



Pro Biodiversity Business
Gap Analysis for Žumberak – Samoborsko gorje,
Croatia



Global Nature Fund - Eco Karst Project

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Gap Analysis for Žumberak

Promising Pro Biodiversity Business ideas that support the protection, sustainable use and appreciation of Ecosystem Services in the Danube region

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1 Aim and procedure of the Gap Analysis

1.1 Aim

The aim of this gap analysis is to showcase opportunities for the development of Pro Biodiversity Businesses (PBBs) in Žumberak. The results of the analysis will contribute to the development of the Action Plan which is an outcome of the ECOKARST project.

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.

The usage of ecosystem services in a protected area provides a special opportunity to produce natural products, because the resources are less exposed to pollution from traffic and industry. The special karstic landscapes additionally provide unique features to develop touristic activities. To ensure a long-term success, also for future generations, sustainability and biodiversity conservation are crucial aspects for the economic development of the region and they should be a key aspect in planning economic development.

In the Žumberak Park there are already some businesses that have good first approaches to preserve biodiversity and the environment. However, this analysis will identify gaps for future economic development or for enhanced biodiversity conservation practices.

1.2 Procedure

The results presented in this gap analysis are the outcome of a desk research and expert interviews on Pro Biodiversity Businesses (PBBs) and international examples. The results of several interviews, discussions and workshops with the project partners and a variety of stakeholders that took place between May 2017 and December 2018 in each protected area will be presented and compared to successful PBB approaches.

In a first round of interviews, local economic and environmental conditions in the area were discussed with the project partners from Žumberak. Simultaneously, GNF searched for good international examples of PBBs, which were then presented to the involved partners and stakeholders through presentations and the PBB brochure. An overview of PBB examples is also included in the PBB Development Guide. Combining the information regarding the protected area with information on international best practice examples helped to identify first gaps and opportunities for the development of PBB. In a second round of interviews with the project partners, open questions about the situation in all economic sectors were then clarified. While considering a rating of the project partners from each pilot area regarding the importance of the identified opportunities, a first selection of opportunities with high potential was undertaken. These sectors were then further discussed in a participatory approach with local stakeholders from a variety of institutions and sectors during the workshops. All relevant information acquired during these steps, are included in this document.

2 Overview Žumberak

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.

Location: north-western Croatia

Size: 34,200 hectares

N° Business: 30-50 businesses

Population: 2000-2500 inhabitants approx.

Unique characteristics: Valuable archaeological heritage of the area, numerous archaeological sites

Landscape: Traditional villages, fields, meadows, orchards and forests lie where the characteristics of the Dinarides, the Alps and the Pannonian plains meet.

The companies are predominantly small-scale and range from wood processing small companies and farms to beekeepers and tourism facilities.

2.1 Cross-sectoral challenges in Žumberak

There are several administrative, demographic as well as environmental challenges in Žumberak Nature Park, which have an influence on the development of all economic sectors.

2.1.1 Administrative obstacles

Although in the recent years the situation has changed, the national legislation makes the registration of businesses complicated for locals. In addition, there is a lack of support from the authorities and especially a lack of information about the available support on agricultural subsidy schemes. This lack of financial incentives and state support opportunities to finance new projects and farmers when they are applying for the first time, result in complex procedures and bureaucracy hard to achieve for investors and farmers.

Croatian laws of land inheritance present a problem for effective land consolidation. There is a lack of spatial planning conditions and conflicts with private sector or/and unclear property (in some cases there are vague parcel borders, in others the owner of the land is unknown), making it difficult to buy land parcels and make investments. It is also necessary that the state and the local authorities update land registries.

2.1.2 Social and human resources

Due to rural-urban migration of the younger population, there is a lack of young people who are willing to found businesses. At the same time, there is aging of the local people and low population density. There is poor motivation and disappointment among the local population.

