

A Report on the Sustainable Development of the Hațeg Country Dinosaur Geopark in Romania

Group Report



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Summary

In this semester a case study on the sustainable development of Hațeg Country Dinosaurs Park has been conducted. The case study was conducted by an international research group consisting of six students with different backgrounds from various universities. The students come from the fields of geography with different focuses.

The aim of this research is to look at the present state of geoconservation and come up with innovative proposals for the sustainable development of the Hațeg Country Dinosaurs Geopark.

The Hațeg Country Dinosaurs Geopark is located in Romania and covers an area of 102,392 ha. It is under the administration of the University of Bucharest who is constantly trying to find ways to ensure an effective and sustainable development of the park. Following the European model, the Hațeg Country Dinosaurs Geopark has several partnerships at local, national and international level, and has become a catalyst for local development in the fields of nature conservation, cultural heritage protection, traditional economic activities, ecotourism, social issues, and education and training. The problem definition of this case study is to come up with innovative recommendations for the sustainable development of the Hațeg Country Dinosaurs Geopark. The practical recommendations that our group comes up with are based on research which includes internet based research, book research and an interview which was conducted. Those recommendations will help the Geopark to improve its development in terms of sustainability. Thus, the central research questions of the study is:

“Which sustainable cultural services are interesting for development in the Hațeg Country Dinosaurs Geopark in the next five years?” This research questions has been broken down in order to get better results:

- What types of cultural services do already exist in the Hațeg Country Dinosaurs Geopark?
- What types of cultural services are innovative for the Hațeg Country Dinosaurs Geopark, and meet our definition of sustainability?
- What are the best cultural services to propose, based on our definition of sustainability?

Those questions deal with the past, present and future activities and development in the Geopark and raise awareness of the strengths as well as the weaknesses of the park. Having analyzed the weaknesses and strengths, we will suggest appropriate and effective ways to continue the sustainable development of the Hațeg Country Dinosaurs Geopark.

We approached our research by studying the research questions as well as the sub-questions and approaching it from different angles. We looked at the social, environmental and economic dimension- the three dimensions of sustainable development, and added our own definition of sustainability in terms of geoparks which we then used as a foundation for further research. Each member of the group was assigned specific aspects that conducted individual research in order to answer the research questions regarding the aspect of, for example, geotourism or cultural heritage.

The results of our research show that Hațeg Country Dinosaurs Geopark is a geopark with great potential that still has to be uncovered to its fullest. The geopark offers a variety of activities to enjoy for the visitors and to learn from it, however, there is still room for improvement, especially when it comes to making the geopark known to an international audience. It has many features to promote the park such as its geological, paleontological, biological, cultural and historical ones that are already highlighted. Also, there is steady development into the right direction. However, it still needs to establish continue to develop in a sustainable way in order to show up on an international scale and to be taken notice of. It needs to continue to develop in a way that benefits nature preservation, locals and visitors.

Marketing, infrastructure, activities and many more aspects need to be expanded to promote the park and invite more tourists to come and discover and experience this geopark with all its interesting and enlightening sites it offers.

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1. Introduction

Introduction

A European Geopark is defined as a territory with a particular geological heritage, which has a sustainable development plan to help promote local development (Andrășanu, 2006). Since Geoparks are established in rural areas they are also meant to bring sustainable development to their territory, resulting in conservation of the natural environment (geodiversity, biodiversity) and sustainable use of natural resources, as well as the protection of the cultural heritage of the local communities and local social-economic development, for example reducing unemployment and migration by being a stimulus for the local economy (<http://www.europeangeoparks.org>; Zouros & Valiakos, 2017). Geoparks are therefore beside environmental aspects very much concerned with traditional economic activities (agriculture, handicrafts), ecotourism, social issues, education and training, and raising awareness on European integration and promotion. A European Geoparks Network (EGN), aiming to protect and promote geological and cultural heritage through geotourism, was established in 2000 and now consists of 70 members in 23 countries. In addition, there is a worldwide Global Geoparks Network (GGN) in which at present 120 geoparks are brought together for networking.

Geotourism, through which visitors increase their knowledge of and affinity with Earth's natural environment and are able to experience the cultural and historical heritage of local communities, can be a powerful tool for preserving natural resources as well as cultural identity. Geotourism, because of economical benefits, can deliver the necessary means for geoconservation, bring more economic stability and alleviate poverty. Involving local communities is crucial for this (Maksimovic, Karabasevic & Stanujkic, 2017; (Farsani, Coelho, Costa, & Amrikazemi, 2014).

In this paper one European Geopark will be studied, Hațeg Country Dinosaur Geopark, which is located in Southern Transylvania (Romania) near the main routes to Hungary, Serbia and Bulgaria (figure 1). The territory was decided by the county authorities and the Romanian Academy of Science to be a protected area, which is quite similar to a natural park, and designed as such. It is currently in the process of gaining this designation by the Ministry of Environment and Water Management. The Hațeg Country Dinosaur Geopark covers an area of 102.392 ha and comprises 11 mayoralities and more than 100 villages, the communities of which are faced with several social and economic difficulties like unemployment and migration (Ciobanu, 2016).

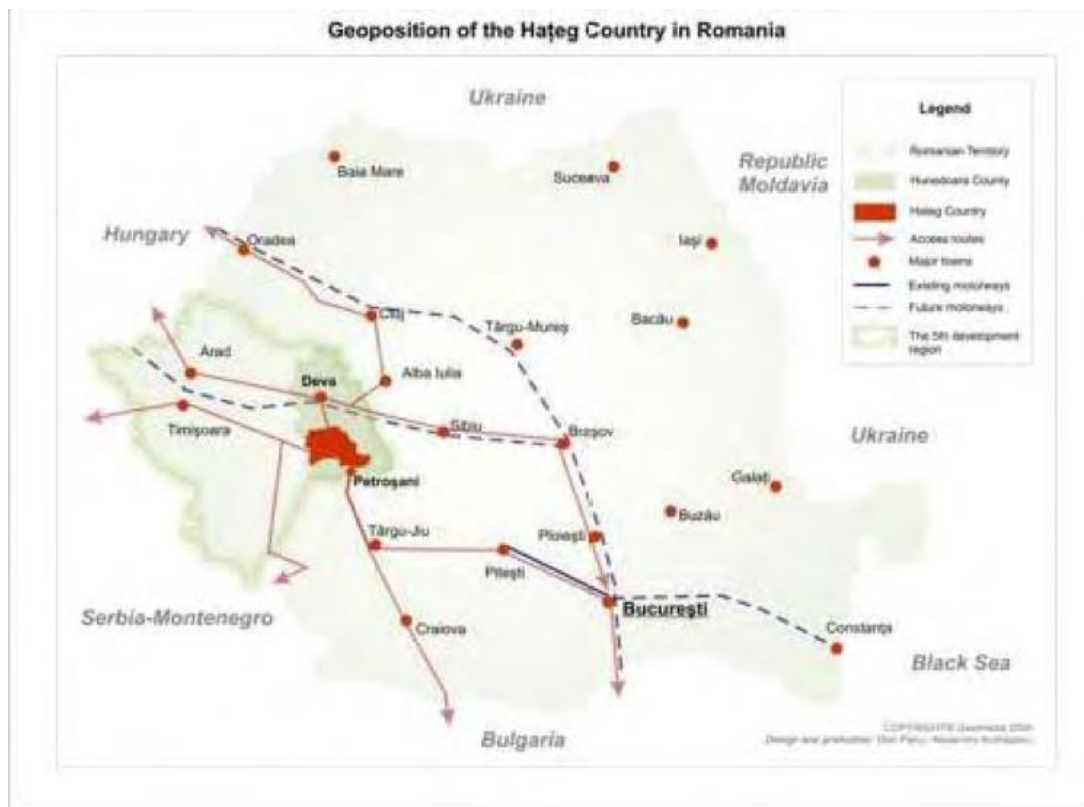


Figure 1. Geoposition of the Hațeg Country in Romania. (Andrășanu et al., 2008, p. 2)

Since the Millennium Ecosystem Assessment (MA) of 2005 its ecosystem service approach is very well used. 'Ecosystem services can be defined as the benefits natural ecosystems supply to guarantee human well-being' (Elliff & Kikuchi, 2015). The MA describes four categories of ecosystem services: provisioning (goods we take from the environment), regulating (services that maintain ecosystem-balance), supporting (supporting other ecosystem-services) and cultural services. This last category, which we investigate concerning the Hațeg Country Geopark, is quite abstract with its often intangible objectives, but very important, since for much ecosystem-research it is crucial to take the relationship of man and nature into account (Tengberg et al., 2012). Since an important goal of the ecosystem approach is to provide decision-makers of information from an integrative, holistic view, with ideally all stakeholders involved, taking cultural services into account is crucial for developing sustainable policy: management strategies that, as Eliff and Kikuchi (2015) state, value the natural capital and respect the carrying capacity of an area, while 'reaching long-term and fair benefits to all involved'. According to Tengberg et al. (2012) this is often not recognized.

Human cultures have always been dependent upon their natural environment: *“if there is no natural capital there is no human well-being”* (Elliff & Kikuchi, 2015). The concept of cultural services makes this very explicit and can be seen as some sort of interface between culture and nature: the natural environment - resources, landscape etc. - give shape to human cultures, while at the same time those cultures affect their surroundings, in positive and (often) negative ways. Cultural services by the MA are divided into six categories (Tengberg et al., 2012):

- a) heritage values
- b) cultural identity
- c) spiritual services
- d) inspiration
- e) aesthetic appreciation of natural and cultivated landscapes
- f) recreation and tourism

To investigate these services for the Hațeg Country and how its Geopark and local communities can benefit from them by geotourism in a sustainable way, our research is focused on the following objectives (figure 2): historical, cultural, recreational, geographical, ecological and spiritual objectives and health and geotourism. These are of course inextricably connected.

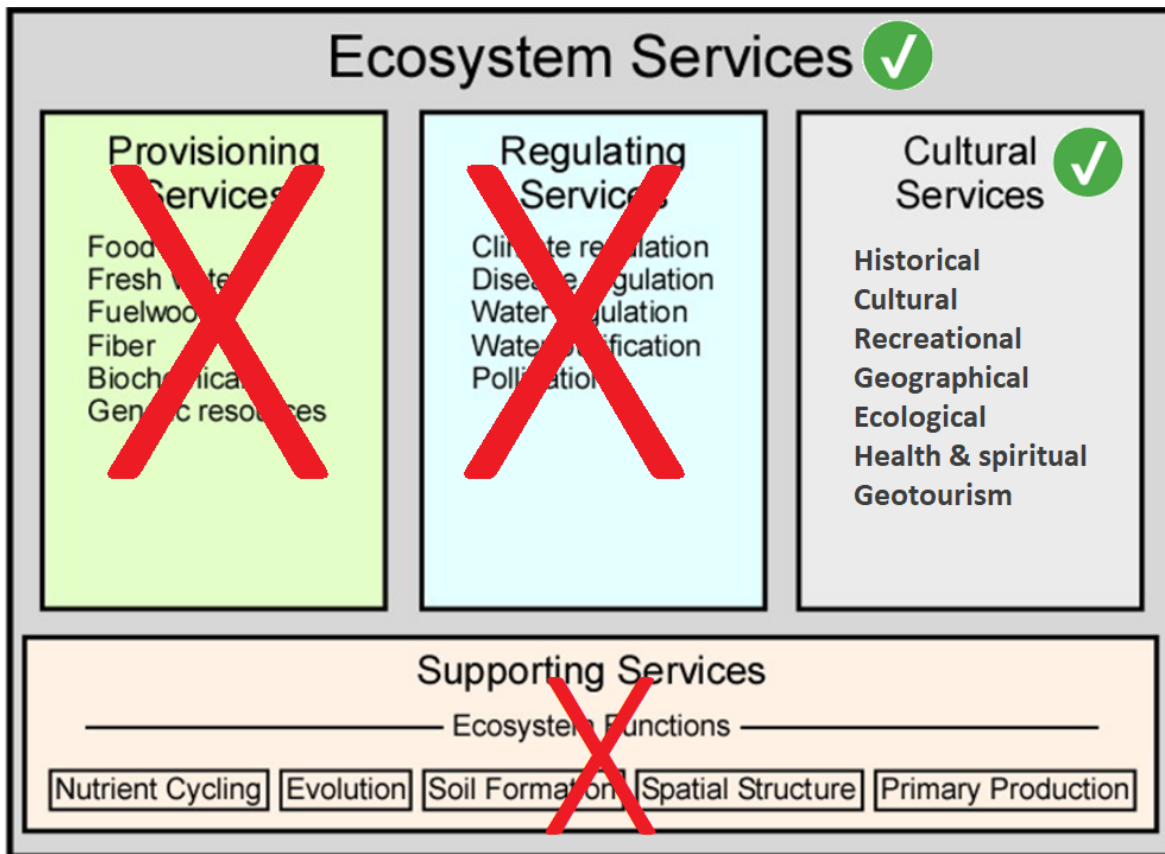


Figure 2. Types of ecosystem services (Millennium Ecosystem Assessment, 2005, p.10).

