Council of Europe´s European Diploma for Protected Areas

Bílé Karpaty Protected Landscape Area Annual Report for the year 2018

State: Czech Republic

Name of the area: Bílé Karpaty/White Carpathians Mts. Protected Landscape Area (PLA)

Year and number of years since the award or renewal of the European Diploma for Protected Areas: ED awarded 2000, renewed 2009 (9 years)

Central authority concerned:

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Conditions:

1. Keep at least the existing access to the Radejov hunting reserve for the visitors and decrease the population size of the non-indigenous game species, such as fallow deer, control the pressure exerted by game so that the forest may regenerate, draw up a hunting plan in conjunction with the administration of the protected area, and finally refrain from building any new facilities (e.g. hunting lodge);
2. Amend agri-environmental funding rules in accordance with the protected area's management plan in order to secure financing of management needed to attain objectives set.

1. **The Bílé Karpaty PLA Administration has regularly and continuously been negotiating with the Radejov hunting preserve (1,600 hectares) managers of the main private owner the ways how to minimalize the non-native game species numbers, particularly the fallow deer (*Dama dama*) and the red deer (*Cervus elaphus*), aiming at reducing browsing impact of the game on forest natural regeneration there. Because the hunting was preserve had been open to the public only if no hunting activities are carried out and only with a staff as a guide, the Duha /Friends of the Earth of the Czech Republic, took the case to a court. In October 2018, the Supreme Administrative Court decided that the hunting preserve does legally not exist due to administrative mistakes and serious lapses made in the early 1990s. Thus, the Court suspended the entry ban and the game-keeping forest it should be open for the public year-round. In addition, the case has been watched by the Ombudswoman of the Czech Republic as well as by Municipality Council of the Town of Strážnice.**

2. **The subvention programmes/subsidiary schemes allow supporting suitable management activities to reach nature conservation goals. More recently, agri-environment-climate measures also can be used for climate change mitigation and adaptation measures. In addition to activities funded from the EU budget (e.g., Operational Programme The Environment funded from the Structural Funds), there also have been some subvention programmes/subsidiary schemes from the State Budget, *inter alia*, from the Landscape Management Programme, or Landscape Natural Function Restoration Programme. The issue is of great importance in the Bílé Karpaty/White Carpathians Mts. PLA, because the protected area displays one of the highest percentage from the total size owned by private owners among the large-size Specially Protected Areas, *i.e.* National Parks and PLAs, in the country.**

Recommendations:

1. Reassess and guarantee the requisite financial and human resources to ensure implementation of the management plan;
2. Arrive at a concerted method of agricultural management that promotes the Bílé Karpaty Protected Landscape Area through close co-operation between the Ministries of Agriculture and the Environment, the departments active in the field (agriculture, forestry and Bílé Karpaty departments) as well as the local authorities and other bodies involved;
3. Eliminate non-indigenous species, namely fallow deer, from the nature reserves and the other strictly protected areas and further develop consultation between the Ministries of Agriculture and the Environment in order to control big game populations;
4. Continue the current forestry policy of conversion to hardwood stands and encourage the natural regeneration of existing hardwood forests;
5. The European Diploma should be more visibly associated with the image of the Bílé Karpaty Protected Landscape Area (for example, in the information centres, in publications and on the website).

1. **The budget for the PLA Administration has been improving since the economic crisis in the late 2000s. In total, there is 29 staff members located at three workplaces. The Administrations consist of departments as follows:**
    i. **Department of Operations**
    ii. **Department of nature Conservation and Landscape Conservation**
    iii. **Department of Nature and landscape Management**
    iv. **Department of Biodiversity Monitoring.**
2. **Due to nature and landscape character, agricultural production is a key driver for the PLA. The collaboration between the sectors of agriculture and nature conservation has been continuing, *i.a.* through agri-environment climate schemes. Moreover, the large ungulate high numbers have been a serious problem, similarly to other parts of the Czech Republic.**
3. **See above**
4. **In addition to famous Bílé Karpaty/White Carpathians Mts. species-rich meadows, almost half of the PLA is covered by forests. The area has been inhabited by humans for a long time and its natural conditions had been shaped by the Wallachian colonisation. In the 19th century, the first non-native woody species, particularly the Norway spruce, were introduced to the Bílé Karpaty/White Carpathians Mts. forests. Thus nowadays, the Norway spruce is the second most frequent woody species there, while the European beech has been the most common. Current forest management reverts to natural regeneration of broadleaved trees. Moreover, overpopulated hoofed game poses a serious problem there. There also are many land owners within the PLA. From a point of view of forest typology, a nutrient-rich series and a series enriched by mull prevail in the Bílé Karpaty/White Carpathians Mts.**

