

Territory of Eastern Slovakia - area of mining heritage of mediaeval mining

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ABSTRACT

This article discusses the significance of medieval mining in eastern Slovakia as a mining heritage and its application in geotourism. It represents the mining heritage from several points of view as natural, geological, cultural heritage. Shortly informs about mining towns in the East Slovak territory and in the North-East Hungarian territory, which established Association of Upper Hungarian Mining Towns.

Keywords: mining heritage, mining towns, medieval mining, cultural routes, geotourism

INTRODUCTION

Mining and contemporary priorities of the society do not stand side by side. The environmental organizations are strongly opposed to new mining works and require restrictions towards the existing mining operations, and they call for the healing of mother nature's wounds caused by the former mining operations.

Mining has been a part of human existence since the Paleolithic period – the Lower Stone Age. As early as that, there were groups of people dealing with collecting, and later on processing non-ore materials. At that time they founded long distance trade with raw materials, such as obsidian, hornstone, and others. Copper and bronze trade exceeded the continental measures. The same can be said about transfer of the first metal-processing technologies. That is only one side of the coin – that of technology and trade. Subsequently there is a specific group of people creating a special category of population towards the society - miners.

As early as in the medieval age, miners

were a specific group of inhabitants, which is documented e.g. by royal privileges granted to the mining towns. The miners were free, predominantly subordinated directly to the king. They joined together in guilds, created and followed the law of mining. They were at the birth or boom of natural sciences, e.g., geology, mineralogy, chemistry, geodesy, cartography, they initiated the occupational medicine and security, originated and developed several new technologies, e.g., metallurgy, the use of explosives, water management, drainage of the deepest and vast underground spaces, their lighting, and above all their achievements stands tall the beginning and further development of technical and higher education. The listing is not final.

The liquidation and reclamation areas after mining, as well as the standardized technological procedures after the closure of mining activities in 20th century, simultaneously brought the liquidation of the unique mining works, technology equipment, machinery, abandonment of the former mining settlements with the following development of modern housing

sites. All those solutions were considered correct in order to end hard work, unsuitable living conditions in the mining communities.

In this manner we have "victoriously" lost both: the unique technological and technical works created and used by the miners and a centuries social aspect of miners and mining communities.

At this moment, let us appeal to those involved: if there is a desire to preserve biodiversity in order to save natural riches having been developed for hundreds, thousands or millions of years, and mankind should not leave a negative impact behind, then there might exist a desire to preserve some kind of "technodiversity" or "sociodiversity", connected with activities that has been related to thousands years mining contribution of mankind.

MINING HERITAGE

Mining heritage in Slovak terminology forms a part of the category "technical monuments". But term mining heritage has a much wider meaning. Incorporates all: natural, historical, architectural, technological, technical, artistic, documentary, geomorphologic, and other aspects. Thus mining heritage includes, in great part, the heritage of the miner as a human being within the mining communities that had invested their possessions and lives into specific mining conditions.

Definition of mining heritage is complicated, because it should be associated with both: geological, geomorphologic, as well as natural heritage. Another time is mining heritage related to cultural heritage - historical, architectural, archaeological, industrial, technological, technical, and other attributes. Mining heritage can also cover territory, which have long depended on mining. In territorial terms, we may assign mining heritage in different categories (tab. 1). In general, the concept of heritage can be defined by

cultural, natural and mixed categories. This is a case that covers the most areas where mining existed for a long time.

According the classification of mining heritage made by *Javier Carvajal Domingo Gómez* [2], we have modified this classification on the way we usually understand in terms of Institute of Geotourism (tab 1). All subsets shown in the table, as natural heritage, geological heritage, etc., relate to mining heritage or to geosites.

In a subset *natural heritage* (tab.1) we understand species of fauna, flora and minerals, which were not present previously in the micro-region, respectively wilder area, before mining. Abandoned mines, whether underground or surface, providing conditions for the existence of a new type of biotic and abiotic species. Within the subset *geological heritage* (tab. 1) there are allocated such aspects which belong to geosites defined in geotourism [5, 6].