Concerning the cultural and historical objectives we will look at the cultural-historical heritage of the area of the Geopark to find out which aspects could be suitable for attracting and entertaining visitors, enabling them to experience other cultural identities and learn from them. We also want to find out current and future possibilities for recreation and how tourism may support geographical and ecological conservation of the area. How to allow tourists to enjoy the environment while at the same time contributing to its preservation and development? Health and spirituality are other objectives in our research. Sporting facilities and provision of relaxation and inspiration for example may contribute to a visitor's health. Learning more about the spiritual tradition of the area – religion, relationship with nature, inspiring myths and legends - and what can be learned from this is an example of a spiritual objective that can be studied when researching cultural services. However, in all these objectives possible sustainable management-strategies for geotourism – preserving and developing the natural and cultural heritage, with high involvement of local communities – will be our ultimate goal.

Problem Definition

In our research we would like to focus on innovative activities for sustainable development of the Hațeg Country Dinosaurs Geopark. We want to raise awareness for geoconservation by making it more interesting to students, tourists and local people on a cultural, ecological and economical level. Thus, we will focus on sustainable tourism in this paper and come up with innovative suggestions for sustainable development in the Hațeg Country Dinosaurs Geopark in order to help improve the management activities.

Research Questions

Based on the introduction we have defined a main research question:

“Which sustainable cultural services are interesting for development in the Hațeg Country Dinosaur Geopark in the next five years?”

From this main research question we have derived the following sub-questions:

- What types of cultural services do already exist in the Hațeg Country Dinosaur Geopark?
- What types of cultural services are innovative for the Hațeg Country Dinosaur Geopark, and meet our definition of sustainability?
- What are the best cultural services to propose, based on our definition of sustainability?

We have summarized our research in a flow chart (figure 3):

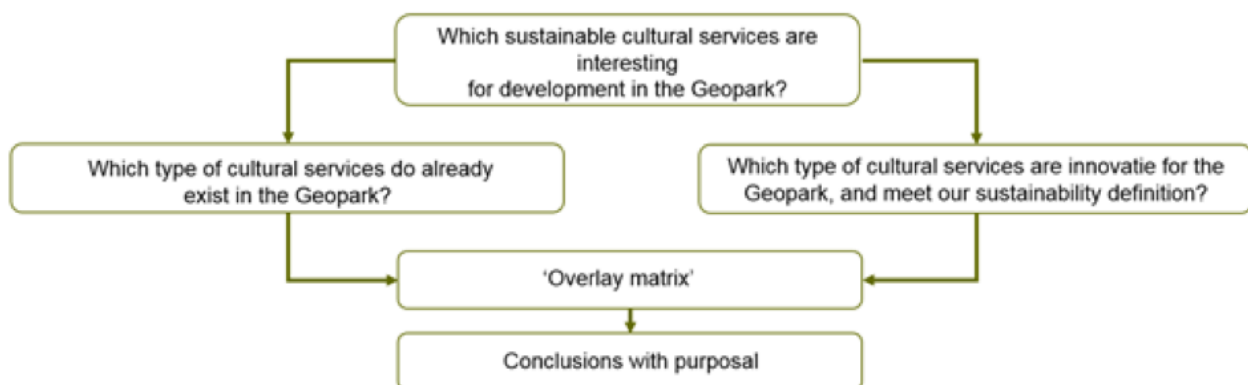


Figure 3. Flow chart (source: authors).

Research Goal

The goal of this case study is to look at the present state of geoconservation and come up with innovative proposals for the sustainable development of the Hațeg Country Dinosaurs Geopark, for example based on a comparison with other Geoparks or regional development projects. Which cultural services could contribute to sustainable development in the Hațeg Country Dinosaur Geopark in the next five years? To answer this question we will first establish what types of cultural services the Hațeg Country Dinosaur Geopark at present benefits from and in what way, after which we will try to find cultural services and ways to benefit from them that are innovative for the Hațeg Country Dinosaur Geopark and meet our definition of sustainability for Geoparks: creating a social, economic and environmental network, aiming at conservation of geo- and biodiversity, sustainable use of resources, profitable activities for the community like geotourism, and also at preservation and development of the cultural and historical heritage of the geopark, for current and future generations of inhabitants and visitors. In our discussion and conclusion section we will then establish which of these innovative cultural services could be proposed as most suitable for sustainable development in the Hațeg Country Dinosaur Geopark.

After a description of the Hațeg Geopark we will present our research method and the results from our research. We will then present and discuss our conclusions and give some recommendations which are suitable cultural services for the management of the Geopark to exploit as innovative strategies for sustainable geotourism.

Our research contributes to current ongoing research on how sustainable tourism can contribute to preservation of geological and cultural heritage and sustainable development. Hațeg country is a relatively young Geopark; possibly our findings will lead to the development of new initiatives or confirm or help improve existing management-strategies, thereby being of relevance for the Geopark-management as well as the local communities. Because of its focus on sustainability this research also fits very well into the discourse and paradigm of contemporary science and help identify needs for further research.

2. Hațeg Geopark

Location

Hațeg Geopark is located in the western part of Romania within Hațeg Basin, surrounded by mountain chains: Șureanu Mountains (eastern side), Retezat Mountains (southern side), Poiana Ruscă Mountains (northern and western side), Țarcu Mountains (south-western side). (Andrășanu, Palcu & Oelere, 2008)

Landscape

The Hațeg Country is a depression between two main branches of Carpathian Mountains- the South Carpathians (Retezat Mountains, Șureanu Mountains, Țarcu Mountains) and the West Carpathians (Poiana Ruscă Mountains). The basin is dominated by the South mountains that go up to 2500 m, carved by the glacial activity and with deeply cut valleys. The West Carpathians are low (altitudes lower than 900 m), and with a hill aspect- good for human settlements and agriculture. The lowest altitude in Hațeg Country is 300 m, in the northern part. (Andrășanu et al., 2008)

Climate

The region has a temperate-continental climate, with influences (western and mountain influence). The annual average temperature is +6..+8°C (January -6-4°C, June +12+19°C).

The average annual precipitation level is 700-800 mm.

The eolian regime is irregular. In the cold season, because of the relief type- intramontane depression, temperature inversions are frequent (Andrășanu et al., 2008).

Hydrology

The Hațeg Basin has significant river-network that allows hydroelectric power output.

All the rivers are collected by Strei: Breazova, Râul Mare, Sibișelul, Sălașul, Râu Alb, Râu Bărbat (from south to north), Răchitova, Densuș (from west to east).

Due to the geology of the area, in the lower regions, there are surfaces covered by marshes and wetlands, from which two are floristic protected areas (The Marsh of Peșteana and the Nucșoara Grasslands) (Andrășanu et al., 2008).

Vegetation

There is a variety of vegetation districts, because of the relief (Andrășanu et al., 2008):

- alpine shrubs and grasslands (above 1800 m- *Festuca supina*, *Vaccinium myrtillus*, etc)
- spruce fir forests (1300-1800 m, mixed with *Sorbus aucuparia*, *Fagus silvatica*, *Abies alba*)
- beech forests (mixed with *Tilia cordata*, *Ulmus montana*, *Fraxinus excelsior*)
- sessile oak forests, with grasslands and fields
- turkey oak and hungarian oak forests (altitudes lower than 500 m).

Fauna

The Hațeg Geopark has a diverse fauna, as listed below (Andrășanu et al., 2008):

- mammals: *Myotis nattereri*, *Rupicapra rupicapra*, *Cervus elaphus*, *Capreolus capreolus*, *Ursus arctos*, *Canis lupus*, *Lynx lynx*, *Rhinolophus ferrum-equinum*
- birds: *Glaucidium passinton*, *Ficedula parva*, *Lanius collurio*, *Lanius minor*, *Ciconia ciconia*
- reptiles and amphibians: *Triturus cristatus*, *Rana arvalis*, *Vipera berus*, *Lacerta agilis*
- butterflies (they are on the red list and need special protection): *Maculinea telejus*, *Parnasius memosyne*, *Euphydryas aurinia*, *Maculinea arion*, *Heteropterus morpheus*, *Lycaena dispar*, *Lycaena thersamom*, *Hespreia comma*.

The land

The Hațeg Country has on its territory the Town of Hațeg and 78 villages, grouped in ten-village municipalities (Andrășanu et al., 2008): Baru, Densuș, General Berthelot, Pui, Răchitova, Râu de Mori, Sarmizegetusa, Sălașu de Sus, Sântămărie, Orlea and Totești.

The population is more than 38,000, two thirds living in the villages and the other third in the town of Hațeg.

The geopark covers an area of 102,392 ha and the 11 mayoralities signed an official agreement with Hațeg Dinosaurs Association. Population has an increasingly growth of number in people over 60 and there is a movement of people towards urban centers in the region and out of the region, because of the collapse in the regional industry (Andrășanu et al., 2008).

The story of Earth

The geopark area has a long geologic history, more than 500 million years- igneous rocks (Retezat type granite) and metamorphic rocks (Sebeș-Lotru Metamorphic Complex).

There are marine deposits: Permian deposits (conglomerates, sandstones, siltstone red beds type with plant remains), Lower Jurassic deposits (conglomerates, sandstones, clays containing

thin beds of coal with fossils of plants and invertebrates), Middle and Upper Jurassic (sandstone, siltstone, limestone), Paleontological remains (Belemnites, crinoids, gastropods, bivalves, ammonites- marine tropical climate), Lower Cretaceous limestone.

In the Late Cretaceous, marine sedimentation was replaced by the accumulation of sediments in continental conditions. The volcanic activity left some deposits in Densuș-Ciula Formation (combined with fluvio-lacustrine deposits) and Sânpetru Formation. Continental deposits formed in Late Pliocene, Paleogene until Middle Miocene and are: siliciclastic (conglomerates, sandstones, marls) with fresh water fauna (gastropods). One important discovery was the fossil remains of a terrestrial mammal (Crivadiatherium), found close to Crivadia Village, in the eastern part of the basin (Andrășanu et al., 2008).

The Dwarf Dinosaurs

The fossil remains are internationally unique and commonly known as "dwarf dinosaurs of Transylvania": *Magyarosaurus dacus* (a titanosaurid sauropod), *Rhabdonon priscus* (iguanodontid), *Telmatosaurus transylvanicus* (a "duck-billed" dinosaur), *Strathiosaurus transylvanicus* (ankylosaur). These were herbivorous, but there were also some carnivorous dinosaurs- theropods: *dromaeosaurids* and *troodontids*.

Other reptile fossils are: turtles *Kallokibotion bajadzi*, crocodilians *Allodaposuchus precedens*, and remains of the largest pterosaurs or "flying-reptiles" in the world *Hatęopterix tambema* with a wing span of 14 m.

This is the only place in Europe where mammals were found together with dinosaur remains (in Upper Cretaceous deposits).

The most spectacular discovery of the last years is represented by the clutches of dinosaur eggs found near the village of Tuștea, in the middle of the Densuș-Ciula Formation. Near the egg-clutches few bones of babies, belonging to the "duck-billed" dinosaur *Telmatosaurus transylvanicus* were identified (Andrășanu et al., 2008).

