

CHAPTER 3

More-Than-Representational Postmining Landscapes in the Former Coal Regions of Eastern Germany

Between Economic Revitalization and Risk Society

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Just south of Leipzig, Germany, lies the suburb of Markkleeberg. There, on the southeast shore of Markkleeberger Lake is one of two unique artificial whitewater canoe/kayak slalom courses in Germany. According to the Deutsche Zentrale für Tourismus e.V. (the German Centre for Tourism), it receives an average of 23,000 visitors a year and is among the top one hundred popular sights in the country. The lake is a former open-pit coal mine that was flooded in 1999 and was developed as a tourist area in 2006. The infrastructure, initially planned as part of Leipzig's bid to host the 2012 Summer Olympics (which was finally awarded to London), soon became a symbol of one of the largest landscape transformations in Europe. The mine was the largest brown coal producer on earth with an annual output of more than 300 million tonnes of lignite in the German Democratic Republic (GDR), corresponding to one-quarter of worldwide annual production in 1986 (Helmbold 2018). After the fall of the Berlin Wall in November 1989 and in the context of a liberalized market economy, most of the mines closed down, leaving behind a devastated landscape (Kabisch 2004). Today the remaining moonscapes are being transformed into recreational landscapes. While there are about 140 pit lakes in the central German lignite mining district today (Schultze et al. 2010), this research mainly focuses on



Figure 3.1. Zwenkauer (foreground) and Cospudener (background) mines before completing the flooding. Photo: © A. Berkner, courtesy of Regionaler Planungsverband Leipzig-West Sachsen

those located in the southern parts of Leipzig in what has been baptized Neuseenland (New Lake District).

Based on a more-than-representational approach, semi-structured interviews and ethnographic fieldwork, this research explores the emergence of new actors, practices, narratives and conflicts associated with this new landscape. By studying the transformation of one of East Germany's former coal regions, I offer a complement to scholarly discourse that criticizes the representation of deindustrialization as 'smokestack nostalgia' (Cowie and Heathcott 2003; Mah 2009; High 2013; Strangleman 2013). This label refers to the sentimentalization of the past (Cowie and Heathcott 2003) and the lack of a more critical perspective that can make sense of what deindustrialization really means in the United States. As stated by Cowie and Heathcott, 'we have to strip industrial work of its broad shouldered, social-realist patina and see it for what it was: tough work that people did because it paid well and it was located in their communities' (2003: 15). One aspect of this smokestack nostalgia is the growing number of coffee-table books and other publications on abandoned industrial plants and buildings 'where tensions of gender, race and class go unnoticed' and 'where the destructive impacts of industry on health and environment are obscured' (Strangleman 2013: 33). This chapter aims to provide a more nuanced understanding of the post-industrial landscape and move away from the stereotypical image of a closed



Figure 3.2. Zwenkauer Lake (foreground, Number 4 in Map 3.1) and Cospudener Lake (background, Number 1 in Map 3.1), in the southern part of Leipzig. Photo: © Lichtfisch

down factory or mine. I argue that while the postmining landscape is opening up new opportunities for residents, it also brings new risks, including new environmental issues, territorial inequalities and concerns over what can be interpreted as symptoms of green gentrification.

First, I will discuss the phenomenon of postmining regions in Europe and the particularities of pit lakes as an end use of mines, including their advantages and risks. Second, I will address the varying agreements and disagreements regarding the relationship between new green areas and socio-demographic change and will introduce the concept of green gentrification. After some methodological notes, I will explain the landscape transformation near Leipzig in more detail, along with the results of the ethnographic research. Finally, in conclusion, I will link the focus of this chapter to the overarching theme of this volume.

Postmining and Pit Lakes as an End Use of Mines

This chapter aims to analyse actors, practices, narratives and conflicts associated with the landscape transformation experienced near Leipzig. With this objective in mind, this section aims to examine the phenomenon of deindustrialization of mining regions (postmining) and to provide a more detailed

description – the advantages and risks – of pit lakes, as they are increasingly becoming one of the most common uses for mines after closure.

Mining industries have played a crucial role in European history. Beginning in the nineteenth century, the extraction of coal and lignite provided the basis for the industrialization of many European regions (Pollard 1981; Wrigley 2013). Due to the exhaustion of resources, or changes to the technical and market conditions, the mining industry has been in decline since the 1960s, often resulting in a sort of ‘socioeconomic drama’ (Baeten et al. 1999) of many regions after the closure of the mines. In addition to the problems of unemployment and the outmigration of the younger population, the quality of life in these communities is often threatened by the devastated landscape left behind after decades of mineral extraction, including air and water pollution, and the poor condition of building and infrastructures (Kabisch 2004; Linke and Schiffer 2002). A 2005 study on postmining regions in Europe indicated that 46% of 226 mining regions in total had completely ceased trading since 1990, and this figure has likely increased since then (Wirth et al. 2012).

