Research Article GU J Sci, Part B, 11(1): 197-207 (2023)

Gazi University

Journal of Science

PART B: ART, HUMANITIES, DESIGN AND PLANNING

http://dergipark.gov.tr/gujsb

Inspiring Stops on the European Industrial Heritage Route ERIH and on the Coal Steam Light Route: Ferropolis Golpa Nord and Bitterfeld Goitzsche Landscape Park

Ayşe Duygu KAÇAR[1,*]

[1] *0000-0002-6561-7517, Eskisehir Osmangazi University, Department of Architecture, Eskişehir / Turkey*

Article Info

Received: 22/03/2023
Accepted: 28/03/2023

Keywords

Memory,
Collective memory,
Industrial culture,
Industrial landscape,
Industrial heritage

Abstract

Industrial culture has been evaluated as a part of collective memory in Europe since the 1970s and has been included in the conservation area. Coal and lignite mines, which are widely found in industry-leading Germany, have also been urban artifacts that have an important place in the collective memory of the German society. These structures, programmatic elements and their landscape have been re-functionalized with a wide variety of functions for the conservation of industrial culture. Ferropolis Golpa Nord and Bitterfeld Goitzsche Landscape Park, which are the subject of this article, are examples of how the giant pits opened by surface mining are evaluated to become rich re-use areas. The two routes of European Industrial Heritage Route ERIH and the Coal Steam Light will be evaluated as a system of connecting inspiring projects in the present paper.

1. INTRODUCTION

The dictionary defines the concept of memory as the power to consciously keep in mind the experiences, the learned subjects and their relation with the past, vocabulary, mind, memory, mind [1]. Memory provides the storage and recall of all our experiences and information in life. All the interactions we have with our environment through our five senses are stored as data in our memory. While these data, which are used repeatedly when needed, make it easier to remember, non-repeatable information or difficulties in accessing this information bring forgetting.

Memory can consist of accumulations experienced individually by individuals, or it can be stored and recalled collectively. Maurice Halbwachs (1877-1945), who is known for his different perspectives on psychology and sociology and his publications on memory, states that the knowledge gained from external sources such as books, magazines and newspaper reports, experienced by the group he lives in, as well as the traces in the personal repertoire of individuals form a collective memory [2].

These two types of memory, which Halbwachs calls internal and external, personal and social, autobiographical and historical, also enable a collective remembrance, unlike the individual. Moreover, Halbwachs states that not only a personal memory is possible for the individual living in the society, but also a social memory is formed within the social environment. Similarly, Rossi sees the city as the "common memory" of its inhabitants [3]. Accordingly, like cities, regions and countries have "collective memory" of the citizens that have common history. The present paper discusses two cases of industrial landscapes from East Germany for being creative examples of re-use specifically as recreational areas. Golpa Nord – Ferropolis and Bitterfeld Goitzsche Lake, which are close to Berlin, the Capital of Germany will be discussed to form an insightful perspective for similar cases.

* Corresponding author: duygukacar@gmail.com

2. METHOD

The present paper is hiring qualitative research method for an in-depth understanding of industrial heritage as a part of collective memory. This will include analyzing collected data such as, texts, images, videos and maps of two cases from Saxony-Anhalt Region of Germany, where coal-mining became an important part of industry. These two cases of open-pit mines are part of an industrial route, that makes these industrial landscapes special. Along with the literature review, the qualitative data collected through site excursion, interview with the management and project team, etc. allows a deep dive to explore how decisions are made.

3. TWO ROUTES OF THE EUROPEAN INDUSTRIAL HERITAGE (ERIH) AND THE COAL STEAM LIGHT (KOHLE DAMPF LICHT)

After the First International Congress on the Conservation of Industrial Monuments (FICCIM) was held in Ironbridge, UK in 1973, the meeting of the International Committee for the Conservation of the Industrial Heritage (TICCIH) was materialized in Bochum, Germany in 1975. Quoting from the architects of the Zollverein pithead XII, Fritz Schupp and Martin Kremmer, Cossons mentions:

> "we must recognize that industry with its enormous buildings is no longer a disturbing link in our townscape and our landscape, but a symbol of work, a monument of the town, which every citizen should present to the foreigner with at least the same pride as his public buildings"[4].

