

## Potential use of the coal and ore mining related industrial heritage for tourism purposes in the North Hungarian Region

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### ABSTRACT

A research into the possibilities of establishing industrial heritage tourism through in-situ exhibitions of the mining heritage in the North Hungarian Region was carried out in order to designate the most preferable target areas for such developments. For this, coal and ore mines as potential destinations, their infrastructural background including accessibility were surveyed and evaluated along with an objective evaluation applied for the quality of quarters and catering places as well as connections to other nearby attractions.

**Key words:** mining heritage, tourism development, regional development, North Hungarian Region

### INTRODUCTION

The formerly rich ore occurrences of precious metals (gold and silver), iron and heavy-non-ferrous metals (primarily copper, lead and zinc) as well as salt and building material deposits have been known in the Carpathian Basin for many centuries. They played an important role in the life of the region's residents who made their living from mining. However by today, the declining industry has merely disappeared. To present and acquaint mining activity and its history as well as to facilitate the subsistence of former mining settlements, tourism development provides a good basis.

Landscapes and buildings impacted by mining have been saved in nearly all countries where mining activities have been closed down providing a significant role to the re-use of such values in the long-term regional development (Bircher, 2006; Dávid, 2008). Representing the significant

mining activity related industrial heritage (structures, mining grounds, shafts, equipments etc.) in their original settings as well as the use of mining sites for tourism purposes however is basically lacking from the tourism supply of the North Hungarian Region, i.e. in a depression hit region where tourism is conceptualised in all development documents as a potential sector for development.

### THE ROLE OF MINING HERITAGE AND ITS PRESENCE IN REGIONAL DEVELOPMENT AND IN THE TOURISM OF THE NORTH HUNGARIAN REGION

Tourism is a nearly inexhaustible resource in the rural settlements of Hungary that could contribute to the improvement of high unemployment by recognising and taking use of the attraction of the natural

and cultural heritage found in the settlements and their surroundings (Jablonská et al., 2009; Dávid & Karancsi, 2010). Tourism revenues strengthen the region's economics and, in direct ratio to this, the quality of life can also be improved. Preserving and presenting mining heritage, from the point of view of tourism, represents a new supply offered, a new attraction for both experts and interested parties that would likely result in an increasing number of visitors in the target area. By this and through the recultivation and rehabilitation of areas degraded by mining, development based on internal resources and endowments can be implemented containing the following elements:

- Designation of the routes for coal and ore mining study trails,
- Designation of thematic mining routes and
- Designation of the locations for mining museums in deep and/or opencast mines.

The reconstruction of industrial monuments and making them visitable represents a new branch of tourism at many regions of Europe (Gonda, 2002). As an example, one of the most relevant mining museums in Bochum operating along with a mining historical research institute and attracting more than 400,000 visitors per annum can be mentioned. Also, the museum in Caphouse Colliery located at the Western rim of the Yorkshire coal mines, undertaking relevant educational activities, should also be noted.

As a precedent from Central Europe, the 'Východoslovenské múzeum v Košiciach (East Slovakian Museum of Košice)' ([www1](http://www1)) carrying out exemplary work including trainings for kindergarten and primary school students is worth mentioning as well as the 'Banícke múzeum v Rožňave (Mining Museum in Rožňava)' with a number of mining-related exhibitions and its efforts. As for Hungary,

several attempts in order to integrate mining heritage into the urban development concept were made in Pécs (Szirtes, 2003).

By tourism development, the preservation and sustainable use of the built and natural heritage can be expected as well as a significant number of new jobs would be created along with improved possibilities to obtain supplementary income. Tourism brings revenues into the region with primary beneficiaries being tourism suppliers including attractions, quarters, catering units, souvenir vendors and local craftsmen whereas the secondary beneficiaries are tradesmen, small-commodity producers and suppliers serving 'the temporary residents'. Of the incomes realised at enterprises, local business tax while for the guest nights, tourist tax must be paid both increasing the revenues of local communities and municipalities for development.

