

Danube Geo Tour

Valorisation of geo-heritage for sustainable and innovative tourism development of Danube Geoparks

Pilot geoCulture and geoOutdoor products tested

Output Code: 4.3.

“Project co-funded by the European Union”

Programme: Interreg Danube Transnational Programme
PA2: Environment and culture responsible Danube region
Project Duration 01/2017 to 06/2019

WP4 Coordinator: ERDF PP8 University of Bucharest
Coordinators: Alexandru Andraşanu, Cristian Ciobanu – ERDF PP8 University of Bucharest

Output 4.3 Responsible partner: ERDF PP3 Public institution “Nature Park Papuk

Date: 26.11.2018
Version: 2.0



Project co-funded by European Union funds (ERDF, IPA)
www.interreg-danube.eu/danube-geotour

List of Abbreviations

<Add abbreviations used in the document>

DTP	Danube Transnational Programme
JS	Joint Secretariat
NGO	Non-governmental organisation
LP	Lead Partner
PP	Project Partner
WP	Work Package
EGN	European Geoparks Network
GGN	Global Geoparks Network
UGG	UNESCO Global Geopark
TIC	Tourism Information Centre



Table of Contents

List of Abbreviations	2
Table of Contents	3
1. Introduction	4
1.1. Background information	4
1.2. Methodology	6
1.3. Summary	6
1.4. Description	7
1.5.. Application	8
2. Qualitative assessment	9
2.1. Description	9
Identity axis	10
Management Axis	11
Production Axis	11
2.2. Application	13
Geo direct connexion	13
Structure and economic viability	13
Geopark partnership	14
3. Quantitative evaluation	15
3.1. Description	15
3.2. Application	15
4. Customer satisfaction	22
5. Conclusions and recommendations	22
5.1. Conclusions	22
5.2. Recommendations	
<i>Bibliography</i>	
6. Annexes	23
6.1. Output Factsheet <obligatory, see attached format>	23
6.2. Digital geooutdoor map of Papuk UGG	

Table of Figures, Maps and Tables

Figure 1. **The philosophy of the geoproduct**

Figure 2. **The requirements of the geoproduct**

Table 1. **Logical matrix in development and assessment of a geoproduct**

Table 2. **Logical matrix used for the Geochallenge Papuk**



1. Introduction

1.1. Background information

Danube GeoTour project aims to “improve management capacities and strategies and to develop practical solutions for the activation of geodiversity/ geoheritage and to seize positive market trends for sustainable tourism development in 8 Geoparks of the Danube region”¹. In order to achieve this, one of the challenges is to “seize the potential of Geopark values and brand for socio-economic development while inspiring local residents and small businesses to develop new, sustainable and innovative geoproducts along the defined Danube GeoTour”²

The objective of WP4 is “to increase the capacities of participating Geoparks in creating unique sustainable tourism products and services based on a Geopark’s specific heritage, the involvement of local SMEs, new gamification tools and visitor engagement with a focus that is in line with the strategy on management tourism pressures and the carrying capacity of each individual territory.”³ Thus, the new geoproducts developed are key elements for the success of the entire project.

This document shows how the pilot geoproducts were tested and what results were reached both qualitative and quantitative. The pilot geoproducts were developed and tested in the WP4 in connexion to all other WPs. The basic criteria, the first step in testing the geoproducts were developed in WP3. It also uses the work from WP5, especially in defining “innovative” as mainly a question of interpretation and also in describing the methods of emphasizing the products connexion to Earth. The promotion component of a geoproduct will be developed in correlation with WP6 recommendations.

Testing the geoproducts shows a snapshot of a particular new geoproduct in this moment of its development. However, all the tools described and used here will be available on the on-line platform in a gamification form. Thus, any time from now, the geopark staff, the partners, SMEs or any other producer may use the assessment tools available on-line to test a geoproduct. This is also helpful for education and training purposes, for any discussion involving the concept of geoproduct.

Each of the Geoparks created and tested a unique product by designing a concept, by engaging, training local providers and/or by developing missing highlights in the geoproduct. Different GeoCulture and GeoOutdoor products were introduced in participating geoparks. Lessons learned are documented, evaluated and made available as models for others in this document.

The geoproduct developed by Public institution “Nature Park Papuk- Papuk UNESCO Global Geopark is geoOutdoor product, called GeoChallenge Papuk– geoOutdoor programme for everyone is a new tourist programme/offer that is based on the demands of visitors who will now have more opportunities to decide what they want to do in the park and how they want to actively spend their time in Papuk UGG. Several existing outdoor activities are linked into a comprehensive programme with geotopic characteristics added, such as: hiking, biking, climbing, walking paths, geotrails ... Every outdoor activity offered in the scope of the new geoproduct connects visitors with geological and biological heritage as visitors while hiking, biking, running literally “passes by or through it”. New geo-educational

¹ Danube GeoTour Application Form

² Danube GeoTour Application Form

³ Danube GeoTour Application Form



component of the programme which refers to guided tours allows visitors to learn something about rich geological, biological and cultural heritage of Papuk UGG.⁴ The new geoproduct was developed in cooperation with local groups, NGOs and SMEs interested in outdoor tourism. External expert for outdoor tourism hired by Papuk organized two meetings with local groups such as: cycling, hiking association, development agency, tourist boards and agencies. At the meeting, they were informed about idea of geoOutdoor product/programme. They gave their opinion and suggestions related to geoOutdoor product. (Fig 1.) However, there was another meeting with local touristic agency Thrillseeker Croatia that is potential promotional partner of the programme.