The story of man

Prehistory and Dacian history

The good climatic conditions, variety of landscapes, natural resources and geographical position, allowed throughout the history the human life and that is why there are a lot of archaeological finds in the region including one of the earliest traces of human life (Neanderthal specimens from the Ohaba Ponor and Cioclovina caves - 29 millions years ago). In the same region, *Homo sapiens* fossils were found and also a set of jewelry, dated at the end of the

bronze age beginning of the iron age. The most important artifact belonging to the bronze age found in the Hațeg Country is a celtic helmet (now it is in Austria, Vienna). Important settlements from the Iron Age were found in the hills (like the one from Subcetate Hill) (Andrășanu et al., 2008).

The Roman History

Two important cultures have influenced the region: the Dacians and the Romans. The core of the Dacian state was situated just some tenths of kilometres away from the region, and the area has significant traces of the presence of this civilization.

The Romans built Ulpia Traiana Sarmizegetusa, in order to avoid conflicts, which will become the capital for the province of Dacia. The entire region has traces of the rich Roman life especially rural roman retreat farms known as Villa Rustica. (Andrășanu et al., 2008)

Middle Ages- military buildings

Hațeg was the nucleus of the Dacian state and of the Roman Dacia. It was first documented in documents in 1247, it is considered a distinct subprovince, since it has developed as a complex territory. In the 15th century, "the Hațeg Country" or district consolidated its entity and historical individuality, becoming Transylvania`s main fortress of defense against the Ottoman incursions. There was a time of ascendance under loan of Hunedoara, when the territory has preserved its political-administrative individuality (Andrășanu et al., 2008).

Middle Ages- religious buildings

Coltului Monastery- raised between the late 14th century and the early 15th century, it is located very close to the river and the highway. Two main elements which are particular at this monastery are: there is a tower over the altar and the presence of some inside frescoes.

In the Ostrov village, there is one of the newly restored churches of Hațeg. It was built in the 15th century, and it contains the most remarkable testimony of frescoes. The fence of the cemetery is also spectacular, originally made up of nearly 300 Roman stones of all types, arranged in a genuine unique proto exhibit.

Two kilometres away, we find Densus (its name is still a myth) (Andrășanu et al., 2008).

3. Definition of sustainable development

It is mentioned in our introduction, but given the importance of our definition of sustainability for our conclusions, it is useful to repeat here. In order to guide this research, the case study group has come up with following definition for sustainable development:

“Sustainable development in a geopark is focused on creating a social, economic and environmental network, aiming at conservation of geo- and biodiversity, sustainable use of resources, profitable activities for the community like geotourism, and also at preservation and development of the cultural and historical heritage of the geopark, for current and future generations of inhabitants and visitors.”

For the Hațeg Country Dinosaur Park this means that they have to create a sustainable management plan in order to ensure the above mentioned aspects such as preserving the cultural and historical as well as geographics of the geopark for future generations to enjoy. The goal is to find a balance between economic growth of the agriculture and tourism without disturbing the natural environment and resources and keeping the traditions alive.

4. Methodology and Research Approach

This chapter deals with the approach and the methodology that was used for this case study. As this case study consists of six group members, each member individually gathered the information necessary to answer the research questions they worked on. Thus, the methodology we used to approach our research questions involved different perspectives which also gives a more varied picture of Hațeg Country Dinosaur Geopark.

Type of research + research design

Concerning our objectives literature research was done, from a broad spectrum of disciplines: ecology, cultural and historical sciences, social and economical studies and tourism studies and so on. Also some information was drawn from other media, like promotional movie clips from different geoparks.

In our literature research we studied and where relevant operationalized concepts in geotourism that are relevant for the geological, ecological, socio-cultural, economical and historical aspects and how others have used them to analyse geoparks. Special attention was given to the relationship between geotourism and sustainable development, in which our definition (see §4) served as a guide. Besides that we did literature research concerning the cultural and historical background of the Land of Hațeg and studied reviews on how different geoparks have come up with all kinds of innovations.

Operationalization

We operationalized 'sustainability' by using our own definition, looking at the three dimensions of sustainability while analyzing our sources: social, economical and environmental. In our definition of sustainability networking is emphasized, since this is absolutely crucial for Geoparks.

'Cultural services', being related to tangible and intangible aspects of local heritage as it has developed in the Geopark, are quite abstract and can hardly or not be quantified. We operationalized this concept then by searching in literature for aspects (present and innovative) belonging to the different objectives, as in the illustration (figure 3). We tried to establish what exactly they contribute to human well-being - socio-economically and in a sense of belonging - and how visitors and local communities could benefit from that. Benefits for local communities

would be the strengthening of local identity, through locals rediscovering their roots and their children learning about their history. For tourists discovering this culture would be very interesting. 'Cultural services' however is not a very strict category, there will be quite some overlap, which could also be reflected in the results-section as done by our different members. For example: sports, as facilitated by the Geopark's specific natural and geological environment, is recreational but also contributes to health. For our Recommendations-section we therefore bundle our results from different objectives under different headings like development, marketing, recreation, education and so on.

Research methods

For the gathering of data we relied on many different (types of) sources. The most important of which proved to be the interview and the analysis of scientific literature and policy documents. Other sources were educational and marketing tools from Geoparks for the public, such as leaflets, websites and videos. Because of these varied sources, it wasn't possible to use one kind of method of analysis, however, it did allow for a broader scope on the research unit.

Justification

"Why did we choose these research methods or methods of analysis?" Literature research turned out to be very important, since Geoparks and geotourism are a relatively young and very active area of research: a lot of research has been done and much more is needed. For our research of course we had to build on recent articles and books done by others. Combining literature research in the way mentioned before with our research of Hațeg Country Geopark (including an interview concerning its current state and developments) should make it possible to reach our goal: to come up with some possible innovations and recommendations for the management of the Geopark within the next five years, concerning the benefits that could be drawn from cultural services that haven't been (fully) exploited yet.

Geoparks and geotourism touch on many different areas of research, so 'multidisciplinary' is a keyword and definitely the way to go. The range of literature we needed to study as well as the composition of our team, of which the members all have a very different background, demonstrates this need for a multidisciplinary approach.

5. Results

Current objectives Hațeg Geopark

The current ecosystem services by the Hațeg Geopark project is based on activities able to create incomes and to revive local traditions and events. These activities are (Andrășanu, Palcu & Oelerer, 2008):

- Stimulate small local businesses;
- Development of cultural tourism and geo-tourism;
- Development of a possible label for local Hațeg Country products;
- Association (guild) of local craftsmen;
- Cultural activities (modern);
- Calendar of traditional events, festivals (Nedeile).

General objectives Geoparks

“The synergy between geodiversity, biodiversity and culture, in addition to both tangible and non-tangible heritage are such that non-geological themes must be highlighted as an integral part of each Geopark” (UNESCO, 2014). At present, UNESCO's declaration on geoparks as a model of sustainable development and protection of nature has strongly emphasized the strategy of local communities' participation in natural areas. It is stated that the local communities of geoparks should not be removed from the lands where they live, since the locals' knowledge, traditional arts and traditional lifestyle play a vital role in geopark management (Farsani, Coelho & Costa, 2009). A geopark is, in fact, about people and about how human communities have built their identity by continuously using the natural resources resulting from the evolution of billions of years of the Earth (Andrășanu & Grigorescu, 2012).

Based on the results of an descriptive analysis, it is analysed that the majority (80%) of geoparks believe in involving local businessmen in tourism marketing is the best way to promote geoparks and the local economy (Farsani, Coelho & Costa, 2011). Figure 4 shows that 68% of geoparks try to link their activities with other local tourism activities such as boating, bird watching and cultural activities. Irrespective of tourism marketing, geoparks with a view to local economic development strive to support local products and services through a label (36%) or direct marketing of regional products (36%) as shown in figure 4 (Farsani et al, 2011).

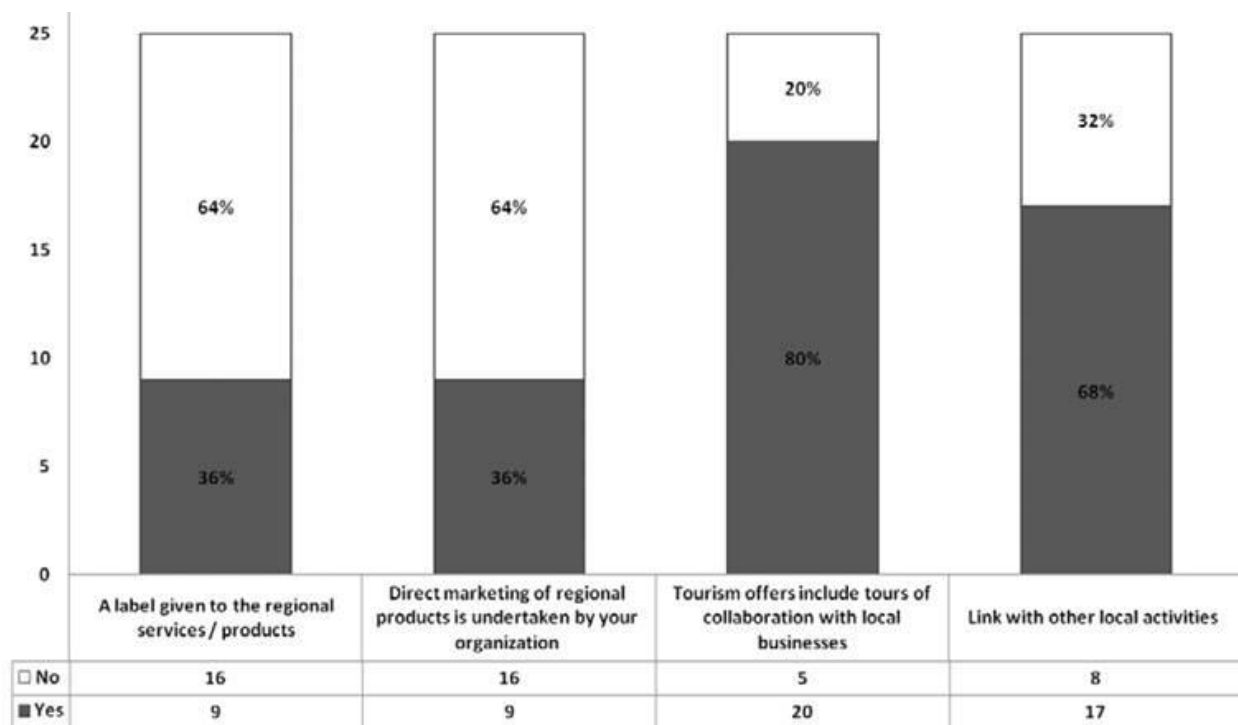


Figure 4. Different economic strategies from geoparks in order to promote links between geoparks and the local economy (Farsani et al, 2011).

Innovative objectives Hațeg Geopark

Historical objectives

Geological heritage sites can generate employment and new economic activities, especially in rural regions in need of new or additional sources of income (El Wartiti, Malaki, Zahraoui, Di Gregorio & De Waele, 2009). In this regard, geological landscapes that draw visitors to Ireland and Britain support a thriving tourist industry. For instance, the dinosaur coast project has marketed geology directly to the tourists (Mc Keever, Larwood & McKirdy, 2006).

In the Hațeg Country Dinosaurs Geopark the historical landmarks are represented by Paleolithic and Neolithic settlements, then Dacian and Roman, by the existence of fortresses and the caves or defense castles, such as those from Mălăiești, Suseni, Colț, Răchitova, Nălăț, Sănămaria Orlea and the presence of the famous stone churches: Densuș, Sînpetru, Ostrov, Sănămaria Orlea, and Colț (UNESCO, 2014). The special value around which the geopark was built and which is a powerful vector of image and marketing, is the famous "dwarf dinosaurs of Transylvania". Paleontological researches have revealed testimonies of a prehistoric world from

a tropical island with lush forests populated by dinosaurs, flying reptiles, snakes, lizards, crocodiles, mammals and numerous aquatic creatures that lived in the rivers and lakes of Hațeg, now better of 70 million years (Grigorescu, 2005).

There are also several innovative geopark policies for involving locals in geopark heritage conservation activities. Sustainable development in recycling the Hawksbill turtle hatchery with the help of indigenous people was a strategy in the Qeshm Geopark (Iran), which not only preserved marine turtles but also provided seasonal job opportunities for locals (UNDP, 2003).