5. **The fact that the PLA has been a holder of a prestige pan-European award is mentioned in publications recently issued by the PLA Administration. At this moment NCA CR´s web pages lay-out has been reshaped and there will be special detailed information on the importance of the European Diploma and both the sites managed by the NCA CR, having been awarded by the ED since 2000 (cf. http://www.ochranaprirody.cz/o-aopk-cr/aopk-cr-informuje/aktuality/evropsky-diplom-pro-chranena-uzemi/, http://www.ochranaprirody.cz/mezinarodni-spoluprace/mezinarodni-organizace/ respectively). The ED award is also presented on some webpages in English, *e.g.* http://www.cittadella.cz/europarc/index.php?p=index&site=CHKO_bile_karpaty_en.**

6. **Natural heritage (general abiotic description: geomorphology, geology and hydrogeology, habitats, flora, fauna, landscape) – State of conservation**

The Bílé Karpaty/White Carpathians Mts. PLA covers 715 km^2 and is located in the south-eastern part of the Czech Republic in the Moravian part of the mountain range as well as in the eastern part of the Vizovice Hills, neighbouring the Biele Karpaty/White Carpathains Mts. PLA on the Slovak side. Geographically, the area is a part of the Outer Western Carpathians and constitutes one of the westernmost parts of the entire mountain range. The highest peak of the area is Mt. Velká Javořina (970 m a.s.l.), the lowest point is situated at village of Sudoměřice (240 m a.s.l.).

As a part of the Western Carpathian mountain range, the Bílé Karpaty/White Carpathians were shaped by Alpine orogenic processes during the Tertiary period and are characterised by their typical nappe structure of flysch units. Therefore, the area is made up of inner flysch layers, formed by alternation of sandstone and claystone layers. Flysch landscapes are characterized by gentle slopes, rounded ridges and broad shallow valleys. Flysch bedrock, a sequence of alternating layers of Palaeogene sandstones and claystones, is easily eroded and subjected to frequent landslides. Its claystone layers are impervious to water, which often results in the formation of seepages on slopes. Soils on flysch are usually deep, with texture ranging from clayey-loamy at sites where claystones prevail to loamy-sandy on sandstones. Flysch rock mas is pervaded with neovolcanite, tertiary andesite as real sills. Igneous rocks are accompanied with a varied range of minerals.

With respect to climate, the Bílé Karpaty/White Carpathinas Mts. PLA around the town of Strážnice is categorised as a warm climatic region with mean annual temperatures of + 8.9 °C. Most of the PLA area belongs to the mildly warm climatic region with mean annual temperatures of + 7.6 °C and the areas around the Vlárský průsmyk Pass and the peaks of Mt. Velká Javořina, Mt. Velký Lopeník and Mt. Mikulčin vrch became a part of the cool climate region with mean annual temperatures of + 6.8 °C. The mean annual precipitation total ranges from 553 mm near Strážnice to 700 mm on Mt. Velká Javořina.

The PLA stretches out over a length of 80 km along the Czech-Slovak border. Its scenery has been largely created and modified by humans: hardly anywhere else are man and nature so closely related. This is demonstrated by the diversity in (particularly vascular plant and insect) species and communities/assemblages/guilds on the one hand, and by the richness in fruit tree cultivars and traditional local livestock landraces as well as the variety in songs, folk costumes, ornaments, crafts, customs, and traditions on the other.

