13 %
Indicator 28	Population dynamics of the Aquatic warbler in the Zuvintas Reserve (Lithuania)
Baseline	Population size of the aquatic warbler at the restored potential key habitat Zhuvintas is 2-7 males
End of Project Target	Population size increases to at least 30 males (through translocation) and further population growth is registered
End of Project Status	<p>Population size increased from 2 males in 2017 to 30 males in 2020 (through translocation).</p> <p>The International Study Group “Aquatic warbler Conservation Team” (includes more than 30 representatives from EU and Eastern Europe countries) recognized that a breakthrough in Aquatic warbler conservation had been achieved through the translocation methodology developed by the project.</p> <p>By 2020, 100 chicks were relocated from the Zvanets Reserve (Belarus) to the Zhuvintas Reserve (Lithuania). Of these, 22 birds returned in 2021 to the Zhuvintas Reserve after wintering.</p> <p>By 2022, population size increases to approx. 30 males (through translocation in 2008-2021). (Data from 2021 survey in Zhuvintas, conducted in collaboration with LIFE-financed project).</p>
Indicator Assessment	Target achieved
Indicator 29	Number of breeding pairs of greater spotted eagle in Olmany Mires
Baseline	18-20 pairs
End of Project Target	Stabilized at 20-25 pairs
End of Project Status	<p>By 2020, 22 breeding pairs of greater spotted eagle were observed in Olmany Mires.</p> <p>By 2022, about 20 pairs of Greater Spotted eagle in Olmany Mires.</p> <p>Numbers of the Greater Spotted Eagle and other birds of prey are not increasing due to a catastrophic decrease in numbers of the water vole, the main game. Water vole numbers declined as a result of the epizootic in 2001, when most of the population died. The death of water voles as a result of the epizootic is a common occurrence, recurring in several years, but then the species quickly recovers in numbers. However, when American mink numbers are high, the water vole fails to recover.</p>

	A similar situation of decline in numbers of the Greater Spotted Eagle and a number of other birds of prey is observed throughout the Polesie region, which is associated with a sharp decline in numbers of the water vole. The project in 2022 is working to restore high numbers of water vole in Zvanets by translocation from other regions. Based on this experience, it is planned to prepare a large project to restore the number of water voles in Polesie, which will contribute to conservation a number of rare species of birds of prey
Indicator Assessment	Target achieved. Follow-up project developed to restore water vole population
Indicator 30	Breeding Success
Baseline	30 %
End of Project Target	40 – 50 %
End of Project Status	<p>By 2020, no change from the baseline. A joint research collaboration on breeding success was undertaken in 2021-2022 with the TA project "Polesie", which focusses on this topic.</p> <p>By 2021, and EoP (2022) breeding success was still near baseline (30 %). Breeding success is significantly determined by population pressure of the White-tailed Eagle (there were repeated cases of eating chicks by the White-tailed Eagle). The number of White-tailed Eagles is steadily increasing in this region.</p> <p>As a mechanism for controlling the number of the white-tailed eagle, proposals are being prepared to remove this species from the Red Book of the Republic of Belarus.</p>
Indicator Assessment	Target not achieved (67 %) due to population increase of White-tailed eagle.
Indicator 31	Number of secure nesting sites
Baseline	Lack of secure places for nesting
End of Project Target	At least 20 artificial nests are established on plots where greater spotted eagles nest
End of Project Status	By 2021, 42 artificial nests have been established on plots for rare bird species such as big eagle, owl, bearded eagle including 14 in the Olmany bogs; 22 in the Zvanets reserve; and 6 in the Sporovski reserve.
Indicator Assessment	Target achieved. 42 artificial nests established
Indicator 32	Action plan on conservation of 13 invertebrates and 5 molluscs with EN and VU status based on scientific knowledge of size and distribution (including <i>Dolomedes plantarius</i> , <i>Dytiscus latissimus</i> , <i>Graphoderus bilineatus</i> , <i>Cerambyx cerdo</i> , <i>Lycaena helle</i> , <i>Lopinga achine</i> , <i>Euphydryas maturna</i> , <i>Phyllodesma ilicifolia</i> , <i>Unio crassus</i> , <i>Pseudanodonta</i>)
Baseline	Lack of data prevents actions for their effective protection

End of Project Target	Collected data on the state of populations of these species leads to the development of an Action Plan on conservation of these poorly known species
End of Project Status	<p>By 2020, National status of 13 invertebrate species and 5 mollusk species was assessed in Brest, Minsk, Grodno and Vitebsk regions, similar works in Gomel and Mogilev regions are underway. Data on distribution, population status, ecology and threats to these species were obtained.</p> <p>Dolomedes plantaires, Unio crassus have been re-introduced in habitats where they had disappeared and newly created populations were being monitored. New Cerambyx cerdo habitats (2 new populations) have been restored and preparatory works had been carried out to relocate to new Unio crassus habitats (2 new populations).</p> <p>By 2021, National action plans for 11 species (Numenius arquata, Haematopus ostralegus, Gallinago media, Lymosa lymosa, Cerambyx cerdo, Osmoderma barnabita, Unio crassus, Astacus astacus, Dolomedes plantarius, Nehalennia acciosa, Pseudanodonta complanata) were developed and submitted for approval to the Ministry of Environment.</p> <p>By August 2022, National Action Plans for conservation of 17 species: birds 4 species (Aquila clanga, Limosa limosa, Gallinago media, Haematopus ostralegus), mollusks 2 species (Unio crassus, Pseudanodonta complanata), crayfish Astacus astacus, spider Dolomedes plantarius, insects 9 species (Cerambyx cerdo, Osmoderma barnabita, Carabus intricatus, Ceruchus chrysomelinus, Phengaris teleius, Phengaris nausithous, Coenonympha oedippus, Nehalennia speciosa, Phengaris arion) were developed and submitted for approval to the Ministry of Environment.</p>
Indicator Assessment	Target achieved
Assessment of Outcome 3	Outcome largely achieved, some targets could not be fully achieved , for example when species populations are impacted by decline in food sources or growth of predator species, and international bison transfers were not possible due to pandemic and political situation.

