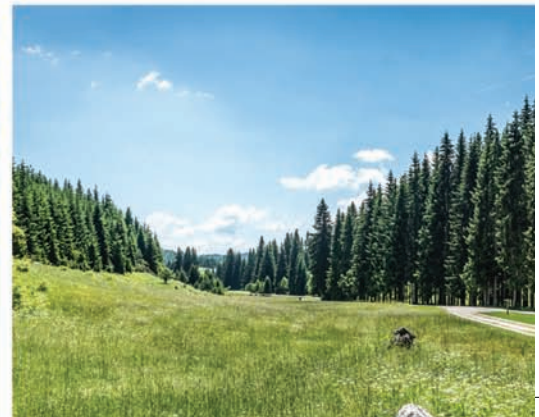




BIODIVERSITY – IT'S YOUR BUSINESS

Economic development in protected areas with the help of nature



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Economic development in protected areas with the help of nature

Publisher:

Global Nature Fund in the framework of the ECO KARST project, supported by the Interreg Danube Transnational Programme and co-financed by European Union funds (ERDF and IPA)

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Graphic design and layout:

Center for Energy, Environment and Resources – CENER21, Sarajevo

Electronic version available at:

www.interreg-danube.eu/approved-projects/eco-karst/outputs

May, 2018

This publication has been produced within the “ECO KARST – Ecosystem services of protected karst areas- driving force of local sustainable development” project, implemented through Interreg Danube Transnational Programme and co-funded by European Union funds (ERDF and IPA).

Suggested citation: Gattenlöhner U., Peiffer A., Volles R., 2018.: Biodiversity – It's your business - Economic development in protected areas with the help of nature. Interreg Danube Transnational Programme, ECO KARST project

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1. Objective of this publication and target audience

The aim of this publication is to highlight opportunities for combining nature conservation and local economic development to generate a win-win situation. One way to achieve this is the promotion of so-called Pro Biodiversity Businesses.

We recommend this publication to entrepreneurs, farmers, residents, nature managers and other interested stakeholders who wish to learn more about companies that successfully reconcile nature conservation and biodiversity with their economic activities.

In addition to international best practice examples, promising approaches from seven pilot areas of the ECO KARST project are presented.





The last master carpenter finishing his drevak (traditional boat), Slovenia - Jošt Stergaršek ©

2. Ecosystem services of karst protected areas – the driving force of local and sustainable development

This publication is a product of the ECO KARST project. ECO KARST's goal is to contribute to the protection, conservation and sustainable use of karst ecosystems in the Danube and Dinaric region by raising awareness about ecosystem services and increasing the number of committed local Pro Biodiversity Business entrepreneurs. The project involves seven protected karst areas in seven different countries with common features and similar challenges.

In the ECO KARST project, a holistic view of natural resource management is being developed and implemented in seven pilot areas. To achieve this, a thorough analysis of the local ecosystems and the services they provide to society has been conducted. This assessment is described in a separate publication entitled "Ecosystem Services in Protected Karst Areas"¹. Relying on existing ecosystem services, new business opportunities can be developed, not only providing more jobs but contributing to nature conservation and community development at the same time.

A key factor contributing to the success is the cooperation of local residents and park managers, entrepreneurs, NGOs and authorities. With their knowledge of the region and their commitment, new ideas for Pro Biodiversity Businesses can be developed and put into practice.

¹Available at: www.interreg-danube.eu/approved-projects/eco-karst/outputs



A flower on the meadow nearby Cerknica lake, Slovenia - Notranjska Regional park photo archive ©



3. What is a Pro Biodiversity Business?

A Pro Biodiversity Business (PBB) is an enterprise that generates financial returns and at the same time makes a positive contribution to preserving biodiversity. This is important because individuals, communities and companies benefit from the use of natural resources and ecosystem services.

Such ecosystem services include contributions of ecosystems to human well-being and economic productivity. Biodiversity—the diversity of species, genes and the diversity of ecosystems—helps to ensure the provision of ecosystem services and the performance of economic activities. This is the basis for a functioning economy and good living conditions.

Due to rapid economic and population growth worldwide, the consumption of natural resources is steadily increasing. This, in conjunction with the pollution and overexploitation of ecosystems as well as climate change, results in an unprecedented loss of biodiversity and ecosystem services.

PBBs try to break this vicious circle and allow long-term economic development while simultaneously preserving biodiversity. In the seven pilot areas, the most important economic sectors for the development of PBBs are forestry, agriculture and tourism.





What is biodiversity?

Biodiversity is the diversity of species, the genetic diversity within species (globally and locally) and the diversity of ecosystems.

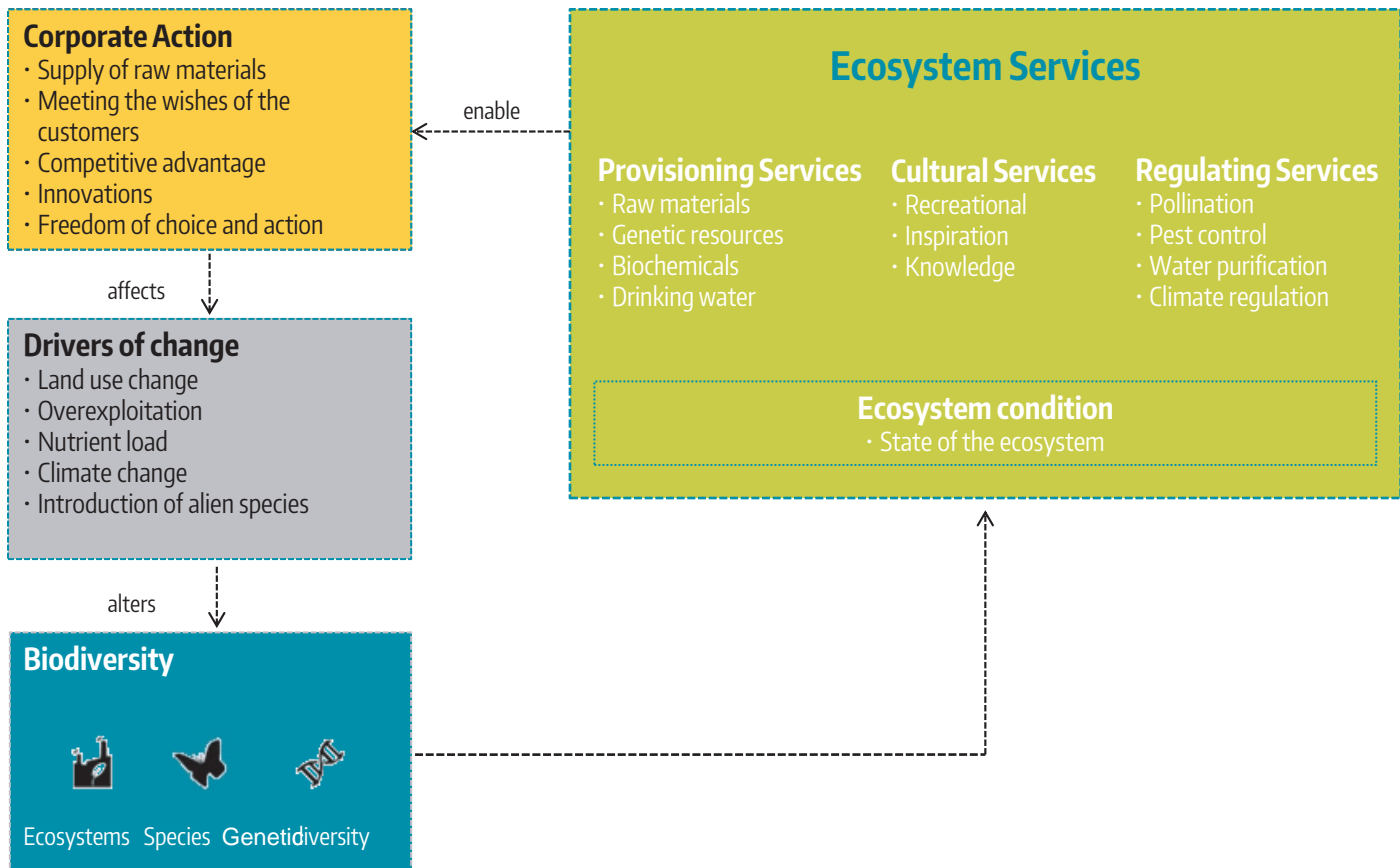
What are ecosystem services?

Ecosystem services are gifts that nature provides for us. The concept of ecosystem services aims to capture the complex relationship between nature and society in a simplified way. To achieve this, it borrows an analogy from economy: a provider (the ecological system) offers various services to a beneficiary (society).

Ecosystem services can be divided into three categories:

- **Provisioning services**—material products provided by the ecosystems, such as food, grains, fruit, fuel, fiber (timber, wool), herbs, natural medicine, ornament materials (flowers, clams), etc.
- **Regulating services**— ecosystem processes providing stable and safe living conditions, such as air quality regulation, climate regulation, erosion regulation, water purification, regulation of diseases, pest control, pollination, regulation and mitigation of floods and natural disasters , etc.
- **Cultural services** – non-material benefits provided by ecosystems, such as spiritual enrichment, cognitive development, inspiration, relaxation, social connections, cultural heritage, aesthetic experience and ecotourism.