Human influence on the Bílé Karpaty/White Carpathians Mts. landscape had begun during the Neolithic period. The first farmers settled lower-lying areas and prevented the forests from moving down into the valleys. Whereas higher elevations were not colonised earlier than the Middle Ages, first settling activities along the rivers of the area go back to the later Stone Age. In the early Middle Ages period the contentious border between the Bohemian and Hungarian Kingdoms ran through the area when the experienced attacks by Tatar, Kuman and Turkish armies and some parts of the area were emptied of people as a result. The population decline had to be compensated for by targeted colonisation, the last wave of new inhabitants coming even in the 19th century.

In addition to its natural beauty, the Bílé Karpaty/White Carpathians Mts. has maintained an exceptional variety of folk culture and traditions. The PLA consists of a number of ethnographic regions: Dolňácko/Lower Region is located in the south around the town of Strážnice and the village of Radějov while Horňácko/Upper Region is situated around the village of Velká nad Veličkou. In the PLA central part there are the Uherskobrodsko and Moravské Kopanice ethnographic regions. The northern part has been known as the Luhačovické Zálesí, Bojkovsko and Jižní Valašsko/Southern Wallachia. In all the regions many traditional customs and festivals have been maintained (carnivals, festivals, wine and spirit tastings, *etc.*), and some folklore festivals are annually held there. The International Folklore Festival in the town of Strážnice is one of the oldest and largest folklore festivals in the world. An important part of the folklore is the men's solo dance called verbuňk which is danced in the Bílé Karpaty/White Carpathians Mts., namely in the districts of Dolňácko, Horňácko and Uherskobrodsko , and which was declared a Masterpiece of Cultural Heritage by the UNESCO.

From a point of view of nature conservation, the Bílé Karpaty/White Carpathians Mts. PLA is particularly valuable because of the unusually wide range of habitats and species found on its territory. There are thermophilous oak forests, Carpathian and Pannonian oak–hornbeam forests, old-growth mountain beech forests displaying some primeval forests characters occurring in the north-eastern part (Jižní Valašsko/Southern Wallachian region) and most of the meadow and forest wetland natural habitat types occurring in Europe: the area is a study ground of world-wide importance. The whole area, and particularly its southern part, has been cultivated by people for many centuries. In spite of this or that is why extremely valuable natural

values as well as in Central Europe unique harmonic and picturesque landscape scenery/character have been preserved there. Therefore, the PLA provides as a model for the long-term co-existence of nature conservation interests and economic land-use of the territory, which respect the natural conditions and the ecological sustainability of the area.

A wide range of wild plant and animal species are endemic to the Czech Republic or have the largest populations of the country there (for more details, see below).

More than 1,500 plant species occur in the Bílé Karpaty/White Carpathians Mts. PLA, of which 101 are pursuant to Act No. 114/1992 Gazette on Nature Conservation and Landscape Protection, as amended later, and Ministry of the Environment of the Czech Republic Decree No. 395/1992 Gazette, as amended later, Specially Protected Species – 27 of them being Critically Endangered, 37 species are Highly Endangered and 37 species are classified within the category Endangered. There are 40 orchid species growing there, which is most of the orchids found in the Czech Republic as a whole. Within the Bílé Karpaty/White Carpathians Mts. PLA there are four phytogeographical districts. The southern foothills between the villages of Bojkovice and Sudoměřice belong to the Dolnomoravský úval/South Moravian graben (lowlands) and the Bílé Karpaty/White Carpathians Mts. steppes which are parts of the Pannonian Thermophyticum. Moreover, the majority of PLA is located within the Bílé Karpaty forests but its northern part around the town of Valašské Klobouky is located in the Javorníky Mts. phytogeographical district: both of these districts are a part of the Carpathian Mesophyticum.

