

Assessment of attractiveness (value) of geotouristic objects

PAVOL RYBÁR

*Institute of Geotourism, Technical University in Košice, Letná 9, 042 00 Košice, Slovakia
(E-mail: pavol.rybar@tuke.sk)*

ABSTRACT

The article reviews the geotouristic objects by scoring. There are evaluated two basic attributes of objects - natural and anthropogenic. The resulting pair of points gives a picture of the value of geotouristic objects.

Keywords: Assessment of attractiveness, geotourism montaneous tourism, natural object, anthropogenic object, criterion, point ranking, scoring

INTRODUCTION

The assessment of attractiveness of geotouristic objects would be one of the tools that could help person interested in new environment – geotourism. Ultimately it may help him to resolve the fundamental question: to visit or not visit the site? Analysis should also help to see the site as an object of tourism with dominated natural - geological character, or object with a predominance of anthropogenic nature - more falling into the category of montaneous tourism. To solve this problem author has prepared classification of both aspects – natural and also anthropogenic one. The ranking of these two aspects in selected criterion should gives information on whether if visitation such an object will brings to tourist satisfaction. It is clear, that the value of different touristic objects varies.

ASSESSMENT OF ATTRACTIVENESS OF GEOTOURISTIC OBJECT

There are places that are popular and visited by tourists in large measure, and there are also those that do not attract tourists at all. Our aim is, inter alia, to describe the reasons that would explain this fact objectively.

Before we begin to evaluate geotouristic objects it is necessary to mention that it is not possible to determine the attractiveness of the locality by logical analysis, nor any scientific methods express the opinion that should be generally respected. Regardless of our evaluation a locality may be valued, i.e. visited by tourists, or it may be disregarded.

Generally the assessment of attractiveness of any object would not be a problem. May it be a village, a geosite, or a touristic region? There are respected scales for infrastructure elements evaluation, e.g.: the hotel quality (rating in stars), road (first, second class), tourist trails (easy, moderate, difficult, Alpine).

If we decide to measure something by scoring - by point ranking, we need to determine the intervals of the point scale. We decided that the score be between 0 to 8 point scale, which allows sufficient opinion differentiation on the object within the limits of chosen criteria. Thus is possible to rate (evaluate) surface relief, surface waters, forests, climate, tourism infrastructures, accessibility by roads, objects of mining heritage, etc.

It is necessary to add, that point ranking is very subjective and is based on knowledge, experience and taste of the ranking person. There is always the possibility that tourists can appreciate different values than ranking

person. That is why, when evaluating a geotouristic object, it is important to state the methodology used by assessment. It is also suitable to give to person who is interested sufficient description and image of the object together with the point ranking.

Let us try and describe the properties of an object, which will be assessed from two basic points of view. Firstly, let us perceive it as a natural object, and secondly, let us look for and appreciate all its anthropogenic elements [1].

EVALUATION OF THE ASSESSED OBJECT AS A NATURAL OBJECT

First, it is necessary to define the criteria by which the object is evaluated. In terms of evaluating the natural character of the object, we selected the following criteria [2]:

- Primary geological properties
- Uniqueness of the object
- Accessibility of the object
- Existing scientific and professional publications
- Conditions of observation (research)
- Safety criteria
- Availability of information about the object
- Visual value of the object
- Value of provided services
- Object in the tourist area

1. Primary geological properties

Within the field of geotourism, the objects with the highest ranking will be those, that are worth to be classified as geosites, be it from mineralogical, petrographic, stratigraphic, tectonic, or paleontological point of view, or any other reasons, or in case the object is a part of geopark. Objects classified in international networks will acquire the highest point ranking; objects of local importance lower ranking. The term “other object” defines an object classified as geotouristic, but only from anthropogenic and technical point of view,

without any value for natural sciences.

2. Uniqueness of the object

Those objects that are unique within large units (e.g. continents, mountain range, or orographic unit) are of the highest value. Naturally, object that occur several times in certain area, e.g. sandstone formations in Carpathian Mountains, will be assess with lower value. The term “other object” defines an object classified as geotouristic, but only from anthropogenic and technical point of view, without any value for natural sciences.

3. Accessibility of the object

The accessibility of an object may be assessed according to time needed for accessing the object, or by the accessibility itself. The difficulty to reach Mount Sinai or the tower of St Elisabeth Cathedral in Košice city, may make it impossible for less mobile people to visit such an object. An opposite example could be watching the sunrise at a beach, or access to Herľany geyser near Košice city.