The place of coal in the sector of industry, chemistry and construction sectors is undeniable. Lignite coal obtained from open-pit mines in the Saxony-Anhalt Region has also been an important energy source for East Germany. While the German Democratic Republic (GDR) was biggest brown coal producer in the world in 1989, this strong economy of the country collapsed with the opening of the border between the Federal Republic of Germany and the GDR on November 9th 1989, and with the political change after reunification on October 3rd 1990. This cheap and permanent underground resource, which was reached by digging from the surface, created an industrial focal point in the regions where it was obtained, while creating a in memories of the societies. However, not only the physical environment but also the national economy of the country was in a crisis after the decline of mining in Germany. The rapidity of the change in the society and the structure of the country in Eastern Germany in the name of “shock therapy” is unique according to Wirth, P. and Lintz, G. [5]. The International Building Exhibition (IBA) Berlin 1987 tackled with the high level of unemployment along with the related problems in social life and for attracting new industry and business such as tourism. As a precaution for the wave of emigration and loss of human resources, IBA dwelled on the re-use of abandoned buildings and sites of industry in and around Berlin, while searching solutions for environmental degradation. Nevertheless, the particular cases of re-use were not sufficient for an overall response to the economical and the environmental problem. With the overwhelming change in the world since then, the interpretation of industrial heritage has turned to an influential social and economic force in global scale. The industrial landscapes needed a holistic approach and interconnecting these sites by certain routes of recreation both in regional and national scale was a creative endeavor.

Mentioning that the idea of “interconnected park system” derived from Olmsted’s vision of creating an integrated park and parkway system, Demirkol the connectivity of the separate parks with parkways and avenues led an overall development of green spaces and recreational areas [6]. IBA Emscher Park project in 1989 in the Ruhr Region, the interconnection of recreation areas and open-air museums of industrial heritage gave way to new projects in Germany and in the world. Following the IBA Project in North Rhein Westphalia, the interconnection of various industrial landscape with European Routh of Industrial Heritage as well as with the Coal Steam Light Route of bikes through lakes, helped the economic development of the Sachsen-Anhalt Region (Figure) [7].

> “In the 1990s, there were 21 rehabilitation projects that were awarded the status of major ecological projects, each having a financial volume of at least 50 million euros. They are financed at 75% by the federal government with the remaining 25% coming from the Federal State.” [8].

Two examples of these major projects in the Sachsen-Anhalt Region are the Ferropolis Golpa Nord and Bitterfeld Goitzsche at south-west of Berlin and southeast of Dessau (Figure 1). Today, these two lignite mines, which are used as an open-air industrial museum and landscape park, are 143 km and 167 km from the capital Berlin, respectively. The lignite quarries and their remaining giant digging and coal mining machines have been conserved as industrial monuments while relieving the economy of Eastern Germany. These two industrial areas, located on the European Route of Industrial Heritage (ERIH) at the European scale and the Coal Steam Light Route at the German regional scale, will be discussed with their open-air museum and recreation area features.

