

THE GEOPARK - AN INSTRUMENT OF MANAGEMENT AND EXPLOITATION FOR PROTECTED AREAS

Maria Dimitriu *

Albert Scriciu **

Abstract

The Geopark is an officially protected area and a territory with clearly defined boundaries and own administration system, encompassing a region with a high number of geological, natural and cultural sites of interest, all part of a common network which is managed to promote sustainable development.

The concept of “geopark” represent a solution for geotourism development relaying on both, geoconservation and promoting of sustainable tourism in rural areas having as ultimate objective sustainable development, objective achievable through a sustainable plan management that takes into account local community needs.

This paper presents the geobiodiversity of Buzau Land, an area rich in traditions and natural resources that can grow by using those elements. The project for Geopark Buzau will have a major impact on the local population by creating new jobs, giving young people a reason to stay in the area in an attempt to achieve their professional goals

Keywords: *Geopark, protected area, geobiodiversity, geoconservation, geoeducation*

* Prof. Univ. Dr. Maria DIMITRIU, Christian University Dimitrie Cantemir, Academy of Economic Studies, Bucharest, dimitriumaria1@gmail.com

** Doctorand Marian-Albert SCRIECIU, Academy of Economic Studies, Bucharest, albert.scrieciu@yahoo.com

Introduction

The geopark is a tool for harnessing the resources in its territory, by creating economic and social activities through geotourism and geoeducation. It is also an element of reinforcing local identity and creating a brand. This instrument offers the chance of a tight collaboration between institutions and individuals, between government agencies and non-governmental organizations from both public and private sectors. It is also an opportunity for universities to engage directly in the real problems of an area. It constitutes a rich field of interdisciplinary education in planning and conserving natural resources¹. For a geopark to have success is mandatory that the plan management is the result of the local population involvement in planning and management decisions and take into account their needs, while offering a fair distribution of the benefits.

Local communities must be engaged in each stage of the development process: planning, implementing and monitoring². The term “geopark” took shape due to pioneering initiatives in the 90s in Vulkaneifel (Germany) (Frey et al., 2006), where the geopark was linked with

¹ Andrasanu, A. (2005). *The Geopark – Framework for research, education and training in sustainable development*, Second Conference on the Geoheritage of Sebia Proceedings, Belgrade, ISBN 502.131 – 1.55, pp 171 – 157

² Choi, H. C., and Murray, I. 2010. Resident attitudes toward sustainable community tourism. *Journal of Sustainable Tourism*, 18, (4), pp 575 – 594

tourism development endeavors, subsequently labeled as geo-tourism. The concept is related to the development of Haute Provence Geological Reservation that hosted the first International Symposium for Geoconservation, when the Digne declaration was adopted (1991).

1. Overview of Geopark Concept

The concept of geopark has several meanings. As an officially protected area, it is a territory with clearly defined boundaries and own administration system, encompassing a region with a high number of geological, natural and cultural sites of interest, all part of a common network which is managed to promote sustainable development. The management plan is designed to ensure its functioning.

Another meaning is that of a development area. Having an integrated approach to the heritage in its territory, it creates an environment of development through development maps, infrastructure plans and economic and social activities. The enforcement instrument of this goal is **The Territorial Development Charter**. The Charter represents a strategic development program for the geopark’s local communities. The program is achieved by assessing local resources and needs, and identifying the possible directions of sustainable development, where the main resource is the geopark itself. The charter is a document subject to public debate and

approval. It represents a point of convergence for investments and development, and can contribute significantly to declaring the geopark a LEADER territory.

At the same time it is an instrument for rural development that is financially supported through community funds.

The geopark has also the meaning of a quality brand for conservation and territorial development, creating local brands and a market image for the local communities. The concept emerged due to the European Network of Geoparks and the UNESCO Geoparks Network. The European Network started from the experience with geoparks in France, Germany, Greece and Spain, which have come together in 2000, and managed to extend the concept globally. At its core, the geopark is an overall acknowledgement of a territory's heritage or an acknowledgement of an interdisciplinary approach between complementary fields, like natural resources and socio-economic development.

At present, the geo-parks constitute new territories for research, education, socio-economic development, geo-tourism and an efficient way of globally promoting earth sciences. The European Network can be considered a quality brand in conservation, research, education, promotion, and it maintains this position by applying rigorous evaluation criteria when considering the inclusion of new geoparks. Regular reevaluation of members, cooperation and transfer of good practice reinforce European standards for the geopark concept.

Three main elements are necessary for the creation and functioning of a geopark:

- A well-defined territory, encompassing a rich natural and cultural heritage, from which the geological heritage is the most important.
- Enforcing management plans and promotional programs together with the local population to strengthen local identity.
- Synchronizing the geopark's activities with local development plans.

Defining a geopark's territory is not limited to marking a space on the map. Rather it means identifying a territory that is coherent in terms of natural, cultural and socio-economic resources, and that needs to be organized in a complementary and dynamic way³.

Organizing the territory focuses on sustainable development, and is also a way of identifying elements of spatial determinism as values of local identity that can be transformed into touristic advantages. The main element of sustainable development is geotourism, which has economic functions. It is a form of sustainable tourism, offering touristic products that rely on discovering, and personally experiencing the geological features of Earth, so that it can change attitudes to natural and cultural heritage, leading to greater conservation efforts and benefits for the local population.

