Designing with Deep Time
Entwerfen mit geologischen Zeitmaßstäben
the Hinterland of the Elbe River
das Elbe Hinterland

Landscape Architecture Master's Thesis

Summer Semester 2021

CONTENTS

1. INTRODUCTION

ABSTRACT

The Master's thesis aims to highlight the essential role of being aware of geological temporality (Deep Time) and natural processes to conceive new landscape transformations over time. Because of the impact of climate change on the future of landscapes, the master's thesis challenges the current short-term view of understanding our environment. Therefore, if we comprehend the importance of recognizing a place to silence or the moment of stillness, and motion the force that makes possible the movement and transformation of matter, we can live in resilient landscapes. Since these two opposite but complementary terms make life (and death) on Earth possible.

The Elbe Hinterland chosen as the area of study is located in the Middle Elbe or *Mittelelelbe*, specifically in the southern side of the river, which lies in Saxony-Anhalt and Lower Saxony, near Wittenberge. This place is seen as an opportunity for the proposal of an explanatory path to raise awareness about Deep Time to take response-ability and make new futures possible.

This thesis believes that it is possible to create a new relationship with time through the proposal of new landscape scenarios that rescue symbolic values from the past and also consider new paradigms for the days to come. And most importantly, to be aware that through reciprocal interaction with other species it is possible to establish a resilient landscape that we now inhabit. Thus, reconciliation is possible by participating in the change in partnership with nature.

If you still have your eyes closed, it is time to open them.

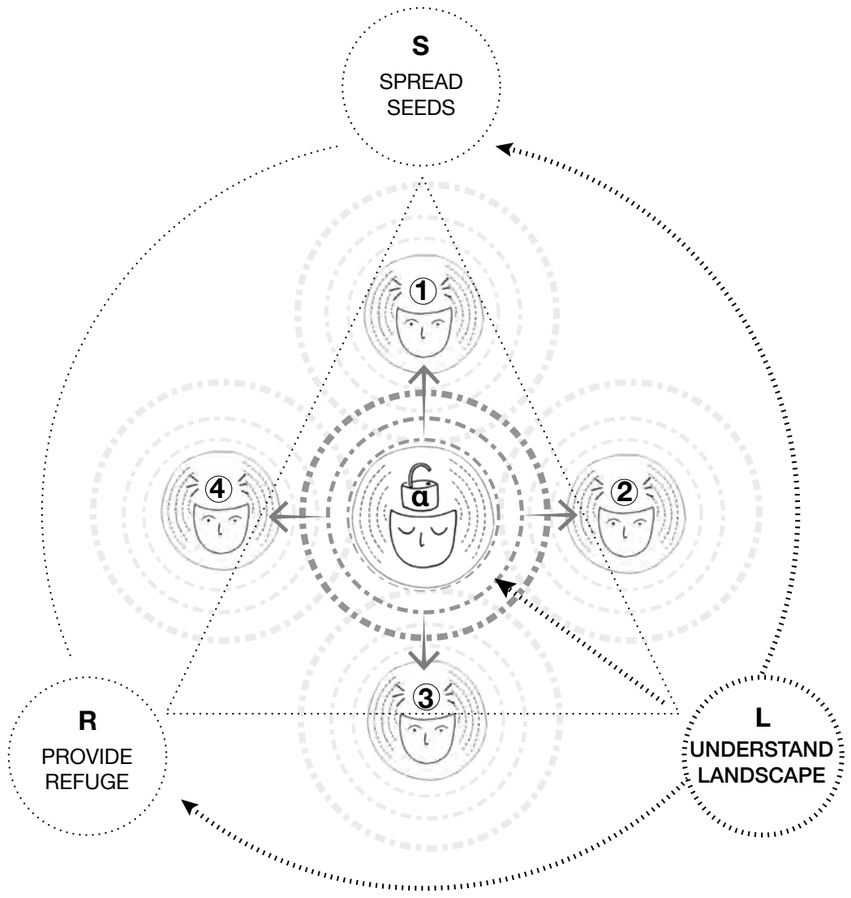


Fig. 1: Thesis Statement diagram

THESIS STATEMENT

> Life and dead are two opposite but complementary terms, because one cannot exist without the other. Just as motion and silence make possible transformations on the Earth.

The master's thesis aims to demonstrate that from a landscape architecture proposal it is possible to raise awareness of how landscapes are transforming over time, and how this has implications in the future to create new possible transformations in the landscape. For this reason, as long as we understand the implications of geological temporality (Deep Time) and nature's dynamics, it is possible to achieve a resilient landscape in the future, in which humans create a reconciliation with nature in reciprocity with other species.

The proposal is an explanatory path (in Fig. 1 in the centre and named α) that appears in the hinterland of the Elbe River to raise awareness about Deep Time. Thanks to this proposal, then in the near future other sites in the surrounding area will be revealed as an opportunity for future transformations in the landscape, which in this thesis is called "Landscape scenarios" (in Fig. 1 named as 1, 2, 3 and 4). Through the implementation of different small-scale actions, in this thesis referred to as 'agencies', these punctual forces occurring at a given moment also produce a particular effect on a large scale and create an aptitude in time to think of ourselves collectively with other species and to let nature be. The 'agencies' of "Understand Landscape" are the ones that lay the foundations of awareness and are therefore the most important of all.

OBJECTIVE AND METHODOLOGY

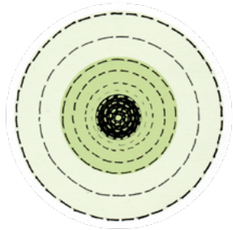
> [...] un-making, undoing, subtracting, reversing, decarbonising, tearing out, ripping up, replanting, softening and connecting.
>
> —Kate Orff[1]

The methodology is to implement small-scale spatial sensitive interventions (‘agencies’) to influence future large-scale landscape transformations over time. These interventions, in addition to raising awareness of natural processes, allow the role of other species and matter in the development of the landscape over time to be recognised. They also establish the concept of reciprocity in nature, as a fundamental axis that places us on the same level as all species on planet Earth. Being aware of how each action determines new energy in the landscape is the way to understand that we are all part of the nature assemblage and therefore part of the change and transformation of the landscape. The implementation of these small-scale interventions mainly achieves three objectives: 1 Raise awareness about Deep Time in our present through the relationship between body and landscape; 2 Recover land for the revival of novel ecosystems, flourishing with the human agency; and 3 Heal soil for carbon dioxide sequestration.

In this thesis troubles as seen as opportunities to conceive nature in another way. Being aware of being present in this moment is how we can project new futures.

1 *What is Design Now? Unmaking the Landscape* (Architectural design, 90(1), 2020), 96.

METHOD



Implement small-scale spatial sensitive interventions to influence future large-scale landscape transformations over time.

GOALS

1

Raise awareness about Deep Time in our present through the relation between body and landscape.

2

Recover land for the revival of novel ecosystems, flourishing with human agency.

3

Heal soil for carbon dioxide sequestration.

Fig. 2: Method and Goals icons

2. BACKGROUND

It was as if time had stopped in the woods, allowing me to see things that were normally a blur of motion.

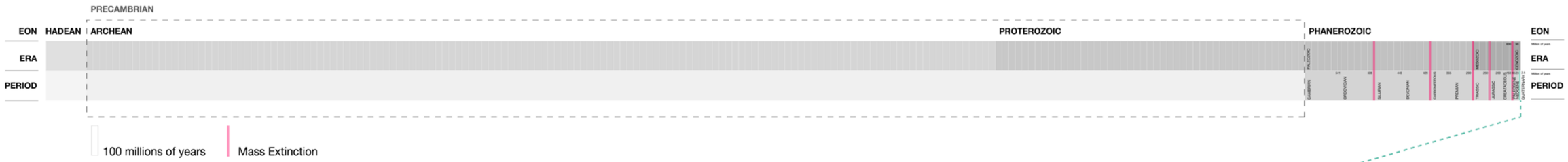
— Marcia Bjornerud, Timefulness (2018)

DEEP TIME

> Focusing simply on the age of the Earth is like describing a symphony in terms of its total measure count. Without time, a symphony is a heap of sounds; the durations of notes and recurrence of themes give it shape.[1]
>
> —Marcia Bjornerud

Almost the entire North German Lowland is a product of the Ice Age, only the North Sea marshes and the moors have been formed in the last 10.000 years. The ice age had a duration of 2.6 million years. Thereby the warm periods were mostly around 10.000 to 20.000 years, while the cold periods lasted mostly around 10. 000 years, in these cold periods the North German landscape was formed. Moreover, the deglaciation of the Eurasian ice sheet complex (EISC) formed the Fleuve Manche and drained the present-day Vistula, Elbe, Rhine and Thames rivers through the Seine Estuary. On the glacier fronts, *Endmoränen* were formed, some of which were compressed and some of which were created by deposits of thawed material. In front of the *Endmoränen* wide *Urstromtäler* formed into which the enormous amounts of meltwater were carried away. *Endmoränen* and *Urstromtäler* provide the great structure of today's northern German landscape.

1 *Timefulness: How thinking like a geologist can help save the world* (Princeton: Princeton University Press, 2018), 17.



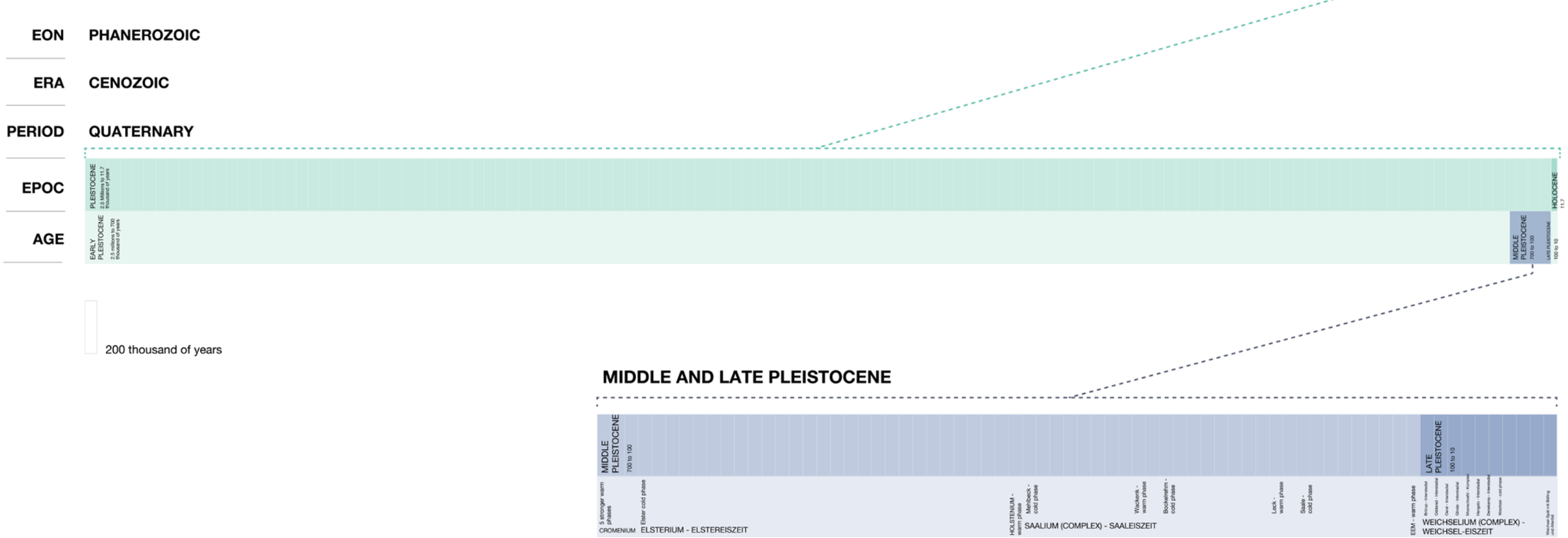


Fig. 3: Earth's Deep timeline

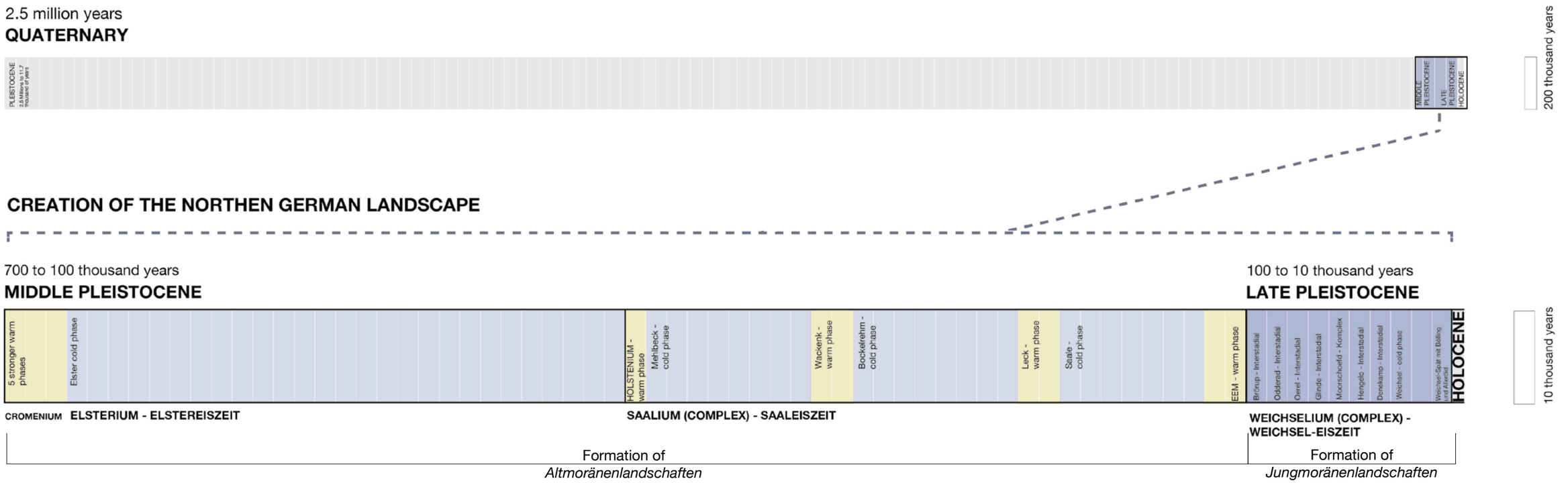


Fig. 4: Middle and late Pleistocene timeline

The Pleistocene is divided in three geologic ages: the early Pleistocene (2.5 millions to 700 thousands of years ago), the middle Pleistocene (700 to 100 thousands of years ago) and the late Pleistocene (100 to 10 thousands of years ago). Mainly in the middle and late Pleistocene the landscape of northern Germany was formed. In the middle Pleistocene, ice penetrated several times into northern Germany and laid the foundation for the *Altmöranenlandschaften*. This land did not receive fresh material later and, consequently, its soils are very poor, and in our days contrast sharply with the *Jungmoränenlandschaften* formed mainly in the late Pleistocene in the north of Germany.

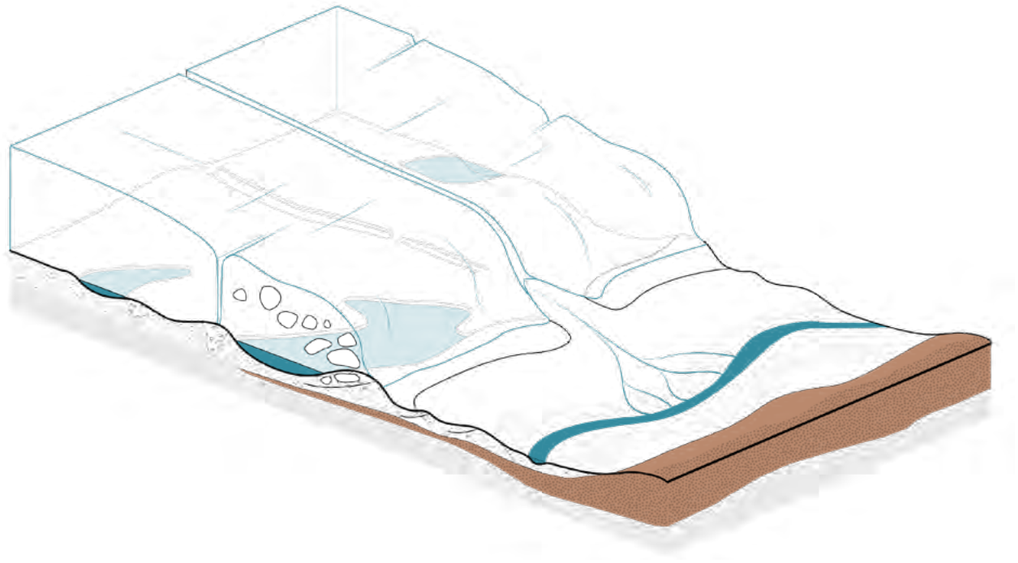


Fig. 5: *Altmörane* illustration

The North German *Altmöranenlandschaften* areas were formed during the Elster cold period (*Elster-Eiszeit*) and especially in the Saale cold period (*Saal-Eiszeit*), afterwards they were strongly reshaped.

