



**ACTION PLAN**  
for the sustainable use of  
ecosystem services in  
**BÜKK NATIONAL PARK**

*Eger, April 2019*

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## 1. Introduction

### a. Purpose and scope of the action plan

The Danube region is home to a rich natural heritage with increased biodiversity, largely due to its variety of landscapes and special conditions in the karst area. Diversity can also be observed in the countries in this area, some of which can be considered among the most developed in the world, while others are in the process of rapid development. Thus, conflicts between local populations and nature conservation objectives often occur, especially in protected natural areas. The perception that nature conservation prevents progress and local development is still present in many protected areas. It is, therefore, essential to develop ways in which these conflicts can be avoided and to encourage the development of fruitful collaboration between people responsible for nature conservation and the local population for the mutual benefit of people and biodiversity.

This Action Plan is the direct result of the activities undertaken within the ECO KARST project, based on a structured and participatory approach, aimed to assist both the Bükk National Park Directorate (as a nature conservation administration) in managing the natural capital and the ecosystem services and also the local communities developing pro-biodiversity business. The present Action Plan is a non-binding, guiding document, that will steer the management decisions within the park in the short to mid-term future, alongside or integrated into the existing management structures.

Bükk National Park Directorate considers this Action Plan as a partnership document, guiding the ways in which the park and its partners will collaborate in the future. Most of the actions are derived from the Management Plan of the national park, which is currently under supervision of the nature conservation department of the Ministry of Agriculture. The role of the Action Plan is also crucial in the harmonization of other sectoral plans (such as land use planning documents, forestry, and hunting plans).

Thus, the Bükk National Park has no legally promulgated 'buffer zone' but in the implementation of the ECO KARST project we have taken into consideration the surrounding areas as well, because some of the studied ecosystem services have significant presence and role. Furthermore, we define the surrounding area as 'Bükk region' in the Action Plan.

There are two small protected areas – designated after the national park's act – which are completely adjacent to the national park (Békkő Nature Protected Area, est. 2008; 97 hectares; Tardi-legelő Nature Protected Area, est. 2007; 280 hectares). These protected sites are important to include to the ECO KARST project, majority of the territories are state owned and managed by the

#### Protected Area Name

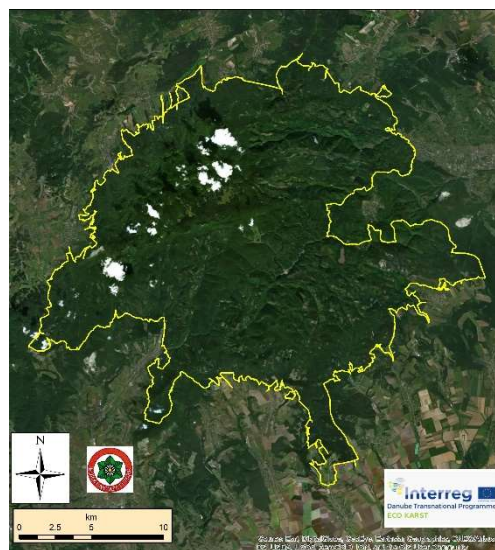
Size: 43.168 hectares

Altitude: 140 – 980 m a.s.l.

Population: >800 inhabitants

Protected since: 1978

IUCN category: V, Natura 2000 sites



national park directorate. These are mostly non-forested areas (pastures, hayfields and abandoned query) supplying several other important ecosystem services beside the forests.

#### b. Creation and ownership of the plan

The Action Plan is based on extensive and detailed overview of the condition of the present ecosystems and the services they provide to the local population. Moreover, the actions proposed here were developed and discussed with a wide array of stakeholder in a series of three workshops. The Action Plan will be primarily implemented by the national park directorate, however, a close collaboration with local stakeholders, identified in the plan, will be maintained.

## 2. Situation analysis of the site

#### a. General characteristics

The Bükk National Park - including the Bükk Mountains, a part of the Northern Mountain Range - was established on 1 January 1977 on an initial 38,774.6 hectares. Nowadays, it covers 43,168.8 hectares. The area of the strictly protected zones covers 6.010 hectares. It is the third national park in Hungary, but the first one in a mountain area dominated by forests. The Bükk Mountains belong to the inner range of the Carpathians. The High Bükk is mainly an area of cavernous limestone, the slightly undulating plateau is characterized by low peaks and the typical formations of karstic surfaces (karrenfelds, dolinas, sink-holes, shafts, and caves). The rocky masses of the southern edge are particularly spectacular (the range of the Bükk Rocks). The highest peak is under 1000 metres (Szilvás-kő 960 m a.s.l.). The most important feature of the vegetation, flora and fauna of the mountain is its great diversity, from subalpine element to the sub-mediterranean representatives on the southern foothills. The sump-caves take us to the rich and variegated undersurface world of karst phenomena. 52 of the cca. 1100 explored caves are strictly protected. The longest (4.000 metres) and deepest (245 metres) cave of Hungary, the István-lápa cave, is in the national park.

The protected area overlaps the administrative territory of two counties: Heves and Borsod-Abaúj-Zemplén Counties and 21 municipalities. The national park is sparsely populated (less than 800 residents), only three municipalities (part of municipalities) are situated inside the park boundary (Répáshuta, Ómassa, Lillafüred-Felsőhámor). In the buffer area, more than 200.000 inhabitants live (including three towns: Miskolc, Eger, Béalápfalva).

The Bükk National Park Directorate is a state institution, fulfilling nature conservation duties and tasks in its operational area. Additionally, the Bükk National Park, also attends to the 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 cadastres, and all other activities aiming at the protection, conservation, maintenance, reconstruction, as well as public awareness and education in the protected areas.

| Land use (according to Corine Land Cover database) | Percent in the project area % |
|--|-------------------------------|
| Urban areas  | 0.4                           |
| Arable land  | 0.3                           |
| Forests  | 97.9                          |
| Pastures and meadows                               | 1.4                           |

### b. Description of features characterizing biodiversity

Climatic features and the rather diversified topography determine the unique wildlife of the Bükk Mountains. In Hungary, the most regular mountain vegetation zones have evolved in the Bükk Mountains where, with typical zonal forest associations (forest-steppe woods → sessile oak woods → oak-hornbeam woods → submontane and montane beechwoods). The ravine forest is the characteristic forest association of deep valleys with a cool and humid climate. On the rocky limestone hillsides with southern exposure, ash lime rock forests are the remnant of the warming period, following the Ice Age between 9000-7500 B.C. Sub-Pannonic mixed whitebeam-lime relict forests, present on the steepest rocky hillsides, are rich in sub-alpine relict species. On the warm slopes of the south-eastern Bükk with thin rendzina soil, associations composed of 'bush forests', thermophile oak forests and steppe meadow patches can be found. Of the treeless vegetation types, typical stands of the limestone-dolomite rock grasslands or siliceous grasslands formed on volcanic rocks should be mentioned. Species-rich mountain meadows in the mountain region that used to be utilized as hayfields have evolved by deforestation. The flora of the Bükk Mountains contains about 1.400 plant species, of which 18 are only known from here in Hungary.

As a result of the various impacts on the fauna, the diverse geomorphologic features and the variable vegetation, a species-rich fauna has evolved, with an estimated minimum number of 22.000 animal species present in the Bükk Mountains. Endemic species living only in the Bükk Mountains, as for example *Duvalius gebhardti* (blind coleoptera) or sub-endemic butterfly species such as the mountain argus (*Aricia artaxerxes*) are very valuable. Many rare species can be found in the gorges at the northern part of the mountains. The avifauna is characterized mainly by woodland species, with internationally significant populations of some birds of prey (e.g. imperial eagle, lesser spotted eagle, honey buzzard), woodpeckers, collared and red-breasted flycatchers.

The national park is totally overlapped with a special protected area (SPA) designated according to the Birds Directive of the European Union ('Bükk-hegységésperemterületei' /HUBN10003/). Six special areas of conservation (SAC) overlap fully or partly (\*) with the national park territory: 'Bükk-fennsíkés a Lök-völgy' (HUBN20001), 'Hór-völgy, Déli-Bükk' (HUBN20002), 'Szarvaskő' (HUBN20004), 'Kisgyőri Ásottfa-tető - Csókás-völgy' (HUBN20005), 'Vár-hegy - Nagy-Eged' (HUBN20008\*), 'Tard környékierdőssztyepp' (HUBN20009\*). These Natura 2000 sites are designated for the protection of altogether 8 plant, 21 invertebrate, 3 fish, 1 amphibian, 27 bird, and 13 mammal species.

Ecosystem condition map is produced based on the vegetation map of the national park according to the mapping methodology set in ECO KARST WP3. The extensive vegetation mapping was elaborated around 1995-2000, but some parts (esp. non-forested habitats) were remapped later. The mapped area is partly (approx. 90%) overlapped with the project area. The 'blank' places were mapped with the help of orthophotos and forestry data. The basemap contains more than 38.000 polygons.

The habitats were scored according to their naturalness and, as a modifying factor, we have used the number of the protected plant species occurring in each habitat polygon. Vascular protected plants are good indicator species: (1) understory plants in forest habitats reflects the naturalness and (2) grassland species in open habitats mostly reflect to the management regimes in the past or present land-use.

According to the ecosystem condition map the present state of the pilot area is favorable. The low cover of urban areas, low infrastructure is suitable for a long-term survival of the wild flora, fauna, and habitats. Most of the biggest quarries were abandoned and this threat is no longer interfere the natural processes. The most precious habitats are on the open karst surface: the presence of the deep gorges, karstic watersheds, and rocky outcrops is remarkable. The foothills are less natural with their several secondary forests (e.g. black locust) and agricultural lands (arable lands, orchards). Several negative elements influence the state of the natural condition. In forest areas, the non-proper management (incl. big cutting areas, elimination of lying and standing deadwood, non-proper age and tree composition of the forest lots) is crucial. The abandonment of grasslands with the collapse of the animal husbandry is the largest threat for biodiversity in the pilot area.