For a further discussion of ecosystem services and their assessment, please refer to the publication “Ecosystem services in protected karst areas”.



Source: adapted from (Beständig & Wuczkowski, 2012)

4. Pro Biodiversity Businesses – international approaches

PBB ideas are being increasingly developed and implemented worldwide. One of the most common examples of a PBB are beekeepers. By producing honey, which is consumed as a popular and tasteful aliment with healing effects all over the world, beekeepers not only earn an income but also help to protect biodiversity due to the pollination effect. Globally, nearly 90 percent of wild flowering plant species and more than 75 percent of food crops rely at least in part on animal pollination. Honeybees are among the most important pollination insects because they visit many different kinds and a large number of blossoms every day. However, due to changing farming practices, the use of pesticides and the loss of many species and habitats, honeybees and other wild pollinators are under threat. Beekeeping is thus a very important activity. In particular, organic honey production is a good way to contribute to species protection because it reduces the utilisation of synthetics and medical treatment. The location of the hives is very important in organic production: far enough away from industries, conventional agriculture and motorways.

A second good example of a PBB with a significant positive impact on biodiversity are meadow orchards and the resulting production of fruit juices, musts and liquors. An extensive orchard represents the ecological transition between open and wooded areas and can offer a habitat for more than 5,000 animal and plant species. This is due to the different layers that exist on such a meadow: soil, undergrowth, mosses, branches and twigs, dead wood or tree cavities provide various kinds of living spaces. In times of constant intensification of agriculture, meadow orchards offer refuge for living organisms. In addition to the protection of biodiversity, orchards protect the soil from erosion, produce oxygen, characterise the landscape and are valuable for recreation and tourism. On the following pages, examples of international PBBs are described that could stimulate initial ideas and provide inputs for the development of new businesses in protected areas such as karst regions.



A man is picking flowers of *Arnica montana*, Romania - Ecoherba & Bioflora photo archive ©



Shepherd For Rhön Sheep, Oberelsbach-Ginolfs, Germany | Extensive land use and livestock farming

Mr. Kolb's family-business farm is located in the Rhön Biosphere Reserve. The farm grows vegetables and fodder for their livestock, sheep, chicken and geese. A neighbouring farmer with an abattoir slaughters the animals for a group of farmers. The meat is then processed by a local butcher. Together with other farmers and processors, Josef Kolb has created local value chains. Products are sold at a farm shop. Around 80% of the meat is delivered to restaurants in the region.

Biodiversity impact: In collaboration with a German environmental NGO (BUND), Mr. Kolb has reintroduced the Rhön sheep to the region, a species that was almost extinct. The grazing of this sheep on the pastureland in the area contributes to landscape maintenance and the preservation of biodiversity on the pastures. All his products have organic certification, produced without the use of chemical pesticides.

Success factors: The regional production of the native Rhön sheep is used by the farmer as a unique selling point. This has created growing interest among local restaurants in the products. In the Rhön Biosphere Reserve a general trademark, called "Dachmarke Rhön", was established to promote regional products according to stringent membership criteria. Mr. Kolb is one of more than 300 producers, processors, retailers and restaurants using this regional brand. All these activities have significantly improved collaboration between the producers and enabled a better exchange of information between the people.



Josef Kolb



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Shepherd for Rhön Sheep photo archive 



Dehesa Casablanca-Ambrosía, Cáceres, Spain | Beef production, processing and sales

Enrique Vega has been a farmer for over 35 years and manages a typical farm of more than 400 ha in the north of Extremadura. The farm Casablanca-Ambrosía is a Spanish “Dehesa”, a traditional, but also up-to-date, Mediterranean system that combines livestock rearing with forestry and crops. The farm produces certified organic beef. Through the operation of its own slaughterhouse, the meat is marketed directly to consumers. Additionally, the farm started offering tourist and educational activities a few years ago.

Biodiversity impact: This “Dehesa” is a successful example of how extensive agriculture featuring crops, forestry and pasturage of animals is not only compatible with nature conservation and rural development but is also necessary for the achievement of both goals. From the very beginning, Enrique strongly focused on healthy soil and livestock density. He uses indigenous breeds of cows which he moves to different

grazing grounds according to the seasons. In addition, the animals are fed with autochthonous legumes.

Success factors: Enrique Vega understands the farm as a complex nature system and environmental issues are taken into account within management decisions. The direct processing and marketing of the meat are central aspects of the company’s success as it ensures a high quality of the products and establishes trustful customer relations.



Earth Good Food Coop, Skopje, Macedonia | Consumer cooperative for organic food

Good Earth is a consumers' cooperative registered in 2015. It organises the sale of local Macedonian organic products to its members who can pick up a basket with seasonal fruits and vegetables every week. Customers that are not members of the cooperative can buy the products in a shop. The main objective is to provide access to healthy, trustable and affordable organic products from the region. Three full-time employees work in the shop and pack around 90 baskets every week.

Biodiversity impact: All the food sold by the cooperative is naturally produced without chemical pesticides or artificial fertilisers. Around 30 producers regularly deliver their products. Farmers were selected according to specific criteria, such as short distances, polyculture plantations, organic production and other sustainability factors. Products are delivered by public transport, which ensures low emission

and transport costs. In addition, the cooperative engages in low-waste management: glass is recycled and plastic bags are completely banned. They also organise an event for seed exchange with the producers.

Success factors: The cooperative fosters a direct contact between producers and consumers, for example by organizing farm visits. The small-scale farmers profit from the cooperation since they are less dependent on larger supermarkets. An important success factor of Good Earth is the enthusiasm and values of the three co-founders and owners of the cooperative: the establishment of the cooperative is their way of contributing to ecological sustainability and healthy nutrition.



Heylen bvba, Geel, Belgium | Sustainable landscape management

Tom Heylen founded his company in 1995 at the age of 21, after being active in environmental protection as a volunteer. He is a pioneer in Belgium and was one of the first to offer nature-friendly management of protected areas and landscape design. He uses a machine fleet consisting of crawler excavators, dumpers, tractors and a range of smaller machines. His main clients are national and regional governments, nature conservation organisations and EU-projects such as EU-Life.

Biodiversity impact: One of his main working methods is to limit soil compaction during work. Repeated site management with heavy machines can impair plant growth. He, therefore, uses special light machines with better weight distribution. For instance, his company mows pastures in protected areas, prevents heather areas from becoming overgrown by forest and undertakes forestry in fragile

environments. In addition, as much natural material (e.g., certified wood, bio-degradable machine oil) as possible is used. The company also constructs wastewater treatment systems in remote areas by using natural systems such as reed or lava stones for water purification.

Success factors: Tom Heylen had set up his business as a single entrepreneur, but now employs 23 people. The expertise he had gained as a volunteer in conservation work, as well as the demands by authorities were important factors for the successful growth of his business. Creating environmental awareness among his employees and adapting the machines are very important for his successful management of biodiversity.



Urnatur, Ödeshög, Sweden | Ecotourism, farming

Ulrika Krynitz, a biologist and designer, and Håkan Strotz, a forester, jointly own a farm of 50 ha, where they started their ecotourism business in 2007. Private guests and conference participants are accommodated in exquisite cabins built by Håkan from forest wood, with the interiors designed by Ulrika. The cottages without electricity are located in a forest area that is situated away from the farmhouses. Vegetables from their own kitchen garden, meat from their own sheep, mushrooms and berries from the forest as well as fish from the lake are offered to the guests.

Biodiversity impact: The owners of this ecotourism business say that tourism allows them to spend extra time on biodiversity preservation. However, their work in nature conservation contributes much to the high value and special experience people can have on their farm. They aim at cultivating their farmland in a very traditional way. For example, hay is made in late July using traditional techniques to support the

natural growth of endangered plant species on their meadows. All of the products consumed on the farm are produced organically or come from nearby sources. By using solar panels for electricity and wood from the forest for heating, as many resources as possible are saved.

Success factors: Ulrika and Håkan state that it was important for them to focus their work from the very beginning on the nature preservation; they are proud of the healthy ecosystems they have created and would describe themselves as “producers of biodiversity”. It is also important to recognise that there is a growing market for authentic, nature-based tourism. While many people did not believe in their plans in the beginning, more and more people are now interested in their tourism and biodiversity efforts.





Wilderness Scotland, Aviemore, Scotland | Ecotourism, environmental education

Wilderness Scotland, founded in 2001, is a tour operator offering a range of active adventure holidays and wilderness experiences in the Scottish Highlands. The company aims to help people connect to the environment and enjoy nature in a sustainable way. To support the local economy, Wilderness Scotland promotes locally produced food and collaborates with small family-owned hotels and restaurants.