Within the remaining local population there is a lack of education, ecological awareness and knowledge regarding business development and the importance of biodiversity conservation. Many people do not speak foreign languages or have special education, which makes it difficult to work in tourism. In addition to this, the population does not have extensive financial resources as start capital for the foundation of new businesses. Within the local population there is a lack of trust and cohesion among each other. Due to these factors there is poor motivation among the local population to found new businesses, especially in the agriculture and food sector.

2.1.3 Infrastructure

At the end of 80s there was a good connection but nowadays time has damaged those roads, being hard to get access to nearby towns like Samobor, Ozalj or Jastrebarsko. During winter, when it snows, many villages are uncommunicated for one or two days. Water supply, waste and water management and better internet connection also need improvement.

On the other side, there is good infrastructure for cycling and hiking paths available to be used to develop the tourism sector.

2.2 Cross-sectoral opportunities in Žumberak

2.2.1 Cooperation between producers, processors and service providers

To successfully sell products enhancing the cooperation between producers, processors and service providers in the protected area and the region are crucial. The short transportation pathways between regional businesses are cheaper and decrease pollution.

The collaboration can simultaneously be used for a joint marketing and selling of products to tourists. For example, restaurants and accommodation providers can offer meals that are prepared from locally produced and processed products. This does not only create local value, but can also be useful for marketing strategies, since it transmits the local identity to tourists.

Selling the locally produced products to national or international customers is another opportunity, which is facilitated by cooperation since bigger amounts can be transported and sold jointly. The use of labelling could facilitate the cooperation with international customers.

2.2.2 Certification schemes and labelling

The **Žumberak Nature Park label** is provided by the state ministry cannot be considered as a reliable certification scheme, because there are no clear rules and guidelines for member businesses. There is

no cooperation among local businesses that want to use the park logo. Nobody has to inform the park management, if she/he wants to start a business inside the park. Some businesses use the park logo or images that link to the park and region. But there is no existing partnership with the park and the park management is not satisfied with the quality of all the products or way of production. So far there is no cooperation with local businesses that want to use the park logo. Žumberak is interested in establishing such a partnership.

Producing in an organic way without using chemical fertilizers, pesticides and by avoiding antibiotics is recommended to preserve biodiversity and to ensure sustainable land use. This more natural way of producing does attract new customer groups and can increase revenues. Acquiring an organic certification and though participatory guarantee systems proves the production techniques to the customer and raises awareness within consumers.

The same is valid for a fair trade certification, which stands for a fair treatment of employees. The FairWild standard for instance, ensures that wild resources are maintained and that there are no negative environmental impacts. In addition, good working conditions are ensured: no discrimination, no child labour, healthy work conditions and a fair contract with collectors are required to receive the certification. Using such a standard can help to access new markets and to create trust.

In addition to these international certification schemes, there is an opportunity in using the origin from the protected area (Žumberak Nature Park label) as a special feature that demonstrates the naturalness of a product. Products from protected areas can be considered less contaminated, because of fewer industries that pollute the environment. The naturalness can be used as a marketing feature and products could be sold as high quality products also outside of the region. The trust of customers who care about the origin of their food can be earned with a regional label, which reliably certifies products from the Protected Landscape Žumberak, Samoborsko gorje & Plešivičko prigorje (in registration process). Cross-sectoral organization is crucial for the success of such a Park label.

2.2.3 Store focusing on Nature Park products

A specific store that exclusively sells Nature Park products could offer a business opportunity that connects different product chains and uses the regional character of products as a key selling point which promises naturalness to the buyers. The cooperation of businesses and the development and use of a regional brand certifying the origin of the product can be helpful here. The store could simultaneously serve as an information contact point for tourists.

3 Gap Analysis

During the process of analysis the possible linkages between the three (primary, secondary, tertiary) sectors became more and more apparent. Many companies operate in more than one of the sectors. In addition, the cooperation between companies of different sectors makes sense because it enables local value creation and a stronger connection to the protected area. This is why the results of the analysis will be presented in a value chain approach: each chapter includes various activities to underline possible linkages.