In the frame of Danube GeoTour project we made digital geoOutdoor map of Papuk UGG to improve our geoproduct. The map consists of two part, first is tourist geoOutdoor map with entire outdoor offer of Papuk UGG such as hiking, cycling, geo trails and all relevant data for good touristic map. Other part of digital geoOutdoor map is geology map of Papuk area. This maps will be available on web site of local tourist agency and Papuk UGG. (Annex 6.2.).



Figure 1: The meeting with local groups in Papuk UGG/ development of geooutdoor product

Example of GeoChallenge Papuk offer made with local tourist agency Thrillseeker Croatia and Papuk UGG contains parameters such as:

1. Activities: hiking, biking, climbing, walking paths, geotrails. Each of outdoor activities include guided tours.
2. Physical rating
3. Tour highlights: extraordinary geological, biological and cultural heritage of Papuk
4. Tour programme: according to demands of visitors tour programme will be made. Price of programme depends also on demands of visitors.

⁴Cimerman, Š., 2018, *GeochallengePapuk-geooutdoor program za sve*

The development of GeoChallengePapuk is in final phase. The promotional activities based on high quality promo movie for GeoChallengePapuk is in process.

The GeoChallengePapuk will be available for visitors next year.

In this document the GeoChallengePapuk is presenting a new geoutdoor product as one of the case studies developed in the frame of Danube GeoTour.

1.2. Methodology

This material was developed using data and expertise provided by Papuk Geopark, the partners in the project and by other geoparks in the European Geoparks Network. Most of the methodology for defining the geoproducts followed the Output 4.1. Guideline for development of innovative GeoProducts.

Other data derives from experiences and lessons learned from ASP and other members of EGN and GGN, the skills and expertise of the geopark managers present in the project as well as all the partners direct contact with local entrepreneurs in tourism, food art and crafts.

For the specific geoproduct tested here – GeochallengePapuk – the data used was collected directly by the geopark staff and in collaboration with potential sellers of the programme.

1.3. Summary

The Output 4.3 is document that shows how the pilot geoproduct - geoOutdoor product developed by Public institution "Nature Park Papuk- PapukUGG" was tested and what results were reached. The pilot geoproduct was developed and tested in the WP4 in connection to all other WPs. For testing geoproduct we used a set of questions made by ERDF PP8 University of Bucharest, responsible partner for WP 4. The assessment is divided in two parts, one being qualitative assessment and the other quantitative evaluation of geoproduct. Set of questions is based on philosophy and requirements of geoproduct established in Output 4.1. The base of quantitative evaluation is logical matrix for development and assessment of a geoproduct. The Output 4.3 contains all relevant data that can be used in future process of different kind of geoproducts development.

The pilot geoproduct called GeoChallengePapuk- geoOutdoor programme for everyone is a new tourist programme/offer of Papuk UGG based on outdoor activities taking place in rich geological, biological and cultural heritage area. It presents specially designed programme/ package for visitors who want actively spend their vacation in nature and at the same time learn something more about valuable geological, biological and cultural heritage of Papuk UGG.



1.4. Description

Geoproduct is a product that presents the characteristics of a geopark on the market. At the same time a geoproduct can have additional values from nature conservation. In this case, a geoproduct must comply with the principles and standards of conservation of the geological heritage and its promotion in order to improve awareness about the importance of conservation of our GEO heritage. The geological heritage should be recognized through the geoproduct as the geopark's essential element.

The Strategy on Management of Tourism Pressures in Geoparks (shortly Strategy) elaborated within WP3 provided a tool which enables all target groups (visitors, residents, geopark managers and investors) to better plan their activities, understand different impacts of these activities and alternatives which can be used to avoid or reduce negative impacts. The Strategy has to be included to clarify the aspect of nature protection as well as the aspect to contribute to the holistic concept of protection, education, public awareness and socio-economic benefits for sustainable local development. In order to carry out integrated evaluation of geoproducts we had to firstly create the relevant framework and then a methodology for the assessment of impacts of recreational activities on natural heritage.

The framework developed in WP3 can be used as a first and basic qualifier in the first steps of the decision process, which tells us if the product can be defined as a geoproduct. The Strategy also provides a common framework which enables all geopark managers as well as visitors, residents and investors to better plan their activities, understand different impacts of each activity and to be aware of available alternatives which can be used to avoid or reduce negative impacts. The information from the Strategy can be also used to increase awareness of investors and it can help to change their behaviour towards more sustainable patterns in geoproducts. As such it leads to better conservation of natural and cultural heritage and it supports the achievement of the programme specific objective "Foster sustainable use of natural and cultural heritage and resources".

In this way, the Strategy also served as a framework for the development of joint geoproducts (as a part of WP4).

Nature conservation definitively has to be incorporated to the geoproduct as its intangible value. The evaluation of the geoproduct from the point of nature conservation is essential. The geoproduct has to comply with the principles and standards of conservation of the geological heritage and its promotion in order to increase the visibility of the importance of protecting the geoheritage.

Geoproducts may include various geoheritage and nature conservation aspects, which can be displayed in several ways. Finally a geoproduct may be included/integrated directly as a tangible (mineral raw materials, agricultural product) or intangible (cultural, historical, ethnological) content. Geoproducts can be recognized as an activity or a final market object, available indoor or outdoor.

Four different groups of geoproducts can be distinguished:

- Market objects (souvenirs, food)
- Outdoor activities (guiding for groups/individuals in nature; rafting, biking, hiking, riding, water activities, mines and caves visiting, camp schools)
- Indoor activities (indoor programs in museums, info centres, restaurants, tourist farms)



- Small interpretation infrastructure dedicated to specific local heritage items (houses, dinostops, geotrails) developed and managed in partnership with local partners.