Biodiversity impact: Wilderness Scotland attempts to minimize their environmental impact in various ways. It conducts environmental risk assessments to analyse the potential negative impacts of their tours and follows the international standard of “Leave no trace”, ensuring that nature and culture are not harmed by the trips. Their guides also receive education on biodiversity and nature education. Through a “Conservation Contribution Scheme”, clients can voluntarily support grass-roots conservation efforts across Scotland at the time of booking.

Success factors: Due to the high level of expertise of the guides and the close collaboration with the National Parks where they operate and with other wildlife managers, Wilderness Scotland provides engaging wildlife experiences. A high level of customer service is also ensured by the involvement and interaction with local communities and businesses. Overall, these efforts provide tourists with an unforgettable trip.





5. Pro Biodiversity Businesses – approaches in the pilot areas

The seven protected project areas face similar challenges in the development of PBBs. However, there are already some companies in all the parks and surrounding areas which have taken initial steps towards protecting biodiversity and the cultural heritage. The following pages provide a brief presentation of each pilot area with two local businesses. These companies or individuals have a potential to become a PBB or may already be considered as one. Furthermore, these local examples are transferable to other regions.

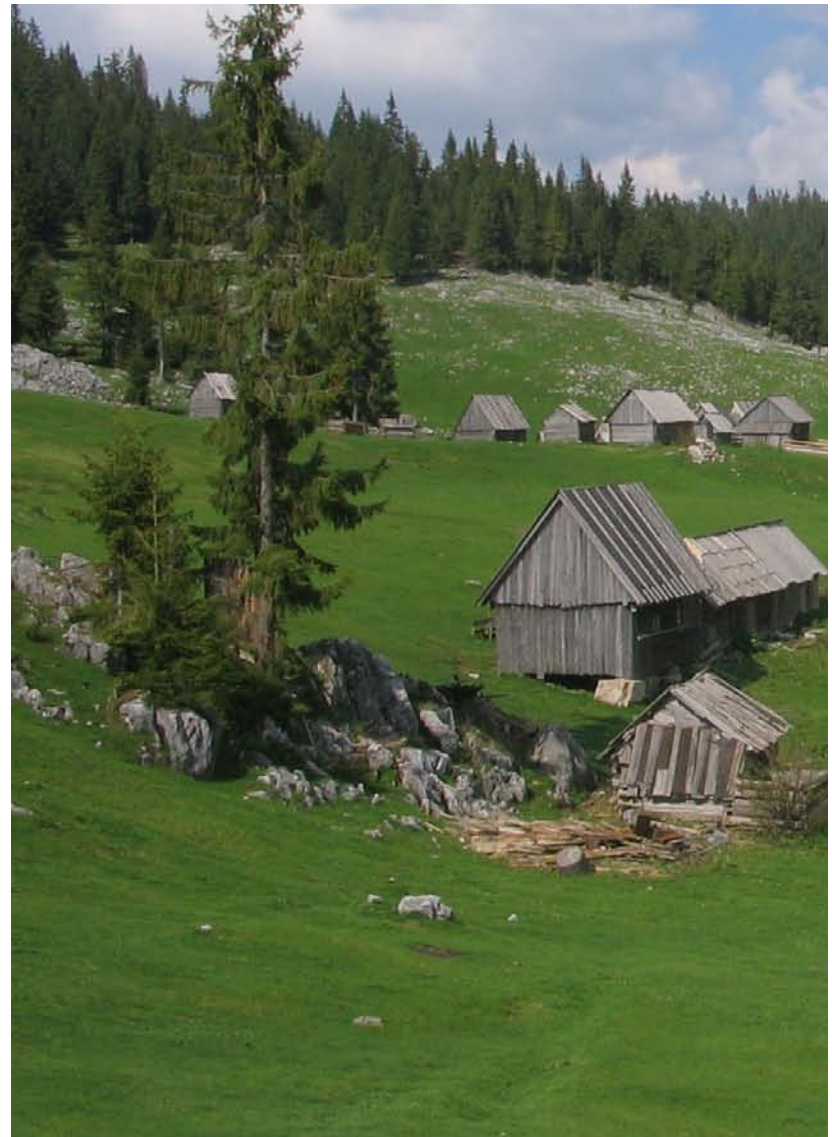




Rural landscape in Apuseni Nature park, Romania - Apuseni Nature Park photo archive ©

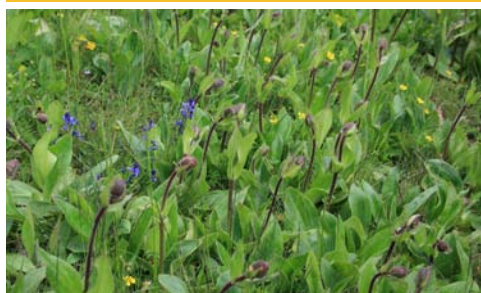
APUSENI NATURE PARK

Apuseni Nature Park is located in the western part of the Romanian Carpathian Mountains, covering an area of 75,784 hectares. The area is characterised by more than 1,500 caves, forests and a rich biodiversity with some 1,550 plant species and 1,350 animal species. The park also includes the largest accumulation of underground ice in the world and fossil-rich sites such as the Bear Cave. There are a number of businesses that already operate inside and in the vicinity of the park. In principle, businesses operating inside the Nature Park need to have permission from the authorities. The companies are predominantly small-scale and range from wood processing companies (mostly very small) and farms to medicinal plant companies, beekeepers and tourism facilities.





Summer woodcrafter settlement Gardisoara in Apuseni Nature park, Romania - Apuseni Nature park photo archive ©



Ecoherba and Bioflora Apuseni, Cluj, Romania | Herbal and medical plants

Ecoherba & Bioflora Apuseni are the result of a long process of interdisciplinary and intercultural research of several institutions in Europe (University of Freiburg, Germany; WWF-UK; University of Agricultural Sciences; Veterinary Medicine of Cluj-Napoca, Romania and Weleda). The first research studies in the area were initiated in 1995 by the University of Freiburg, which launched Apuseni Project. During the ensuing “Arnica Project”, contacts with Weleda AG in Germany was established, and Ecoherba was founded in 2007 as a result of this research and development project. In 2010, at the recommendation of Weleda, Bioflora Apuseni was established as a viable solution to new socio-economic challenges. The two enterprises employ some 25 seasonal workers and have four permanent local staff. One of the main products is the medical plant *Arnica montana*, providing an important ingredient for a range of pharmaceutical and cosmetic products.

Biodiversity efforts: The focus of the companies is the preservation of neglected grasslands with low nutrient levels in the traditional landscape of the Apuseni Mountains. Such diverse oligotrophic meadows and pastures are among the most threatened habitats in Europe. The main goal is the preservation of oligotrophic grasslands in the cultural landscape, rich with endangered species through sustainable land use patterns and the fair trade of *Arnica montana*.

Success factors: In collaboration with Weleda, the companies organise training courses for the local pickers to ensure sustainable harvesting of Arnica’s inflorescences. The collected fresh material is transported under proper hygienic conditions and adequate temperatures to a local drying facility, where it is processed under optimal conditions. The final certified organic product, dry *Arnica* inflorescences, is of high quality and purchased by Weleda AG at fair prices.





Discover the Nature Association, Cluj Napoca, Romania | Promotion of sustainable tourism

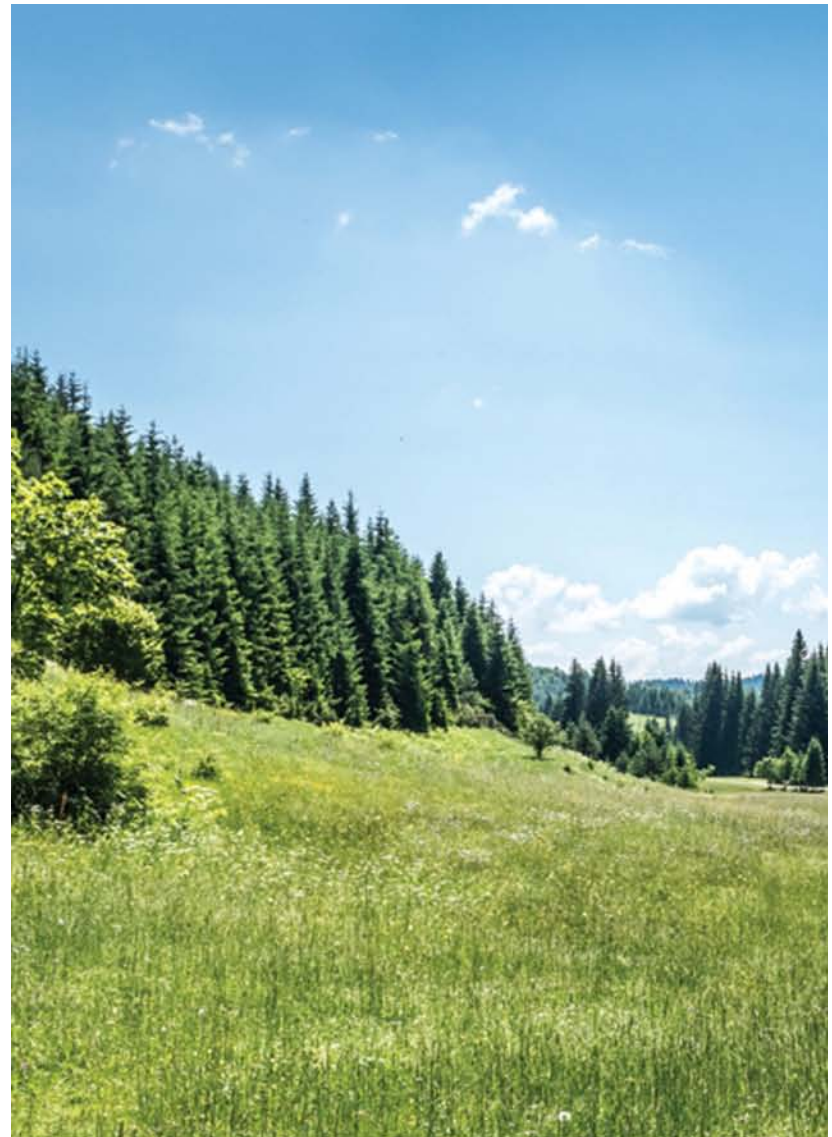
Discover the Nature Association was founded as a result of the Innovative and Responsible Tourism Territories (IART) project. Equestrian tourism activities started in 2006. Since 2010, the association has been providing training programmes and certification schemes for equestrian guides. Currently, up to seven people, most of them on a project base, work within the program.