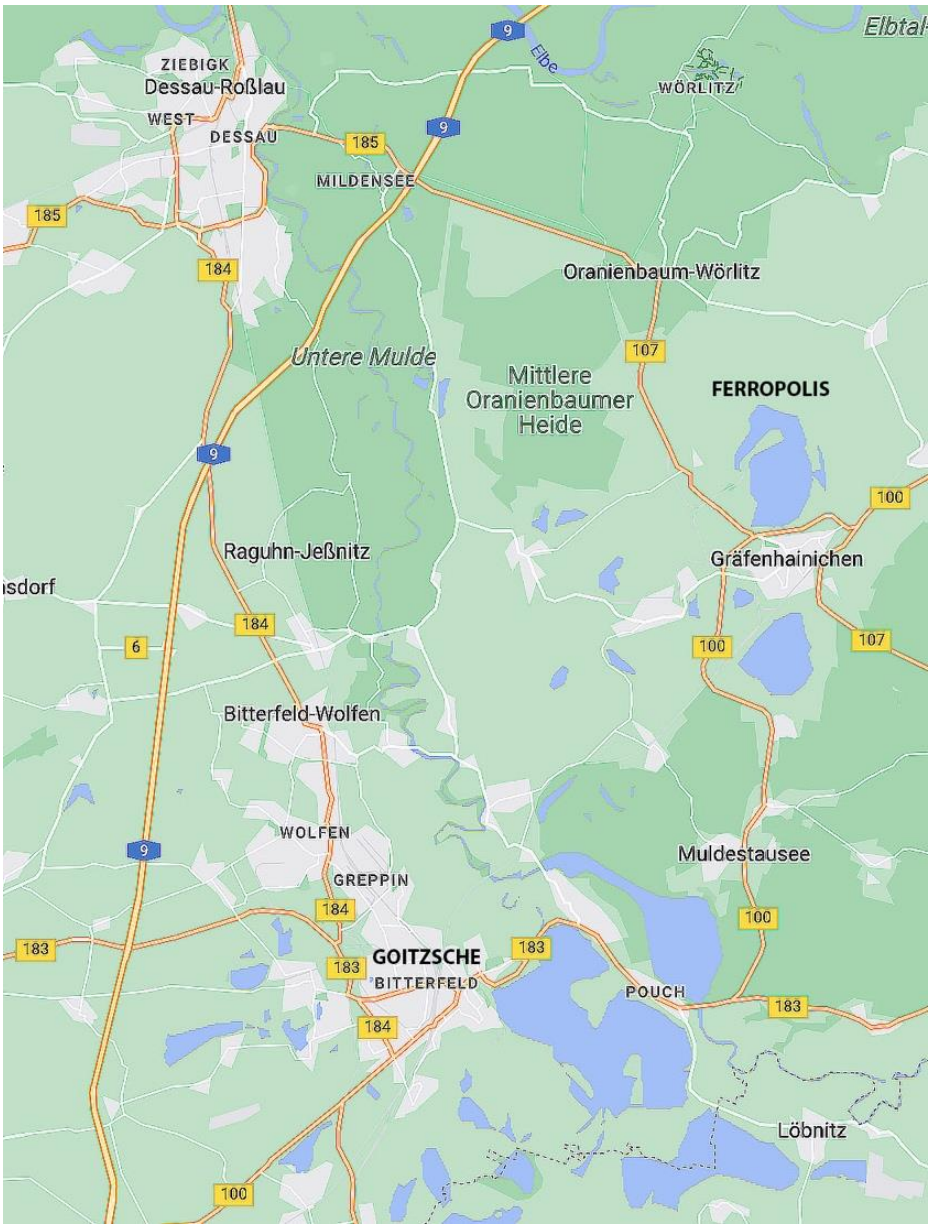

Figure 1. *Map showing the Bitterfeld Goitzsche Lake and FERROPOLIS close to the city of Dessau*

3.1. Golpa Nord – Ferropolis on the European Route of Industrial Heritage (ERIH)

Since the 17th century, the mines opened from the surface in Germany have been working with the principle of reaching the coal beds by digging around a peninsula where the technical equipment is in the middle. Mines operated with this oldest technology have left deep pits that are irreversible. Golpa Nord, which started drilling in 1957, is partly among the small mines [9]. Like all other mines in East Germany that left deep and wide pits after excavations, a huge void remained from the Gräfenhainichen lignite quarry.

