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Viera KREŠÁKOVÁ 

Matej Bel University

viera.kresakova@umb.sk

## REFLECTIONS ON INDUSTRIAL HERITAGE TRANSFORMATION IN SLOVAKIA

(CASE STUDY: FOREST RAILWAY ČIERNY BALOG)<sup>1</sup>

### ABSTRACT

In the paper, we have a look at one of the most popular and most used forms of protection of industrial heritage today: transformation. Central Slovakia is the region with the most industrial monuments and sites in Slovakia and many of them are more or less aesthetic elements of the local landscape since the Middle Ages. However, except of some popular destinations, Central Slovakia does not belong among the regions with high attendance of domestic and foreign tourists. Several industrial monuments are in poor condition and located in remote places where tourists rarely venture. In this article, we would like to point out transformation and adaptive reuse as an appropriate form of protection for industrial monuments and have a closer look at the potential of rural regions and small towns. As a positive example of a conversion, we analyze the Čiernohronska Forest Railway in Čierny Balog in more detail. We focus not only on its positive economic and aesthetic impact on the surrounding landscape and people's lives, but also on building prestige and an important position of the rural and unattractive touristically region in comparison with popular and prestigious tourist destinations.

**Keywords:** industrial heritage, transformation of industrial heritage, industrial tourism in rural regions

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Several European cities declare the negative effects of crowds of tourists on various areas of life. Many of them mention at least the most notable impact: on the environment and social life of the local people. This is believed to be due to tourist friendly conditions and promoting of destinations with the aim of attracting as many visitors as possible. Traditionally high attendance is reported at UNESCO monuments in general, monuments with attractive history known from school, movie locations, or otherwise architecturally and culturally popular monuments. On the other hand, there are also monuments which are often located deep in the mountains (abandoned iron ore mines, various propulsion systems, equipment for transporting wood in forests, etc.) or in remote areas. Due to their remoteness, limited accessibility, bad conditions or lack of marketing and tourism management, they escape the attention and interest not only of tourists but also experts from various scientific fields. This remoteness often leads to a gradual destruction of interesting and valuable historical monuments. Their miserable condition has various reasons. The first to be mentioned is bad economic situation, often caused by closing of factories, mines and other facilities providing livelihoods for the local population, which has a strong depopulative impact. Low interest of valuable historical objects in remote areas can be further seen in broader context of the trend of urbanism and the desire to live in the comfort of the urban environment. The dilapidated state of several monuments is also caused by the lack of ideas a rusty, decaying former building or machines could be utilized fruitfully.

Creative ideas and projects of conversion and transformation are a solution to gradually disappearing historical objects. Many successful conversions around the world can serve as a stimulus. This paper aims to point out the potential of remote and less-frequented destinations with focus on industrial monuments and to highlight transformation and conversion as tools for saving unused, decaying heritage.

The paper is structured as follows: At the beginning we tackle the problem of overtourism, which we perceive as an opposite tendency compared to underestimated, remote and economically weaker areas with interesting tourist potential. In the next part, we deal with the transformation and conversion of technical monuments in particular, pointing out its principles and advantages and giving examples of good practice. Later on, we summarize the development of technical monuments protection in Slovakia, and the paper concludes with an analysis and description of an example of a successful conversion and new use of forest railway as a means of transport for tourist and a museum in Čierny Balog in Central Slovakia.

The goal to attract more tourists has led to unsustainable and permanent negative conditions with tourist ghettos often avoided by the locals in heavily touristed cities. The phenomenon of 'overtourism' is a substantial threat to ecological, cultural, and social sustainability of places with limited carrying capacity. Examples of this phenomenon are provided by the Mediterranean cities of Dubrovnik and Venice.<sup>2</sup> In addition

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<sup>2</sup> M. Brenner, *From Overtourism to Sustainability: A Research Agenda for Qualitative Tourism Development in the Adriatic*, at <https://mpr.ub.uni-muenchen.de/92213/>, 20 August 2021.