Between the cold periods, there were warm periods of shorter duration. These contributed little to the formation of the landscape. Between the Elster and the Saale, there was the warm Holstein period, which had temperatures similar to today's and in which forests that thrived well in the warmth spread. From this time, we have the oldest traces of humans in northern Germany.

While the sea level dropped during cold periods and the North Sea dried up, the water rose during warm periods. The former Holstein Sea was considerably larger in the southeast, overflowed a large part of Holstein and penetrated with a deep bay into today's Elbe as far as Wittenberge.

During the Elster cold phase, the ice covered the entire northern German lowlands and partially penetrated the low mountain range zone. Some of the areas that were formed at this time and were outside the glaciers (periglacial zone) lacked vegetation and were shaped by the lasting effects of frost, water and wind. Consequently, over time, there was a generalized levelling of the landscape.

The Saale cold period was the origin of the Elbe River. Also, numerous depressions were formed and then filled up with water. At the end of the Pleistocene, all northern Germany *Jungmoränenlandschaften* were covered with many lakes. After the Saale cold period, no new material was added to these landscapes. In addition to the levelling, sandy soils were eroded, causing what is called *Geestlandschaft* or barren and infertile landscape. These soils contrast enormously with the fertile *Löss* soils of the south and the marshes of the further north of Germany.

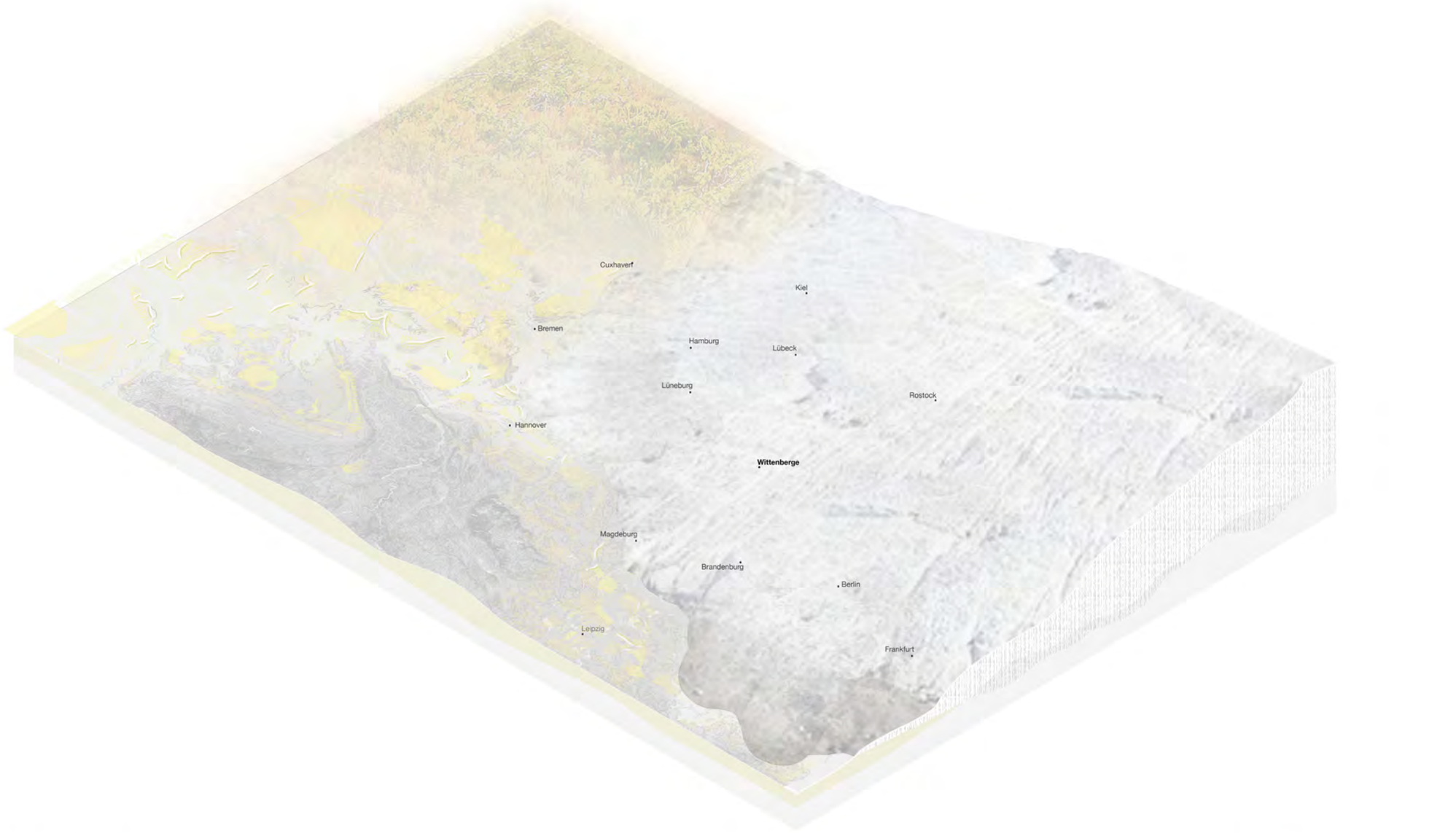


Fig. 6: *Elstereiszeit* in northern Germany (Elbe region)

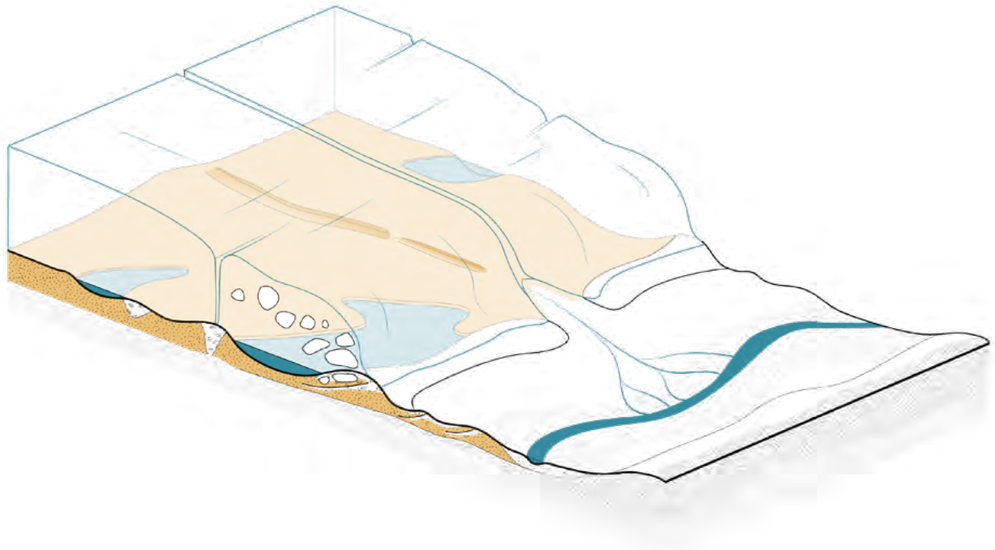


Fig. 7: *Jungmörane* illustration

Altmöranenlandschaften were characterized as being covered by tundra or cold deserts vegetation during the last “Ice Age”. Nowadays they differ from the *Jungmoränenlandschaften* at first sight by their low relief and the absence of lakes.

The North German *Jungmöranenlandschaften* areas were formed during the Weichselian cold period (*Weichsel-Eiszeit*), the youngest cold period and with a duration of approximately 105.000 years. After the Eem warm phase (before the beginning of the Weichselian) there was a long period of arctic climate, which also corresponds to the lack of vegetation most of the time. The beginning of the Weichselian cold period was interrupted several times by interstadials (warmer phases). In the first two interstadials, northern Germany was covered with birch, pine, spruce and larch forests, indicating a cold continental climate. In the last four interstadials, tundra vegetation and permafrost dominated. These landscapes are characterized by the presence of *Endmoränen*, a linear protuberance (“wall”) formed by rocky material that marks the line of maximum glacial advance.

Towards the end of the Weichselian, the climate became warmer. The Scandinavian glaciers advanced to northern and central Germany and enormous amounts of meltwater were discharged into the Elbe glacial valley. Additionally, the glaciers brought different materials, such as sand, gravel, clay and stones of all sizes (mostly large granite boulders). The glaciers also carried away the limestone and covered a large chalk-limestone area, which today is still preserved in the soils of the *Jungmöranenlandschaften* and is highly valued for its fertility. Furthermore, the ice flattened the subsoil and carved out basins that later filled with water.

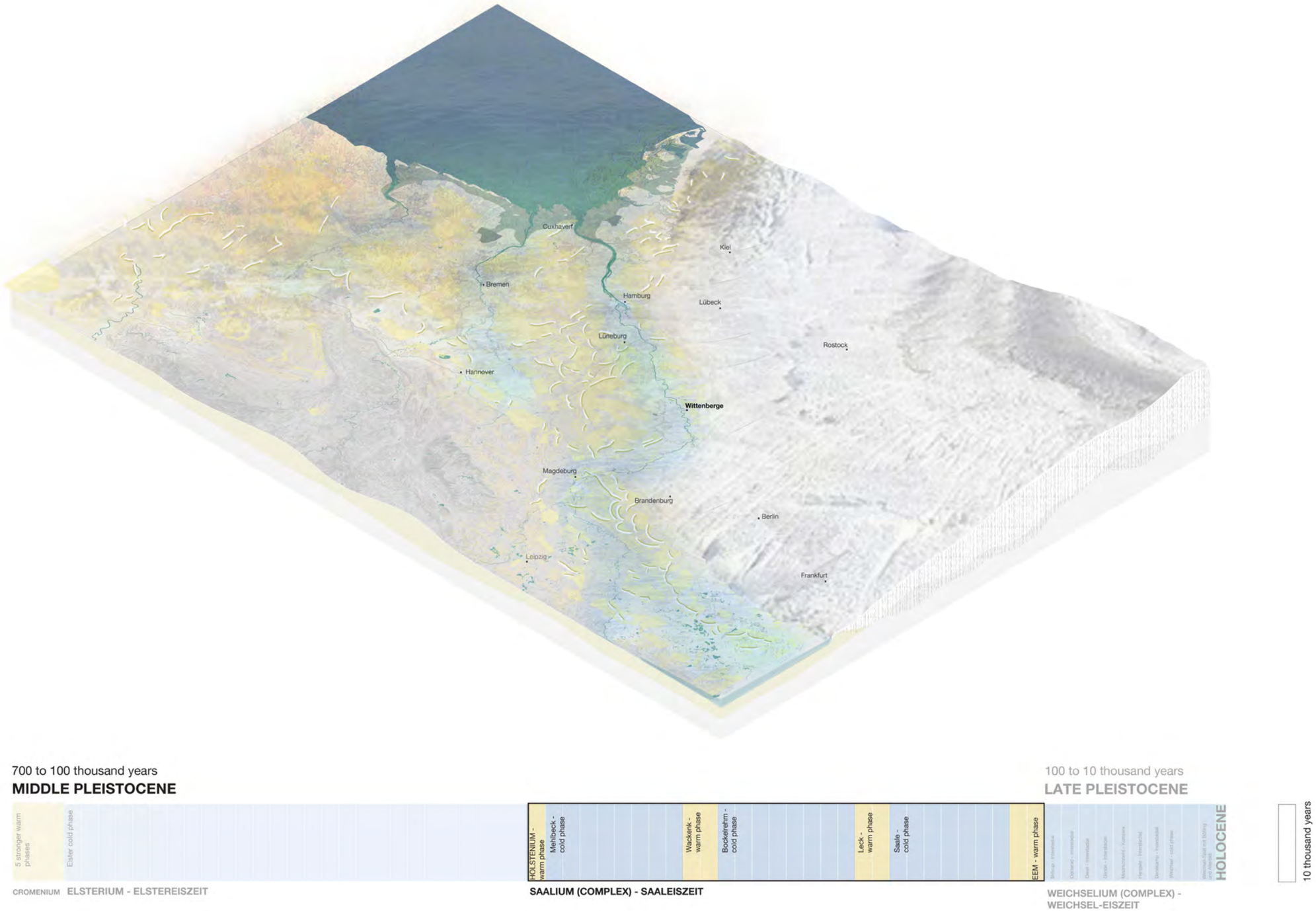


Fig. 8: *Saaleiszeit* in northern Germany (Elbe region)

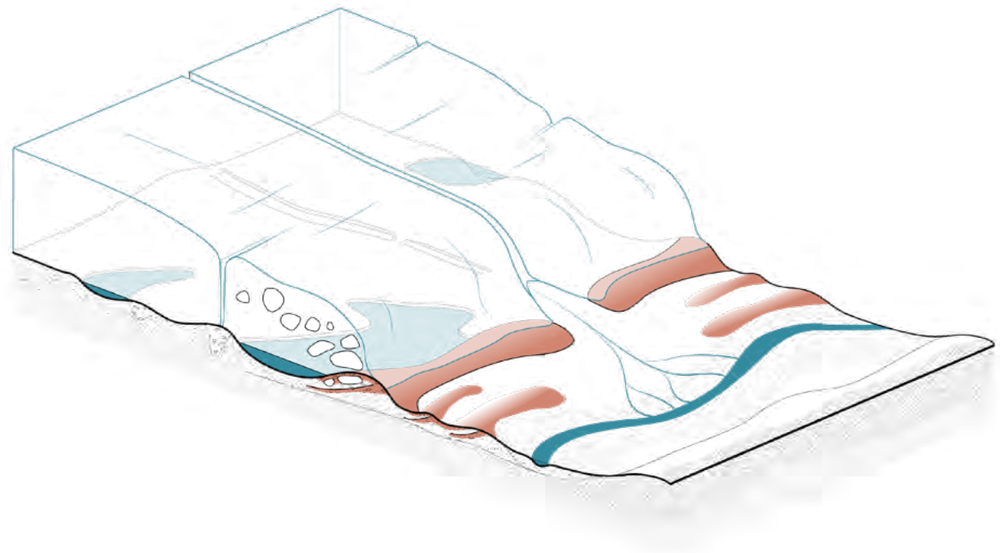


Fig. 9: *Endmörane* illustration

After the glaciers retreated in the late Pleistocene, the soil remained without vegetation for a long time. Permafrost slowly disappeared and the loose soil was easily blown away by the wind. Large quantities of sand from the *Jungmöranenlandschaften* of the glacial valleys migrated and were carried far away.

After the end of the “Ice Age”, the ice melted rapidly and consequently the sea level rose considerably. The average rise was 1.25 m per century. Then began our geologic epoch, the Holocene, which has been identified by some to be an interglacial period of the Pleistocene. In the Pre-boreal (the first time interval of climatic fluctuation) the rapidly warming but still unstable climate of the Earth led to the growth of birch and pine forests. In the next climatic period of our geologic epoch, the Boreal, temperatures were already suitable for the development of trees better adapted to the warm climate. Birches, pines and aspens also continued to occupy the land, forming relatively light-permeable forests. At the end of the Boreal hazelnut trees migrated and spread throughout Germany.

Finally, it only remains to say that the Holocene is characterized by the rapid propagation and huge impact of the human species. It has been shown that since the middle of the 20th century (time after World War II and the Atomic Age) and thanks to human socio-economic trends, the Earth’s geological processes are increasing at a dramatic rate (what used to take a thousand years now takes only few years). Therefore, we speak of a new geological epoch, the Anthropocene. This will be discussed later in this chapter.