The critical thing in this project is that FERROPOLIS was materialized by a student initiative at the Bauhaus Dessau Foundation. The "Industrial Garden Realm" workshop in 1991 opened up new visions for the site and this shows how cooperating with universities and scientific institutions allows potential development of industrial heritage for thematic projects and industrial tourism products. Accordingly, the vision for the future of the mine, which is 22 km away from Dessau, was created by Bauhaus Dessau and this void, which cannot be returned to its natural state, was turned into an artificial lake.

Table 1. *ID of FERROPOLIS*

Country	Germany
Region	Sachsen-Anhalt
Place	22 km south of Dessau
Character	Industrial Culture
Designation	UNESCO World Heritage Site
Economical Support	Co-funded by the EU
Original Usage	Lignite coal open-pit (1957-1991)
Current Usage	Recreation – Open Air Museum
Starting Line	EXPO 2000 Project (1995)
Surface of the Peninsula	0.2 km2
Surface of the Lake	5.6 km2
Shoreline	14 km

The decision by the Dessau employees was to preserve the giant industrial machinery used in the excavations as an open-air museum under the name FERROPOLIS (original name "Stadt aus Eisen" means iron city). Three pickaxes (Mad Max, Mosquito and the Big Wheel outside the arena) and two coal extraction machines (Gemini and Medusa), which are a serious economic problem even to be disassembled, transported, and reused, were left in their places and served as landmarks in the social memory for the future. These giant machines from the middle of the twentieth century, each approximately 30 meters high, 120 meters long and weighing 2000 tons, were opened to visitors on the peninsula, after filling the wide pits with water and turning their site into an arena (Figure 2). The three historical machines used for digging in the Golpa-Nord open mine until 1991 were named by former employees of the mine and are now the indispensable setting of the arena, which is used for large crowd events such as concerts (Herbert Grönemeyer, Metallica, etc.) and international festivals. These giant steel machines have been an important element in preserving the memory of this ancient mine, while using it for recreational purposes.

Today, an open-air museum and an industrial monument, FERROPOLIS has become a gathering place and theme park for large groups with its steel sculptures. Giant sculptures (machines) exhibited in all their majesty as the dinosaurs of the past, try to keep up with our age with energy resources as well as the visions of new investors such as vacation, swimming and water sports.

Figure 2. *The Arena of FERROPOLIS*

Ferropolis is a successful regional cooperation project in Saxony-Anhalt while being supported by a multiplicity of actors in the framework of EXPO 2000. In 2005 Ferropolis took its place on the European Route of Industrial Heritage (ERIH) and became an anchor point of the regional ERIH route Saxony-Anhalt among others in 2009.

3.2. Bitterfeld Goitzsche Lake and Landscape Park on the Coal Steam Light Route

The huge void created by the three lignite mines Holzweißig-Ost, Holzweißig-West and Goitzsche, which worked between 1908-1991 in the Anhalt-Bitterfeld region by digging approximately 850,000,000 m3 of soil, destroyed six villages and caused the change of the Mulde River bed [10]. This comprehensive intervention to nature brought to mind the idea of leaving the giant pit, many meters deep, left behind by the mines that will no longer work due to changing technologies, to nature again. Through this approach, it was decided to transform the old mineral deposits into artificial lakes.

The master plan for the region was completed in 1995 [11]. With the project implemented between 1995-2000 in Goitzsche, 31 km from Dessau, the area that no one wanted to live in due to environmental pollution during the years when the mines were operating, has been transformed into a new attraction area with a lake and new landscaping (Figure 3-4). In addition to programs such as swimming, resting, eating, drinking, hiking, biking, camping and limited commerce with the integration of landscape art projects, new accommodation units designed by Wolfgang Christ between 2000-2011 were included to the area (Figure 5-6-7). Along with these arrangements, bushes, sand, stones and traces of the old river bed were also brought to light in the memories.

