

## *Prerequisite for the Development of Ecotourism on the Territory of the Town of Zlatograd and Possible Environmental Issues*

*Ekaterina Valcheva<sup>1\*</sup>, Krasimir Aleksandrov<sup>2</sup>*

1 - Agricultural University, Faculty of Plant Protection and Agroecology,  
12 Mendeleev Blvd.,BG-4000 Plovdiv, BULGARIA

2 - Agricultural University, Faculty of Economy,  
12 Mendeleev Blvd.,BG-4000 Plovdiv, BULGARIA

\* Corresponding author: [katia\\_valcheva@abv.bg](mailto:katia_valcheva@abv.bg)

**Abstract.** The basis for the development of ecotourism in Bulgaria is the tourist resource that provides a system of protected areas and historic cultural heritage. One of the key elements of ecotourism are the environmental protection and the creation of real opportunities for economic prosperity and livelihood of communities in settlements near the protected areas. Tourism is considered a priority in the economic development not only in Zlatograd Municipality, but also in Smolyan District. The main prerequisite for the successful development of tourism in the municipality is the realistic assessment of the factors that are relevant to tourism. Object of this study is the town of Zlatograd as an ecotourist destination and the possible environmental issues resulting from the development of tourism.

**Keywords:** anthropogenic pressures, sustainable management, ecotourism, biodiversity, protected areas.

### **Introduction**

The realization of one of the main directions of the EU Agricultural Policy - Rural Development, provides for the use of different approaches, tools and activities for achieving the goal - development of economic life and the economy in these areas; creating a livelihood and incomes through activities diversification; equalization of social and economic conditions in the regions. One means of achieving this goal is the development of rural tourism (LULCHEVA, 2011).

With its social, economic, political and environmental importance, tourism contributes to strengthening health and recovery of people's work capacity; enriches their knowledge; increases their linguistic culture; creates new jobs; provides income

for those employed in it; changes the look of the settlements and the territories in which it is being developed and improves the standard of living of the local population (TONCHEVA, 1994).

It is known that Bulgaria has considerable resources for tourism development. The conditions in the country are suitable for practicing different type of tourism throughout the whole year. The success of tourism is largely related to the state of the environment where it operates. The relationship between tourism and the environment is bilateral. In the last decades we have witnessed quite often the negative impact of the activities, which provide good conditions for tourism, on the environmental components (LAKOV, 2011).

National and nature parks have a leading role in the development of ecotourism, which is a small, but rapidly growing industry, governed by the laws of the market and its regulations. Ecotourism is one of the main priorities for development of the Rhodope Region.

The Rhodope Mountains with their geographical position, climate and numerous mineral springs, natural and historical sights meet all requirements therein to develop ecotourism. The studied area - Zlatograd Municipality, is one of the few significant Rhodope areas which has a huge potential for the development of ecotourism.

### **Materials and Methods**

*Study area.* Zlatograd Municipality is located about 300 km from the capital Sofia and 70 km from the international resort Pamporovo. Administratively, it is part of Smolyan District and its administrative centre is the town of Zlatograd, the most southern Bulgarian town. Municipality includes nine villages - Startsevo, Dolen, Erma Reka, Alamovtsi, Tsatsatovtsi, Strashimir, Presoka, Kushla, and Fabrika. Zlatograd Municipality has an altitude of 385 to 1118 m. The town of Zlatograd is the lowest settlement in the municipality - 420-550 m.

The terrain is mountainous and it changes suddenly in places - steep slopes alternate with small valleys and highly developed hydrographic network. This explains the fragmentation of the agricultural lands. Their average slope is 10-12°.

The town of Zlatograd is already using its rich potential for tourism. The natural and historical factors are those which give a competitive advantage to Zlatograd Municipality.

The natural and climatic characteristics of the region are a prerequisite for the implementation of a well-organized ecotourism. All villages of the municipality have preserved their local traditions and the beautiful natural environment. Here the tourists could have direct and invaluable contact with nature and local culture.

*Climate.* The area belongs to the Continental - Mediterranean climatic region, South Bulgarian climatic sub-region, Eastern Rhodopes low mountainous climatic region.

