Danube Geo Tour

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

Pilot innovative geoInterpretation methods tested: Village interpretation points

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List of Abbreviations

DTP	Danube Transnational Programme
JS	Joint Secretariat
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
ICOMOS	International council on monuments and sites
IUCN	International Union for Conservation of Nature
MLA	The Museums, Libraries and Archives Council
GLO	Generic learning Outcomes

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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 as well as to seize positive market trends for sustainable tourism development in 8 Geoparks of the Danube region"[1]. One of the specific objectives is to develop, demonstrate and evaluate joint Danube GeoTour comprising innovative interpretation of the geosites of 8 participating Geoparks. Acting in close collaboration with partners, visitors and local inhabitants the project shall create, test and implement a set of modern interpretation methods and techniques.[2]

Objective of the WP5 "Geointerpretation" is to improve the skills and quality of heritage interpretation in participating Geoparks so as to complement the uniqueness and character of the overall Danube GeoTour product. The history of Earth, geology over time, its processes, etc. are difficult to understand and interpret. For Geoparks and Danube GeoTour, it is critical that visitor centres and guides are able to present a true geological story and the value of its geoheritage. Although there is ample of scientific information available, the quality of interpretation among participating Danube Geoparks still lags behind more advanced Geoparks. A screening of the most recent developments, technologies and best practices of interpretative methods applicable to Danube Geoparks was already carried out and shared as part of the geointerpretation training for Geopark staff. This screening and geointerpretation training enabled an exchange of interpretative practices among parks (learning from each other) and allowed them to apply and test different pilot interpretative actions in individual Geoparks. Each Geopark has addressed a different interpretation challenge (problem) so that each pilot interpretation site serves as a reference point for other parks. The process of piloting was documented, continuously discussed and exchanged among partners and evaluated and presented as lessons for others.

Output document represents the evaluation of one of eight implemented pilot actions in the field of interpretation points or centres implemented in our Geopark. This document illustrates how the pilot action was tested and what results were reached from aspect of different geointerpretation methods used, both qualitative and quantitative. In this way, the newly introduced interpretation will contribute to a smarter presentation and preservation of geoheritage and geodiversity in our Geopark as well as to the quality, visibility and uniqueness of the Danube GeoTour product as a whole. Pilot interpretation actions also add value to or are a part of the innovative geoproduct developed in WP4. Furthermore, they are also in line with the Strategy on Management of Tourism Pressures in Geoparks developed in WP3.

Implemented pilot interpretation sites as a part of Danube GeoTour visitor infrastructure network will serve as a reference and learning points for demonstrations of different interpretation methods for 8 most common geological phenomena and processes in the Danube geological area (tectonics, metamorphic processes and rocks, geology over time, water in time, geomorphology, volcanology, dialogue between earth & humans, geological hazards). This ensures transnational learning and transfer of practices from participating to other geoparks and organisation dealing with heritage interpretation.

[1] Danube GeoTour Application Form
[2] Danube GeoTour Application Form

1.2. Methodology

Different methodologies (qualitative and quantitative assessment) concerning Output 5.2 „Pilot innovative geoInterpretation methods tested" were use in order to find out a smarter presentation and preservation of geoheritage as well as to the quality, visibility and uniqueness of the Danube GeoTour product.

For the qualitative assessment of pilot actions a formative evaluation of interpretation methods during the implementation phase was conducted by project partners with geoparks. Within this evaluation each project partner tested reactions within a focus group of potential visitors to the interpretation methods, such as their attention, attitude etc. and collected their opinions.

In the frame of quantitative assessment a self-evaluation questionnaire was developed which helps project partners to assess their pilot actions and interpretation methods. In quantitative assessment also summative evaluation is included, which will be implemented in a form of visitor satisfaction questionnaire. The results are a part of Deliverable 5.3. "Evaluation report on pilot actions with lessons learnt" while findings are integrated in this document as well.

1.3. Summary

In the frame of WP 5 "Geointerpretation" each Geopark introduced and tested different geointerpretation methods within their pilot action that can be applied in other parks. The geointerpretation methods can be transferred not only to other Geoparks in the region or in the EU but also to other similar territories such as national parks, cultural heritage sites, rural areas or tourism destinations.

Newly developed and demonstrated geointerpretations sites are open to the public and serve as a reference and learning points for demonstrations of different interpretation methods for 8 most common geological phenomena and processes in the Danube geological area. This ensures transnational learning and transfer of practices from participating to other geoparks and organisation dealing with the heritage interpretation. Interpretation methods were carefully and strategically planned, while planning is very important starting phase in developing new interpretation site.