1.5. Application

A set of questions supporting geoproduct development was applied and tested by each partner while designing its own geoproduct.

Question 1: Is a geoproduct developed according to the actual legislative framework and it does not cause any damage to nature?

If the answer is YES:

→ follow the assessment. The product:

1. has strong tangible connection to local geodiversity or **geological heritage** (geosites, fossils, minerals, rocks, mines, quarries, caves, geologic processes or phenomena...) YES/NO
2. has strong intangible connection (historical, ethnological, cultural) connection to local geodiversity or **geological heritage** YES/NO
3. increases awareness of users about the importance of protecting geological heritage. YES/NO
4. encourages and helps the user to engage/involve in nature conservation. YES/NO
5. is produced in a sustainable way, it is made from recycled or/and local materials. YES/NO

If the answer is NO:

→ contact to your geopark or follow the *Recommendations for residents, visitors and investors on behaviour and sustainable use of geodiversity in Geopark*

In the case of the geoproduct GeoChallenge Papuk the answer is yes, it follows the legislative framework and it does not cause any damage to nature

1. **YES** it has strong tangible connection to local geodiversity and **geological heritage**
2. **YES** it has strong intangible connection (historical, ethnological, cultural) connection to local **geodiversity**
3. **YES** it increases awareness of users about the importance of protecting geological heritage and the importance of geodiversity.
4. **YES** it encourages and helps the user to engage/involve in nature conservation.
5. **YES** it is developed in sustainable way (other part of the sentence "it is made from recycled or/and local materials" is not applicable for Geochallenge Papuk)



In case of GeChallenge Papuk product of Papuk UGG the questions 1, 2, 3 and 4 can be answered YES. The GeoChallenge Papuk has strong connection with local geological and biological heritage. From the geology point of view Papuk is very diverse. The outdoor activities offered in this programme allow visitors direct connection with nature because they literally “passes by or through it”. Educational component which is very important in this geoproduct enables visitors to learn not only the diversity of heritage but also the importance to protect and preserve the heritage. The product is designed in the way that it better involve visitors in nature conservation and nature experiencing. Intangible connection is based on stories about geology, history, culture and their connection.

The answer on question 5 is also YES. The outdoor activities offered in GeoChallenge Papuk such as hiking, biking, climbing, walking paths, geotrails are designed in a sustainable way in order to enjoy outdoor activity and at the same time experience geological, biological and cultural heritage of Papuk UGG.

2. Qualitative assessment

2.1. Description

Geoproduct is a new term appeared along with the geopark philosophy. It is usually used in the context of a geopark’s socioeconomic involvement along with geotourism and geodiversity. Its understanding varies from a broad perspective to one of the most concrete result of the geopark concept implementation.

In the most extensive definition, the geoproduct is considered a potential geotourism focus point⁵, usually a geological attraction. The more focused definitions mention a geopark connexion and include local, manmade products as well as the dialogue between tourists and local heritage. For example, Farsani et al. (2012) define geoproduct as:

Local products related to geopark activities and symbols of geological and geomorphological heritage of the geopark. Geoproducts which are made based on geological elements of geoparks not only introduce the local products and the local handcrafts as cultural components to tourists, but also increase the public knowledge of tourists about geology.⁶

If we discuss the main attributes of a product⁷, then we have to consider three aspects which the geoproduct must comprise in order to be a product:

- It has to respond to a need,
- It has to be created, constructed through a production process,
- It has to be marketable and sold.

These characteristics bring the term geoproduct closely to a practical and economical approach, it defines it more clearly and focuses on its necessity as a tool for socioeconomic

⁵Complova, M., 2010, *The identification of geoproducts in the village of Jakubany as a basis for geotourism development*, ActaGeoturistica, volume 1, number 1, 51 – 56

⁶Farsani, T., Coelho, C., Costa, C., Carvalho, C., 2012, *Geoparks and Geotourism. New approaches to sustainability for the 21st century*, BrownWalker Press, BocaRaton

⁷<https://www.merriam-webster.com/dictionary/product>



development through geoparks. This perspective underlines the role of geoparks in achieving social, economic and cultural sustainability and in coping with pressure from the sociocultural impact of tourism.

On the other hand, a geoproduct is not simply another product sold in a geopark. A geoproduct comes with a deep connexion to Earth on a local level and with a strong sense of identity. Each geoproduct is unique in its construction with a story about people and the place they inhabit.

As a result, we find that the philosophy of a geoproduct takes into account three axes: identity, management and production. If we see it as a graphic model, then the geoproduct finds itself at the intersection of these three axes (Fig. 1).