The indicated rating for each Pro Biodiversity Business is a result of discussion between stakeholders and the park administration. The discussions and the rating is an ongoing process. One star (*) stands for not important or low opportunity, five stars (*****) stand for a high importance and good opportunity for business development.

3.1 Wood production, processing and marketing

3.1.1 Current situation

The 60% of the forest is state owned and 40% privately owned. Private owners have to ask for permission to cut certain amounts for their small areas. The timber is sold in the region or mostly to foreign countries. A state company, Hrvatske šume d.o.o, is responsible for the management of the forest. There is no wood processing in the pilot area but there is a big potential due the amount of wood that grows in the area each year. Wood is used mostly as timber, firewood, furniture, and pellets, but its value is not well appreciated.

There is a lack of transparency of data collected by state institutions and rarely exchange between institutions, even sometimes the public institution cannot get all the data about forests despite they are in charge for managing the area. The inhabitants are not active on these participatory processes.

 Challenges and opportunities in the wood sector	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Lack of control and sanction of law violation. ○ High biological diversity is not the focus of forest management. ○ Excessive cut of forests. 	<ul style="list-style-type: none"> ○ Small patches of forest land make an economic use not viable. ○ Value of local wood is not utilized. ○ Process of cutting wood and its transport, damage roads and natural springs.

Opportunities for biodiversity conservation	Opportunities for economic development
	<ul style="list-style-type: none"> ○ Revive building associations of private forest owners. ○ Lack of manufacturing / processing businesses (carpenter); higher degree of product finalization is possible. ○ Local population has skills to utilize tools, skills for cutting, etc. ○ Production of wood souvenirs for tourists. ○ Use origin as unique selling point. ○ Forest area is FSC certified.

3.1.2 PPB Opportunities

**	Wood processing business / Carpentry business	Establish a business that focus on processing of local timber under sustainable standards (use of environmental friendly paints and varnishes) and using the origin of the wood for marketing and price setting. Production of final products increases the local added value.
***	Manufacturer of wood handicrafts	Production of wood souvenirs, handicrafts for tourists using traditional skills and environmental friendly paints and varnishes. Distribution in collaboration with local markets, shops, restaurants, accommodations and park administration.
*	Producer of wood houses	Wood houses from timber from the park could increase added value and demonstrate the direct benefit people obtain from nature. Origin of wood from the park can be used for marketing.

3.2 Non-timber forest products (NTFP), processing and marketing

3.2.1 Current situation


Mushrooms, herbs and berries are available in the park but the quantities are not enough for large companies. Some people collect berries to sell them on the markets. There are regulations on collecting mushrooms and permissions are needed if people want to pick more than for personal use but there is a lack of control and sanctions for violation of these regulations.

People collect the herbs from their own land or a small amount from state owned meadows, forests or abandoned meadows. Meadows are still rich in mushrooms and they represent good habitat for them as well as in medicinal herbs.

Current businesses:

Mister Ivo Bačlija: producer of natural oils buys a small amount of plants from the park, but most of the plants are imported as they are cheaper on the global market.

Association "Sunčanica" from Samobor provides courses and seminar to its members on mushroom and herbs knowledge.

 Challenges and opportunities in the NTFP sector	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Unsustainable picking of NTFP. ○ No monitoring or control of collected amounts / insufficient implementation of existing laws and systems. 	<ul style="list-style-type: none"> ○ Collected NTFP are mostly sold on black market. ○ Local people do not use NTFP to produce and sell products.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none"> ○ Education of pickers regarding sustainability. ○ Enhancement of legislation regarding picking rates and control. ○ Use of standards / certification which ensures sustainability and monitoring. 	<ul style="list-style-type: none"> ○ Usage use of local species. ○ Set incentives for local companies to buy their supplies locally. ○ Collaboration with hotels, shops, supermarkets could incentivise legal production and increase the turnover. ○ Competitive advantage through using standard or certification (FairWild).

