

ANNUAL REPORT FOR 2021¹

“DOBROČSKÝ PRALES NATIONAL NATURE RESERVE”

State: **Slovak Republic**

Name of the area: **Dobročský prales National Nature Reserve**

Year and number of years since the award or renewal of the European Diploma of Protected Areas: ***The Resolution CM/ResDip(2018)12 on the renewal of the European Diploma for the Dobročský prales National Nature Reserve (Slovakia) adopted at the 1321st meeting of the Committee of Ministers on 4 July 2018, valid by 18 September 2028 /hereafter “Resolution No (2018)12”²***

Central authority concerned:

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1. Condition

The following condition is determined by the Resolution No (2018)12:

Conduct a study involving all stakeholders to verify necessity of a new forest road into the buffer zone and identify measures guaranteeing a least intervention solution to minimise the impact of the road, provided that the construction is not carried out during the vegetation period and in the breeding season, and that the felling itself does not include heavy machinery; a natural re-cultivation of the road should be foreseen once the forestry work has been carried out; report to the Council of Europe before starting the road works.

Due to repeated and extensive calamity in the adjacent area of the Dobročský prales National Nature Reserve (hereafter “Dobročský prales NNR”) and the priority of its processing by sanitary logging, the forest manager and administrator of the area - the Forests of the Slovak Republic, state enterprise – branch Čierny Balog (hereafter “FE Čierny Balog”) did not plan the road construction in this reported period.

¹ Reported period 1st September 2020 – 31th August 2021

² Originally resolution No (2003)6, resolution No (2008)19 and resolution No (2012)11, respectively

2. Recommendations

Four recommendations set up by the Resolution No (2018)12 are:

1. Add a chapter on scientific research to the management plan defining clearly the needs of the management of the nature reserve and including a timetable to avoid surveys that are not directly connected to the further development of the area.

During this reported period research in the Dobročský prales NNR was implemented in accordance with the Management Plan for the Dobročský prales National Nature Reserve (Special Area of Conservation SKUVE0047 Dobročský prales) for the period 2018–2047.

The climate change research continued this year. More details are provided in recommendation No. 3.

Regarding to bats' research, records from the acoustic monitoring collected in 2020 were analysed by the researchers of the Institute of Forest Ecology of the Slovak Academy of Sciences in Zvolen (hereafter "IFE SAS"). Automatic bat detectors revealed the presence of at least 12 bat species. The list of species with frequency of their records is in the report attachments. The IFE SAS in cooperation with the State Nature Conservancy of the Slovak Republic, Poľana Protected Landscape Area and Biosphere Reserve Administration (hereafter "Poľana PLA-BR Administration") conducted a special study on the Giant noctule (*Nyctalus lasiopterus*), one of the rarest and the biggest European forest bat. Altogether, 18 individuals were captured in nearby Valleys of Čierna dolina and Šaling during this summer. All of them have been banded. Using the radio-tracking of some individuals their tree roosts had been explored. Roosts of the Giant noctule colony were not proofed in the Dobročský prales NNR, however, their occurrence is very likely there.

The research on rare fungi species led by Prof. Vladimír Kunca from the Department of Applied Ecology, Faculty of Ecology and Environmental Sciences, Technical University in Zvolen was running also this year. During summer, Prof. Kunca together with Dr. Jan Holec from the National Museum, Prague examined fungi fruiting bodies on lying dead wood. Not all of the fungi species that were found have been determined yet.

2. Develop, according the precautionary principle, a strategy on how to deal with invasive alien species, in case of their appearance.

Results of the monitoring of plant invasive alien species (IAS) in the Dobročský prales NNR and adjacent area this year suggest that the situation with the Canadian goldenrod (*Solidago canadensis*) spreading in Brôtovo Valley has been improved. Compared to last year, it was found only 50 % of individuals now. In Za Dlhý grúň Valley it was recorded almost the same number of individuals as in the previous period. All individuals of invasive plants were eradicated in accordance with the current methodology (i.e. uprooting). Other IAS were not recorded during our monitoring. The area of the Dobročský prales NNR itself is free from the presence of IAS up to now.