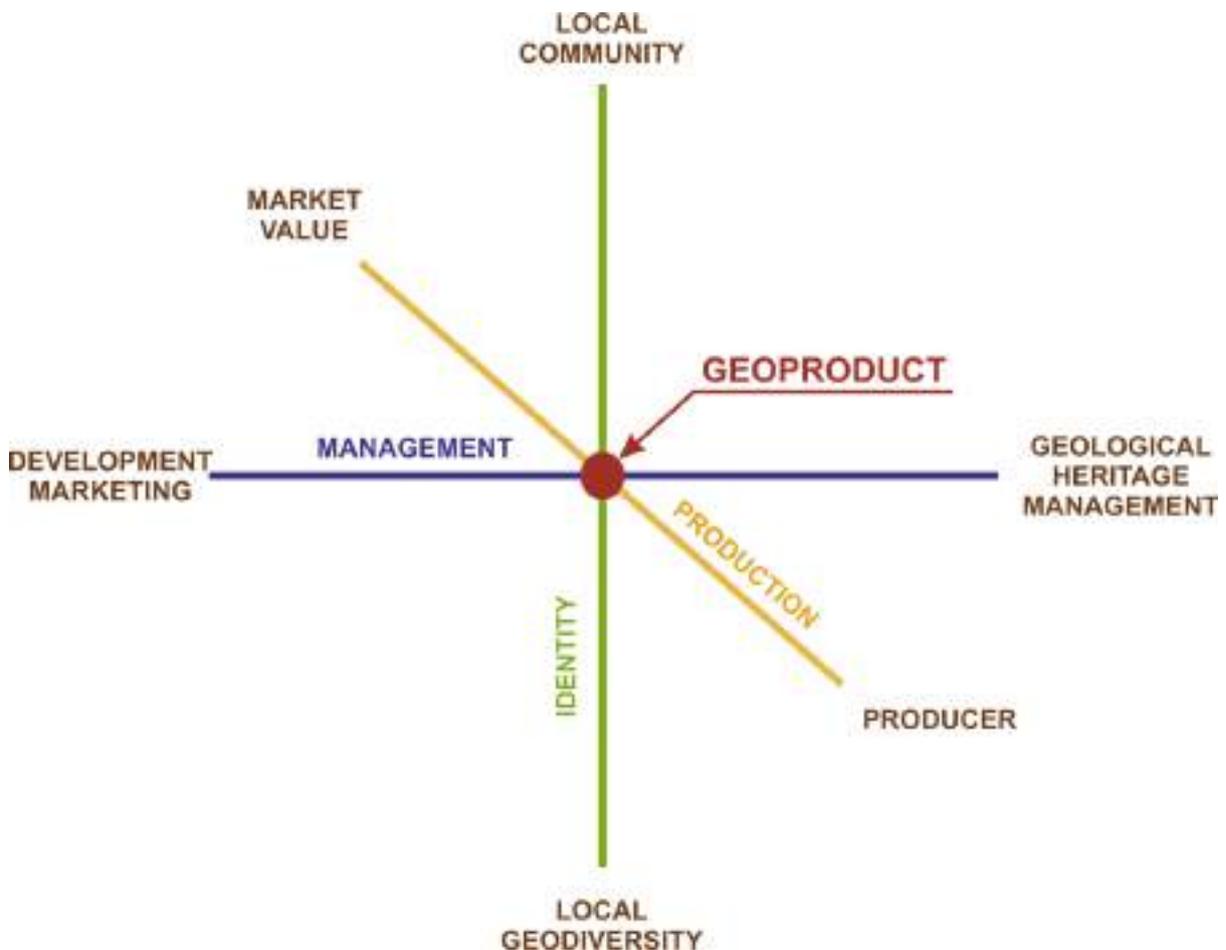


Figure 1. The philosophy of the geoproduct

Identity Axis

A geopark territory is a complex structure made of ecological, socio-economic and cultural realities, shaped by its geodiversity, biodiversity and historic evolution. The sum of them is generating the local identity made of tangible and intangible heritage. The tangible heritage is mainly related to local geodiversity like raw materials, relief, mineral resources and soils. Intangible Cultural Heritage, as defined by UNESCO, 2003⁸ means:

...the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some

⁸UNESCO, 2003. *Intangible Cultural Heritage*



cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

One of the key requirement² for a UNESCO Global Geoparks is to have sites and landscapes of international geological significance managed with a holistic concept of protection, education and sustainable development. A UNESCO Global Geopark uses its geological heritage, in connection with all other aspects of the area's natural and cultural heritage, to enhance awareness and understanding of key issues facing society, such as using our Earth's resources sustainably, mitigating the effects of climate change and reducing the impact of natural disasters. By raising awareness of the importance of the area's geological heritage in history and society today, UNESCO Global Geoparks give local people a sense of pride in their region and strengthen their identification with the area. The creation of innovative local enterprises, new jobs and high quality training courses is stimulated as new sources of revenue are generated through geotourism, while the geological resources of the area are protected.

The Identity axis expresses local cultural and historical identity generated during centuries or millennia by the continuous interaction between local community and natural environment. On the other hand, this axis is revealing one of the main goal of a geopark to cooperate with communities and to identify innovative approaches in order to re-appropriate tangible and intangible heritage values and to revive and strengthen the local cultural identity, in respect to sustainable development principles.

The identity axis is the axis of product development. Is the way a producer is using directly or indirectly local geodiversity components, local knowledge and market needs in the geopark context. This process is part of the cooperation between geopark team and local entities which could be associations, companies, private persons, artists, freelancers, museums, schools, etc.

Management Axis

The management axis is the way to transform a geoproduct in a market good, a product to be sold directly or indirectly and to generate benefits. The benefits are both direct incomes and indirect and induced ones that contribute to geopark promotion, strengthen of local identity and socio-economic development.

Each Global Geopark is using the UNESCO Global Geoparks logo which is one of the most powerful brand in the world in order to develop a local brand of quality for its territory. The management axis is reflecting the way a geoproduct is using the geopark brand to increase its value and also the role each new geoproduct is playing in strengthening the geopark brand. The management axis is expressing the cooperation between the geopark team and the producer of a new geoproduct. In some cases the producer is the geopark team. The management axis is reflecting the main philosophy of Global Geoparks: *Celebrating Earth Heritage, Sustaining local Communities*. Each geoproduct is embedding a part of local geodiversity or geoheritage and in the same time is contributing to local socio-economic development.

Production Axis

This vector represents the organisational aspect of a geoproduct. The Geopark has to encourage entrepreneurship of local partners and to provide to them the context presented by the other two axis. The production axes starts with a producer, an entity able to provide a service or create a product in a legal way and in close cooperation with the Geopark. The direction of the axis is the actual profit from the products and services. In the

case of the Geopark being also the producer of a geoproduct, the benefits can be other than financial: awareness, promotion, community involvement etc.