The average annual temperature is 10.8°C, with a maximum in July 20.6°C and a minimum in January - 0.8°C, indicating moderate summers and relatively mild winters. The extreme values of the average maximum and average minimum temperature is 17.1°C and 4.9°C, the average monthly maximum in August is 28.9°C, and the average monthly minimum in January is -3.9°C.

The average annual rainfall reaches 1000 litres/m<sup>2</sup>. The intense rainfall of different length is typical of the Zlatograd Region; they are most often in autumn and when combined with the large catchment basin of the Varbitsa River they are a prerequisite for large floods of the river. The maximum rainfall amounts (in mm) for the period April - October varies from 10.0 for 5 minutes to 46.3 for 60 minutes and 59.7 for more than 60 minutes.

The average annual relative humidity is 75%, with a maximum of 85% in November, 13 are the days with relative humidity equal to or less than 30%, which is indicative of good growth conditions of forest and grass vegetation in the area. The average monthly wind speed is between 0.9 m/sec to 1.2 m/sec, and the average 1.1 m/sec.

### **Results and Discussion**

*Analysis of the natural resources in the area*

*Mineral waters.* Part of Zlatograd's natural resources is the geothermal field of hot springs in the Ermorechie. The static reserves are approximately 200.10<sup>6</sup> m<sup>3</sup>. The water temperature is 80-100°C, and the dynamic reserves are 30-100 l/sec, average 60 l/sec. The water is with good quality and suitable for drinking; it can be used for treatment.

*Biodiversity.* The area, in which the town of Zlatograd is located, is characterized by very well preserved biodiversity, and intact habitats for a number of protected plants and animals, which are one of the greatest

treasures of the municipality. The number of plants growing in the area is over 200 species. The difference in the habitats is a prerequisite for the presence of plants from almost all ecological groups.

The territory of Zlatograd Municipality is 173,321 km<sup>2</sup>. The total area of forests including state owned and private is 139,068 decares. The agricultural lands are 6 times less - 27,363 decares. For the needs of transport have been used 456 decares, and for fund "Settlements" - 4,737 decares. The rivers and the watercourses are 1,642 decares, and the mining territories - 55 decares.

The forests in the region are mixed. The most common tree species on the places facing north are: beech (*Fagus sylvatica*), hornbeam (*Carpinus orientalis*) and durmast (*Quercus petraea*), and on the southern windy slopes - white (*Pinus sylvestris*) and black pine (*Pinus nigra*), sumac (*Cotinus coggygria*), broom (*Chamaecytisus absinthioides*), manna ash in not very good condition. On the river alluvial areas are growing - black willow (*Salix nigra*), willow (*Salix caprea*), elderberry (*Sambucus ebulus*) and rarely hazel (*Corylus avellana*). There are in this region, even though rarely, on area where spruce tree used to grow - Hungarian oak (*Quercus frainetto*), Oriental hornbeam (*Carpinus orientalis*), and in the lower parts - sycamore (*Acer pseudoplatanus*), Norway maple (*Acer platanoides*) and mountain elm.

There are centuries-old trees - oak, hornbeam, sweet chestnut (*Castanea sativa*), maple (*Acer campestre*), white and black pine. The oldest tree of the species domesticated chestnut tree - 278 years old is situated on the territory of the municipality, in the "Balaliyska Reka" area.

There are many shrubs too: wild brier, sumac, red and blue juniper, horsetail, blackberry, and eryngo.

The variety of grass species is wide. There are: wild geranium (*Geranium sylvaticum*), celandine (*Chelidonium majus*), cuckoo-pint (*Arum maculatum*), alpine avens (*Geum montanum*), and many types of ferns.

There are many herbs in the Zlatograd Region - thyme, yarrow, oregano, chicory,

wormwood, St. John's wort, wild dog rose, wild mint, sorrel, lemon balm and more.

The fauna in the region is typical of the central highland fauna region species. The exceptional biological diversity here includes: 291 species of birds, 40 species of fish, 39 species of amphibians, 26 species of reptiles (including two tortoise species, 13 species of snakes, 11 species of lizards).