In the next table we conclude the assessment of main activities and potential impacts on the conservation status of ecosystems:

| <b>Main activities and potential impacts on the conservation status of ecosystems</b> |   |  |
|---|---|--|
| <b>Activity</b>   | <b>Description</b>  | <b>Impact evaluation</b>   |
| <b>Forestry</b>   | <p>The forest cover of the Bükk National Park is very significant (more than 95%). Timber and firewood should be 'produced' in all forest lots, but as an activity implemented in a protected area is influenced by several conditions. The legislative framework – due to the forestry planning process – is determinant. The forestry companies use 'classical forestry' interventions, esp. in forest cutting methods (shelterwood system), with natural regeneration. Alternative forestry methods (e.g. selective cutting, Pro Silva methods) appear only in lower scale in the management of the forestry companies. The alteration is a slow movement, mostly manifested via the nature conservation restriction at the forestry planning phase. The integration of biodiversity aspects in forest planning and forest management implementation is needed.</p> <p>In forest areas the non-proper management (incl. large cutting areas, elimination of lying and standing deadwood, non-proper age and tree composition of the forest lots) is not favorable for the wild flora and fauna and may cause environmental problems, too (e.g. erosion).</p> | - / +<br>Significantly impact  |
| <b>Grazing and mowing</b>   | <p>The present situation of the grazing is not favorable. Only some parcels, especially in the southern part of the project area are managed by grazing (esp. sheep, goat and cattle). According to an inventory from the ES mapping, we can conclude that 30% of the grasslands have disappeared in the last two-three decades. The shrub encroachment is very significant in several places. The mountain meadows (in karstic areas) are owned by the state forestry enterprises and one parcel is belonging to the National Stud Farm of Lipizzaner horses (without active management).</p>  | +<br>Appear only in small patches – low, but significant positive impact |
| <b>Tourism</b>  | <p>Bükk National Park is a popular area among the visitors. The park has a long tradition of hiking and outdoor sports. This includes bicycle riding, horseback riding, rock climbing, caving and, to a smaller extent, winter sports. There are organized tours</p>  | + / -<br>Medium negative impact (depends on different                    |



|   |   |                        |
|---|---|------------------------|
|   | <p>and sports competitions, such as performance racing (long distance hike), running and bicycle competitions, taking place. The influence of hiking associations on the area is positive, since they contribute to the designation and maintenance of marked hiking paths and rest areas. The number of events and the number of participants in different competitions is increasing.</p> <p>The quality of the environment, both natural and man-made, is essential to tourism. However, the relationship of tourism with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure such as creating or reconstructing roads, and of tourism facilities, including buildings, restaurants etc. The negative impacts of tourism development can gradually destroy environmental resources on which it depends. Tourism can put enormous pressure on an area and lead to impacts such as soil erosion (via trampling), increased pollution, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. Large-scale events can exert significant pressure on the protected area, so the organizers need to be aware and accountable for limiting wildlife disturbance to the minimum.</p> | locations)             |
| Hunting                                     | <p>The hunting activities has a medium impact on biodiversity. The management of overpopulated wild game populations (esp. wild boars, mouflons, red- and roe-deers) is manifested by the hunting activities. The reestablishment of large carnivores (wolves and lynxes) took place in the park in the last decades. Their presence should be accepted by the hunter communities; thus some cases illegal hunting was documented in the national park.</p>   | + / -<br>Medium impact |
| Forest fruit, mushrooms and herb collection | <p>The present impact of these activities is very low in the protected territory and vary from year to year (according to the 'product' availability). The collection of mushrooms and other non-timber forest products is generally regulated and limited in the protected area.</p>   | + / -<br>Low impact    |

### c. Description of ecosystem services

In the ECO KARST project, five ecosystem services were mapped in the project area. In this chapter, we summarize the results of the ecosystem mapping, highlighting its importance for sustainable development of the local community and PBBs.

- **Timber & firewood**

Most of the forests (over 95%) are managed by two state-owned forestry companies (Egererdő and Északerdő Ltd.). Due to the modernization of the forestry techniques, less and less people work directly in the forest. Before it was an important life form of the local people in and around the national park. The main product of the forests is the firewood, the incomes from processed materials and non-timber products are much lower. The low income level of population determinates the fact, that there is no market for high-quality products.

- **Hay and output of livestock**

The grassland cover is rather small in the project area and considerably spatially dispersed. Around 2% of the area of Bükk National Park is grassland of a very high conservation value. Thus, biodiversity is very rich. However, the abandonment of non-edaphic grassland types (esp. meadows) is causing habitat degradation and losing of valuable habitats. The species, which are dependent on open habitats, cannot survive the secondary succession. Grazing is more traditional in lower altitude on the foothills of the Bükk (mostly outside of the project area). The social importance of the grasslands now is very low. Very few people work in the agricultural sector in the project area (this activity is much more important in the vicinity of the park). The two inner municipalities, Répáshuta and Bükkszentkereszt are typical clearing derived settlements (around 200 years old), where the grassland management (mostly hay-making) was a typical utilization. The direct income from the grasslands are very low. The present management (mowing) has lower income for the owners than the direct payments (as EU agricultural subsidies from CAP). The mountain meadows (in karstic areas) are owned by the state forestry companies and one parcel is belonging to the National Stud Farm of Lipizzaner horses (without active management). The grasslands on the foothill are privately owned or farmers as renters contribute in grassland management on state land belonging to the national park administration. The low infrastructure and the patchy distribution of the meadows are not favorable from management point of view.

- **Water quality**

In the Bükk Mts. the use of karst water has always been of fundamental importance and is still extremely important among water users, although its role has changed. Today, water use from groundwater production has dropped significantly due to significant social changes (lower population in the vicinity; collapse of industrial activity etc.). The Bükk Mountains have a dynamic, constantly renewed (cold) karst water pool value of estimated 40.000.000 m<sup>3</sup>/day. The renewal of the karst water supply depends very strongly and decisively on precipitation conditions and - to a lesser extent - on production today. The utilization of karstic water is a state-owned monopol, three companies manage the karstic water in the region (MIVIZ Ltd., HevesMegyeiVízmű Ltd., ÉRV. Északmagyarországi RegionálisVízművek Ltd.), supplying more than 300.000 customers.

- **Touristic attractiveness of nature**

The quality of the environment, both natural and man-made, is essential for tourism. However, the relationship of tourism with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure, such as creating or reconstructing roads, and of tourism facilities, including buildings, restaurants etc. The negative impacts of tourism development can gradually destroy environmental resources on which it depends. Tourism can put enormous pressure on an area and lead to impacts, such as soil erosion (via trampling), increased pollution, natural habitat loss, increased pressure on endangered species, and increased vulnerability to fires. The pilot area has a strong protection legislation as national park, so only eco-touristic development is feasible. The mass tourism should be canalized into the touristic zones (C-zones) of the park or outside the protected areas. The demand for better services in the forested areas is also significant. Several touristic developments were implemented by the park administration, municipalities and forestry companies recently (e.g. educational trails, renewed forest huts, narrow gauge railway lines, look-out towers, planned visitor



center etc). An increase in emphasis should not mean increasing the number of visitors, especially not for outdoor sports events, but to develop the program offer and cooperation among the stakeholders.

- **Carbon sequestration**

Forestry has a key role in carbon capture and the long-term storage of atmospheric carbon dioxide (CO<sub>2</sub>). The main investment type is the reforestation, which has lower role in the pilot area, because the land nowadays is covered predominantly by forests. The main dominant trees in the pilot area are long-lived trees (>100 years) which sequester carbon for a more graduated release. The secondary succession on grasslands lead also greater carbon fixation rate in the area, but from nature conservation viewpoint this is not a favorable process. In the case of carbon sequestration, we cannot estimate pro-biodiversity business opportunities, especially for individuals or SME businesses.

#### d. Description of pro-biodiversity businesses potentials

Pro-biodiversity businesses (PBBs) are enterprises that generate financial returns and at the same time make a positive contribution to preserving biodiversity. For most economic activities, ecosystem services are used and sometimes exploited. Conserving biodiversity and ecosystem services, while simultaneously ensuring economic success, offers the chance to ensure a sustainable use of ecosystem services.

There are several administrative and demographic challenges in the Bükk National Park, which have an influence on the development of all economic sectors. The main factors are the following:

- Administrative and political obstacles (e.g. two administrative unit; lack of financial and technical support, nature conservation restrictions)
- Social and human resources (e.g. rural-urban migration of the younger population; aging local population; small motivation among the local population to found new businesses; lack of trust in cooperatives; local population do not have required financial resources as venture capital for the start of new businesses).
- Environmental challenges (e.g. climate change; be longer periods of draughts; spread of invasive alien species)

Several opportunities in the Bükk National Park are relevant for the development of a variety of sectors. To summarize the main results of the gap analysis and the stakeholder workshops, we enlist the main cross-sectoral opportunities were identified:

- A. Cooperation between producers, processors and service providers;
  - Shorten of transportation pathways between regional businesses and customers;
  - Joint marketing and selling of products to tourists / visitors;
  - Exporting the locally produced products to national or international customers;
  - Creation of 'Bükk Council', as bottom up organized independent network for local stakeholders and decision-makers.
- B. Implementation of certification and regional branding schemes
  - Acquiring an organic certification;

- Using the origin from the protected area as a special feature (branding/development)

At first stakeholder workshop, the participants have assessed the PBB possibilities / feasibilities in the region and to pre-select four PBBs for further discussion, as follows:

- Grassland management /as hay and fodder/;
- Processed local products;
- Tourism and sport activities and
- Education with special attention of bird-watching.