The multi-facetedness and multiplicatory impacts of tourism development based on mining-related industrial heritage are well indicated by the goals of such activities (Fig.1). For these, the strategic goal is to increase the tourist attraction of the natural and cultural heritage; the related overall goal is to improve the quality of life, to decrease out-migration from the region (experienced mostly among the youths as well as to increase the settlements' incomes and revive overturn of the regional SMEs. To this, five basic criteria should be fulfilled that are as follows: (a) establishment of a visitor-friendly, accessible aesthetic environment, (b) improvement of the infrastructure, (c), reconstruction of the mining or archaeological site, (d) establishment of a tourist path and (e) reconstruction and expansion of quarters. These are implemented through achieving various goals such as the establishment of an archaeological or mining education centre, designation of a study trail due to which the increasing number of visitors is expected. By reconstructing and expanding quarters, employment rates will be higher, services

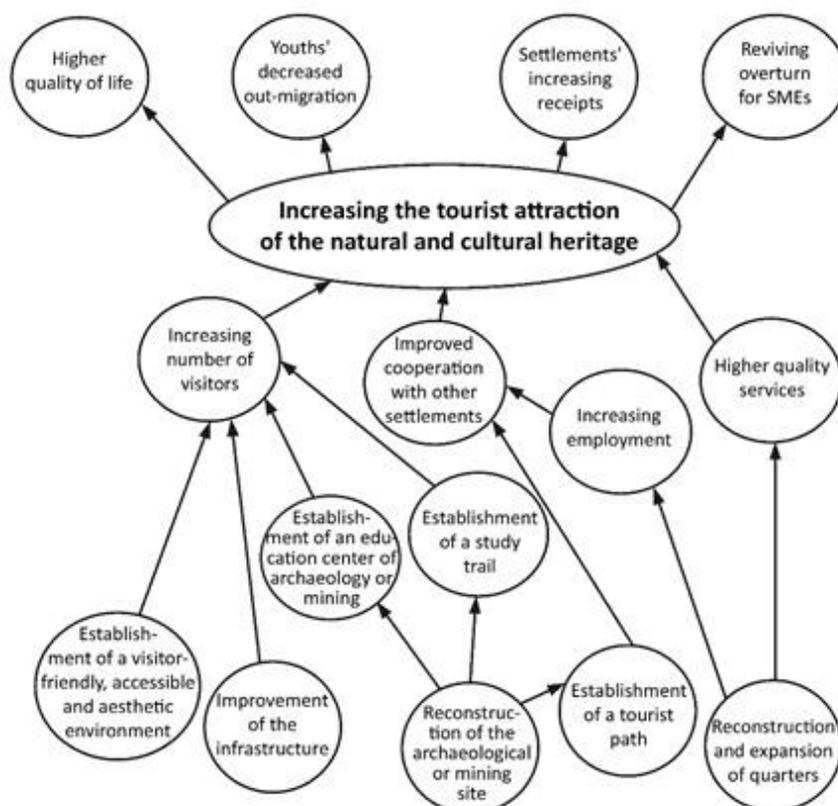


Fig. 1 Goals of tourism development based on mining heritage. Modified after Gonda (2003)

will be of higher quality as well as cooperation among the surrounding settlements will be improved. At settlements realising such development this will potentially result in, through the increased revenues, the evolution of a better and more liveable environment that could be a factor of attraction for both the region's residents and visitors.