Relevance

The project addressed priority needs of the country regarding biodiversity conservation including globally important species, maintaining ecosystem services and promoting green economic development. Project activities contributed namely to government programs on Protected Areas, Forestry and European Bison protection.⁸ Practices introduced with project support are relevant for large areas of the country as Peatlands cover 12.3% (over 2.5 Mio ha) of the territory of the Republic of Belarus.

⁸ State Program for the Development of Specially Protected Natural Areas (SPNAs) for 2015-2019, Strategic plan for the development of the forestry economic sector (2015- 2030), state program "Environmental protection and sustainable use of

The project was relevant to implementing the second (to 2020) and third (2020-2030) National Strategies for Sustainable Development (NSSD) which entailed improvement of the environmental policy framework and the economic mechanisms to use natural resources, and details the need to conserve drained lands, especially drained peatlands, to reclaim degraded lands, to conserve and enhance biodiversity of forest ecosystems and to maintain the sustainability of forest ecosystems.

In this context, the new law on the protection and sustainable use of peatlands, developed by the project and approved in December 2019, is particular relevant. It is unique for Europe and regulates sustainable use of peatlands' resources and aims to preserve, restore the ecological functions of peatlands, satisfy economic and other needs for these resources, as well as to implement the rights of citizens to a healthy environment and the use of natural resources.

The law also promotes the fulfilment of Belarus' voluntary commitments as a signatory of the UNFCCC to reduce greenhouse gas emissions by at least 35% by 2030, including commitments done on wetland rewetting and peatland restoration, which will lead to a reduction in CO₂ emissions for the country in general. The project further contributed by helping create a digital register of peatlands, a key tool for decision making in the protection and sustainable use of peatlands in Belarus, thus advancing climate policy and the green economy.

Belarus joined the Ramsar Convention convention in 1999, committing to preserve 26 wetlands of international significance with the total area of 778,000 hectares (3.7% of Belarus' territory); project results constitute an important contribution to commitments under this convention.

While not succeeding in creating financially sustainable mechanism for all pilot areas, mechanisms were implemented in Sporovsky reserve successfully to demonstrate financial self-sufficiency for PAs to invest generated income back into law enforcement and conservation from which lessons can be scaled up countrywide.

For local livelihoods and green economic development, the project has enhanced enabling conditions by creating improved infrastructure for ecotourism development, and supporting sustainable natural resource use, i.e. improved processing and marketing of cranberries. The project contributions are also to be seen in the light of the economic value of restored peatlands. It was estimated that the restoration of the drained Zhada bog in the Vitebsk region of Belarus could bring in more than US\$10 million of profit a year IF all natural functions of the bog are restored and working. This is the approximate cost of the bog's social and environmental services, which Zhada provides to the environment and people.⁹

Relevance is rated as **Highly Satisfactory (HS)**

natural resources" (2015 – 2019), state program "The Belarusian Forest (2016-2020)"; action plan on "conservation and management of European Bison (2015 – 2019)".

⁹ <https://www.undp.org/belarus/news/economics-restored-peatlands-why-we-invested-rehabilitation-zhada-bog>. The economics of restored peatlands: why we invested in the rehabilitation of Zhada bog. January 29, 2021

Effectiveness

The high degree of achievement towards objectives has been documented above, and it has been recognized that several quantitative targets could not be fully achieved due to assumptions at project design that optimal ecological conditions could be achieved and an underestimation of the speed and severity of climate change impacts.

Nevertheless, activity implementation, including those of adaptive management responses, was effective in achieving key objectives of the project, namely to enhance the legal framework for peatland conservation, creating awareness of the need to conserve and sustainably manage peatlands and developing and demonstrating hands-on measures and approaches with engineering solutions that are now available to be applied and replicated country wide, in fact mandatory based on the new legislation.

Furthermore, financial sustainability has been demonstrated to be possible, at least for Sporovsky reserve, and expert studies have given options for economic development. Some of the envisioned income generating options, such as export of pellets from biomass, could not be realised but again largely due to factors (borders closed) beyond the control of the project. The project has generated a wealth of experiences both in natural resource management and conservation, as well as for economic development upon which stakeholders and further projects can build.

As a result of the project, the country emerged as a regional leader in peatland conservation; also the new approaches and experiences in Aquatic warbler conservation advanced by the project have been recognised by the international conservation community.

Factors contributing to achieving/exceeding planned outcomes include the project design building on a series of projects with related objectives in peatland management, the fact that design addressed the key barriers identified and combined changes to the legal framework and capacity building with practical measures to test and introduce sustainable management and conservation practices for scaling up.