#### e. Stakeholders analysis and participation

In Annex VI. there is a list of stakeholders enclosed with external and internal experts who were involved in the mapping process, workshops, and planning activity during the ECO KARST project.

Social network data collected in the ECO KARST project can help to find ways to include stakeholders, understand relations among people and between society and nature, as well. The analysis figure (GEPHI graph) shows that networks were relatively well connected and also had a better connected internal sub-network (altogether 78 responders with 535 nodes; Fig.-1.). As in the case of other pilots, where forests are harvested, there was a communication gap between forest managers and other stakeholders). This pattern is probably not related to forestry as it is, more likely to the fact that the main ecosystem type in general gives a position of authority to its manager that enables unilateral decisions and non-negotiable strategies. According to the analysis we have found that there is poor communication between the following groups, which needs improvement in the future (see dashed red lines on Fig.-2.):

- tourism – animal keepers
- tourism – small producers
- forestry – small producers
- animal keepers – small producers

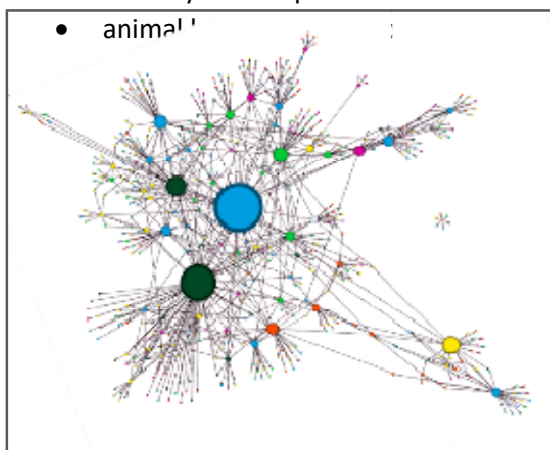


Fig.-1: GEPHI graph

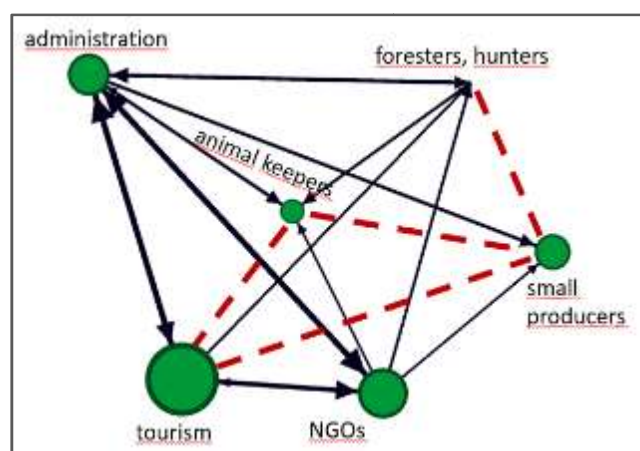


Fig.-2.: Communication between groups



### 3. Goals, objectives and implementation

#### a. Forests

| Objective                                   | Specific goals                                    | Measure   | Steps  | Location                             | Responsible and collaborators   | Timeframe                                    | Financing                         | Indicator of success  |
|---|---|---|--|--------------------------------------|---|--|-----------------------------------|---|
| <b>THEME: FORESTS</b>                       |   |   |  |                                      |   |  |                                   |   |
| A<br>Enhance sustainable use of the forests | A1<br>Introduce close to nature forest management | A1.1<br>Initiate the adjustment of logging in the protected area forest (under cutting forestry system) | <ol style="list-style-type: none"> <li>1. Lobbying for a higher percentage of dead wood left in the forest</li> <li>2. Lobbying for a decrease the maximum allowable cutting area</li> <li>3. Foster the establishment of multispecies and multiage forest-structure (incl. micro-habitats) through raising awareness and</li> </ol> | BNP, Bükk region (Natura 2000 sites) | BNPD ,Forest enterprises (EgererdőZrt. , ÉszakerdőZrt. ), private forest owners | In line with the new forest management plans | Public funds at forestry planning | <ul style="list-style-type: none"> <li>- 20% of new forest management plans are adapted with the measures proposed here</li> <li>- Improved state of forest naturalness by 30%</li> </ul> |

|  |  |  |  |  |  |  |   |   |
|--|--|--|--|--|--|--|---|---|
|  |  |  | <p>lobbying, based on the benefits of such forests</p> <p>4. Creation of a network of eco-cells in managed forest zone by promoting and introducing the system of eco-cells to private forest owners</p>                 |  |  |  |   |   |
|  |  | <p>A1.2</p> <p>Extend the area of forests with continuous forest cover</p> | <p>1. Implement the conservation forest management (oak forests managed by BNPD via LIFE project)</p> <p>2. Demonstrate the best practices of the oak forests nature conservation management</p> <p>3. Afforestation</p> | <p>BNP protected area (esp. strictly protected forests)</p> <p>BIOMAP for LIFE project sites(Annex II)</p> | <p>BNPD, MTA ÖK, external partners</p> | <p>2019 – 2026 (in LIFE project areas)</p> <p>2019 ongoing</p> | <p>LIFE16 NAT/IT/000245, state budget</p> | <ul style="list-style-type: none"> <li>- Increased forest cover of native species by 20%</li> <li>- 100 ha of new forest management plans are adapted with the measures proposed here</li> <li>- Improved state of forest naturalness by 30%</li> </ul> |

|    |   |   |   |  |  |   |  |   |
|----|---|---|---|--|--|---|--|---|
|    |   |   | only with native species in BNPD forests and lobbying for this type of afforestation in other forests   |  |  |   |  | - Number of environmentally conscious forest managers increased by 50%  |
| A2 | Suppression / elimination of invasive tree species            | A2.1<br>Tree composition conversion back to oak forests           | <ol style="list-style-type: none"> <li>1. Involvement of BNPD in the adjustment of forest management plan</li> <li>2. Set the intervention areas</li> <li>3. Implement the elimination</li> </ol> | BNP protected area and neighboring Natura 2000 sites | BNPD, state and private forest owners        | In line with the new forest management plans<br><br>2019 –2035 (in forests managed by BNPD) | State budget, operational programmes                     | <ul style="list-style-type: none"> <li>- Increasing naturalness in the forest by 30%</li> <li>- Suppression of invasive tree species (e.g. <i>Robinia pseudo-acacia</i>, <i>Ailanthus altissima</i>) – reduced cover of these species by 25%</li> </ul> |
| A3 | Sharing best practices in forest management & raise awareness | A3.1<br>Improve and broaden the existing knowledge base on forest | <ol style="list-style-type: none"> <li>1. Collect successfully implemented forest management and conservation</li> </ol>  | BNP protected area and neighboring Natura 2000 sites | BNPD, state forest institutions, MTA ÖK, WWF | 2019 –2025  | State budget, after life of LIFE13 INF/HU/001163 project | - Increasing knowledge of forest managers by implementation of 2 workshops per  |



|  |  |  |  |  |   |            |  |  |
|--|--|--|--|--|---|------------|--|--|
|  |  | habitats   | <ul style="list-style-type: none"> <li>2. Implementing the Natura 2000 Forest Planning Toolkit</li> <li>3. Enhance the adaption best practices of stakeholder involvement in forest management (through workshops and events)</li> </ul> |  |   |            |  | <ul style="list-style-type: none"> <li>- year Implemented 3 annual close-to-nature forestry interventions via management practice</li> <li>- Improved state of forest naturalness by 30%</li> </ul>          |
|  |  | A3.2<br>Raising awareness about sustainable forestry | <ul style="list-style-type: none"> <li>1. Promoting best practice management techniques via field visits, forums, workshops</li> <li>2. E-learning training modules</li> </ul>   | BNP protected area and neighboring Natura 2000 sites | BNPD, state forest institutions, MTA ÖK, WWF, KaptárkőEgyesület | 2019 –2025 | State budget, after life of LIFE13 INF/HU/001163 project | <ul style="list-style-type: none"> <li>- Increasing knowledge of forest managers by implementation of 2 workshops per year</li> <li>- Implemented 3 annual close-to-nature forestry interventions</li> </ul> |

|  |  |  |  |  |  |                |                              |  |
|--|--|--|--|--|--|----------------|------------------------------|--|
|  |  |  |  |  |  |                |                              | via management practice<br>- Improved state of forest naturalness by 30%   |
|  | A4<br>Research and monitoring of key species | A4.1<br>Maintain and restore populations of key species associated with forests (in accordance with national species action plans) | 1. Review of the existing monitoring schemes (according to the Hungarian Biodiversity Monitoring System (HBMS))<br>2. Launching regional research and monitoring scheme for management indicator species groups (e.g. vascular plants, woodpeckers and other tree- | BNP protected forests (monitoring locations) | BNPD, external researchers and institutions (universities, research institutions, Hungarian Natural History Museum etc.) | 2019 – ongoing | State budget, research funds | - Favourable Conservation Status of species will be improved (in 80% of the Natura areas)<br>- Know-how of monitoring methods will be transferable with organization of 3 trainings per year |

|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|
|  |  |  | dwelling birds,<br>bats, large<br>carnivores)<br>3. Repetition of<br>the long-term<br>habitat survey<br>(160 non-<br>forested<br>quadrats) |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|