3.2.2 PPB Opportunities

- | | |
|---|--|
| ***** Individual enterprise/ family business that collects and sells medicinal herbs and cosmetic plants | Sell nettle, thyme, elder, comfrey and rose hip (wild NTFP) to local processing companies (LUSH). Branding products and "label" of the Nature Park, which would give added value to the products. There is a high demand. Cultivation is also an option that can be considered, reducing the pressure on wild herbs and berries. |
| **** Family business picking and processing mushrooms | Individual enterprise or family business that picks and processes mushrooms. There is knowledge about mushrooms (Mr Laušin) and collaboration with local restaurants, cafes, shops, hotels, and administration enables secure sales channels. |
| ** Distributor of NTFP / Collection company | Use of certification schemes such as FairWild to prove legal collection and to create a competitive advantage. Collaboration with local suppliers increases trustful relationship and transparency of the origin of resources. Sell NTFP to processors abroad that are interested in sustainable resources |

3.3 Livestock production, processing and marketing and landscape maintenance


3.3.1 Current situation

There are some successful **breeders** (mostly cows, sheep), mostly old people who do extensive grazing, produce milk, cheese and sell the meat. Some of the farmers move the animals from pasture to pasture. Others keep them near to the house. Some of the **grasslands** are managed by the park. Succession is taking place on some meadows, which usually are abandoned. Nature park administration does some grassland management by mowing and it is difficult to find owners of the meadows. Besides, Nature Park administration often cannot sell the hay because its low price and the difficult transportation due to bad condition of road infrastructure.

There is the possibility of growing autochthonous varieties (for example goats, montafon (cow) and buša (autochthonous Croatian cow variety)) and it can be financed by subsidies.

Current business:

OPG Pavković: milk producer. He sells fresh milk in a self-service milk machine at the local open market.

 Challenges and opportunities in the livestock production, processing and marketing and the landscape maintenance sector	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Natural succession on parts of the meadows. Abandoned meadows. ○ Hay mowing without heavy machinery and late mowing to enable natural reproduction of special plants is not in the focus of the meadow owners. 	<ul style="list-style-type: none"> ○ Value of meadows inside the park is not utilized. ○ Traditional animal breeding is not marketed very well. ○ Until now, the hay business is abandoned due the road conditions.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none"> ○ Extensive livestock grazing to prevent succession of meadows and maintain biodiversity. ○ Autochthonous varieties. ○ Using horses for mowing and other light agricultural work 	<ul style="list-style-type: none"> ○ Establishment of farmer association that support the distribution of meat and dairy products. ○ Production of specialty / high-quality product. ○ Cooperation with processors, restaurants, hotels, etc. to create local value and to sell to tourists.

3.3.2 PBB Opportunities

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| <p>**** Livestock farmer/ Shepherd</p> | <p>High potential to market high-quality products from the park. More grazing activities could increase the amount of milk and meat in the region and conserve the cultural landscape. Create local value chains with processors, shops and restaurants and sell products also to tourists that have higher buying power.</p> |
| <p>** Farmer association / registered livestock farmer</p> | <p>Share machines, transportation vehicles, grazing areas and work force to increase productivity. Joint collection of milk and transportation to processor. Reintroduction of traditional breed that supports preservation of species and used for marketing. Collaboration with local cafes, restaurants and shops or tourist agencies that show tourist the traditional farm.</p> |
| <p>** Hay selling/ transport</p> | <p>Potential for a business that collects the hay and brings it to areas that demand good quality hay. Hay produced in Žumberak is of high quality and hence appreciated. Also, there are horses' owners from Žumberak that have need for hay too. It will be harder and harder to produce hay due to the vegetation succession, problem that appears on semi-natural grasslands when people abandon keeping cattle. If traditional techniques are used, it could be offered as educational courses with a focus on biodiversity conservation to tourists.</p> |

3.4 Crop production and marketing of agricultural products


3.4.1 Current situation

There are 300 registered OPGs (family agriculture company), of which only 100 are still successfully operating. Most of the owners are elderly people who have small areas. They cultivate potatoes, onions and garlic, using conventional agriculture methods and their products are sold on local markets, but rarely to local restaurants. The good quality of water, and grasslands provide the perfect conditions for agriculture and cattle keeping.

