

# ANNUAL REPORT FOR 2024<sup>1</sup>

## “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 1321<sup>st</sup> meeting of the Committee of Ministers on 4 July 2018, valid by 18 September 2028 /hereafter “Resolution No (2018)12”<sup>2</sup>***

### Central authority concerned:

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### Authority responsible for its management:

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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.**

Despite great efforts, the spread of the bark beetle “calamity” in the surroundings of the Dobročský prales National Nature Reserve (hereinafter “NNR”) has still not been halted. In mid-March, a state of emergency was declared in connection with the “calamity” in the Brezno District.

The State Nature Conservancy of the Slovak Republic, the Poľana Protected Landscape Area and Biosphere Reserve Administration (hereinafter “Poľana PLA-BR Administration”) contacted the administrator and manager of the area - the Forests of the Slovak Republic, State Enterprise - Horehronie Branch (hereinafter “FE Horehronie”) regarding the construction of a new forest road. The response showed that the processing of the sanitary logging is the highest priority for the FE Horehronie. If the situation changes, experts would prepare a study to assess the potential impact of the construction of the new road in the territory of the Dobročský prales NNR.

<sup>1</sup> Reported period 1<sup>st</sup> September 2023 – 31<sup>th</sup> August 2024

<sup>2</sup> 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 undertaken in line with the Management Plan for the Dobročský prales National Nature Reserve (Special Area of Conservation SKUEV0047 Dobročský prales) for the period 2018-2047<sup>3</sup> (conservation measures No. 1.2, 1.3, 1.9, 2.5 and 2.6 within the Chapter 3.4).

The project entitled PROBIOFOR "The relationship between biomass production and biodiversity in fir-beech forests under the influence of changing environmental conditions" was finalized as far as measurements are concerned. As mentioned in the previous reports, the project is focused on climate change research and is carried out by experts from the Technical University in Zvolen. More information is provided in the recommendation no. 3.

Research activities on the Giant noctule (*Nyctalus lasiopterus*) which are carried out by researchers from the Institute of Forest Ecology of the Slovak Academy of Sciences in Zvolen, did not detect the species occurrence in the NNR this year either.

Research of rare fungi associated with dead wood led by Prof. Ing. Vladimír Kunca, PhD., from the Department of Applied Ecology of the Faculty of Ecology and Environmental Sciences of the Technical University in Zvolen was completed.

No other research activities were carried out in the NNR.

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

The monitoring of invasive alien species in the Dobročský prales NNR and its surroundings confirmed the presence of the Canadian goldenrod (*Solidago canadensis*). The population status of this species is currently under control. The reduction of its abundance is positively influenced by the following activities within the buffer zone of the NNR and its surrounding:

- annual removal and elimination of individuals,
- the mowing of roadsides,
- a slightly increased proportion of mown meadows, especially in the Za Dlhý grúň Valley,
- the frequent use of roadside areas for the temporary storage of wood.

During regular monitoring by the Poľana PLA-BR Administration staff at the end of August, 16 individuals of the Canadian goldenrod were found in the Za Dlhý grúň Valley and 4 individuals in the Brôtovo Valley. They were removed by uprooting in accordance with legislation in force. The area of the reserve itself is still free of invasive alien species.

**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**

Climate change research, carried out within the PROBIOFOR project continued by measuring soil respiration, monitoring tree growth and the microclimate of the vegetation and soil. For comparison, similar measurements were also carried out on the site of the fire (the fire is

<sup>3</sup> Available within the table overview: <https://www.sopssr.sk/web/?cl=119>

described in more detail in section 3. Local management). The results so far were presented at the TRACE 2024 international conference in Romania and published in the abstract collection<sup>4</sup>.

After nineteen years, the evolution trends of the herbaceous layer in relation to the dynamics of the tree layer were assessed by repeated measurements of dendrometric parameters and phytocoenosis characteristics on the same plots. The results show that the development of herbaceous layer follows the trends in the tree layer, while these are very dynamic processes that are specific to certain microhabitats<sup>5</sup>. The 103 species (25 liverworts and 78 moss species), of which 40 species are new in the territory, were identified during the study of mosses in the Dobročský prales NNR<sup>6</sup>. Further result publications are also in preparation. The research is planned to continue.

On 12<sup>th</sup> of October 2023 the Poľana PLA-BR Administration and the scientific team organised a field seminar entitled "Adaptation of forest trees and carbon fluxes in forest ecosystems in times of global climate change". The aim of the seminar was to present partial results of climate research mail to the staff of the FE Horehronie. The researchers of the above-mentioned project from the Technical University in Zvolen presented the results of their measurements and also they demonstrated measuring devices directly on the research plots in the buffer zone of the reserve. Totally 30 representatives from both the forestry and nature conservation institutions and from the scientific community took part in the seminar. In the concluding discussion, everyone agreed on the great benefits of the event. Similar activities are planned for the near future, with a stronger focus on the utilisation of research results in forestry practise.

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

During this reported period, the public had limited access to the Forest open-air museum in the Vydrovská dolina Valley. In March 2024, the Brezno District Office issued a decision prohibiting the use of the forests in the Vydrovská dolina Valley by the public, with the exception of weekends and public holidays. In July, a new decision was issued in this respect and the open-air museum was completely closed to the public. The reasons for this are both, the reconstruction of the open-air museum as well as sanitary logging.