#### b. Grasslands

| Objective  | Specific goals  | Measure   | Steps   | Location   | Responsible and collaborators   | Timeframe   | Financing  | Indicator of success   |
|--|---|---|---|--|---|-------------|--|--|
| <b>THEME: GRASSLANDS</b>   |   |   |   |  |   |             |  |  |
| B<br>Revert the afforestation process & halt the biodiversity lost | B1<br>Conservation and reconstruction of high plateau karstic meadows | B1.1<br>Reconstruct / rehabilitate mountain meadows | 1. Review of the Grassland Management Plan of BNP<br>2. Obtaining permits<br>3. Implementation (within forestry and NP jurisdictions-30 | BNP mountain meadow<br><br><u>BIOMAP</u> (Annex III) | BNPD, Forest enterprises (EgererdőZrt , ÉszakerdőZrt .), National Stud for Lipizzaner Horses, | 2019 – 2021 | State budget, foresters' budget, agricultural subsidies (SAPS) | - Add 100 ha of reconstructed mountain meadows<br>- Number of meadows maintained<br>- Developing good ecological conditions of |

| Objective | Specific goals   | Measure   | Steps  | Location  | Responsible and collaborators                        | Timeframe   | Financing   | Indicator of success  |
|-----------|--|---|--|---|--|-------------|---|---|
|           |  |   | ha) – mowing and shrub removal<br>4. Establishment of extensive summer grazing system (with re-introduction of Lipizzaner horse grazing)<br>5. Monitor the interest of the locals for the PBB development (e.g. herb collection, or link to tourism) |   | private owners (as PBB possibilities)                |             |   | protected area / Natura 2000 sites in 80% of the Natura sites<br>- Increase in the protected/rare species in the mountain meadows (link with Natura 2000 monitoring) by 50% |
|           | B2<br>Halt the loss of existing areas of foothill steppic grassland / wooded | B2.1<br>Management of foothill grasslands / wooded pastures & | 1. Promote grazing activities (removal of IAS and expanding shrubs)<br>2. Target and review the use  | BNP, Bükk region - foothill grasslands<br><br><u>BIOMAP</u> (Annex III) | BNPD, farmers, Hungarian Birdlife (MME) 'Bükk Group' | 2019 – 2025 | State budget<br><br>LIFE-IP GRASSLAND-HU (LIFE17 IPE/HU/000018) project | - Add 300 ha of reconstructed mountain meadows<br>- Number of meadows maintained  |

| Objective  | Specific goals                              | Measure   | Steps  | Location                                     | Responsible and collaborators   | Timeframe      | Financing   | Indicator of success   |
|--|---|---|--|--|---|----------------|---|--|
|  | pastures and expand the habitats            | involvement of local people to utilize larger areas | <p>of existing agri-environment schemes and other funding sources to support the management of grassland (esp. Bükkalja ESA)</p> <p>3. Organize local/regional forum (establishment of Bükk Grazing Forum, annual meeting)</p> |  |   |                |   | <ul style="list-style-type: none"> <li>- Developing good ecological conditions of protected area / Natura 2000 sites in 80% of the Natura sites</li> <li>- Increase in the protected/rare species in the mountain meadows (link with N2K monitoring) by 50%</li> </ul> |
| C  | C1  | C1.1  | 1.   | BNP Protected meadows (monitoring locations) | BNPD, external researchers and institutions (universities, research institutions, Hungarian | 2019 – ongoing | State budget, national and international research funds | <ul style="list-style-type: none"> <li>- Favorable Conservation Status of species will be improved in 80% of Natura sites</li> <li>- Know-how of monitoring</li> </ul>   |
| Maintain and restore populations of keystone species associated with grassland / | Sustainable management of grassland species | Research and monitoring of key species              | Review of the existing monitoring schemes (according to the Hungarian Biodiversity Monitoring System (HBMS))   |  |   |                |   |  |

| Objective      | Specific goals | Measure | Steps   | Location | Responsible and collaborators                                       | Timeframe | Financing | Indicator of success   |
|----------------|----------------|---------|---|----------|---|-----------|-----------|--|
| wooded-pasture |                |         | <ol style="list-style-type: none"> <li>2. Launching regional research and monitoring scheme for management indicator species groups (e.g. vascular plants, <i>Carabidae</i>, <i>Formicidae</i>, <i>Araneae</i>, <i>Orthoptera</i>, <i>Lepidoptera</i>)</li> <li>3. Repetition the previous quantitative studies for indicator species groups</li> <li>4. Repetition of the long-term habitat survey (40 non-</li> </ol> |          | Birdlife (MME) 'Bükk Group', Hungarian Natural History Museum etc.) |           |           | methods will be transferable by organization of 3 trainings per year |



| Objective | Specific goals | Measure   | Steps   | Location                 | Responsible and collaborators | Timeframe   | Financing   | Indicator of success  |
|-----------|----------------|---|---|--------------------------|-------------------------------|-------------|---|---|
|           |                |   | forested quadrats)  |                          |                               |             |   |   |
|           |                | C1.2<br>Small-scale management for species conservation | <ol style="list-style-type: none"> <li>1. Defining the target species / species-groups</li> <li>2. Collecting available knowledge on the ecological needs and lifestyle of the target species</li> <li>3. Obtaining licenses (if needed)</li> <li>4. Involving volunteers, public institutions, NGOs (where applicable)</li> <li>5. Implement measures</li> <li>6. Monitoring of</li> </ol> | BNP<br>Protected meadows | BNPD                          | 2019 – 2025 | State budget, LIFE-IP GRASSLAND-HU (LIFE17 IPE/HU/000018) project | <ul style="list-style-type: none"> <li>- Increase in the protected/rare species in the mountain meadows</li> <li>- Good ecological conditions of the managed locations (habitat mosaics)</li> <li>- Increasing number of environmentally conscious citizens (involving volunteers)</li> </ul> |

| Objective  | Specific goals  | Measure   | Steps  | Location                                  | Responsible and collaborators      | Timeframe  | Financing   | Indicator of success   |
|--|---|---|--|---|------------------------------------|------------|---|--|
|  |   |   | the measures   |   |                                    |            |   |  |
| D<br>Common public recognition of the value of the grasslands& wooded pastures | D1<br>Improve the public awareness by promotion of values | D1.1<br>Monitor the interest of the locals for the PBB development (e.g. mowing, herb collection, or link to tourism) | <ol style="list-style-type: none"> <li>1. Survey for actual utilization / management of grasslands</li> <li>2. Offering activities for civil participation (e.g. special event as 'Rural Olympic Games')</li> <li>3. Dissemination of the LIFE IP project results and outputs</li> </ol> | BNP, Bükk region (esp. Natura 2000 sites) | BNPD, interested local communities | 2019 –2026 | State budget, funds for NGOs and local communities<br><br>LIFE-IP GRASSLAND-HU (LIFE17 IPE/HU/000018) project | - Increasing number of environmentally conscious citizens (involving volunteers) with 1 annual survey and 10 annual activities organised |

c. Orchards

| Objective  | Specific goals  | Measure  | Steps   | Location  | Responsible and collaborators   | Timeframe  | Financing   | Indicator of success  |
|--|---|--|---|---|---|------------|---|---|
| <b>THEME: ORCHARDS</b>                                   |   |  |   |   |   |            |   |   |
| E<br>Protection and reconstruction of extensive orchards | E1<br>Reconstruction and rehabilitation of old orchards and extension of them, where possible | E1.1<br>Protection of present extensive orchards | <ol style="list-style-type: none"> <li>1. Compiling a management plan for the extensive orchards</li> <li>2. Obtaining licenses for management (if needed)</li> <li>3. Involve local people in the management tasks (as PBB possibilities) – local products link to tourism)</li> </ol> | Orchards at Tard, KácsSály, Mónosbél villages<br><br><u>BIOMAP</u> (Annex IV) | BNPD, Forest enterprise (ÉszakerdőZrt.), Hungarian Birdlife (MME) 'Bükk Group', private owners (as PBB possibilities) | 2019 –2021 | State budget, agricultural subsidies (SAPS, AES)    | <ul style="list-style-type: none"> <li>- Add 3 ha of reconstructed extensive orchards</li> <li>- All old fruit varieties to preserve</li> <li>- Increase in the protected/rare species connecting to the orchards by 10%</li> </ul> |
|  |   | E1.2<br>Establishment of new orchards in the     | <ol style="list-style-type: none"> <li>1. Inventory for old remnants of orchards and fruit-variety</li> <li>2. Setting of a</li> </ol>  | Orchards at Tard (in the pilot area) and around                               | BNPD, external specialists (pomologists)  | 2019 –2025 | State budget, agricultural subsidies (AES), private | <ul style="list-style-type: none"> <li>- 100 pcs / year old-variety fruit trees will be plant</li> <li>- Filled database</li> </ul>   |

| Objective | Specific goals | Measure     | Steps  | Location              | Responsible and collaborators | Timeframe | Financing   | Indicator of success   |
|-----------|----------------|-------------|--|-----------------------|-------------------------------|-----------|-------------|--|
|           |                | Bükk Region | <p>database for the fruit varieties and their locations</p> <p>3. Setting a network of newly planted / reconstructed fruit gardens</p> <p>4. Establish a network for organizing variety identification, organizing propagation and grafting</p> <p>5. Organizing special event (e.g. pruning / grafting / harvesting day – potential PBB possibilities /as products,</p> | the region (villages) |                               |           | investments | <p>records for the local varieties</p> <p>- 5 pcs model farms with extensive varieties and environmentally friendly farming / region (incl. the present farms)</p> |