On the other hand, the journey to relatively remote object from Starý Smokovec (High Tatras, Slovakia) to Hrebienok (High Tatras, Slovakia) alone can be a sought-after tourist attraction.

Position of an object in the middle of protected area restricts its accessibility as well, for example, in case people can only walk along the marked paths, whereby the object is positioned far from these paths. This is indeed a negative restriction for geotourism, because the geotourism is by its definition based on research character of site description and restrictions of geotourist's movement are also restrictions of thorough geosites research. Thus the geotouristic objects within protected areas will have lower point value.

Private ownership of grounds the locality is positioned on, is another important negative restriction of locality's value. Sometimes, the accessibility of an object is limited, or even the entry to a location can be prohibited.

4. Existing scientific and professional publications

As we already stated, one of the conditions for classification of a geological object into one of the geosites networks is the need for scientific work on/with the object. The existence of scientific or professional literature concerning the object is a great example.

5. Conditions of observation (research)

This criterion assesses the possibility of active object examination. It is an important feature within geotourism, and it needs to be evaluated. The valorisation of geotouristic objects is set (for example) by presence of outcrops, on which the geotouristic sights can be observed. The outcrop can be observed along railway tracks, or roads, or on walls of abandoned quarries. Observation of these geotourist objects is also possible on naturally occurring outcrops along streams, forest roads, rock faces, etc. Decrease in point ranking within this criterion is related to accessibility of geosites.

6. Safety criteria

Access to geotouristic objects can be connected with danger. The danger of underground spaces is connected with possibility of head injury, or even graver danger, such as chances of caving falls. Objects placed in high altitudes bring with themselves the danger of falling, landslides, and so on. Objects positioned in depths, such as wells or ditch bottoms, require movement according to special safety regulations. Visits to old mining works require observance of whole set of safety regulations. The movement in alpine terrain requires increased caution, too. Underwater object, such as coral reefs and other, are very specific and they may require a special training.

7. Availability of information about the object

Tourists need available information for

realisation of their plans. Be it in the form of scientific-popular books, brochures, image publications, tourist guides, or in the form of scientific materials about national parks or geoparks. For geotourists, geological maps with explanatory notes are of high importance. Other important information elements are educational boards placed in terrain. Nowadays it is natural to get first, basic information, on the Internet. In addition, the power of first information is opinion-shaping, and no popular or scientific publication can replace the underestimation of this fact.

8. Visual value of the object

Assessment according to this criterion depends on object's surroundings. Relatively common object with beautiful view can gain higher point ranking as an attractive object in the middle of nowhere.

The method of landscape evaluation is based on assessment of visible radius, landscape relief, but also on types of flora.

Object in mountainous landscape, with view reaching to far distances and depths, is of the highest value. Object in plain landscape with great view also acquires high ranking. Understandably, an object in landscape with no view of its surroundings does not have great visual value. As far as this criterion is concerned, an object overlooking man-made structures negatively affecting one's perception is practically valueless.

9. Value of provided services

An object with a study room and a library and laboratories for research purposes has the highest point ranking. Accommodation and catering are two other highly valued services. Geotourists (like any other tourists) favour services provided by stores selling minerals, historical objects, books or advertising objects. Conference rooms for lectures and other presentations are welcome. From this point of view, an object is worthless, if no services for geotourists are provided.

10. Object in the tourist area

These are the objects marked on maps and underpinned by marketing, or objects visited by holidaymakers, or objects that are "along the road" between two touristically visited locations. An object that has not been underpinned by marketing is of no point value.

EVALUATION OF RESEARCHED OBJECT AS AN ANTHROPOGENIC OBJECT

In case of montaneous tourism, anthropogenic activity in geotourism means actions connected to mining activities. As in the previous case, we have to define criteria by which the object is evaluated. In terms of anthropogenic character of the object, we selected the following criteria [2]:

- Age of the object
- Historic value of the object
- Aesthetic value of the object
- Authenticity
- Value of municipalities, objects and cultural routes reconstruction
- Excellence
- Emotional value
- Utility value
- Value of provided services
- Safety criteria

1. Age of the object

It is safe to say that the older an object is, the more valuable it is, for the number of those oldest objects is small.

2. Historic value of the object

As far as geotourism is concerned, this value is connected mainly to mining undertaking. Sets of technical monuments - building complexes, "tajchy" lakes, set of technical monuments in a limited area, and so on, have the highest point rankings. Lower ranking is assigned to individual objects such as:

- Technical objects – e.g. adit mouths, "tajchy" lakes, adits open also for tourists, shafts, winding machines,

mining machinery, stamping mills, brine tanks, and so on.