Following pilot interpretation action testing one of the 8 most common geological challenges for interpretation was established by project partners (Table 1):

Table 1: Pilot interpretation action established in the frame of the Danube GeoTour project

	Project partner	**Interpretation action**	**Geological challenge tested**	
1	LP IHC	Visitor Centre	tectonics	
2	ERDF PP1 Balaton Geopark	Visitor Centre with outdoor sites and interpretation trails	volcanology	
3	**ERDF PP11 Eisenwurzen Geopark**	**Village interpretation points**	**water**	☺
4	ERDF PP3 GeoPapuk	In-situ interpretation of geological site Zvecevo	metamorphic rocks	

5	ERDF PP4 GeoKaravanks	Digital interpretation tool	geotime	
6	ERDF PP10 Železné Hory Geopark	Digital interpretation tool	geo hazards	
7	ERDF PP8 UNIB	Digital interpretation tool	dialogue Earth & Man	
8	IPA PP1 DNP	Geological interpretation point Tekija	geomorphology	

Geopark Eisenwurzen: Three interpretation points focusing on the topics water and geology have been built in three villages of the Geopark Eisenwurzen (Landl, Wildalpen, St. Gallen). The interpretation points are situated nearby some important Geosites such as the GeoVillage Gams (GeoWorkshop) in the municipality Landl, Spitzenbach gorge in St. Gallen and SpringWater Museum in Wildalpen. Based on a uniform concept dealing with the geological effects of water, differing content-related key aspects are presented fitting the location of the respective interpretation point. The detailed content was elaborated during the first phase of the project in a participatory process with municipalities, regional stakeholders and experts. The basic concept envisaged each interpretation point to be constructed in the way of an information board with interactive turning elements (equipment), primarily focusing on the comprehensible presentation of geology and water of the targeted areas. Therefore, each of the interpretation points consists of (in German and English):

- Information and map of the Geopark and its visitor attractions
- Illustrated explanation of the geological history of the region and the occurring geological phenomena (with special emphasis on the influence of water) such as the ice age, karst springs, caves, gorges,…
- GEO for Dummies: Interactive element (equipment) consisting of rotating pentagons linking the geological phenomena of the region with its present visitor attractions. The interactive elements are also linking to other project partner destinations such as ERDF PP1 Balaton Geopark, ERDF PP3 GeoPapuk and ERDF PP4 GeoKaravanks.
- By actively exploring the region's phenomena and their related attractions of the present Geopark, the visitors will understand the geological history of the region and their current characteristics, ready to experience throughout the Geopark Eisenwurzen.

2. Interpretative planning process

Heritage interpretation is about connecting people to places, objects and events. It's about explaining the significance of tangible and intangible heritage and helping visitors – tourists and local people – to engage with and to value heritage site – and to find what it means to them. Interpretation is non-formal education that contributes to lifelong learning. It uses creativity and inspiration while maintaining the integrity and authenticity of the story you have to tell.

Good interpretation widens people's horizons and increases their satisfaction and enjoyment. It can also help to change visitors' behaviour and attitudes. For this reason, it's an important tool in managing sites and encouraging both greater awareness of their significance and support for their protection from local people and tourists. However, it must aim for high levels of planning, implementation, operation and maintenance.[3]

For a successful interpretation it is necessary to be carefully and strategically planned. Only if the themes and objectives of the interpretation are clearly defined, if we know exactly what we want to interpret and to whom, and why, if we carefully choose methods and means of interpretation, we will be able to monitor how successful and effective the interpretation is and, and if necessary, improve the imperfections. In the frame of activity 5.3 "pilot actions: demonstration of innovative methods and technologies of Geointerpretation" "Preliminary concepts and plans of pilot action" was developed following a joint template by project partners with pilot actions.

Planning of the interpretation site is very important starting phase in developing new interpretation site. In the first place an interpretation project should identify and present the most significant themes and stories and set the objectives (what you hope to achieve through interpretation: learning objectives, behavioural, influencing visitor actions; emotional objectives e.g. enjoyment, empathy etc.). Furthermore it is also important to decide how we will interpret heritage by choosing appropriate interpretation methods and outlining the most suitable way of presenting themes and stories so that visitors have stimulating experiences. Each interpretative planning process also define to who will we interpret by identifying future target groups (potential visitors, families, groups, organizations, residents, stakeholders, etc.). In the frame of Interreg Danube GeoTour project the Strategy on Management of Tourism Pressures in Geoparks was developed within WP3 and was considered in planning of pilot actions in order to better understand different impacts on nature and to avoid or reduce negative impacts on nature. It also helped clarified the aspect of nature protection to contribute to the holistic concept of protection, education, public awareness and socio-economic benefits for sustainable local development.

To sum up the following section was included in the interpretative planning process of **Eisenwurzen village interpretation points** pilot action in the frame of Danube GeoTour project:

- ✓ Why interpret this topic or site to visitors?

Over a period of millions of years, the powerful influence of water has been continuously modifying and altering the geological history of Geopark Styrian Eisenwurzen. A major focus

[3] Interpret Europe (2016): Engaging your visitors: Guidelines for achieving excellence in heritage interpretation, Witzenhausen.

of the pilot action is bringing this fascinating history to life for interested visitors and tourists accompanied by the detailed but understandable interpretation of water phenomena.

- ✓ What are you interpreting?

The region is very famous for its water richness and is deeply influenced by water (rivers, gorges and springs for example). A total of three interpretation points is concerned with this topic and explain this rather complex scientific subject matter in an innovative way.

- ✓ Who are your visitors?

A variety of visitors are exploring the Nature and Geopark Styrian Eisenwurzen. Our visitors are open to explore new outdoor experiences or love outdoor sports such as hiking and whitewater sports. The majority are daily visitors from the neighboring countries such as Germany, Czech Republic, Hungary or Slovenia for example. Neverthanless, the region is trying to attract visitors who are staying several days in the Nature and Geopark.

