

## KEY INFORMATION ON PROTECTED AREA: Bükk National Park, HUNGARY

The BNP is mainly state owned and the main land use is forestry - run by two state forest enterprises thus the ES services are not so broad and the stakeholder groups are restricted. We enlarge the area creating a "buffer zone" "Core area" and "buffer area" were delineated (the BNP has no legislative "buffer zone")

The size of the PILOT area:

- "Core area" – 43.236 hectares
- "Buffer area" – 13.736 hectares
- Altogether: 56.978 hectares

### Maps of protected area including borders of the protected area:

Border of protected areas, NP zonation map (not accepted), municipality borders, border of pilot area (incl. "core area" and "buffer area"), Natura 2000 sites (SPA + SAC), cadastre map, isohypse line, vegetation map, CORINE Land Cover map, geological map, map of open karst areas, registered bee-hive rocks, registered caves, registered meadows, registered quarries, registered springs, urban areas

- BNP\_beehive\_rocks\_WGS84.shp [number of polygons: 15] = see description at I./Step-2. in "*Delineation\_process\_GIS\_ECO KARST\_BNPD.docx*"
- BNP\_borderline\_added\_PA\_WGS84.shp [3] = see description at I./Step-2.
- BNP\_borderline\_WGS84.shp [1] = see description at I./Step-1.
- BNP\_buffer\_vegetation\_map\_WGS84.shp [4.793] = see description at II./1.
- BNP\_cadastre\_map\_WGS84.shp [12.051] = cadastre map (sectors)
- BNP\_core\_area\_vegetation\_map\_WGS84.shp [38.228] = see description at II./1.
- BNP\_CORINE\_map\_WGS84.shp [792] = see description at II./2.
- BNP\_extended\_borderline\_WGS84.shp [4] = see description at I./Step-4.
- BNP\_geological\_map\_WGS84.shp [2.449] = geological map (not full cover)
- BNP\_isohypse\_line\_WGS84.shp [2.294] = isohypse lines (clipped for the extended area)
- BNP\_municipality\_borders\_WGS84.shp [22] = all adjacent municipalities' borders (not clipped for the extended area)
- BNP\_Natura2000\_SAC\_sites\_WGS84.shp [7] = the Natura 2000 SPA site (not clipped for the extended area)

- BNP\_Natura2000\_SPA\_site\_WGS84.shp [1] = the Natura 2000 SAC sites (not clipped for the extended area)
- BNP\_NP\_zonation\_WGS84.shp [37] = BNP zonation (A-C) (draft version, not proclaimed)
- BNP\_open\_karst\_surface\_not\_clipped\_WGS84.shp [58] = see description at II./3.
- BNP\_open\_karst\_surface\_WGS84.shp [49] = see description at II./3.
- BNP\_pilot\_area\_borderline\_WGS84.shp [1] = see description at I./Step-3.
- BNP\_registered\_caves\_WGS84.shp [860] = registered protected caves (clipped for the extended area)
- BNP\_registered\_meadows\_WGS84.shp [614] = registered (mountain) meadows – derived from the forestry cadastre maps (clipped for the extended area)
- BNP\_registered\_quarries\_WGS84.shp [6] = registered active & abandoned quarries (not clipped for the extended area)
- BNP\_registered\_springs\_WGS84 [597] = registered protected springs (clipped for the extended area)
- BNP\_strictly\_protected\_areas\_WGS84.shp [918] = strictly protected areas of BNP
- BNP\_urban\_areas\_WGS84.shp [87] = urban areas in and around the pilot area (not clipped for the extended area)

See the details here: *“Delineation\_process\_GIS\_ECO KARST\_BNPD.docx”*

### **Basic biodiversity data**

#### 1. Share (%) of main ecosystem types

For the protected areas (BNP + 2 PAs):

- 93,4% forest
- 3,6% grassland (meadow and pasture)
- 2,6% non-agricultural
- 0.23% arable land
- 0.02% vineyard and orchard

For the whole study area (incl. “buffer area”):

- 79,4% forest,
- 6,8% grassland (meadow and pasture)
- 7,8% non-agricultural
- 4.2% arable land
- 1,7% vineyard and orchard

2. Presence of habitat types according to:

[http://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/Int\\_Manual\\_EU28.pdf](http://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/Int_Manual_EU28.pdf) or EUNIS classification \_ are maps available?

7 different Natura 2000 SAC sites and 1 SPA area cover or overlap with the project area ("core" + "buffer").