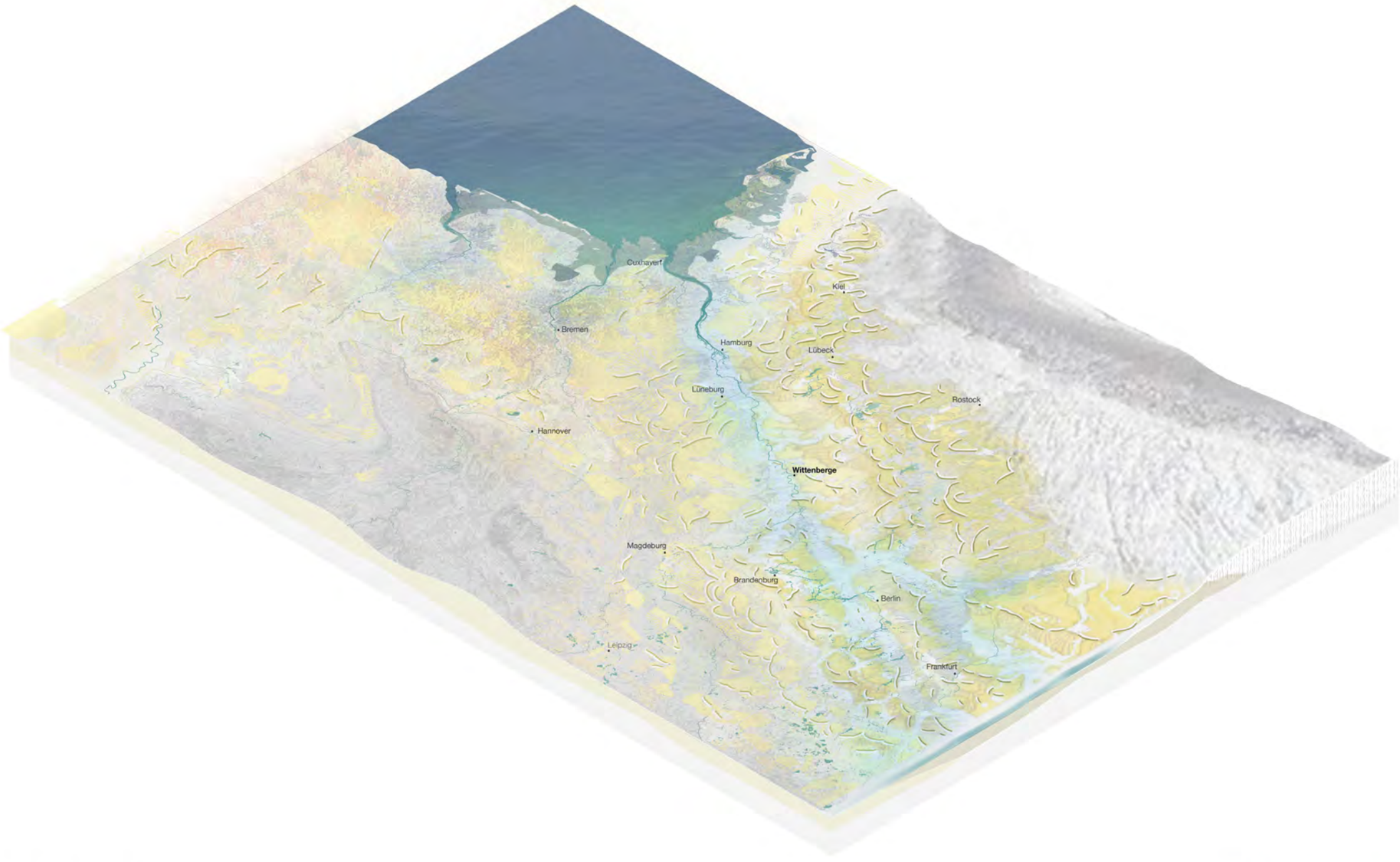


Fig. 10: Late *Weichseleiszeit* in northern Germany (Elbe region)

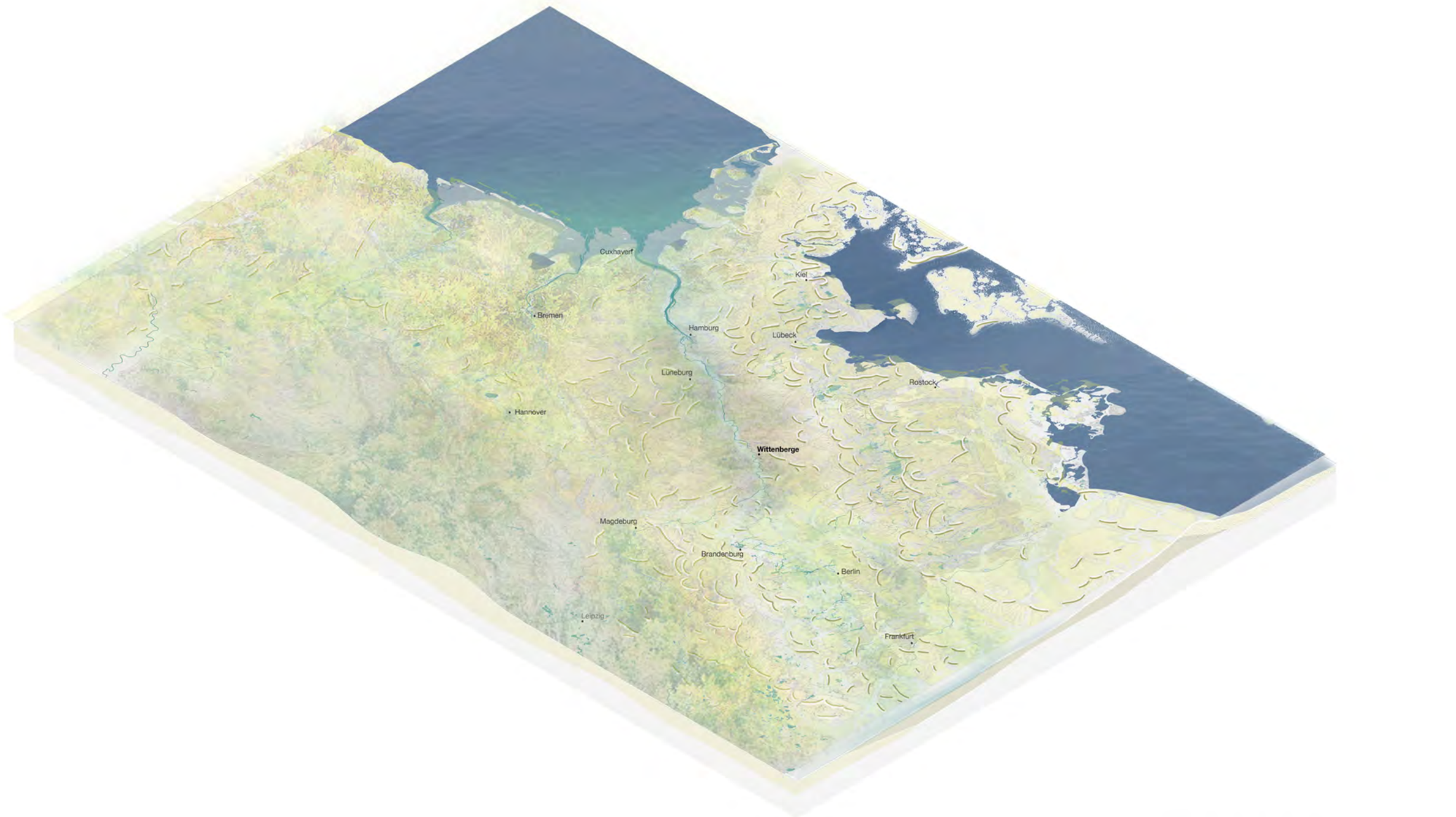


Fig. 11: *Allerodzeit* in northern Germany (Elbe region)

CONCLUSION

> What happens now when we turn to “nature” and realize that we are the ones that should be “nurturing” Her so as not to be reduced to irrelevance by Her sudden change of steady state. She will last. Don’t worry about Her. We are the ones who are in trouble.[1]
>
> —Bruno Latour

Deep time reveals to us how strong the Earth is and makes it understandable that she will be able to recover from what we conceive today as not normal: climate change, natural hazards or nature regaining its room. This is nothing more than the constant movement of a very lively planet that we inhabit. The fact that the human being causes strong effects on the “stability” of the Earth is not dangerous for Her, on the contrary, it puts our existence on Earth on a tightrope, and yes, we have the responsibility and the capacity to turn what we have destroyed into a “better” place. Furthermore, the geology perspective of time uncovers specificities, singularities and the enormous diversity of planet Earth. It gives also voice to the silenced (rocks, sediments, soil...) and makes understandable the force of life in all things.

Now it is the opportunity to see the landscape with the eyes of Deep Time and if possible, give a soul to the soil. Do not you think it is almost a “miracle” to be able to be here after all?

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1 *Waiting for Gaia. Composing the common world through arts and politics* (London: A lecture at the French Institute, 2011), 9.

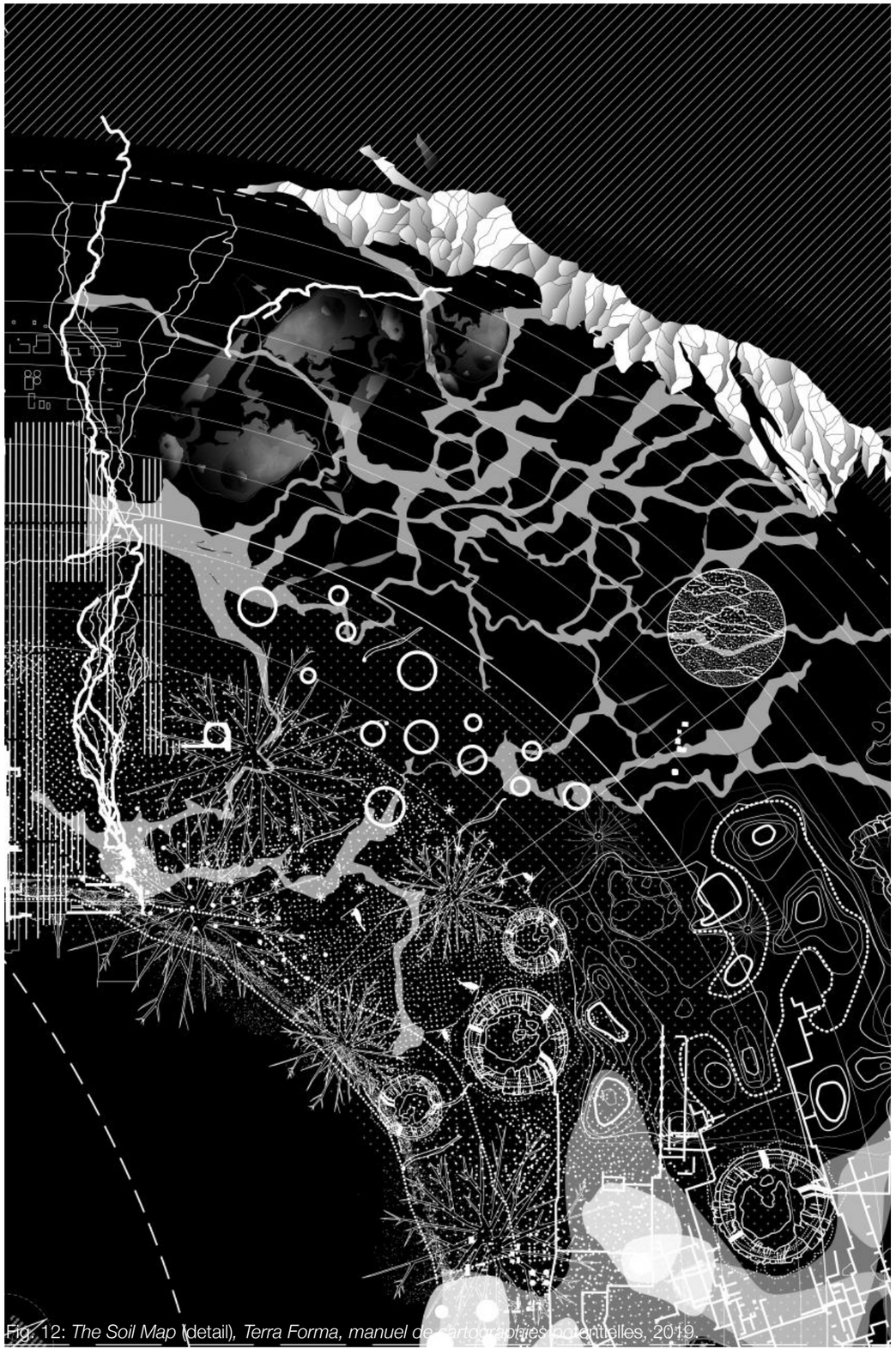


Fig. 12: *The Soil Map* (detail), *Terra Forma, manuel de cartographies potentielles*, 2019.
Illustration by Frédérique Aït-Touati, Alexandra Arènes, Axelle Gérgoire

WELCOME TO THE ANTHROPOCENE

> [...] this speculative dimension helps call attention to—and occasionally overturn—certain bad habits of thinking that allow humans to conceive of objects, whether micro- or hyper-, aesthetic or mundane, as distinct from the processes of their emergence and decay.[1]
>
> — Hans Vaihinger

As mentioned above, the scientific relevance of considering a new geological epoch, the so-called Anthropocene, is being debated. This would allow the International Commission on Stratigraphy (ICS) to recognize a diachronic Holocene rift since the last “Ice Age” receded nearly twelve millennia ago from our present. The term was first popularized by the Dutch chemist Paul J. Crutzen in a paper published in Nature in 2002. After that, the term started to be used by other scientists in different publications. Since then, the Anthropocene has been studied not only in scientific disciplines but also in the social sciences, humanities and arts. To determine whether there are sufficient criteria to define a new geologic epoch, stratigraphers and geologists consider some anthropogenic effects: The increase in land for agriculture use; the constant deforestation of virgin forests; oil extraction and others, and their consequences for the atmosphere; carbon combustion fuel emissions; large loss of coral reefs; acidification of the oceans; soil degradation; increase in the rate of extinction of species; and the high percentage of human propagation, which according to biologist E. O. Wilson, is “more bacterial than primate” (Davis, Heather and Turpin, 4).

1 Quoted in Davis, Heather and Turpin, *Etienne, Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environments and Epistemologies* (London: Open Humanities Press, 2015), 5.

Fig. 13: Dead rock growing on Elbe sanded due to the forced deepening

Three dominant positions are speculating on the beginning of this new geologic epoch. The first, by paleoclimatologist William Ruddiman, proposes that since the invention of agriculture (8 thousand years ago) and the constant deforestation, the increase of carbon dioxide makes it evident that humans have been a primary geological force since the beginning of the Holocene. The second was suggested by meteorologist and atmospheric chemist Paul J. Crutzen, in which he states that since the invention of the steam engine at the end of the 18th century, more specifically in 1789, an uninterrupted increase in carbon dioxide emissions seen in ice-core have demonstrated this. The last one proposes the beginning of this new epoch following the bombing of Hiroshima and Nagasaki, as seen in sedimentary records. Also, the post-war times with the overflowing growth of the human population, its consumption and technological development, referred to as the “Great Acceleration” are considered as fundamental factors of a possible beginning of a new geological epoch.

> (...) what imaginaries might be possible under the sign of the Anthropocene, and how they could be constructed to refuse both false hope and the apocalyptic foreclosure of possible futures. We also want to acknowledge that whatever the outcome of the International Stratigraphic Commission in considering the merits of the Anthropocene thesis, the cultural, aesthetic, and theoretical implications of this discourse are neither isomorphic, nor easily dismissed. What follows, then, might be considered a propositional itinerary, accompanied by some preliminary heuristics, for encountering art in the Anthropocene.
>
> (Davis and Turpin 2015, 6)

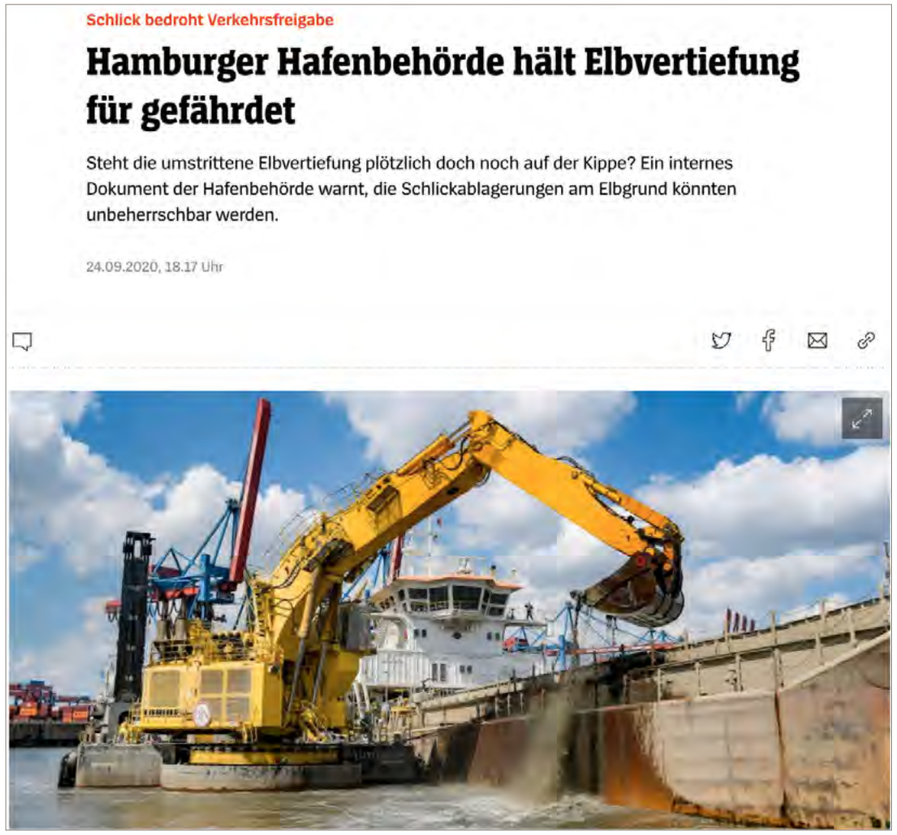


Fig. 14: Dredging in the Elbe. Screenshot from Spiegel.de

It is important to mention, although this has no direct implications on the results of this thesis, that the processes of the "Great Acceleration" continue to profoundly affect the Elbe River. The implications of what is happening on a regional scale by the deepening and the constraint of the river affects nearby local scales and remote areas, such as the one studied in this thesis as a focus of study.