Last but not least the outstanding expertise and long term experience, hard work and commitment of the project team, with very capable leadership, drove the effective implementation and achievements of results even under adverse conditions such as the COVID-19 pandemic. The restrictions due to the pandemic impacted the way the project operated, however adjustments were made accordingly and results were largely achieved even at the height of the pandemic. Well coordinated efforts by national implementing partners, facilitated through a well and regularly functioning oversight mechanism through the project board were equally contributing to effective implementation.

Considering the difficult implementation conditions for several years during the project life (pandemic, political situation) the effectiveness in achieving objectives is rated as **Satisfactory (S)**.

Efficiency

The project achieved its global and development objectives, but not as has been detailed above, all targets. The evidence from the documentation provided by the PMU to the TE, comprised of all regular reports and M&E logs according to requirements, as well as interviews with stakeholders suggest that

resources and inputs were allocated as planned and efficiently to generate results while applying adaptive management in response to emerging challenges.

The M&E system and logs on risk, issues/problems and lessons learned which were used for tracking project progress, planning forward and reporting on achievements was effective in capturing implementation progress in detail and flag potential challenges to be addressed by the project board or relevant stakeholders.

The disbursement rate of 96.5 % (without 2022 commitments) and of 98 % with 2022 commitments at the time of the TE speak to the efficiency of financial management of the project.

Efficiency is rated as Highly Satisfactory (HS)¹⁰

Overall Project Outcome

Based on the ratings for “relevance”, “effectiveness” and “efficiency”, and the achievements towards project objective and key outcomes, the overall project outcome is rated as **Highly Satisfactory (HS)**.

The rating is justified as the project exceeded its targets for biodiversity, sustainable forest management, land degradation and climate change mitigation and achieved the target for protected area management.

The project was able to introduce a conservation-centered and financially self-sufficient approach to management of forests and wetlands by making significant achievements towards the three planned outcomes. The sustainability of forest and mire protected areas was improved through the adoption of the new law on peatland conservation and sustainable management, and viable financial mechanisms were demonstrated. Sustainable management of biodiversity-important forest and wetland ecosystems outside protected areas was enhanced through the transfer of large tracts of land to protection status (details above). Experience and knowledge of innovative measures for habitat restoration developed under the project has found regional and international recognition. Awareness of the need for conservation and of options to put conservation into practice has been build among national and local authorities.

Country Ownership

The rationale for the project and its key desired outcomes were firmly grounded in national priorities and several state programs. The state program "Environmental protection and sustainable use of natural resources" (MNREP, 2015 - 2019) aimed at advancing the legislative basis for PAs, restoring of disturbed meadow and wetland ecosystems, supporting tourism and sustainable use of natural resources at PAs, and supporting implementation of international treaties in the area of biodiversity. The state program "The Belarusian Forest", (2016-2020) aimed at sustainable forest management and conservation of forest

¹⁰ Rating Scale in Annex 1

ecosystems. The program Conservation and Management of the European Bison (2015 – 2019) aimed at the long term survival of the country's population of the European bison.

Implementation of the project (under NIM modality) with MNREP as main implementing partner and the well planned and coordinated roles and responsibilities among national stakeholders, the fact that the government adopted the new law developed by the project all are testimony to a high degree of country ownership of the project design and its results.

Sustainability

Key successes that promote sustainability of project achievements are the changes to the legal framework, namely the law on protection and sustainable use of peatlands, which makes the continuation and scaling up of practices introduced by the project mandatory. Other elements promoting institutional and governance sustainability are the development of the sectoral national program on sustainable use of hydroforestry reclamation systems, revised management plans for forestries, transfer of biotopes to protection status, capacity building and awareness raising among foresters.

Financial sustainability could be demonstrated for Sporovsky Reserve, where both the natural conditions are conducive to income generation from biomass and leadership initiative of reserve management was actively pursuing income generation options. Sporovsky reserve earned sufficient income to cover operating costs and invest back into law enforcement and conservation activities. Income sources included the sale of biomass, production of wood chips and various services to other entities. Economic activities in other reserves still need further development, and options need to be evaluated further. Current activities of selling biomass as hay and firewood do not secure financial self-sufficiency, and ways to add more value need to be explored. Exporting pellets abroad as foreseen by project design could not be realized under current conditions of cross border restrictions.

The rating concerned financial sustainability was assessed based on statements of stakeholders and beneficiaries that the activity initiated by the project will continue. Stricter evidences have not been found.

An economic study found that a minimum of 50 % for periodic investments in infrastructure and equipment is required through subsidized funding, from government programs, international technical assistance, or other sources). Several options were evaluated preliminary and challenges identified, including pellet production, table ware production from biomass, fattening of livestock to return abroad. For biomass and livestock export, quarantine and phytosanitary restrictions and other regulations pose significant challenges to overcome. Pellet production and export involves many risks related to VAT in the country of destination, regulatory barriers, certification requirements, and others. Therefore, this economic activity should only be piloted with prior identification of a buyer; however, current restrictions in regional/international exchanges compromise this opportunity. Table ware production requires a large investment, making it unlikely to be feasible for an environmental institution/PA. All options need more detailed feasibility studies and market research.

Recent trends in tourism, with more affluent visitors frequenting the reserves, there is a potential for tourism development as an income source; investments in further trails, accommodation, educational and entertainment facilities are required.

Besides the direct income generating options, the project outcome in restoring the economic value of ecosystems should be considered in the assessment of sustainability. An estimate valued the ecosystem services of Zhada bog at 10 Mio USD per year; however this calculation is contingent on the full restoration of all natural functions of the bog.