In this context, mine waste and remediation has become the main challenge for many postmining regions nowadays. Old mining areas are being regenerated in many different ways, but, in most cases, there is a desire to first convert the target areas into natural spaces. Particularly relevant for the purposes of this chapter is the creation of artificial lakes by flooding the old mine openings and generating new natural habitats around them. Pit lakes have been developed in the past internationally (Soni et al. 2014), e.g. East Pit Lake in Alberta, Canada, Sleeper pit lake in Nevada, United States, and Westfield pit lake in Scotland, and evidence suggests they are becoming one of the most recurrent end use of opencast mining. Geller et al. (2013) estimate the existence of at least twenty-two European regions with one or more pit lakes, including Neuseenland. They are valued resources for a variety of purposes such as wildlife conservation, chemical extraction, industrial and potable water sources for humans or livestock, aquaculture, irrigation, and recreation and tourism (Doupé and Lymbery 2005; Koschorreck et al. 2020; Søndergaard et al. 2018). These new landscapes may advance the identification of revitalization strategies for communities located around opencast mining areas and have been facing decline for several decades, as suggested by Berkner (2001) in reference to East German mining areas. Empirical evidence suggests that the occurrence of new natural areas positively impacts the living conditions (Kabisch 2004) and the economic value (Lienhoop and Messner 2009) of areas where mining had caused huge ecological harm in the form of contaminated air, water and soil, as well as noise pollution. Furthermore, new natural areas are often located in the proximity of densely populated urban areas and could become a home for many new residents in the context of globally increasing urbanization. The city of Greater Geelong

in Victoria, Australia, is a good example. Geelong has been experiencing growth pressures from population increase that necessitate the development of a new habitation areas starting as early as 2025 (Gerner and McCullough 2014). In this context, the former mine site could become a valued home to about 40,000–45,000 people in the next decade. The same could be said about Leipzig. Despite the overall decline of many East German areas, the city has experienced important demographic growth over the last fifteen years, which increases the urbanization pressure to the newly restored areas (Gelfert et al. 2020; Kabisch and Linke 2000; Nuissl and Rink 2003).

However, research has shown that these types of restoration projects have come with uncertainties of a different nature. The literature recognizes the existence of environmental risks associated with pit lakes (Soni et al. 2014; Schultze et al. 2010; Doupé and Lymbery 2005; Pérez-Sindín and Blanchette 2020) that may have profound disadvantageous implications felt for many years afterwards, especially by local communities. These risks have to do with postclosure hazards such as excessive soil erosion, unexpected flooding and hazards due to the proximity of other industries and slope failure, among others. Second, pit lakes appear to come with inherent political and economic uncertainties. To be sure, pit lakes must be seen as part of a wider phenomenon known as large-scale projects or megaprojects (Altshuler and Luberoff 2003; Flyvbjerg et al. 2003; Fischhendler et al. 2015). These can be understood as infrastructures that require large investments and normally accrue great social, environmental and budgetary impacts. As such, pit lakes usually involve multiple and multilevel actors. They often involve partnerships between the public and the private sector, different public administrations as well as local, regional and national governments/organizations, in addition to various financing and land-use planning mechanisms (Fischhendler et al. 2015). Moreover, assuming the large-scale character of pit lakes, they could have a ‘powerful magnetic spell on ambitious politicians’ (Priemus 2010: 1023). They often become regional, national or international icons, or at least have ‘aims to become one’ (Fischhendler et al. 2015: 3). This chapter shows how many of these risks are part of the discourse of key actors, recalling the idea of a risk society as one of the main features of modernity, which is defined by Ulrich Beck and Anthony Giddens as a society increasingly preoccupied with the future (and also with safety), which generates the notion of risk (Beck 1992; Giddens and Pierson 1998).

New Natural Areas and Sociodemographic Change

Central to the discussion in this chapter is the existing literature about environmental justice. Having conceptualized Neuseenland as an environmen-

tal megaproject, this section examines some of the primary agreements and disagreements about the topic, and the interrelations between the creation of new natural areas and sociodemographic changes within this emerging body of knowledge. In its early formulations, environmental justice research focused narrowly on the relationship between, on the one hand, race and poverty and, on the other, the spatial distribution of waste and industrial sites (Walker 2012). However, nowadays there is a wider variety of environmental themes, including transport issues, food justice, deforestation and green space.

Especially relevant for the purposes of this study is the environmental justice topic about the existence, distribution and access afforded to green space. In a context of growing inequality and greater heterogeneity due to the global relocations of people, labour and capital, green spaces emerge as a very important element in the creation of more just cities (Low 2013). They are where race, class, gender, age, sexual preference and ethnicity are experienced and negotiated in a safe forum for political action, communication and democratic practice (Fincher and Iverson 2008; Low 2013). The links between human health and wellbeing, and contact with nature, have been increasingly documented to date (Walker 2012; Wolch et al. 2014). Research has focused on correlations between reductions in stress and the access to appropriated spaces for physical exercise in various forms: walking, jogging and informal games, to name but a few. Access to green space is therefore increasingly recognized as an environmental justice issue. Many cities all over the world have implemented strategies to increase the supply of urban green space, including those resulting from the restoration processes of old industrial sites.