The philosophy of the geoproducts uses axes to show the whole concept as a process. The Geopark team has to manage the process and evaluate its position on each of the axis. The partners (SMEs, NGOs and others) base their business in geoproducts on the identity and management axis and contribute to the development of the production axis.

In conclusion, figure 1 shows a geoproduct at the intersection of the three axis. The identity axis is expressing the innovative way in sustainable use of local resources, the management axis reflecting the capacity of a geopark team to support geoproducts development and sale in the benefit of producer and local communities and the production axis shows the process of constructing the offer by a geopark partner.

In the creation and development of geoproducts, geopark managers and local entrepreneurs must start from the philosophy described in the previous chapter. Then they must follow the most important three requirements of a geoproduct (Fig. 2):

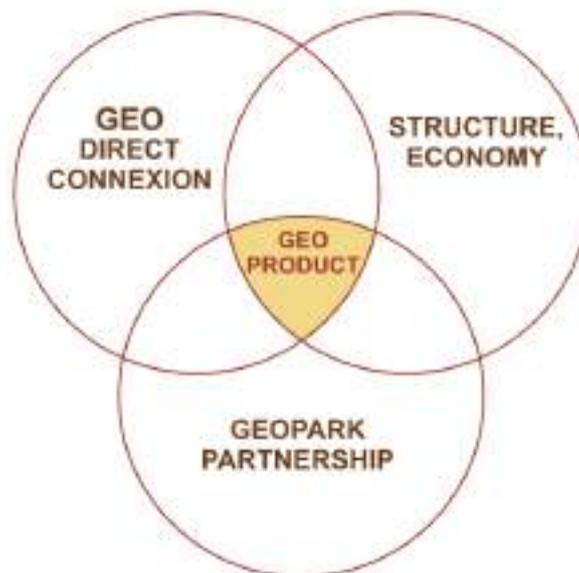


Figure 2. The requirements of the geoproduct

In addition to the main three requirements, the newly developed geoproducts have to respect sustainable standards and communicate these values to their users, visitors and thus help raise awareness on the importance of protecting and valorising the area's geodiversity, natural and cultural heritage in a sustainable way.

Geoproducts creation and development will also consider and respect specific needs of people with disabilities or elderly people and thus increase potential for these groups to have access to geoheritage. The design of these products and their management have to reflect equal chances and inclusion of all categories.



2.2. Application

Geo direct connexion

“Geo” (Gaia / Gaea in Greek) is the personification of Earth. Represents natural characteristics of a territory, whether is the local geodiversity, or biodiversity. Cultural values or tangible and intangible heritage being the human appreciation and use of these characteristics. Geo direct connexion requirement assures that the product is not only a geographical designation – “produced in the geopark” – but it has a deep meaning and an interpretation. The geoproduct must be a sentence in the dialogue between Man and Earth. Sometimes this connexion is only a matter of interpretation. Many products developed today in geoparks can be transformed into geoproducts with ease, if the proper interpretation of their connexion with geology or local identity is added.

A good example for this requirement is the GeoFood label⁹. This designation, managed by Magma UGG, is more than just another ecolabel.

GEOfood products must have strong connection with the local Geological Heritage, specific brief information concerning this connection must be provided in the food products and in the GEOfood restaurant menus through written information (ex: potatoes or vegetables that grown in fertile sandstones which were formed by glacier movement during the last Ice Age; olive oil produced from olives grown in Jurassic marls that were deposited in the ancient Sea of Tethys, salt from the ancient Sea, bread from grain growing in the Geopark soil due to special geological phenomena, etc.).

The GeoChallenge Papuk fulfils this requirement because every outdoor activity offered in this programme connects visitors with geological and biological heritage as visitors literally “passes by or through it”. Educational component (guided tours) of programme allowed visitors to learn something about rich geological, biological and cultural heritage of Papuk UGG.

Structure and economic viability

Structure and economic viability means that the geoproduct has to live up to its “product” part of the term. It has to be constructed (“produced”) as a marketable product meant to be sold. Of course that in some cases the geoproducts are not sold per say, instead they belong to the geopark administration’s educational offer, or they are provided along with other services. In order to be a geoproduct, the object or service doesn’t have to be actually sold, but to have the construction and economic viability which allow it the possibility to be sold. For example, an educational program from the educational offer of a geopark can be considered as fulfilling this requirement by asking the question: would this program be viable if it were to be sold by someone to tourists?

The viability is the health assurance of the geoproduct – it can only exist if it is bought. This means it has to be adapted to market demands, it has to continuously address

⁹<https://www.geofood.no/>

the needs of the buyers and it has to have the adaptability to focus on new trends and requirements.

The GeoChallenge Papuk fulfils this requirement because it will be promoted as geoOutdoor tourist programme. The programme will be available primarily, but not exclusively by local tourist agencies. Creating a new offer and promoting Papuk UGG as attractive outdoor destination will raise benefits add value to everyone in the local community from restorans, overnight stays, SMEs etc. Local stakeholders will be included in GeoChallenge Papuk because they are all participating in one or another part of the programme offer.

Geopark partnership

The geological connexion and the economic viability would describe only a good business idea without the active role of the geopark. This is the reason why the third important requirement for geoproducts is to have the geopark partnership. Of course, this applies when the geopark is not itself the provider of the geoproduct.