In addition, aquaculture of pearls by the local communities, especially the women of Berkeh Khalaf village, was another strategy for the preservation of natural resources and historical entrepreneurship for local women in the Qeshm Geopark (UNDP, 2003).

Which historical aspects could be suitable, as cultural ecosystem services, to promote and develop sustainable geotourism for Hațeg Country, beside the aforementioned aspects? As said before, there are many landmarks in this part of Transylvania, belonging to a long and rich history of human presence, as shown in figure 5. It is impossible within the scope of our research to analyze all the different periods, so we will choose one that seems very useful for further elaboration: the second stage in figure 5, comprising the Geto-Dacian state and Roman occupation. The reason to pick this specific era is threefold: it is the most important period of ethnogenesis of the Romanian people so very relevant for local identity, antiquity is of great importance in this area as a field of academic research and Roman antiquity often turned out to have great potential for tourism and give local economy a great boost (Hognogi & Pop, 2016; Martini & Chesworth, 2010). Of course it would also be possible to make a case for medieval history of Hațeg Country; though it is not possible to fully explore this period here, some of the medieval landmarks will be referred to in the following paragraph on spiritual objectives. The following analysis from our literature refers to Antiquity, taken broadly - as in figure 5 - from the fifth century BCE to the ninth century CE, so including the early medieval period.

Pre-history (1,500,000 BC – fifth Century BC)

- Stone Age (1,500,000–3000 BC):
 - *Paleolithic* (1,500,000–12/10,000 BC)
 - *Mesolithic* (12,000–6000 BC)
 - *Neolithic* (6000–3000 BC)
- Bronze Age (approx. 3000–1150 BC):
 - *Early Bronze Age* (3000–2300/2200 BC)
 - *Middle Bronze Age* (2300/2200–1500 BC)
 - *Late Bronze Age* (1500–1150 BC),
- Iron Age (1150 BC–100 AD):
 - *Hallstat* (1150–450 BC)

Antiquity (fifth century BC)

- *La Tène* (450 BC–100 AD)
- *Roman occupation* (second to third centuries AD)
- *Post Roman/migrating peoples period* (third to fourth centuries AD): Sarmatians, Goths, Huns, Gepids, Avars, Slavic)
- *Middle Ages* (fifth to ninth centuries AD)
- End of Romanian people ethno genesis. The first political entities led by Gelu, Glad and Menumorut.

Medieval Ages

- Ninth to thirteenth centuries. Small principalities in the area lived by the Romanians.
- The fourteenth to sixteenth centuries. The constitution of the medieval independent Romanian states: Wallachia, Moldavia and the Autonomous Principality of Transylvania.

Modern Age (Romanian subdivision)

- The sixteenth to eighteenth centuries. The Ottoman domination over the Romanian principalities. The first Union accomplished by Michael the Brave (1600). The establishing of the Austrian domination over Transylvania and Banat.
- The eighteenth to nineteenth centuries. The transition from medieval to modern history. The beginning of the movement for national emancipation: Școala ardeleană (Transylvanian School).

Figure 5. Periods of the Romanian history (1,500,000 BC – nineteenth Century) (source: (Martini & Chesworth, 2010))

The interbreeding of Romans colonizers and army veterans with local indigenous tribes in effect resulted in ‘the ethnogenesis that defined the Romanian people’ (Martini & Chesworth, 2010). Vulgar Latin became the language, from which the current Romanian language developed. Learning more about this history brings with it a sense of belonging, an awareness of historical roots. As Roman history is very much alive today, for example as represented in popular media (movies, TV-shows) and literature, this part of the heritage of Hațeg Country has great potential for local pride and tourism. According to Botici et al. (2012) ‘few zones in Romania can be compared to Tara Hategului’ with respect to the amount of ancient remnants and monuments, as well as ethnography, folklore and architecture. As the writers point out, when compared to elsewhere in the EU, tourism has much to gain here and in Hațeg is ‘rather a potentiality than a reality’.

The relationship of the specific local landscape and its inhabitants through the ages has defined local cultural identity, as this identity is rooted in the historical past, as well as imagined in local myths and legends or passed in traditions. Learning and understanding more about this will be very attractive for tourists. Since many of the tourists that would want to come to the Geopark are well-educated, there will be great interest among them in the way the geographical

surroundings through different historical periods have defined local societies and their customs. This process also highlights man's relationship with the natural environment and so interpretation provided by the Geopark as well as educational activities have great relevance for sustainability. While local people learn more about their history and how the current landscape they live in and their present culture both are the result of the historical interaction of human populations and their environment, tourists are made aware of the same process. Humans have modified the mountain slopes to make them suitable for agriculture, but themselves have also always been influenced in their behavior by their surroundings. For example: in the past approximately 70% of the area must have been covered by forests. This has led to a real 'wood culture' – which can be demonstrated to tourists in traditional crafts – as well as to deforestation. The complexity of man's relationship with the environment and sustainability becomes clear, as deforestation led to more land for cultivation and grazing but also to erosion (Farsani, Mortazavi, Bahrami, Kalantary, & Bizhaem, 2017; Martini & Chesworth, 2010).

Fig.16.6 Hațeg Depression:
1 mountains; 2 piedmonts;
3 limit of the Hațeg Depression;
4 Geto-Dacian vestiges;
5 Roman vestiges;
6 early medieval orthodox churches;
7 early medieval fortifications

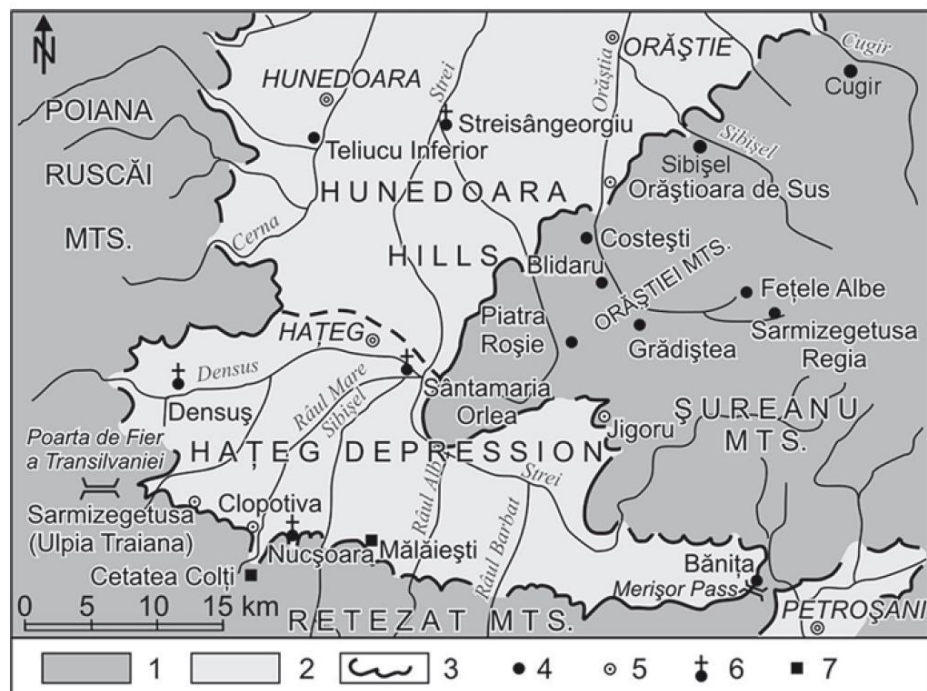


Figure 6. Land of Hațeg: some historically important places (source: (Martini & Chesworth, 2010)

Education, also historical education as this example has shown, is an important approach to sustainability. Tourists can learn from the way local people relate to their environment and local communities learn about their history and traditions, also becoming aware of issues of sustainability (Pásková, 2015). Beside being of great relevance for tourists, local communities and schools the exceptionally high density of historical remains from the Geto-Dacian and Roman period makes Hațeg Country a very inviting area for academic research (Botici et al., 2012). Yet, academic research until now leaves much to be desired, hampered by lack of funding, lack of specialists and equipment and - until recently - a lack of modern methods. Also, current interpretations of Roman history in the Land of Hațeg probably fall short, because of the focus on urban and military sites and a lack of information on social or economic life in antiquity (Oltean, 2007). However, the richness of the historical heritage of Hațeg Country (see figure 6) could for example be a goldmine for academic research on romanization and so brings great opportunity to collaborate with universities and faculties of Studies in (Late) Antiquity worldwide; this networking with faculties in Europe or all over the world could be an important innovation for the Hațeg Geopark, especially since it is run by a management-team from University of Bucharest. It would be an innovation to involve as much academic disciplines and network extensively in this regard. Also, maybe conferences and retreats could be organized for the scientific community, with a focus on local ancient and medieval (including ecclesiastical) history.

Cultural objectives

Living in the Hațeg Country-environment has led to specific cultural customs and traditions in the local communities. Which aspects of this cultural heritage could be suitable for attracting and entertaining visitors, enabling them to experience local culture and learn about other cultural identities?

If a culture is defined as the whole of a certain group of people's attitudes, mentalities and values and their expression or embodiment in social practices, cultural heritage is the collective memory thereof (Burke, 2005; Tengberg et al., 2012). This memory is connected to people's natural and cultural environment, now and in the past, and is not static but dynamic. When we say we want to preserve cultural heritage, we will identify and select certain elements based on our perception of that heritage in the present: cultural heritage is an interpreting *frame* that changes through time (Halbertsma & Kuipers, 2014). When considering the cultural heritage of the people of the Land of Hațeg it is therefore important to realize that they themselves should guide us in our perceptions, valuation and ideas about that heritage. Too often in tourism in

general a caricatured representation occurs, in which local traditions are – as Ciobanu (2016) states – are condemned to freeze in time and local people only play a decorative role. Representing the local communities inaccurately, for example, in media and marketing strategies, is one of the factors that may lead to a negative attitude towards tourism. The Hațeg-Geopark's management-style is very much 'bottom-up', researching the local heritage and involving locals in how to represent elements thereof.

Cultural heritage has a material and non-material dimension: the landscape with its geological features and historical landmarks, buildings, infrastructure and remains etc. with which the intangible cultural heritage is connected. Ciobanu (2016) mentions five frequently acknowledged domains of cultural heritage and adds two more: oral traditions and expressions (language for example), performing arts, social practices like rituals or festivals, knowledge and practices concerning nature and universe, traditional craftsmanship plus living human treasures and religious or sacred sites. What has been researched and undertaken by the Hațeg-Geopark so far?

Instead of establishing one central visitor center for the Geopark the management has created small centers in several villages along a Geopark thematic route, all with their own theme, like House of Volcanoes or House of Dwarf dinosaurs. With this project obsolete buildings are given a new function and are renovated so it places the Geopark within the local communities. Other initiatives concerning cultural heritage of the Hațeg-Geopark have been for example all kinds of educational activities with local schools, the production of a local geoproduct (dino-bread) and a book about local cuisine, meetings of the Geopark-officials with local producers and the establishment of a small center with souvenirs and local handicraft products (Farsani et al., 2012). Since it has become a national ecotourism destination with Retezat, the Hațeg Geopark has established a cultural calendar, with annual events.

A very interesting initiative in this regard at first glance seemed to be the 'LegendaRoom-pilot' from 2014 to 2016, where local myth and legend were to be researched within local communities and then were to be explored in all kinds of activities, with high local involvement, putting into practice the current insight that stories play a key role in human learning and development (Farsani, Mortazavi, Bahrami, Kalantary, & Bizhaem, 2017). Providing visitors with stories, information and interpretation, combined with scientific research to save part of the oral tradition from oblivion could have made this a very special project. However, it was made clear to us by the Geopark-management that, though the pilot is presented by Muntean (2017) as an astonishing success, in fact it was a complete failure, with incorrect reinterpretation of local

legends misrepresenting local cultural identity. It was a private undertaking, creating tensions with local authorities, without respectful and fruitful cooperation with Geopark-management or local people. It is mentioned here both as an example of the importance of cultural sensibility and good cooperation, as well as the potential of local myth for Geopark-strategy, provided that projects are well organized and executed.