Among the most significant habitats in the Bílé Karpaty/White Carpathians Mts. are the herb-rich meadows/grasslands with solitary trees, displaying one of the highest species diversities among all European meadow types, and harbouring the most orchid species inhabiting the Czech Republic, often in the highest numbers: they have no analogy across Europe. The semi-dry grasslands are famous for their extremely high species richness. At some sites they harbour more than 130 species of vascular plants per 100 m^2 and for some plot sizes they hold world records in the number of vascular plant species. The area covered by herb-rich meadows in the Bílé Karpaty/White Carpathians Mts. is also exceptional. Of the total of more than 6,000 hectares, small-size Specially Protected Areas have been declared on 1,321 hectares. These meadow/grassland communities belong to the *Festuco-Brometea* class, *Cirsio-Brachypodion pinnati* alliance and are mostly found in the southern section of the PLA, between the villages of Strání and Radějov. As mentioned above, among the significant plant species growing there, some of them maintain the largest population in the Czech Republic there or are only found there and not elsewhere in the Czech Republic. They include the wild oat-grass *Danthonia alpina*, the sawwort (*Serratula lycopifolia*), black false hellebore (Veratrum nigrum), lousewort *Pedicularis exaltata* and the bastard speedwell (*Pseudolysimachion*

spurium) and orchid species such as the late spider orchid (*Ophrys holosericea*), bee orchid (*O. apifera*) and the pyramidal orchid (*Anacamptis pyramidalis*).

Another interesting non-forest habitat type in the Bílé Karpaty/White Carpathians Mts. is the *Cynosurion* alliance pasturelands with much lower species diversity, which are found in the central and eastern parts of the PLA. Their species composition includes, *inter alia*, species preferring shallow soils and more acidic flysch, including the sweet vernal-grass (*Anthoxathum odoratum*), the matgrass (*Nardus stricta*) and the crested dog's tail (*Cynosurus cristatus*). Around the town of Valašské Klobouky the *Violion caninae* association of short-stemmed grass growths with the matgrass, heather (*Calluna vulgaris*), the milkwort *Polygala multicaulis* and the pill sedge (*Carex pilulifera*) occur. A typical component of the meadows and pasturelands are the springs and meadow wetlands. Their species richness is influenced by the chemical composition of the water and the water regime. The *Calthion* alliance is most commonly found around the streams with large numbers of the thistle *Cirsium rivulare*. At sites with organogenic substrates, vegetation fragments of the *Caricion davallianae* or *Cratoneurion commutati* alliances with cottongrasses (*Eriophorum* sp.) and rarely around the springs include the early marsh orchid (*Dactylorhiza incarnata*), the broad-leaved marsh orchid (*Dactylorhiza majalis*) and the marsh helleborine (*Epipactis palustris*). Another specific vegetation type found in the Bílé Karpaty/White Carpatians Mts. PLA are weed communities on cultivated lands and private plots. In the Zahrady pod Hájem National Nature Reserve near the village of Velká nad Veličkou some rare thermophilous weeds including the wild bishop (*Bifora radians*), yellow vetchling (*Lathyrus aphaca*), hare's-ear cabbage (*Conringia orientalis*), thorow wax (*Bupleurum rotundifolium*) and the corn cleavers (*Galium tricornutum*) grow. The Kopanice region has been inhabited by the small-flowered catchfly (*Silene gallica*) and the bromegrass (*Bromus secalinus*).

Nearly 45 % of the PLA territory is covered by forests and 55 % of this area being deciduous broad-leaved forests. Fragments of the *Potentillo albae-Quercetum* association of Pannonian oak forests have been preserved there. The typical community at lower elevations in the PLA are the Pannonian oak–hornbeam forests (*Carici pilosae-Carpinetum* association), with a very rich herb layer including *Hacquetia epipactis*, ramsons (*Allium ursinum*), the Alpine arum (*Arum alpinum*), the ranunculus *Isopyrum thalictroides*, violet helleborine (*Epipactis purpurata*) and the martagon lily (*Lilium martagon*). At higher elevations climax beech forest communities have been developed, those of the *Fagion* association. Beech forests with a natural mixture of the silver fir (*Abies alba*) can only be found around the town of Valašské Klobouky in the PLA´s northern section. The area of the Vlárský průsmyk Pass is a genepool for the European beech (*Fagus sylvatica*), displaying the natural regeneration of beech forest communities. The landscape mosaic consisting of forest and meadow/grassland patches is further completed and divided by numerous forest strips and hedgerows, which together with their herbal fringes represent another

significant habitat type with plants such as the iris *Iris graminea* and the bastard agrimony (*Aremonia agrimonoides*).