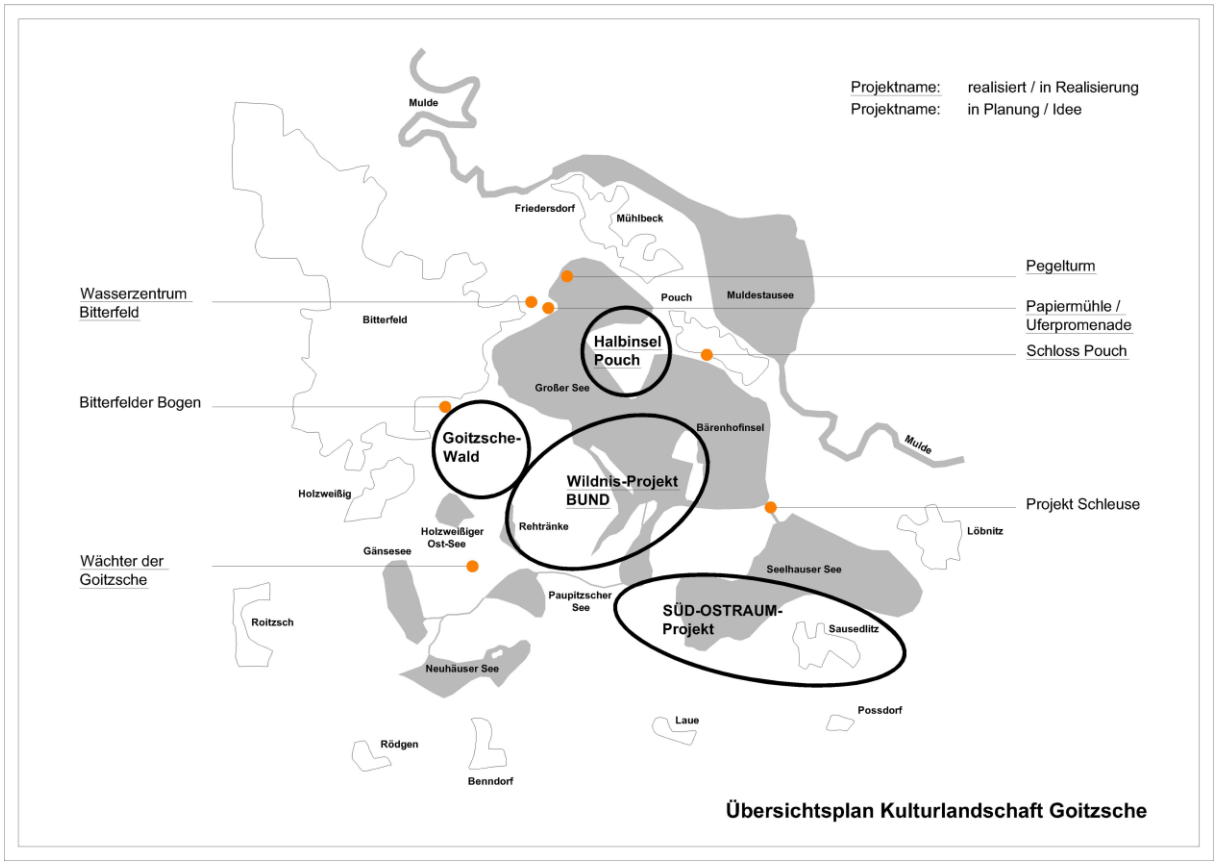

Figure 3. *Overall plan for Goitzsche Cultural landscape*

Figure 4. *Goitzsche Lake Cultural landscape Halbinsel pouch*

Figure 5. *Map showing Bitterfeld Goitzsche Lake on information board*

Figure 6-7. *Waterfront of Bitterfeld Goitzsche Lake*

Figure 8-9. *Villa am Bernsteinsee and the Goitzsche Lake level tower*

Both the Villa am Bernsteinsee, built in neo-Renaissance style in 1896 by a manufacturer and the level tower are a part of the Goitzsche Lake, formerly a brown coal mining area of Bitterfeld (Fügure 8-9).