Paradoxically, much of the current debate revolves around the impact of new green space and its true capacity to improve social integration and justice (Krueger and Gibbs 2007; Checker 2011; Gould and Lewis 2012; Wolch et al. 2014). The term that best captures the current discourse is environmental or green gentrification. When green space strategies are successful from the point of view of residents and businesses, it is possible that they might eventually exclude those whose need for access is most acute (Wolch et al. 2014). To be sure, urban development often responds to the principle of capital accumulation and profitability. Such accumulation takes place by investing in spaces with special interest for the highest socioeconomic strata, such as new parks and natural areas (Harvey 2012). Hence, by making older and typically low-income and/or industrial areas more attractive, new greening projects can importantly alter the affordable housing and retail infrastructure opportunities that support lower-income communities. Here it is worth mentioning the empirical evidence from the restoration of Prospect Park in Brooklyn (Gould and Lewis 2012). After having analysed

three years of census data from the US Census Bureau with regard to race, class, social power and housing, researchers found that the restoration of the park also gentrified the surrounding neighbourhoods by way of whitening, richening and raising rents. The same trends have recently been detected in a similar study in Barcelona (Anguelovski 2017). After having examined the changes in the socioeconomic profile of people living near gardens created between 1992 and 2000, Anguelovski suggests that the new areas have attracted wealthy neighbours and pushed away those who are poor.

Methodological Notes

Most of the data in this study was collected during my stay at the Helmholtz Centre for Environmental Research (UFZ) in the summer of 2015. Originally, this research focused on the restoration process of the former open pit Espenhain, which gave rise to Markkleeberger (municipality of Markkleeberg) and Störmthaler Lakes (municipality of Großpösna). Yet, the mutual interdependence between these and other nearby bodies of water found in the course of the research made it convenient to broaden the geographical scope. Therefore, the analysis also includes references to other nearby pit lakes, particularly Cospudener and Zwenkauer Lakes.

The research has been conducted by applying ethnographic techniques, specifically the go-along method (Kusenbach 2003). All experiences lived in situ in relation to the research question are worthy of being treated as data. Hence, data coming from in situ observations, sporadic talks and events were included as research material. Semi-structured interviews were conducted with six different social actors: a representative from Borna, the Mayor of Großpösna, the Secretary of Kommunales Forum Südraum Leipzig (KFSL; the South Leipzig Municipal Forum), an organization that brings together all the municipalities affected by the restoration process, town representatives from Leipzig and Markkleeberg, and a member of the Markkleeberg Town Council for Culture and Tourism. The interviews were conducted and recorded in German and were then transcribed and translated into English. After an open introduction, the interview guide consisted of at least two main groups of questions: (1) what is the general opinion of the interviewee on the trajectory of development in the Leipzig region, with a special emphasis on the landscape transformation?; and (2) what does the new natural space mean for the interviewee and what are the main conflicts, opportunities and challenges at the present time? It is also worth including excerpts from my attendance at the public discussion organized by the Friedrich-Ebert-Stiftung (FES; Friedrich Ebert Foundation) on the further development of the region. The FES is a German political foundation associated

Table 3.1. List of interviews by institution, position within the institution, gender and acronyms in the text

Institution	Positions	Gender	Marked in the text as
Borna	Town representative	f	Bo
Großpösna	Mayor	f	Gr
Kommunales Forum Südraum Leipzig	Secretary	f	KFSL
Leipzig	City representative	f	Le
Markkleeberg	Town representative	m	Ma
Markkleeberg	Member of Town Council for Culture and Tourism	f	To

with the Social Democratic Party of Germany (SPD), yet is independent of it. Its main goals are to promote political and societal education, and to ‘encourage a more democratic and plural society’ (Friedrich Ebert Foundation 2019).

I also borrow insights from more-than-representational theory, a post-structuralist theory inspired in part by the ideas of thinkers such as Michel Foucault, Gilles Deleuze, Félix Guattari and Bruno Latour. Initially conceived by Thrift (1996), the theories emerged in the mid-1990s as a response to other theories in which geographical research was limited to representations, as a result of being concerned only with cognitive knowledge. More-than-representational theory focuses on embodied experience and, as argued by Lorimer (2005), seeks a means to better cope with our self-evidently more-than-human, more-than-textual and multisensual worlds. More-than-representational thinking means focusing ‘on how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements, precognitive triggers, and affective intensities’ (Lorimer 2005: 84). Against such a background, this chapter goes beyond representational knowledge and looks at the emergence of new actors, practices and affects related to the new landscapes. All data obtained was then analysed by means of thematic analysis (Fereday and Muir-Cochrane 2006; Braun et al. 2019). This technique emphasizes the identification, examination and regis-

tration of themes within the raw material obtained. Such themes produce a data set that is relevant to the research question regarding which narratives, institutions/actors, practices and conflicts are associated with the new landscapes. The analysis consisted of a six-phase coding process: getting familiar with the data, generating initial codes, grouping codes into themes, reviewing, defining and naming the themes.