The number of households that offer their products (e.g. potatoes (traditional plant in the region), or local sort of cherry – Okić cherry) is growing. That growth can be explained by the interest of the local caterers (consumers) on buying local manufactured food, and traditional crafts. Sometimes they combine it with other products, like “demižoni”, that includes the basket and wine.

Current businesses:

Rajko Šimrak: Potato producer who has built up an economically viable business by renting patches of local people and hiring local unemployed people for harvesting.

 Challenges and opportunities for the development of PBBs in the <i>agricultural sector</i>	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Do not practice ecological production. Conventional agriculture is most common. ○ Abandoned areas hinder farmers to increase their agricultural areas. ○ Small patches of land make it difficult to cultivate crops economically viable. 	<ul style="list-style-type: none"> ○ Measures from the Rural Development of the Republic of Croatia Program are insufficiently used. Same with subsidies: there are subsidies for farmers, but the registration makes it complicated. Furthermore, land rights represents another obstacle. ○ Lack of knowledge about the production requirements, potential and access to market and product placement. ○ Farmers do not collaborate in order to use economies of scale. The farmers are not well organized. ○ There are no organized or not enough local shops, restaurants, and/or accommodation facilities to be serious buyers.
Opportunities for biodiversity conservation	Opportunities for economic development

<ul style="list-style-type: none"> ○ Organic farming without fertilizers and pesticides. ○ Lack of pollutants in soil and water (no factories, no industry developed in this area). ○ Plenty of agricultural land, quality soil, prerequisites for the cultivation of different cultures according to ecological principles exist. 	<ul style="list-style-type: none"> ○ Close to big(ger) cities as a potential market. ○ Organic farming as unique selling point. ○ Establish farmer cooperatives / producer associations to enable joint marketing and distribution. ○ Collaboration with restaurants, hotels, shops. ○ Dense network of small settlements in the park area.
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3.4.2 PPB Opportunities


****** Farmer association**

Demand for organic food is increasing. Convert more farmers into organic farming and establish a joint distribution to markets in Zagreb as an opportunity to set higher prices. Organic farming as a unique selling point. Strong collaboration with shops and restaurants to facilitate the sale and with tourist agencies to offer the traditional farms to tourists. Others advantages: share machines, transportation vehicles and work force to increase productivity.

3.5 Orchards, fruit processing and marketing

3.5.1 Current situation

There is small production of jams, made by the local people that use it for themselves or sell it to neighbours. So far, local products are rarely sold to tourists.

 Challenges and opportunities in the <i>Orchard and fruit processing sector</i>	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> Lack of knowledge on how to cultivate tall orchard species (using grafting technique) among the local young generations. 	<ul style="list-style-type: none"> 1.46 % Orchards inside the park.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none"> The restauration on meadows would imply provision for nesting to many birds (including cavity-nesting birds), also provide them food during migration and winter (feeding on fruits). Furthermore, insectivore birds are keeping balance of insect population, keeping the trees healthy. 	<ul style="list-style-type: none"> Use orchards for touristic activities. Development of fruit products, jams, juices, brandy,...on a traditional way

3.5.2 PBB Opportunities


- **** Production of fruit products from orchards** Products like juices, fruits, dried fruit, etc. could be sold to the tourists and be made with local products. Potential to show tourists how important orchards are for biodiversity conservation and how juices are produced. Other products like: fruit brandy and liquor, dried fruits and the fruits themselves can be also sold.

3.6 Wine production and marketing

3.6.1 Current situation

There are between 30 and 50 conventional vineyards, which usually have between 5 and 7 ha and sell their wine locally, either direct on their farms or to local supermarkets and restaurants.