to travel opportunities (low-cost carriers, cruises), popular, historically and aesthetically attractive cities and places (not only in the Mediterranean area) attract tourists also to well-promoted popular UNESCO-listed monuments. Moreover, visitors are attracted by a rich tourist infrastructure and the 'consumer comfort' in the form of cafes and shops, generally well-known historical, aesthetic or relaxing characteristics of the place. Some places are now experiencing a backlash against throngs of tourists and no longer see this as a goal by the local population together with ecology experts that are rejecting this identity. There is a need to expand tourism beyond the 'bucket list' locations. Often a visitor's vision of Europe extends beyond the big city and includes rural pastoral settings. The issue of overtourism can also be seen in a broader context with the growing interest and comfortable living preferences of Europeans in urban settings. D. Cole et al. see this development as a dark picture for rural Europe and its historical and cultural assets. He asks, *is the support for agriculture, mineral extraction and small scale manufacturing the only role for the small town...?*<sup>3</sup>

Nevertheless, an increasing interest in agrotourism, home-made products, local traditional dishes, fashion, lifestyle, and other components of folk heritage as preserved in rural regions indicate the beginning of a reversal of previous destructive dynamics in tourism. Potential of rural regions also lies in industrial heritage. Old mills, ways of logs transfer in mountains, canals or mining infrastructure dominated the rural regions and remote areas. According to the definition of The International Committee for the Conservation of the Industrial Heritage (TICCIH),<sup>4</sup> *Industrial heritage consists of remains of industrial culture that have historical, technological, social, architectural or scientific value. These are various structures and machinery, workshops, factories, mills, warehouses, shops, mines, places where raw materials are processed and cleaned, and buildings where energy is produced, transmitted, and used. This includes transport structures and all infrastructure, places related to industry, including buildings used for housing, worship and education.* Industrial monuments were out of the interest of national heritage preservation institutions and the public in the countries of Eastern and Central Europe longer than in Western Europe. At first, however, the idea of protecting industrial monuments in general had to compete with the interest in more aesthetically appealing monuments of sacral and secular architecture.

Two concepts of monuments protection are currently being discussed in the field of conservation: scientific and functional conservation. Scientific conservation is based on scientific objectivity and the effort to protect authenticity of the heritage with as minimal intervention as possible. In conservational practice, science should establish how the restored object should look like, which conservation techniques and materials

<sup>3</sup> D. Cole et al., *Abandoned Slovakia: Abandoned Buildings as Part of the Development Potential of Cities and Municipalities*, Banská Bystrica 2021, p. 7.

<sup>4</sup> TICCIH is an organisation their goals are to promote international cooperation in preserving, conserving, investigating, documenting, researching, interpreting, and advancing education of the industrial heritage. It supports international cooperation of people in safeguarding conserving investigating documenting and researching all aspects of the industrial heritage in the world, at <https://ticcih.org/about/>, 16 March 2021.

are most efficient and it monitors the development of a conservation process.<sup>5</sup> On the other hand, there is the new concept of the so-called functional conservation or living conservation. This theory reflects more the dynamic processes and development in society and adds the social dimension to decision-making about the objects of conservation. The need to unify such factors as achieving an economic development, creating new jobs, revitalizing abandoned areas, generating prosperous community, producing innovative and creative society means involving in the conservation decisions not only scientists, but the negotiations concerning the heritage (conservables) should be done in a combination with professionals from tourism, economists, and other specialists as well as users.

Among the international institutions dealing with protection of industrial heritage, one needs to be mentioned The International Committee for the Conservation of the Industrial Heritage<sup>6</sup> (TICCIH) – an organization for promoting international cooperation in preserving, conserving, investigating, documenting, researching, interpreting, and advancing the education of the industrial heritage.

Abandoned and unused industrial monuments are a challenge for their surroundings and conservational practice. They can't be used for their original purposes when more efficient resources were found in other regions of the world (in the case of mines), or the production of factories and companies was no longer economically viable and they were closed. The biggest challenge for often aesthetically unattractive industrial buildings is probably their suitable and feasible further use. Conversion is a popular way to protect industrial monuments that acquire a new function. Adaptive reuse can bring a new meaning to an abandoned industrial place and it has become more and more popular for many reasons. The site is reused and at the same time we have a building or place for new activities. Aesthetic experience from the reused site or object is more intensive when we bring a new activity to a nice old industrial building or when ruins form a romantic and aesthetically pleasing feature of the landscape. However, industrial monuments often represent aesthetically unattractive objects. In the popular mind, they are often synonymous with a damaged environment and devastated landscape.