Table 2. *ID of Bitterfeld Goitzsche Lake*

Country	Germany
Region	Sachsen-Anhalt
Place	31 km south of Dessau
Character	Industrial Culture
Economical Support	Co-funded by the EU
Original Usage	Lignite coal open-pit (1908-1991)
Current Usage	Recreation area – Open Air Museum
Surface of the Lake	13.32 km²
Route length	30.3 km

Similar to ERIH, Coal Steam Light Route is gathering formerly destroyed industrial landscape in a regional scale in former East Germany. Great pits of lignite mining and chemical industry that turned out to be lakes and green areas are connected with each other in a system of cycle paths [12]. Both Gräfenhainichen lake of Ferropolis and Goitzsche Lake are included in this system of leisure parks and cultural landscape. The common European brand of ERIH inspired similar routes for industrial heritage and a standard of quality.

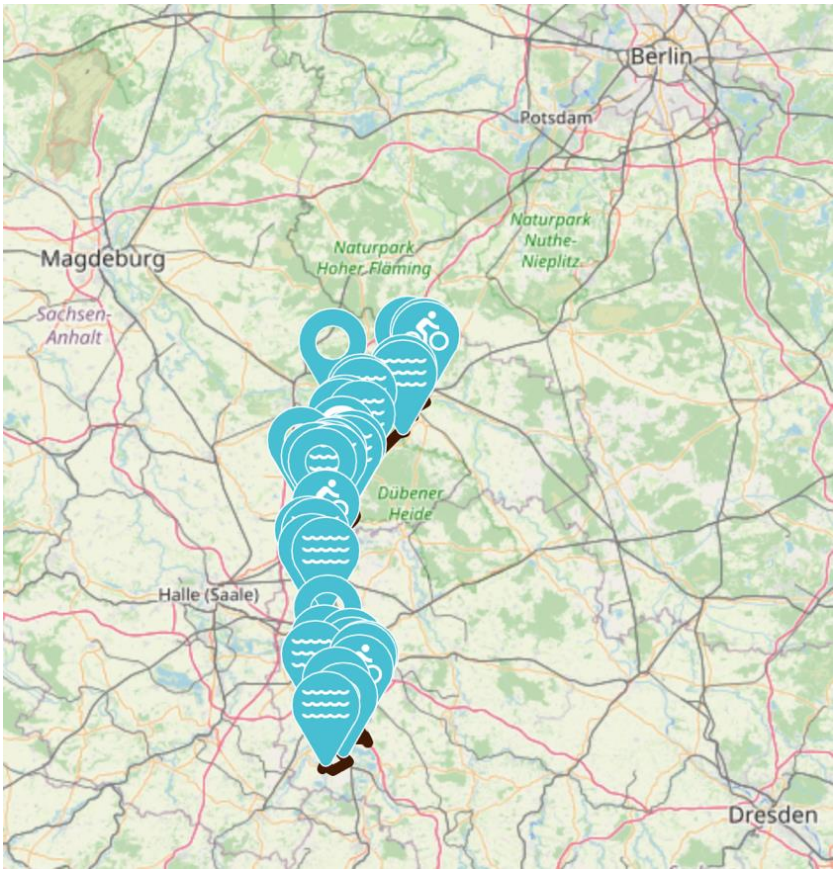

Figure 10. *The Coal Steam Light Route*

As can be seen from the cases, today, not only the buildings but their landscapes are a part of social and dynamic processes. Industrial heritage, as a part of European identity, is connected through the network of ERIH with anchor points like the Ferropolis Golpa Nord or through the Coal Steam Light Route with stops like Bitterfeld Goitzsche for a comprehensive evaluation (Fügure 10). Post-industrial landscapes are transformed to urban cultivated landscapes of cities and regions. On the other hand, while trying to find an answer to the question of "what can we learn from the *Eastern German way* of structural change in mining regions?" [13] Wirth, P., Lintz, G. underlines the required close cooperation of government institutions and municipalities for the success of development programs. Creative networks of actors from a wide spectrum show alternative solutions to tackle the decline whether economical support is scarce.