On the one hand, the natural dynamics of the river-related to sediment deposition are still undesirable for efficient and fast shipping across the river. Therefore, the *Elbvertiefung* is being carried out regularly, deepening the fairway in the *Unterelbe* between the Elbe estuary and the Port of Hamburg, to provide the navigable channel with a greater width and a greater minimum depth. According to *Naturschutzbund Deutschland Landesverband Hamburg e.V.* (NABU) Hamburg, serious ecological consequences are observed: Loss of valuable shallow water areas that are important for birds and fish habitats; the brackish water area is shifting towards Hamburg as more saltwater enters, as a result, freshwater tidal habitats, such as tidal forests and others, are declining; lack of oxygen and biological degradation in deep waters and without light; and at high tide, bodies of water flow across the embankment river in direction to Hamburg and carry tons of sediment, which is mainly deposited in the harbour.

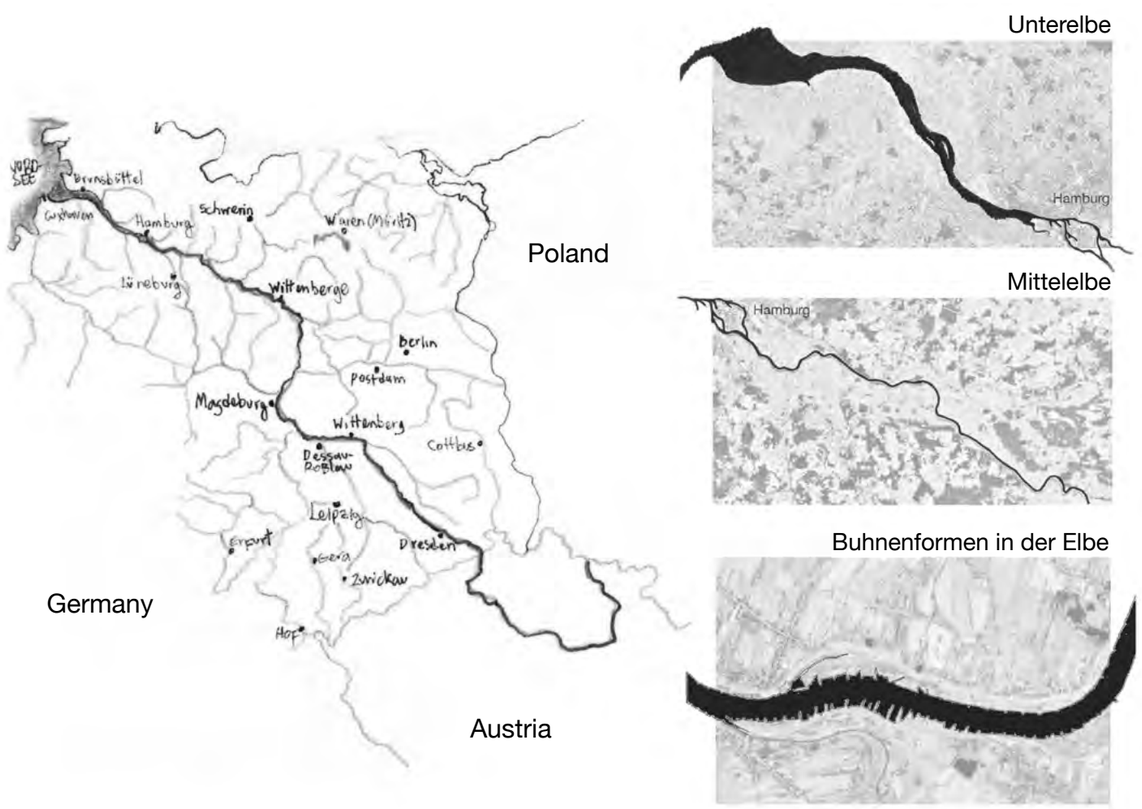


Fig. 15: River profile difference

On the other hand, today morphological dynamics of the Elbe (better explain in Chapter 3) are constrained by the presence of dykes and groynes. Consequently, there is a limitation to lateral erosion and the riverbed can only change in the vertical direction. Specifically, in the Elbe, there is a trend towards deepening of the riverbed. The study “Sohlstabilisierungskonzept für die Elbe” focusing on the zone between Mühlberg and Saalemündung, a region further upstream of the focus area, shows that “According to current analyses (BfG, 2004) and model studies (BAW, 2001), the focus of erosion is gradually moving downstream”. This means, double deep erosion is happening, the river is being violently stripped of its dynamics (for now) and the consequences could be serious if we do not pay attention to their implications.

Fig. 16: Until the dredgers came and drove new groynes into the river (above), shading of the banks also began in many places (center) and was completed at this section (bottom) (Dörfer 2000).

Fig. 17: Die (the) Elbe in Germany

DIE (THE) ELBE

> Behutsam setzte ich meinen Fuß auf den weichen Teppich aus Sand. Auch ich hinterlasse Spuren, vergängliche Spuren. - Wir alle sind nur Gäste, Nomaden des Flusses. [1]
>
> — Ernst Paul Dörfer

The Romans called the Elbe Albis, the “white river”, probably because the river was originally covered with white sand. Also, the Elbe used to freely determine its course covered by its soft sandy banks. Today the riverbank is darker due to the various control measures that man has imposed on the river, only for his own benefit. For more than 200 years, the river has been constrained by groynes and stone embankments, that extend from the shore into the river to ensure that the riverbed is as deep as possible to allow ships to navigate. In this way, the river becomes narrower, deeper and faster. However, the river with its soft riverbed is particularly sensitive. Where it is constrained, the river has no other choice but to clear its bed through lateral erosion. As a result of this ongoing deep erosion, floodplain forests and floodplain waters are being drained of water. This means that the gradual drying up of the floodplains and their waters is endangering the existence of the river landscape.

1 *Wunder der Elbe* (Halle an der Saale: Janos Stekovics, 2000), 17.

The Elbe springs in the Czech Republic flows through Germany and meets the North Sea. It follows two glacial valleys of the North German lowlands. The course of the Elbe in Germany is divided into five: 1. *Oberelbe*: Where the valley loses its low mountain range character and enters the North German lowlands, 2. *Mittelelbe*: it refers to the Elbe as a lowland river, 3. *Unterelbe*: Tidal section of the river, the Elbe estuary or the lower Tidal Elbe, 4. *Mündung*: Place where a river flows in, and 5. *Außenelbe*: Continuation of the estuary through the Nordsee.

The river is characterised by its slow and shallow waters. The persistence of low water levels is natural for the Elbe. Its tributaries come from low mountain ranges. After the thaw, the Elbe can have low water from May until autumn. During this time, it is not uncommon for the river to be only one meter deep. Plants and animals that live with the river have long since adapted to this rhythm, and for them, this characteristic is essential for their own existence. On the other hand, during almost these eight months of low water ships have a problem.

Fig. 18: Typical of the Elbe is its riverbed of sand (Dörfer 2000).

One of the Elbe's special peculiarities is therefore its dry riverbanks in summer. Here the silver willows lie directly on the riverbed, sometimes even up to a metre below the average waterline. If the water level were to change, the effects would be devastating for the willows, they would not survive. By contrast, when the flood comes everything changes. Rhythms of the landscape have now more movement: Birds are suddenly attracted by the rising water; residents seek shelter for their grazing animals and trees lie where they are rooted reflecting theirs forms on the water than before took the place of grasslands. Then, after days or weeks, the water flows again, and the river landscape changes over. Everything is alive.

But this wonderful ecosystem is in danger of disappearing. On the one hand, as the river floodplain is suitable for hay harvesting after the spring floods, and on the other hand, as humans have always tried to avoid the dangers of floods, large areas were "protected" from flooding by building dykes, often very close to the river.

Moreover, in Germany, tributaries straighten out even the smallest streams, causing flood peaks downstream that would not normally occur. Rivers very quickly exceed their water storage capacity, no longer flowing in width, but only rising in height. Even the best-constructed dykes cannot "protect" us and so the likelihood of natural disasters, as happened this summer (2021), has increased.

Fig. 19: Mirror water in the flood (Dörfer 2000).

Since the 1990s there have been controversial debates on the proper management of the river. Strategies for an ecologically compatible development between the Federal Waterways Administration, the federal states and different environmental institutions have been developed and implemented. Despite this, the measures taken in some cases still do not show a benefit. In consequence, after several years of resistance by citizens, the initiative “Pro Elbe” was founded in 2001 to continue to defend the threat to the Elbe and Saale rivers. Even today, the organisation is proposing new approaches and reorientations for the river. Together with the federal government and the federal states, the organisation is currently developing an overall concept for the Elbe that advocates the protection of the river landscape.

The “Pro Elbe” initiative has brought together citizens of different origins and ages. The organisation is supported by the whole population, but especially by artists and Protestant regional churches. Also, the organisation cooperates constructively with environmental associations as well as with the scientific community.

Fig. 20: Citizens’ initiative “Pro Elbe“ (Dörfer 2000).

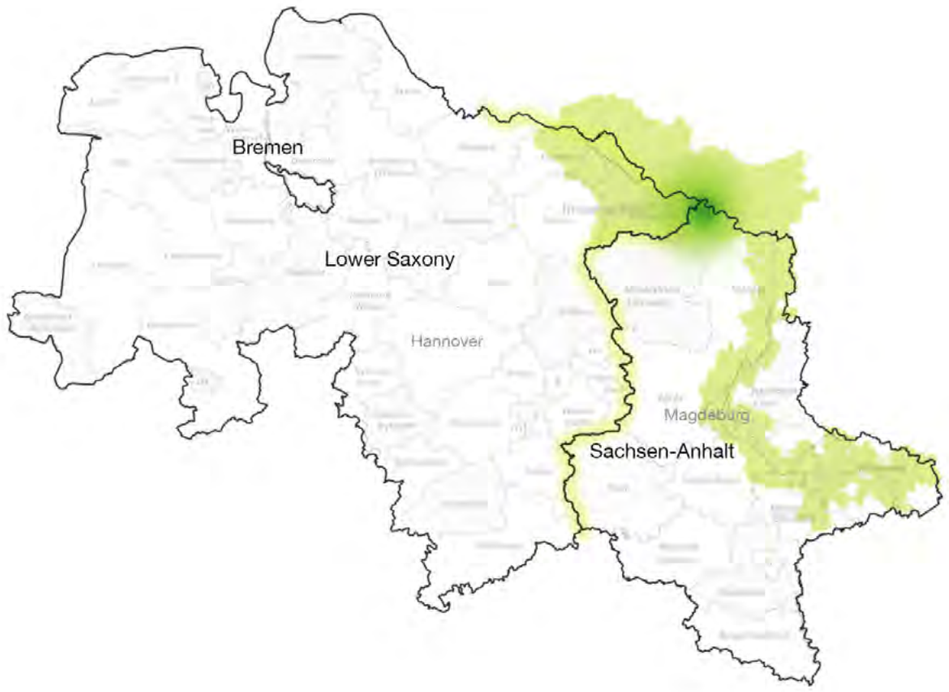


Fig. 21: Location of the area of study: dark green dot. Reserves in light green.

SITUATING

The area of study is part of the *Biosphärenreservat Mittelelbe*. This reserve is part of the UNESCO Biosphere Reserve Elbe River Landscape, recognised in 1997. The *Biosphärenreservat Mittelelbe* in Saxony-Anhalt represents the largest contiguous protected area in a river landscape in Germany, with unique natural biodiversity. It covers three-quarters of the longitudinal extension of the entire reserve, which encompasses several federal states along the Elbe River. The reserve includes some of the Elbe floodplains that still survive as a unique biotope in Germany and which, as already mentioned, are becoming increasingly rare in Germany.

The area of study is also crossed by the *Grünes Band,* one of the largest and most important nature conservation projects in Germany and in Europe. For almost 40 years, Germany was divided and this also had implications for the landscape. The inner-German border was framed by high walls and watchtowers. But contradictory as it may seem, this also led to the emergence of refuges for the splendour of various animal and plant species. After the fall of the wall the *Bund für Umwelt und Naturschutz* (BUND) created the *Grünes Band.* With a length of 1,393 kilometres, the *Grünes Band* is today Germany's largest and only cross-border biotope network.

Additionally, one-third of all European NATURA 2000 protected areas in the state of Saxony Anhalt are in the reserve.

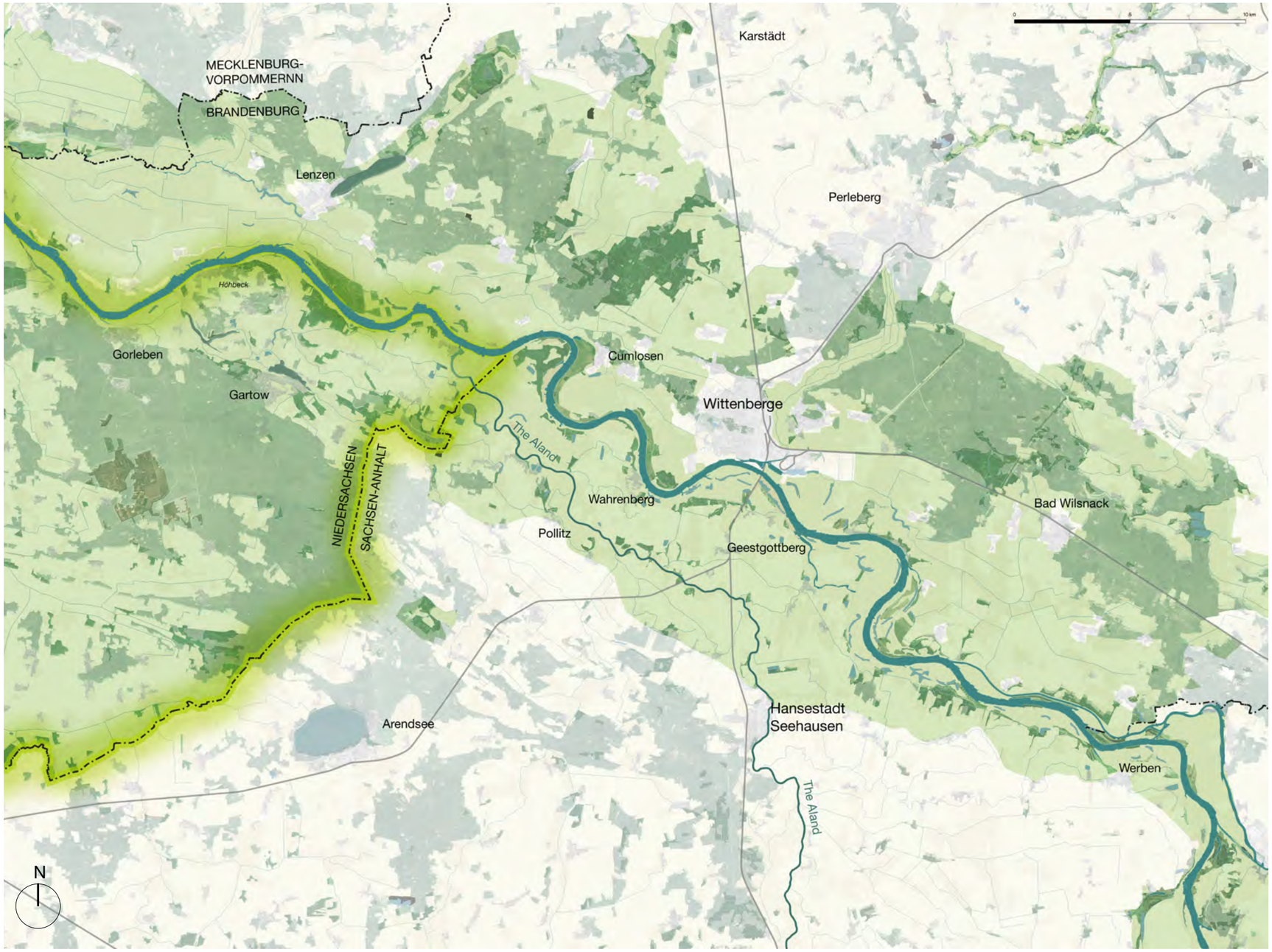


Fig. 22: Study area and zone of influence

THE HINTERLAND

Later chapters will discuss in more detail each of the locations described below. A brief opening will be given here to start the landing in the Elbe Hinterland. To clarify, the term *Hinterland* in this thesis refers to the southern “land behind” the Elbe River in Sachsen-Anhalt and Lower Saxony.