Biodiversity efforts: The idea of the network is to develop small companies working under a responsible tourism perspective to improve the economic competitiveness of rural areas.

Success factors: The main objective of Discover the Nature Association is to promote equestrian tourism as an ecotourism opportunity for rural communities around and inside the protected areas of the Apuseni Mountains and other regions in Romania. Horse riding has a very long tradition in this region.

PROTECTED LANDSCAPE BIJAMBARE

The Protected Landscape Bijambare has an area of just 497 hectares. It is located in eastern part of Bosnia and Herzegovina, north of Sarajevo. The region is characterised by undulating mountain meadows, dense forests and rocky limestone ridges. More than 800 species of vascular plants, numerous species of mammals, birds, reptiles, amphibians, mollusks and insects can be found in the protected landscape. Karst-phenomena such as sinkholes and caves shape the landscape. While there are no enterprises operating within the boundaries of the protected area, the surrounding ten communities have a network of small companies that manufacture products mainly from local herbs and wood.





Educational trail in the Protected Landscape Bijambare, Bosnia and Herzegovina - Velija Hasanbegović (Visit BiH) ©



BioHalilović, Ilijaš, Bosnia and Herzegovina | Agriculture and processing of herbs

Biohalilović d.o.o is a family business founded in 1983 that cultivates medicinal and aromatic herbs, cereals and vegetables in an area of 150 hectares, at an altitude of 1,000 meters above sea level. Under the brand “Liliya”, it produces medicinal and aromatic herbs, teas, essential oils and decorative objects. The enterprise has 10 employees and an additional 100 seasonal workers. Its products are sold in local stores, and directly to international pharmaceutical companies and pharmacies.

Biodiversity efforts: The products are controlled by two organic certification schemes (for the European and American market). Buckwheat and other local plants that grow naturally in the area such as chamomile (*Chamomilla off.*), balm (*Melissa off.*) and lady's mantle (*Alchemilla sp.*) are the main products.

Success factors: Biohalilović offers a variety of highly popular medicinal plants. Thanks to a sophisticated marketing strategy developed in the framework of a USAID project and its high-quality products, the company has increased its revenues.



Standard Furniture Factory, Ilijaš, Bosnia and Herzegovina | Wood processing, furniture production

Standard Furniture was founded over 50 years ago, and has more than 750 employees today. It manufactures furniture made of wood (oaks, beech and walnut) sourced predominantly from the region, with some parts imported from the EU. Its chairs are upholstered with leather, eco-leather and fabrics.

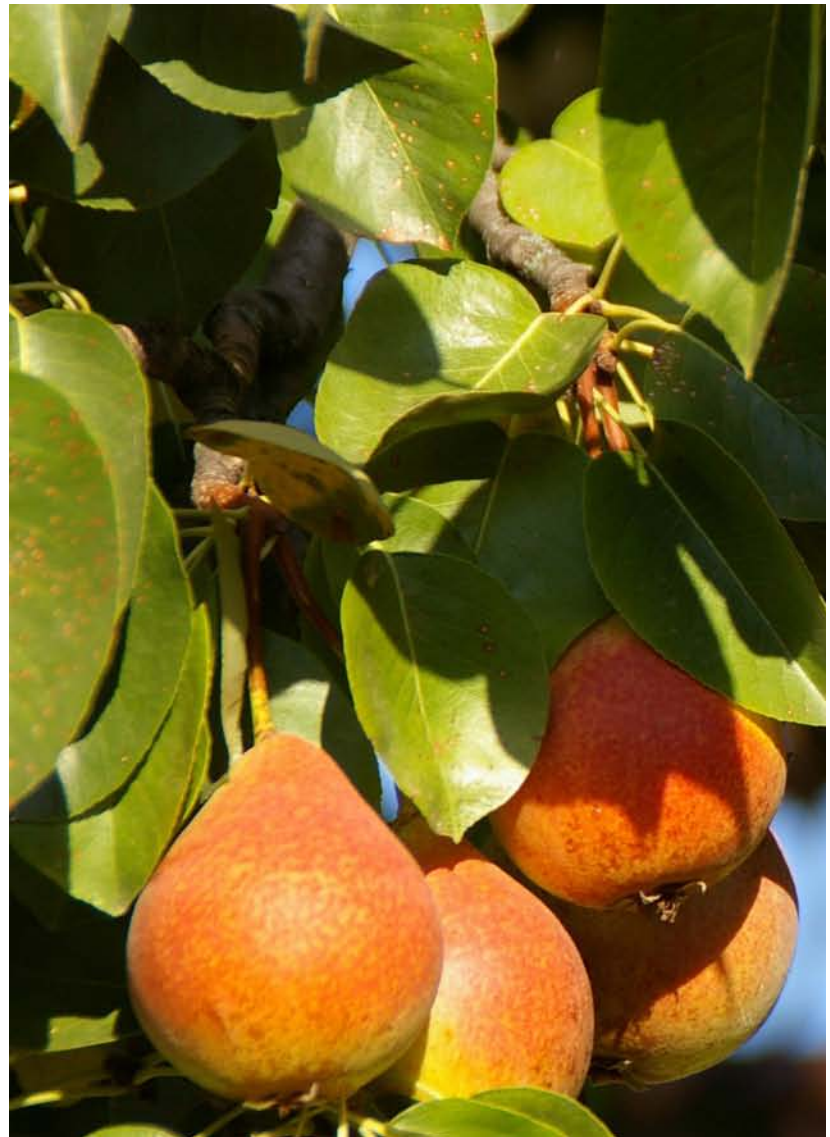
Biodiversity efforts: All the products processed by Standard Furniture are FSC-certified (Forest Stewardship Council). The FSC standard aims at preserving forests, by promoting responsible forest management and creating transparency for the consumer. The criteria prevent uncontrolled deforestation, human rights violations and environmental pollution. Basic natural forest functions can, therefore, be preserved.

Success factors: Due to the high quality and limited local demand, the company sells its products both on the national market and throughout Europe.



BÜKK NATIONAL PARK

Bükk National Park extends over the northern mountain range of Hungary with an area of approximately 43,000 hectares. The region is characterised by karstic surfaces and forested mountains. The flora and fauna of the region represents a great diversity with sub-Alpine and sub-Mediterranean elements. The caves lead to the rich and diverse underground world of karst phenomena and are therefore partly open for touristic and therapeutic activities. There is one village and two settlement parts of Miskolc town located within the park, whereas another 20 villages are located at its border. Therefore, many small family businesses are active in the region. They collect herbs and plants, produce jam, cheese or syrups, own restaurants or offer accommodation.





Ripe pears fruit in a Bükk National Park - András Schmotzer ©



Bükki Sajt Manufaktúra, Mónosbél, Hungary | Agriculture, dairy products, restaurant, catering

The cheese-making company Bükki Sajt Manufaktúra, founded in 2005, continues the traditional cheese culture of the region. The family business with two employees produces approximately 800 kilos of cheese per month from milk it gets from its own animal husbandry, alpine goats and Hungarian cattle. During summer, the animals do extensive grazing, and during winter Tamás Sándor uses his own high-quality hay as well as forage from local colleagues.

Biodiversity efforts: The animals graze on upland pastures (at an altitude of 400-450 meters above sea level) in the Bükk Hills, close to the National Park. These extensive grasslands have a rich variety of herbs. The abandonment of grasslands and resulting overgrowth of shrubs and trees are a real threat to the landscape. Tamás Sándor and his team spend a lot of time eliminating the shrubs by hand while leaving native trees such as apple and pear. He does not use

any pesticides on the pasture land. Instead of pharmaceuticals, he successfully uses a mix of herbs to treat his animals.