| Objective | Specific goals | Measure | Steps  | Location | Responsible and collaborators | Timeframe | Financing | Indicator of success |
|-----------|----------------|---------|--|----------|-------------------------------|-----------|-----------|----------------------|
|           |                |         | 6. Networking activities with domestic and foreign organizations |          |                               |           |           |                      |

d. Networking & tourism

| Objective  | Specific goals                               | Measure                                  | Steps  | Location    | Responsible and collaborators                     | Timeframe      | Financing    | Indicator of success  |
|--|--|--|--|-------------|---|----------------|--------------|---|
| <b>THEME: NETWORKING &amp; TOURISM</b>                                 |  |  |  |             |   |                |              |   |
| F<br>Establishment of well-connected and nature-friendly tourism offer | F1<br>Development of local product programme | F1.1<br>Creation of "Bükk Product" brand | 1. "Bükk Product" brand formulation (corporate identity, website)<br>2. Expand the number of entrepreneurs | Bükk region | BNPD, present branded entrepreneurs and producers | 2019 – ongoing | State budget | - Increase the number of products sold by 50%<br>- Increase their awareness with at least one training per year |

| Objective | Specific goals | Measure                                       | Steps  | Location    | Responsible and collaborators | Timeframe  | Financing                                  | Indicator of success  |
|-----------|----------------|---|--|-------------|-------------------------------|------------|--|---|
|           |                |   | and products<br>3. Dissemination of the existing brand for the customers<br>4. Marketing expansion (using different marketing channels)<br>5. Improvement of the identity and usage of National Park Products (nationwide imitative) |             |                               |            |  | - A new brand established   |
|           |                | F1.2<br>Expand the market for local producers | 1. Expansion of the store network, common sales channels<br>2. Training (entrepreneurship training, market access)   | Bükk region | BNPD,<br>Bükk Foundation      | 2019 –2024 | State budget, Interreg DTP project „Brand” | - The number of green entrepreneurs increases by 10%/year<br>- Number of store network grows by a |



| Objective | Specific goals                              | Measure  | Steps  | Location                    | Responsible and collaborators                                 | Timeframe  | Financing                                    | Indicator of success  |
|-----------|---|--|--|-----------------------------|---|------------|--|---|
|           |   |  | 3. Good examples from domestic and international   |                             |   |            |  | <ul style="list-style-type: none"> <li>- store per year</li> <li>- The number of sales products increases every year by 10%</li> <li>- Number of branded producers and products increases by 10%</li> <li>- Increase revenue by increasing the number of products sold by 10% a year</li> </ul> |
|           | F2<br>Ecotourism infrastructure development | F2.1<br>Establishing the Bükk Region Geopark (nomination | <ol style="list-style-type: none"> <li>1. Preparation and submission of documentation</li> <li>2. Independent online communication channels</li> </ol> | Area of the planned Geopark | BNPD, Bükk Foundation, EszterházyKároly University, Hungarian | 2019 –2020 | State budget, national & international funds | <ul style="list-style-type: none"> <li>- Creation of a new geopark in Hungary</li> <li>- Increase of knowledge (also karst</li> </ul>   |

| Objective | Specific goals | Measure  | Steps  | Location  | Responsible and collaborators                      | Timeframe  | Financing                                    | Indicator of success  |
|-----------|----------------|--|--|---|--|------------|--|---|
|           |                | and ratification of the geopark status by UNESCO)              | (webpage, FB)<br>3. Development of networked tourism products<br>4. Public information via road-shows<br>5. Publication<br>6. Networking, national and international good examples |   | Geological Society, KaptárkőEgyesület              |            |  | dependent) by establishment of a webpage and promotional FB profile<br>- 1 roadshow per year<br>- 2 publications per year |
|           |                | F2.2<br>Launching the Dark-sky Park Visitor Centre (Répáshuta) | 1. Opening of the facility<br>2. Operation of the visitor centre<br>3. Reducing of light pollution in the area (new  | Designated area of the Dark-sky Park<br><u>BIOMAP</u> | BNPD, municipality of Répáshuta, KaptárkőEgyesület | 2019 –2020 | State budget, national & international funds | - Lower light pollution by 20%<br>- State of nocturnal species improved by  |

| Objective | Specific goals | Measure   | Steps   | Location   | Responsible and collaborators      | Timeframe   | Financing             | Indicator of success                            |
|-----------|----------------|---|---|--|------------------------------------|-------------|-----------------------|---|
|           |                |   | techniques, technology development, awareness raising)<br>4. Networking, national and international good examples   | (Annex V.)   |                                    |             |                       | - 30% Increase number of visitors by 10% a year |
|           |                | F2.3<br>Opening and promotion of Szeleta Visitor Centre | 1. Opening of the facility<br>2. Operation of the visitor centre<br>3. Building and maintenance of the necessary infrastructure (e.g. tourist path, benches)<br>4. Networking, national and international good examples | Szeleta Visitor Centre (Miskolc)<br><br><u>BIOMAP</u> (Annex V.) | BNPD, Municipality of Miskolc Town | 2019 - 2021 | European Fund (GINOP) | - Increase number of visitors by 10% a year     |

| Objective | Specific goals | Measure                                      | Steps  | Location    | Responsible and collaborators  | Timeframe   | Financing  | Indicator of success   |
|-----------|----------------|--|--|-------------|--|-------------|--|--|
|           |                | F2.4<br>Development of biking infrastructure | <ol style="list-style-type: none"> <li>1. Organizing bike events (and joining to other initiatives / events)</li> <li>2. Maintenance of bike renting (servicing) points &amp; creation of a network for this service</li> <li>3. Promotion of e-bike possibilities with its technological background (plugging) – developing of the new biking map</li> <li>4. ‘Bicycle-friendly’ accommodations</li> <li>5. Development of environmentally friendly public</li> </ol> | Bükk region | BNPD, Government Commissioner for Active Tourism, Hungarian Biking Association, KaptárkőEgyesület, local and county governments entrepreneurs, tourism operators | 2019 – 2025 | State budget (Government special funds), private investments | <ul style="list-style-type: none"> <li>- Increase of environmentally conscious visitors,</li> <li>- Increase of services</li> <li>- Development of PBBs</li> </ul> |

| Objective | Specific goals                               | Measure   | Steps  | Location   | Responsible and collaborators  | Timeframe      | Financing  | Indicator of success  |
|-----------|--|---|--|--|--|----------------|--|---|
|           |  |   | transport  |  |  |                |  |   |
|           |  | F2.5<br>Establishment of education trails and facilities                                | <ol style="list-style-type: none"> <li>Maintenance of the presenting thematic trails and facilities (BNPD managed)</li> <li>Assist and consult of newly planned trails (external managed)</li> </ol> | BNP and Bükk region  | BNPD, NGOs - Hungarian Birdlife (MME) 'Bükk Group', KaptárkőEgyesület, forest enterprises, local communities | 2019 – ongoing | State budget, funds for local communities and NGOs | <ul style="list-style-type: none"> <li>3 Renovated trails</li> <li>Newly established trails (2 pcs)</li> <li>Increase of services by 10%/year</li> <li>Development of PBBs (2 pcs)</li> </ul> |
|           | F3<br>Improve energy-efficiency developments | F3.1<br>Promotion and establishment of green energy solutions (BNPD facilities & outer) | <ol style="list-style-type: none"> <li>Planning</li> <li>Licensing (obtaining permits)</li> <li>Execution</li> <li>National and international best practicing</li> </ol>                             | BNP headquarter office, guest houses and visitor centres (Eger, visitor centres at Felsőtárkány, Szilvásvárad, | BNPD, Bükk Foundation  | 2019 – ongoing | State budget, national and international funds     | <ul style="list-style-type: none"> <li>Number of renovated houses, facilities (3 pcs a year)</li> </ul>   |

| Objective | Specific goals | Measure   | Steps  | Location  | Responsible and collaborators | Timeframe      | Financing                                      | Indicator of success   |
|-----------|----------------|---|--|---|-------------------------------|----------------|--|--|
|           |                | Design of electric charging stations              |  | Répáshuta, Borostyán Guest House, Oszla Guest House)  |                               |                |  |  |
|           |                | F3.2<br>Design and construction of passive houses | <ol style="list-style-type: none"> <li>1. Planning</li> <li>2. Licensing (obtaining permits)</li> <li>3. Execution</li> <li>4. National and international best practicing</li> </ol> | BNP headquarter office, guest houses and visitor centres (Eger, visitor centres at Felsőtárkány, Szilvásvár, Répáshuta, Borostyán Guest House, Oszla Guest House) | BNPD                          | 2019 – ongoing | State budget, national and international funds | <ul style="list-style-type: none"> <li>- Number of renovated houses, facilities (3 pcs a year)</li> <li>- Increasing the environmental awareness of visitors (less waste)</li> </ul> |



| Objective | Specific goals  | Measure  | Steps  | Location  | Responsible and collaborators                              | Timeframe      | Financing                                      | Indicator of success  |
|-----------|---|--|--|---|--|----------------|--|---|
|           |   | F3.3<br>Design and construction of additional electric charging stations | <ol style="list-style-type: none"> <li>1. Planning</li> <li>2. Licensing (obtaining permits)</li> <li>3. Execution</li> <li>4. National and international best practicing</li> </ol> | BNP headquarter office, guest houses and visitor centres (Eger, visitor centres at Felsőtárkány, Szilvásvár, Répáshuta, Borostyán Guest House, Oszla Guest House) | BNPD, Bükk Foundation                                      | 2019 – ongoing | State budget, national and international funds | - Number of renovated houses, facilities (3 pcs a year)   |
|           | F4<br>Mitigation of unfavorable effects of the mass tourism | F4.1<br>Preparation of sustainability strategy                           | <ol style="list-style-type: none"> <li>1. Questionnaire survey</li> <li>2. Sociological examination, social, economic analysis (GAP analysis)</li> <li>3. Study on</li> </ol>        | Bükk region   | BNPD, tourist operators, county governments TDMs, research | 2019 –2023     | State budget, national and international funds | <ul style="list-style-type: none"> <li>- Preparation of a strategic document</li> <li>- Increasing the environmental awareness of visitors</li> </ul> |