Within the subset *mixed heritage* (tab. 1) we follow the broader view on a country affected by mining activities. These changes caused by abandoned quarries, or mines reclaimed by water surfaces, or otherwise differently reclaimed mines (terraced gardens, recreational areas, etc.). Dumps after underground mining usually remain as scars on the appearance of the landscape.

By the help of *cultural heritage* (tab.1) we can study and describe mining prehistory and history. Architectural elements in the mining region and artifacts of mining technologies create also part of cultural heritage. Migration of skilled miners and metallurgists into the areas with rich natural resources, meant not only spread of know-how, but also occupation of mining areas and transfer of cultural habits by colonists. Interesting and important part of mining heritage is presence of King houses or Comorian yard (Kammerhof) and Mints in the mining territory. Also important families associated with mining and metallurgy are part of mining

Tab. 1 Distribution of Mining Heritage

Mining heritage			
Natural heritage	Geological heritage	Mixed heritage	Cultural heritage
Fauna	Paleontology	Landscape	History
Flora	Mineralogy	Ecology	Prehistory
Minerals	Petrography		Ethnology
	Geomorphology		Architecture
	Structure geology		Technology
	Hydrology		Technical objects
	Hydrogeology		Mining school
	Vulcanology		Development of science
			Royal Institutions
			Mining museums
			Archives
			Significant families bound with mining and metallurgy
			Mining law
			Customs, manners, mythology