The area under study in this thesis comprises the catchment area of de Milde-Biese-Aland; named after the upper, middle and lower western tributary of the Elbe. It lies mostly in Sachsen-Anhalt, but its lower parts flow through Lower Saxony. Only one part of the area of the lower tributary, which flows into the Elbe, the Aland, will take part in this research. Also, the former floodplain of the Elbe, a landscape in the north-east of Altmark in Saxony-Anhalt, known as the *Wische*, a name derived from the Low German “meadow”, is taken into consideration within the cultural conception of the landscape in the area. This landscape is characterized by its flatness and numerous ditches, which give the region a water-rich character. It is also below the mean high-water level of the Elbe and therefore the Aland flows backwards during the Elbe floods. The floods make in consequence the land very fertile, but at the same time heavy. In addition, this region is the remnant of meltwater from the “Ice Age”, more precisely in the Saale period. At that time, water deposits of the Elbe formed fine-grained clays, making the region a very fertile area since geological times.

3. ANALYSIS

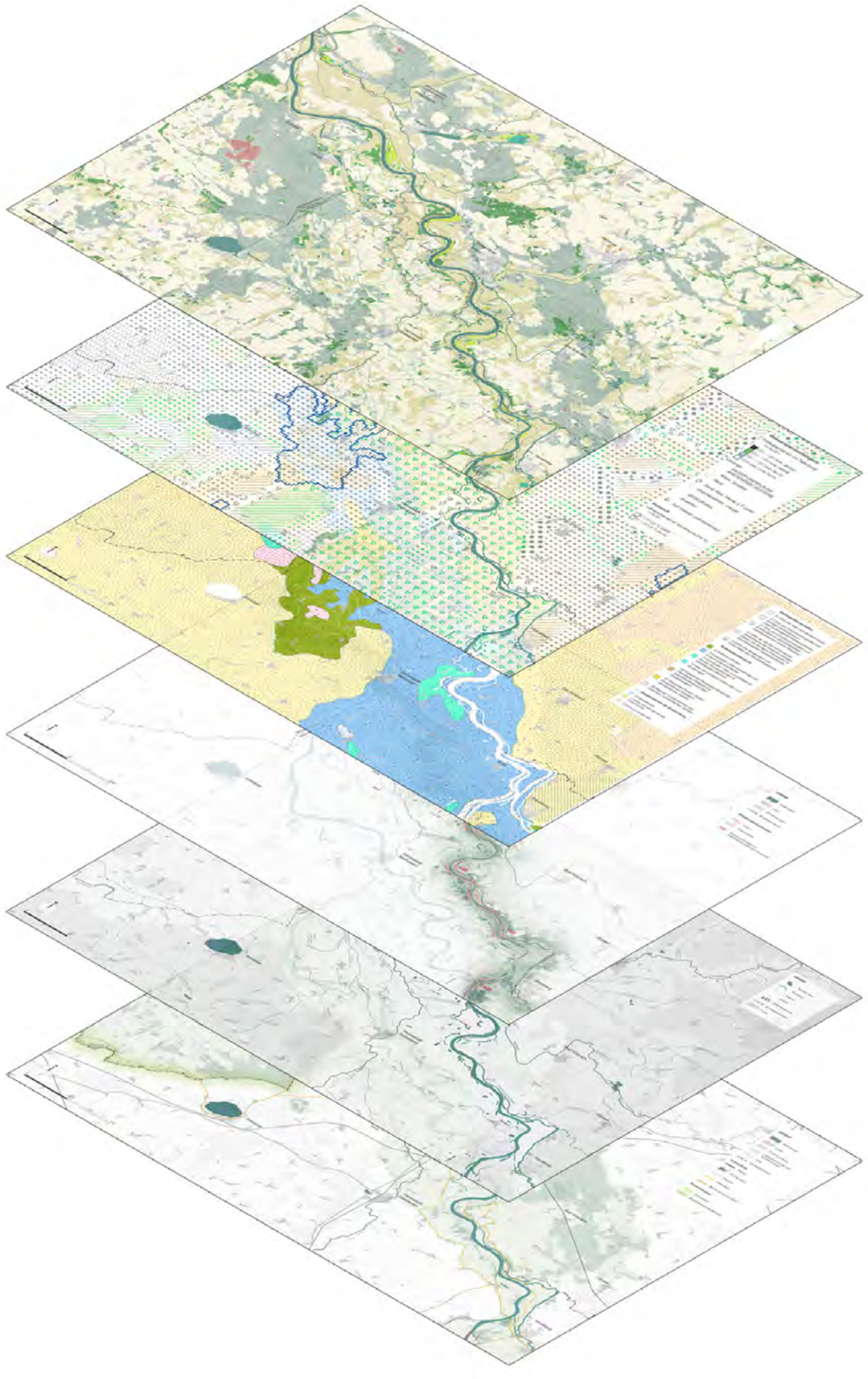


Fig. 23: Overlay mapping

METHODOLOGY

The analysis of the site started before the site visit and continued to be enriched afterwards. It is important to clarify that this particular landscape is discovered step by step during the research. It is an unfamiliar place, conceived from an outsider's point of view. Therefore, there will always be a sense of curiosity, strangeness and surprise about what may be obvious to the locals. Also, it is important to clarify that the analysis which has been made from a perspective closer to environmental planning is due to the education received during the Master's.

On the one hand, the analysis of the site and its characteristics was carried out through a bibliographic and digital research and, on the other hand, with Ian McHarg's overlay method. For this purpose, different factors have been considered, which will be shown throughout the chapter. By superimposing, turning off, turning on or making the layers more transparent, the result of these comparisons determines the location of the places to intervene. But in the same way that Linda Pollak criticises this method in her essay "Matrix Landscape: Construction of identity in the Large Park": The flaw in McHarg's method was his use of such analysis as a deferral or substitution for design issues (Czerniak et al. 2007, 113); in this thesis this analysis is only the beginning of a deeper exploration of the landscape. This will become more evident in the chapters that follow this one.

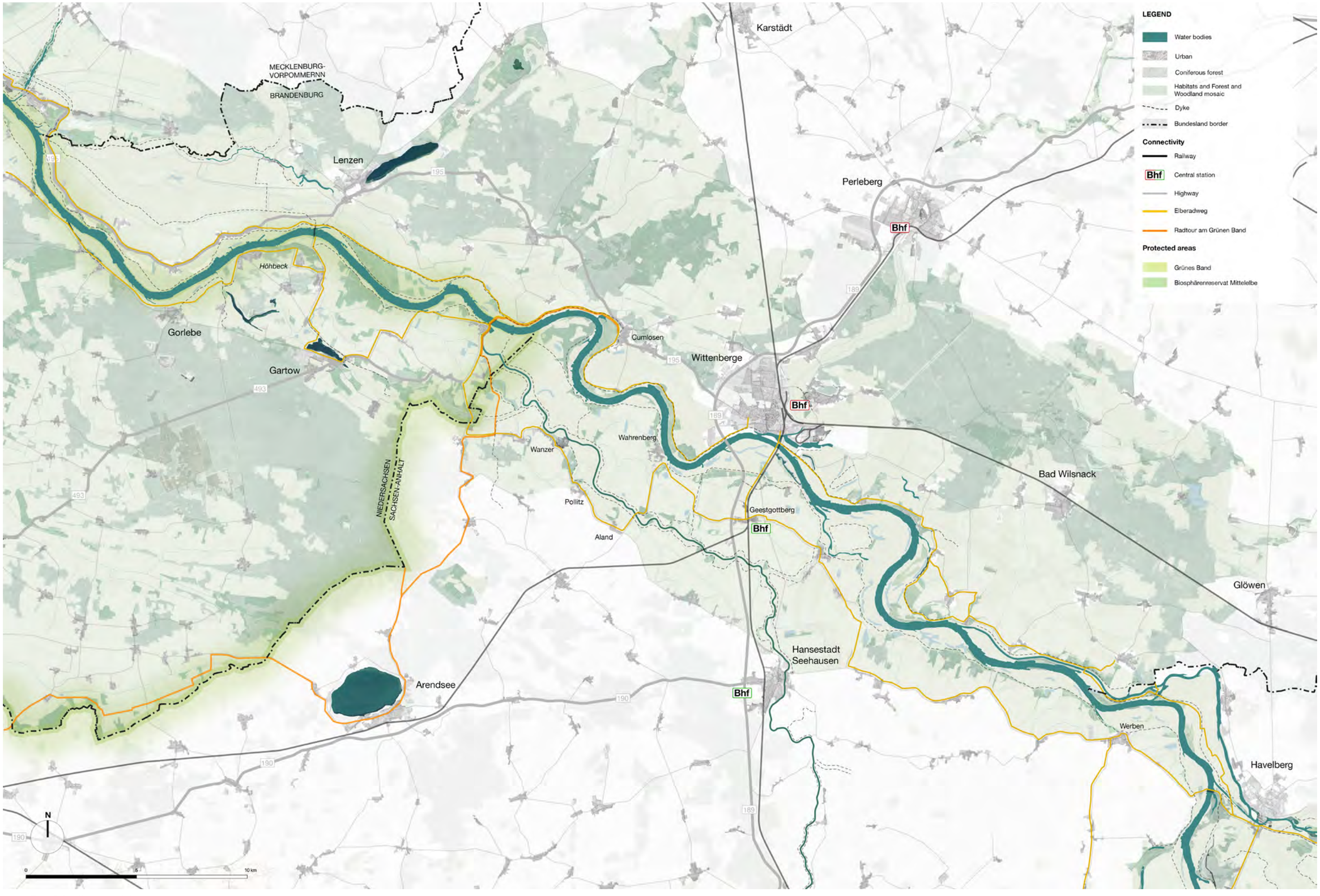


Fig. 24: Connectivity map

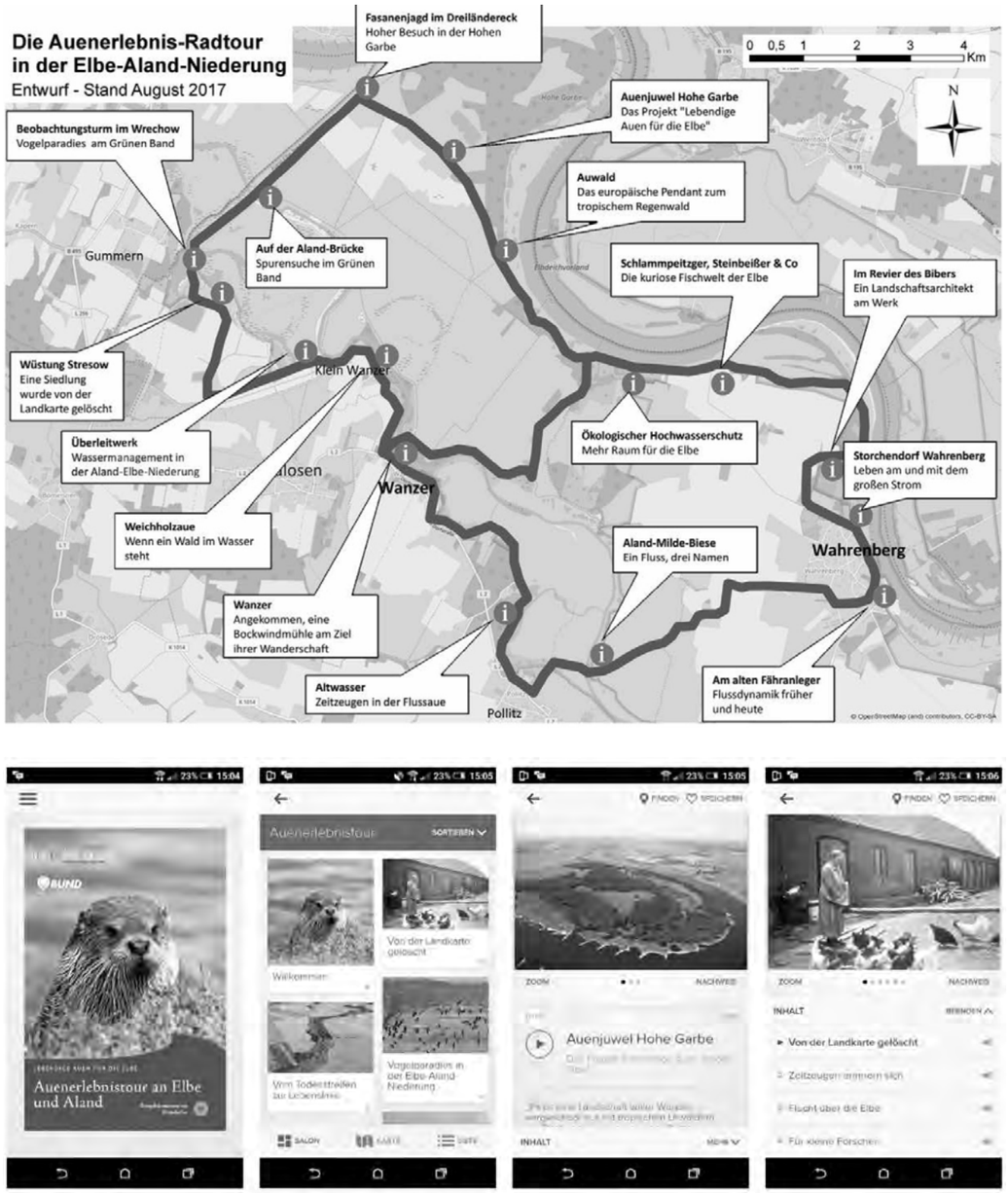


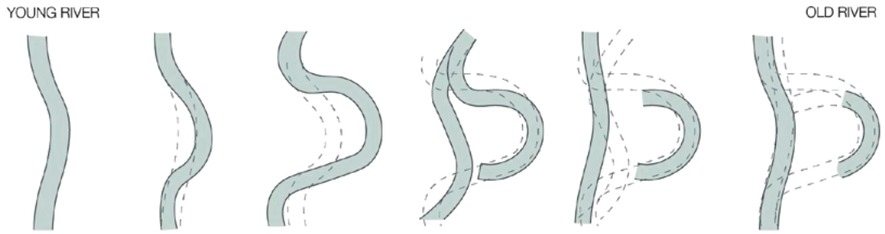
Fig. 25: “Auenerlebnis-Radtour” map and its Smartphone AppPicture from Trägerverbund Burg Lenzen e. V.

DIE AUENERLEBNIS-RADTOUR

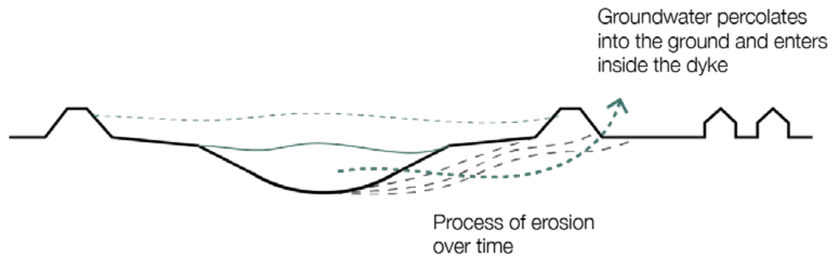
Together with the research of the project team “Lebendige Auen für die Elbe” (better explain in chapter 6), the residents of the region created the “Auenrerlebnis-Radtour” in the Elbe-Aland-Niederung (part of the “Natura 2000 network”) and along the Hohe Garbe. On approximately 25 kilometers and with about 17 stations, the bike route combines nature experience with information on culture and history of the site. In addition, all the information collected is available in the “Auenerlebnistour an Elbe und Aland” app. It functions as a travel guide: cyclists can navigate along the route and receive information about significant places in the area. Also, various stations with recorded voices, short videos and photos can be enjoyed.

Users of the app are taken on a journey back in time, for example, with an explanation of the history of the Stresow memorial. Other questions address environmental concerns such as, what role did forester Fritz Reuter (chapter 6) play in the Hohe Garbe forested area? Or how is the project in the Hohe Garbe continuing to develop and what nature conservation measures are being implemented? In addition, nature processes are also part of the App with various explanations of how flood management shaped the Elbe-Aland-Niederung over the decades.