A case in point is the Landschaftspark Duisburg in Germany' a former coal and steel production plant that sat abandoned since 1985 and was only seen as a derelict eyesore with no future as an industrial park. This polluted and aesthetically disturbing industrial site has been turned into an interesting recreation area where green parks intermingle with abandoned industrial modernism. Each space within the main complex has been reused/redesigned for a specific new use: concrete bunkers create a space for a series of intimate gardens, old gas tanks have become pools for scuba divers, concrete walls are used by rock climbers, and one of the most central places of the factory, the former steel mill, had been made into a sort of main square. The whole concept has a beautiful idea behind it: a personal story of a grandfather, who might have worked at the plant, could

<sup>5</sup> S.V. Munoz, "Contemporary Theory of Conservation", *Studies in Conservation*, vol. 47 (2002), p. 27.

<sup>6</sup> <https://ticcih.org/about/>, 26 August 2021.

walk with his grandchildren, explaining what he used to do and what the machinery had been used for.<sup>7</sup>

Reuse of old structures can be a more economical solution since renovation is usually more expensive. Adaptive reuse projects often have an uncertainty as to their profitability and it is not always easy to recognize the potential of abandoned industrial heritage. The conservation and adaptive reuse projects in Europe can be funded from different EU sources, regional development funds as well as from the public or private sector, individually or jointly. The experience from good adaptive reuse projects shows that for the project to be successful, it should include representatives of all key local interests: experts with financial, legal, business, and conservation skills.

In the following part of the paper, we would like to summarize the state of protection of industrial monuments in Slovakia in several points. To some extent, they may correspond with the situation in other countries.

1) In bigger towns, industrial monuments limit the space in urban planning, often desired by developers for more cost-effective projects. Significant is the lack of good, creative projects they would give a new role to the old and unused industrial objects. The 'ugly' monuments are simply replaced with the brand new modern buildings. The most dramatic approach to technical monuments in Slovakia has been recorded first of all in Bratislava, for example, dilapidation and recent gradual liquidation (after 2007) of a tobacco factory (former Hungarian Royal Tobacco Factory, built in the mid-19th century) or the demolition of a valuable technical monument – mill in the Nitra city center (2006).

2) Perception of industrial monuments by the society as degrading and destructive for their environment, unaesthetic and disturbing the view and panorama in combination with the lack of the ability to formulate and assign the cultural and monumental values and meaningful use. An old copper factory in Banská Bystrica (Central Slovakia), called Medený Hámor, was built in the Middle Ages. It produced copper products and was used also for the processing of copper ore from nearby copper mines (Špania dolina and its surroundings; prehistoric copper mining dated from as early as 2000-1700 BC). As the longest running company in Slovakia, it had been operating continuously for almost 500 years, but now has been closed and abandoned since 1991 without any plans or ideas for the next use. Only recently, the municipality of Banská Bystrica decided to collect the proposals of residents' and ideas to find a new way of the use for the old factory and preserve *genus loci* of an important historical part of the town.

3) Since a large number of industrial monuments are located in remote regions outside the cities (often in mountains), there is often a lack of professional staff (with technical, historical, cultural or managerial education) who would take care of the monument. These monuments have insufficient tourist infrastructure and as a result can't attract visitors compared with modern touristic destinations. Before the nationalization in 1948, the Coburg Ironworks in the region of Horehronie (Central Slovakia) belonged to the important European aristocratic family Saxony-Coburg-Gotha, who

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<sup>7</sup> <https://www.landschaftspark.de/>, 26 April 2021.

significantly influenced this mostly agricultural and forestry-oriented region of Slovakia. Some parts of the complex are in form of solitary objects with a high degree of devastation (e.g., blast furnace in Valkovňa). On the other hand, in contrast to this example, there is another blast furnace in Tri Vody (located in the forest in Central Slovakia, 4 km from the nearest village) used for the processing of iron ore from 1795. It is a historical structure that gives testament to how we developed into the modern society that we have become. Its functionality has long since past but it stands as a solitary monument without any ambition of being a mass-visited tourist attraction. The Slovak Forest Enterprise (Lesy SR) decided to preserve this piece of history, and with the attribute 'Significant Forestry Place'. As such, it has been listed among other tourist destinations on the website of the Slovak Forest Enterprise.<sup>8</sup> This is an important lesson for preservation of unique artifacts. Though it is in a rural setting, its significance should not be underrated.