The management of the open-air museum assumes that it will be open to the public again from May 2025 (as the validity of the decision is until 30 April 2025).

### **3. Local management**

During 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 years 2018-2047.

No forestry measures were carried out in the core zone. The "non-intervention" regime continued to apply here, though a "calamity" in the volume of 2,900 m<sup>3</sup> was registered here. Some spruce trees that had died in the previous season have now been uprooted by the wind. They are gradually beginning to decompose. Faster decomposition is to be expected for lying deadwood. In brighter areas, abundant natural regeneration of all main tree species (beech, fir, spruce) was observed.

<sup>4</sup> [https://silvic.unitbv.ro/images/conferinte/trace2024/TRACE2024\\_Book\\_of\\_abstracts.pdf](https://silvic.unitbv.ro/images/conferinte/trace2024/TRACE2024_Book_of_abstracts.pdf)

<sup>5</sup> Jergus Rybar, Michal Bosela, Peter Marcis, Mariana Ujházyová, Dominik Polťák, Lucia Hederová, Karol Ujházy, Effects of tree canopy on herbaceous understorey throughout the developmental cycle of a temperate mountain primary forest, Forest Ecology and Management, Volume 546, 2023.  
Rybar, J., & Bosela, M. (2023). Trade-offs or complementarity between biomass production and biodiversity in European forests: a review. Central European Forestry Journal, 69(4), 201-213

<sup>6</sup> Širka, P., Kováč, Š. & Papp, B. (2023): Contributions to the bryophyte flora of the Dobročský prales National Nature Reserve (Veporské Vrchy Mts, Central Slovakia). – Studia bot. hung. 54(2): 145–156

The sanitary logging was carried out only in the buffer zone (wind “calamity” 8 m<sup>3</sup>, bark beetle “calamity” 3,613 m<sup>3</sup>, drought 3,392 m<sup>3</sup>). After the reporting the occurrence of the “calamity” by FE Horehronie, the Poľana PLA-BR Administration carried out an inspection in the affected stands. “Calamity” processing was not restricted. The main reason for this was the relatively high proportion of unprocessed “calamities” from the previous period.

On 1<sup>st</sup> of May 2024, a fire broke out in the buffer zone of the Dobročský prales NNR, in the part of the Za Dlhý grúň Valley. The affected area was about 1 ha. From there, the fire spread to the core zone and partially damaged the habitat of the Community interest Asperulo-Fagetum beech forests (9130) on an area about 0.04 ha. The extinguishing work was made more difficult by worse weather conditions and the spread of the fire via the root system. However, thanks to the rapid and professional action of the Fire and Rescue Service together with volunteer firefighters and local foresters, the fire was quickly localised and brought under control within a few hours.

In the following months, the Poľana PLA-BR Administration staff inspected the fire site. In a relatively short time, a herbal layer was detected at the fire site (especially in open areas), which indicates the high regeneration capacity of the site.

#### **4. Borders**

No changes.

#### **5. More details**

Due to the continuing unfavourable “calamity” situation and the ongoing research, excursions into the core zone of the reserve were restricted to interested specialists. FE Horehronie accompanied 4 groups with a total number of 102 participants. They were foresters from France, Germany and Croatia as well as forestry students from the Secondary School of Forestry in Banská Štiavnica. NGO Vydra employees accompanied the visitors only on the educational trail in the buffer zone of the reserve. In total, there were 6 groups with 67 participants. Of these, 5 groups were individual visitors (57) and 1 group consisted of pensioners (10 visitors).

As part of the promotion of the Dobročský prales NNR and raising awareness of its European Diploma award, the information boards in the Brôtovo Valley were renovated. The event Day of the School, which is usually organised in the open-air museum, took place this year on the premises of the primary school in Podbrezová. All the students participated in it. At the stop about primeval forests, they learnt about primeval forest species and learnt to recognise the signs of the primeval forest. The Dobročský prales NNR and its European Diploma award was presented here in more detail.

During the reported period, other environmental education events were held to familiarise participants with the Dobročský prales NNR. (Day for Biodiversity, Through the Ostrá Lúka forest). The participants could take small gifts with the European Diploma logo (bookmarks, postcards, stickers) as souvenirs.

The Slovak Radio and Television broadcasted several programmes in which the Dobročský prales NNR was presented. On 17<sup>th</sup> of October 2023 it was broadcasted a coverage in **Regina** – a daily magazine from Slovak regions (<https://www.rtvs.sk/televizia/archiv/14356/430065#225>), on 4<sup>th</sup> of November 2023 in the Na zelenej adrese – a weekly magazine a coverage where Prof. Ing. Stanislav Kucbel PhD. presented the results of the climate change research (<https://www.rtvs.sk/televizia/archiv/20348/432783#509>). The magazine is aimed on environmental awareness raising and sustainable development of Slovakia. On 31<sup>st</sup> July 2024 a documentary film “V pralesoch Karpat” (<https://www.rtvs.sk/televizia/program/4850/482076>) was broadcasted.

Annexes:

1. Field seminar – photo documentation
2. Field seminar – attendance list
3. Renovated information boards - photo documentation
4. Environmental education events presenting the Dobročský prales NNR - photo documentation

In Zvolen, 29<sup>th</sup> of October 2024

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