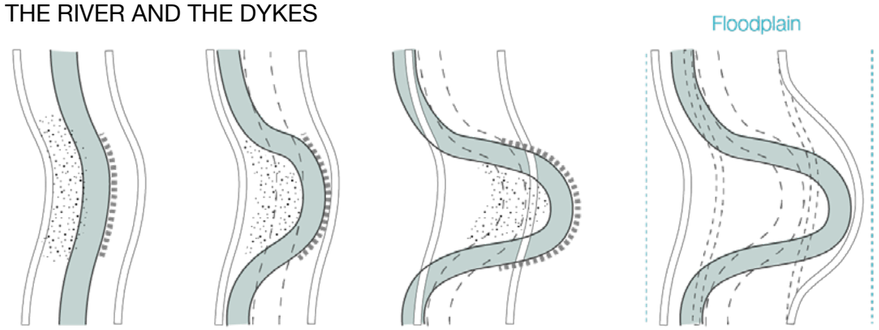
THE OLD ELBE



VERTICAL FLOW IS NOT TAKEN INTO CONSIDERATION



THE RIVER AND THE DYKES



THE RIVER AND THE GROYNES

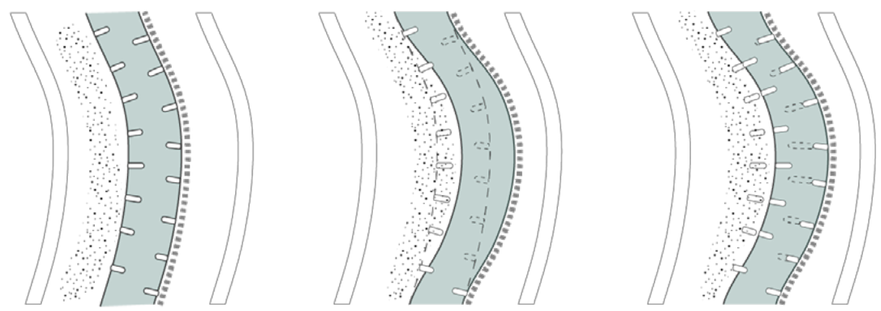


Fig. 26: The river is moving

RIVER DYNAMICS

> Geologic processes may be slow, but they are not beyond our perception. And one of the most important insights to emerge from “clocking the Earth” is that the rates of disparate natural processes, from the growth of mountains, to erosion, to evolutionary adaptation- each powered by different motives forces- are remarkably well matched.
>
> —Marcia Bjornerud[1]

Natural systems are constantly changing the shape and form of the river through the interplay of dynamic processes. The Elbe is no exception. As described previously, the river is mostly covered by soft sand. Consequently, the riverbed is malleable, sand comes and goes very often. After flooding, sandbanks are washed away and rebuilt elsewhere. The situation is very similar at the bottom of the river, where the dynamics of the river are hidden from our eyes. New scour holes are formed, and others are filled underwater. Moreover, as the river has become narrower and faster, it has been digging itself deeper into its riverbed. The increased depth erosion does not even stop at the groynes. Sooner or later the river will renaturalize itself. As will be explained below, there is a lot of motion, but, as will be seen later, there is also moments for silence.

1 *Timefulness: How thinking like a geologist can help save the world* (Princeton: Princeton University Press, 2018), 19.

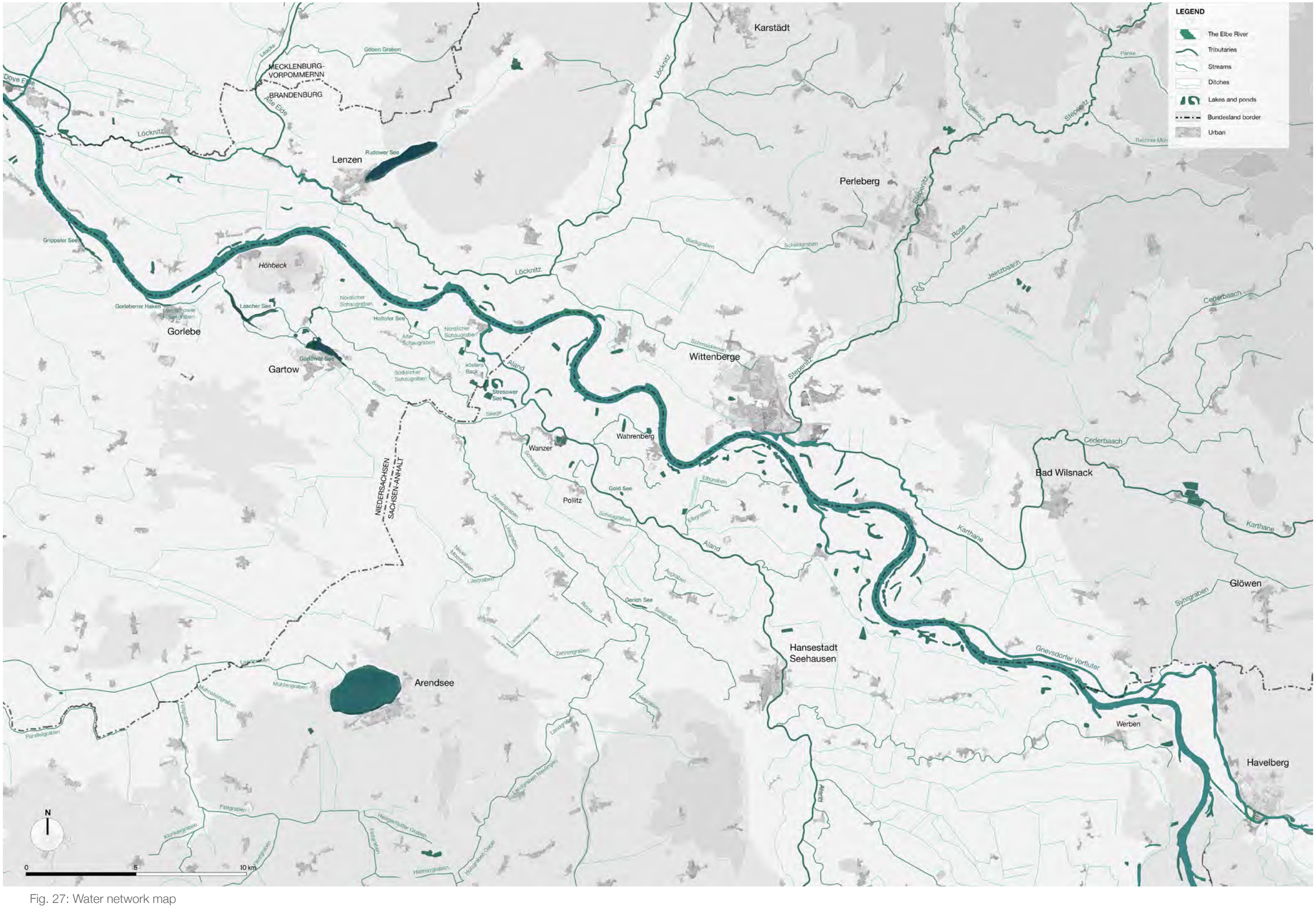


Fig. 27: Water network map

Fig. 28: Elbe riverbank sediments

SOIL AND GROUNDWATER MAPPING

Based on data from the geographic system of the *Bundesamt für Kartographie und Geodaesie*, both synthesis maps reveal the geological histories of the soil and the qualities of the groundwater system of the site.

To begin with, the soil synthesis map makes clear the diversity of the soil types found there. The area is dominated by a large patch along the river composed mainly of floodplain soil, which discovers stories of a moving river: gley of sandy to clayey floodplain sediments. A patch in the northwest, like an island in the ocean, composed of Podsoil soils, uncovers stories of heathers: poor soils because of their high sand content. Also, a patch of low-moor soils stands out to tell stories of peat, the opposite of the previous one: an accumulation of organic matter rich in nutrients. The important thing is to discover with this map what is hidden and then make it evident.

With the groundwater synthesis map, it is evident the water richness of the place. Basically, the floodplain soil with the presence of sand, gravel, rocks and loam on the surface has a medium water storage capacity; and the low-moor soils with the presence of peat soils have high-water capacity storage. Now is clearer why the quantity of ditches in one certain zone (floodplain soils) and the scarcity of them (included streams) on the low-moor area. What is important is that water is telling stories of resilience. Groundwater describes landscapes and which ones are adapted to their characteristics, or at least which ones could.

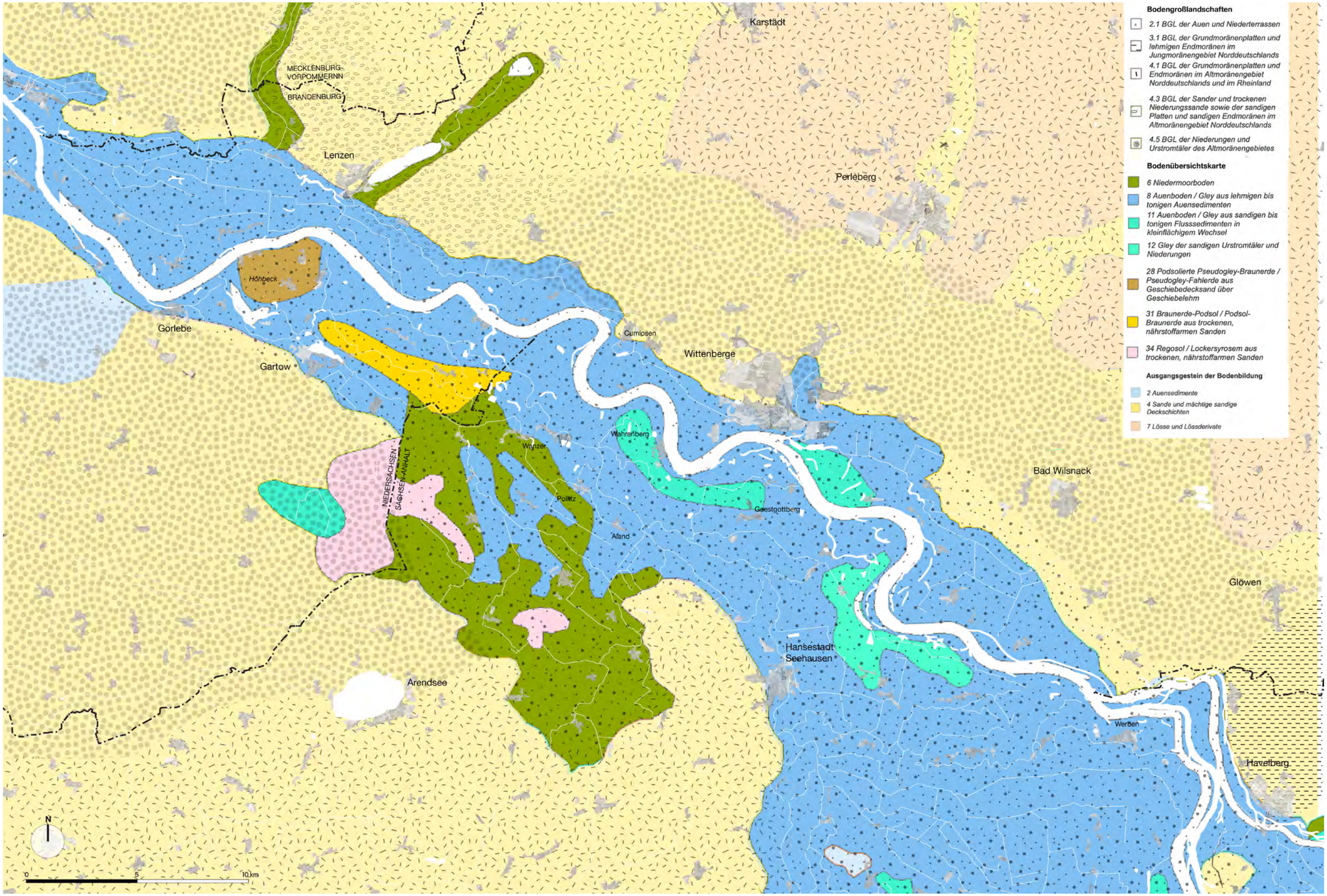


Fig. 29: Soil synthesis map

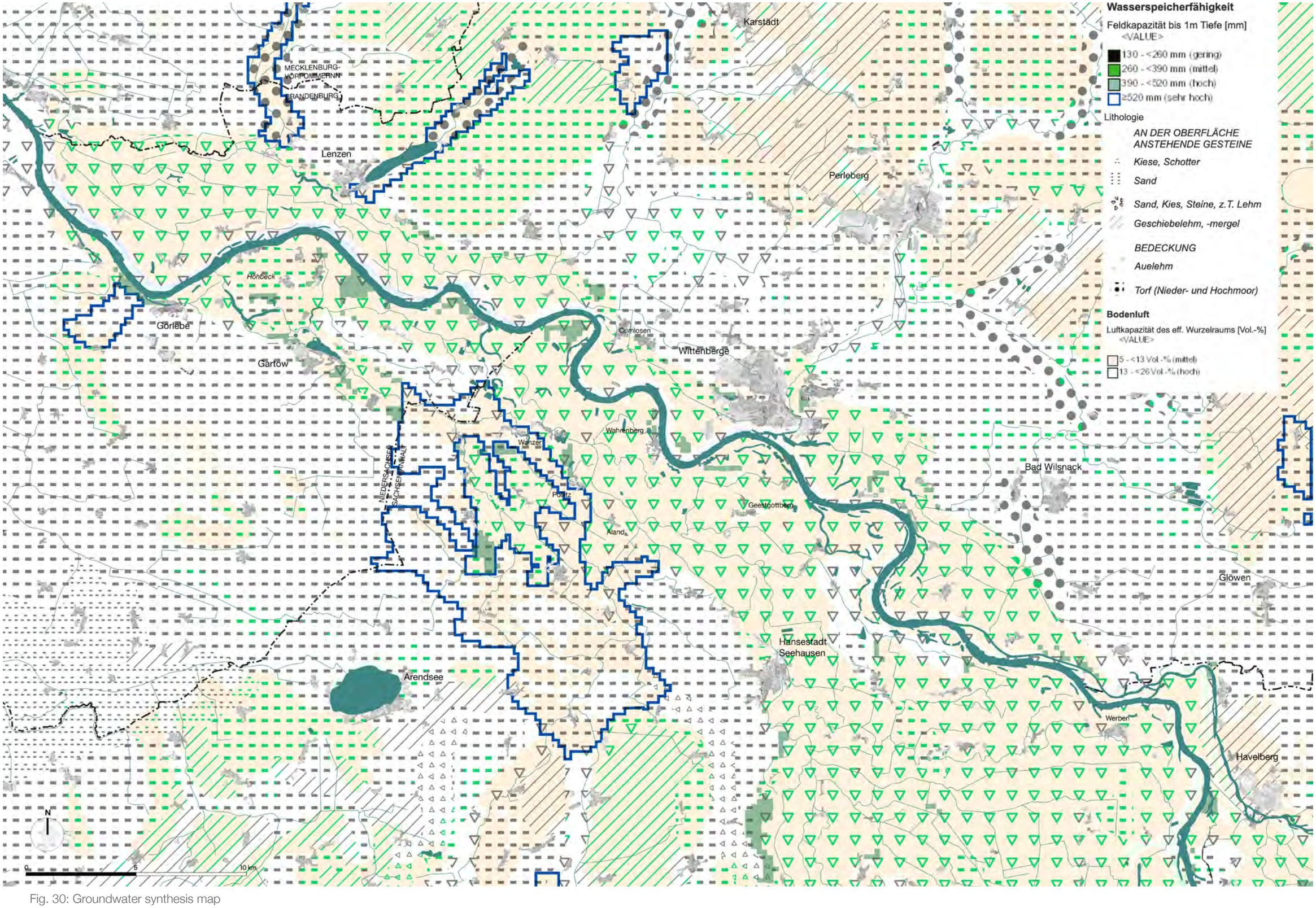


Fig. 30: Groundwater synthesis map

Fig. 31: Vegetation textures

LAND COVER ANALYSIS

Land cover analysis reveals important land-use characteristics. Perhaps too obvious to locals, but shocking to an outsider, the predominance of agricultural and forestry land use reveals clear supremacy of economic interest for the river hinterland over an ecological one. According to *Deutschlands Natur* the factors threatening the habitats in this area are mainly:

-disturbed flooding dynamics due to embankments and flood control;
-income from nutrient and pollutant inputs due to intensive grassland management (as well as intensive mowing or grazing);
-changes in farming practices and intensive forestry use;
-increasing tourism and recreational sports use;
-and inadequate water management.

It then becomes clear that previously mapped soils are suffering significant deterioration due to this extensive use.

In conclusion, two important outcomes for the proposal emerge from this analysis. First, the “pasture, meadows and other permanent grasslands under agricultural use” layer stands out as a possible area of connection between habitats, which means that it is an area of opportunity for future landscape transformation. Secondly, the significant amount of anthropogenically disturbed gleysol soils due to agricultural use is deteriorating their qualities and the groundwater system, and consequently, the release of carbon dioxide is increasing. Soil is also under threat.