The currently executory North Hungary Operational Programme (2007-2013) itself neither takes into account nor mentions the use of mining heritage for tourism purposes. The relevant and particular elements of the programme include however, among others, the reasonable and sustainable use of local resources and, according to its content, e.g. the creation of jobs can be expected to be realised through the improvement of tourism competitiveness. In order to achieve to programme's overall goal, the region's economic heritage and resources should be built upon as well as its natural and cultural endowments should also be taken into consideration. It is also important to

mention that even the region's accentuated tourist destinations (world heritage sites, wine regions, historical monuments, spas etc.) are not adequately used as revealed by the sector's regional indicators (earnings, the number of guest nights etc.) not reflecting the actual values of the region's endowments. Thus it can be presumed that successfulness of attractions related to the presentation of mining heritage can accentuated when such are connected to other attractions making up complex products (Gerner et al., 2009). From the point of view of the impacts of tourism it is relevant to study the length or shortness of the time required to obtain the experience demanded (Urry, 1990).

## METHODS – EVALUATION OF THE USE OF MINING HERITAGE FOR THE PURPOSES OF TOURISM

Our research aimed at surveying and elaborating the evaluation methodology of the background required to the use of the

region's coal and ore mine locations as potential destinations for tourism purposes.

As a first step of our research, based on the literature and the already available map database (CORINE, and the database of the Mining Office of Hungary, the region's coal and ore mine locations were surveyed and the potential future destinations were primarily designated (Fig. 2).

Within the framework of this survey, not only the location of mines but also their physical parameters (depth, length, security etc.) as well as their landscape aesthetic values are studied as such are factors decisively influencing their potential future use.

Following this, studies into the infrastructural background related to the use of potential attractions for the purpose of tourism including the factors (in the surroundings of the given attraction) listed below (Fig. 3):

- transport, accessibility (approach and public roads: number, category and length; railway lines: number and category; public transportation: number, frequency; accessibility index),
- quarters (number, type, quality, distance)
- commerce and catering units (shops based on their categories, the number, quality and distance of restaurants)
- tourist information centres/organisations (the existence of an information point and its distance from the attraction)
- joint attractions (connection to other attractions, other branches of tourism and their supply in the region)

As a result, an information and database will be available based on which the suitability of potential destinations can be objectively evaluated and the most preferable target areas for development can be selected.

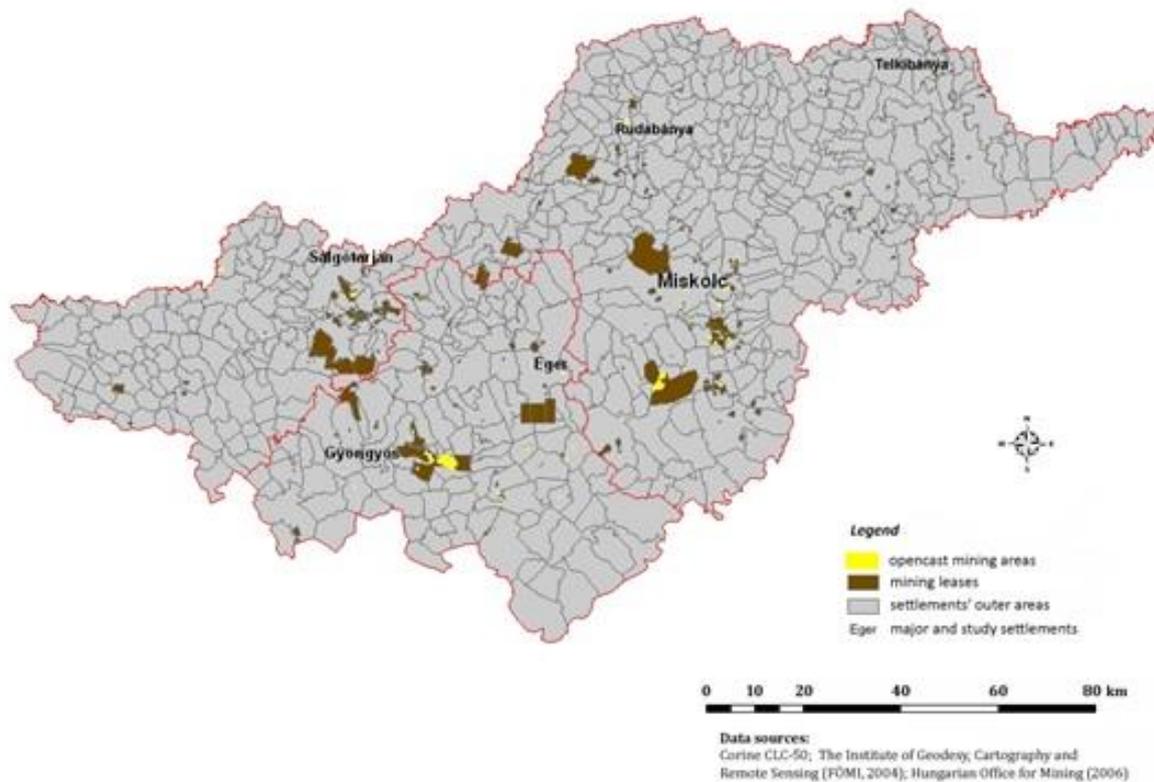
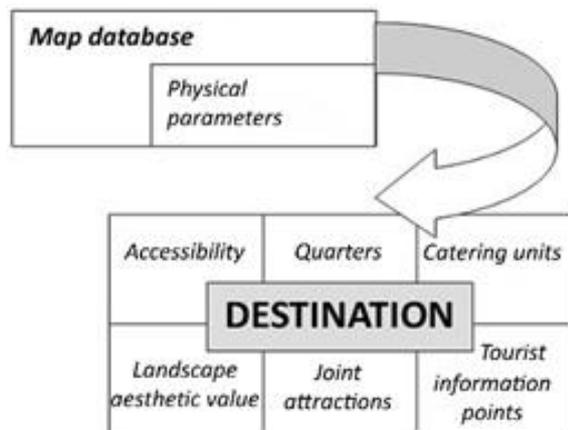