Success factors: Depending on the seasons, different traditional cheese specialties are prepared to offer a high quality and diversity. The company has various distribution channels for its products: they are sold to approximately to 30 partners, predominantly hotels and restaurants outside the region as far as Budapest; the cheese is also sold on local markets and festivals. Cheese-tasting events are also organised. Furthermore, the company has a certificate for “Bükk National Park Products”, provided by the NP directorate.



Mr. Tamás Sándor



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Bükki Sajt Manufaktúra photo archive





Archeopark, Szilvásvár, Hungary | Education, tours

József Regős offers several topical walking tours for schools, families or other groups in the National Park such as cave-trips. He established the Archeopark in its present form in 2011. In the Archeopark, the only Stone Age park in Hungary, younger visitors in particular can learn about the history of the Bükk region and try out the life of ancient people, for instance, by preparing pre-historic tools. During the high season, from April to August, Archeopark employs two to three people.

Biodiversity efforts: Children learn about the importance of biodiversity and the impact of climate change in the National Park. Visitors are able to gain a multidisciplinary insight into the landscape, from archaeology to biodiversity.

Success factors: Mr. Regős became interested in speleology and archaeology 30 years ago and described several hundred new caves in the Bükk National Park. He also offers cave-trips and as a practitioner, he uses non-specialised language – an important factor of success. Approximately 5,000 visitors come to the park every year, most of them in organised groups, such as school classes.

KALKALPEN NATIONAL PARK

Kalkalpen National Park in Austria has an area of 20,850 hectares. It is characterised by its forest which covers more than 80 percent of the area. The rest of the area includes mountain pines, alpine pastures, rock formations and mountain streams. A large variety of flowering plants, beetles and butterflies are unique to the National Park. Conventional business activities are not allowed within the Kalkalpen National Park. However, the region, with its 18 municipalities, is home to numerous medium-sized companies in the farming, food manufacturing and tourism sectors.





A view to the mountain chain of Sengengebirge in the Kalkalpen National park, Austria - H. Erber ©



E-mobility, Steyr, Austria | Cycling tours, bike rental and shop

E-mobility is a business that operates in the Kalkalpen National Park by offering e-bike tours in to the park and the surroundings. Longer e-bike vacations are offered to other countries as well. Customers can choose between different types of tours with a diverse focus such as mountain farm tours, fruit wine producer tours or other individual topics. Therefore, other stakeholders such as restaurants also profit from the tours.

Biodiversity efforts: E-bikes allow discovering the nature of the National Park by using electric vehicles that do not impact the environment with pollutants or noise. Nature can be experienced by a wider range of people with different fitness levels and at different ages. In addition, the guided tours offered by E-mobility ensure more sensitive behaviour of the National Park visitors.

Success factors: E-mobility addresses a new customer group. E-bikes have a great advantage since they can be used by people with different fitness and age levels. In addition, the offer also reaches people who would normally do not do cycling tours and enables tourists to explore wider and higher areas at the same time. This gives E-mobility a competitive advantage over similar businesses.



kalkalpen.wild, Molln, Austria | Marketing and distribution of premium game meat

The small-sized company kalkalpen.wild markets game meat from the Kalkalpen National Park and the surrounding area. The game is processed in one of the most modern facilities at very high-quality standards. The game meat is sold as a premium product via the Internet. Kalkalpen.wild aims at using the existing potential of the National Park region.

Biodiversity efforts: Regulating hooved game in the National Park is necessary due to the lack of large carnivores. Wild animals in the protected area and its surroundings usually do not come into contact with fertilisers, pesticides or other chemicals used in agriculture. In addition, the wild animals are shot with lead-free ammunition in the National Park by professional hunters. This prevents lead contamination of the game meat itself and poisoning of other animals due to hunting leftovers. It is planned to convince hunters around the

protected area to also use lead-free ammunition to protect nature and to get a higher price for their game.

Success factors: Kalkalpen.wild deliberately uses high quality uncontaminated meat as a strong competitive advantage. This attracts private customers and restaurants which appreciate this regional premium meat. Marketing is done via a platform specialised in high quality meat (www.nahgenuss.at) and the online shop of the company. Kalkalpen.wild won second place in a competition for company ideas that combine nature conservation and sustainable management.

NOTRANJSKA REGIONAL PARK

Notranjska Regional Park covers around 22,200 hectares at the border of central and southern Slovenia. It is characterised by unbroken beech and fir forests, where brown bear, wolf and lynx roam freely and an intermittent lake Cerčniško jezero. The area has an outstanding biodiversity with its karst caves and meadows. Almost 3/4 of all birds, roughly 1/2 of mammals and more than 2/3 of all butterfly species found in Slovenia have been spotted in the Notranjska Regional Park. Almost 11,500 people inhabit 65 settlements located inside the park boundaries. Many of them benefit from local ecosystem services such as timber, livestock farming and guided recreation. Local companies are mainly engaged in forestry and wood processing while the tourism sector and sustainable agriculture have a great potential for the economic development of the region.





Full bloom of *Allium angulosum* in Notranjska Regional park, Slovenia - Jošt Stergaršek ©



Društvo Modro Nebo (Blue Sky Society), Pivka, Slovenia | Tour guide, environmental education

Marko Cvetko is the president of Društvo Modro Nebo and works as a tour guide offering hiking tours in Notranjska Regional Park. Daytrips of different durations which involve natural and cultural aspects can be booked. During the tours, historical places, natural landmarks and local tourist farms are visited.

Biodiversity efforts: The tours are reserved for small groups of up to 20 people, to reduce the impact on flora and fauna. During the trips, the value of plants and animals is explained to the visitors in a very clear way by demonstrating the use of wild food and natural building materials. In addition, Marko shows rare plant species such as orchids and amphibian plants around Cerknica Lake.

Success factors: Marko Cvetko and the Blue Sky Society successfully combine an impressive nature experience with valuable information about local biodiversity. In addition, Marko Cvetko owns a small farm where he grows various plants, which are used for workshops on herbalism and organic farming.



Marko Cvetko



www.dmn.si



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Društvo Modro Nebo photo archive 



Tekavča Ograda, Grahovo, Slovenia | Tourist farm: restaurant, accommodation, farming

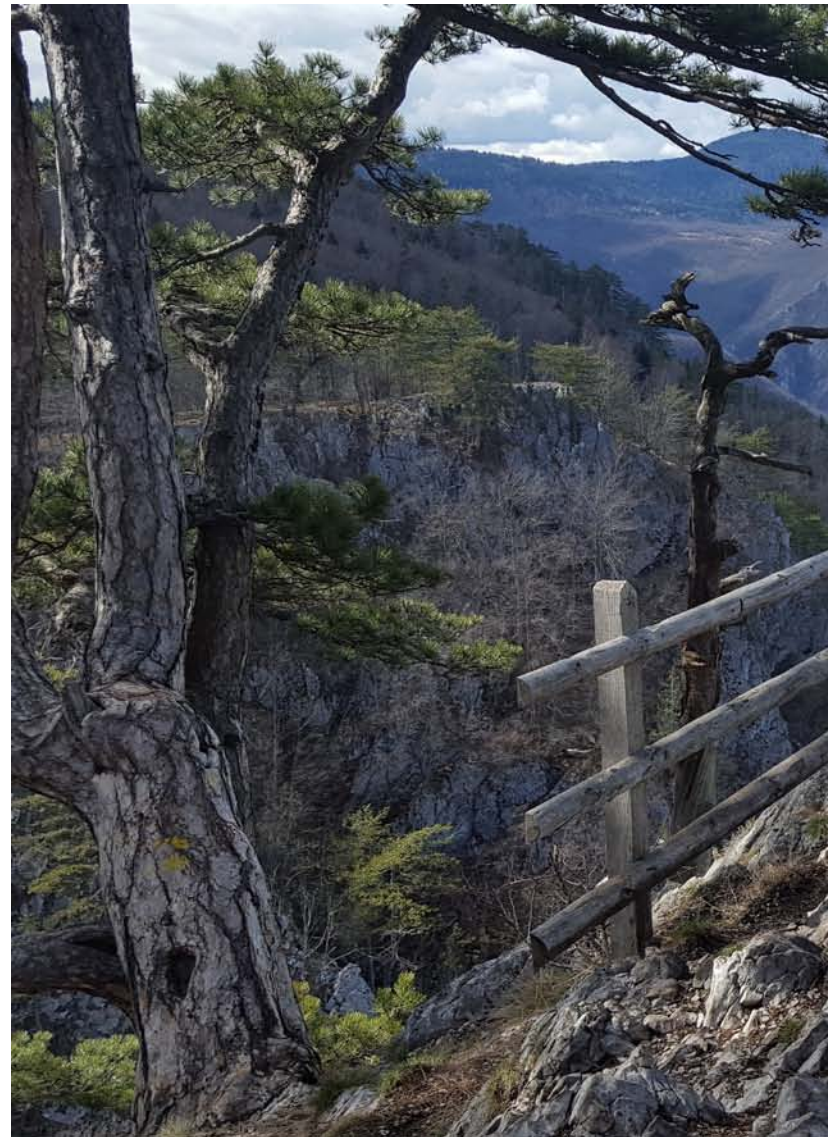
Tekavča ograda is a tourist farm built in a traditional style in 1997. The farm offers accommodation (19 beds), a camping site, and a restaurant preparing homemade meals with products from their organic garden. In addition, they provide information about the park, bicycles for rent and information about the sites of interest in the vicinity.