Representatives of the avifauna are: black woodpecker, greater spotted woodpecker, green woodpecker, common chaffinch, siskin, common crossbill, blackbird, chiffchaff, crested tit, coal tit, great tit, jay, nutcracker, hooded crow, tree sparrow, house sparrow, house martin, swallow, black and white stork.

The most common representatives of the ichthyofauna are: pike-perch, carp, barbel, chub, bleak, golden carp, rudd and pike. "Varbitsa" River, "Zlatograd" Dam Lake and "Hasidere" small dam are important to the fishery in the municipality. In 2004 the Hunting and Fishing Association did fish stoking of the dam lake with carp and trout.

The most common representatives of the amphibians are: big water frog, green toad, common frog, and salamander.

Representatives of the reptiles are: green lizard, sand lizard, wall lizard, adder, horned viper, grass snake.

Representatives of the mammals are: wild boar, fox, wolf, brown bear, squirrel, wild rabbit, chamois, pine-marten, marten, otter, weasel, hedgehog, etc.

Part of the wildlife included in **the Red Book of Bulgaria** is: salamander; and in the category endangered species - black and white stork, chamois, pine-marten, and otter.

*Culture and traditions.* The town of Zlatograd has a very rich cultural heritage, which creates favourable conditions for the development of cultural tourism, as well as many tourist products based on the historical and cultural potential of the region. The architectural reserve of houses from the National Revival period gives a special image of the town. The National Institute of Monuments of Culture has

registered in it about 100 monuments of culture. The main features of the houses in the reserve are their white walls around the courtyards, plank-beds, white chimneys, wide oak doors. There are wells in most courtyards and eaves of tiles.

Zlatograd Municipality has got well preserved traditions and distinct Bulgarian values. In the past Zlatograd was called Belovidovo - because of its white houses. Until 1934 its name was Darydere. Zlatograd has been a centre of the Bulgarian education and culture for a long time. The folklore heritage has been preserved by the four municipal cultural clubs - "Prosveta" in the town of Zlatograd, "Progres" in the village of Startsevo, "Orpheus" in the village of Erma Reka and "Iskra" in the village of Dolen.

Zlatograd Municipality has a substantial basis for the development of tourism. Every year new sites are created and the existing ones are modernized and reconstructed. Considerable number of local entrepreneurs is now offering services to tourists in small family hotels and guest houses, and after categorizing them the quality of services has significantly increased.

#### *Summary of the analysis*

In terms of sustainable development we are now facing the problems of ecotourism, which is seen as "a responsible journey to natural areas which does not harm the environment and contributes to the well-being of local people".

Ecotourism is carried out in a natural environment and at the same time aims to change it as little as possible (NIKOLOV, 2010). At the same business seeks to support local people and thus creates a scheme of sustainable development with minimal use of resources and co-investment for their conservation. The educational nature of ecotourism is a key element that distinguishes it from the other sections of the nature-oriented tourism and thus makes it recognizable. Education and interpretation of the natural environment (including Environmental education) are

important tools in creating a pleasant, meaningful and full ecotourism experience.

Ecotourism attracts people who: wish to interact with the environment in different degrees (different degrees of merging, the feeling to be part of nature); who wish to develop and improve their knowledge, their consciousness, as well as to assess, understand and comprehend ecotourism (NATIONAL STRATEGY FOR SUSTAINABLE TOURISM DEVELOPMENT IN THE REPUBLIC OF BULGARIA 2009-2013).

A few eco trails and bicycle lanes start from Zlatograd and its surroundings and if visitors take these routes they can enjoy the untouched scenery and explore the various historical, cultural and architectural sites of local and national significance.

One of the eco trails passes a protected tree "The centuries-old chestnut" (*Castanea sativa*), 278 years old - the oldest in Smolyan District.

Another eco trail follows the legend of the born two centuries ago in the town of Zlatograd legendary rebel Delyo Voyvoda.

There are many other eco trails which attract tourists:

*Eco trail "St. Nedelya"*. Length of the eco trail - 12 km. Duration - 3 hours. Level difference - about 400 metres. Eco trail signs - blue markings and wooden boards. The trail begins at the Watermill (The Fulling mill) in Zlatograd - the most attractive place of the ethnographic complex. It consists of three traditional systems: wooden wash-tub for scouring (Dyshta), a fulling mill and a watermill (Karadzheyka).