- Buildings related to historical mining – Chamber Office, salt storehouse, open-air mining museum, mining museums, buildings of historical mining schools, burgher houses in centres of old mining towns, churches, etc.

3. Aesthetic value of the object

This criterion is independent of age and historic value. Object may be assessed on its own, or together with its surroundings. The importance lies in architectonic aspect, preservation state, reconstructions, etc. However, this category is very subjective.

4. Authenticity

This is an important criterion as far as architecture and buildings are concerned. It takes precedence over the aesthetics criterion. As a good example could serve preservation of medieval paned-windows, or old glass window panes that do not transmit light to the room well, which could be a negative factor from aesthetic point of view. Authenticity is valued in open-air museums, and also in museum, archaeological and archival localities.

5. Value of municipalities, objects and cultural routes reconstruction

The highest ranking can be assigned to an element characterising cultural route connected to mining and mining-related activity in larger region. Let us state an example: a railway road along old mining settlements where iron was exploited. Gothic route, or prospective salt and mining routes are similar cases. Reconstructed mining towns and settlements like Smolník (historical mining town, Slovakia) or Špania Dolina (Slovakia) also gain positive ranking.

6. Excellence

Uniqueness and exceptionality of an object is taken into account also by including them to the UNESCO World

Heritage List. Objects unique in their character in (e.g.) European measure are also exceptionally valued. The uniqueness can be expressed by the phrase "one of its kind in Slovakia", "one of its kind in Slovenské rudohorie mountains", "one of its kind in Banskohodrušský ore area", etc.

7. Emotional value

This value is present if an object is related to famous person or event of global/international/national significance. Further, it could be connected with object's enlistment to an extremely sensitive area of Banská Štiavnica Mining Academy, etc. Object related to the "iron king" Andrásy has emotional value especially for Hungarian tourists, etc.

8. Utility value

Object chosen as an interesting from point of view of montane tourism can serve several functions. Museum, restaurant, or information centre can be situated there. Many original old technical objects changed their character, for example in the socialism era; many valuable objects were turned to silos, or agricultural storehouses. At present, on the other hand, many of those objects are being modified to a form that can be utilised in the means of tourism.

9. Value of provided services

The uniqueness of occurrence, its considerable distance from other localities worth visiting or admiration, is usually a negative element from the viewpoint of locality value. Geotourism is not cultivated only by loners, people on the run from civilization. It needs to be supported by suitable services. And these are not only services providing accommodation and catering, or transport and movement of

people, but also services enriching geotourist's imagination, providing information, improving knowledge, even providing education and study opportunities, etc.

The highest ranking should be assigned to:

- tours down the mines designed for tourist visits (*Wieliczka, Glanzenberg adit*, etc.);
- open-air mining museums with exhibits of architecture, mining objects and technical monuments;
- demonstrations of activities in open-air mining museums, such as gold cradling, demonstration of development of rock disintegration;
- unique collections and information in museums;
- information in mineralogical, petrographic and palaeontological collections;
- visits to specialised archives and libraries connected with scientific lectures;
- presentations of audiovisual and virtual programmes explaining the formation and development of natural attractions, but also development of mining technologies, or arrangement of old mining works in selected area;
- lectures on mineralogy, palaeontology, geology, history of mining, etc.;
- visits to operational mining works with demonstration of modern technologies.

10. Safety criteria

Here we can apply similar method of assessment like in the safety assessment of natural geotouristic objects with particular reference to the anthropogenic origin of the object.

**POINT RANKING OF GEOTOURISTIC OBJECTS ATTRACTIVENESS
(CHART PART)**

Criterion – natural object:

Character	Points
Primary geological properties	
Object is a part of geopark listed in European Geoparks Network	8
Object listed in international geosites network	8
Object is a part of geopark	6
Object listed in national geosites network	6
Object not listed in any geosites network, but due to its character should belong there	5
Object of local importance	3
Other object	0
Uniqueness	
Object unique within Europe	8
Object unique within The Western Carpathians	6
Object unique within orographic unit	5
Object unique within hiking distance	4
Object typical for region	3
Other object	0
Object accessibility	
Comfortable access	8
Accessible for a person with average fitness condition	7
More difficult – passing high elevation – steps, ladders	5
Very difficult – specialised guide, or a need for special training	4
Protected area with limited freedom of movement	
Inaccessible for different reasons	0
Existing scientific and professional publications	
Scientific and professional geological literature	8
Map records only	4
Locality without description	0
Conditions of observation (research)	
Suitable	8
Difficult	4
Unsuitable	0
Security criteria	
Object, surroundings safe	8
Object, surroundings, secured by security elements, protection tools at disposal	5
Object, terrain in dangerous environment, without security elements	0
Information availability on the object	
Available and quality information on the Internet	8
Existence of educational-popular form of information	6
Existence of scientific form of information	5
Incomplete information	2
Missing information	0
Visual value of the object	
Object in mountainous landscape with great distance and depth views	8