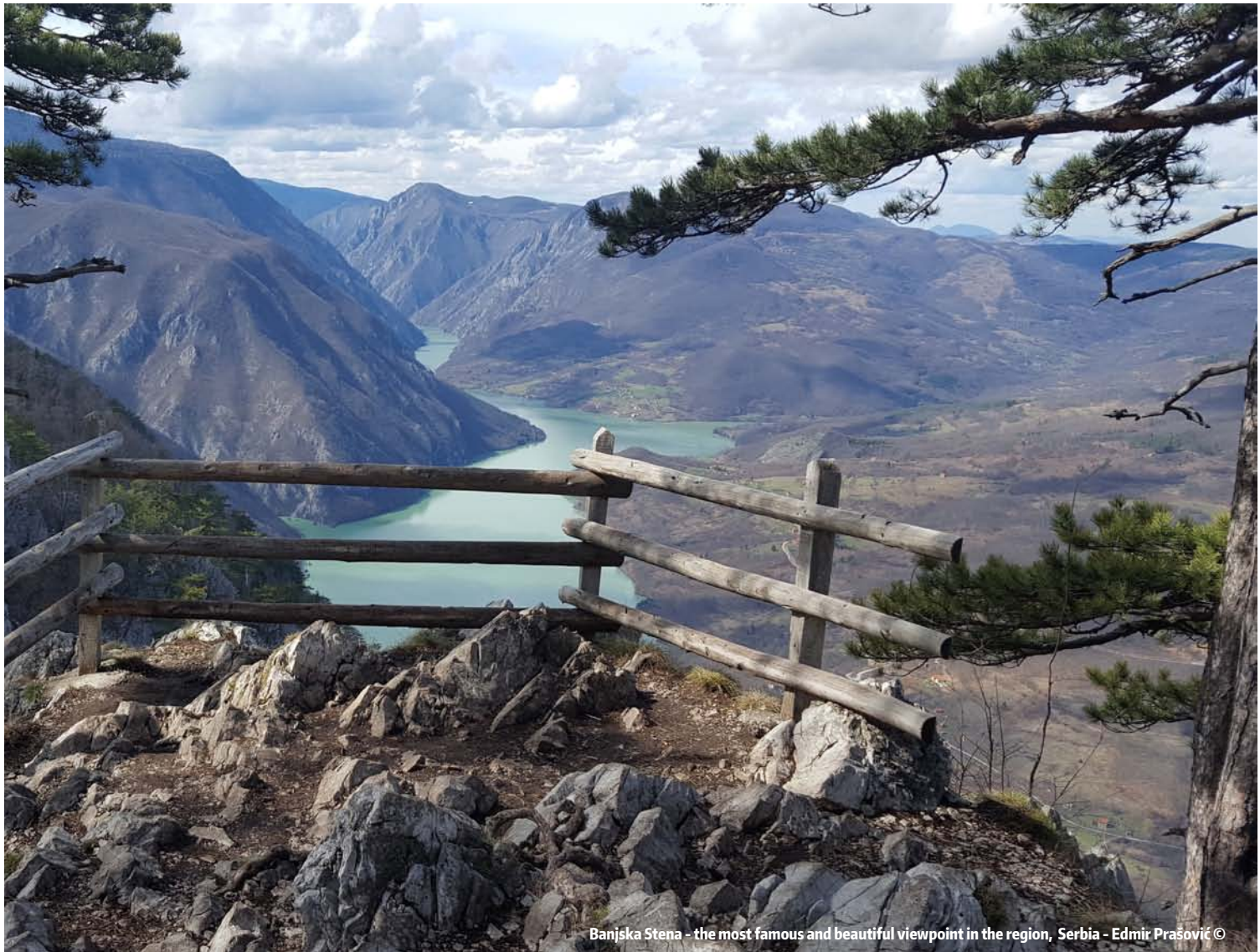
Biodiversity efforts: Vegetables are grown without pesticides and different kinds of crops are cultivated manually. Herbs, forest fruits and mushrooms are collected from the Regional Park. The cultivated crops and collected plants from the park are processed into jam, liqueurs and teas and are made available to tourists, to convey the quality and value of natural products.

Success factors: The home-grown food is used to prepare traditional specialties from the Notranjska region. Tekavča ograda creates an attractive offer based on local dishes and organic products.

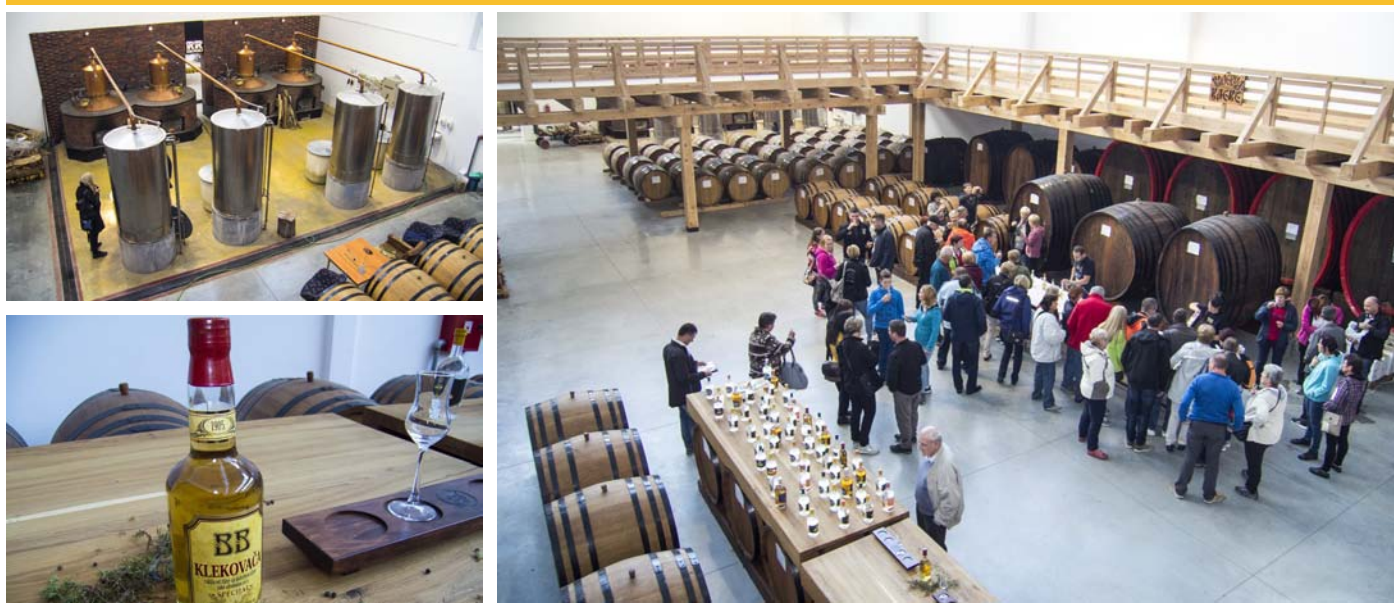
TARA NATIONAL PARK

The Tara National Park is a mountain massif located in Western Serbia and covers an area of almost 25,000 hectares. The Karst plateau is intersected by numerous canyons and gorges. The Tara National Park is a typical forest area dominantly covered with mixed forests including important endemic species such as the Serbian Spruce or the Pančić's grasshopper. In addition, numerous archaeological sites and monuments dating from the Neolithic period to modern times can be found in the park. Local companies are mainly engaged in forestry and wood processing while the tourism sector, honey and rakija production have further potential for the economic development of the region





Banjska Stena - the most famous and beautiful viewpoint in the region, Serbia - Edmir Prašović ©



BB Klekovača, Bajina Bašta, Serbia | Spirits Distillery

BB Klekovača was founded in 1953 and is the oldest existing Serbian distillery, famous for its plum brandy with regionally collected juniper berries. The brandy is produced with traditional recipes in Bajina Bašta, close to the Tara Mountains. The company has seven employees. Around 200,000 litres of high-quality brandy are constantly produced. Eleven different kinds of brandy are sold in supermarkets, drink stores and restaurants all over Serbia, whereas a certain amount is exported.

Biodiversity efforts: A regional plum variety that has been cultivated in the region for the last 150 years is processed by the distillery and supports the preservation of biodiversity. Almost all fruits that are used are grown locally.