In the PLA, wild animal species richness is primarily influenced by the mix of Continental, Carpathian and Pannonian species. The insect fauna on the herb-rich meadows is exceptionally rich: among them, the praying mantis (*Mantis religiosa*), the purse-web spider *Atypus piceus*, the rare harvestmen (*Opiliones*) – *Zacheus crista* and *Egaenus convexus*, the orb-web spider *Argiope bruennichii*, the ground beetle *Pterostichus incommodus*, the longhorn beetle *Akimerus schaefferi* and the eye-catching jewel beetle *Anthaxia hungarica* should be mentioned. Butterflies found there include the twin-spot fritillary (*Brenthis hecate*), alcon blue (*Maculinea alcon*), and the scarce large blue (*Maculinea telejus*) and in the northern section on sheep pasturelands, also large blue (*Maculinea nausithous*). Unfortunately, it seems that the Danube clouded yellow (*Colias myrmidone*) has been now extinct in the Bílé Karpaty/White Carpathians Mts. PLA, probably due include the decline in traditional usage of pasturelands.

The remarkable vertebrate species inhabiting the PLA include the smooth snake (*Coronella austriaca*), common quail (*Coturnix coturnix*) and thecorncrake (*Crex crex*). Song birds which nest in large numbers include the meadow pipit (*Anthus pratensis*), corn bunting (*Milaria calandra*), whinchat (*Saxicola rubetra*) and the stonechat (*Saxicola torquata*). A characteristic mammal in the southern part of the mountain range is the bi-coloured white-toothed shrew (*Crocidura leucodon*). In old woodsheds and barns or in shrubby areas the Aesculapian (tree) snake (*Elaphe longissima*) occurs. Forests at higher elevations also have an interesting fauna composition. Typical mountain forest species include the molluscs – the blue slug *Bielzia coerulans* and the snail *Monachoides vicina* or the rare Alpine longhorn beetle (*Rosalia alpina*). The yellow-bellied toad (*Bombina variegata*) is commonly found in pools and forests wetlands. Close to streams and wetlands in the beech forests, the ground beetle *Carabus variolosus* and the fire salamander (*Salamandra salamandra*) are often observed. Interesting bird species nesting there include the stock dove (*Columba oenas*), great spotted woodpecker (*Dendrocopos major*), white-backed woodpecker (*Dendrocopos leucotos*), black woodpecker (*Dendrocopos martius*), black stork (*Ciconia nigra*), the raven (*Corvus corax*) and recently the Eurasian three-toed woodpecker (*Picoides tridactylus*). Of large carnivores the Eurasian lynx (*Lynx lynx*) occasionally inhabits the Bílé Karpaty/White Carpathians Mts. and the brown bear (*Ursus arctos*) wanders over the border from Slovakia. The temporary occurrence of the grey wolf (Canis *lupus*) was first recorded in the PLA´s northern part in 2006 and its occurrence has been increasing there. Camera traps have recently confirmed the occurrence of the European wild cat (*Felis silvestris*) in the PLA.

The main tasks of the PLA Administration are yearly management and restoration of grassland communities. It also tries to prevent game feeding in nature reserves and

other parts of protection zone I, and the planting of non-native conifers. Another threat to biodiversity is possessed by overpopulated game, particularly large ungulates.

When combining vascular plant, bird and mammal species richness the PLA is the only pan-European hot-spot in the Czech Republic.

6.1. Environment: changes or deterioration in the environment, of natural or anthropic origin, accidental or permanent, actual or anticipated

Due to natural conditions and nature conservation measures implemented by the State Nature Conservancy, volunteers and municipalities, there are currently no significant negative changes in the Bílé Karpaty/White Carpathians Mts. PLA.