| Objective  | Specific goals   | Measure                                       | Steps  | Location    | Responsible and collaborators                              | Timeframe      | Financing    | Indicator of success  |
|--|--|---|--|-------------|--|----------------|--------------|---|
|  |  |   | international practices<br>4. Dissemination of the results   |             | institutions   |                |              |   |
| G<br>Effective networking with county and local governments, local producers, NGOs, research institution | G1<br>Establish excellent communication with all stakeholders and interested parties | G1.1<br>Development of communication channels | 1. Trainings (e.g. touristic guides)<br>2. Publications<br>3. Media activity<br>4. Webpage enhancement<br>5. Initiative for public funding of 'ZöldHorizont' | Bükk region | BNPD, Bükk Foundation, communities local service suppliers | 2019 – ongoing | State budget | - Increasing the visibility and activities of the national park by increasing reach by 20%<br>- Professional information sharing at least once a year<br>- Publishing the 'ZöldHorizont' newspaper (at least 1 occasion / year) |
|  |  | G1.2<br>Establishment of 'Bükk                | 1. Stakeholder involvement<br>2. Setting the framework of  | Bükk region | BNPD, Bükk Foundation, NGOs, communities                   | 2019 – ongoing | State budget | - Increasing the visibility and activities of the national park   |

| Objective | Specific goals | Measure | Steps  | Location | Responsible and collaborators | Timeframe | Financing | Indicator of success  |
|-----------|----------------|---------|--|----------|-------------------------------|-----------|-----------|---|
|           |                | Forum'  | this association<br>3. Workplan<br>4. Execution (annual meeting) |          | local service suppliers       |           |           | by increasing reach by 20%<br>- Professional information sharing at least once a year |

#### e. Education

| Objective  | Specific goals                                   | Measure  | Steps   | Location   | Responsible and collaborators             | Timeframe      | Financing                        | Indicator of success   |
|--|--|--|---|--|---|----------------|----------------------------------|--|
| <b>THEME: EDUCATION</b>                                |  |  |   |  |   |                |                                  |  |
| H<br>Environmentally well-informed and educated public | H1<br>Raise awareness about environmental topics | H1.1<br>Raising environmental awareness through waste management | 1. Creation of a 'waste study trail' with additional booklet<br>2. Attitude-forming lectures for primary and high | Bükk region, Education Centre - Felsőtárkány<br><br><u>BIOMAP</u> (Annex V.) | BNPD, ÖKO-Pack Ltd., education institutes | 2019 – ongoing | Stet budget, European funds (OP) | - Cleaner environment (e.g. karstic water pollution reduced) – acute incidences reduced by |

| Objective | Specific goals   | Measure  | Steps   | Location   | Responsible and collaborators                     | Timeframe   | Financing    | Indicator of success  |
|-----------|--|--|---|--|---|-------------|--------------|---|
|           |  |  | school students and adults<br>3. Placement of selective collection containers, composters at BNP Education Centre<br>4. Organizing waste management events, actions                           |  |   |             |              | 80%, chronic pollution lowered by 30%   |
|           | H2<br>Promoting 'outside the school' environmental education | H2.1<br>Preparation of forest school modules for two classes per institution | 1. Preparation of the module involving education specialists<br>2. Planning the design and layout<br>3. Networking with similar initiatives<br>4. Execution<br>5. Evaluation of the education | Bükk region, EszterházyKároly University, Hungarian Birdlife (MME) 'Bükk Group', Educational Centre - Felsőtárkány | BNPD, education institute - Eger Education Bureau | 2019 – 2020 | State budget | - New education modules launched 2 classes per institution<br>- Free forest school modules for two classes per institution<br>- Number of students participating in the action at |

| Objective | Specific goals         | Measure  | Steps  | Location  | Responsible and collaborators  | Timeframe      | Financing                                     | Indicator of success  |
|-----------|------------------------|--|--|---|--|----------------|---|---|
|           |                        |  | module   |   |  |                |   | least 50 a year<br>- Number of teachers participating in the action 10 a year   |
|           |                        | H2.2<br>Advanced training for environmental education for teachers | 1. Preparation of lectures, field trips, workshops for teachers<br>2. Present the environmental education field methods<br>3. Exchange knowledge among the teachers and environmental education institutes | Bükk region, Eszter házyKároly University, Hungarian Birdlife (MME) 'Bükk Group', Educational Centre - Felsőtárkány | BNPD, education institute - Eger Education Bureau, individual experts, | 2019 – 2022    | State budget, European funds (OP)             | - Methods and knowledge exchanged at at least 2 trainings per year<br>- Involvement of teachers in public education in environmental education (at least 5 teachers per year) |
|           | H3<br>Consultation and | H3.1<br>Liaising with municipal,                                   | 1. Cadaster beehive-rocks<br>2. Thematic lectures,   | Bükk region   | BNPD, Bükk Foundation, KaptárkőEgy esület,                             | 2019 – ongoing | State Budget, European funds (OP) for beehive | - Increase of environmental ly conscious visitors by 10%  |

| Objective | Specific goals  | Measure   | Steps   | Location | Responsible and collaborators                                 | Timeframe | Financing | Indicator of success                 |
|-----------|---|---|---|----------|---|-----------|-----------|--------------------------------------|
|           | participation in tasks related to Hungarian national values and Hungaricums | county and regional councils and the Hungaricum Committee | workshops<br>3. Safeguarding the beehive-rock study trail at Szomolya |          | municipal, county and regional councils, Hungaricum Committee |           | rocks     | - Increase of services by 10% a year |

#### 4. Monitoring and communication

Progress on the implementation of the Action Plan will be assessed annually, by the national park administration. The evaluation of the different actions will be assessed by the partners (as collaborators) involved in the action plan.

The implementation of the measures will depend on the availability of financial and human resources. Some actions (e.g. investments) need higher financial investments, which should be covered by national and European funds. Several 'networking' actions have lower financial needs, so the main issue is to keep the conscious community together, which was established in the framework of the ECO KARST project.

The measures defined in this Action Plan should serve as a background document for the Nature Conservation Management Plan and the separate Natura 2000 management plans, if they will be approved by the Ministry of Agriculture.

## 5. Annexes:

Annex I - Ecosystem condition map

Annex II–BIOMAP for Action A1.2

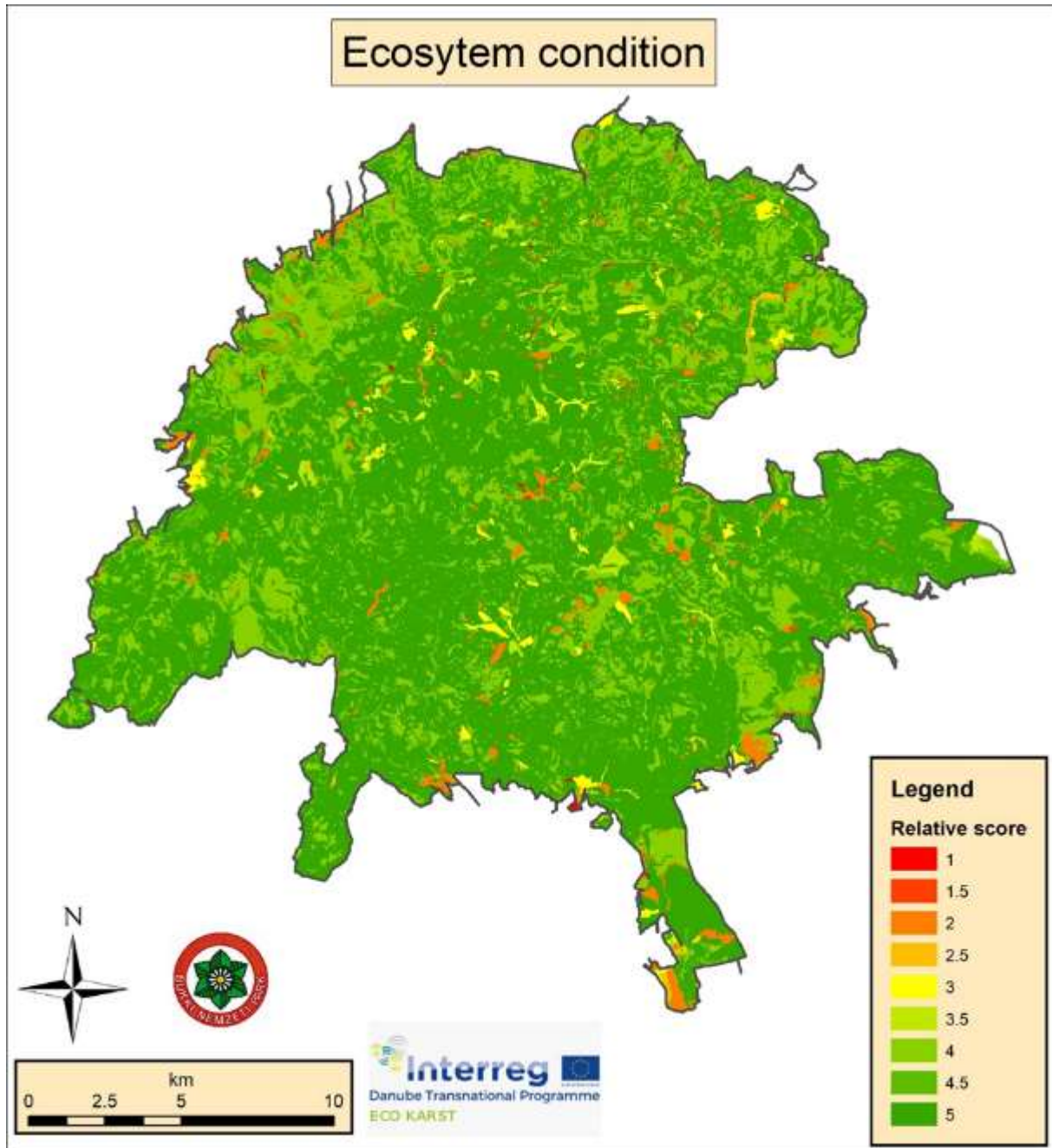
Annex III - BIOMAP for Action B1.1 & B1.2