Success factors: The best fruit from the region of Western Serbia is selected for all the BB brandies. BB Klekovača does not only produce its own fruit brandy, but also offers tastings, tours and accommodation. The distillery is a multiple winner of numerous awards in Serbia and abroad. The company uses the Tara Mountain region as a geographical label for its advertisement: its new slogan is "Heart of the Drina – Soul of the Tara". To highlight the regional character of the product, photos from the park are shown on the website, and a bear is used as a logo.





Gorštak, Bajina Bašta / Braneškopolje, Čajetina | Serbia Wood processing

Gorštak is a wood processing company with 75 employees that was originally established inside the National Park in 1991. Gorštak produces pellets, wood houses, and furniture. Less than a third of the timber comes from the Tara National Park, more than the half is from Western Serbia, and a small amount is imported from Bosnia.

Biodiversity efforts: Gorštak has an FSC certificate and thus aims at promoting the sustainable use of forest resources. Their pellets are produced from wood waste and do not contain any chemical additives. The company engages in reforestation actions in the Tara and the Zlatibor mountain region, where it has reforested private plots over the past few years.

Success factors: The company has grown from a small company to a renowned business by continuing to invest in the production process and quality. It focuses on customer service by being reliable and providing professional products.

ŽUMBERAK- SAMOBORSKO GORJE NATURE PARK

Situated in north-western Croatia, the Nature Park covers 34,200 hectares of mosaic landscape. Traditional villages, fields, meadows, orchards and forests lie where the characteristics of the Dinarides, the Alps and the Pannonian plains meet. These characteristics ensure that the area is home to a variety of flora and fauna. Intersected with trade routes since prehistoric times, the Žumberak hills have always been a place of cultural diversity. Rich archaeological findings of fortified settlements, gravesites, sacral architecture and other remains of human activity tell stories of prehistoric, roman, medieval and modern age hardships of everyday life. The most specific recent cultural impact took place in the 16th century with the colonisation of the (mostly) Orthodox Christian population of Uskoks, who left traces of population density and landscape heterogeneity, economic development, customs and beliefs.





Panoramic view of Mrzlo polje in Zumberak-Samoborsko gorje Nature park, Croatia – Romeo Ibrisević ©



B&B Podžumberak, Kostanjevac, Croatia | Tourism, gardening

The B&B Podžumberak is a family-owned agritourism farm, where food is planted, and home-cooked traditional meals are served for their overnight guests. They offer various activities such as joining them in their daily tasks (maintaining the garden, picking vegetables and fruit, harvesting berries, making brandy, collecting hay), organised walking tours through the meadows and forests or bike rides. They inform visitors about the protected area and distribute promotional materials and maps.

Biodiversity efforts: All the food they offer is produced in a traditional way without using pesticides, most of it in their own garden. The extensive cultivation of native varieties and the traditional production of food contribute to the preservation and appreciation of local biodiversity. This is additionally supported by the fact that they buy

meat and dairy products from local producers and stimulate grassland management.

Success factors: Visitors can actively participate in all the activities on the farm. Thus, they learn about traditional food production and adopt the culture of the area. The position within the Nature Park and its unpolluted environment are used as a unique feature.





Etno kuća pod Okićem, Klake, Croatia | Tourism and catering

The Etno kuća pod Okićem (Ethno House under the Okić Fortress) is a family business that provides several services to tourists and local people. Besides accommodation and a camping site, the family Slakoper offers children excursions and educational workshops such as workshops on baking bread in a traditional way. Homemade food for social gatherings is offered in the authentic rural farmhouse.

Biodiversity efforts: Food such as fruits, vegetables, cheese, wine, brandy (rakija), bread, salted (smoked) meat offered in the restaurant is bought locally and is provided by small local producers. Since the house is situated on the border of the Nature Park area, they inform visitors about the protected area and distribute promotional materials and maps. Some of the educational events offered by the Nature Park are organised in the Ethno house.

Success factors: The Ethno house provides a collection of traditional local artefacts that show vivid evidence of the traditional way of life in the countryside. This collection, as well as the traditional food, supports the preservation of the cultural heritage.

6. Next steps – take actions – get involved in ECO KARST activities

This publication is only a first step towards developing and promoting Pro Biodiversity Businesses in seven pilot regions. Within the framework of the ECO KARST project, further activities are planned in the coming months to contribute to the sustainable development of the regions.

Workshops on Pro Biodiversity Businesses and Local Ecosystem Services

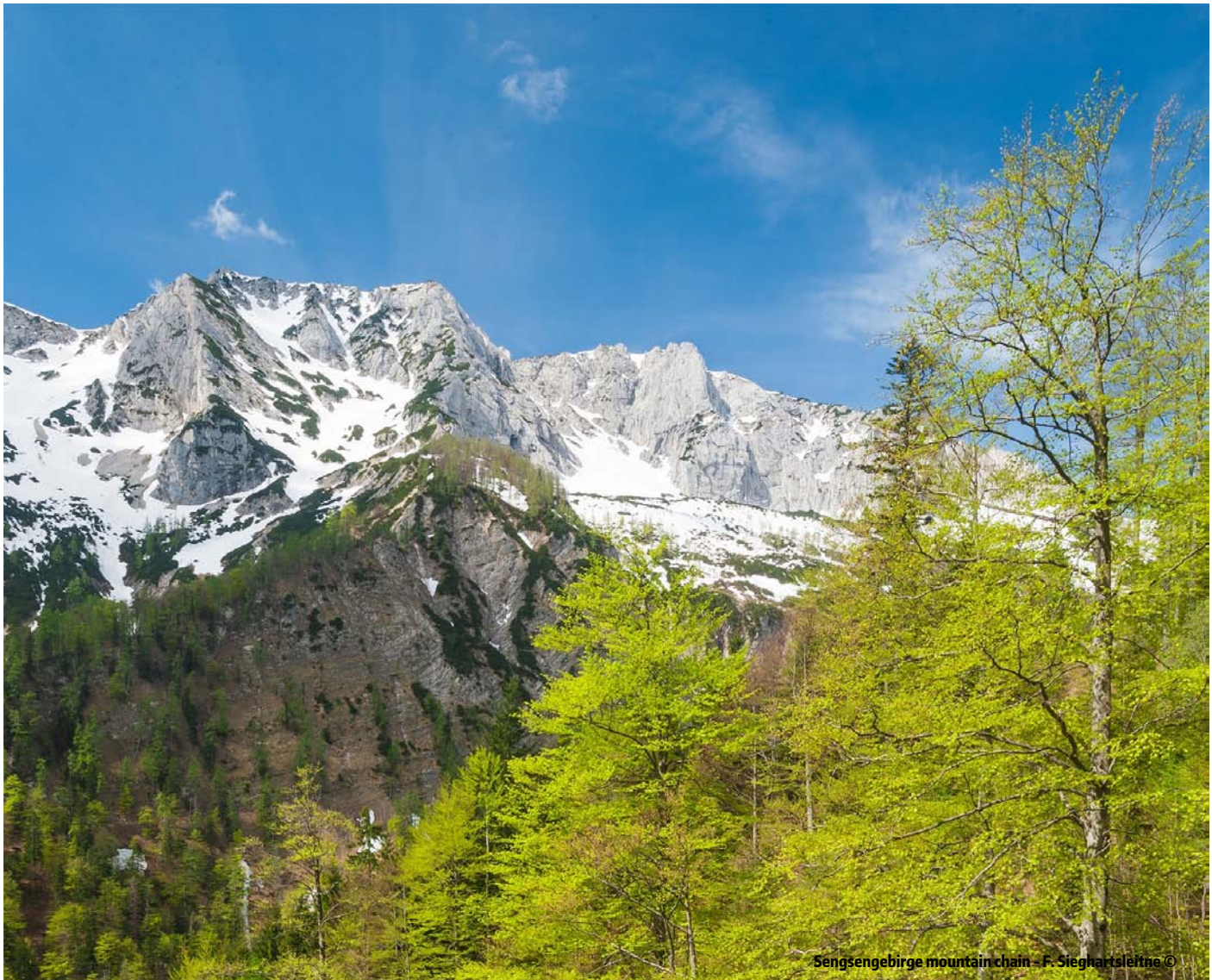
Through various workshops, local entrepreneurs, associations and authorities have the opportunity to identify potential Pro Biodiversity Businesses based on existing ecosystem services. Tangible steps for the establishment of new or further development of existing companies are being discussed and action plans will be developed.

Green Entrepreneurship Training

In order to support local entrepreneurs, the ECO KARST project will offer a Green Entrepreneurship training in all seven pilot regions. Within the framework of this training, experts will present practical tips and valuable knowledge for founders of new companies.