The availability of maps of the core and buffer areas:

	size of the area (ha)	extent vegetation map (ha)	Nr. of polygons	availability (%)	missing (non-mapped) area (ha)
CORE area	43.236	42.317	38.228	97,8	918
BUFFER area	13.736	6.903	4.793	50,3	6.833
Together	56.978	49.220	43.021	86,4	7.751

The list of the habitats:

Code	Name	1*	2	3	4	5	6	7
9110	<i>Luzulo-Fagetum</i> beech forests	X	X		X	X		
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	X	X		X	X		X
6110	Rupicolous calcareous or basophilic grasslands of the <i>Alyso-Sedion albi</i>	X	X	X				
8160	Medio-European calcareous scree of hill and montane levels	X						
7230	Alkaline fens	X						
6520	Mountain hay meadows	X						
40A0	Subcontinental peri-Pannonic scrub	X	X	X	X	X	X	X
6190	Rupicolous pannonic grasslands ( <i>Stipo-Festucetalia pallentis</i> )	X	X	X	X	X		
8310	Caves not open to the public	X	X		X	X		
91H0	Pannonian woods with <i>Quercus pubescens</i>	X	X	X	X	X	X	X
91G0	Pannonian woods with <i>Quercus petraea</i> and <i>Carpinus betulus</i>	X	X	X	X	X		X
6230	Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)	X	X					

91M0	Pannonian-Balkan turkey oak- sessile oak forests	X	X	X	X	X	X	X
7220	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )	X						
9180	<i>Tilio-Acerion</i> forests of slopes, screes and ravines	X	X	X	X	X		
8210	Calcareous rocky slopes with chasmophytic vegetation	X	X					
9130	<i>Asperulo-Fagetum</i> beech forests	X	X	X	X	X		
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> )	X	X	X	X	X	X	X
9150	Medio-European limestone beech forests of the <i>Cephalanthero-Fagion</i>	X	X		X	X		
6240	Sub-pannonic steppic grasslands	X	X	X	X	X	X	
6440	Alluvial meadows of river valleys of the <i>Cnidion dubii</i>	X	X		X	X		
6510	Lowland hay meadows ( <i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i> )	X	X	X	X	X	X	X
8150	Medio-European upland siliceous screes	X	X					
9110	Euro-Siberian steppic woods with <i>Quercus</i> spp.	X	X	X	X	X	X	
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco-Brometalia</i> ) (* important orchid sites)		X		X	X	X	X
8220	Siliceous rocky slopes with chasmophytic vegetation			X				
6250	Pannonic loess steppic grasslands				X	X	X	

\*1: HUBN 20001 – Bükk fennsík és Lök-völgy

2: HUBN 20002 – Hór-völgy, Déli-Bükk

3: HUBN 20004 – Szarvaskő

4: HUBN 20005 – Kisgyőri Ásottfa-tető - Csókás-völgy

5: HUBN 20008 – Vár-hegy - Nagy-Eged

6: HUBN 20009 – Tard környéki erdőssztyepp

7: HUBN 20067 – Szilvásvárad Aszaló és Szilvás-patak mente

3. Presence of species of EU interest (Annex II and IV of the Habitats Directive), Annex I Birds Directive species \_ use data from Standard Data Forms in case of Natura 2000 areas; attractive/sensitive species – are species distribution maps available?

According to the reporting tasks of the Birds & Habitats Directive we have GIS distribution data for most of the species.

Scientific name	Annex I.	Annex II	Annex IV
<b>Invertebrata</b>			
Callimorpha quadripunctaria		X	
Carabus hampei		X	X
Catopta thrips		X	X
Cerambyx cerdo		X	X
Cucujus cinnaberinus		X	X
Dioszeghyana schmidtii		X	X
Duvalius gebhardti		X	X
Erannis ankeraria		X	X
Eriogaster catax		X	X
Gortyna borelii lunata		X	X
Hypodryas maturna		X	X
Isophya costata		X	X
Leucorrhinia pectoralis		X	X
Limoniscus violaceus		X	
Lucanus cervus		X	
Lycaena dispar		X	X
Maculinea arion			X
Morimus funereus		X	
Osmoderma eremita		X	X
Paracaloptenus caloptenoides		X	X
Parnassius mnemosyne			X
Proserpinus proserpina			X
Rhysodes sulcatus		X	
Rosalia alpina		X	X
Sadleriana pannonica		X	X
Saga pedo			X
Stenobothrus eurasius		X	X
Stylurus flavipes			X
Theodoxus prevostianus			X
Vertigo angustior		X	
Vertigo moulinsiana		X	
Zerynthia polyxena			X
<b>Fish</b>			
Barbus meridionalis		X	
Cobitis taenia		X	
Rhodeus sericeus amarus		X	
<b>Amphibia</b>			
Bombina bombina		X	X
Bufo viridis			X
Hyla arborea			X
Pelobates fuscus			X