Central Slovakia is an area with the largest concentration of technical monuments in Slovakia (24%), compared to Bratislava and the Bratislava region (11%), due to the mining areas of Banská Bystrica, Banská Štiavnica and Kremnica, the Coburg iron-works complex, but also various forestry and other technical monuments. Thanks to a higher popularity as a UNESCO place and mass tourism based marketing, only Banská Štiavnica belongs to prominent examples and representatives of heavily visited cities in the Central Slovakia. In addition to the mentioned activities of tourism organizations in Slovakia, technical universities and local enthusiasts, also the Slovak Forest Enterprise contributes significantly to the rescue of isolated monuments in remote places in forests by professional tourism management. The results are the webpage Geomontane Tourism, Slovak Mining and Iron Route activities<sup>9</sup> as well as the creation of the Coburgs Iron Route (Coburgovská železná cesta), which summarizes and promotes individual technical and non-technical monuments left in Slovakia by an important aristocratic family, similarly to the European Route of Industrial Heritage (ERIH).<sup>10</sup>

In the next part of the paper, we will present a case study of an adaptive reuse of a technical monument: a forest railway in Čierny Balog.

## CASE STUDY: THE FOREST RAILWAY ČIERNOHRONSKÁ ŽELEZNIČKA ČIERNY BALOG

There were more than 100 narrow gauge forest railways in Europe. Many forest railways have been built in mountainous parts of Austria, Germany, France, Romania, Slovakia, the Czech Republic, Poland, and Hungary; many functional forest railways can still be found in Russia. They were used mainly to transport wood from long valleys

<sup>8</sup> <https://www.lesy.sk/lesy/pre-verejnost/kam-do-prirody/vyznamne-lesnicke-miesta/zoznam/vysokapec-troch-vodach.html>, 17 September 2021.

<sup>9</sup> <https://www.zeleznacesta.sk>, 19 May 2021.

<sup>10</sup> <https://www.erih.net>, 10 April 2021.



to sawmills and the most commonly used gauges were 600, 700 and 760 mm. Majority of them ran from the late 1950s to the 1980s. Most of them were later demolished. Railway embankments were in some cases (especially in Germany and Austria) reused as a basis for cycle paths and hiking trails in national parks (e.g., Spiegelauer Waldbahn in the Bavarian Forest; forest railway dismantled in 1960) and railway museums were built in which locomotives and some wagons are displayed.<sup>11</sup> In a few cases, the narrow gauge system was replaced by the standard gauge for regular public transport.

Only a few from the original forest railways have been reused as functional museum for adventure rides for tourists: Nasswald, Steinzerbahn, Bregenzer Waldbahn (Austria), Muskau, Buchhorster Waldbahn (Germany), Waldbahn Scharja (Russia), Bieszczadzka Kolejka Leśna (Poland), Chemin de fer touristique d'Abreschviller (France), etc. The Čiernohronská Railway in Čierny Balog belongs to them. The forest railway with narrow gauge lines in Čierny Balog (5 153 inhabitants; Central Slovakia) started to operate in 1909 using the steam-powered locomotives. Its final length was almost 132 km and it transported logs from the forest down to sawmills in the surrounding villages. The railway replaced the waterways and log slides for transporting logs, the ways not efficient enough for the growing industrial needs. Logging and the timber trade was at the time important for making a living for the people and about 40 forest railways were built in the territory of Slovakia in the first half of the 20<sup>th</sup> century. Motorization and improvement of cars for timber transport caused that at the beginning of the 80s all forest railways in Slovakia were destructed. All equipment – rails, locomotives, and wagons – were intended for scrapping.