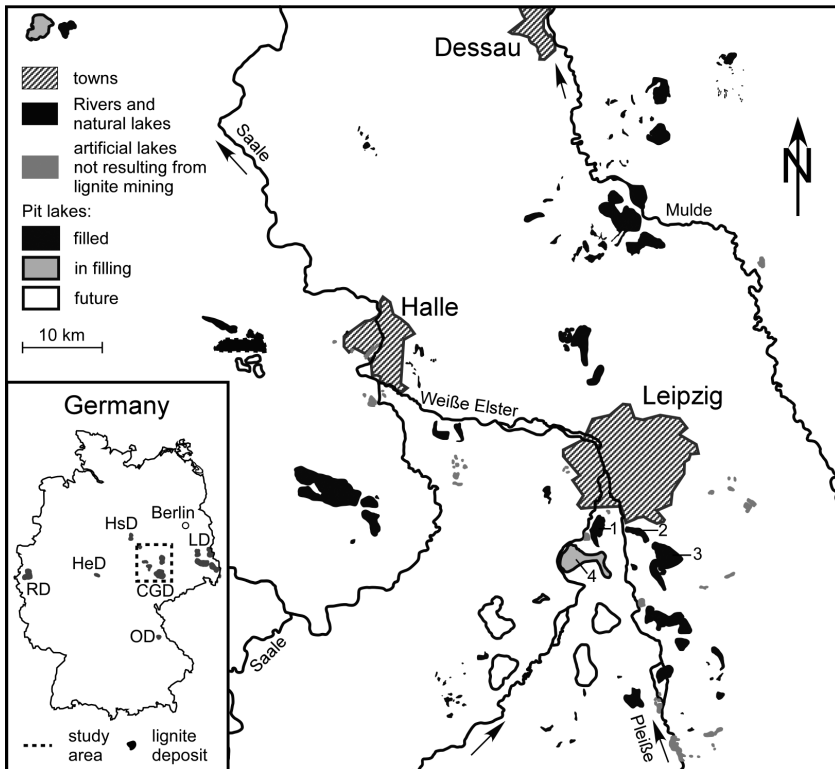
Environmental Restoration and Landscape in Former Coal Regions

Neuseenland consists of sixteen pit lakes that have been, or will be, created mostly south of Leipzig. These bodies of water cover about 70 km² of the 500 km² of the region (Berkner 2009), creating an idiosyncratic landscape, especially compared to that of premining times, when the land was characterized by a mix of relatively high-yield cultivated land, small villages and floodplain forests. It impacts up to sixteen different municipalities and approximately 100,000 inhabitants. I should add that, with the inclusion of the city of Leipzig, the number increases to 600,000, which accounts for a population density higher than the German average (250/km²), something unusual in Eastern Germany, where depopulation has represented one of the main challenges since German reunification. This fact, together with the 500 km distance from the ocean, placed the new lakes in high demand for locals.

Cospudener Lake (number 1 in Map 3.1 and in the background in Figure 3.2) was the first one of the lakes in Neuseenland to be completely flooded in the summer of 2000. Markkleeberger Lake (number 2 in Map 3.1) followed in 2006; Störmthaler Lake's flooding (number 3 in Map 3.1) and Zwenkauer Lake (number 4 in Map 3.1 and in the foreground in Figure 3.2) in 2015. South of this area, twelve more lakes have been built or will be filled when the still operating mines will be closed.

New Actors

The region has witnessed the appearance of new landscape-oriented institutions in recent years. One example is the KFSL, an organization founded in October 1992 by fourteen municipalities affected by the lignite mining in southern Leipzig. The initial motive of the KFSL was to address the economic situation in the south of Leipzig resulting from the radical transformations that occurred at the beginning of the 1990s after German reunification. The KFSL seeks to foster cooperation between local actors and to put into practice the regional development plan, paying special attention to the development of transport and technical infrastructure, restoration and environmental design of the new landscape, as well as tourism (KFSL n.d.).



Map 3.1. Map of the central Germany mining district showing the pit lakes resulting from lignite mining, the major rivers and some towns for orientation. Adapted from Schultze et al. (2010). © M. Schultze

Another emerging institution is the Grüner Ring Leipzig (GRL; Green Belt of Leipzig). This organization was founded in 1996 because of the ‘shared desired to create a better image for the city of Leipzig and its surroundings’ (GRL 2020) and it focuses on ‘highlighting the attractiveness of the surrounding countryside, restoring the cultural landscape of the region, preserving it and bringing it to life for the citizens’. Currently, the GRL counts fourteen municipalities and two counties as members, being responsible for coordination and communication across local borders. It organizes regular working groups on specific topics such as agriculture, local recreation and tourism, waterbodies, environmental technology and the management of landscape conservation. Importantly, it organizes an annual city-hinterland conference, which seeks to ‘facilitate the preparation and implementation of measures in relation to the landscape, waterbodies and tourism infrastructure development’ (GRL 2020).