- ✓ Who is involved in the planning process?

The Geopark management was involved in the planning process. A project firm (E.C.O. – Institut for Ecology) had a contract to support us with their expertise in project management, content planning and design of the interpretation points. They also had to deliver and construct the interpretation points. During the process different stakeholders were involved, mainly from the municipalities where we built the interpretation points (Spitzenbach gorge, Spring Water Museum and GeoVillage Gams).

- ✓ What are the objectives (management, learning, behavioural, emotional objectives)?

The main objective is to reveal gradual geological changes of the region caused by the impact of water including influenced landscape. The three interpretation points will not only enhance and expand the existing offers within the Geopark Eisenwurzen but they can also be seen as a model for other members of the Geopark network, especially for geoparks consisting of karst and calcareous/limestone rock, that have been modified through the force of water in a similar or equal way.

- ✓ How are you interpreting?

The interpretation points consist of an information, map of the Geopark and its visitor attractions, illustrated explanation of the geological history of the region and the occurring geological phenomena. The interpretation applied also methodology called “GEO for Dummies”. An innovative interactive element was developed consisting of rotating pentagons which links the geological phenomena of the territory with its present visitor attractions. The interactive elements are also connected to other project partner destinations such as ERDF PP1 Balaton Geopark, ERDF PP3 GeoPapuk and ERDF PP4 GeoKaravanks.

- ✓ How are you including aspects of nature conservation and sustainable tourism?

By active exploring the interpreted phenomena and their related present attractions, the visitors will easily and better understand the geological history of the Geopark as well as its nature conservation aspects and current characteristics. In this way interpretion increases visitor experience in the whole Geopark Eisenwurzen and at the same time makes tourism attractions sustainable.

2.1. Description of pilot action and interpretation methods

In the frame of Interreg Danube GeoTour project 8 pilot interpretation sites as part of Danube GeoTour visitor infrastructure network were tested and implemented. They serve as reference and learning points for demonstrations of different interpretation methods for 8 most common geological phenomena and processes in the Danube geological area.

In the **Styrian Eisenwurzen UNESCO Global Geopark** three interactive Interpretation Points with corresponding mobile equipment are elaborated and established. They are located at key neuralgic points in the protected area. They present complex geological characteristics of the region in an interactive and comprehensible way. Additionally, and as a first step the visitor guidance system of the park was evaluated and revised.

Current status and revision of the visitor guidance system in the nature and geopark

The current visitor guidance system in the Styrian Eisenwurzen UNESCO Global Geopark has already existed for several years. Within this project it was re-evaluated and possible improvements have been suggested. To identify the current status, needed adaptions and possible improvements, a kickoff discussion was held. Throughout the whole protected area and especially at strategical important spots for visitors, explicit visitor information and signage is important. A modern and innovative visitor guidance system concept (including maps) was elaborated during this first project phase, which then serves as a basis for the second stage (see below).

Elaboration and construction of three Interpretation Points incl. Equipment

To explain the complex geology of the region, three Interpretation Points have been constructed at important visitor spots in the protected area. They act as visitor information points as well as for orientation within the park. Interactive components and simple graphical elements support the comprehensibility of the information points. Comprehensive literature and knowledge are necessary for the elaboration of the contents of the Interpretation Points, which have been created in a participatory process with geological experts and stakeholders of the region. The Interpretation Points and the Equipment have been designed in accordance with the Corporate Identity and design guidelines of the Styrian Eisenwurzen UNESCO Global Geopark.

Outcome of this second phase was the elaboration of the location, the contents, the layouts and the construction plans for three Interpretation Points.

Additionally, three movable technical devices (Equipment) have been produced. They provide geological information and can be placed and used at different spots in the Styrian Eisenwurzen UNESCO Global Geopark. At the moment they have been integrated into the Interpretation Points, where they can be applied until they are moved to other locations. When the total new visitor guidance system is finished the equipment will be exchanged within the various interpretation points. The positive thing about this is that the interactive elements are changing at every point from time to time. This gives every interpretation point a refreshment. It will be changed minimum once a year.

Figure 1: Village interpretation point in the GeoVillage Gams at the GeoWorkshop, municipality Landl

Figure 2: Village interpretation point in the Spitzenbach Gorge, municipality St. Gallen

Figure 3: Village interpretation point at the Spring Water Museum Wildalpen

3. Evaluation process of pilot action

Evaluation is a critical quality assurance measure in interpretation management and should be undertaken throughout the project, not just at the end. Evaluation is also a systematic process of determining 'somethings' value, worth or merit. When you evaluate your interpretation programme or project, it will help you develop your interpretation and to understand whether it is meeting its objectives or not.[4]

Evaluation should be an on-going process and thus it should be an integral part of the regular review of your on-site interpretation. There are a number of ways to divide the stages in the evaluation process, typically however there are five forms of evaluation which can be used to support your interpretation and these are; front-end, formative, remedial (process), summative (outcome) and impact evaluation.[5]

For evaluating pilot actions / interpretative methods in the frame of the Danube GeoTour project ERDF PP4 Geopark Karavanks proposed a qualitative assessment (formative evaluation) as well as quantitative assessment (self-evaluation questionnaire and summative evaluation) of developed pilot actions which was applied as a common approach in all pilot sites.