Object in plain landscape with great view	6
Object in landscape with no view on its surroundings	3
Object with view on man-made works negatively affecting one's perception	0
Value of provided services	
Study room with library and laboratories for research purposes within the object	8
Accommodation and catering offer	7
Stores selling minerals, historical objects, books and advertising objects	6
Presence of conference rooms	5
Offer of accommodation for large groups, or just of refreshment	4
Other services	2
Object with no provided services	0
Object in the tourist area	
Object marked on maps, underpinned by marketing	8
Object visited by holidaymakers	5
Object "along the road" between two touristically visited locations	3
Object not underpinned by marketing	0

Criterion – anthropogenic object:

Character	Points
Age	
Object from prehistoric, ancient or Roman age	8
Medieval object	6
Object from period between 16 th -19 th century	5
Newer object	3
Newly established object	0
Historical value	
Object as a part of set of technical monuments - building complexes, "tajchy" lakes, set of technical monuments in a limited area	8
Individual object documenting mining activity – knock tower, adit mouths, winding machines	7
Mining museum, open-air mining museum, mining archive	7
Object related to historical mining activities	6
Other historical object	3
Object with no historical value	0
Aesthetic value	
Architecturally preserved works (house, mansion, church, archaeological findings)	8
Objects in beautiful natural environment	6
Aesthetical reconstruction of mining settlement, set of objects	8
Technical monument with aesthetic value	3
Object without given aesthetic value	0
Authenticity	
Preserved authentic elements and details (buildings, technical works and objects)	8
Museum or open-air museum with authentic technical monuments	7
Archaeological finding documenting usage of mining, or processing technologies	6

Mining archive and library with number of authentic historical mining maps and mining literature	6
Authentic object of mining technology	5
Models, panels and copies of authentic technologies and objects	3
Other	0
Value of municipalities and cultural routes reconstruction	
Cultural route connected to mining activity	8
Reconstructed mining municipality	6
Reconstructed parts of mining municipalities	4
Not reconstructed mining municipality	3
Other objects	0
Excellence	
Listed in UNESCO World Heritage List	8
Object exceptional in European measure	7
Object present in notable written and pictorial works documenting the history of mining	6
Object important in historical ore area	5
Object typical for selected mining area	3
Other object	0
Emotional value	
Object related to famous person or event of global/international/national significance	8
Object visited by foreign tourists due to reverence for their native or hero	6
Object related to historic figure or event of Slovak national significance	4
Object with no emotional value	0
Utility value	
Multifunctional object adjusted to needs of geo and montane tourism	8
Object connected to presentation of geo and montane tourism	7
Mining museum, open-air mining museum, mineralogical collections, mining archive, unique library of historical mining books	6
Object offering historic services – mining canteen, mint, etc.	5
Other object	0
Value of provided services	
Tours down the historical mines	8
Demonstrations of old technologies – gold cradling, flint chipping	7
Multifunctional virtual mining - presentation	6
Visit to operational mining works – demonstrations of modern technologies	5
Lectures on mining, mineralogy, petrography, palaeontology, social development of mining, famous persons in mining, mining law, etc.	4
Store selling minerals, historical objects, books, and advertising objects	3
Other services	2
Object with no provided services	0
Safety criteria	
Object safe, requiring no safety measures	8
Safety fully secured by services provider	7
Safety secured, protection tools not provided	5
Short training provided	3
Object without provided safety measures	0

CONCLUSION

The value (evaluation of attractiveness) of geotouristic object is then given by a pair of numbers that represent its natural-scientific and anthropogenic value. The highest point value, score, is 80/80, which means that object was assessed in all categories with the maximum "80" point rate. Number 80 is a sum of ten eights in natural-scientific and anthropogenic criteria.

The value 80/0 means that an object has the highest possible value from the "geo" viewpoint, but zero value expressing "mining" part of assessment. Vice versa, the value 0/80 indicates that an object has no "geo" value, but has maximal technical and

historical "mining" value. Assessment with two numbers close to 80 marks an object with exceptional geotourist and mining value. Assessment with numbers close to zero means that an object is not of great geotourist value [2].

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