To counter act climate change impacts and improve hydrological regime to create favorable conditions for indicator species populations, and for other measures in species management, a series of engineering solutions have been developed; however follow-up finance is not guaranteed for all measures. Project management is in the process of developing funding applications to corporate and government donors of the Russian Federation. The Turov Center for ecological education was found to fulfill an important function, organizing excursions and enjoying demand for educational support; however, it does not have the capacity to sustain itself financially as it cannot engage in income generation through charging user fees or payments for field trips.

Substantial financial support to assist in scaling up project experiences country wide is currently not available as follow-up finance through GEF 7 or EU funding has been terminated for the time being due to the political situation.

Socio-politically, sustainability of project outcomes is challenged as civil society cooperation has been affected with the liquidation of NGOs that were involved in activities of ecological monitoring and conservation management. Climate change impacts in the form of drought and winters without snow had been underestimated in project design; the accelerating pace of climate change poses a further challenge to the environmental sustainability of project outcomes.

In summary, project results enjoy a high degree of institutional and governance sustainability due to the successes in developing the legal and regulatory framework and as a result of good country ownership. However, significant challenges remain for financial sustainability, and environmental and socio-political sustainability are impacted by climate change and current political trends.

It should be noted that financial self-sufficiency for PA is a very ambitious goal; parks in the US, Germany or New Zealand, for example, are all subsidized by state budgets. (Rating scale for sustainability is provided in Annex 1.)

Sustainability	Rating
Financial resources	Moderately Likely (ML)
Socio-political	Moderately Likely (ML)
Institutional framework and governance	Likely (L)
Environmental	Likely (L)
Overall Likelihood of Sustainability	Likely (L)

Gender Equality and Women's Empowerment

The UNDP ATLAS Gender Marker Rating for the project was GEN1 "Some contribution to gender equality". In annual Project Implementation Reviews the project was assessed as not contributing to "closing gender gaps in access to and control over resources", "Improving the participation and decision-making of women in natural resource governance" and "Targeting socio-economic benefits and services for women".

While by design no activities were explicitly planned to address the different needs of men or women, to change norms, values, and power structures, or to contribute to transforming or challenging gender inequalities and discrimination, several measures implemented by the project likely will benefit women and girls in particular. These include the development of ecotourism where women are the majority of service providers and thus, potentially, increase their income, and environmental education for youth, whereby 70 % of recipients are girls. Increased access of girls to green knowledge, potentially encourages them to explore green job opportunities and to apply the acquired knowledge and skills in addressing environmental challenges. Likewise, women in ecotourism are encouraged to expand their businesses and improve their knowledge and skills in business management and development.

Project design had anticipated that of the planned income generation activities especially those related to cranberry gathering would benefit women who make up 80 % of gatherers. The number of women gatherers at pilot sites was expected to increase on average 4 times. Other sustainable use activities such as management of forest meadows and tourism at Nalibokski, profitable use of biomass in Sporovsky and Zvanets; and grazing, mowing and tourism at Turov and Pogost are also expected to have an impact on local women. Business plans under Outcome 1 therefore were to (i) ensure that women are appropriately represented in all meetings and discussions on planning the income-generating activity; (ii) include a gender analysis of the income generating activity (understand of gender-specific roles and gender-differentiated vulnerabilities/ impacts); and (iii) set a target for the participation of women in implementation of the income-generating activity. At least 50% of those involved in and benefitting from sustainable use activities were expected to be women. Under Outcome 2, forestry training was to be equally accessible by men and women and women to be encouraged to participate in restoration activities. For project implementation, participation of women in decision making bodies and employment of qualified women was to be encouraged.

The project did not develop a gender analysis (required since 2014) or a gender action plan (required since 2018). In the results framework, the only reference to gender is the indicator "Representation of women in sustainable use activities associated with business plans developed under Outcome 1". The baseline was 0 %, the EoP target was 50 %, the EoP status (by 2021) was reported as "representation of women in the project's target area management activities amounted to 44% (41 out of 92). Of the total number of experts hired by the project in 2021-2022, 25% were women (3 out of 12)." By 2020, representation of women in the project's target area management activities amounted to 47% (38 out of 81). Of the total number of experts hired by the project in 2020-2021, 54% were women (8 out of 15).

The M&E system otherwise did not entail any gender disaggregated data for capacity building, access to resources or other. In the GEF Core Indicator reporting, the project duly provides gender disaggregated data on direct beneficiaries disaggregated by gender as co-benefit of GEF investment. Total number expected at CEO ER: N/A. Total number achieved at MTR: 54 female, 21 male. Total number achieved at TE:81 (38/43)

Cross-cutting Issues

The project made contributions towards the UNDP CP regarding Outcomes 3.1 (Solutions developed at national and subnational levels for the sustainable management of natural resources, ecosystem services, and 3.2 Legal and regulatory frameworks, policies and institutions able to ensure the conservation and sustainable use of natural resources, biodiversity and ecosystems, in line with international conventions and national legislation. The project contributed to the

(previous) UNDAF Outcome “policies have been improved and measures have been effectively implemented to increase energy efficiency and production of renewable energy, protect landscape and biological diversity and reduce the anthropogenic burden on the environment” with its achievements in legal framework development, updating PA and forest management plans, transferring biotopes to protection status, building capacity and awareness for peatland and forest conservation. In the long term, these are contributions to green development of the country.