It is also worth mentioning the Tourismusverein Leipziger Neuseenland e.V. (TALN; Tourism Association of Leipzig Neuseenland), whose mandate includes the promotion, coordination, establishment and development of socially accepted and environmentally sound tourism for the purposes of generating solid economic and employment opportunities. The association consists of eighteen municipalities, thirty-nine accommodation businesses (including hotels, hostels and private rooms), two restaurants, sixty-two tourism-oriented businesses, including sport businesses, leisure resorts and tour agencies, among others. Its membership includes individuals, supporting organizations and companies. The organization is engaged in networking and in representing the interests of all its members. It also encourages discussions about tourism development and, in cooperation with the town of Markkleeberg, it has been running tourist information offices since June 2015.

Regarding education and ecological initiatives, new actors have become involved, such as the ecological agriculture school Dreiskau-Muckern and the sociocultural centre KuHstall e.V., whose projects include the mining and technology park (Bergbau-Technik-Park). The park is located about 10 km south of Leipzig between the Markkleeberger and the Störmthaler Lakes on the inner overburden dump area of the former open pit mine Espenhain. The goal of the park is to present the production cycle of a brown coal open-pit mine in a comprehensible manner (from the deconstruction of a cultivated landscape through extraction and restoration). Here visitors can see the bucket wheel excavator 1547 (weighing about 13,000 tonnes) and the belt ejector 1115 (weighing about 2,400 tonnes) (Soziokulturelle Zentrum KuHstall e.V. n.d.).

Another type of educational initiative is the Sommerakademie (summer school, also known as SOMAK), which is organized by the Kulturstiftung Hohenmölsen (Hohenmölsen Cultural Foundation). I had the opportunity to spend two days in Hohenmölsen, 27 km southwest of Leipzig and very close to one of the still-active opencast coalmines, Braunkohlentagebau Profen. The main goal of this organization is to support 'ideas, concepts and projects that shape the present and future life of local lignite mining areas for the benefit of the people living and working there' (Kulturstiftung Hohenmölsen n.d.). The organizing team of the summer academy consists of representatives from various institutions, including universities, civic organizations, the West Saxony Regional Planning Association, public authorities and mining companies. The foundation organizes the event every year and, on this occasion, it aimed to combine interdisciplinary presentations that referenced the region with excursions through the Zeitz-Weißenfels lignite district.

Finally, there is the Regionaler Planungsverband Leipzig-West Sachsen (RPDWS; Regional Planning Department of West Saxony). This institution was founded in 1992 and its primary objectives are to 'get involved in

regional questions and developments', 'balance different positions and interests in case of conflict' and 'design and implement development plans' (RPDWS 2019a). Although it is engaged in numerous fields of action, this institution also played a fundamental role in the environmental restoration process (Gross 2010) and it is still a key actor in the governance of the new landscapes (Markkleeberg representative, semi-structured interview). Furthermore, in 2019, RPDWS, in cooperation with numerous partners in Saxony, Saxony-Anhalt and Thuringia (districts, municipalities, companies, associations, associations and authorities), developed and published the *Gewässerkatalog Mitteldeutschland 2019–2021* (Central German Lake Landscape Waters Catalogue 2019–2021). This catalogue presents the thirty-eight most important waterbodies of central Germany, including facts on flooding, water quality, uses, planning and contact persons (RPDWS 2019b)

New Practices

During my stay in Leipzig, I spent many hours talking to my flatmate, a master's student at Merseburg University of Applied Sciences near Leipzig. In one of our first conversations, he furrowed his brow when I explained the purpose of my visit and said: 'The new lakes? Is that the topic of your research? I didn't know there are people studying that.' He used to spend time every weekend biking around the new lakes. His partner had accidentally fallen on one of those trips and was recovering at home the second week after my arrival. As I would later find out, many of the new natural spaces have become part of people's everyday life.

The environmental restoration of old mines is creating a new landscape in which recreation and nature conservation have a high priority and where the 'close coexistence of old rivers and new lakes, attractive cultural landscapes and diverse urban spaces [are] opening up special opportunities for the future' (Economic Development Agency Anhalt-Bitterfeld and the City of Leipzig, Department Environment, Order, Sport 2014). Moreover, each lake has gradually acquired specific roles within the urban morphology. Cospudener Lake, for instance, 'has become the bathing lake' (Ma, semi-structured interview) due to its proximity to Leipzig and has the highest water quality due to its location in naturally produced soil. The eastern part of the lake, belonging to the municipality of Markkleeberg, has experienced significant urban growth in the last few decades. Kabisch's sociospatial analysis (2004) describes this area as having benefited most from the expansion of Leipzig, showing an atypical demographic increase compared to other towns in West Saxony. Traditionally home to middle- and higher-income groups, thanks to the arrival of 'suburbanites' from Leipzig (Nuissl and Rink 2003: 47), it has recently become one of the few towns in East Germany to actually grow in population. During interviews, both the Großpösna and Mark-