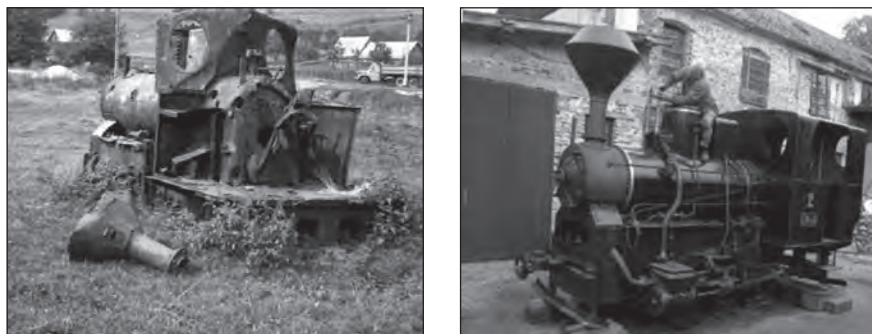
In 1982, thanks to the initiative of an enthusiast, former employee of the forest railway, the railway was put on the list of national heritage of Slovakia, which was the most important step to its rescue. In 1983, a group of architects started the reconstruction of the railway on a volunteer basis. A tradition of voluntary camps called TREE OF LIFE was created (with historical roots in socialistic volunteering camps). Thanks to it, many other monuments and attractions in Slovakia were rescued. The camps were attended by students as well as local people and various enthusiasts from other regions. The idea behind it and the strongest motivation was spending a summer among a group of like-minded people helping to restore ruins of castles or manor houses. Like historical buildings, the aim of this rescue project was not to restore the railroad to the original function of forestry. Instead the wagons were adapted to be pulled by steam locomotives to transport tourists to an open-air forest museum. The results today is a non-profit-organization established for conservation, protection and redevelopment of the industrial heritage using the original narrow-gauge lines and original infrastructure, steam- and diesel-powered locomotives. The old steam-powered locomotives are maintained and kept functional partially in the own workshop by old locomotive enthusiasts, partially by professional companies specialized on the restoration of the old machines. Locomotives, wagons and other elements of the infrastructure have been

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<sup>11</sup> <https://waldwissen.net/de/lernen-und-vermitteln/forstgeschichte/die-spiegelauer-waldeisenbahn>, 29 August 2021.

collected from various museums and resources in Slovakia and abroad. The oldest locomotive is from 1906 and thanks to volunteers and enthusiasts, it was rescued from a pile of rusted iron found abandoned; in 2012, after a long story, it was brought back to its original use (picture 1).<sup>12</sup>

Picture 1. From a pile of rusted iron into a shiny functional locomotive



Source: <https://chz.sk>, 12 April 2021.

As a part of this popular tourist attraction, a little museum shows and explains the history of forest railway.

The proof of popularity comes in the growth of visitors and transported tourists. In 2003, at the beginning of working as tourist transport, there were around 38,000 tourists, in 2019, more than 132,000. This popular attraction offers a variety of theme rides (birthday train, Santa Claus train), however, the high season is in the summer time. At present, it transports tourists from the villages Chvatimech to Čierny Balog, to Dobroč on a total route of 19 km, and the most used route is from Čierny Balog to Vydrovská dolina to the forest open-air museum.

The Forest Open-Air Museum is not actually an industrial or other Slovak national heritage, but it contributes to the use of forests in forest tourism and uses the old discarded forest technology as exhibits directly in the forest. The museum was opened in 2002 with a 4 km long trail, mostly in the forest, that presents the history, protection, and importance of the forest and the work of forest workers. About 50,000 people a year visit the railway. According to a research,<sup>13</sup> the majority of the visitors are local people (Basnkobystrický kraj 24,8%), followed by tourists from the Bratislava region (Bratislavský kraj 21%) and further on from the other Slovak regions. It is naturally an attraction for children. Domestic tourists from the Banská Bystrica region visit the railway and open-air museum mostly as part of a one-day trip. However, it is a very suitable addition and a part of the program during a longer

<sup>12</sup> <https://chz.sk>, 12 April 2021.

<sup>13</sup> V. Krešáková, J. Pecníková, "Akceptovateľná miera komercializácie technickej pamiatky Čiernohronskej železnice a Lesníckeho skanzenu vo Vydrovskej doline návštevníkmi", *Ekonomická revue cestovného ruchu*, vol. 53, no. 4 (2020).



holiday in the popular destination of the Low Tatras for visitors from the Bratislava, Nitra, and Trnava regions.