³ Andrasanu, A. (2008). *Geoconservarea, concept, metodologie, aplicatii. Geoconservarea formatiunilor de varsta Cretacic Inferior din Bazinul Dimbovicioara* – Teza de Doctorat, Bucuresti

2. The Characteristics of The Buzau Geopark

The Buzau Geopark is located in Region 2, South-East, in the northern part of Buzau county, in the curvature of Eastern Carpathians, at the conjunction of the historic roads that link Muntenia, Transylvania and Moldavia. This territory encompasses the villages: Beceni, Berca, Bisoca, Bozioru, Brăești Cănești, Colți, Chiliile, Cozieni, Mânzălești, Lopătari, Odăile, Sărulești, Scorțoasa, Valea Salciei, Vintilă Vodă, with an area of approximately 100 000 hectares and a population of over 40 000 inhabitants.

The geological history of Buzau has been extremely complex and interesting. The history of the sedimentary rocks from the surface can be traced back over 60 million years ago in the Tethys sea, continuing with the Paratethys sea, which got separated from the former as the Carpathian and Alpine mountains arose. The climate of Geopark is within the temperate continental climate zone of the hill, except the north-west area, which has a climate of transition towards the mountain.

a. The geopark's boundaries

The boundaries of the geopark overlap with the administrative boundaries of the villages. The southern boundary is composed of the administrative boundaries of the villages Berca, Scorțoasa, Colți. The eastern boundary follows the boundaries of the villages Berca, Beceni, Vintila Voda, Sarulesti, Valea Salciei. The northern boundary coincides with the line of Valea Salciei municipalities, Bisoca, Lopatari. In the

western region we find the boundaries of municipalities Lopatari, Braesti, Colti.



Figure 1. Geopark area and localities

Source: Andrasanu A – Geoconservarea, concept, metodologie, aplicatii. Geoconservarea formatiunilor de varsta Cretacic Inferior din Bazinul Dimbovicioara – Teza de Doctorat, Bucuresti 2008.

Geodiversity and biodiversity

The Geopark is located in the curvature of Eastern Carpathians corresponding in geotectonic terms to the Foredeep area and is crossed by three tributaries of Buzau river: Valea Slanicului, Valea Saratelului and Valea Balanesei.

The area is well known for the Muddy Volcanoes, the amber from Colți, the salt from Meledic, the Live Fire, oil springs, spectacular landscape with "the walls of the giants" or "the corner stone" for the salt caves, landslides and not least for rural landscapes and salty or sulphurous springs.

Elements of geological interest

At Paclele Mari and Mici there are large areas with clay, where cones and craters ranging from several centimeters to several meters in diameter can be found. These shapes are called muddy volcanoes. From the craters erupts a gray mud accompanied by gas emissions, resembling a volcanic eruption. The gas emissions are due to deposits of hydrocarbons in the subsurface at a depth of approx. 3000m.



Figure 2: Muddy volcanoes

There is also a fossilized resin, the amber, made from a mixture of organic compounds with specific properties, found in many varieties.

The entire hillside of Buzau is full with salt, the most famous being the accumulation at Lopatari, Manzolesti, Bisoca and Sari, from where Slanic, a tributary of the Buzău River, springs. The waters that spring from these areas, flowing through salt banks create saline areas that occupy a large surface in the plains of Buzau.

Besides the geological elements of special interest, the villages which form the Geopark are rich in culture and traditions. The traditions found in this area are unique and increasingly less common.

Biodiversity is represented by:

- Gărdurarița (*nitration schoberi*) - plant remarkable for its adaptation to silty and sandy soils with excess salts from arid regions.
- Colilia or năgara in our country is represented by several species from family of grasses: *Stipa capillata*, *S.lessingiana*, *S.pulcheriima*, *S.joannis*.
- The Scorpio (*Euscorpius carpathicus*) is spread only in the vicinity of the Southern Carpathians, from Banat to Buzau.
- Butterflies - 84 day butterfly species, two of which are protected by the Flora-Fauna-Habitats Directive of the European Union (92/43 EEC of 21 May 1992). These are small butterflies from Lycaenidae family, blue stained (*Maculinea arion*) and fire butterfly (*Lycaena disappear*), both species are dependent on wetland habitats.

b. The socio - economic

The geopark Buzau is a rural area and its population has grown old, while younger generations tend to migrate to urban areas and other countries.

These trends represent a real threat to traditions and cultural heritage that can result in their permanent loss.

The main sources of income of people are: agriculture, farming, trade and tourism activities.

3. Conclusions

In conclusion, we can say that Geopark is a protected area, officially recognized, with well-defined limits and its own administration, assigned in a region where there is a significant number of geological sites of interest, along with historical cultural elements, being also a developing territory, where the major resource is precisely this natural and cultural heritage.

A better knowledge of the elements of the Buzau Geopark can contribute to a sustainable development of Buzau Land but can also help preserving and harnessing the geobiodiversity elements, the culture and the traditions.

This project has a major impact on the local population by creating new jobs, giving young people a reason to stay in the area in an attempt to achieve their professional goals. In the same time, it aims to use the exceptional natural cultural and scientific heritage of Buzau Land through tourism and geoeducation. It also addresses the revitalization of local traditions and customs.

Now, it came straight after the County Council meeting was approved, with implementation of European funds through a public – private partnership with ANTREC Buzau.

The total value of investments is 951,150 lei, 2% from the County Council budget and the other part from the European

funds. It will be done by the Regional Operational Programme, with the priority "Sustainable development and tourism".

Given the international context, the dynamics of the programs and especially their socio-economic impact, we can consider Geoconservation as a new applied field of earth science. Geoconservation is an interdisciplinary field that combines elements of geology with geography, biology, sociology, urban planning, rural development and education. We propose a model for specialized training in the field, which would combine knowledge and basic skills in the geosciences with knowledge of related fields.