What would be innovative for the Hațeg-Geopark with respect to the cultural heritage of the area, apart from improving and expanding the aforementioned initiatives? Farsani et al. (2012) have researched several Geoparks and from their research many ideas for innovation can be drawn. Given that all these should be realized from within the local communities themselves, to mention the most relevant innovations for the Land of Hațeg concerning cultural heritage:

- a restaurant with local traditional cuisine and specialties or food inspired by cultural history ('Dacian-Roman food' for example)
- technological tools, for example apps or the use of GPS or augmented reality; see also Cayla (2014)
- establishing lodging facilities or guest houses where visitors can to a certain extent, participate in the local life
- trekking programmes, for example to experience part of a prehistoric way of life
- facilities for disabled people

Some of these activities have already been undertaken by the management; in that case they could probably be expanded. According to Hognogi & Pop (2016), apart from the former Dacian-Roman capital Sarmizegetusa, local cultural history is not used to its maximum capacity.

Other possibilities that could be suggested are: establishing a conference centre, where retreats and lectures about local culture and cultural history (antiquity, medieval studies) – but also geology, biology etc. of course – or management or spiritual retreats can be organized; creating new tours that touch on other cultural or historical topics or build on the current tours (Dacian-Roman, medieval etc.). Retreats or conference centers could give obsolete buildings, like some monasteries, castles or fortresses that need renovation, a new function and help funding preservation or restoration of some monuments. This kind of commercial activity could help fund preserving the various material remains that are in a poor state of conservation and/or poorly accessible. More academic research is needed, since part of the material cultural heritage has not been inventoried yet (Hognogi & Pop. 2016).

According to Farsani et al. (2012) all experts believe that for Geopark-management strategies networking is crucial, collaborating not only with local communities, but also with universities

and schools, businesses and many others – on a regional, national and international level. Expanding their network would be an innovative strategy for the Geopark-management (Neda T. Farsani, Coelho, & Costa, 2014; see table 1). In order to improve on the relationship with national authorities and for their support in achieving sustainable development of cultural heritage as well as other services, it is very important to be able to demonstrate how the local economy benefits from Geopark-activities. Geotourism has the potential to ‘generate the political pressure required for the protection of the geoheritage’ (Farsani et al., 2012; Dowling & Newsome, 2006).

Table 1
Collaboration links of Geoparks

6 N. T. Farsani, C. O. A. Coelho and C. M. M. Costa

Table 3. Numbers of links in each field of collaboration for the geoparks which replied to the questionnaire

Geoparks	Field of collaboration									
	□	◦	∇	•	◆	*	⊗	⊕	×	Δ
Réserve Géologique de Haute-Provence	3	5	—	1	2	3	3	—	—	6
Naturtejo Geopark	6	3	—	7	2	2	4	—	—	1
Arouca Geopark	—	3	—	—	4	4	5	—	—	1
Vulkaneifel Geopark	39	—	—	4	2	1	36	—	—	3
Swabian Alb Geopark	—	—	—	—	2	29	29	—	—	9
Psiloritis Natural Park	—	3	—	2	4	5	5	—	—	3
Sobrarbe Geopark	—	—	—	—	1	4	6	—	—	—
Magma Geopark	—	2	—	—	6	7	3	—	—	3
Gea Norvegica Geopark	—	—	—	—	4	2	3	—	—	2
Marble Arch Caves Global Geopark	7	9	6	7	31	12	18	—	—	13
Geopark Shetland	5	2	—	—	4	4	6	6	6	3
Hateg Country Dinosaurs Geopark	1	1	—	—	1	—	—	—	—	2
Papuk Geopark	1	9	3	—	9	—	7	—	—	3
Kanawinka Geopark	1	1	1	—	5	2	4	—	—	—
Qeshm Geopark	—	1	1	—	1	—	—	—	—	3
Langkawi Geopark	—	—	—	—	—	2	—	—	—	3
Itoigawa Geopark	—	1	—	—	1	1	1	—	—	—
Yandangshan Geopark	1	1	1	—	1	1	1	—	—	—
Leiqiong Geopark	1	1	1	1	—	1	1	—	—	—
Total number of links	65	42	13	22	80	80	132	6	6	55

Key for table

□tourism marketing

◦educational activities

∇conservation programs

•production of new products

◆exchange of knowledge

*conferences

⊗meetings

⊕volcanic thematic network

×coastal thematic network

Δothers

Remark: Farsani, N. T., Coelho, C. O. A., & Costa, C. M. M. (2014). Analysis of Network Activities in Geoparks as Geotourism Destinations. International Journal of Tourism Research.

Recreational objectives

According to the European Geoparks Network (EGN) charter and Global Geopark Network regulations, all geoparks have to be established in rural areas (Zouros & Martini, 2003). Therefore geoparks and geotourism are opportunities for rural development, and they reduce the rate of unemployment and migration in rural areas (Farsani et al, 2011). Geoparks, by increasing the number of tourists, play an important role in local economic development. When geotourists move to geoparks, the money moves in the same direction, as if geoparks were in fact exporting something such as agricultural and local products to other places (Frey, Schaefer, Büchel & Patzak, 2006). Geoparks have to support the establishment of local crafts and local products as well as support local replicas. Thus, visitors to geoparks can actually take manufactured goods with them, together with emotions and knowledge (Frey et al, 2006).

An innovative strategy of geoparks is to develop recreational activities and sports, which are related to topography and geology in some way, such as geokayaking, geohiking, georrafting, climbing, skiing and geocycling, which bring about an increase in tourists, and it will increase especially the amount of adventure tourists (Farsani et al, 2011).

This recreation strategy can create new products and services on several levels, like (Farsani et al, 2011):

- New products: geoproducts and geomenus in restaurants;
- New jobs: geotours, georestaurants, geobakeries and rural hotels;
- New recreational activities: geosports, geomonuments and geopark museums

The availability (supply) of recreational activities to which tourists are attracted, creates a demand for accommodation. In fact, these recreational activities that are focused on tourists, and the hospitality industry are two sides of the same coin. As towns and villages in the Geopark can function as 'hubs' from which the recreational activities can be reached or performed, the hospitality industry (hotels, bed and breakfasts, hostels, etc.) can facilitate the use of these 'hubs'. Evidently, this provides a source of income for the owners of the accommodation and its employees, while at the same time allowing for more complementary facilities (such as restaurants, souvenir shops, etc.).

It is clear that the hospitality industry and the recreational activities surrounding them will have a lot of difficulty to survive without each other. This is why there is a need for some kind of

platform for cooperation and the sharing of information between and among these two industries. Here there is a role to play for local governments/municipalities or the management of the Geopark, to facilitate this platform. Such a platform can help identify where there is a (potential) mismatch between the supplies and demands of recreational activities and accomodation and vice versa. More will be said about this in the Recommendations chapter.

Geographical objectives

The main focus of a geopark lies with its geological value and features. However, a *“Geopark should take into account the whole geographical setting of the region, and shall not solely include sites of geological significance”* (UNESCO, 2014). In the Hațeg Country Geopark there are many options for leisure and education that don't entail sites of geological value. They are, for example, historical sites or areas and features with particular flora and fauna, especially in relation to the Natura 2000, which is a network that aims to protect certain species and habitats to maintain the biodiversity in Europe. These special features are, however, mostly discussed under the other objectives.

The main geological features, then, are the Upper Cretaceous dinosaur fossils. It was determined that several areas are of main importance for this geological feature, two of which gained a protected status (Sânpetru and Tuștea; Andrașanu *et al.*, 2004). Other geosites, along with those mentioned before, can be seen in figure 5. Other geological features include the numerous volcanic rocks that document the volcanic eruptions that occurred during the lifetime of the documented dinosaur species. Among the volcanic rocks that are found are volcanic igneous rocks, such as tufa, cooled lava rock, and so-called "volcanic bombs," fist-sized pyroclasts disgorged from the volcano during a volcanic eruption (http://www.europeangeoparks.org/?page_id=474). The Geopark and the sites of geological importance within it are protected because of the national park status of the Geopark. Therefore, it is not allowed to enable or perform any activity that can damage the park or its geosites (Andrașanu *et al.*, 2004). As the local communities and tourists benefit from this protection, it is in their interest to keep the environment intact. This helps to enforce and maintain the protective status and the environment.

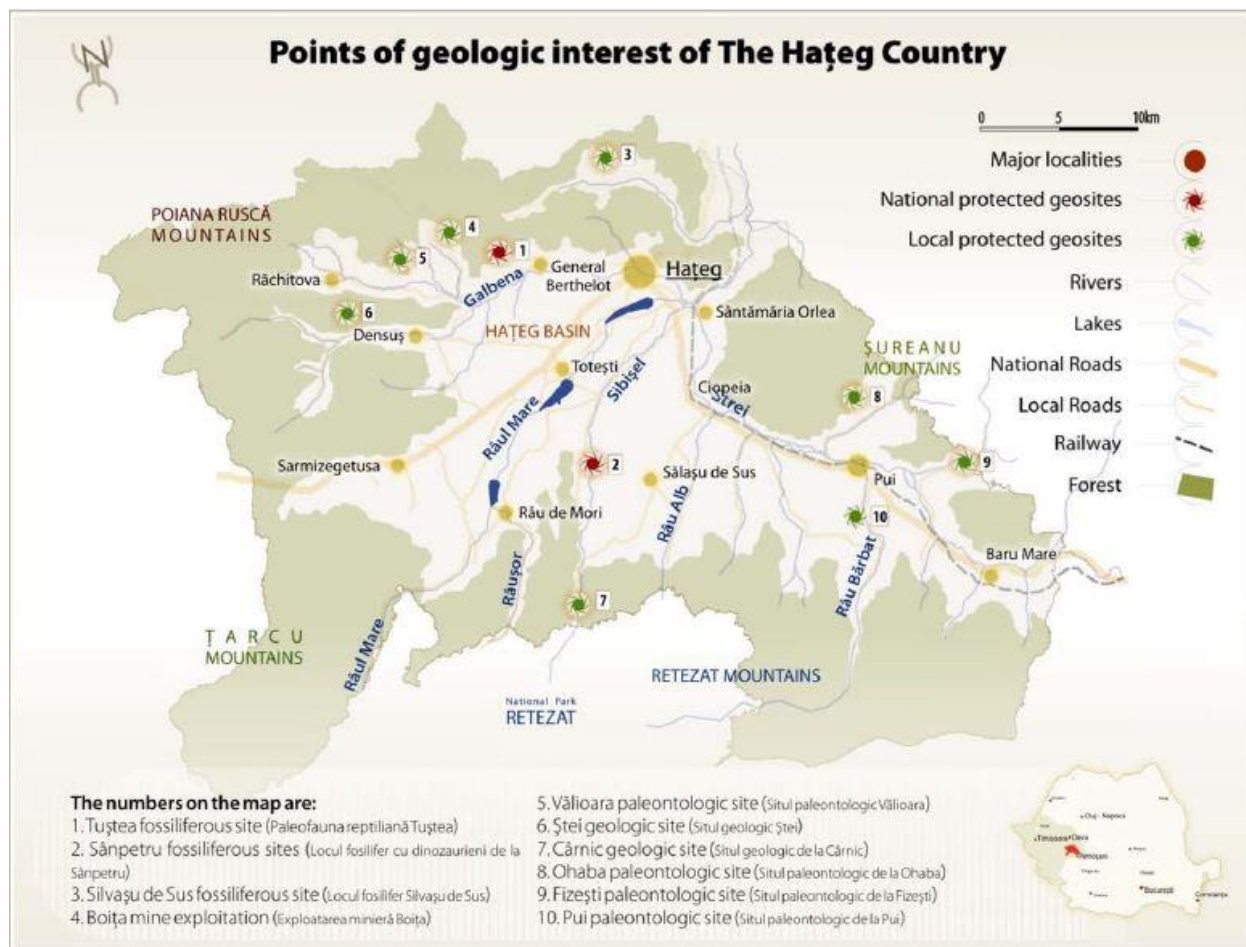


Figure 7. Points of geologic interest of the Hațeg Country (Andrășanu et al., 2004).