Fig. 2 The location of mining grounds in the North Hungarian Region, 2006. Modified after Baros and Bujdosó (2007)



**Fig. 3** The study methodology and system of the use of mining areas for tourism purposes (Baros and Bujdosó, 2007)

## RESULTS AND DISCUSSION

In this paper, a summary is given on the results and conclusions obtained from the research carried out for 3 sites and settlements (Fig. 2) as listed below:

- a. Nógrád Historical Museum , Mining Exhibition (Salgótarján)
- b. Mining History Museum of the County of Borsod-Abaúj-Zemplén (Rudabánya)
- c. Industrial Historical Collection at Telkibánya

### Nógrád Historical Museum, Mining Exhibition (Salgótarján)

At the eastern rim of the Veremoldal, at the site of the former mining colony at Salgótarján, Europe's second and Hungary's first natural underground coal mining museum is located. It was opened in 1965 at the 125<sup>th</sup> anniversary jubilee of brown coal mining in the Nógrád region and it is a declared industrial monument since 1980. The renewed new permanent underground exhibition was opened on 24<sup>th</sup> February 2005 in order to deliver learning to the visitors of the mining museum in an up-to-date, adventurous way as well as to preserve and acquaint younger generations with the history of the region's mining (Szvicsek, 2007). The museum contains 3

parts:

- The underground mining museum,
- The historical exhibition and the
- Open air museum (skanzen).

This underground mining museum used to be a functioning coal mine from 1879 until 1905 and was called József Inclined Shaft. The museum was established in the joint system its tunnel and the Károly Shaft (1889-1914). In the József Inclined Shaft, coal of high quality was mined producing an amount of coal of 776,000 tonnes during the period between 1937 and 1951. However, it was a mine with a high risk of frequent water inrush (Nagy-Szabolcsi, 2006).

### Mining History Museum of the County of Borsod-Abaúj-Zemplén (Rudabánya)

One of Hungary's mining historical collections was established in Rudabánya. It is a museum that can be divided into 4 sections:

- A historical exhibition along with the permanent and temporary exhibitions
- The Aladár Földvári Exhibition Hall
- The Artificial adit and
- The industrial skanzen.