[4] Colquhoun, F. (2005): Interpretation Handbook and Standard - Distilling the essence.
[5] Dr. Ryland P, Dr. Welch S. (2016): Demystifying evaluation: a brief guide to the evaluation of interpretive media, activities and programmes, AHI Best Practice Guidelines 12.

3.1. Criteria for effective heritage interpretation

For evaluation purpose, especially for quantitative assessment in form of self-evaluation questionnaire we defined different criteria which we find important in evaluating of the effectiveness of the interpretation methods used in pilot actions of the Danube GeoTour project.

Firstly, we researched already exsisted criteria/indicators for assessing the quality and efficiency of different interpretative methods. The ICOMOS, International Council On Monuments and Sites established seven recommendations for effective cultural heritage interpretation: access & understanding, information sources, contex & setting, authenticity, sustainability, inclusiveness, research training & evaluation. For example, the IUCN - International Union for Conservation of Nature also developed Criteria for quality assessment of natural heritage interpretation. Furthermore The Museums, Libraries and Archives Council (MLA) came up with a framework called “Generic learning Outcomes” or GLOs to help museums think about the objectives and effectivness of interpretation projects.[6]

With the respect to all researched criteria, indicators and aspects, and according to the Danube GeoTour project application, we defined our own criteria which we find important in evaluating of the effectiveness of the interpretation methods used in pilot actions of the Danube GeoTour project (Figure 3). When selected the criteria we also took into account objectives of the European and Global Geopark Network (sustainable socio-economic development, education and teaching, preservation of the Earth heritage for present and future generations, ...). Defined criteria for effective heritage interpretation by ERDF PP4 Geopark Karavanks are following:

A. INTERPRETATION METHODS

For effective heritage interpretation it is important which interpretation method is used (personal, non-personal interpretation), and if some innovative audio-visual soulutions are available. In the case of personal interpretation story telling is an important component of effective interpretation and it is a powerful technique used to conjure up the spirit of place for visitors. Stories should be directly related to the site and linked to what people are likely to know already.

B. ACCESSIBILITY / DISABILITY

According to application form of the Danube GeoTour project interpetation should be adapt to the needs of people with disabilities (toileets, wheelchair acess, etc.) whenever it is possible. Text, heigh of the displays, good connection to the public transport network, available parking facilities etc., should be accesible to everyone.

C. KNOWLEDGE & UNDERSTANDING

Interpretation should be planned and delivered as a comprehensive programme to explain the site and its heritage to visitors with a range of interests, experiences and educational levels. People of all ages should be treated as equals – do not assume lack of knowledge, but also do not assume a high level of knowledge. Interpretation should give visitors an option to find out more detail, both on-site and through

[6] Rowehl J., Vigurs K. (2011): 10 Top Tips for Museum Interpretation, MLA.

publications and websites, while some visitors like to explore topics in detail and appreciate being provided with appropriate informations. Furthermore multi-lingual interpretation will attract a wider range of visitors. It is recommended to research key languages used in the area and provide some translated material.

D. ENJOYMENT, INSPIRATION, CREATIVITY, SKILLS

By defining indicators for effective heritage interpretation we also consider that interpretation methods within pilot actions should encourage enjoyment, inspiration, creativity by trying to do new things with involment of visitors to stimulate their interest (asking your visitors questions, using their experiences and encourage them to think with, design of panels, audio visual solutions in way which encourage thinking, discovering etc.). For successful interpretation is also important that visitors can gain new skills, change attitudes and future behaviour in way of developing more responsibility towards geological, cultural and natural sites, adoption of positive attitudes to the geology and other heritage through interpretation. Furthermore techniques which use different senses should be included in the interpretation which encourage visitors to look at, touch, listen to, smell or taste things around them. The senses trigger different parts of the brain and elicit different responses, smell for example is strongly connected with memory.

E. IMPACT ON NATURE

When planning an interpretative project aspects of nature conservation/preservation should be also consider. In case of Danube GeoTour project the developed Strategy on Management of Tourism Pressures in Geoparks in the frame of WP3 was included in the process of interpretative pilot actions developement. The interpretative site has to comply with the principles and standards of conservation of the geological and other heritage and its promotion in order to increase the visibility of the importance of protecting the heritage. The infrastructure and the activities connected to the interpretative places should not have any negative impact on the environment and interpretation should point out the environmental problems related to different activities in nature and suggest to visitors how to behave in nature to avoid or at least to reduce pressures. On the interpretative site there is also important that informations about the nature conservation (statuses, protection regimes) are presented. As the result such way of interpretation can contribute to the promotion of the nature conservation among the visitors.