4. CONCLUSION

The conservation of industrial areas is important in protecting the identity and memories of countries. As Rossi said, identity consists of the collective memory of a city, a country and a nation and industrial areas are part of the collective memory. These areas are valuable as artifacts and images of memory because memory can help us understand the complex structure and physical formation of a place. Ferropolis and Bitterfeld Lake Goitzsche, as the examples of the abandonment of industrial areas, where the destruction they have caused to nature has reached to irreversible dimensions, are inspiring for Germany and the whole world. Conserving the traces of thousands of cubic meters of giant pits in the collective memory with blue and green as far as the eye can see allows them to be integrated into daily life as new recreation areas. In terms of their scales, social, financial and environmental continuity has been ensured in both projects by transforming large landscapes into an open-air museum character. In this way, social awareness was raised about the heritage dimensions and values of the industrial structure, campus, area and landscape, and cooperation was created with different disciplines. Accordingly, it is possible to say that when environmental, urban and socio-economic development are linked the project is successful. These practices are important in terms of ensuring democratic participation with non-governmental organizations, universities as well as local and regional administrations.

ACKNOWLEDGEMENTS

The author would like to express sincere gratitude to Gerd Seltman, GSEProjekte for opening new sights to the research at the area of Industrial Heritage in Germany. All the photographs were shot by the author and the maps were held from the managers of the projects during the site excursion under the guidance of him.

REFERENCES

[1] URL-1. *The meaning of Memory*. https://www.merriam-webster.com/dictionary/memory#:~:text=mem%C2%B7%E2%80%8Bo%C2%B7%E2%80%8Bry,retained%20especially%20through%20associative%20mechanisms Last Accessed: 21.03.2023

[2] Halbwachs, M. (1980) The Collective Memory, Ditter, F. J. & Ditter, V. Y. (translator), Harper & Row Colophon Books, New York.

[3] Rossi, A., The Architecture of the City, MIT Press, Opposition Books, Cambridge, 1982.

[4] URL-5. https://www.anhalt-dessau-wittenberg.de/en/industrial-culture/coal-steam-light-lakes-route Last Accessed: 21.03.2023

[5] Wirth, P., Lintz, G. (2006) Rehabilitation and Development of Mining Regions in Eastern Germany - Strategies and Outcomes, *Moravian Geographical Reports* 14(2): 69-82.

[6] Demirkol, H. G. (2017) An Analysis of 'Interconnected Park System' as an Integrated Structural Approach for the Regeneration of Post-Industrial Region as in the Case of Emscher Park, *International Journal of Recent Scientific Research* Vol. 8, Issue, 7, 18163-18171.

[7] URL-2. https://www.kohle-dampf-licht-seen.de Last Accessed: 21.03.2023

[8] BUNDESREGIERUNG (2004): Jahresbericht der Bundesregierung zum Stand der Deutschen Einheit 2004, Berlin, 173.

[9] URL-3. http://www.ferropolis.de/in-english/info-history.html Last Accessed: 21.03.2023

[10] URL-4. http://www.erih.net/nc/regional-routes/germany/saar-lor-lux/detail.html?user_erihobjects_pi2%5BshowUid%5D=18220 Last Accessed: 21.03.2023

[11] Shapins, J. (2002) Cultural Landscape Goitszche, Bitterfeld, Germany, *Places*, UC Berkeley, 15(1), 18-21.

[12] Cossons, N. (2009) Prospects, Perceptions and the Public, *Industrial Heritage - Ecology Et Economy, XIV. International TICCIH Congress*, Sächsisches Industriemuseum IWTG/TU Bergakademie Freiberg, 13-16.

[13] Wirth, P., Lintz, G. (2006) Rehabilitation and Development of Mining Regions in Eastern Germany - Strategies and Outcomes, *Moravian Geographical Reports* 14(2): 69-82.