Aside from sites that are geologically important, there are also sites of mostly aesthetical importance (i.e. visually attractive landscapes and sites). These sites and geosites are, of course, not necessarily mutually exclusive, but overlap will be avoided in this paragraph. In the Geopark there is a lot of variation in terms of landscape (forests, rural landscapes, small rivers and caves, see also figure 7). The area is mostly rural, but there are many villages and a few small towns spread out across the area (see figure 8). These places can function as starting points for excursions and hikes through the surrounding rural landscapes, while at the same time fulfilling a role as hospitable environments where visitors can have something to eat and drink and get a taste of the local life. This can contribute to the social sustainability of the developments. There are already several hiking trails in the district (see <http://en.hateg-tourism.ro/hiking-trails/>).

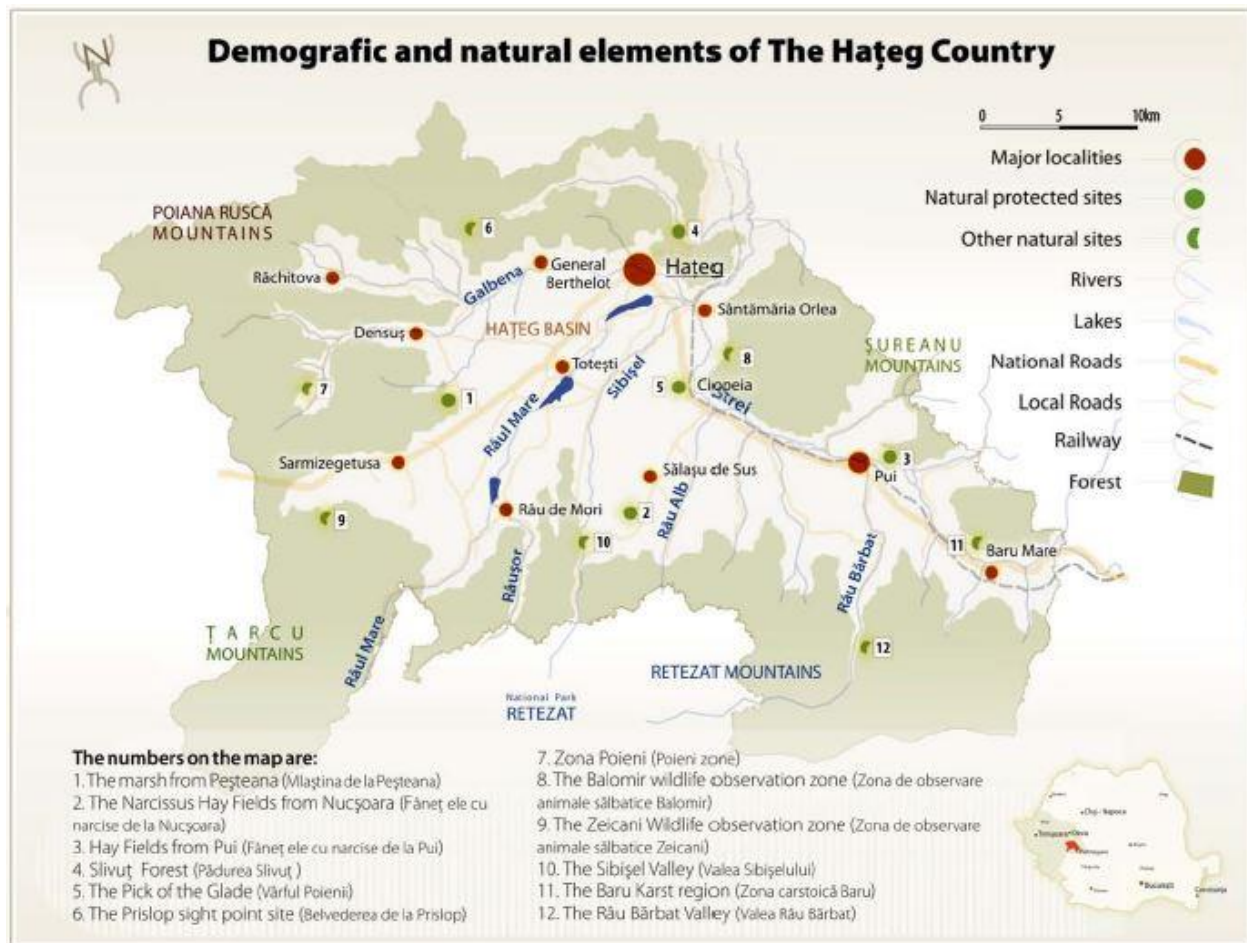


Figure 8. Demographic and natural elements in Hațeg Country (Andrășanu et al., 2004).

Currently, most of the craft businesses that are located in geopark territories are linked to the geoparks and produce products based on the geological elements such as Geococktail (Vulkaneifel Mineral Water Cocktails) in the Vulkaneifel Geopark of Germany and dinosaur bread in the Hațeg Country Dinosaurs Geopark of Romania (Farsani, Coelho & Costa, 2010).

To protect and conserve the geographical features of the Geopark geoconservation is necessary. Nature conservation is mostly based on biodiversity while geoconservation deals with preserving of the non-living parts in the natural environment such as geological features, landforms and soils. This parts of the natural environment are just as sensitive to disturbance as biodiversity.

It is based on the recognition of scientific and research values of certain bedrock features. It is first and foremost used for information about the past development of the earth and is important for the creation of an inventory of some significant landform features and bedrock sites.

Geoconservation thus serves to preserve the diversity of geological, geomorphological soil features and related systems and processes. It is more than protecting and preserving the values, it aims to ensure a comprehensive approach to nature conservation, offering new tools for sustainable use of natural resources that affect social and economic development. Geodiversity contains the variety of rocks, minerals, landforms and soils, as well as the tectonic and hydrological features that occur on Earth, as well as the natural processes that shape the landscape. These values are intended to be fundamental goals of geoconservation. The geological heritage is called the geotope or geological monument. This is a unique opportunity to observe and study the geological and morphological features that are unobservable under ordinary circumstances. Therefore, the protection of geographical monuments includes all types of conservation activity and land use planning (Andrășanu, 2006).

Ecological objectives

In order to preserve and protect the geographical characteristics of the Hațeg Geopark, it is necessary to provide environmental education to the general public, through geotouristic offerings, such as guided hikes or support and promotion of scientific research within the park, and on the other, through UNESCO recognition, to increase public awareness of the geological heritage and to achieve international recognition and effective political influence (<http://www.umweltbundesamt.at/umweltsituation/naturschutz/sq/geoparke/>).

The geopark organises already a lot of activities concerning environmental education (Explorer's Club - kids from schools in the area), volunteering programs (Geopark's Ambassadors - usually teenagers from villages all around geopark; during the summer, they take part in all the events).

Health and spiritual objectives

Which aspects of the spiritual and religious tradition of Hațeg Country can contribute to innovative management strategies for sustainable development of the Geopark?

Apart from the obvious contribution to health that is the result of all kinds of sports and physical activities that are possible in Hațeg Geopark, as well as of the beautiful landscape and clean air of its non-industrial rural environment, it is important to note how the Geopark might contribute to mental and spiritual health. Many people in fully modernized and/or urban societies are under stress and it is commonly acknowledged that stress is an important threat to people's health.

One of the attractive characteristics of geotourism is that it provides very special opportunities to visitors to have all sorts of stress-reducing experiences, for example feeling more connected

with or in harmony with nature or with their or other people's cultural-historical roots. Being in a completely different cultural environment with a totally different tempo or way of doing things is also something that could lead to stress-reduction and improve health. Though more abstract than other cultural services, this is certainly an important service of the Geopark that could be more fully put to use, for example by establishing facilities where visitors can relax, learn about the way local culture deals with the environment, how people relate to one another, about local religion or spirituality and how locals give meaning to life - the specific answers they have come up with when dealing with life's difficulties or what they are traditionally celebrating. This learning could be combined with all kinds of physical activities, like special walking tours. Also, bath houses could be established, maybe renovating obsolete buildings in an inspiring environment (Hognogi & Pop, 2016).

It may be important to note here that there is a strong connection between earth sciences, religion and tourism, as pointed out by Sigali et al. (2016): development of local religion and spirituality are influenced by the geographical environment (for example: locations where churches have been built) and social factors. As was seen before, societies or cultures also evolve from interaction with their natural surroundings. Because of this influence local characteristics of various religions have emerged, like special festivals, which are of great interest for tourists, also non-religious visitors. Myths and legends are often connected to specific places and make the landscape spiritually interesting or meaningful for geotourists (Sigala et al., 2016).

Spirituality can be defined in many ways, but in most definitions it has to do with experiencing God or some other non-material reality and/or with the way people make sense of their life or give meaning to life in general. This includes their specific worldview and all rituals and other practices that are a result of that worldview (McGrath & Ferguson, 2002). Since a vast majority of people in Romania adhere to the Orthodox christian confession, the expressions of spirituality that go with this specific branch of christianity might be what visitors want to learn more about. Interpretation of this religious heritage could, for example, be combined with tours, visiting the many special church buildings in Hațeg country, like the extremely remarkable 13th century church of Densus, in which building material from ancient Roman sanctuaries was used (Martini & Chesworth, 2010; <http://www.romania-travel-guide.com/en/attractions/spiritual/hateg-stone-churches.html>; <http://www.uncover-romania.com/attractions/culture/churches/densus-church.html>).

Local christians and churches, as well as national and international departments or organizations, might be interested in funding Geopark-activities that give people the opportunity

to learn more about local faith and religious history. Networking for this purpose on a national and international level could possibly contribute to funding the restoration or renovation of historical church buildings.

Transylvania, including the Land of Hațeg, has historically been relatively multicultural; in the national context the region stands out, in the sense that other confessions like protestantism and catholicism have a relatively strong presence in the region (Stan & Turcescu, 2007). This could also be something to explore in exhibitions or lectures along a church-walking tour.

Special attention could further be given to regional inspirational historical figures. Places could be pointed out where people might retreat or reflect, individually or in groups. Romania, including Hațeg, has a very strong monastic tradition; since the revolution of 1989 - when the persecutions of the communist age ended - many monasteries have been re-established, with financial support from the government (Calin, 1999). Perhaps some monasteries are interested, like elsewhere in Europe, to extend their activities to a certain amount, lodging visitors. This could even help them to generate income (see for example <https://www.kloosterhuis.nl>). In this way the Geopark could be part of an international circuit of inspirational travel destinations and market itself like that. Worldwide, management-teams of churches, schools, universities and other (also commercial) organizations, organize retreats for their staff or other members. It could be very interesting, also financially, for the Hațeg Geopark to facilitate retreats, conferences or other meetings, be it to a scale that wouldn't spoil the attractiveness of the place or disturb local life.

Stories are very important for people for their sense of place and time; it is often in stories that people reflect on the meaning to life and through stories that they feel they have found some answers. Local myths and legends can be such a source of inspiration, to visitors seeking to learn about Hațeg's non-material, spiritual or religious heritage. Though the LegendaRoom pilot, which was not a project of the Geopark-management, turned out to be a failure (see cultural section above), new activities - if executed in a right manner, in close and respectful cooperation with local communities - could potentially be very fruitful. Since for many in the local communities their beliefs, convictions and lifestyle are important, tourism that focuses on the spiritual services valorizes their traditions or culture in the wider sense and might strengthen or revive their identity in this respect. Since much of the knowledge of local history, myth and legend is rapidly diminishing, this tourism might also inspire local people to revive and maintain their non-material heritage.

Geotourism objectives

In order to properly answer the research questions, a definition for geotourism must be provided. According to Andrășanu, geotourism is “an economical approach in geoconservation developed during the last decades due to the lack of other financial resources in the effort of protection and promotion of the geological heritage.” It “is both a geoconservation and sustainable exploitation strategy” (Andrășanu, 2006). National Geographic has defined it as following: “Geotourism is defined as tourism that sustains or enhances the distinctive geographical character of a place—its environment, heritage, aesthetics, culture, and the well-being of its residents” (Nationalgeographic.com, 2018).

To summarize, both definitions make aware of the beneficial side of tourism in terms of providing financial help to make geoconservation possible and to provide resources to ensure the protection and promotion of those geological heritage sites. At the same time, it benefits residents economically, supports the integrity of place, and informs both visitors and hosts about the heritage, geology and many other things. Of course, it also provides a very interesting experience for the visitors.