F. IMPACT ON SUSTAINABLE TOURISM

The interpretation should have potentially positive effects on sustainable tourism. Gradually, the linkages between interpretation and sustainable tourism have grown and they have begun to be turned from being theoretical ideals into practical reality. Interpretative sites shall support the cooperation and networking of various groups, as well as maintaining traditions of various cultures of the region. They shall help to develop especially local economy and strengthen competitiveness of SME operating in the region and country as the whole. Skilled interpretation can be used to direct visitors and their spending to those local businesses and services which are economically marginal but which are important elements of the local economy and

community. These may be local post offices, restaurants, accommodation facilities, local transport services.[7]

Interpretation for visitors can be much more beneficial and sustainable if the local community is actively involved. Wherever possible local people should be involved in helping to decide whether or not to interpret, what to interpret, who to interpret to, as well as how to interpret. Local residents can take an active part in all the processes of interpretation, including the research and the presentation and celebration of place and people. Such participation can encourage communities to understand, to value and then to sustain their own environment, cultural resources and heritage.

Sustainable tourism should provide a quality experience for visitors, while improving the quality of life of the host community and protecting the quality of the environment. Respect the socio-cultural authenticity of the region, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.

[7] Bramwell B., Lane B. (1993): Interpretation and sustainable tourism: The Potential and the Pitfalls, Journal of Sustainable Tourism, Volume 1, No. 2.

Figure 4: Criteria for effective heritage interpretation**,** Source: Karawanken-Karavanke UNESCO Global Geopark

3.2. Qualitative assessment

3.2.1 Formative evaluation of interpretation methods

This type of evaluation typically occurs during the implementation phase to test interpretation project being developed. In the frame of this evaluation each project partner tested visitor reaction to the interpretation methods, for example - their attention or understanding of messages it is trying to communicate, feedbacks, … Project partners invited small focus group of visitors (approx. 10 potential future visitors). Participants were asked several questions, for example what works and what might need to be changed and gave opinions.

The formative evaluation has been done in the form of focus group at the Spring Water Museum in the municipality Wildalpen where one GeoInterpretation point is situated. Stakeholders of the museum were in the focus group. The meeting of the group took place during the seasonal opening of the museum on the 1st May 2019 when the group members had also a chance to test the interactive elements. The Geopark management tested their reactions as test visitors and asked for their opinions. Andrea Matousch and Oliver Gulas from the Geopark team leaded the group and 8 stakeholders were involved.
As a result, the stakeholders are very satisfied with the pilot action. It is a very innovative way to involve visitors, show the Nature and Geopark as well as give more information about the location and other sites in the region. As museum staff they reported that some of their visitors have already experience and tried out the interactive elements. The group was shortly discussing if the current location of the information board is appropraite. Some stakeholders were mentioning that maybe the major front site of the building would have been better. A further input was given on the construction work. As it was a two step apporach it was not clear for the visitors during the works what the equipment is about and if there will be more elements installed. But the total construction work was finished within one week anyway.
In addition, two critical points were mentioned. First of all, some participants think it is too much text on the boards. During the planning phase the Geopark management tried to shorten the content as much as possible. However it is very demanding to besides the content include also all necessary additional information about the project, Nature and Geopark and after all present this in two languages. The necessity of presenting all the information shall be considered when planning further GeoInterpretation points in the Geopark. Finally, two participants think that the information “How to use the interactive elements” could be better. It is not clear at first sight, how to use them. While other evaluators said it is definitely clear and well written. So this might also be evaluated for future GeoInterpretation points.
In conclusion it was a very constructive qualitative assessment. The main feedback was very positive and acknowledges the background work with the signed company.

3.3. Quantitative assessment

For quantitative assessment of pilot actions we developed self-evaluation questionnaire though which each project partner assessed the newly developed interpretation methods. The self-evaluation questionnaire consists of defined indicators and parameters which we find important in the evaluating the effectiveness of the interpretation methods used in pilot actions of the Danube GeoTour project.

In quantitative assessment also summative evaluation is included, which was implemented in the form of visitor satisfaction questionnaire. The results are part of Deliverable 5.3. "Evaluation report on pilot actions with lessons learnt."

3.3.1 Self-evaluation questionnaire

Self-evaluation questionnaire (Table 2) consists of defined indicators and parameters which we find important in evaluating the effectiveness of the interpretation methods used in pilot actions of the Danube GeoTour project.

The questionnaire has six (6) sections from A to F, each section with a set of statement has to be self-evaluated on a scale from 1 to 5. Please select / underline the relevant value for your pilot action. The values are: 1 – low degree; 2 – quite low; 3 – medium; 4 – quite high; 5 – very high degree. Under the questionnaire more specific description of each set of statements from section A to F are given and in two sentences the result of the quantitative assessment for each statement (A1, A2,... to F4) should be discussed.