Annex IV - BIOMAP for Action E1.1

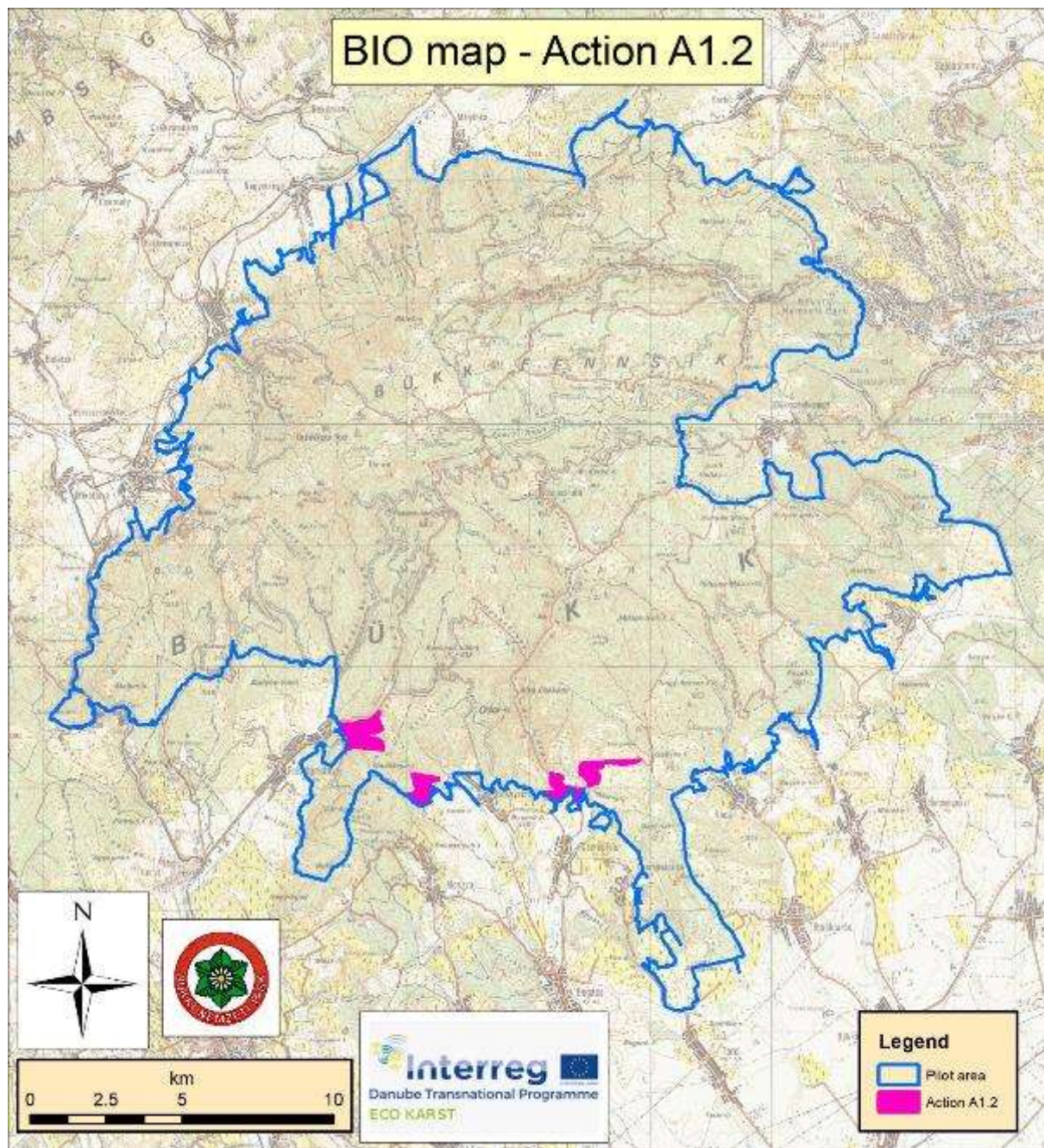
Annex V - BIOMAP for Action F2.2 & F2.3 & H1.1

Annex VI - List of stakeholders and external experts involved in the preparation of the action plan