According to viticulture expert, Mr. Zdenko Vrbaneč, organic viticulture in the continental part of Croatia (for the difference of Adriatic area) is impossible because of humid climate and soil type, which supports the development of bacteriological diseases, if no chemical treatment is applied. It would be possible to convert into organic, as it was in the past, but only with very basic/primitive type of one to two old local grape varieties, which are only appreciated by the local people. This sort is very resistant to diseases but the taste and quality is very strange for non-local people, who are not use to it.

 Challenges and opportunities in the <i>wine production sector</i>	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none">○ No organic viticulture that conserves local biodiversity.	<ul style="list-style-type: none">○ Small patches of land.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none">○ There are no organic wine producers yet.	<ul style="list-style-type: none">○ High demand for wine in the region.○ Selling to local restaurants.○ Interest of the farmers to introduce more sustainable and ecological standards.


3.6.2 PBB Opportunities

- * **Organic Wine** Convert local vineyards to organic farming in order to increase quality of the wine and sell it for higher prices to wine lovers. Offer wine tasting in collaboration with restaurants or accommodations.

3.7 Bee keeping and honey production

3.7.1 Current situation

There are between 20 and 30 beekeepers in the park registered as family agricultural business “OPGs”. Most of them successfully sell their production either on the market, on the street or in supermarkets.

 Summary of specific challenges and opportunities in the <i>beekeeping</i> Sector	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Conventional agriculture. 	<ul style="list-style-type: none"> ○ Market access.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none"> ○ Organic beekeeping. ○ Beekeeping enables pollination, which enhance biodiversity in the protected area. ○ Bees are important for orchards and agriculture and could have a positive impact on the productivity of areas. 	<ul style="list-style-type: none"> ○ At present the beekeepers can sell the honey quite successfully. ○ It can be sold more to tourists. ○ It comes from unpolluted areas. Its origin can be used for marketing.

3.7.2 PPB Opportunities

**** Production of honey


The good quality of the honey and important service of the bees should be given more prominence. There is a potential for organic beekeepers inside the Nature Park. The advantage, that the honey comes from an area which is far away from industries and conventional farming and thus from an unpolluted environment, can be used for marketing. Since many people appreciate the healing effects of honey a natural origin is often important for honey consumers. Using a logo that proves this origin can help to achieve higher prices.

Sell different products: honey, candles from beeswax, pollen or pollen bread.

3.8 Hunting, processing and marketing of wild game

3.8.1 Current situation

Hunting is organized by hunting associations that give license to hobby hunters. Hunters use ramps to close paths and roads and make them unavailable for the tourists, disturbing them too. According to hunting expert, Mr. Antun Alegro Sr., the number of wild boars has been increased in the last 20 years. Moreover, hunters feed (exposing big quantities of corn) wild boars to increase their wild game in number. Over the years, wild boars increased their population density and began to spread to populated areas, damaging local crops and creating problems all around the region. It has very negative impact on agriculture, ground nesting birds too. This is a big and real problem for local people but it is suppressed by local authorities. Public Institution should develop better cooperation with foresters and hunters in order to mitigate and ideally solve problems mentioned above.

 Challenges and opportunities in the <i>hunting</i> sector	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none">○ Hunters do not use lead-free ammunition, which have an impact on soil and animals in the park.	<ul style="list-style-type: none">○ Limited amount of wild game.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none">○ Hunters are often maintaining forest grasslands	<ul style="list-style-type: none">○ Meat could be sold to local restaurants to sell it to tourists.

3.8.2 PPB Opportunities

There are no business opportunities in this sector.

3.9 Touristic accommodation & restaurants & cafés


3.9.1 Current situation

There are around 15 accommodations and 15 restaurants. Most of them are small family business, offering traditional meals to their guests, from local products and accommodation.

A lot of them have just started to rebuild old houses and are still in the process. Some of the restaurants produce their own food, one produces fish for his own restaurant. Not many camping facilities inside the park. The food providers for restaurants and accommodations can only be found outside the border of the Nature Park.