Table 2: Self-evaluation questionnaire

A. INTERPRETATION METHODS					
A1. Using the combination of personal and non-personal interpretation	**1**	2	3	4	5
A2. Using of innovative audio-visual solutions (very simple, digital)	1	2	**3**	4	5
A3. Using of story telling	1	**2**	3	4	5
B. ACCESSIBILITY / DISABILITY					
B1. Interpretation (text, graphic stylelighting, height of the displays, etc.) is accessible to everyone, so all visitors can experience the whole point of view	1	2	3	4	**5**
B2. Some aspects of the interpretation are designed for people with disabilities	1	2	3	4	**5**
B3. Places to have a rest, toilets and wheelchair acess for people with disabilities are available	1	2	3	**4**	5
C. KNOWLEDGE & UNDERSTANDING					
C1. Informations are given in easy to understandable language	1	2	3	**4**	5
C2. Informations are prepared and given in different languages	1	2	3	4	**5**
C3. More detailed interpretation for those who want to find out more is available and offer or suggest ways to explore the subject further (hyperlinks in websites, QR codes, etc.)	1	2	3	4	**5**
D. ENJOYMENT, INSPIRATION, CREATIVITY, SKILLS					
D1. Interpretation encourage visitors to try and do new things and it is stimulating	1	2	3	4	**5**
D2. Gaining new skills and changing attitudes and future behaviour of visitors	1	2	3	4	**5**
D3. Different senses are included in interpretation – encourage visitors to look at, touch, listen to, smell or taste the things around them	1	2	**3**	4	5
E. IMPACT ON NATURE (NATURE CONSERVATION)					
E1. Incourage the individual and to decrease the massive tourism.	1	2	3	4	**5**
E2. Interpretative places (pilot actions) do not have negative impact	1	2	3	4	**5**

on the nature.					
E3. Interpretation explain the impacts of various actions – encouraging visitors to take care about the geosites and to behave responsibly (raising awarness).	1	2	**3**	4	5
E4. Interpretation include various nature conservation aspects, which are displayed in different ways.	1	2	3	4	**5**
F. IMPACT ON SUSTAINABLE TOURISM					
F1. Possitive impact on the environment, society and economy	1	2	3	4	**5**
F2. Support local economy, especially use of local transport and accommodation infrastructure	1	2	**3**	4	5
F3. Reflecting the needs and requirements of tourists and local inhabitants	1	2	3	4	5
F4. Respect and enhance the historic heritage, authentic culture, traditions and distinctiveness of host communities	1	2	3	4	**5**

TOTAL SCORE (max. 100 points): 83

A1. Personal interpretation means something presented to people by other people. It includes the following: guided tours, storytelling, workshops, etc. Non-personal interpretation means visitors do not have to rely on someone else to present it. It includes some of the most common forms of interpretation such as: leaflets; self-guided trails; taped audio trails; interpretive boards; and information centre exhibits etc.

In the case of the GeoInterpretation points only non-personal interpretive methods (boards) are used. A combination of personal and non-personal interpretation was not used.

A2. QR codes are link to further information that people can access using their mobile phone, using of interactive touchscreen technology, tablets, augmented reality, etc.

The interpretation points are not using audio-visual solutions. Only QR codes are on the boards for further information.

A3. Storytelling is a powerful technique used to conjure up the spirit of the place for visitors. Stories should be directly related to the site and linked to what people are likely to know already. With storytelling you can also encourage people to take part as characters in the story.

The three points are not exactly using storytelling as they are only referring to various sites in the Geopark which use storytelling for interpretation.

B1. The text is clearly printed and legible; is complemented by headings and / or subheadings; is divided into paragraphs and uses correct spelling, grammar and syntax. The text is in a height and angle in which it can be read easily, and do not block views or features of interest.

The information is divided into paragraphs and uses everything mentioned above correctly. The information is available in English and German.

B2. Offering special programms and guided tours for people with different disabilities (individuals with mobility limitations; individuals who are blind or partially sighted; individuals who are deaf or hard of hearing; individuals with developmental and/or learning disabilities); large print labels, Braille labels and maps, audio guides, audio descriptions, sign language interpretation, etc.

The GeoInterpretation points have interactive equipment for visitors to explore. This is accessible also for people with disabilities (individuals with mobility limitations; individuals who are deaf or hard of hearing; individuals with developmental and/or learning disabilities);

B3. Places to sit down, special toilets for people with disabilities and wheelchair acess are available. It helps people with walking difficulties and other mobility problems as well as anyone with tired legs and feet.

Two information points include places to sit down, toilets and wheelchair access. The GeoInterpretation point in the Spitzenbach gorge is accessible for wheelchairs but it is located along a hiking trail and in a gorge. So, there are no toilets and places to rest at the moment. Further improvement is foreseen.

C1. Very simple descriptions. Visitors require well structured and easy-to-digest language. An average visitor might spend as little as 3 seconds looking at a graphic panel before browsing to the next area.

It was not easy to cover all the necessary information within the information board. The content was shortened as much as possible, but with two languages and information concerning the funded project as well as the Nature and Geopark it still might be too long.

C2. Providing personal (guided tours, etc.) and non-personal heritage interpretation in native and other foreign languages.

Besides German description also English information appears on every panel.

C3. Interpretation should be planned and delivered as a comprehensive programme to explain the site and different heritage to visitors with a range of interests, experiences and educational levels. There is an option to find out more detail, for example on the homepage and through other publications.

For further information QR codes and hyperlinks are available.

D1. Involvement of visitors and encouragement of interaction to stimulate their interest (asking your visitors questions, using their experiences and encourage them to think for themselves, design of panels, audio visual solutions in way which encourage thinking, discovering etc.).

The interactive equipment ensures the involvement of visitors. They can spin their favorite attraction in the Nature and Geopark and also see further touristic sites in the area on the map.

D2. Interpretation which can encourage visitors to develop more responsibility towards geological, cultural and natural sites, adoption of positive attitudes to the geology and other heritage through interpretation.