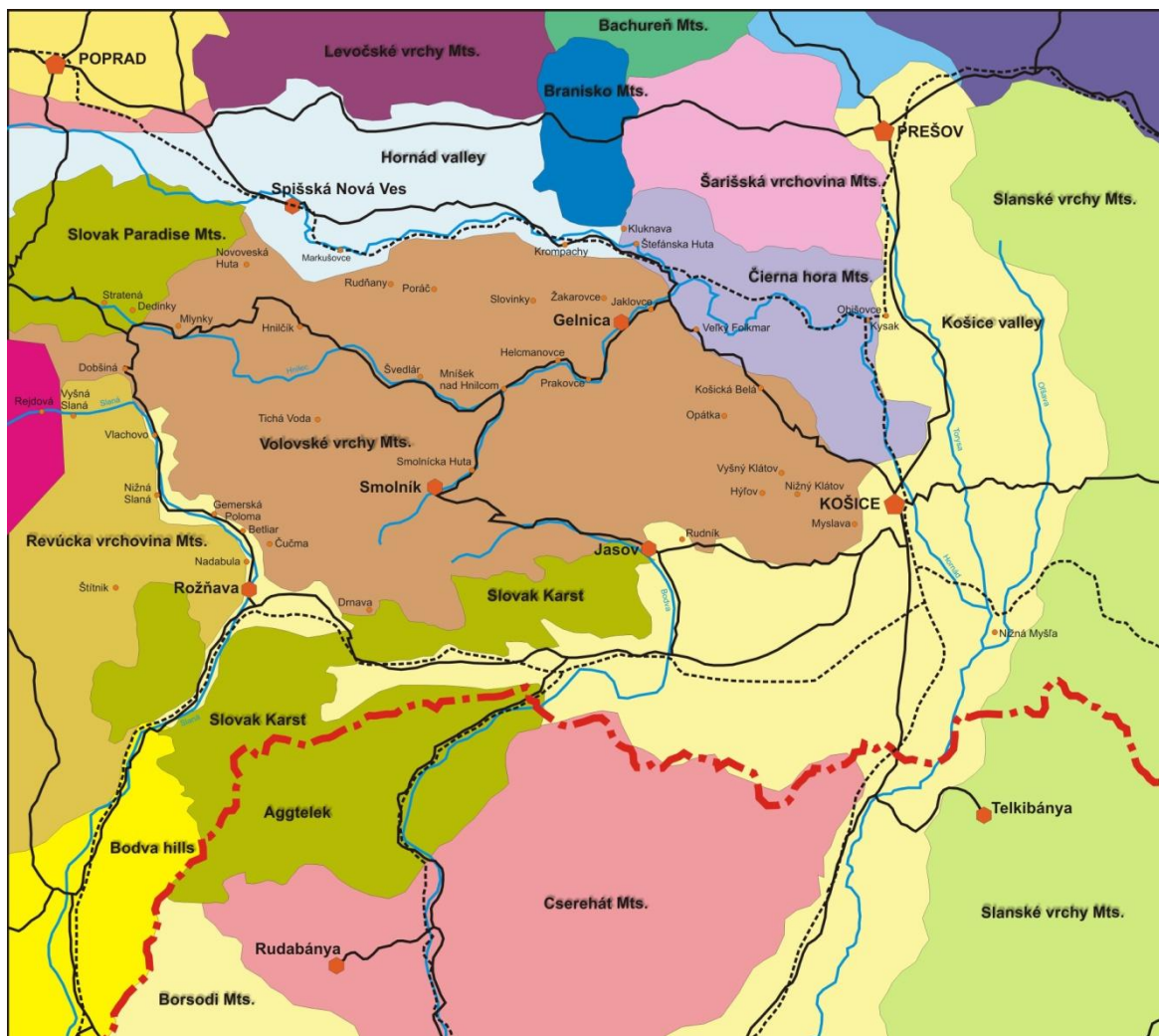


Fig. 1 Territory of East Slovakia with significant mining towns (Upper Hungarian mining towns)

heritage. Mining heritage associated with the mining education is formed by school buildings and prominent personalities who worked at the school [3]. Mining museums and archives are establishments whose primary mission is to save and preserve the mining heritage. Another interesting area of mining heritage is the preservation of customs, and mythology associated with mining.

MEDIEVAL MINING ON THE TERRITORY OF EAST SLOVAKIA

Deposits of precious and non ferrous metals East Slovakia territory (Upper Hungarian mining towns), Central Slovakia (Lower Hungarian mining towns), and in Transylvania and district of Baia Mare (nowadays Romania), was „Goldmine” of Europe and the whole World, especially in the 13-18th centuries. There were periods when two thirds of the world’s gold production and three quarters of world’s silver production were provided by this region. From forty to sixty percentage of treasury revenue of the Kingdom of Hungary comes from mining and related

incomes. Mining was in the hands of the treasury and nobility, but the latter was controlled by the royal court. The 14th century was a significant, „Eldorado” period of the region [1]. Mentioned mining regions were significant until the middle of 19th century. Centers of Upper and Lower Hungarian mining towns were Gelnica and Banská Štiavnica.

Mining activity in East Slovakia started in the 12th century and significantly developed with settlement of German miners after the Tartar Invasion (1241). Most important mining towns were Gelnica, Smolnik, Jasov, Rožňava, Spišska Nová Ves, Telkibánya and Rudabánya (last two named mining towns occur in Hungary). These seven mining towns, which were granted royal privileges, established Association of Upper-Hungarian Mining Towns. Legal relations and judiciary were determined in their meeting held on 26th and 27th December 1487 in Kosice. They all agreed to use the mining law of Gelnica, as the oldest and most important mining town in the region. The Chamber of these seven towns acted as Superior Court.

The common mining law created similar



Fig. 2 Tartar raids, miniature from Illustrated Chronicle, Szechenyi Library, Budapest [7]

circumstances for the miners and mining occupants in all towns of this important mining region. Therefore the people of the seven towns moved often from one town to the other and acquired mining site, land and smelter. According to the agreement of the Upper Hungarian Mining towns, disputes between miners, especially cases on wage, were judged in first instance by the master miner. Serious cases were under the jurisdiction of Superior Court.

Beyond these seven associated mining towns, other settlements also mined and exploited precious metals in Upper Hungary. After the Battle of Mohács 1526, the Association of the Upper Hungarian Mining Towns dissolved. Gelnica, Smolnik and Telkibánya got into the hands of the Szapolyai family and so the previously free royal mining towns simply became land of the landlord. Importance of mining in this region decreased. Upper-Hungarian mining towns sank temporary to market towns.

SHORT PRESENTATION OF MINING TOWNS

(members of Association of Upper Hungarian Mining Towns in the East Slovak territory)

Gelnica

The town was established by German colonists (guests) in the 12th century. The town's real development started after the Tartar Invasion, when German settlers arrived to replace the killed citizens. Gelnica soon became the center of the surrounding mining towns. In 1264 Hungarian king Béla IV. (Arpád) awarded town privileges for Gelnica. These privileges were extended by the king Charles Robert (Anjou) in 1317, by the king Louis the Great (Anjou) in 1359, and by the king Sigismund (Luxembourg) in 1435. Therefore Gelnica was elevated to free royal town. The 15th century was the golden age for Gelnica, when a great number of silver and copper were mined there, later iron mining became dominant.