At the museum's permanent exhibition, mining related heritage, traditions, sculptures, mining equipment, kits, models of mineworking, historical papers, dress uniforms, ornamental spontoons, ornamental stoups, the mine manager's office and the officer's dwelling are displayed. A library is also found in the museum. Its documents and books, represented by ca. 3000 books and journals, embrace the entire history of mining in Hungary (Heim, 2009). At the permanent exhibitions in the Aladár Alföldi Exhibition Hall, visitors can see findings from the county and the Zemplén Mountains. A separate section is provided for the palaeontological findings as well as for the local and international minerals and meteorites. The artificial adit approximately 15 km in length exhibits the most wide-

spread methods of mineworking and lining constructions. In the industrial skanzen (or, in other words, in the industrial fleet) old transportation and commodities, remaining from those formerly used here, are displayed between the museum buildings.

### Industrial Historical Collection at Telkibánya

In one of Telkibánya's oldest buildings, presumably built in the early 16<sup>th</sup> century, 6 halls exhibit the history of precious ore mining around the Village of Telkibánya, mineral mining in the Tokaj-hegyalja Region, the famous potteries, the forestry in the Zemplén Mountains, the finest minerals of Hungary and the memorial room of the grantor Kádár Family (Fekete, 2009).

### Evaluation of the results

Temporary changes in the visitor statistics of the three exhibition sites studied can be considered to be similar to other museums. As for Salgótarján, the number of visitors in the mining museum in the 1970s was 5,000-10,000 per annum increasing to 20,000-30,000 visitors per annum by the late 1980s followed by a decline to approximately 20,000 visitors per annum in

the 1990s and somewhat below that figure in the mid-2000s (Szvicsek, 2007; Sztancsek, 2008). This decrease in the number of visitors can be explained by the increasing travel costs, the general decline of domestic tourism in Hungary as well as the pulling of other attractions and international destinations (i.e. international travels becoming increasingly attractive).

A decline in the number of visitors during the 1990s can also be observed for Telkibánya, starting in 1997 and lasting for 4 years. In this case, however, stopping and inverting the negative tendency took place from 2001 when the exhibition was renewed. It can be concluded from the data that a revival of exhibitions or the realisation of new exhibitions is required to maintain the number of visitors. It is also likely that the next increase in 2004 was due to the building's restoration (Fekete, 2009). As for Rudabánya (Fig. 4), a significant growth was experienced in 2005 that can be linked to exhibiting new archaeological-palaeontological findings.

Students as a possible target group of potential developments should also be mentioned here. They represent a relevant segment of visitors in nearly all of the years