Pro Biodiversity Business Award

With the aim of awarding promising entrepreneurial approaches and making them better known, a prize for good Pro Biodiversity Business ideas is being promoted in all seven project areas. The jury will consist of local stakeholders and experts from the project. Only companies from the pilot regions can participate. If you are interested in these project activities, please contact Lead partner: Slovenia Forest Service | Večna pot 2 | 1000 Ljubljana | SLOVENIA | www.zgs.si



Sengengebirge mountain chain - F. Sieghartsleitner ©



7. Further Examples of Pro Biodiversity Businesses





Organic farming and ecotourism



Sapoori di Bea; Abruzzo, Italy



Family run farm in Majella National Park; produces ancient cereals using traditional techniques; offers environmental education to children; provides locally grown food to the visitors.



www.saporiidibea.it/en/agriturismo/



Collection of wild herbs



Plantamelj; Svrlijig, Serbia



Family business, employing local collectors who collect over 100 different varieties of wild plants and herbs with in a scarcely populated area of more than 500 km², without intense agriculture or industry; certified with FairWild standard that proves sustainable and fair harvesting of wild products.



www.fairwild.org/news/2017/8/14/wild-about-rose-hips-in-serbia-newly-certified-ingredients-o.html



Medicinal balm production



Karelia Arctic Oy; Helsinki, Finland



Production of a balm with medicinal-functions from the spruce resin; using a century-old recipe; no trees are damaged during the resin harvesting as no heavy equipment is used; forest owner benefits financially which supports the sustainable management of forests.



www.pihqa.com/en/



Salt production and processing



Soline Pridelava soli; Portorož, Slovenia



Salt is extracted by entirely natural crystallization from the Sečovlje Salina Nature Park; work is done manually and by employment of historical tools; skin-care products are directly offered in a local spa and are exported worldwide.



www.soline.si/en/shop



Production, processing and distribution of meat and animal products



Bäuerliche Erzeugergemeinschaft Schwäbisch Hall, Germany



Large regional cooperative of agricultural businesses, a butchery, dairy, restaurant and shops that work with meat and animal products produced regionally without the use of antibiotics and genetically modified plants; old pig species at the verge of extinction was reintroduced by one of the farmers.



www.besh.de



Production and marketing of distillates



Stählemühle; Eigeltingen-Münchhof, Germany



Unique and high-priced distillates and liquors from a variety of fruits, berries, nuts, herbs and vegetables; rare species, collected in low quantities from the woods are processed and sold.



www.staehlemuehle.de/de/index.php



Marketing of high-quality food



Genusshandwerker; Düsseldorf, Germany



Online retailer of high-quality and special products from all over Europe; specialities from old or traditional species can be purchased via the online shop; CO₂-emission-compensation for a more environmental friendly value chain.



www.genusshandwerker.de/Produzenten/



Marketing of organic biosphere reserve products



Vivasphera; Petersberg, Germany



Organic products from German biosphere regions; every product contributes to the preservation of a specific species, which are monitored by experts; products are distributed via wholesalers, organic and delicatessen stores.



www.vivasphera.de



Café/restaurant



Muir Woods Trading Company;
Mill Valley, United States



Located in the Muir Woods, a National Monument of California; offers local food; implements water preservation, energy reduction, waste management, recycling techniques to contribute to the preservation of park resources.



<http://muirwoodstradingcompany.com/think-green/>



Red kite feeding



Girgin Farm; Rhayader, United Kingdom



Farm that started feeding red kites in the 90s when the birds were very rare in the UK; they thus helped to preserve the species and are now feeding up to 500 animals every day; visitors come to observe the feeding pay fees; the farm has three employees.



www.gigrin.co.uk



Ecotourism



Green Visions; Sarajevo, Bosnia and Herzegovina



Ecotourism and environmental group that offers mountain walks and hikes; pioneer in Bosnia and Herzegovina; dedicated to promoting and preserving the natural and cultural heritage of the highlands; accommodation usually in the homes of the villagers or in mountain lodges. Meals are traditional and organic provided by the locals.



www.greenvisions.ba



Ecotourism



Limes Farm; Ludham, United Kingdom



Holiday cottages with the "Green Tourism Award"; various efforts to improve environmental friendliness: photo voltaic panels, nesting boxes for bats, owls and swallows, wildflower areas, bug hotel; voluntary donation of £1.00 per visitor can be made to "Love the Broads", an organisation raising funds to support landscape and nature preservation in the National Park.



www.limesfarmholidays.co.uk/About/Green-Credentials/

Glossary

Alien species	A species, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce. (Secretariat of the Convention on Biological Diversity, 2002)
Biodiversity	'Biological diversity' means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems. (Convention on Biological Diversity, 1992)
Conventional agriculture	Conventional farming is the use of seeds that have been genetically altered using a variety of traditional breeding methods, excluding biotechnology, and are not certified as organic. Some conventional breeding methods have been used for thousands of years, often times to develop plants with faster growth, higher yields, pest and disease resistance, larger seeds or sweeter fruit. (USDA, 2015)
Cultural services	Non-material benefits provided by ecosystems, such as spiritual enrichment, cognitive development, inspiration, relaxation, social connections, cultural heritage, aesthetic experience and ecotourism.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. (Convention on Biological Diversity, 1992)
Ecosystem services	Benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other non-material benefits. (Millennium Ecosystem Assessment)
Extensive agriculture	System of crop cultivation using small amounts of labour and capital in relation to area of land being farmed. The crop yield in extensive agriculture depends primarily on the natural fertility of the soil, the terrain, the climate, and the availability of water. (www.britannica.com)
Fair trade	Fair Trade is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers. (WFTO, 2018)
Fauna	All of the animals found in a given area. (Convention on Biological Diversity – Glossary)
Flora	All of the plants found in a given area. (Convention on Biological Diversity – Glossary)
FSC (Forest Stewardship Council) certificate	The FSC standard aims at preserving forests, by promoting responsible forest management and creating transparency for the consumer. The criteria prevent uncontrolled deforestation, human rights violations and environmental pollution.
Habitat	It is a place or type of site where an organism or population naturally occurs. (Convention on Biological Diversity, 1992)
Meadow orchards	Meadow orchards are defined as the planting of high-stemmed fruit trees that stand scattered on meadows, pastures or waysides. As the trees stand well spaced out, the area can also be used for cattle herding, for example. The meadow orchards' ecological value as features of our cultural landscape worthy of preservation is well known. (www.rabenhorst.de)

Native species	Originating from the respective place of observation, down-to-earth (for example, rocks in geology, animal and plant species in nature conservation, or woody individuals in forestry); indigenous (Glossary – Federal Office for Nature Conservation (BfN) Germany)
Oligotrophic grasslands	Grasslands on wet, nutrient-poor, often peaty soils, of the boreal, nemoral and steppe zones. Includes coarse acid grasslands and shorter wet heathy grasslands. (EUNIS habitat classification)
Organic certification	Organic certification is an internationally recognized set of standards aimed at proving that agricultural and food products have been produced with emphasis on the protection of soil and water, the enhancement of biodiversity and the responsible use of energy and natural resources. (www.bureauveritas.com)
Polyculture	A polyculture crop production system implies the growing of multiple crops simultaneously or in a crop rotation. This farm system is more labor intensive than the monoculture and tends to be more convenient for farm management and beneficial to the soil and environment. (www.blog.agrivi.com)
Provisioning services	Material products provided by the ecosystems, such as food, grains, fruit, fuel, fibre (timber, wool), herbs, natural medicine, ornament materials (flowers, clams), etc.
Pro Biodiversity business	A biodiversity business is a commercial enterprise that generates profit and equitable benefits through biodiversity conservation and sustainable use activities. (IUCN, 2009)
Pesticide	A pesticide is something that prevents, destroys, or controls a harmful organism (pest) or disease, or protects plants or plant products during production, storage and transport. The term includes, amongst others: herbicides, fungicides, insecticides, growth regulators and biocides. (European commission)
Protected areas	Protected areas are a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. (IUCN, 2008)
Protected/endangered species	Species of plants, animals, and fungi designated as threatened and endangered by national laws or classification systems or listed as endangered or critically endangered by the IUCN Red List of Threatened Species™ and/or listed in Appendices I, II, or III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
Regulating services	Ecosystem processes providing stable and safe living conditions, such as air quality regulation, climate regulation, erosion regulation, water purification, regulation of diseases, pest control, pollination, regulation and mitigation of floods etc.
Species	A group of organisms capable of interbreeding freely with each other but not with members of other species. (Convention on Biological Diversity – Glossary)
Vascular plants	Vascular plants are plants that use specialized tissue for transporting food and water to different areas in the plant. Examples of vascular plants include trees, flowers, grasses and vines. Vascular plants have a root system, a shoot system and a vascular system. (www.sciencing.com)
Wildflower meadow	A field grown specifically to produce a hay crop; any livestock is moved off in late spring to allow the vegetation to grow and flower. If such field is floristically rich, it is described as wildflower meadows, and this term may be applied to a range of priority grassland types including lowland acid, neutral and calcareous grasslands. This floral richness is both aesthetically pleasing and ecologically important. (www.forestry.gov.uk)
Wild species	Organisms (animal, plants or fungi) captive or living in the wild that have not been subject to breeding to alter them from their native state. (Convention on Biological Diversity – Glossary)







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Project co-funded by European Union funds (ERDF and IPA).
www.interreg-danube.eu/approved-projects/eco-karst