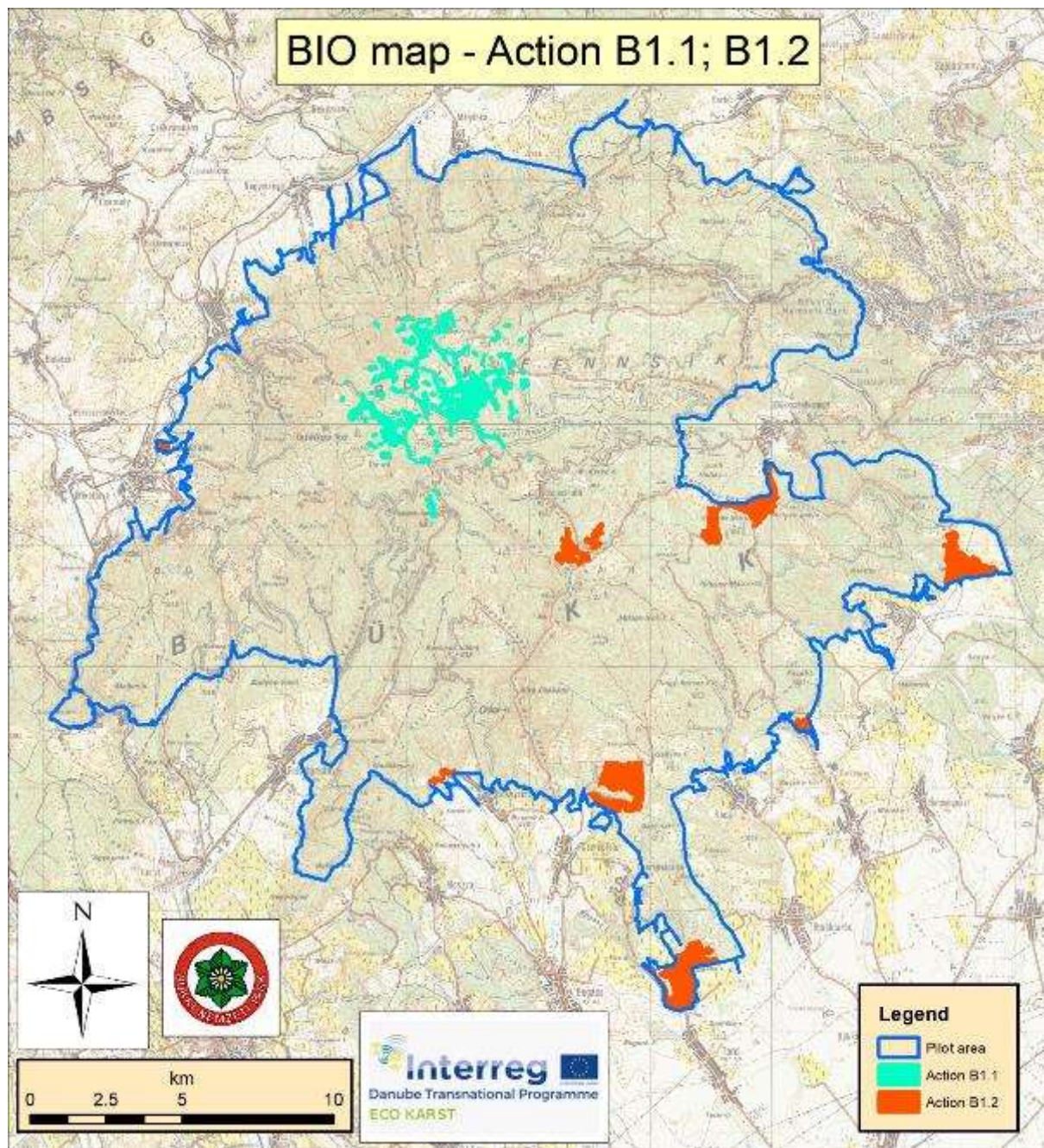


Annex I.: Ecosystem condition map



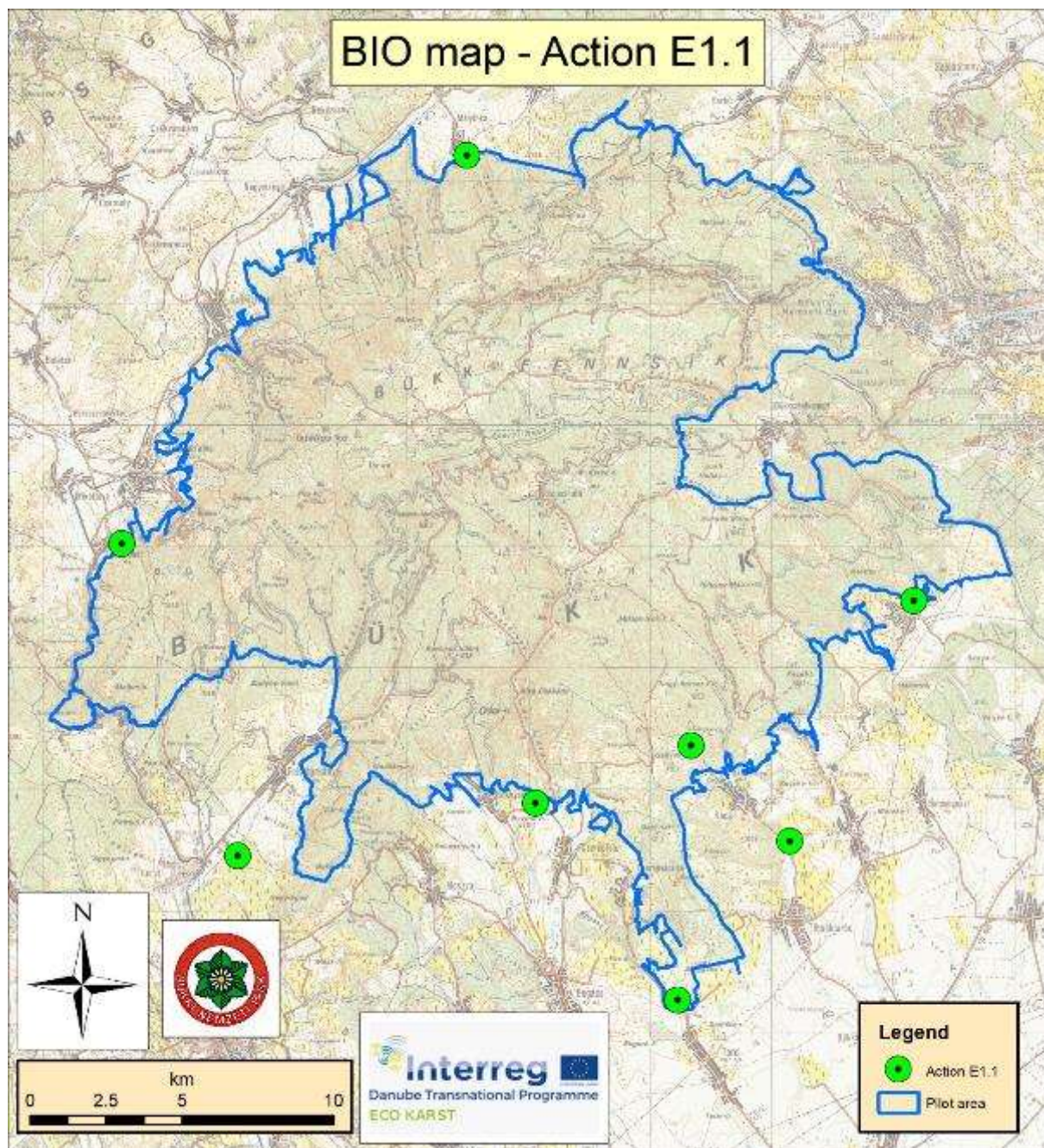
Annex II – BIOMAP for Action A1.2





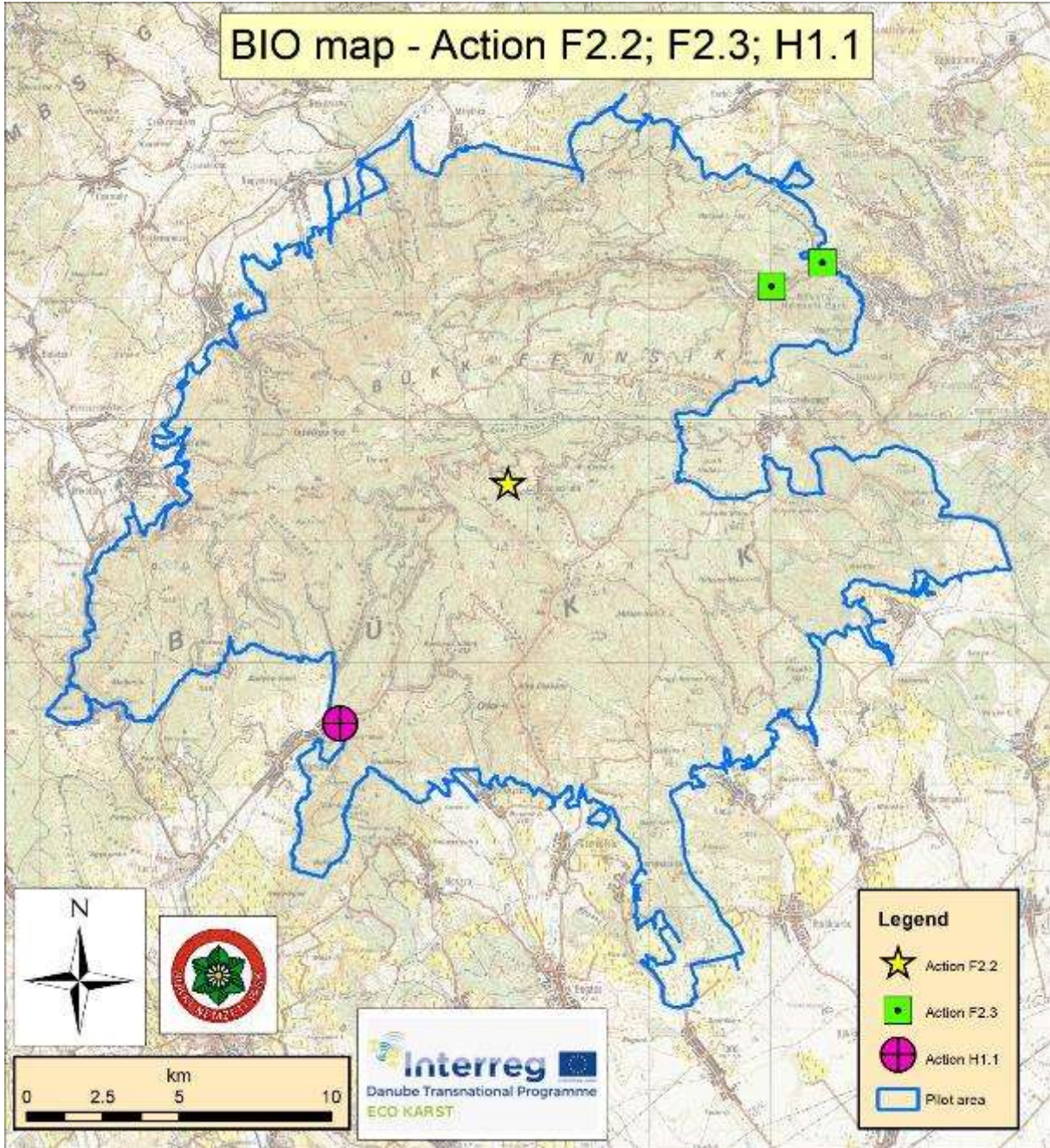
Annex III - BIOMAP for Action B1.1 & B1.2





Annex IV - BIOMAP for Action E1.1





Annex V - BIOMAP for Action F2.2 & F2.3 & H1.1

Annex VI - List of stakeholders involved in the preparation of the action plan:

| <b>Organisation</b>                                 | <b>Field</b>         |
|---|----------------------|
| Agrárminisztérium NPTF                              | Authority (ministry) |
| Barlang Bt.   | Entrepreneur         |
| BAZ MegyeiKatasztrófavédelmiIgazgatóság             | Authority            |
| BAZ MKH MJH   | Authority            |
| KörnyezetvédelmiésTermészetvédelmiFőosztály         |                      |
| BükkTermészetvédelmi,                               | NGO                  |
| KulturálisésÖkoturisztikaiAklapítvány               |                      |
| Büxirup   | Entrepreneur         |
| EgerVárosiTurisztikaiKözhasznú Nonprofit Kft.       | Tourism organization |
| EgererdőZrt.  | Forestry enterprise  |
| ÉletfaKörnyezetvédőSzövetség                        | NGO                  |
| ÉrmellékiTermészetvédelmiEgyesület                  | NGO                  |
| EszterházyKárolyEgyetem                             | Education            |
| EszterházyKárolyEgyetem TTK BI                      | Education            |
| EszterházyKárolyEgyetem TTK FKI                     | Education            |
| Garamond 91 Kft.                                    | SME                  |
| HevesMegyeiTermészetbarátSzövetség                  | NGO                  |
| InnoTime Hungary Kft                                | SME                  |
| KaptárkőKulturálisésTermészetvédelmiEgyesület       | NGO                  |
| Magyar MadártaniésTermészetvédelmiEgyesület         | NGO                  |
| MIDMAR Kft, Miskolc TDM                             | Tourism organization |
| MTA ÖkológiaiKutatóközpont                          | ES expert (external) |
| NemzetiAgrárgazdasági Kamara HevesMegyeiIgazgatóság | Chamber organization |
| NoszvajKözségiÖnkormányzat                          | Municipality         |
| Öko-Park Panzió                                     | SME                  |
| RépáshutaKözségÖnkormányzata                        | Municipality         |
| SzalakótaEgyesület                                  | NGO                  |
| SzilvásváraközségÖnkormányzata                      | Municipality         |
| SzilvásváradiTúrakerékpáros Klub                    | SME                  |
| Tard KözségÖnkormányzata                            | Municipality         |
| ZöldAkcióEgyesület                                  | NGO                  |