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# NATURE PROTECTED AREAS IN THE SLOVENSKA BISTRICA REGION

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## INTRODUCTION

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The municipality Slovenska Bistrica has the favorable strategic position of crossroads of routes in direction of Maribor, Ptuj, Ljubljana and Rogaška Slatina. With the surface of 260 km<sup>2</sup> it is one of the biggest municipalities in Slovenia and exactly 49,27% of that area is a part of Natura 200. At the same time the municipality of Slovenska Bistrica boasts of many natural sights and historical cultural monuments.

A large part of these were declared by the municipality with a decree on the protection of sights and monuments. Many, especially cultural monuments, have also been restored and protected against collapse in the past two decades.

The natural and cultural heritage in the municipality represents an invaluable part of the economic and tourist potential of the future development of this area.

The last inventory of natural heritage in the area of the entire municipality was carried out by the Institute for the Conservation of Nature and Cultural Heritage Maribor in 1991. The most important objects and areas of natural heritage were insured by the municipality of Slovenska Bistrica in 1992. 189 buildings and areas were insured on the territory of the entire municipality; 3 landscape parks, 13 nature reserves, 163 monuments, of which 132 dendrological, and 10 monuments of shaped nature.

The following two chosen analyzed areas are thus a protected area not just from the declaration of the municipality, but also from protection of Natura 2000.

## BIODIVERSITY

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The first area: Bistrica gorge is the ravine of the Bistrica stream, covered and surrounded by 270 hectares of the woods, which include both deciduous and coniferous trees. Up to 700 m of elevation oak trees, hornbeams, cherry trees, sweet chestnuts are present, together with beech trees, sycamores, fir trees, rowan trees and many others, which flourish at 500 m altitude. As the surface around the stream is more or less steep and covered with rocks, the forest with its layers decreases the speed of the stream and thus decreases the effect of erosion. The Bistrica stream is one of the biggest and most preserved Pohorje streams. In the upper part of the basin there are many peat bogs, where various rare and endangered plants flourish, such as the round-leaved sundew (*Drosera rotundifolia*), the hare's-tail cottongrass (*Eriophorum vaginatum*), the northern bog club moss (*Lycopodiella inundata*), cranberries (*oxycoccus palustris*), the alpine bulrush (*Trichophorum alpinum*) and others. On its way the stream crosses various soil horizons of which different rocks contribute to several rapids, pools and three waterfalls. It has two great springs in the Pohorje hills and is about 20 km long, out of which about two thirds flow through the aforementioned woods.

One of the symbols of the area was the European silver fir (*Abies alba*) or in Slovenian: Maroltova jelka. It was the biggest natural sight in the stream region and with its 605 cm wide trunk perimeter it was the thickest tree of the species, not only in Slovenia but in general. However it has started to decay after about 250 in the 1990s and has collapsed in 2010 due to a supposedly set fire.

Considering the animals, mammals are the most prevalent, out of 69 species of mammals in Slovenia as much as 52 can be found in this area and on the Pohorje hills. Common are deer and wild boars, while

smaller mammals include foxes, hares, martens, skunks, dormice, squirrels, weasels, shrews and mice. Damp environment around the stream represents the living space of frogs. Some snakes and insects are also present. Moreover, various bird species live there as well. Other smaller insects living in and next to the Bistrica stream indicate that the water is very clean and drinkable, at least in the upper part of the stream.

The reason this whole area is protected is mostly for recreational and educational needs. Protected structures and those of important national heritage include:

- Quarry of hairpin bend – a geological natural sight
- Natural site of hairpin bend flora – botanic natural monument
- the aforementioned Bistrica stream - hydrological, geomorphological and botanical monument
- Roman quarry – geological natural monument
- forest reserve Gradišče
- all three waterfalls of the Bistrica stream (two of which have a name: Bistriški Šum and Žleb) - hydrological and geomorphological monuments
- thick spruce tree under the Žerjav farm

## DEMOGRAPHICAL DATA

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The traditional types of settlements in this region are scattered settlements and solitary farms. In some areas larger clustered settlements were established, however scarce statistical data shows that the number of inhabitants is decreasing by the years.

Other specific data about directly employed people is not available for this region, mainly because as this area is used mostly for self-recreational purposes, no surveillance is needed, therefore, no employees are present either, ergo no research has been done on this, or the information is not available for us to obtain. Consequently the people who minimally take care of the area are most likely locals, who do not profit from this, or hikers and visitors that use the area.

## DEVELOPMENT - ECONOMIC (ISSUES)

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The protected area of Bistriški vintgar, which connects bistriško Pohorje, has in the past been expanded to a wider European area due to Pohorje glassworks - 'glažute', forestry, charcoal, stonemasonry and ironmongery. After the Second World War, the development of industrialization caused the process of depopulation. Nevertheless, the settlement is even today reaching the 1100 meters of altitude.