The project has contributed with regard to several cross cutting themes namely governance, climate change mitigation, water management, livelihoods development, and capacity development. Governance for sustainable management of peatlands, forests and protected areas was enhanced through legal amendments and intersectoral coordination of stakeholders; the reductions in emissions of GHGs through peatland restoration constitutes a potentially significant climate change mitigation measure over time considering that approx.12 % of the country are peatlands; the project introduced engineering solutions are important contributions to improved water management; livelihood development has been initiative through enhancements in tourism infrastructure development and feasibility studies for value addition in biomass production; capacity was built for sustainable forestry, improved PA management, species conservation and habitat restoration.

GEF Additionality

Apart from the achievements regarding the legal framework, transferring territories to protection status, enhancing METT scores of PAs etc. the project's significance was in the opportunities for scientists and practitioners to take risks, experiment and develop pilot measures. It would not have been possible to undertake these important activities with the regular institutional budgets of the involved implementing agencies, namely those under the Academy of Sciences.

The project outcomes are directly related to the incremental reasoning at project design, namely the improved self-financing capacity of reserves (demonstrated for Sporovsky in particular), stabilization of target species, reduction of emissions, restoration of forest and peatland areas, improvements to hydrological regimes. These environmental benefit outcomes related to the incremental reasoning are reflected quantitatively in M&E documents and verifiable.

Catalytic/Replication Effect

Scaling up. As mentioned in previous chapters, the project has supported the development of a new law on Protection and Sustainable Use of Peatlands, a sectoral national program on sustainable use of hydroforestry reclamation systems, revised management plans for forestries, and seventeen species conservation action plans. The embedding of the introduced approaches in the legal and regulatory framework make it mandatory to scale them up in peatlands and forestries across the country. Likewise, biotope management approach was formally adopted by regional government authority and coordinated with local land users. Another example is the use of aurochs for sustainable forest management as evidenced in letters by the Ministry of Forestry to the project confirming that aurochs grazing has been included as a recommended practice to forestries.

Replication. Replication of project experiences is being promoted both in-country and abroad. The project is currently actively seeking funding (from the Russian Federation) to replicate measures such as ecosystem management through biomass removal, and the use of aurochs and tarpan for biomass control. A project to build on the experiences in tourism development in Sporovsky reserve, including provision of educational and practice experiences for students and contracting with tour operators, is already underway with Russian funding. Three applications to establish new populations of Taurus cattle have been launched.

The expertise in species conservation (Aquatic warbler) developed by the project has been recognized in the international conservation community and noted as a replicable methodology.

Larger scale upscaling and replication is currently hindered as GEF and EU funds are on hold.

Demonstration. The project has supported educational facilities such as information centers and eco trails to share information on the conservation values and ecosystem services of the peatlands, and approaches to maintain them, with the public.

Knowledge management. While the communication strategy of the project was adjusted around mid term of the project and engagement with state controlled media was scaled back, the project has continued to share experiences and educate the public about its conservation objectives and approaches, and collaboration with the scientific and conservation community has been pursued through in-person events and ongoing communication. Due to the COVID-19 pandemic, the project made significant changes in disseminating project results, with a greater focus on the use of telecommunications. As mass events could not be organized in the target areas, work with focus groups such as women, youth, and local communities was much diminished.

The project developed a communication strategy in 2021. Its priority themes for communication were: Sustainable development, sustainable management and use of natural resources, forest and wetland ecosystems management, environmental protection, energy efficiency, renewable energy, sustainable economic development, biodiversity, ecotourism, climate change, green economy, gender equality SDG #5, SDG #6, SDG #8, SDG #13, SDG #14. Its key objectives were to a) Position the key results of the project's work on wetland conservation and sustainable management, b) reflect the impact of the project's activities on wetland conservation and sustainable management processes, c) create a positive image of the project in the public information space, with local and national partners, development partners, beneficiaries and the general public, d) promote the expansion of the project's network of partners, and e) promote the project results and achievements at the global level. The UNDP CO Belarus website and social media became important platforms to share project results online.

Through social media and other strategies adapted to the pandemic (online information sharing), on-site information for the general public the project has generated heightened awareness in-country of the ecological significance of peatlands, promoted peatland reserves through recreational and educational opportunities.

Progress to Impact

According to the “TE Guidance for UNDP supported, GEF financed projects”, progress towards impact is assessed here based on GEF core indicators as the project did not develop a Theory of Change defining an ultimate development goal. At the time of TE, the update for GEF Core Indicators was not available, the values as of MTR are used here. The project is reporting in the core indicators 1, 3, 4,6 and 11.

Core Indicator 1: *Terrestrial protected areas created or under improved management for conservation and sustainable use (hectares).* Ha expected at CEO ER: 226,5534. Ha achieved at MTR: 137,423, Ha achieved at TE: 230,247. The areas (ha) broken down by project site are shown in the table below (source: GEF Core Indicators tracking tool as provided by the project).

Name of Protected Area	WDPA ID	IUCN Category	Total Ha (expected at PIF)	Total Ha (expected at CEO ER)	Total Ha (achieved at MTR)	Total Ha (achieved at TE)
Nalibokski	93947	IV	N/A	86,892	86,892	
Zvanets	145850	IV	N/A	16,824	8,000	

Sporovski	93900	IV	N/A	19,384	19,384	
Olmany mire	900564	IV	N/A	94,219	20,000	
Servech	n/a	IV	N/A	9068	3,000	
Turov Meadow	147	VI	N/A	147	147	

Core Indicator 3: Area of land restored (hectares). Ha expected at CEO ER: 13,016. Ha achieved at MTR: 6,956. Ha achieved at TE: 13,016 (12,456 ha of rewetted forest peatlands and 560 ha of restored grasslands)

3.3. Area of natural grass and shrublands restored. Ha expected at CEO ER: 560. Ha achieved at MTR: 230. Ha achieved at TE: 660 ha total: Turov meadow - 180 ha, Pogost meadow - 50 ha, meadows in Nalibokski PA – 430 ha.