During the LIFE+ project, more than 100 hectares of from a point of view of nature conservation and culture valuable grasslands overgrown woody plant self-seeding have been restored.

6.2. Flora and vegetation: changes in the plant population and in the vegetational cover; presumed causes

Outputs of biodiversity monitoring suggest that populations of the target wild plant species are stable in the PLA.

6.3.1 Fauna: changes in the sedentary or migratory populations; congregating, egg-laying and breeding grounds
Recently, occurrence of the grey wolf, Eurasian lynx and wild cat has been confirmed, as well as of some rare bird species, *e.g.* the Eurasian three-toed woodpecker (*Picoides tridactylus*) – see above.

7. Cultural heritage and socio-economic context

7.1. Cultural heritage

7.1.1. Changes concerning cultural heritage

As mentioned above, the Bílé Karpaty/ White Carpathians Mts. PLA displays very specific and traditional culture incl. a specific dialect, typical folk architecture, songs, costumes, ornaments, crafts and various customs and other traditions throughout the year. Because the PLA is unique due to traditional human-nature relationship, the PLA Administration supports these activities by organizing and co-organizing various events. Some of them support appropriate nature management, *e.g.* traditional seasonal hand-mowing and haying the orchid meadows which is attended by young people from the whole Czech Republic, or sheep grazing.

7.2. Socio-economic context

7.2.1. Changes concerning the socio-economic context

There are no significant changes in socio-economic context within the PLA, except of the local population getting older.

8. Education and scientific interest

8.1. Visitors – Information policy

8.1.1. Arrangements for receiving and informing the public (building, booklets, maps, cards, etc.)

Education and information on the area is promoted by the Bílé Karpaty/White Carpathians Mts. Education and Information Centre at the town of Veselí nad Moravou, providing, *inter alia*, guided tours in the area, has a permanent exhibition in its building, builds nature trails, publishes the magazine *Bilé Karpaty*, *etc.* Environmental education and teacher training are provided by the above organisation as well as the Kosenka Centre in the town of Valasské Klobouky. There also are a tourist information centre and a farmer information centre at the village of Starý Hrozenkov. At the village of Hostětín an information centre on the environmental activities carried out by the NGO Veronica has been available for local people and visitors.

In the White Carpathians, there are **x** natural trails for hikers, entitled as Around Hrozenek, The Moravské Kopanice and Hrnčířské louky Meadows. Near the village of Tvarožná Lhota is a watchtower with a beautiful view of the surroundings. The PLA is passed by the long-distance Bekydy/Beskids Mts.-Carpathians Mts. trail used by bikers. As mentioned above, visitors can be guided across the PLA in various languages by certificated specialists.

Special websites presenting the PLA´s natural and cultural heritage to tourists are quite often visited: some of them are in English, German or Russian.

8.1.2. Frequentation by visitors and behavior (number, distribution in time and space)

Number of visitor to the PLA has slightly been increasing, particularly in the Kopanice region and at Mt. Velký Lopeník where a watchtower was built. Traditionally, Mt. Velká Javořina, the highest peak in the PLA, is visited, as well as grasslands in the PLA´s southern part. Although the attendance is highest in the summer, number of visitors (nature funs, photographers) in the spring has been increasing. The current visitors´´ number is sustainable, there is no damage caused by too many tourists there and the carrying capacity has not been reached yet.

8.1.3. Special visits (distinguished persons, groups, etc.)

In March 2010, the PLA, namely the Hostětín Centre was visited by Charles, Prince of Wales: various environmentally friendly activities carried out by the centre in close co-operation with local people were presented to the distinguished guest.

8.2. Scientific research

8.2.1. Current or completed research (observation, experimentation, etc.; identification or inventory of the species listed in the appendices to the Bern Convention, *etc*.)

Research in the Bílé Karpaty/ White Carpathians Mts. PLA is carried out by the staff itself as well as by researches from the Czech Republic and from abroad.