kleeberg representatives pointed out that the influx of population is causing a sort of urban pressure on the new living areas as the demand for new housing is increasing. Moreover, during the course of an event organized by the Friedrich Ebert Foundation on the further development of the lakescape, one of the attendees suggested that the area was going through a process of gentrification and labelled the new residents as well-heeled citizens, stating afterwards that the housing prices had skyrocketed up to €350–500/m². This observation is arguably related to the ‘class gap’ detected in Abel et al.’s (2015) survey in relation to the acceptance of the new landscapes across different economic strata. Low-income respondents exhibit a lower acceptance of the new landscape, and 23% of them perceive it as negative or very negative, compared to the 10% among the total population. The gap persists when it comes to practices. Only 67% of low-income respondents were said to have visited the beaches or exercised near the new lakes, compared to 83% of high-income respondents.

Markkleeberger Lake is located in the eastern part of the town of Markkleeberg. This lake functions as ‘visitor magnet’ (Ma) due to the location of two unique artificial white-water canoe/kayak slalom courses in Germany. The infrastructure was initially planned as part of Leipzig’s bid to host the 2012 Summer Olympics and it functioned as a sort of starting point for the rest of the region. In an interview, those responsible for tourism development in Markkleeberg stated that Kanupark functioned as a sort of reference point as it reinforced an idea already present in the early planning of new lands (Uhlig 1994; Gerstner et al. 2001), i.e. the necessity to look for what makes the region unique and assign special uses to each of the lakes to avoid unnecessary competition:

It has been a gift that there was this Olympic bid for the city of Leipzig for the 2012 Olympics and that the canoe park was one of the venues chosen ... And it is also a gift, from my point of view, that the city council planned this in the early years after reunification. To make such an investment is such a responsibility for the town of Markkleeberg. I believe over [€]2 million. This is a huge sum, and above all, one must not forget that such infrastructure needs to be managed for years to come. It also shows how important such infrastructure is for the tourist development of the whole lakes network ... not only do we need basic infrastructure on every lake, but in fact a special tourist characteristic of each lake must be achieved, so that the region as a whole remains touristically interesting. (To, semi-structured interview)

Although it is further from the main settlements, Markkleeberger Lake also has beaches that can function as an ‘expanded bathing area’, alleviating overcrowding at Cospudener Lake. Wachauer Beach offers more differentiated areas, ‘you can see here that there are small bays, for people, for families or naturists or, in short, for people who need rest’ (Ma, semi-structured interview). In addition, Auenhainer Beach, located near the canoe park, is one of

Table 3.2. Overview of the new lakes in the south of Leipzig

Lake	Space (ha)	Flooding started	Flooding ends	Use category
Bockwitzer	168	1 March 1995	2004*	Local recreation
Cospudener	439	5 August 1993	2 August 2000	Local recreation/ Tourism
Hainer	405	12 April 1999	23 February 2010	Tourism
Haselbacher	335	1 September 1993	26 August 2002	Local recreation
Kahnsdorfer	125	12 April 1999	2015*	Conservation
Markkleeberger	252	20 July 1999	18 December 2012	Tourism
Störmthaler	733	13 September 2003	30 January 2013	Tourism
Werbener	80	24 November 1998	2000*	Conservation
Zwenkauer	963	9 March 2007	2015**	Tourism

Source: adapted from Economic Development Agency Anhalt-Bitterfeld and the City of Leipzig, Department Environment, Order, Sport. (2014); Güte von Bergbaufolgeseen der LMBV [Quality of Post-mining Lakes of the LMBV] (2018); and RPDWS (2019b)

* Unknown month and day

** Zwenkauer: filled to 94% since 2015. The filling will be completed in 2038 according to the website of LMBV

the largest beaches where ‘sports such as water skiing could play an important role’ (Ma, semi-structured interview).

South of Cospudener and Markkleeberger are Störmthaler and Zwenkauer Lakes, where flooding ended more recently (2013 and 2015, respectively). These lakes are located near small industrial towns, i.e. Gaschwitz (population 671 in 2014), Grossdeuben, Rötha (population 3,704 in 2014),

Espenhain (population 2,267 in 2014). There, the collapse of brown coal industry led to social disaster due to the fact that most of the residents used to work in the mines (Kabisch 2004). Today, despite the environmental restoration, high unemployment has persisted and many of the young people have no choice but to leave. The municipality of Großpösna, which owns of large portion of Störmthaler Lake, has already developed some projects, such as the Highfield Festival, which has attracted up to 25,000 visitors in five years. In addition, according to the interviewee, this lake has potential for the practice of such sports as water skiing (Ma, semi-structured interview). In the course of the interview with the Markkleeberg representative, he commented that, with regard to the largest lake Zwenkauer Lake (963 ha), there is sailing and surfing potential there and that the town of Zwenkauer is ready to allow motor sports there to a certain extent (Ma, semi-structured interview). Even further outside Leipzig are a group of relatively smaller lakes (Bockwitzer, Hainer, Haselbacher, Kahnsdorfer and Werbener), which are categorized as playing different roles, including conservation, local recreation and tourism.