The geopark's role as a partner of the geoproduct provider is to assure the quality of the geoproduct and the conditions in which the selling process takes place. This will eliminate opportunistic initiatives of low quality products made to look like geoproducts. It will also make sure that the production process is made with care for the heritage and environment and that it respects the culture and needs of all people, especially vulnerable groups.

The GeoChallenge Papuk fulfils this requirement because it was developed in cooperation with local interested groups, NGOs and SMEs interested in geoOutdoor tourism. This Output will also serve as a best practice to other local producers to make different kind of geoproducts or services related to the topics of Papuk UGG. External expert for outdoor tourism haired by Papuk organized two meetings with local groups such as: cycling, hiking association, development agency, tourist boards and agencies. At the meeting they were informed about idea of geoOutdoor product/programme. They gave their opinion and suggestions related to geoOutdoor product. However, there was another meeting with local touristic agency Thrillseeker Croatia that is potential seller of programme.



3. Quantitative evaluation

3.1. Description

The evaluation process starts from the basic idea that a geoproduct is representing the tool a geopark has to develop in order to contribute to the holistic concept of protection, education, public awareness and socio-economic benefits for sustainable local development.

Testing and evaluation are connecting four key elements defining a geoproduct: Earth resources, Geopark management, Local community, Geoproduct development.

The questionnaire has five sections from A to E, each section with a set of elements to be self-evaluated on a scale from 1 to 5. The values are: 1 – low degree; 2 – quite low; 3 – medium; 4 – quite high; 5 – high degree. According to the Logic Matrix:

LOCAL COMMUNITY	Contribute to social entrepreneurship approach of the geopark	Document relation geo-bio-cultural	Tells a story about local community	Enhances local cultural heritage	GEOPRODUCT DEVELOPMENT AND MARKETING
New local products strongly related to geopark territory				Integration in geopark's marketing strategy	Connects to the marketing strategy
Connects to geodiversity and geoheritage interpretation			Quality assurance by geopark labeling		Involves the geopark in the product process
Integrates into geopark's promotional strategy		Common advantages based on a partnership agreement			Contribution to the promotion of the geopark values
Results from geopark's involvement in the community (trainings, seminars, programs)	Assures novelty and innovation				Impact evaluation
GEOLOGICAL HERITAGE MANAGEMENT	Contribute to Geodiversity Action Plan Development	Identify all potential values of geo heritage	Tangible and intangible themes	Assessment of local geodiversity	LOCAL GEODIVERSITY

Table 1. Logical matrix in development and assessment of a geoproduct

3.2. Application

Section A - Any geoproduct has to be connected to local geodiversity / geological heritage and to have a geological story (in a broad sense). Local geological assets are identified and



defined based on scientific research and a coherent management plan guides the conservation and interpretation of geological features. It sets the geological scene, looks in detail at the geological heritage in the geopark territory, details opportunities to explore and celebrate the local Earth history.

A1. How well are the geological assets / subjects related to the geoproduct documented from the scientific point of view?

1 – not documented; 5 – Very well documented

A2. In what degree the geoproduct contains both tangible and intangible components of the geological asset/s?

1 – not having both elements; 5 – Very well integrating the two elements

A3. Does the geoproduct tell all the possible stories on the specific geological asset?

1 – very few stories; 5 – the whole story

A4. In what degree are those geologic assets part of a geodiversity action plan / geoconservation plan developed by a Geopark?

1 – they are not in a plan; 5 – all of the assets are part of a clear plan

Section B - A geoproduct has to incorporate a story of local people and could contribute to connect geological heritage with local community.

B1. In what degree is the geoproduct created and developed by a local company / person / producer?

1 – not a local company; 2 – most parts of the geoproduct are not created/developed by a local company/producer; 4 – most parts of the geoproduct are created/developed by a local company/producer 5 – to-tally created and develop by a local company

B2. In what degree the connections between the identified geologic asset/s and natural and cultural heritage are documented?

1 – not documented; 5 – Very well documented

B3. Does the geoproduct tell more than a geological story?

1 – only the geological story; 5 – many other stories connected to geology

B4. In what degree is the geoproduct directly connected to a specific community / person/s?

1 – not directly connected; 5 – Very well connected

Section C - A geoproduct has to have a practical and economical approach, as a tool for socioeconomic development inspired and supported by the geopark development.

C1. In what degree is the geoproduct new and innovative?

1 – not new; 5 – totally new and innovative

C2. How detailed and clear has the geopark identified different types of partnerships in geoproduct development (e.g. produced by the geopark, supported by, produced in the territory of the..., etc ?

1 – not a single partnership; 5 – clear and detailed partnerships



C3. Did you use the geopark's geoproduct development criteria defined by the Geopark in the geoproduct development?

1 – not defined/used; 5 – Very well defined/used

C4. Is the geoproduct sold in regular events (geo-fairs) organized by the geopark dedicated/integrating local geoproducts?

1 – no; 5 – frequent events clearly targeted

Section D - A geoproduct is not simply another product sold in a geopark. A geoproduct comes with a deep connexion to Earth on a local level and has to generate interest and respect for the Earth pro-cesses that generated local geodiversity

D1. In what degree local producer/s are inspired by the local geodiversity / geoheritage in developing new products?

1 – very low; 5 – very high

D2. In what degree the geoproduct/s are connected or supported by the interpretation infrastructure of the geopark (taking into consideration geological and cultural components of the geopark territory)?

1 – not connected or supported; 5 – Very well connected and support-ed

D3. In what degree the new geoproduct/s are promoted by the geopark?

1 – very low; 5 – very high

D4. In what degree were the producers involved in training courses and/or regular meetings as part of the geopark activity plans?