The list of bodies collaborating with the PLA administration on research and monitoring carried out research in the Bílé Karpaty/White Carpathians Mts. includes *e.g.*:

- Institute of Soil Biology, Academy of Scienees of the Czech Republic, České Budějovice/Budweis (research in soil biology, soil fauna identification)
- Institute of Vertebrate Biology, Academy of Sciences of the Czech Republic, Brno (research on ichtyofauna, crayfish, benthos)
- Institute of Botany, Academy of Sciences of the Czech Republic, Třeboň (vegetation monitoring, restoration of species-rich grasslands)
- Institute of Botany, Academy of Sciences of the Czech Republic, Pruhonice near Prague (restoration of species-rich grasslands, taxonomy questions)
- Biologiy Centre, Academy of Sciences of the Czech Republic, České Budejovice/Budweis (restoration of species- rich grasslands)
- Masaryk University, Faculty of Natural Science, Brno, (botanical inventories, phytosociology, database interpretation, inventories of various animal taxa/functional groups)
- Mendel Agronomic and Forestry University, Lednice and Brno (preservation of local fruit- tree varieties, restoration of species-rich grasslands, pasture monitoring, silvicultural research, landscape ecology, bee and other pollinator survey)

- Palacký University, Faculty of Science, Olomouc (pasture monitoring, algological research, floristics)
- South Bohemian University, České Budejovice/Budweis (restoration of species-rich grasslands, orchid taxonomy)
- Charles University, Faculty of Natural Science, Prague (phytosociological studies an mapping)
- University of Ostrava, Faculty of Science, Ostrava (spider inventory)
- OSEVA Development & Research Ltd., Grassland Research Centre, Rožnov-Zubří (restoration of species-rich grasslands)
- Forestry and Game Management Research Institute, Kunovice (endangered tree species)
- Institute of Agricultural Economics and Information, Brno (agri-environment and climate scheme implementation by small farmers)
- Regional Museum, Olomouc (seedbanks, cultivation and repatriation of endangered vascular plant species)
- Moravian Museum, Brno (mycological surveys)
- Museum, Roztoky (aquatic and wetland plant inventories)
- Czech Entomological Society (inventories in various insect taxa/functional groups)
- Czech Zoological Society (mammal mapping, fossil molluscs)
- Czech Society of Ornithology (bird mapping and protection)
- Czech Society for the Protection of Bats (bat mapping and protection)
- Czech Ecological Society (ecosystem restoration, ecosystem ecology, species recovery)
- Society for Natural Science, Uherské Hradiště (amphibian and reptile mapping)
- Czech Union for Nature Conservation (wood ant mapping)
- Komenský University, Faculty of Science, Bratislava [Slovakia] (biodiversity inventories)
- Slovak Academy of Sciences, Bratislava [Slovakia] (phytosociology, taxonomy
- University of Kent [United Kingdom] (restoration of species-rich grasslands).

Each year, undergraduate and Ph.D. students are involved in fieldwork gathering the data for their theses in the Bílé Karpaty/White Carpathians Mts. PLA.

In addition to inventories of the individual small-size Specially Protected Areas, plant and animal species listed in the EU Nature Directives and thus in the appendices to the Bern Convention have been monitored during the nation-wide monitoring organized by the NCA CR´s Headquarters.

Data gathered are regularly submitted to the The Nature Conservancy Species Occurrence Finding Data Database operated by the Nature Conservation Agency of the Czech Republic´s Headquarters. Citizen science is also stimulated aiming not only

at from a point of view of nature conservation target species, *e.g.* protected under the domestic law, EU legislation or Bern Convention, but also at invasive alien species. The citizens can use a special smartphone application for that purpose.

8.2.2. Scientific publications

Each year, scientific papers using data collected in the Bílé Karpaty/ White Carpathians Mts. PLA are published in peer-review journals or as chapters of scientific books.

Some examples of the recently published papers:

HÁJKOVÁ P., ROLEČEK J., HÁJEK M., HORSÁK M., FAJMON K., POLÁK M. & JAMRICHOVÁ E. (2011): Prehistoric origin of the extremely species-rich semi-dry grasslands in the Bílé Karpaty Mts (Czech Republic and Slovakia). Preslia 83: 185–204.