Emerging Narratives, Affects and Potential Conflicts

A survey undertaken by Abel et al. (2015) reflects a high level of social acceptance of the new landscape, with approximately 90% of the inhabitants of Greater Leipzig perceiving the new landscape development as something either good or very good. During my interviews, it was only the representative from Borna who gave a slightly more critical view, stating that she could not actually take a position on the landscape transformation and that there exists some uncertainty about the use of the new areas: 'let's see what one can do with the transformed landscape' (Bo, semi-structured interview). On the contrary, most of the people I interviewed expressed, to a greater or lesser extent, a high level of satisfaction with the landscape transformation. The memories of moonscapes that the active mining pits left behind still shapes today's discourse and the words of those I met during my stay often denoted a mix of satisfaction and alleviation resulting from restoration. All the interviewees point to the overall improvement in terms of infrastructure and living conditions as the main achievement. As stated by the representative of KFSL when interviewed, 'the region can be proud' (KFSL, semi-structured interview). The Director of the TALN went as far as to say that Neuseenland is 'simply a success story ... which, of course, is not difficult, as we started from zero. And everything more than zero is very, very much' (FES public event). In addition, the Mayor of Großpösna commented during the interview that thanks to restoration, the region has been re-evaluated, with the municipalities near Leipzig having benefited the most as they have the appropriate conditions to become new residential areas.

As mentioned above, I had the occasion to attend a public event organized by the FES on the further developments of the new landscapes. The title of the event was ‘Braunkohlefolgelandschaft. Wie geht es weiter mit der Seenentwicklung?’ (‘After Brown Coal Landscapes, How Do We Continue with the Lake Development?’). The event included the participation of important regional actors such as the Mayors of Leipzig and Markkleeberg, the Director of the TALN and the Secretary (and former Mayor) of Großpösna, who engaged attendees with an interesting and vivid discussion about the past, present and future of the region. Approximately thirty people attended the event, some of whom took part in the final discussion by asking questions or making comments. Before analysing some of the opinions shared during the course of the event, it is worth commenting on the text used by the FES to announce the event on the internet and in advertising material (see the quote given below). The text begins by expressing the overall satisfaction with the environmental transformation, as well as the emergence of new affects, ‘long-lasting lakes that are equally popular with both locals and tourists alike’. The second part then points out new issues and raises questions about the future, particularly in relation to the capacity for the combination of recreational areas and tourism:

In the last 20 years, the landscape in the Leipzig region has changed enormously. Former lignite mines were converted into long-lasting lakes that are equally popular with both locals and tourists alike. Neuseenland is increasingly known in and outside of Germany as a brand. Markkleeberg and its neighbouring municipalities are shaped by four lakes: the Cospudener, the Markkleeberger, the Störmthaler, which was opened last year, and the Zwenkauer Lake, which was only opened in May this year. But how will this landscape develop in the future? What meaning will the charter Leipziger Neuseenland have in 2030? How can tourism and recreation be combined, especially with regard to the navigability of the lakes and tourist destinations and attractions on and in the water? We would like to discuss these questions and any other questions you may have with you and our guests. (Friedrich Ebert Foundation 2019)

Several people from the public expressed concerns of different natures during the course of the event. Apart from the alleged increase in the housing prices around Cospudener Lake, as mentioned above, it is worth highlighting the complaint of one of the attendees in relation to what he perceived as a decrease in people’s level of involvement. He first emphasized the key role played by citizens at the beginning of the environmental restoration process, something confirmed by Gross in his 2010 study on the governance of abandoned mines, where he highlights the degree of social openness and organization of citizens’ hearings throughout the whole restoration process. Against this background, the attendee then argued that people are taking it for granted that the problems of water quality and other environmental issues have been solved:

People lost connection with what was created, when the landscape was still devastated in the early 1990s, citizens became more active, the improvements were more obvious, and the population took part in making their environment nicer. Now they believe it is already nice. However, experts know that it is still a far journey to 'becoming nice', because appearing nice is different from being nice. Also, the landscape can lose attractiveness again, so citizens cannot lose the vision and courage we had at the beginning of the process. (Attendee at FES public event)

Concerns regarding the new environmental issues appeared repeatedly in discussions with my interviewees. A majority of the interviewees mentioned issues of water quality: sulphate, heavy metals, pH or eutrophication. In Bockwitz, near Borna, the pit lake had to be neutralized twice with carbonate to reach a neutral pH value and, as pointed out in the literature (Doupé and Lymbery 2005; Schultze et al. 2010; Soni et al. 2014), long-term acidification should be taken into consideration as it might cause a decrease in pH in the long term. Some of the interviewees also expressed their concern with regard to the groundwater. For instance, as stated by the Mayor of Borna, 'the groundwater is upside down now ... we have tennis courts which we had to close ... problems [that] were already believed to be solved, but ... by far ... are not solved' (Bo, semi-structured interview)