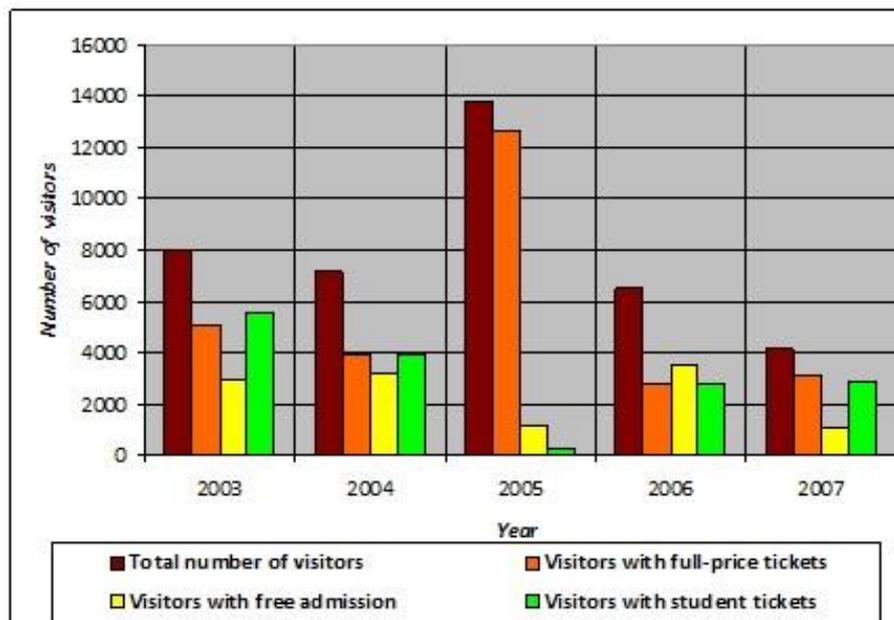


Fig. 4 The number of museum visitors in Rudabánya (in 2003-2007)  
Source: Fekete (2009), based on visitors' statistics of the museum

studied (except 2005), approximating the number of visitors with full-price tickets. In Salgótarján, ca. 5-6.5 % of all visitors are made up by international tourist who, according to the statistics, represented more than 60 countries in the past 15 years.

Regarding accessibility, as far as road accessibility is concerned the Town of Salgótarján is in a rather advantageous situation. It is only in a distance of 100 km from Budapest and is accessible partly on the M3 motorway and partly on a 50 km section of the main road No. 21. the journey demanding less than 1 hour that will be further decreased when the main road (being the county's most important and busiest route) will be extended (likely by 2015). For Rudabánya, visitors have to use the M3 motorway to Miskolc then, after diverging from the main road No. 26 (for ca. half of the 40 km section), road conditions are inadequate. By regular bus services, running in every 30 minutes or 1 hour, the settlement can be reached from the surrounding settlements. Due to its unexploitedness, rail passenger transportation has ceased. By car, the Village of Telkibánya can be accessed from

Miskolc on the main road No. 3 (i.e. the continuation of the M3 motorway) and after diverting from it on bad quality subsidiary roads at a 70 km long section. A low number of regular bus services also run between the surrounding settlements. Not only are these inadequate but also the 9 services per day running to the county seat Miskolc. The village is located to a distance from the nearest railway line.

For quarters and catering units however, the Village of Telkibánya can be mentioned as a positive example. This small village with nearly 700 residents has a 3-star hotel, 2 youth camps, 2 hostels, 2 inns, 3 suites and 12 guest houses with a total number of beds approximately 350. Temporary changes in the number of beds and guest nights between 2000-2007 are indicated in Fig. 5. In the centre of Rudabánya however, a hotel accommodating only 60 guests can be found with catering possibilities upon demand. Other than this, quarters are only found in the neighbouring settlements.

This is also the case for catering units: only 4 are available in Rudabánya (buffet, confectionary, pub and pizza-house) with their standards all requiring improvement.