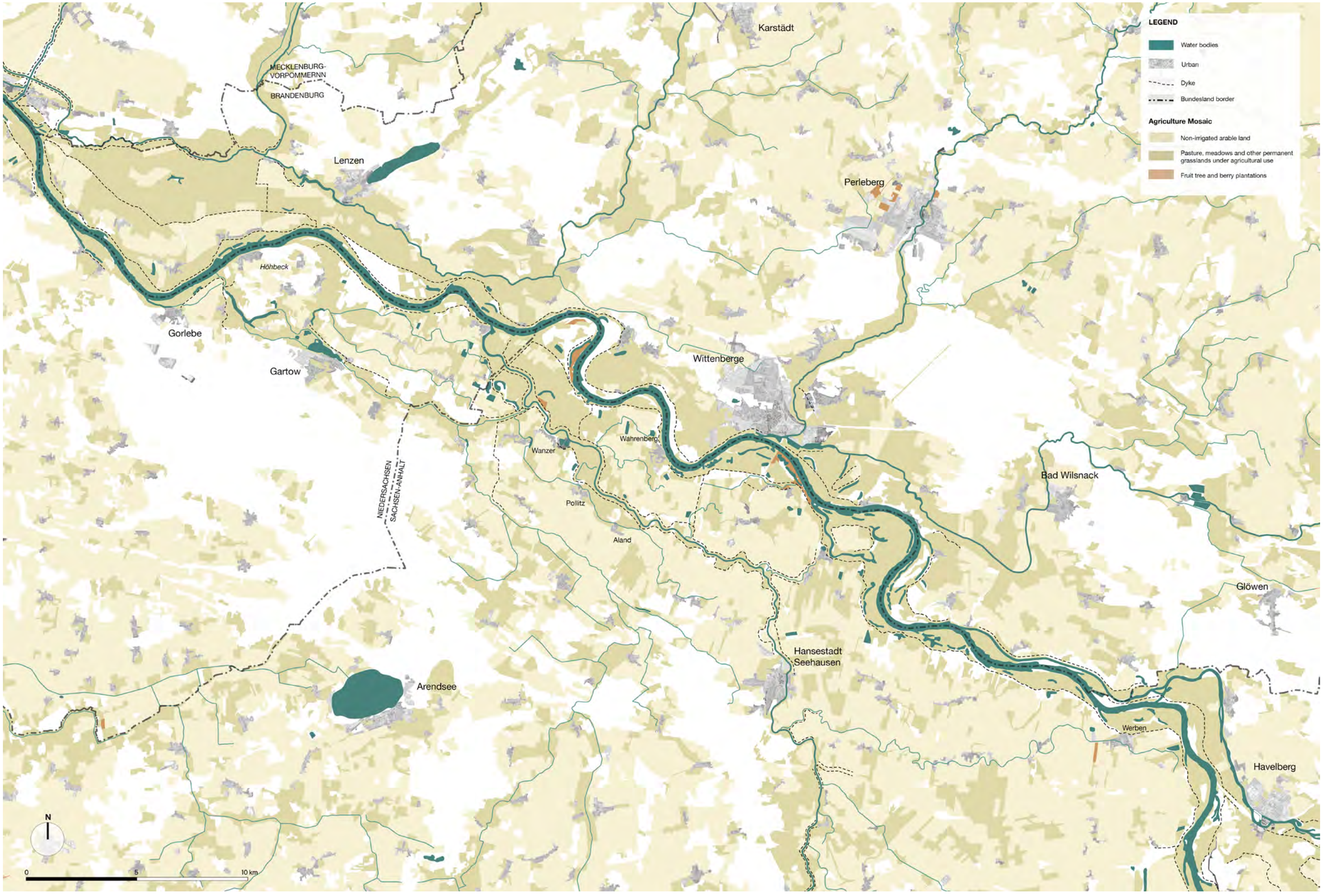


Fig. 32: Agricultural Mosaic

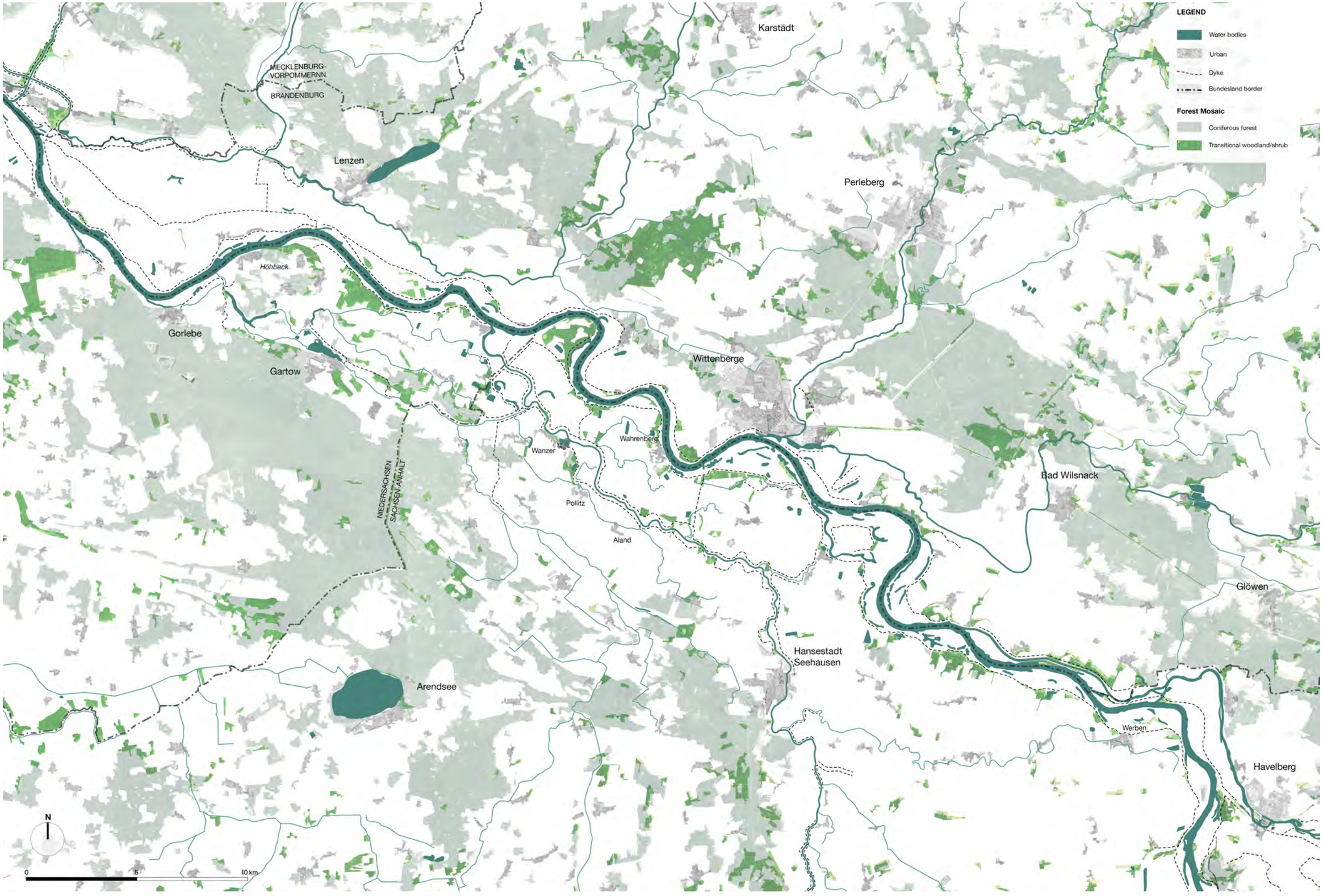


Fig. 33: Forest Mosaic

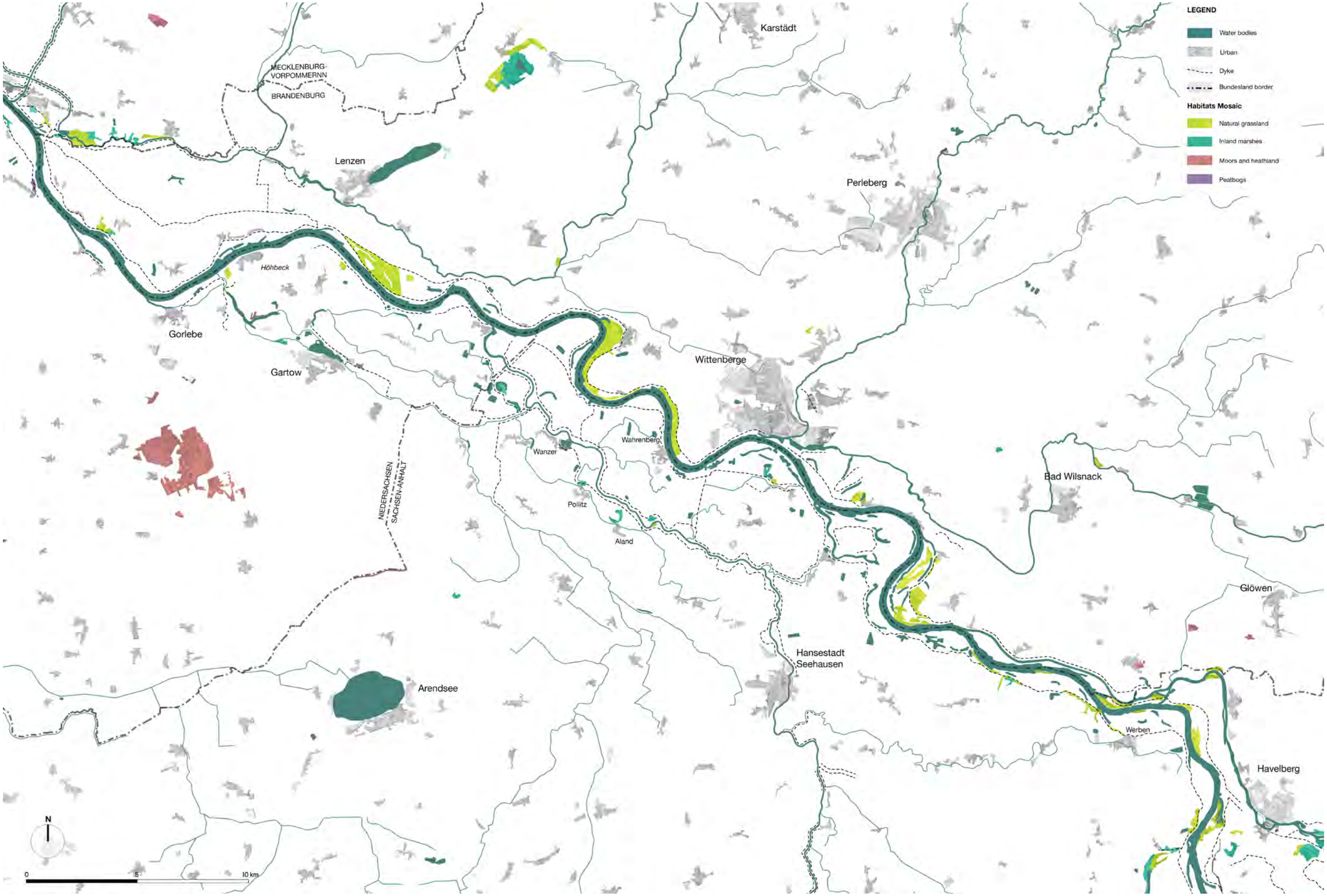


Fig. 34: Habitats Mosaic

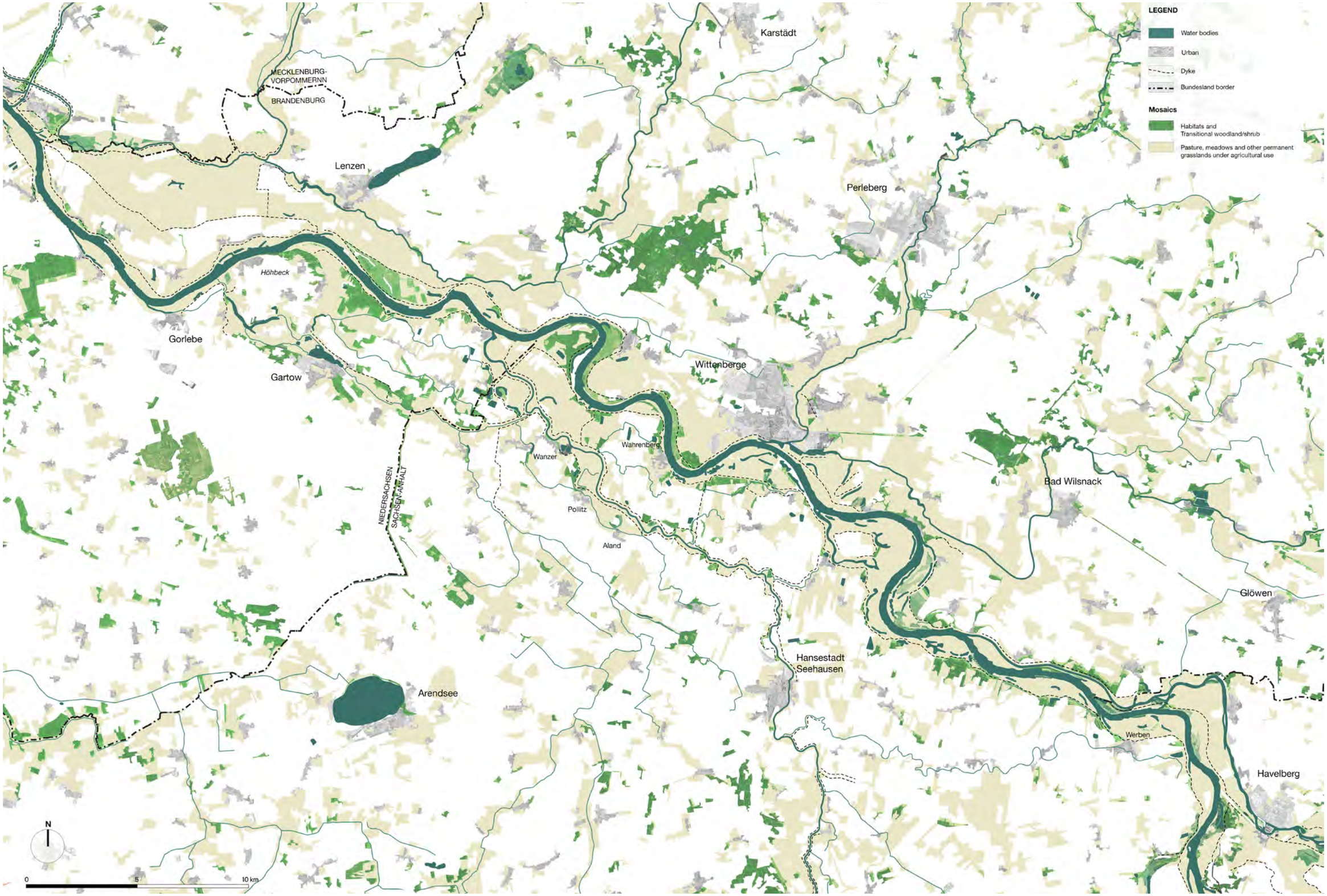


Fig. 35: Oportunity area: Pasture, meadows and other permanent grasslands under agricultural use

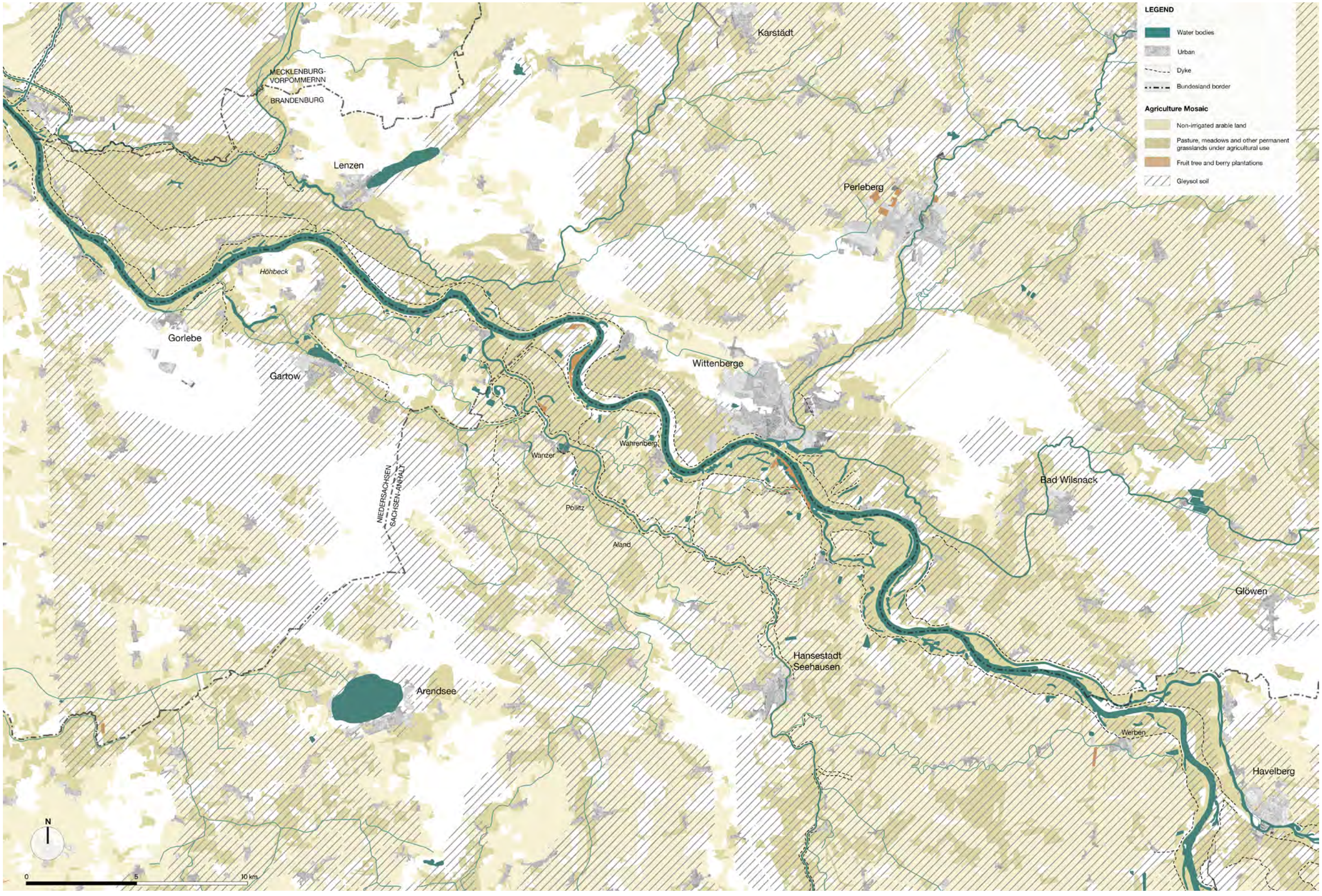


Fig. 36: Gleysol on Agricultural Mosaic

Fig. 87: Elbehof, Wahrenberg

LOCAL ACTIVISM

Thanks to the mapping of points of interest, a much more focused landing was possible. Communal meeting points, independent organisations fighting to rescue environmental values of the site and ecological renaturation projects were of utmost importance to start unravelling the landscape. Not all of them will be discussed, but those that play an important role in the thesis will be highlighted.