Current business:

Ethno house: The owners grow and offer their own food, and offer educational courses.

 Challenges and opportunities in the touristic accommodation, restauration sector	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Lack of education regarding importance of biodiversity. ○ Existing restaurants do not serve organic food. If they do, the offer is very low. 	<ul style="list-style-type: none"> ○ Some of the holiday houses are not legally registered. ○ There is no common platform of information about accommodations, restaurants, cafés, etc. ○ Restaurants do not buy locally or they don't use formal channels. ○ Most tourists come from Croatia and only spend the weekend (short- term tourists). ○ Not enough restaurants in the nature park.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none"> ○ Restaurants and cafés could sell and promote organic products. ○ Implementation of environmental friendly practices, such as energy saving, waste reduction, etc. by restaurants, cafés and accommodation. ○ Educate tourists and school children on values of nature conservation. ○ Interest in traditional recipes that use local products. 	<ul style="list-style-type: none"> ○ Rich gastronomy culture and hence potential for developing gastro-tourism. ○ Connect a farm with provision of accommodation, restaurant and activities. ○ Need of information exchange about all available accommodation, restaurants, cafés, and activities in the area. ○ Potential to use abandoned schools for the accommodation purposes.

3.9.2 PPB Opportunities

*****	Accommodation which includes traditional food and traditional livelihood	Potential to differentiate from competitors by offering local traditional food. Environmental friendly practices, such as: energy saving light bulbs, photovoltaic panels, waste separation and disposal, biodiversity refuges in the garden, etc. Publication website/brochure which gives relevant info to tourists. Combination with information point for tourists (about accommodation, activities/tours, restaurants and cafés) or other services (bike rental service).
****	Tourism Farm	Farmers can offer accommodation to tourists and show them the life on a traditional farm. The farms can directly sell products, offer courses to experience traditional farming life. The agriculture is organic or traditional. It can be connected with the selling of locally produced products and eco camping.
****	Eco Camping	It combines an active nature protection with improved management and competitive advantages. Environmental friendly practices such as provision of biodiversity refuges, ensuring clean waste disposal, etc. Combination with tourist farm & courses possible. It attracts nature lovers or younger people with less money.
***	Restaurants	Offer local, seasonal and traditional food. Unique selling point for products. Offer special services like: cooking classes, organic catering services, wine tastings, etc.

3.10 Touristic and cultural activities


3.10.1 Current situation

Nature Park is near the capital city (Zagreb) and has the good connections with nearby cities which enables visitors to come to the area regularly. But this potential is not sufficiently exploited and better promotion of the area is needed. Tourists have to pay a tourist tax but Žumberak does not receive money from it. Furthermore, the Park has no entrance fee. There are 20-30 tour operators and agencies outside the park. The park collaborates with some of them. Tour guides are mostly hired and not employees of the agencies.

The natural Park not only has a beautiful landscape, but also has cultural spots like a monastery and a church. Its cultural heritage is very important, and its results can be seen on home-made products, local fairs or festivals, like for example “Uživam tradicijo” a culinary event and in the façade of old houses. Nevertheless, rebuild an old house is very difficult due the administration process to receive permission.

Current businesses:

Riding Club “Zorro” within Family Farm Bratelj offers horse riding.
Cycling associations are established.

 Challenges and opportunities in the <i>touristic and cultural</i> sector	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Lacking education of locals regarding importance of biodiversity. ○ The environmental education aspect is underdeveloped in the tours. 	<ul style="list-style-type: none"> ○ The environmental education aspect is underdeveloped in the tours.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none"> ○ Besides horse riding there are more environmental friendly tourism activities such as bike, e-bike and hiking tours. ○ Furthermore, the tours could stronger include environmental education aspects or information about the cultural heritage of the park. ○ Bird watching (beginners level) values the nature and delivers recreation for humans. 	<ul style="list-style-type: none"> ○ Traditional knowledge about ethnology, history of the region available. It is special and unique and can be used for touristic offers. ○ Tour operators could use the trails inside the park free of charge. ○ Cultural heritage is very important and there is interest in keeping the traditional festival and local fairs.