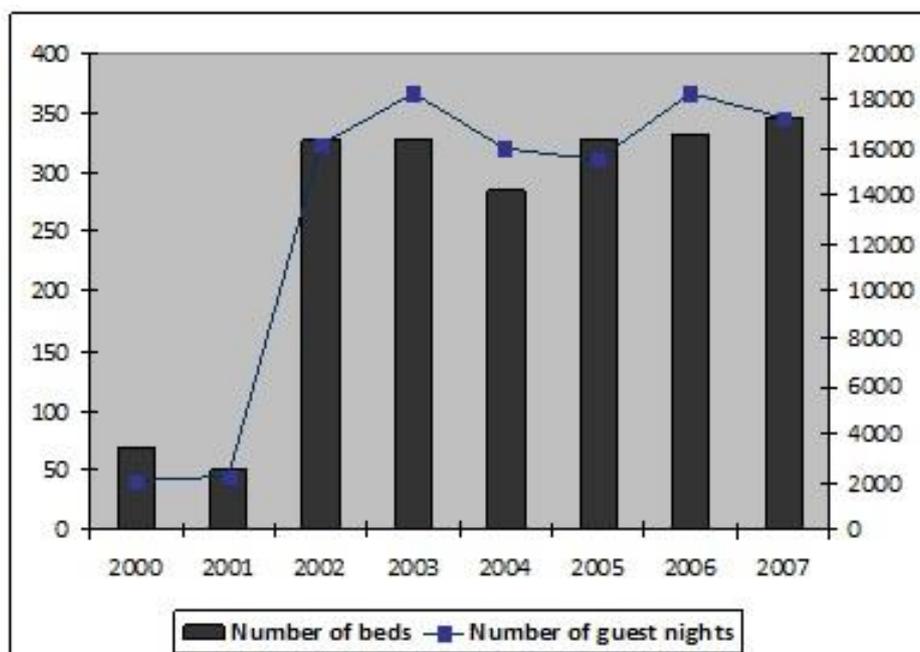


Fig. 5 The number of beds and guest nights in Telkibánya (2000-2007)

Source: Fekete (2009)

As probably the most positive feature, the existence of joint attractions can be mentioned for all three destinations studied. They are all surrounded by a high number of attractions known both by domestic and, in some cases, international tourists (as e.g. for Rudabánya, the Aggtelek Cave and for Telkibánya, the Tokaj Wine Region can be mentioned), located in a usually small distance (10-25 km). All 3 regions have a rich history and unique natural endowments thus with an appropriate route mapped out they offer one- or multi-day recreation abundant in experience for visitors. Nevertheless it is also their feature that despite the endowments described above, tourism is far behind its possibilities. This reflects the lack of complexity and connectedness of these programmes.

A summary of the studies carried out is given in Table 1.

## CONCLUSIONS

Among the strengths of the settlements studied, their accessibility, the high number of nearby attractions and the continuous renewal of mining exhibition sites with fulfilling the visitors' demands can be mentioned. Weaknesses include the bad conditions of the subsidiary roads, low accessibility by public transportation, low public safety and the lack of connectedness to other attractions.

Our presupposition according to which such developments should focus on students as a target group has been proved: such attractions, in addition to education

and popular education also facilitate raising awareness aiming at the preservation of cultural heritage. It was also proved that novelties and continuously developed, updated exhibitions sites are found to be not only interesting but in some cases there is high demand.

As a result of the tasks carried out, for the sites designated and selected for development, particular recommendations can be made and the possible method to display the given attraction can be defined. To this, the following factors should be taken into consideration:

- Principles conceptualised in all local and regional tourism development and planning documents, especially tourism development based on local endowments.
- Principles of the sustainable tourism development. Having them followed tourism development strategies with a primary aim being the implementation of a more effective and efficient nature conservation policy and practice and in the meantime providing benefits in solving the socio-economic difficulties of the region's residents can be elaborated (Sütő et al., 2011).

The revival of tourism based on this new type of supply can contribute to the region's strengthening competitiveness, to the development of backward rural and urban areas hit by the depression of the heavy industry and, by the creation of jobs and infrastructural developments, to the improvement of the quality of life.

**Tab. 1** Evaluation of the settlements studied

Evaluation criteria	Evaluation		
	<i>Salgótarján</i>	<i>Telkibánya</i>	<i>Rudabánya</i>
Accessibility	+	+-	+-
Quarters	+-	+	-
Catering units	+-	+	-
Joint attractions	+	+	+
Tourist information point	+	+	-

*Legend: + adequate; +- partly adequate; - inadequate*

*Acknowledgements*

*The paper was compiled within the frameworks of the TÁMOP Programme (Social Renewal Operative Programme) Research, Innovation, Cooperation - Strengthening the cooperation of social innovation and research networks by the collaboration of Eszterházy Károly University of Applied Sciences, Bay Zoltán Applied Research Non-profit Ltd. and Agraria TISZK Non-profit Ltd, project identification number: TÁMOP-4.2.1.D-15/1/KONV-2015-0013. The project is co-funded by the European Union and the European Social Fund.*

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