Every GeoInterpretation site covers the most important facts about the area. It shows visitors the importance of the place where they are standing. It raises awareness also for the whole Geopark, Geology, natural as well as cultural aspects and other Geosites.

D3. Techniques which use several senses (sight, sound, touch, smell and taste). We experience everything through our senses. We use our intellect, memories and assumptions to process the information, but it all starts from the raw materials we receive from looking, touching, smelling, listening, tasting and a whole range of lesser headlined senses. They trigger different parts of the brain and elicit different responses, smell for example is strongly connected with memory.

The information board covers the visual sense and the interactive elements encourages the visitor to touch and try out. Therefore, two senses out of five are involved.

E1. The infrastructure of pilot action is built for smaller groups and individual visitors.

The infrastructure is built for smaller groups and individual visitors. The panels are not visible if there is a large group around.

E2. The infrastructure and the activities connected to the interpretative places does not have any negative impact on the environment.

The pilot actions are not having any negative impacts on the nature. Two sites are installed at the location of already existing visitor centers. The third information board is within a nature protected area thus the Geopark management established the geopoint in contact with the authorities. As the board was planned and built along the official hiking trail and forest road, approval was given by the responsible authority and no negative impact occurs.

E3. The interpretation (in visitor centre or info point) point out the environmental problems related to different activities in nature and suggest visitors how to behave in nature to avoid or at least to reduce pressures.

The pilot actions were also planned to raise awareness. This means awareness-rising messages are integrated in the content of the info points. There is no further information on environmental problems or rules on behavior in nature.

E4. The informations about the nature conservation (statuses, protection regimes) are presented. Interpretation contribute to the promotion of the nature conservation among the visitors.

As stated before, awareness-building and improved visitor information have been the main issues to plan and install these pilot actions.

F1. Is your pilot action based on the rules of sustainable development and has no negative effect on our environment, as well as on society and economy? All pilot activities should not lead to pollution of the environment, whether directly or indirectly, and their implementation should be energy-saving, based primarily on renewable energy sources. Pilot action shall support the cooperation and networking of various groups, as well as maintaining traditions of various cultures of the region. And last but not least, it shall help to develop especially local economy and strengthen competitiveness of SME operating in the region and country as the whole.

The pilot actions follow the prinicples of sustainable development and have no negative impacts as stated above. The materials used are weather proof and long-lasting.

F2. Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Most of the GeoInterpretation boards were constructed by a local steel manufactory. The company also installed the panels together with the municipalities.

F3. Provide a safe, satisfying and fulfilling experience for visitors, available to all without discrimination by gender, race, disability or in the way not negatively affects the day-to-day routine of local inhabitants, respecting their needs, habits and culture.

Everything is respected as stated.

F4: Respect the socio-cultural authenticity of the region, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.

The socio-cultural authenticity of the Geopark is respected. Historic and cultural heritage is also described at the GeoInterpretation points.

3.3.2 Visitor satisfaction summative evaluation

In the frame of quantitative assessment we decided to do as well summative (outcome) evaluation of interpretation methods in developed pilot actions to make sure that visitors are enjoying and learning from interpretation, and to check whether interpretive objectives have been met. This summative evaluation will be implemented in a form of visitor satisfaction questionnaire.

The summative (outcome) evaluation is generally the most widely and regularly used form, it is carried out after the interpretive project has been completed and is most often used to assess its success in relation to its objectives. In this type of evaluation, visitors are typically encouraged to tell staff what they think about their experience often through a questionnaire, interview or focus group.[8]

In the frame of the Danube GeoTour pilot action developed, visitor satisfaction questionnaire was prepared (Annexes 7.2) and each project partner gave this questionnaire to visitors of their interpretative site. The results of visitor satisfaction questionnaire of each project partner will be a part of Deliverable 5.3.1 “Evaluation report on pilot actions with lessons learnt”.

4. Recommendations

As we are dealing with GeoInterpretation points which are not big in size, it is very useful to place them along touristic flows and other sites in the Geopark. We see these three GeoInterpretation points as a first step of a new visitor management system as the one of the Geopark Styrian Eisenwurzen was quite old. This means that the first planning step - where to place your interpretation points - is very important to think about. This is the reason why we have evaluated the visitor management system as a first step. Along this new concept it was possible to decide better where to exactly place the first three GeoInterpretation points. Furthermore, the concept is now a ground source for further interactive interpretation points beyond the project.

We highly recommend using interactive elements, main information about the Geopark and a map along the GeoInterpretation. These are crucial elements to address main facts to the visitors. Our GeoInterpretation sites provide also an overall information of the region and go beyond pure geological facts about the certain location. This is in our opinion a very good

[8] Dr. Ryland P, Dr. Welch S. (2016): Demystifying evaluation: a brief guide to the evaluation of interpretive media, activities and programmes, AHI Best Practice Guidelines 12.

mix as various topics are attracting more visitors. Geology alone might not be everybody's thing. And a overall map for orientation is helping a lot.

5. Conclusion

The planned Interpretation Points are explaining the geology of the region in a modern, interactive and informative way. For the development the Geopark management informed themselves about different visitor offers which are showing the geology of European Geoparks. It served as a basis for the development and the design of the Interpretation Points for the Styrian Eisenwurzen UNESCO Global Geopark.