Criticisms also arose when it comes to the financial aspects of the new landscape uses. The restoration process was financed by the Verwaltungsabkommen, an administrative agreement between the local governments and the state of Saxony, which, as argued by Lintz and Wirth (2015) provided a sound financial basis for it. Yet, interviewees revealed the uncertain future in terms of the funding via the agreement. For instance, the Mayor of Großpösna expressed his concern that 'at a certain point, the government will regard the restoration as finished ... and municipalities will have to increasingly seek for other ways of how to gain money to finance the implementation and maintenance of facilities'. This might intensify the financial shortage of local governments, which is de facto an already existing problem. According to the Markkleeberg town council representative, 'the budgets are a problem ... especially with very, very big projects. They are very cost-intensive, straining the budget of the restoration' (Ma, semi-structured interview), or as stated by the KFSL Secretary in the interview, 'cooperation needs to be intensified due to a limited budget ... with limited funds, actors need to think carefully about how and in which scope projects are implemented'. Indeed, interviewees pointed out several projects that are currently missing funds, such as a bridle paths, public transportation, and an archaeological exhibition, to mention but a few. Notably, in one of the interviews, the Leipzig Council representative revealed the uncertainty that 'the next administrative agreement might not provide funds sufficient to finish what is known as the *Wasserschlange*' (a 1 km-long canal that will connect Mark-

kleeberger Lake and the Kleine Pleiße River – an important element of infrastructure needed for the prevention of flooding), adding ‘especially if it gets more expensive than expected’ (Le, semi-structured interview).

Notably, raising enough capital for implementing projects is not the only challenge concerning financial aspects: ‘every path, every beach and all facilities implemented need some basic maintenance ... and with less money in municipal budgets every year it will be more and more challenging to maintain the created infrastructure’ (KFSL, semi-structured interview). Thus, one profound question arose in the interview with the KFSL representative: ‘Will the municipalities need to abandon facilities, which they offered publicly for free, because they are not able to maintain it anymore?’

According to the Mayor of Markkleeberg (at the FES event), the main challenge is to be able to balance nature, tourism and the economy. Indeed, as I advanced through the fieldwork, two different governance models emerged that might conflict in the long-term perspective. On the one hand, there is a soft tourism development model, defended by those who look forward to a varied landscape and diverse recreational and sports facilities in surroundings characterized by abundant lakes, forests, biotopes and the habitats of indigenous animal species, as well as bicycle paths, footpaths, swimming beaches and natural areas. On the other hand, there is a development project capable of providing jobs, defended by those with higher expectations for the new landscape as a potential source of employment. This group is looking forward to new forms of income for the community, for example, commercial ventures, shopping outlets, adventure parks, big events such as concerts or sport competitions. The most commonly stated point of contention is the issue of motorboats on Zwenkauer Lake. As argued by the Leipzig representative, the decision to allow or disallow motorboats creates divisions between local actors and a solution ‘seems difficult to achieve in the near future’ (Le, semi-structured interview).

Analysis of the discourse also throws into relief the potential for inter-municipality conflicts. Municipalities in the commuter belt of Leipzig profit from their special location; they are more often able to invest money and resources in the implementation of projects. In addition, the demand for recreational facilities is much higher there than it is even further away from Leipzig. In this context, southern municipalities feel disconnected, calling themselves ‘the southern South’ (KFSL, semi-structured interview). There, the dynamic of the landscape transformation process is not as strong as in the northern part of Neuseenland. The Mayor of Großpösna went as far as to say that in this area, public institutions feel a sort of ‘enviousness of other municipalities’ because ‘it is hard to develop a touristic infrastructure when money is already missing for the obligatory municipal tasks’ (Gr, semi-structured interview). Moreover, this is the area where, as described above,

most of the residents used to work in the coal industry, so issues regarding unemployment are clearly present in the discourse. One interviewee described the challenge of being able to unify the whole region's marketing plan so that those located further outside Leipzig can benefit (KFSL, semi-structured interview).

Conclusions

This chapter has attempted to broaden the perspective on the deindustrialization processes behind what some call smokestack nostalgia. The emergence of a dense network of actors, as well as new affects and practices around the postmining landscape, move the region far beyond the stereotypical image of the depressed and nostalgic mining communities that remain after mine closures. Yet, this differentiated image of postindustrialism is not exempt from new conflicts and uncertainties. The results of this research show how residents and institutions need to cope with uncertainties of different natures such as financial limitations, water quality and acidification, or flooding issues. All these issues are inherently part of the discourse of key actors, recalling the notion of the centrality of risk in modern societies, as argued by classic sociologists such as Ulrich Beck and Anthony Giddens. Included in such risks are social aspects related to territorial inequalities and unequal access to land and housing. While the restoration of old industrial sites – today converted into valuable natural areas – may open new opportunities for economic revitalization, their overvaluation as residential and leisure areas are not exempt from counterproductive sociodemographic dynamics found in many large cities worldwide, such as the green gentrification process.

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