You can see geotourism as a form of natural area tourism that specifically focuses on geology and landscape. It promotes tourism to geo-sites and the conservation of geo-diversity and an understanding of earth sciences through appreciation and learning. This is achieved through independent visits to geological features, use of geo-trails and view points, guided tours, geo-activities and patronage of geo-site visitor centres (Newsome and Dowling, 2010).

Nowadays, due to fast-developing technologies and new possibilities, tourists are, compared to the past, better informed, more selective and environmentally conscious and search for personalized, meaningful and authentic tourist experiences. These trends have supported the growing demand for the aforementioned ecotourism, such as geotourism. This comes in very handy for many geoparks such as the Hațeg Country Dinosaur Park and with the right strategies, they can promote it efficiently.

The Hațeg Country Dinosaurs Geopark already promotes tourism in many different ways and offers the visitors a wide array of natural and cultural experiences that they can enjoy. Obviously, even though the trend points towards a positive trend for geotourism, the Hațeg Country Dinosaurs Geopark still needs to develop tourism activities in order to have more people come visit the park. They need to keep on developing distinct management plans to keep up with current times and demands. They need to keep on developing distinct

management plans to keep up with current times and demands. According to the Romanian Tourism Masterplan 2007-2026, the geotourist experiences must emphasize the geographical characters of a place, based on the capitalization of complex natural and cultural resources, which are vegetation and fauna, heritage, views, traditional architecture, crafts, arts, dancing and gastronomy (MDRT, 2007). This explains the overall aims that Hațeg Country Dinosaurs Geopark (HCDG) has set for the park, such as heritage conservation, sustaining local identity and sustainable development. In order to achieve these goals, HCDG has received 2.083.337 euros from an international funding for a project for sustainable development, bio and geodiversity conservation which has been implemented since 2009. The University of Bucharest plays a major part in implementing effective plans through local projects, aiming to achieve the geopark role in sustainable heritage conservation through tourism and ecological education. According to Stoleriu (2014), “more than 40 small projects, most of them focused on infrastructure improvement and only four on tourist promotion and traditions conservation, have been implemented in partnership with local stakeholders. Given the higher national popularity of ecotourism, HCDG has applied in 2013 for the national certification as ecotourism destination.” Another management plan was put through by a Local Action Group and underlined the “authenticity of the anthropic heritage and the well preserved traditional lifestyle, crafts and agriculture as major local strengths. Thereby, the vision proposed for the future development is centered on tourism, with an emphasis on natural heritage (ecotourism, scientific tourism or hiking) and traditions” (Stoleriu, 2014).



Figure 9. A dinosaurs statue in Hațeg GEOpark. Taken from:

<https://turismretezat.ro/en/nature/hateg-country-dinosaurs-geopark/>

As the geopark covers around 102.392 hectares and located in central Romania, it offers a lot of possibilities to offer tourists an unforgettable travel experience. It is, as already mentioned, surrounded by the Carpathian Mountains and including the town of Hațeg with around 10.500 inhabitants and 11 rural communes as well as 78 villages. The tourists can go and explore, for example, the famous Cretaceous fossils of “dwarf dinosaurs”, a pterosaur and other non-dinosaur fossil, as one can see in the picture below. The park tries to bring their rich history to the people and try to visualize it to them. Thus, they creatively put up a statue of a dwarf dinosaur (figure 9) to demonstrate its unique heritage. It moreover provides the visitors with the chance to see cretaceous volcanic rocks-tuffs, lavas and bombs, as well as visit several protected areas. The major cultural heritage sites in the geopark are also concentrated within its limits: the ruins of Sarmizegetusa Ulpia Traiana, the ancient capital of Dacia province; several medieval churches such as Densus and Strei, Sângeorgiu or castles and tower ruins such as Colț, Mălăiești, Răchitova and Crivadia, and the princely courts of Sălașu de Sus.

Ecology and Environmental Protection ethnographic museums include:

- the headquarters in the town of Hațeg and the exhibition „Balauri, Dragons and Dinosaurs” and the reconstruction of the Dwarf dinosaur;
- the Science and Art Centre in General Berthelot commune, with two dinosaur reproductions
- the House of Dwarf Dinosaurs in Sânpetru village
- The House of Volcanoes in Densus commune: people can see what a volcano looks like. They can watch a simulated eruption as well as discover fossils (they receive an explorer kit);
- The House of Traditions in Sânpetru village;
- The House of Miniatures in Totești commune.
- The Hațeg Village Museum: tourists can see how peasants lived in the past and what tools they used in order to survive. A guide shows them how to make a traditional hive using only creepers and clay;
- The flavored garden of time: this is a place where tourists receive a kit with 3 types of plant seeds- for garden, for orchard and for the field culture, and 3 types of rocks- metamorphic, sedimentary and magmatic, as well as tools for observations and drawing. Also, kids can learn how to make salads, and participate in workshops for creating clay pots. (Ciobanu, interview, 2018).

Some other interesting activities, projects and events that visitors can take part in are (Ciobanu, interview, 2018):

- education through outdoor classes for schools (Explorer's Clubs), educational trails (dedicated to people of each age)
- volunteering (Geopark Volunteers, Geopark Ambassadors)
- events: The European Geoparks Week, The Geopark Days, The Volcanoes` Day, Music of the Mountains Festival (piano concerts), The Dinosaurs` Festival

Also, not to forget the traditional villages that HCDG can offer. Furthermore, other national tourist destinations which are very close to HCDG and increase its tourist significance are the national park in Retezat, a natural park called Gradistea Muncelului and several other UNESCO heritage sites (Stoleriu, 2004).

Several hiking or cycling trails also add value to the geotouristic aspect of the HCDG and emphasize once again the geopark's natural and cultural heritage. Some of those tourist trails are the "Dinosaurs Valley", the "Volcanos Route"; "Sălașu de Sus – nature and medieval history"; "Fortresses and stone churches"; and some more. The tourists can look up information that is offered in the form of boards along the main trails (figure 10).



Figure 10. An introduction board in Hațeg Geopark. Taken from: <https://turismretezat.ro/en/nature/hateg-country-dinosaurs-geopark/>

The promotion of tourism in the HCDG is endorsed by local annual events, specialized websites (of geoparks networks or academic), media releases and a book on local gastronomy (2006). According to the annual progress report from 2017, HCDG has publishing 20 news on the media (TV, radio, press), off and on line and has an active presence in social networks such as Facebook. It published several scientific articles (dinosaurs and interpretation), as well as an InfoGeopark newsletter (500 units with the most important news to raise the awareness of the citizen about the Geopark). It also offered a training course for volunteers and guides. A group of 26 young students joined the courses on personal development, natural heritage interpretation, and tourism. Additionally, a partnership for a new visiting center: Transylvanian Dinosaurs Museum was established (European Geoparks, 2017). Even though it seems that the geopark is represented and promoted in many ways, there still is a lot of room for a proper representation of the geopark on social platforms as Facebook, Tripadvisor or LonelyPlanet. It is hard to find the information one needs on those websites. There are some forums and pictures on Twitter that can be found on HCDG geopark, however, there are not a lot of them. For the future, this could be one point to promote geotourism at Hațeg Country Dinosaur Geopark.

Another weak point is that there are only a few hotels, mostly smaller ones. The tourist capacity in 2014 was about 800 tourist places concentrated in 2 and 3 stars/flowers guest houses (57 %), lodges (29 %), one motel and one hotel (Local Action Group, 2014). According to the heritage administrator of the geopark, Cristian Ciobanu (interview, 2018), there is a big number of hotels and guest houses in the geopark area. In the Ecotourism destination of Retezat are 14 partners housing units. 8 out of those 14 are EcoRomania certified, which is regarded as the most important certification for housing units in ecological destinations. The total capacity of these units is 200 tourists. Also, there are other housing options, such as rooms for rent, which are declared monthly at the National Agency of Fiscal Administration (ANAF). However, there is no clear statistic of their number and capacity.

All those touristic facilities have been created with the idea of providing the tourists with an authentic experience which were designed by local managers and public bodies. Hațeg Country Dinosaur Geopark has been planned to be as authentic as possible. It exhibits original artefacts from the past and are a counterpart to modern times. The villages add to this feeling of authenticity by introducing the visitors to the traditional local lifestyle, crafts and customs.

The last aspect we want to deal in this chapter is Hațeg's tourism is the infrastructure as well as the quality of historic monuments. Those points are by far one of the weaknesses of this territory. Visitors come by car, bus, or by train. The closest train station is in Hunedoara, which is located near HCDG. There is no airport in close distance to the geopark. As Ciobanu pointed

out, the quality of historic monuments also poses a weakness of the geopark. They are in need of a restauration in order to be presentable to the visitors.

To come to a conclusion, in 2017 Hațeg County Dinosaur Geopark had 23841 visitors. According to Ciobanu's (interview, 2018) observation, a growing tendency can be observed. To promote the growing number of tourists, the geopark has a partnership with Retezat Ecotouristic Destination and together they will work on projects for a sustainable tourism in the future. The housing units are certified and local communities are encouraged to develop new projects, like vegetables farms, traditional handcrafted products, guest houses.

6. Discussion and conclusions

Through our analysis of our sources from several academic disciplines we have found the following results concerning the different objectives that are considered part of cultural services (see our introduction).

6.1. What types of cultural services do already exist in the Hațeg Country Dinosaur Geopark?

Hațeg Geopark stimulates local businesses and local crafts, by developing cultural tourism and geotourism. For the tourism-activities it has designed a logo and published a cultural calendar, that also contains cultural events that tourists can participate in. Hațeg Geopark has a website and has been promoting it's activities. Tours have been laid out, visiting different geological and historical sites, with interpretation panels and small interpretation centers (Houses). There has been an attempt within the area to preserve myths and other local stories linked with the landscape. Unfortunately, this project was not set up in cooperation with the Geopark and has created a lot of tension between local people and authorities.

6.2. What types of cultural services are innovative for the Hațeg Country Dinosaur Geopark, and meet our definition of sustainability?

We have defined sustainability as creating a social, economic and environmental network, aiming at conservation of geo- and biodiversity, sustainable use of resources, profitable activities for the community like geotourism, and also at preservation and development of the cultural and historical heritage of the geopark, for current and future generations of inhabitants and visitors.

It would be innovative to expand on involving local businesses, as this believed to be of great value for the local economy. This implies for example the development and marketing of new geoproducts or new services. Like the dwarf dinosaurs, also other facets of Hațeg's rich history and its many historical landmarks, could be exploited and marketed for geotourism. It would be innovative and useful to expand on the tours, in collaboration with new research of universities. Also it would be innovative to enhance collaboration with all relevant faculties of universities, internationally, for example concerning the Dacian-Roman and medieval heritage. There is a strong popular and academic interest for example in Antiquity and Hațeg's high density of

important historical monuments and landmarks has not been sufficiently researched yet. The Geopark has great potential to enrich academic knowledge on Antiquity - like on romanization - and other periods. Popular interest might lead to more tourism and help preserving this heritage; Roman remnants have boosted local economies before. Apart from visitors paying for services like workshops, lectures and conferences, which contributes to sustainable development, emphasizing sustainability and the history of sustainability (or the opposite) also raises awareness and may serve the goal of sustainable development. More information concerning monuments leads to higher valorization and probably more funds for maintenance and restoration.

Spiritual services are very innovative for Hațeg Geopark. Religion is a very important factor for the Romanian people and their history and cultural identity, with a very low percentage of people professing no religion at all. The strong christian Eastern-orthodox and monastic tradition as well as the specific local characteristics, together with local stories linked to the landscape, can be of great value for tourists. Retreat- or teaching facilities could be developed and in combination with the beautiful environment could attract people seeking inspiration or tranquility. Emphasizing spiritual services would also strengthen or revive local religious identity and traditions. With these two aspects our definition of sustainability is met concerning Hațeg's cultural and historical heritage. Preservation of very exceptional monuments like Densus church or monasteries may be served in the long run by visitors on a national and international inspirational tour, of which tours in Hațeg may participate.