Main objectives during the development of the Interpretation Points were establishing a playful approach explaining the geology of the region and enabling synergies between the Interpretation Points and other visitor offers of the geopark.

Equipment

Additional to the three Interpretation Points, so called Equipment was designed to interactively inform visitors about the geology of the region. The equipment is designed as movable in order to have the possibility to use the tools also for other information purposes.

Locations

The Interpretation Points are placed at three neuralgic points in the Styrian Eisenwurzen UNESCO Global Geopark. They inform interactively about the geology of the region and present further offers of the Styrian Eisenwurzen UNESCO Global Geopark, which can be visited.

Based on the previous analyses of the current visitor guidance system, the communities St. Gallen with the new established visitor offer Spitzenbach gorge, Wildalpen with the Spring Water Museum and the GeoVillage Gams have been identified as locations for the Interpretation Points. All three locations are frequently visited and offer different geological visitor offers.

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7. Annexes

7.1. Visitor management concept in German

7.2. Output Factsheet

7.3. Visitor satisfaction questionnaire

This visitor satisfaction questionnaire is going to be used at the three GeoInterpretation sites in the next period until the end of 2019 to gain knowledge about the satisfaction of the developed GeoInterpretation.

VISITOR SATISFACTION QUESTIONNAIRE

WE NEED YOUR OPINION!

About the presentations & experience on your visit

Dear visitor,

We would like to thank you to give us the opportunity to serve you with our product/services. The purpose of this short questionnaire is to find out how you feel about the presentations or experience with our product/services and if there is something to be improved. Please know that there are no right or wrong answers to the questions, nor are some responses better or worse than others. We simply want to know your honest opinion about your experience today.

THE QUESTIONNAIRE WILL TAKE LESS THAN 5 MINUTES OF YOUR TIME.

THANK YOU!

1. **Where did you hear about our product/offer? (You can pick more than one answer.)**

   a.) Newspaper, magazine, radio

   b.) Brochure, internet

   c.) On someone´s recommendation

   d.) Other (specify where):_____

2. **Did you know something about the presented topic before the visit?**

   a.) Yes

   b.) No

3. **Which new informations have you gained or learned during your visit ? (You can pick more than one answer.)**

a.) more about our Geopark

b.) more about Geoparks in wider area

c.) geological, natural and cultural heritage

d.) importants of heritage preservation

e.) sustainable geotourism

f.) Other:_____

4. How would you rate your experience/satisfaction with following aspects of the offer/product? The values are: 1 – very dissatisfied; 2 – dissatified; 3 – neutral; 4 – satisfied; 5 – very satisfied.

	dissatisfied <----------> **satisfied**				
Quality of the presentation	1	2	3	4	5
Amount of the information provided	1	2	3	4	5
Ability to hold your interest	1	2	3	4	5

5. Please read carefully following sentences and rang them in a scale from 1 to 5. The values are: 1 – very dissatisfied; 2 – dissatified; 3 – neutral; 4 – satisfied; 5 – very satisfied.

Place is acessible, places to have a rest, toilets, etc. are available	1	2	3	4	5
Information is understandable and in different languages	1	2	3	4	5
The presentation made me curious and encouraged me to try and do new things	1	2	3	4	5
The presentation made me think and to talk about the topic	1	2	3	4	5
The presentation was enjoyable and interesting	1	2	3	4	5
Innovative audio-visual solutions (very simple, digital) were available	1	2	3	4	5

The presentation made me understand the importance of the protecting heritage	1	2	3	4	5

6. Please indicate how much you are inclined to <u>tell another person</u> each of the following things about this place. In this 7-point scale, please tick the choice of your preference:

a.) You should visit (7) ___ ___ ___ ___ ___ ___ ___ (1)You should not visit

b.) The place is interesting (7) ___ ___ ___ ___ ___ ___ ___ (1) The place is boring

c.) Coming here is enjoyable (7) ___ ___ ___ ___ ___ ___ ___ (1) Coming here is *not* enjoyable

d.) Coming here is worth the time (7) ___ ___ ___ ___ ___ ___ ___ (1) Coming here is *not* worth the time

7. How would you rate the presentation overall?

The values are: 1 – very low quality; 2 – low quality; 3 – medium quality; 4 – high quality; 5 – very high quality.

Low quality <----------> **High Quality**				
1	2	3	4	5

8. How satisfied are you (please circle)? The values are: 1 – very dissatisfied; 2 – dissatified; 3 – neutral; 4 – satisfied; 5 – very satisfied.

dissatisfied <----------> satisfied				
1	2	3	4	5

9. What can we do to improve your experience?

Demographics of the person who completed the questionnaire:

10. Age: _____ years old

11. Gender *(circle):* MALE FEMALE

12. Country of origin: _____

12. Education (What is the higest degree you have completed? If you are currently enrolled in the school, please indicate the highest degree you already received.):

a. Less than a high school diploma
b. High school degree or equivalent
c. Bachelor's degree (e.g. BA, BS)
d. Master's degree (e.g. MA, MS, Med)
e. Doctorate (e.g. PhD, EdD)
f. Other (please specify):_____

Thank you for taking your time!