JOHANIDESOVÁ E., FAJMON K., JONGEPIEROVÁ I. & PRACH K. (2014): Spontaneous colonization of restored dry grasslands by target species: restoration proceeds beyond sowing regional seed mixtures. Grass and Forage Science 70: 631–638.

JONGEPIER, J.W. & JONGEPIEROVÁ I. (2009): The White Carpathian wild flower grassland, Czech Republic. In: P. VEEN, R. JEFFERSON, J. DE SMIDT & J. VAN DER STRAATEN, [eds], Grasslands in Europe of high nature value, pp. 186–195. KNNV Publishing, Zeist.

JONGEPIEROVÁ I., MITCHLEY J. & TZANOPOULOS J. (2007): A field experiment to recreate species rich hay meadows using regional seed mixtures. Biological Conservation 139: 297–305.

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9. Site description (vulnerability, protection status, ownership, documentation)

9.1. Changes in legislation or regulations

9.2. Changes in ownership title (conversion to public property, rentals, etc.)

If possible, land plots in the most valuable PLA´s parts, *i.e.* in small-size Specially Protected Areas) are purchased by the State Nature Conservancy, namely by the NCA CR´s Division of Land Plot Management.

9.3. Extension or transfer, new uses (for example, conversion into total reserve)

10. Site management (management plans, budget and personnel)

10.1. Improvements made

10.1.1. Ecological action affecting the flora and biotopes; controls of fauna

Invasive alien species, both plant and animals, occurring in the PLA are being eradicated or their numbers minimalized using funds from the Czech Republic´s State Budget as well as from the EU. Special attention is paid to invasive alien species of the EU concern, following the respective legislation. As mentioned above, there is regular monitoring in some taxa/ecological groups/guilds, *e.g.* amphibians, birds, large mammals where not only the PAL staff but also volunteers and local people are involved.

10.1.2. Protection against the elements (fire, water regime)

Habitats, particularly grasslands and forest, are regularly checked as prevention against fires. Moreover, as a whole, country, the PLA has in recent years has been

suffering for long-term drought as a result of current climate change. Therefore, the PLA Administration strengthens a set of measures trying to keep and maintain water in the landscape.

10.1.3. Approaches and thoroughfares (paths, roads, car parks, signposting, fencing, etc.)

10.1.4. Field equipment (hides and study facilities)

For the purpose of research, there are temporary field facilities located in various parts of the PLA.

10.1.5. Waste management

The PLA Administration has been following the NCA CR´s policy to minimalize waste production through seeking for reasonable and applicable measures (*e.g*. not using PET bottles, using recycled paper and printer cartridges, *etc*.). In 2018, special attention was paid to minimizing single-use/disposable plastics as a part of the initiative Plastics No More running by the Ministry of the Environment of the Czech Republic.

10.1.6. Use of renewable energy systems

Some municipalities use renewable energy sources, *e.g.* at the village of Hostětín, there is a biomass heater plant.

10.2. Management

10.2.1. Administrative department: changes made

The PLA Administration staff was strengthened by experts specialized in biodiversity monitoring.

10.2.2. Wardens' department: changes made

The Ministry of the Environment of the Czech Republic has, in co-operation with other stakeholders, developing a new Nature Guard strategy/policy to be applied at the national level.

10.2.3. Internal policing measures

No new measures were adopted in this field.

10.2.4. Infringement of regulations and damage; legal action

The infringement of regulations is prevented particularly by wardens, *i.e.* Nature Guards members (mostly volunteers), a close cooperation with local municipalities, landowners and NGOs and last but not least by communication, education and awareness among the general public and the target groups.

11. Influence of the award of the European Diploma for Protected Areas

Awarding the Council of Europe´s European Diploma for Protected Areas to the Bílé Karpaty/White Carpathians Mts. PLA has increased awareness of that unique area among the general public and the target groups not only in the Czech Republic but also in abroad. At this moment, there are only other two areas having been the ED holder in the Czech Republic.