In the 19th century forests were exploited systematically. Initially for the development of glassware and ironmongery, but when it fell due to the expensive wood, it was for the production of the railroad in the 1860s. At the same time, the world market with the railway Vienna - Trieste was opened, which is why it began intensively at higher elevations.

After 1945, forests were exploited in a non-systematic and non-economic manner. After 1954 the cutting of rare birch monocultures began. The work gradually mechanized and specialized.

At the beginning of the vintgar there is a water mill. At this site, the capture and preparation of stream water for the purpose of industry and city's tap water. Filtration, chlorination and additional disinfection with UV light. Technological waters cover 150 l / s for the needs of the Impol factory. Tap water for the city needs is 50 l / s. This means two thirds of the average annual flow. Reducing the amount of water in the stream significantly affects the organisms in it.

Bistriški Vintgar with diverse vegetation and animal diversity, the proximity of the city and relatively easy accessibility, offers ideal conditions for recreation of inhabitants of Slovenska Bistrica and the inhabitants of the surrounding area. However, it does not have attention from the wider surrounding.

Any projects in Slovenska Bistrica region that have been completed, are in progress or will be initiated have only the nature of object renovation, sewage systems or infrastructure renovations. There is no available data regarding research or verification of the status of vegetation and animal species currently or from the past 15 years.

## INTEGRATION OF YOUTH INTO DEVELOPMENT OF THE AREA

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As it has been explained, the area does not flourish with population. People are generally moving out, in fact it is facing brain drain of youth. It can be only concluded that that is contingent on the lack of investment in the area itself, lack of job options and a limited variety on the employment field.

Other accurate data on the unemployment rate are not available.

Job opportunities for youth could be potentially created for surveillance, research and promotion to a wider surrounding and public.

Learning routes, brochures and organised field trips for schools have been established by the Institute for culture Slovenska Bistrica.

## INTERNATIONAL DIMENSION

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As previously mentioned, the Bistrica region is mostly used as a recreational and educational space. Most of the people who use it are locals, therefore the area is not internationally well recognized and it does not have an international status. Moreover, the lack of research and studies done makes it harder to determine and establish parameters. However, with the educational routes the area has potential.

On the other hand, it may in reality not be as bad that the region is rather unknown outside broader vicinity, because a small amount of people actually take care of the area and practically nobody is keeping it under surveillance or controlling it. Therefore it is easily accessible to everyone either with a car or on foot. As it is appealing from the nature perspective, it could consequently quickly be infringed and lose authenticity if heavy tourism were to develop.

## CONCLUSION

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The depicted area of Slovenska Bistrica is included in Natura 2000, it is insured by the municipality and the Institute for the Conservation of Nature and Cultural Heritage Maribor. With the help of the municipality, the Slovenska Bistrica Cultural Institute local tourist associations hiking and learning routes were set up, which are used for recreational purposes only by local people and partly by few tourist groups from around of Slovenia. The area faces depopulation, which has not completely isolated the area yet, despite a village Lokanja, which currently has no registered residents. There is no record of changes in vegetation and animal life on the ground, as well as visits. At the same time there is no incentive of monitoring the changes themselves.

The will of employed in the region is to provide secure, clean hiking routes for the locals, since they are the only population that uses the area for recreation. Most of information of the area can overall be found only in brochures printed by local institutes.

## RESOURCES:

- <http://www.slotrips.si/slo/naravne-znamenitosti/trip/939/Bistriski-vintgar> (
- [http://www.hribi.net/izlet/zgornja\\_bistrica\\_sveti\\_trije\\_kralji\\_skozi\\_bistriski\\_vintgar\\_mimo\\_mocnika/4/917/1703](http://www.hribi.net/izlet/zgornja_bistrica_sveti_trije_kralji_skozi_bistriski_vintgar_mimo_mocnika/4/917/1703)
- <http://www.tic-sb.si/kaj-poceti/sportne-aktivnosti/pohodnistvo/pot-skozi-bistriški-vintgar.html>
- [http://kraji.eu/slovenija/bistriski\\_vintgar/slo](http://kraji.eu/slovenija/bistriski_vintgar/slo)
- [https://sl.wikipedia.org/wiki/Bistriški\\_vintgar](https://sl.wikipedia.org/wiki/Bistriški_vintgar)
- [http://www.hribi.net/izlet/dom\\_na\\_osankarici\\_crno\\_jezero\\_na\\_pohorju/4/918/1597](http://www.hribi.net/izlet/dom_na_osankarici_crno_jezero_na_pohorju/4/918/1597)
- <http://www.slotrips.si/slo/naravne-znamenitosti/trip/949/Črno-jezero>
- [https://sl.wikipedia.org/wiki/Črno\\_jezero,\\_Pohorje](https://sl.wikipedia.org/wiki/Črno_jezero,_Pohorje)