*Eco trail "Eco - echo"*. Length of the eco trail - 10 km. Duration - 2 hours and 30 minutes. Eco trail signs - grey markings and wooden boards. The trail begins at the Courthouse in Zlatograd. It passes a fountain and a shooting ground, a villa area, a recreation area with an ornithological corner in it, "Barchinata", the protected tree "The centuries-old chestnut" (*Castanea sativa*), 278 years old - the oldest in Smolyan District, a recreation area, a ravine, "Dybeto" area (centuries-old oak forest), a fountain and a place for rest, a villa area, hazel-wood, orchards. The trail ends at villa "Beloteks".

*Eco trail "Mountain hug"*. Length - 4 km. Duration of the trail - approx. 2 hours. Marked with signs. Begins at the parking lot of night club "Diana". It goes through a broad-leaved forest. There are many fountains along the trail with crystal clear water as well as recreation areas. The trail leads south to a secluded rock called "Chukata" which you can either climb or go around it. The view from the rock is spectacular and you can see in the north-east Zlatograd.

*Eco trail "In the footsteps of Delyu Haidutin"*. The altitude varies between 250 and 700 metres. The eco trail follows the legend which tells how Delyu Haidutin (Delyu the rebel) reached Kostadin peak where he was hiding from the Turkish troops. The eco trail begins at Zlatograd, the area "The Military Garden" and passes the spring "Bunyov vriz". It continues until an asphalt road, about 200 m. After that you take the mountain trail that goes through virgin forests that have been rarely visited until recently by people. Then you reach the well, built during the Ottoman rule, where the most famous Delyu the rebel used to sit with his fellows to drink from the crystal clear water after heavy and fearsome battles with the enemy. After that the eco trail reaches the area "St. Ilia" (altitude 650 m).

### Conclusions and recommendations

Based on this report, we can draw the following conclusions and we can make the following recommendations:

- The favourable geographical location of Zlatograd Municipality and the adjoining tourist area as well as the topography show that the region has potential for ecotourism.
- The bioclimatic characteristics of the area - mild climate, clean air and mountain landscape are a prerequisite for the development of year-round recreation.
- The resources for tourism development in the municipality and the region combine a variety of unique nature, good anthropogenic environment, preserved cultural and historical heritage, traditions and practices typical of the mountain, attractive natural landscapes.

➤ There is a danger that the local community and users may not fully comprehend the need to protect the forest, as well as the natural and cultural heritage, which would lead to an appreciable reduction of the opportunities for the development of sustainable tourism forms such as ecotourism.

➤ It is necessary to develop a long-term conception for expanding the possibilities of further usage of the mineral water for treatment, greenhouse heating, etc.

➤ In our opinion the role of the local authority - municipal administration, municipal council and district administration should be leading in planning and implementation of plans for tourism development.

➤ Local people should benefit from ecotourism so they can support its expansion and development.

➤ The natural environment on the territory of Zlatograd Municipality has to be preserved and developed.

### References

- LAKOV P. 2011. Tourism policy and the development of ecotourism in Bulgaria. - In: *New Knowledge Journal Of Science, Anniversary International Scientific and Applied Conference*, UARD, Bulgaria.
- LULCHEVA I. 2011. Rural tourism in the region of Rodopi. - *Economics and Management of Agriculture*, 2: 64-71.
- NATIONAL STRATEGY FOR SUSTAINABLE TOURISM DEVELOPMENT IN THE REPUBLIC OF BULGARIA 2009-2013, [www.mi.government.bg/bg/themes]
- NIKOLOV N. 2010. *Ecotourism as a non-traditional tourism form*. Bulgarian academy of Sciences, Institute of Geography, Sofia.
- TONCHEVA T. 1994. *Ecology and use of nature tourism*. Sofia, NBU, 127 p.
- ZHECHEV V., STOILOV D. 1999. *Tour of nature and ecotourism*, Publishing house "Korekt", Blagoevgrad, 165 p.

Received: 05.12.2014

Accepted: 22.12.2014