Monitoring and elimination of Canadian goldenrod from the known adjacent areas is constantly realized in co-operation of the Poľana PLA-BR Administration and FE Čierny Balog

3. Prepare a study on the effects of climate change and global warming, both on the nature reserve itself and on the regional forests, including the strategy on how to manage the surrounding forest to avoid negative impact in the nature reserve.

During this reported period field works of a research project entitled “*Trade-offs between biomass production and biodiversity in beech-fir forests under changing environmental conditions (PROBIOFOR)*” has started. A multi-specialised team of experts from the Technical University in Zvolen has been working on this project. Hydro-meteorological station near the Sedmák lodge was renowned and collection of basic climatic variables has been performed since November 2019. Other research activities were:

- Microclimate measurement (temperature and humidity) in reserve with six sensors placed at transects
- Soil water potential measurement with 12 sensors at transects
- Measurement of the seasonal growth of trees (fir, beech) with dendrometers (29 trees at transects)
- Phytocoenological records at transects
- Monitoring of bird species diversity in core zone and in adjacent managed forest
- Fir, beech, spruce sampling in the core zone for dendrochronological study
- Soil respiration measurement in the core zone and also in the border area
- Spruce sampling in adjacent managed forest to compare spruce growth in reserve and in managed forest
- Measurement of microclimate and the seasonal growth of fir, beech and spruce in the border area and in managed forest

It is a perennial research and thus the more complex evaluation of results will be possible in the next years. More detailed information about this research is available in report attachment.

4. Explore the possibility of moving the exhibition from the Pred Skalickou cottage to the Forest Museum.

During the reported period employees of FE Čierny Balog finished construction of a wooden summer house in the open-air museum in the Vydrovská dolina Valley, where the exhibition from the Pred Skalickou cottage would be transferred. Green roof and European diploma logo (made by jeweller Magdaléna Jančurová and her husband) placed at the entrance to the summer house underline the thematic orientation of the summer house. The exhibition from the Pred Skalickou cottage is suitable only for indoor conditions thus new version adapted for outdoor conditions has been prepared nowadays and it will be financed by the State Nature Conservancy of Slovak Republic.

3. Local management

In the reported period the local management respected the principles and measures defined in the Management Plan for the Dobročský prales NNR (Special Area of Conservation SKUVE0047 Dobročský prales) for the period 2018–2047.

“Non-intervention” mode has been applied in the core zone. FE Čierny Balog did not report the calamity from the core zone because there is no calamity reporting obligation in areas under the 5th level of protection. However we suppose the occurrence of dispersed calamity in connection with natural disturbances and developmental stages of primeval forest there.

There was only sanitary logging carried out in the buffer zone (windbreak calamity – 423 m³, bark-beetle calamity – 2 568 m³). Preferential sanitary logging has blocked interventions focused on modification of tree species composition in the buffer zone even in this reported period.

The calamity occurrence was announced by FE Čierny Balog via a special forest management information system. The Poľana PLA-BR Administration made a reconnaissance of the calamity area, arranged processing rules of the calamity and issued an approval to its processing.

4. Borders

No changes.

5. More details

Due to the pandemic spread of COVID-19, the Open Day event in the Dobročský prales NNR for inhabitants of the Čierny Balog Village was not organized. Similarly, guided excursions to the core area of the primeval forest were cancelled. Guiding for individual visitors in buffer zone was provided by NGO Vydra (in total 177 visitors). The NGO Vydra pointed out about fallen trees across the excursion track to exclude forming some roundabouts. This problem was then fixed by the FE Čierny Balog employees.

In the course of promotion of the Dobročský prales NNR and its European diploma, it was possible to accomplish only one event during the evaluated period. It was an Education Day for almost 100 pupils in the eco-centre of the Poľana PLA-BR Administration. Pupils could visit different posts, including a post about the Dobročský prales NNR and its European diploma. They could learn about deadwood, its function as a sponge and to observe species diversity associated with deadwood. Finally, they experienced how many kids are able to embrace the former biggest fir of the primeval forest.

Annexes:

1. The list of the bat species
2. PROBIOFOR – report from the research
3. Wooden summer house – pictures
4. Education day - pictures

In Zvolen, 10th November 2021

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