3.4. Area of wetlands restored. Ha at CEO ER: 12,456. Ha at MTR: 6,726. Ha at TE: 13,256 hectares of 6 rewetted peatlands: Berezovik (4567 ha), Verechskoye (759 ha), Ostrovo (847 ha), Dokudovskoye (757 ha), Zhada (4521 ha), Servech (1805 ha).

Core Indicator 4: Area of landscapes under improved practices (hectares; excluding protected areas). Ha expected at CEO ER: 410,000. Ha achieved at MTR: 379,865. Ha achieved at TE: 653,905

- 4.3 Area of landscapes under sustainable land management in production systems. Ha expected at CEO ER: 150,000 (forest area where management plans are revised to avoid deforestation and reduce dryland forest degradation), 260,000 (peatland forest area where plans for management and wise use reduce peatland forest degradation). Ha achieved at MTR: 122,865 ha of rare biotopes have been identified on the territory of 33 forestries. 257,000 - Proposals on ways of further use of forest hydro ameliorative systems on the area of 257,000 ha have been developed and agreed with the respective forestries. Ha achieved at TE: 179,205 ha of rare biotopes have been identified on the territory of 43 forestries

Core Indicator 6: Greenhouse gas emissions mitigated (metric tons of carbon dioxide equivalent). Metric tons expected (direct/indirect) at CEO ER: 3,199,577/4,799,366. Metric tons expected (direct/indirect) at MTR: 1,138,490/1,107,735. Metric Tons expected (direct/indirect) at TE: 3,199,577/4,799,366

Core Indicator 11: Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment. Total number expected at CEO ER: N/A. Total number achieved at MTR: 54 (female, 21 male). Total number achieved at TE: 81 (38/43)

The project's contribution to environmental stress reduction is expressed in calculated reductions in GHG emissions due to restoration of peatlands. The calculations rely on state of the art methodologies that estimate GHG emissions based on plant community types and changes. Considering the extent of peatlands (approx. 12 % of the territory of the Republic of Belarus), impacts of the demonstrated rehabilitation of peatlands and the scaling up potential due to the inclusion of the measures in the legal framework as mandatory constitute a significant progress to impact and a high potential for sustainability. Capacity building and awareness raising among government agencies as well as public ecological education add to the impact and sustainability potential.

Contributions to changes in socio-economic status were made insofar as models were demonstrated successfully, namely for Sporovsky reserve, and options for income generation opportunities were

studied; current restrictions of cross border travel and trade limited opportunities to further effect socio-economic changes.

The current political and lingering pandemic situation pose barriers towards realizing socio-economic impacts as well as in terms of realizing the potential to engage civil society in activity implementation, using the expertise and experience of NGOs engaged in the conservation and education sector. The liquidation of NGOs has negatively impacted the outcomes of the project, namely with regard to PA management effectiveness, public awareness and ecological monitoring.

The project's long term impact on gender equality is limited to providing opportunities to women in income generation through tourism services and educational opportunities for girls with the potential to prepare them for employment or entrepreneurship in a developing green economy. However, significant gender sensitive changes to access and control of resources, or decision-making mechanisms were not effected by the project.

5. Main Findings, Conclusions, Recommendations & Lessons

Main Findings

Project rationale and design were logical and appropriate to target the three identified drivers of degradation of forest and wetland ecosystems. The project logic is sound also in terms of building on both in-country and international experiences, applying an approach that targets landscapes both within and outside Protected Areas, and re-introducing measures of sustainable natural resource use based on traditional practices in the country and specifically in the project regions.

Design hierarchies were clear with overall objective, outcomes, and outputs; activities under each output were described in technical/scientific detail. Project formulation was inclusive of all relevant stakeholders; their roles and responsibilities in activity implementation and oversight were clearly defined.

Indicators and targets for the results framework were defined with a maximalist approach, assuming that optimal ecological/hydrological conditions would be achieved and underestimating the severity of climate change impacts (namely lack of snow cover, droughts) and the speed of their acceleration during the project life. Complex interactions among species impacting populations of indicator species could not be foreseen in the setting of targets.

Despite challenging conditions including the COVID-19 pandemic and political developments both effecting travel and collaboration in-country and cross-border and eliminating civil society organizations as implementing partners in the later project phase, the project was implemented successfully, with a high level of effectiveness and efficiency.

The project achieved its objective "To introduce a conservation-centered and financially self-sufficient approach to management of forests and wetlands that harbor internationally important biodiversity and are important for climate and land integrity". For biodiversity, sustainable forest management, land degradation and climate change mitigation targets have been exceeded; for protected area management, the target was achieved.

While financial sustainability to maintain all practices demonstrated at the pilot sites is not secured yet, nevertheless the project did introduce options for conservation-centered and financially self-sufficient approaches to management of forests and wetlands. In particular at Sporovsky Reserve, self-financing was successfully demonstrated, relying on the sale of biomass, production of woodchips and services to other entities.