3.10.2 PPB Opportunities

***** **Eco-Tour operator** Local tour guides offer program for different target groups. One day or several day trips. Hiking, cycling (possibility of e-bikes and e-bike tours), bird watching, village tours, photo shooting, or NTFP collecting. Follows environmental standards such as "leave no trace" (ensures proper waste disposal, respects wild life and cultural/historic structures).


Develop more tourist activities that combine biodiversity protection with environmental education and tourism. Examples might be e-bike tours or tours with information about the cultural heritage as this is unique. Local population has knowledge about their history, ethnology and culture, which could be used. Environmental education creates respectful interaction with nature.

Offer seminars and courses: Increased awareness and knowledge about natural preparations including cosmetics and treatments. Workshops also on cooking classes for traditional meals and on ecological farming and permaculture.

3.11 Biodiversity management services

3.11.1 Current situation

A consulting company or agency is missing that helps people to stick to the business registration.


 Challenges and opportunities in the <i>biodiversity management service sector</i>	
Challenges for biodiversity conservation	Challenges for economic development
<ul style="list-style-type: none"> ○ Open habitats are being lost due to undergrazing. ○ No business is using the advantage that protected and natural areas need a special management. ○ Currently there is a lack of awareness within the local entrepreneurs regarding biodiversity conservation. 	<ul style="list-style-type: none"> ○ Strict building and construction regulations are in place. People that want to renovate buildings struggle with these regulations. ○ Local entrepreneurs do not have the financial resources to pay such a consultancy. External funding / seed capital is needed.
Opportunities for biodiversity conservation	Opportunities for economic development
<ul style="list-style-type: none"> ○ Consultancy on biodiversity friendly practices and management could increase the number of businesses that act in an environmental friendly way. 	<ul style="list-style-type: none"> ○ Consultancy for business registration; certifying consultancies; Organic production consultancies. ○ Many abandoned buildings could conserve the cultural heritage of the area.

3.11.2 PPB Opportunities

<p>*** Consultancy company</p>	<p>It gives services on legal business registration (open there own businesses; rebuild an old house or receive subsidies), fund access, subsidies, etc. Further consulting services might support the development of local PBB. Consultancy on biodiversity friendly practices, management and certification. High demand due to complicated processes.</p>
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3.12 Delivery services and transport agencies

3.12.1 Current situation

 Challenges and opportunities in the <i>delivery services and transport sector</i>	
Challenges for biodiversity conservation	Challenges for economic development
	<ul style="list-style-type: none"> ○ Transportation of products to bigger cities is difficult.
Opportunities for biodiversity conservation	Opportunities for economic development
	<ul style="list-style-type: none"> ○ Business that collects and sells products jointly in a city.

3.12.2 PBB Opportunities

***	Transport service for farmer products	It picks up locally produced products. Economies of scale: brings products to market in bigger city to sell to tourists and locals.
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4 Conclusion

Despite the challenges facing the territory, such as the rural exodus and the ageing of the population, Žumberak Park has the potential to implement and promote the different PBBs that already exist.

The above discussed sectors cover those business opportunities that currently offer the most potential. It is highlighted the following Pro Biodiversity Businesses: **Individual enterprise and/or family business that collects and sells medicinal herbs and cosmetic plants, accommodation which includes traditional food and traditional livelihood, and eco-tour operators.**

There are, however, other sectors in which the development of Pro Biodiversity Businesses is generally possible and which might provide opportunities in the future. Those sectors include community and social service activities, and banking, insurance and investment.

For further steps, it is recommended to read the PBB Development Guide, in which, through a series of simple items, recommendations are given to implement measures to incorporate biodiversity into small local businesses.