Rana dalmatina			X
Rana esculenta			
Rana lessonae			X
Rana ridibunda			
Rana temporaria			
Triturus dobrogicus		X	
<b>Reptile</b>			
Ablepharus kitaibelii			X
Coronella austriaca			X
Elaphe longissima			X
Emys orbicularis		X	X
Lacerta agilis			X
Lacerta viridis			X
Natrix tessellata			X
Podarcis muralis			X
<b>Birds</b>			
Alcedo atthis	X		
Anas platyrhynchos	X		
Anthus campestris	X		
Aquila heliaca	X		
Aquila pomarina	X		
Bonasa bonasia	X		
Bubo bubo	X		
Caprimulgus europaeus	X		
Ciconia ciconia	X		
Ciconia nigra	X		
Circaetus gallicus	X		
Circus aeruginosus	X		
Columba oenas	X		
Crex crex	X		
Dendrocopos leucotos	X		
Dendrocopos medius	X		
Dendrocopos syriacus	X		
Dryocopus martius	X		
Emberiza cia	X		
Falco peregrinus	X		
Ficedula albicollis	X		
Ficedula parva	X		
Haliaeetus albicilla	X		
Ixobrychus minutus	X		
Lanius collurio	X		
Lullula arborea	X		
Motacilla cinerea	X		
Otus scops	X		
Pernis apivorus	X		
Picus canus	X		
Rallus aquaticus	X		

Remiz pendulinus	X		
Strix uralensis	X		
Sylvia nisoria	X		
Tachybaptus ruficollis	X		
Tringa glareola	X		
<b>Mammals</b>			
Barbastella barbastellus		X	X
Canis lupus		X	X
Castor fiber		X	X
Felis silvestris			X
Muscardinus avellanarius			X-HTL
Dryomys nitedula			X-HTL
Lutra lutra		X	X
Lynx lynx		X	X
Miniopterus schreibersii		X	X
Myotis bechsteinii		X	X
Myotis blythii		X	X
Myotis dasycneme		X	X
Myotis emarginatus		X	X
Myotis myotis		X	X
Rhinolophus euryale		X	X
Rhinolophus ferrumequinum		X	X
Rhinolophus hipposideros		X	X
Spermophilus citellus		X	X

**Brief description of formal designation (legal status) and managing organisation (max. 100 words)**

The Bükk National Park (BNP) was established on 1st January 1977. The Bükk National Park Directorate (BNPD) is a state institution for fulfilling nature conservation duties and tasks in its operational area. The BNPD also attends to management tasks of areas and assets under national protection of any level in three counties (9 protected landscape areas, 13 protected areas). The BNPD is also responsible for the management of Natura 2000 sites, caves, mires, springs etc. The Nature Conservation Act lists the following measures: surveys and cadasters, and all other activities aiming at the protection, conservation, maintenance, reconstruction and interpretation of protected areas.

**Has a management plan been adopted for the protected area (please describe in few sentences)?**

Not yet adopted. The revised version of the management plan was sent to the Ministry of Agriculture in April 2017.

**Which sectors have the most significant impact on biodiversity in the area (please rate 3-high, 2-medium, 1-low)?**

- Agriculture - 1
- Forestry - 3
- Hunting and fisheries - 2
- Nature conservation - 3
- Tourism - 2
- Water management - 2
- Transportation - 1
- Industry - 1
- Households - 1

**Land ownership – please assess the percentage of land owned publicly or privately:**

- Agricultural land (1.642 ha)  
Public: \_\_7,6\_\_%; Private: \_92,4\_\_%
- Forests (39.830 ha)  
Public: \_98,4\_\_%; Private: \_1,6\_\_%
- Other land (1130 ha)  
Public: \_\_82,1\_\_%; Private: \_17,9\_\_%

**What are the main threats to biodiversity in the protected area?**

- Profit-oriented forestry
- Illegal hunting (wolves!)
- Urban expansion (at the buffer)
- Soil erosion
- Land use intensification (at the buffer)
- Tourism (esp. quads & mass events)

**Where do you see the main opportunities for pro-biodiversity business (PBB) development related to the protected area?**

- Ecotourism
- Hiking, cycling, selling accommodations/camping, restaurants
- Medicinal herbs, jams, spirits – local products
- Handicrafts
- Bee keeping and honey production (at the buffer)

**Who are the main stakeholders you can identify at this early stage that will be involved in the process of mapping ecosystem services and biodiversity opportunities and generating the action plan for opportunities to come true?**

- Local governments
- Local community representatives
- Local product associations / producers
- Kaptárkő Association & other NGOs
- Tourist organisations