In the end of the 19th century non ferrous metal mines drained, only iron mines stayed determinant. Gelnica still has a developed iron mining [4].

Smolník

The first written record on gold mining in Smolnik was issued in 1243. German colonists founded the town settled in a narrow valley. The king Charles Robert rose Smolnik to free royal mining town. Especially silver, and partially gold mining was significant. From 1465 it belonged to Spiš Castle of the Szapolyai family. The family leased out their silver and copper mines and a blacksmithery. In the beginning of 16th century the mines were in the hand of the Dölens and Sauers families, who mined mainly silver. Later it was the property of the Thurzo family and the Csáky family. From 1671 Smolník belonged to the Royal Chamber. This time the town was known by its copper mines, and its industry based on the metal-works, hydroelectric power stations and blacksmithery. From the middle of the 18th century it also operated an own mint. In the 19th century mining activity gradually decreased.

Jasov

Archeological finds shows that people lived in Jasov in the prehistoric age. After the Tartar Invasion German colonists arrived. In 1290 Jasov was granted several privileges (market right, and shooting right) and developed fast as a town. The population lived on agriculture and mining. In their mines iron, copper and lead were mined. There was a boom in its mining industry in the end of 18th century, even a blast-furnace was built here. Besides iron works several smithies, sawmills, brickwork and mills operated in Jasov.

Rožňava

Rožňava was also founded by German guests in the 13th century. It was first mentioned as Rosnaubana in 1291. In 1340 Rožňava was granted town privileges. The

Roman Catholic diocese of Rožňava was founded in 1776. In their mines iron, copper and lead were mined. Iron industry made Rožňava one of the most important industrial region of the Hungarian Kingdom.

Spišská Nová Ves

German colonist were settled here in the 13th century, near the Slavic town - Iglov, where iron and copper were mined. Also processing-industry have appeared. The town suffered from the invading Tartars, but the king Béla IV. resettled it. Spišská Nová Ves was granted market rights and was announced as official mining town by the king Louis the Great. In 1412 Spišská Nová Ves was pawned as loan security by the Hungarian king Sigismund to the Polish king Vladislaus II. Jagiello. The pawned towns were returned to the monarchy by empress Maria Teresa in 1772, and became the capital of the "Province of 16 Spiš towns". This leading role ceased in 1876.

SHORT PRESENTATION OF MINING TOWNS

(members of Association of Upper Hungarian Mining Towns in the Northe - East Hungarian territory)

Telkibánya

Gold mining in Telkibánya was first mentioned in 1341. Telkibánya became mining town in 1341. John Hunyadi, Regent-Governor of Hungary, conferred Telkibánya to the Rozgonyi family. After surface gold veins being worked out mining started to decline, therefore mining activity was suspended between 1574-1757. Empress Maria Theresa ordered reopening of the mines. In the beginning of the 19th century golden and silver mines still worked. Mining activity has already stopped in Telkibánya and researches of the last decades were inefficient

Rudabánya

We have no information on the beginning

of the mining activity in Rudabánya. The settlement was known under Slavic name Rudava. It acquired the title of mining town, and relating rights sometime between 1330 and 1350. Silver and copper mining was important here. Until the middle of the 15th century, Rudabánya was a royal mining town, later it became property of the Szapolyai family and lost its title. In the 19th century iron mining started up in the region, but it has also been ceased yet. After 500 years Rudabánya has become town again. Nowadays intensive researches are made here to explore especially copper and zinc

CONCLUSION

Defining the eastern region of Slovakia as a mining heritage, the region it possible to apply subset of all mining heritage, which are allocated in Table 1 - Distribution of mining heritage. This means to define and observe components of mining heritage in areas such as: natural heritage, geological heritage, mixed heritage and cultural heritage. One of other option is to define a cultural routes - the Upper mining road that could become a comprehensive offering for mining tourism in eastern Slovakia.

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