Most of our sources emphasize the extreme importance of a bottom-up approach, as an innovative strategy for Geopark-management: not only should local communities be involved and employed in all activities and plans, including the use of local knowledge, crafts and arts, they also should be the decision-makers in the development of the Geopark. This already is the approach that the Hațeg Geopark-management has been taking and it is important to build on that. As at the moment hardly any locals are being employed the Geopark has great potential to provide jobs, reducing unemployment and slowing down the rate of migration. All this helps preserving the cultural heritage. It has been pointed out that tourism also affects local culture in a way that threatens local lifestyle instead of preserving it (Pásková, 2015); tourism may have negative effects, sometimes leading to negative attitudes of local people. It should be noted that preservation of local culture as in our definition of sustainability, doesn't mean freezing a certain interpretation of local culture in time: culture, with the people who adhere to it, is changing all the time and local people must decide who they are and what is worth preserving. Different

activities that were undertaken by other geoparks concerning cultural heritage also would be innovative for Hațeg Geopark; these innovations have been described above (see Results). Those that seem to be most suitable we will mention in our paragraph with recommendations (see Recommendations).

The way people are travelling to Hațeg also determines the net sustainability of the geotourism to the Geopark. Developing a sustainable and effective infrastructure is an important innovation for Hațeg Geopark.

Networking turned out to be a crucial innovation for a Geopark like Hațeg. In literature (Farsani et al., 2014) we found that this is a very important strategy for the management of Hațeg Geopark and it came up while looking at different objectives.

6.3. What does Hațeg Country Dinosaur Geopark offer its visitors in terms of geotourism?

The Hațeg Country Dinosaur Geopark offers its visitors many, versatile activities that they can participate in. First of all, they offer outdoor classes for schools. An example of that is the Explorer's Club. It is a club for children who attend primary to secondary schools. It teaches them about biodiversity, geodiversity and local culture through their own experience. The children will discover the wonders of Hațeg Country Dinosaur geopark with all their senses. To give a further example of what programs are offered to children, see figure 11.

Dinosaurs, Volcanos and The Lost Sea (One day program)

The curious ones are invited into prehistoric times all the way back to Cretaceous to follow the Hateg Country dwarf dinosaurs' footprints and to discover two lost worlds – The Volcanoes and The Thetys Sea.

The expedition starts at the House of Dwarf Dinosaurs in Sanpetru village and continues to the fossil sites on Sibişel Valley, where the visitors will find out how fossils are excavated, how dinosaur models are made and how to make their own discoveries (fossils, treasure hunts).

Then, the explorers will go onto The Volcano Road in Densuş village to look for the traces left by the eruptions and by the Thetys Sea, two elements of the tropical island that Hateg Country was once. To do that, the participants will become geologists for a few hours. They will discover the difference between volcanic and sedimentary rocks, they'll find out about eruptions, they'll be able to see lava, volcanic bombs, zeolites, traces of plants and prehistoric worms that dwelled on the bottom of this sea 65 million years ago.

Figure 11 One day program in the Hațeg GEOpark. Taken from:
<https://dragdehateg.org/educational-programs/>

More than 300 pupils and 25 teachers are involved in those children clubs and more than 150 volunteers are enlisted in the volunteer program that will be mentioned below.

Also available to people of all ages are educational trails, and of course the several historic monument that the geopark has to offer and the different exhibitions, such as the headquarters in the town of Hațeg and the exhibition „Balauri, Dragons and Dinosaurs” and the reconstruction of the Dwarf dinosaurs, the Science and Art Centre in General Berthelot commune, the House of Dwarf Dinosaurs in Sânpetru village, The House of Volcanoes, The House of Traditions, The House of Miniatures and the Hațeg Village Museum.

The visitors also have the possibility to attend events while they are there, such as the European Geoparks Week, The Geopark Days, The Volcanoes` Day, Music of the Mountains Festival (piano concerts) and The festival of dinosaurs. The festival of dinosaur in particular is one of the most important cultural events of the summer organised by the Geopark and its volunteers. It takes place in the middle of July over three days and offers activities that promote education, and the culture and values of the area. These various activities are aimed at all age groups, facilitating connections between local communities and tourists. Those events are

mostly created and managed by the volunteers who are trained as part of the Geopark's Volunteers or Geopark Ambassadors program to be guides, etc. .

The Hațeg Country Dinosaur offers its visitors a variety of activities ranging from museums to archeology to history to culture and nature and various events and programs they can be a part of. On top of this, it preserves its nature and uniqueness as well as the culture of the people living in this area by promoting their lifestyle and offering the tourists a chance to gain insight into the locals' lifestyle.

- 6.4. How does tourism support geographical and ecological conservation of the area? How to allow tourists to enjoy the environment while at the same time contributing to its preservation and development? Does it meet our definition of sustainability?

As mentioned earlier, tourism allows a geopark like Hațeg Country Dinosaur Geopark to continue preserving its nature and culture and to make it available to the broad public. How do they do this? For example, eight out of thirteen housing units are certified with EcoRomania. EcoRomania (AER) helps locals to better identify those products that can offer awesome nature and rural culture experiences, raises the level of trust in the Romanian ecotourism product on the international tourist market, become a marketing tool for tour-operators and guesthouse owners, enhances the quality of the ecotourism services, contributes actively to nature conservation and leads to sustainable local development, supports local administrations of protected areas for development of low impact tourism, and offers a platform for common activities between the business sector and nature conservation entities (EcoRomania, online). Another important aspect in all this are the locals and their culture and heritage. Though the many projects that have already been elaborated on in other chapters, they share their stories with visitors and thus make aware of their way of life and traditions. The local communities moreover take an active part in all the activities, including projects involving crafts and arts and many more, and plans that are proposed to advance the geopark's development. They are basically an essential part in the decision-making process. As mentioned in chapter 7.2., the geopark has also great potential in providing jobs for the locals. Of course, the question that has to be asked here is if tourism has negative effects on local culture and heritage instead of actually preserving their way of life. Pointing out to our definition of sustainability, the preservation of local culture does not mean that it needs to stay unchanged over time, but that it

is changing all the time and that the people themselves are the ones deciding what is worth preserving.

By allowing geotourism and other kinds of tourism that make use of nature to expand and develop, nature and geological features (such as the fossils) will no longer be seen as economic costs (upkeep and maintenance of trails, water quality, forests, etc.), but as an advantage. If the touristic activities themselves are sustainable and make use of nature, nature will function and keep functioning as an asset for tourism. Local entrepreneurs will benefit from these sustainable touristic activities directly (e.g., geokayaking, bicycle hire, etc.) and indirectly (e.g., hotel stays, customers for restaurants and supermarkets, etc.). This increase in tourism will also raise tax-income for the local governments, which also benefits the local community, for example through tax-reliefs or infrastructure or housing projects. As it becomes clearer for the local residents that nature is a resource, they may treat their environment with more care.

7. Recommendations

What are the best cultural services to propose to the management of Hațeg Geopark for the next five years, based on our definition of sustainability?

In order to create better circumstances and more opportunities for innovative and sustainable initiatives and development, some things have to be done or done different in the Hațeg Country Geopark. Therefore we have formulated several recommendations, ranging from PR-related measures on social media to education. With this holistic approach we hope to provide a good basis for development of the Geopark for the coming 5 years.

Concerning the historical, cultural and spiritual objectives these innovations are realistic and suitable for Hațeg Geopark; they can be aimed for in the next five years, given that there are enough people available to work on it, with local communities wanting to develop those activities.

Marketing

Social media presence

Currently, the Hațeg Country Dinosaur Geopark has a weak presence on the internet. Even though they own a facebook site as well as show up on certain hashtags on instagram, their internet activities show room for improvement. The internet is in today's time a very important tool for communication and information gathering, thus it is essential for the geopark to work on its internet presence and to inform the World Wide Web about their current activities and projects. Instagram, for example, could be a great platform to share those. YouTube could be used as well to give an insight into what their projects were like and can give potential visitors a short overview of what the park is like. In general, the park needs to be more international in terms of its presence and representation on the internet.

Website improvement

Another point that could be improved is the website. It is very hard to find certain things and the projects, activities and events need to be highlighted more as well as some promotional video clips could be added as well in English or at least with English subtitles.

Development

Information sharing-platform

Within the borders of the Geopark there need to be recreational activities for tourists that supplement the existing natural and geological features (such as nice landscapes and the fossils). These are already there in small numbers, but there is a lot of opportunity for members of the local communities to exploit the current conditions in the park to create more of these activities (such as kayaking and hiking; see also '*Recreational objectives*'). However, for a more sustainable income for the community, the tourists must be able to stay there for a prolonged period of time. This means that there is a need for accommodation, which can provide as a "base" for the visitors from where they can visit and participate in different activities in the area. But for this synergy to take place, there needs to be a match between the "supply" of tourists that are attracted to the activities in the area on the one hand, and the demand for accommodation (hotels, hostels, etc.) on the other hand. This is, of course, a bit a chicken-and-the-egg case. To solve this problem there needs to be information available for potential entrepreneurs in the hospitality and recreational sectors for the different parts of the Geopark, on a local level. For this to happen, the local government needs to be a facilitator for a platform where members of the local community can communicate, cooperate and share or receive information on developments, so that they can identify (potential) mismatches between supply and demand in the area and anticipate on these mismatches by starting their own business.

- Networking: local businesses, schools, regional and national administration, scientific community (also on an international level)
- Improving on infrastructure and accommodation
- Developing facilities for tourists to stay, enabling them to meet locals and experience culture or find spiritual enrichment (monasteries?)

Conservation of historic monuments

As has been mentioned by Ciobanu in the interview we conducted (2018), some of the historic buildings are in need of a restoration. Restoration is an essential building stone to keep the past alive and make it available to present and future generations. Funding for preservation or restoration of historic buildings and monuments like the many special churches in Hațeg Country could be raised by giving obsolete buildings or monuments in bad shape a new functionality or service for which visitors would be willing to pay. For example, a retreat center and/or a conference center could be something to exploit that would probably attract people from the academic and/or management-world on a regular basis, if properly advertised and

networked, raising international academic interest for Hațeg's rich heritage and informing potential visitors about the many inspirational natural features of the Geopark.

Infrastructure

The infrastructure poses one of the weaknesses of this territory. Visitors come by car, bus, or by train. The closest train station is in Hunedoara, which is located thirty minutes from HCDG. There is no airport in close distance to the geopark. One recommendation that could be taken into consideration are shuttle buses or pick-up services offered by the guests' hosts. Another idea would be to get in touch with travel agencies and discuss a plan to offer group travels by bus from, for example Austria or Germany, to the Geopark. Of course, this has to be in demand and profitable. Moreover, the transportation in groups is more sustainable than each and everyone arriving with their own cars.

Recreation

- Developing a health-centre, a school for sports and/or a therapeutic bath house
- Developing a geo-restaurant and promoting local cuisine, maybe combined with historical specialties

Education

- Expanding on educational and interpreting activities concerning history and culture and promoting academic research, also in the area of cultural-historical and religious studies
- New workshops where tourist meet locals and learn about their crafts, arts, music etc.
- Establishing new geotours including guides and interpretation

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Annex

Hello, Mr. Ciobanu. I am part of a project called „European Virtual Seminar”, at Open University of Netherland. I am working on a project about Hațeg Country Geopark and I would be grateful if you would respond to some questions.

1. How many tourists visit the geopark annually? If there is no statistic, can you give me an approximated number? Is there a tendency?
2. Can you give me some examples of collaborations with authorities, institutions and projects?
3. How many people are working for the geopark? What jobs do they have?
4. Are there any innovative technologies used in the geopark?
5. Which are the housing options for tourists? Can you tell me an approximated maximum number of tourists who can be hosted on the geopark territory?
6. What is the geopark electricity source?
7. Give examples of interactive activities organized for tourists.
8. Which are the present and the future projects for a sustainable tourism?
9. Are there any access taxes in exhibitions or for events and activities?
10. What are the financing sources of the geopark?
11. How local communities see the tourism development? Are there any problems?
12. How are local communities involved in the geopark`s activities?
13. What types of cultural services are offered by the geopark?
14. What are the territory`s weaknesses?

These were all the questions, thank you for your time. Do you have anything to add?