1 – not at all; 5 – they are very much involved

Section E – A geoproduct is a combination of market opportunities generated by the geopark activities in tourism development and the ability to generate emotions of visitors to be interested to buy new products related to local Earth and people stories.

E1. Is the developed geoproduct connected to the geopark marketing strategy?

1 – very low connection; 5 – very high connection

E3. In what degree is the geopark involved in development, marketing and selling of the geoproduct?

1 – very low; 5 – very high

E3. Does the geoproduct contribute to the promotion of the geopark values?

1 – very low contribution; 5 – very high contribution

E4. Is there any established mechanism to evaluate the geoproduct impact (financial, appreciation, satisfaction, recognition, etc.)?

1 – no; 5 – a very well developed mechanism



LOCAL COMMUNITY	B1 - 3/5	B2 - 3/5	B3 - 4/5	B4 - 4/5	GEOPRODUCT DEVELOPMENT AND MARKETING
E1 - 1/5				C4 - 1/5	D1 - 4/5
E2 - 5/5			C3 - 4/5		D2 - 4/5
E3 - 5/5		C2 - 3/5			D3 - 4/5
E4 - 3/5	C1 - 3/5				D4 - 3/5
GEOLOGICAL HERITAGE MANAGEMENT	A4 - 4/5	A3 - 4/5	A2 - 4/5	A1 - 4/5	LOCAL GEODIVERSITY

TOTAL = 70 / 100

Table 2. Logical matrix used for the GeoChallenge Papuk

Section A - Any geoproduct has to be connected to local geodiversity / geological heritage and to have a geological story (in a broad sense). Local geological assets are identified and defined based on scientific research and a coherent management plan guides the conservation and interpretation of geological features. It sets the geological scene, looks in detail at the geological heritage in the geopark territory, details opportunities to explore and celebrate the local Earth history.

A1. How well are the geological assets / subjects related to the geoproduct documented from the scientific point of view?

Regarding geology, the whole area of Papuk UGG is very well documented. Almost all geological asset related to GeoChallenge Papuk is documented through different studies, data base of geosites in Papuk UGG (digital and printed version).

A2. In what degree the geoproduct contains both tangible and intangible components of the geological asset/s?

The GeoChallenge Papuk contains tangible (local geodiversity, biodiversity) and intangible components (cultural and historical heritage/stories). For example if you choose walking path in Park forest Jankovac which is also offered in GeoChallenge Papuk you can enjoy in beautiful nature and learn about history of Jankovac vally, geology and biology of Jankovac and whole area of Papuk or if you choose geotrails on Zvečevo area the hike is connected to glassmakers stories and history local bandit JovoČaruga.

A3. Does the geoproduct tell all the possible stories on the specific geological asset?

The GeochallengePapuk tell almost all possible stories. The geoproduct is based on different outdoor activities that can be implemented almost across whole area of Papuk UGG with already known stories about geological assets. Guided tours are very important part of Geochallenge Papuk and serve to tell these stories to visitors. Guided tours in beginning will be done by staff of Papuk UGG. Later on staff of Papuk UGG will give training to local people to guide some of the tours.



A4. In what degree are those geologic assets part of a geodiversity action plan / geoconservation plan developed by a Geopark?

Almost all geological assets included in the geoproduct are part of geodiversity/geoconservation plan of Papuk UGG.

Section B - A geoproduct has to incorporate a story of local people and could contribute to connect geological heritage with local community.

B1. In what degree is the geoproduct created and developed by a local company / person / producer?

The GeoChallenge Papuk is developed in cooperation between Papuk UGG and help of local tourist agency Thrillseeker Croatia with assistance of external experts.

B2. In what degree the connections between the identified geologic asset/s and natural and cultural heritage are documented?

Geology is well documented and presented in around 60% of our studies. Different studies and research addressing connection of geology and natural and cultural heritage are also available. Different living organisms relate to specific type of geological background, so studies are targeted to specific geological areas. For example dry grasslands with rich biodiversity appear only on few sites with karstic bedrock of Mt. Papuk. Archaeological heritage is also connected with types of rocks, different mineral compound of ceramics and other objects is related with specific geo sites. Famous remains of Hallstatt culture used graphite that was exploited in the same site until mid 20th century in the area of Kaptol in Papuk UGG.

B3. Does the geoproduct tell more than a geological story?

GeoChallenge Papuk tells more than geological stories in way that every guided tour consists not only of geo facts but also involves stories about biology, history and raises challenges about importance of geopark and its protection for the future generations.

B4. In what degree is the geoproduct directly connected to a specific community / person/s?

Because GeoChallenge Papuk covers almost the whole area of Papuk UGG, all of the planned outdoor activities and trails of the new geoproduct are connected with local communities and their SMEs, farmers, craftsmen.

Section C - A geoproduct has to have a practical and economical approach, as a tool for socioeconomic development inspired and supported by the geopark development.

C1. In what degree is the geoproduct new and innovative?

The GeoChallenge Papuk is a new tourist programme/offer. Papuk UGG is already known as an attractive outdoor destination with many outdoor events taking place through the year (celebration of International Mountain Day, different biking and hiking events such as Trek and Trail, Papuk Extreme Challenge and so on). Through this new programme we try to attract new types of visitors to spend here several hours and few days instead of participating one single day manifestation.

C2. How detailed and clear has the geopark identified different types of partnerships in geoproduct development (e.g. produced by the geopark, supported by, produced in the territory of the..., etc ?

For now the product is in the testing phase, however Papuk UGG would like to motivate local companies to provide this and similar geoproduct programmes, but it is not excluded that other non local companies can promote it as well.

C3. Did you use the geopark's geoproduct development criteria defined by the Geopark in the geoproduct development?