Key achievements under Outcome 1 include the creation of a total of 430 hectares of highly productive meadows as natural forage habitat for bison maintained by mowing and grazing bison and tarpan horses; mowing and bush removal on over 11,000 ha of open sedge mire in Sporovsky and Zvanets reserves.

Not all quantitative targets under Outcome 1 are fully achieved. Factors impacting achievements towards targets included unforeseen severe climate change impacts (drought, lack of snow cover and therefore of spring flooding), the political situation and liquidation of NGOs as implementing partners, lack of activity implementation/non-compliance by private enterprise, unsustainable use of water resources upstream of project sites, and as a result of the COVID-19 pandemic which reduced tourist numbers.

Outcome 2 has been achieved, and exceeded with regard to numbers of revised management plans for forestries and areas with future use of forest hydro amelioration systems. Key achievements under Outcome 2 include the transfer of 182,222 ha (against target of 150,000 ha) of forest lands with rare biotopes into protection; 16 forestries (against target of 10) envisage forestry management plans in line with sustainable use of protected biotopes; development of the sectoral national program on sustainable use of hydro forestry reclamation systems, and agreement with over 104 forestries on the use of forest hydro ameliorative systems on 474,700 ha.

Outcome 3 was largely achieved. Some targets for indicators species could not be fully achieved when populations were impacted by decline in food sources or growth of predator species, and international bison transfers were not possible due to pandemic and political situation. Key achievements under Outcome 3 include the development of National Action Plans for the conservation of 17 species and their submission for approval to the Ministry of Environment; and issuance of 9 genetic passports for the Nalibokski micro population of the European bison.

The achievements towards targets are testimony to effective management; all reporting, M&E and financial data confirm effectiveness and efficiency in implementation. The fact that in 2020, despite the pandemic and related restrictions, nearly all tasks planned for the year in the annual work plan were completed, speaks to the high standard of implementation.

Stakeholder cooperation and a well-functioning oversight body (project board) with all national stakeholders represented was a key success factor in implementation. The project team facilitated stakeholder dialogue and cooperation throughout the project, enabling a smooth process of consensus building for the draft and submission of the Law on Protection and Sustainable Use of Peatlands, as well as for the development and approval by the Ministry of Forestry of a sectoral program to optimize usage of hydro-reclamation systems in forestry until 2035. The law on Protection and Sustainable Use of Peatlands is the first in Europe to establish a legal framework for peatland protection and sustainable use of their resources.

Civil society participation was compromised due to the liquidation of NGOs in March 2022. Management of Turov PA by “BirdLife Belarus” ceased upon liquidation of the organization, and resulted in a significant decline of the METT score for Turov PA.

The project practiced adaptive management responding to the COVID-19 pandemic and political situation in the country by focusing on online communication strategies, as well as to unforeseen impacts of climate change and ecological processes effecting project outcomes by developed engineering solutions and investment plans.

Conclusions

The project achieved its objective and three planned outcomes, though a number of quantitative targets were not achieved as climate change impacts had been underestimated and optimal ecological conditions had been assumed for the years of project implementation

The project made significant contributions to safeguard peatland and forest ecosystems in the Republic of Belarus. The likelihood of the project’s long term impact is enhanced in particular through the project’s successes developing the law on protection and sustainable use of peatlands, the sectoral national program on sustainable use of hydro forestry reclamation systems into the legal framework, and National Action Plans for the conservation of 17 species.

The project was instrumental in developing a body of knowledge and experiences on peatland conservation practices and species conservation, namely Aquatic Warbler and European bison, which place the country in a leading position in these fields, recognized regionally and internationally. The project assisted in achieving the first law on peatland conservation as well as the first national digital register of peatlands.

While not succeeding in creating financially sustainable mechanism for all pilot areas, mechanisms were implemented in Sporovsky reserve successfully to demonstrate financial self-sufficiency for PAs to invest generated income back into law enforcement and conservation from which lessons can be adopted to scale up countrywide. Economic activities in other reserves still need further development, and options identified with project support need to be evaluated further. Exporting pellets abroad as foreseen by project design could not be realized under current conditions of cross border restrictions.

For local livelihoods and green economic development, the project has enhanced enabling conditions by creating improved infrastructure for ecotourism development, and supporting sustainable natural resource use, i.e. improved processing and marketing of cranberries. Recent trends in tourism, with more affluent visitors frequenting the reserves, suggest that there is a growing potential for tourism development as an income source. The project contributions are also to be seen in the light of the economic value of restored peatlands; for example, the restoration of the drained Zhada bog in the

Vitebsk region of Belarus could equal an economic value of more than USD 10 million per year based on its social and environmental services.¹¹

Project results enjoy a high degree of institutional and governance sustainability due to the successes in developing the legal and regulatory framework, in building capacity and awareness and as a result of good country ownership. However, challenges remain for financial sustainability, and environmental and socio-political sustainability are impacted by climate change and current political trends.

Recommendations

Recommendations to the PMU in the final project phase and during project final events:

- Discuss scale-up plan with relevant stakeholders to scale up project experiences/practices beyond project areas and implement the law on “conservation and sustainable use of peatlands”. Such a scale-up plan could be utilized (in the future) for further funding proposals.
- Discuss with Project Board whether its coordinating function among national stakeholders will be required beyond project life for scale up, and for implementation of the law on “conservation and sustainable use of peatlands” (this is based on experiences many projects have made. The project or its oversight body fulfilled a function for example in cross-sectoral coordination, which needs to be maintained to make project results sustainable).
- Sharing project achievements and lessons, and ensure they are available to the public beyond project life
Upload documents (technical and popular) on project achievements, lessons learnt, and other to open platforms and ensure they remain accessible to the public. Place information on social media about the availability of documents. Organize online events (webinars) for different audiences to educate about project achievements and their significance.