As the railway service is provided mainly by volunteers, it does not directly create many paid jobs, but the museum hosts a commercial restaurant and a souvenir shop with services provided by paid staff. There are several technical monuments in the village, which are waiting for their further use. There were mines of iron ore; in the center of the village Čierny Balog, there is an abandoned steam engine, which was used to drive a local sawmill, and several individual objects, which represent great potential for cultural and industrial tourism in the region.

## CONCLUSION

It is not possible to save all the monuments in the world. They are often in a very bad condition and there are various reasons why their owners decide to demolish them. This could have been avoided. In several cases, it would have helped to formulate the technical, artistic, architectural, historical or other values of the building and put it on the national or international list of heritage. Such an act has an important psychological impact; it increases awareness of the value of the monument. Not all technical monuments are aesthetically attractive steam locomotives or interesting constructions. It is much more difficult to determine the value of a factory or metallurgical buildings, which can't compete with Gothic sacral or classicist secular buildings. If they are located in cities, they take up space for expanding urban plans. Apparently, it seems easier to the authorities to demolish it and replace it by another modern object.

In the recent period, however, transformation and adaptive reuse has become much more popular. It is more valuable when you can find a new, attractive function for an almost hopelessly lost monument. There is a growing number of examples of good practice in the world. In the paper, we analyze the former forest railway in Čierny Balog, which was rescued and reconstructed thanks to the efforts of volunteers. Owing to this, the social value of an industrial monument has increased. Today it fulfils its new mission: transporting visitors to the forestry open-air museum. The passengers of the railway are visitors of various ages that come from diverse regions. It is very popular among children. There were more than a hundred narrow-gauge forest railways in Europe. Only a few of them have survived. In addition to saving a valuable technical monument, this popular tourist attraction fulfils several positive missions.

1. The railway helps to preserve the *genius loci* of the industrial stage of history not only of the village Čierny Balog, but also of many other narrow-gauge railways in Europe and in the world, and thus preserve a part of the identity of specific areas. The railways used to be the source of making a living for many families and technical progress. The railway was not behind Europe in terms of technical innovation.

2. As a transformed monument, it has become a tool of a circular economy. Except of the reuse of locomotives, wagons and other equipment, the railway repurposes

discarded material from various railway companies not only from Slovakia, but other countries as well.

3. In the region, there are a large number of solitary buildings, valuable industrial monuments. It is more difficult to increase their attendance and popularity among tourists as separate objects. Together with already popular forest railway in Čierny Balog and with good tourism management, the potential of the isolated monuments can be used.

4. The transformed railway as an aesthetic experience created by the romantic landscape with the natural environment and the steam coming out of the old locomotive is a moment which attracts people from big towns looking for relax, popular vintage attractions and interesting scenery for taking pictures. From this perspective, the less visited regions with their local values can be seen as a means of reducing negative ecological and social impacts of overtourism in heavily touristed destinations.

5. The region of the Banskobystrický kraj (Central Slovakia) has the highest amount of industrial heritage sites in Slovakia. With the shock transition to a market economy, many areas of Central and Eastern Europe face rapid depopulation and abandonment.<sup>14</sup> The same destiny can be expected in the case of the industrial heritage. Many objects of industrial heritage have a potential to be a successful part of cultural or industrial tourism. The economic inequalities between regions in Slovakia can be the reason for the lack of experts and young enthusiasts with energy and motivation to find a solution for making abandoned industrial objects and sites attractive for visitors. In this respect, the project of Čiernohronská forest railway can be a great motivation and an example for the authorities of the villages, small towns, and whole region how to look for the ideas how to use the heritage sites.

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<sup>14</sup> D. Cole et al., *Abandoned Slovakia...*, p. 8.

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**Viera KREŠÁKOVÁ** – Ph.D., assistant professor at the Department of Professional Language Communication, Faculty of Economics, University of Matej Bel in Banská Bystrica. As part of her teaching activities, she provided lectures in Russian cultural studies for the second year of bachelor's studies in European Cultural Studies at the Faculty of Philosophy, University of Matej Bel in Banská Bystrica. She specializes in professional terminology, the Russian language and culture, as well as the German language and culture. As a member of the research team in the project "European cities in the process of constructing and transmitting of the European cultural heritage. International curriculum for undergraduate and master students (Erasmus+ Programme)", she deals with the research topic Transformation of Industrial Heritage.