The geopark management used geopark's geoproduct development criteria. However, the development criteria are still in the improvement phase.

C4. Is the geoproduct sold in regular events (geo-fairs) organized by the geopark dedicated/integrating local geoproducts?

The Geochallenge Papuk is not promoted yet. It will be available for visitors next year.

Section D - A geoproduct is not simply another product sold in a geopark. A geoproduct comes with a deep connexion to Earth on a local level and has to generate interest and respect for the Earth processes that generated local geodiversity

D1. In what degree local producer/s are inspired by the local geodiversity / geoheritage in developing new products?

Because of increasing trend of people who want to actively spend their free time in nature, local producers are getting more and more interested and supportive of Geopark, its geodiversity / geoheritage, biodiversity.

D2. In what degree the geoproduct/s are connected or supported by the interpretation infrastructure of the geopark (taking into consideration geological and cultural components of the geopark territory)?

The Geochallenge Papuk is very well supported by the interpretation infrastructure (educative panels, educative paths already exist on area of Papuk UGG) therefore this new outdoor geoproduct was launched to add contents and value to pure infrastructure.

D3. In what degree the new geoproduct/s are promoted by the geopark?

At the moment the geopark management is developing promotional activities for Geochallenge Papuk (promo movie) so the geoproduct will be better presented and information accessible to target groups of geoproduct.

D4. In what degree were the producers involved in training courses and/or regular meetings as part of the geopark activity plans?

The producers of local products (souvenirs, local food and so on) were informed about GeoChallenge Papuk and the opportunities and benefits it brings to the whole area.

Section E – A geoproduct is a combination of market opportunities generated by the geopark activities in tourism development and the ability to generate emotions of visitors to be interested to buy new products related to local Earth and people stories.

E1. Is the developed geoproduct connected to the geopark marketing strategy?

For now Papuk UGG doesn't have marketing strategy but is planning to make one in near future. For now we have Management plan of Papuk Nature Park but geoproducts are not yet involved in this plan.

E3. In what degree is the geopark involved in development, marketing and selling of the geoproduct?



The Geopark is deeply involved in development process of geoproduct, beginning from idea about geoproduct, packing geoproduct in tourist offer, adding value with educational component of geoproduct, provide information about geological, biological and cultural heritage of area.

E3. Does the geoproduct contribute to the promotion of the geopark values?

Yes, at high level. The GeoChallengePapuk is a good example how to use nature in sustainable way and through guided tours present and promote its values. In our opinion every geoproduct must promote geopark values.

E4. Is there any established mechanism to evaluate the geoproduct impact (financial, appreciation, satisfaction, recognition, etc.)?

At the moment, we only have oral feedbacks from meetings with local stakeholders and some feedbacks from participants of events such as fairs, local events in Papuk UGG where we presented Danube GeoTour project and geoproduct. Participants are mostly supportive and interested in geoproduct. For now we don't know what economic impact will geoproduct produce, but we expect positive socio-economic benefits for the whole area



4. Customer satisfaction

For now there is no feedback from visitors related to GeoChallengePapuk. Promotion of GeoChallengePapuk is still in the process but due to increasing number of people who want to actively spend their free time in nature and at the same time learn something new we assume that the feedback will be positive. One of the possibilities to get feedback from visitors is to make survey questionnaire in digital form (on web page) and/or printed version and ask visitors to fulfil them after visiting the programme.

5. Conclusions and recommendations

5.1. Conclusions

The goal of the Output 4.3 was to test pilot geoproducts through common set of questions and to see in what way we can improve our geoproduct. The document contains all relevant information for any replication of the development process for this kind of outdoor geoproducts. Also this Output can serve as a tool for geoproduct re-development. Every geoproduct or future geoproduct can be tested in this way.

Set of questions described in this Output are based on philosophy and requirements of geoproduct and logical matrix established in Output 4.1.

After self-assessment based on the common set of questions, we can conclude that some elements of geoproduct GeoChallengePapuk need to be improved in order this tourist programme becomes at required quality level.

Elements that need to be improved are:

- to encourage local producers for better involvement in development process of geoproduct through more meetings;
- to work more on "innovative" part of geoproduct by using example of best practice from other geoparks;
- to make marketing strategy and
- to establish mechanisms for evaluation the geoproduct visitor satisfaction and impact on the local community.

5.2. Recommendations

Local partners, geopark staff, SMEs and other potential producers or park management bodies interested in development of geoproducts should use this Output as a tool for testing their potential geoproducts or just to see how the idea of a product corresponds to the geoproduct criteria. This Output will have online version on web of Papuk UGG so it will be accessible to anyone interested in geoproduct development.



The Output 4.3 is a good start if you want to make a good geoproduct based on outdoor activities.

Bibliography

- Danube GeoTour project application form
- <https://www.merriam-webster.com/dictionary/product> visited in October 2017
- **Complova, M.**, 2010, *The identification of geoproducts in the village of Jakubany as a basis for geotourism development*, ActaGeoturistica, volume 1, number 1, 51 – 56
- **Farsani, T., Coelho, C., Costa, C., Carvalho, C.**, 2012, *Geoparks and Geotourism. New approaches to sustainability for the 21st century*, BrownWalker Press, Boca Raton
- <https://www.geofood.no/> visited in October 2017
- **UNESCO**, 2003. *Intangible Cultural Heritage*
- Cimerman, Š., 2018, *GeochallengePapuk-geooutdoor program za sve*

6. Annexes

- 6.1. Output Factsheet<obligatory, see attached format>
- 6.2. Digital geooutdoor map of Papuk UGG



 **Interreg** 
Danube Transnational Programme
Danube GeoTour