Recommendations to UNDP for long term (when international funding can be received again)

- Prepare project proposal on tourism development in selected reserves (tourism capacity assessment, visitor management plans, destination marketing plans, tourism infrastructure development)
- Prepare funding proposals for in-depth feasibility studies including study tour/s to Poland (based on project consultant recommendations) on a) production of pellets from grassy biomass, b)

¹¹ <https://www.undp.org/belarus/news/economics-restored-peatlands-why-we-invested-rehabilitation-zhada-bog>. The economics of restored peatlands: why we invested in the rehabilitation of Zhada bog. January 29, 2021

production of biodegradable disposable tableware, c) export of biomass and the fattening of steers.

- Prepare proposals to support regional collaboration projects on Aquatic Warbler, European Bison conservation, to scale up project experiences

Recommendation to UNDP, short term

- Explore options to conclude agreements with implementing partners that will make it binding (more than an MoU) to maintain and use equipment received from projects for the agreed purpose and to implement activities as agreed.

Lessons Learned

Identifying Indicators and Targets at Project Design Stage

- Targets related to indicator species populations are of limited suitability as many factors are beyond the control of the project and their impact on indicator populations is unpredictable. It is better for project design and setting targets to take a realistic, not maximalist approach assuming that optimal ecological conditions (hydrological) can be achieved. It is better to choose indicators and targets that are more directly related to output and activity level, rather than ecological indicators influenced by too many external factors. Monitoring of indicator species population to measure achievement toward target also requires lots of human resources and equipment, and is expensive therefore.
- Climate change impacts on specific targets are difficult to predict, despite good in-country data on observed and projected climate change. As a result, under-achievement of certain (ecological) targets could lead to misinterpreting the actual overall achievements of the project. Climate change impacts were more severe and happened faster than anticipated during the project life. The risk of climate change impacts should not be underestimated.

Facilitating Stakeholder Dialogue and Collaboration – Best Practices

- Efficient, productive and open dialogue between project stakeholders at early stage, and representation of all national stakeholders in project board, promoted good coverage on the project in national media in early implementation stage
- The project's role in facilitating stakeholder collaboration was key to successfully and efficiently developing legal and sector program drafts for submission; examples include:
 - The project's facilitation of stakeholders to work together on preparing the draft law "On conservation and sustainable use of peatlands" was effective; as a result, the draft law was agreed without fundamental changes and submitted to the government in accordance with national procedures.
 - Close collaboration with the national partners of the project has allowed to institutionalize the relevant scientific and practical innovations by including them in the new law on peatland conservation.

- Project's role in facilitation of interactions between the Academy of Sciences, relevant ministries and Leskhozoes (governmental forest enterprises) resulted in the development and approval by the Ministry of Forestry of a sectoral program to optimize usage of hydro-reclamation systems in forestry until 2035.

Planning and Implementing Sequence of Project Activities – Best Practice

- Early procurement of equipment for partners in the sustainable management of mire ecosystems (completed 2018), allowed for practical testing of the proposed methodologies during following field seasons of the project making assessment of environmental and economic results of the project activities with a high degree of veracity possible.

Lack of Mechanism to Ensure Activity Implementation based on MoU with private enterprise

- Despite efforts to strengthen cooperation with JSC Turovshchizna enterprise and make them prioritize implementation of agreed activities, ultimately the activities were not implemented. Based on MoU, project has no leverage to enforce compliance with MoU.

There is also no effective mechanism to ensure equipment provided by the project is maintained and used for the purposes it was provided for.

COVID-19 pandemic – Adaptation, Electronic Media/social Media suitable for Public Outreach – Best Practice

- The project team shifted the focus of its outreach efforts to working with electronic media in the wake of the COVID-19 pandemic. This allowed the project to expand its outreach to the general public.

NGOs with relevant expertise and experience are important implementing partners

- The NGO Birdlife Belarus played an important role in implementing activities in education (Turov ecological center), monitoring species and managing Turov meadows reserve. Upon their liquidation, METT score dropped from 88 to 60, impacting negatively on project final achievement at this reserve.

Financial self-sufficiency of Reserve is possible – depending on human resources and environmental conditions. There is not one model to fit all reserves.

- Sporovsky reserve was able to not only cover operating costs but make a profit. Success factors included the initiative and enthusiasm of reserve leadership (manager), and the fact that biomass could be brought out easily.
- Other reserves were not as successful; it was not easy to bring out biomass due to landscape features; other factors: manager changed several times; leadership less enthusiastic and capable to pursue income generation opportunities.

Annexes

Provided altogether as a separate document

Annex 1	Rating Tables (TE Guidance GEF/UNDP)
Annex 2	List of Documents Reviewed
Annex 3	Individuals met and schedule of online meetings and field visits
Annex 4	Questionnaires
Annex 5	Evaluation Question Matrix
Annex 6	Signed statements by evaluators on ethical conduct
Annex 7	Project Results Framework
Annex 8	Audit Trail
Annex 9	GEF Core Indicators
Annex 10	Photo Annex (Naliboksky and Sporovsky reserves)