Starting with the Hohe Garbe, a site of a renaturation project: *Lebendige Auen für die Elbe*, which is conceived to be the core zone of the *Biosphärenreservat Mittelelbe* with the purpose to give more room to the Elbe. This project will be explained more in detail in Chapter 6. What is noteworthy to this chapter is that the project has also been criticised by locals, due to the way it has been managed by the *Bund für Umwelt und Naturschutz Deutschland e.V.* (BUND) (see pages following the map). Wahrenberg and Höhbeck also begin to play a leading role. On the one hand, in Wahrenberg there are several places of interest for tourists and locals. The Elbehof, a *Fährgasthof*, is today an educational place for nature, environment and culture. And ANNE~ELBE, a small café that uses seasonal food, harvested from the garden. On the other side is Höhbeck with the presence of the community “Arche Höhbeck”, which over time has transformed the former radio station into a farm. Today this place has become a biodiversity hotspot of the area thanks to all the years of community effort.

In the end, the most interesting thing was to discover the enthusiasm of the locals. There is a desire to change things.

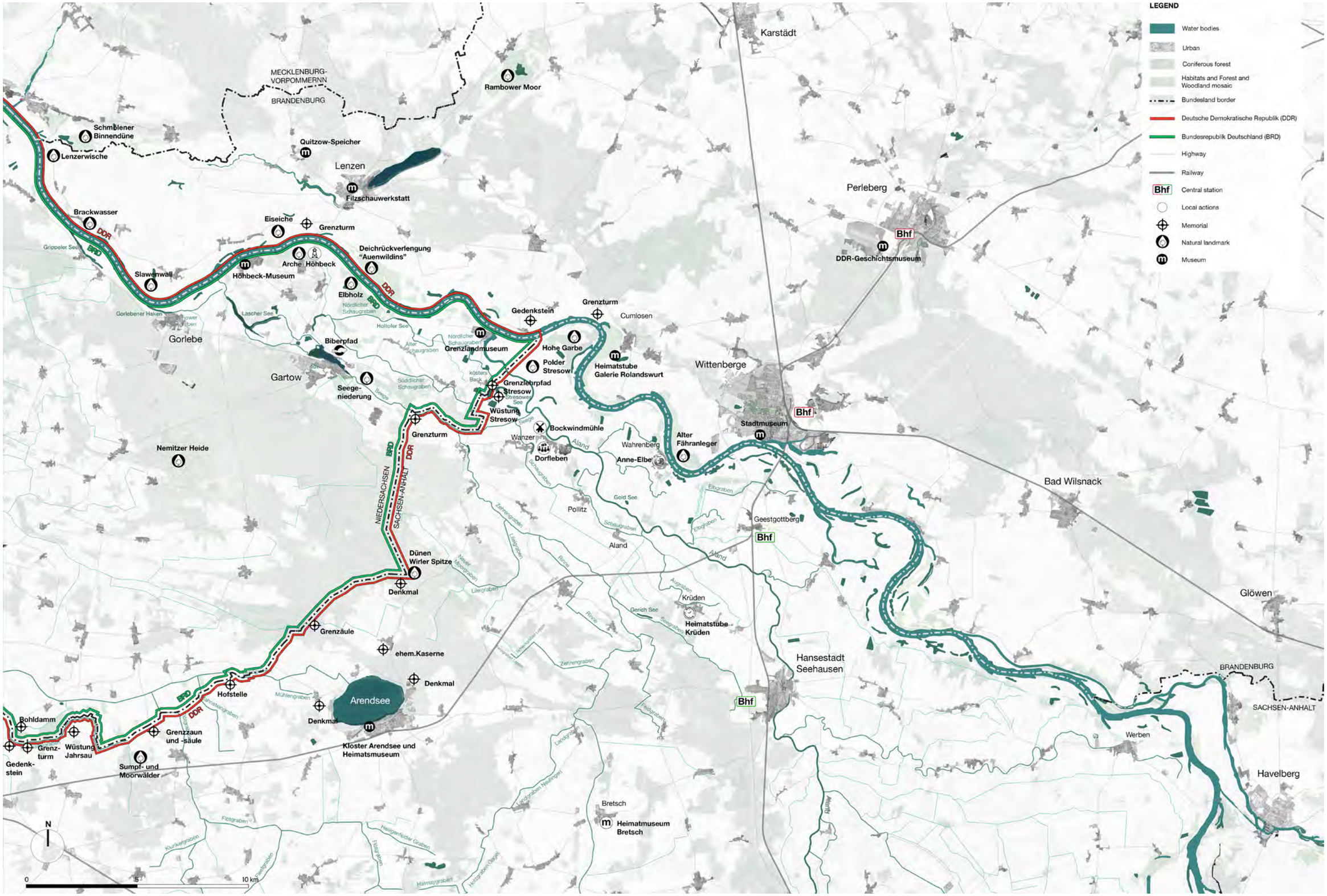


Fig. 38: Points of interest

A ban on fishing on the banks of the Elbe or a ban on walking along public paths for everyone (except for some) would not be necessary if the environmental institution really cares about the protected area. From the angler's point of view, it is needed coordinated water management.

Fig. 39: *Angelverein Aland-Wanzer*

Farmers describe the work in the Hohe Garbe as very demanding. The meadows and pastures are hardly accessible for mowing and maintenance can only be done with heavy machinery. Gernecke would prefer the old dam to be restored; this would allow the livestock to remain there for longer when floods threaten.

Fig. 40: *Familie* Gernecke

They farm 15 hectares and make hay and silage from June and then let the cattle graze. The entire use is documented in a grazing diary to prove that they are adhering to the requirement and contracts with nature conservation. Diekmann and Schäfer would be reluctant to swap their 15 hectares in Hohe Garbe.

Fig. 41: *Die Landwirte* Diekmann *und* Schäfer

They see the floodplain development in the Hohe Garbe as an opportunity to make the region more attractive for locals and guests. "An explanatory nature trail through the Garbe - that would be an asset. There could be a youth camp where young people go in search of clues and take on design tasks".

Fig. 42: Christina ***und*** Bernd Kloss

A land readjustment that creates a contiguous forest area in agreement with all landowners would be an option. Perhaps as compensation, the landowners could be given land from the Bodenverwertungs- und -verwaltungs GmbH des Bundes (BVVG).

Fig. 43: *Revierförster* Stefan Kaiser

"The term floodplain is unknown to many". He believes that environmental education makes an important contribution to people's awareness in the long term. "Boards don't do the job. Children, in particular, do not want to read such things. Guided tours are the alternative. You have to take action with children".

Fig. 44: Norbert Krebber *vom Elbehof*

They advocate for less signage, better maintenance and more cycle paths. "Without agriculture, we would be a dead region here. For that, however, we need paths, well-maintained rest areas and guided tours to nature sites worth seeing. We have to show what we have".

Fig. 45: *Der Bürgermeister der Verbandsgemeinde* Seehausen

She says new cycling and hiking paths are desirable. "Many people look at nature conservation, BUND and NABU with suspicion: What are they doing there again, are we not allowed to go there anymore? It should be the other way round: Nature in the Hohe Garbe is a great story, we can afford to continue to shape it."

Fig. 46: Irene Brade

"Many people are surprised when they realise during floods that they live in a floodplain". He is aware that letting nature be nature where land has been used before is a problem. For him, a floodplain trail to bring people closer to the natural floodplain of the Hohe Garbe is an option worth considering.

Fig. 47: Andreas Berbig *vom Biosphärenreservat Mittlere Elbe*

Cultural landscape development is an important keyword for him. "Gentle nature tourism is the only thing that could be developed here, where the Elbe cycle path doesn't play a major role."

Fig. 48: Stefan Reinsch

4. SITE VISIT

This chapter is dedicated to Norbert Krebber,
thanks to him I was able to get to know
and get inspired in this special place
between raindrops and the sunshine

Fig. 49: View from Elbehof (Wahrenberg) to the river

ENCOUNTER WITH THE RIVER

> Ich muss wieder zu ihr gehen, mich an sie herantasten, mit meinen Augen und Ohren Fühlung aufnehmen, mich ihr immer wieder neu vorstellen, denn sie ist schon wieder eine andere, wie vielleicht auch ich ein anderer bin, danach.[1]
>
> —Ernst Paul Dörfler

The first encounter with the river started in Wahrenberg, one of the oldest settlements in Altmark and a typical ‘Haufendorf’ in Germany. A ‘Haufendorf’ is characterised by its irregular and usually fenced plots. Many of these villages emerged related to the medieval open field system, where the fields of the village had two or three wide fields, which were divided into different field strips and cultivated by individuals or peasant families. In addition, the houses and farms of Wahrenberg were built on artificial elevations to protect them from the flooding of the Elbe River. The name accurately describes this situation: ‘wahren’ (protect) ‘bergen’ (salvage). Thanks to its proximity to the river, Wahrenberg attracts many visitors and new residents, who want to enjoy being close to nature.

Norbert Krebber is one of the many foreigners on site who made his home quite some time ago in Wahrenberg. Trained as a landscape architect in Hoxter, rooted as a local environmental activist and actor at heart, he founded the non-profit organisation VITOS e.V. in Elbehof, to provide environmental education for children and young people on different topics related to the site.

1 Ernst Paul Dörfer, *Wunder der Elbe* (Halle an der Saale: Janos Stekovics, 2000), 11.

Fig. 50: Elbehof, Wahrenberg

Fig. 51: Anne-Elbe, Wahrenberg

Fig. 52: Norbert Krebber

Elbehof is a former guesthouse that is now mainly an educational place for nature, environment and culture. But it is not only that, it is also a meeting point for many residents, educators, scientists, artists and activists who are committed to improving the conditions of the place. Norbert Krebber strongly believes that nature and environmental education can make an important contribution to raising long-term awareness of the importance of the different ecosystems present on-site, such as the floodplain as a central theme of river landscapes.

In addition, here you also can find ANNE~ELBE, a riverside café that uses only organic and homegrown ingredients harvested by hand in the morning. The garden is the heart of the café, which is cultivated according to permaculture principles using non-GMO and no patents seeds. Everything is prepared at the table by the owners. The smell of freshly baked bread and pastries is an everyday thing here.

Norbert Krebber teaches to give back to nature what belongs to it and considers it important to act with people through the body as a way of embracing knowledge. “Panels bring nothing. Children, in particular, don’t want to read such things. Guided tours are the alternative. A starting point where you can go, that’s enough.”[1] He is working together with the T*rägerverbund Burg Lenzen e.V.* on an educational piece, the “river thriller”. It is about flood scenarios in which children and adults see and experience the dynamics of the river in a play.

1 *Porträt des Auenprojekts: Norbert Krebber vom Elbehof in Wahrenberg ist in der Umweltbildung tätig* (BUND Germany, 2021).

Fig. 53: Wahrenberg ein Dorf der Zukunft

Many actions take place in the great Elbehof hall. One of them was the “Tag der offenen Höfe” which took place on Ascension Day, 23 May 2021. On this day different places in the village offered a series of activities, with all the precautions due to the pandemic, in which the neighbours gathered and held different events. In Elbehof took place an evangelic mass with the topic “slowness”.

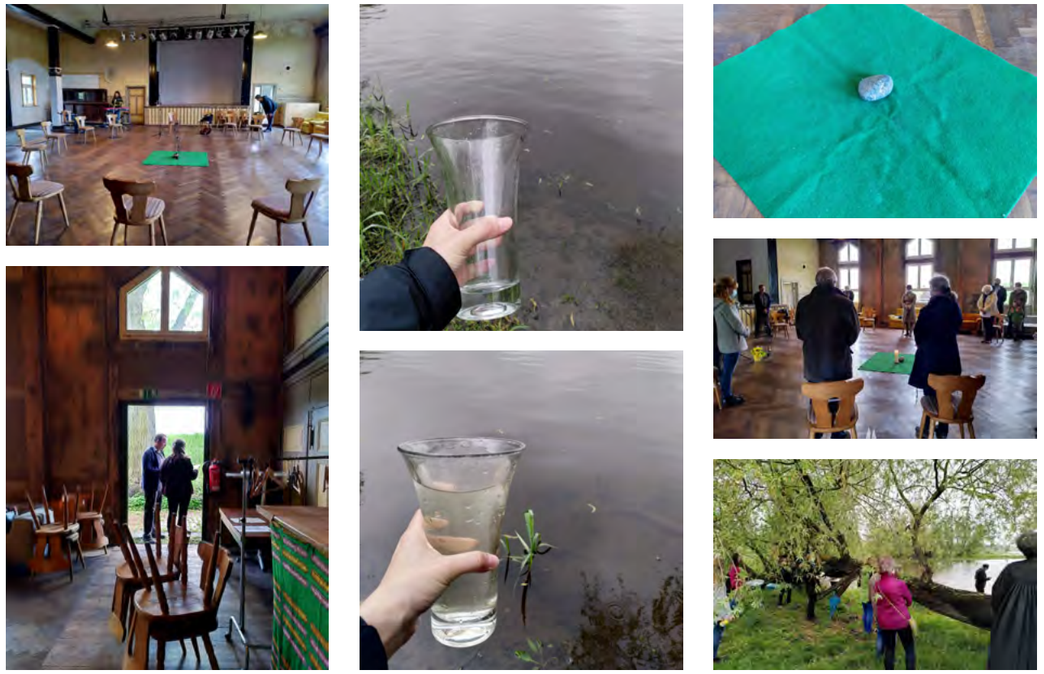


Fig. 54: 13th May: Ascension day (Chisti Himmelfahrt) action in Elbehof

First, the room was arranged with all the chairs in a circle and in the centre a rock on a green carpet, evoking the grassland. Just before the ceremony began, a vase was filled with water from the river and placed near the rock. Then the ceremony began with the accompaniment of piano sounds and the beautiful voice of a woman. The sacred celebration developed around the consideration of time as a mentor that teaches us how to live better with ourselves. When the mass ended Norbert and Lili (a college of Norbert) perform a play called “Meine Zeit, Deine Zeit, Unsere Zeit, Gotteszeit”. The play, without speaking and only with gestures, was about a person who has no time and the other person who tries to show him stillness with the rock. It also talked about wanting something so much to the point of not letting it go and pretending it belongs to us, in this case, the rock. In the end it is with patience how we can learn that it does not belong to anyone, it belongs to nature. At the end of the celebration all together went outside near the riverbank, culminating with a poem about the dynamism of the river over time. Finally, the rock and water were returned to the river.

days in Wahrenberg

landscape impressions

Fig. 55: Bottled landscapes of the Elbe

> Artists, like ethnographers, train their eyes to see things other people don't see. They try to present what they see so that we, the audience, can glimpse something where we have looked a thousand times and failed to find anything noteworthy.
>
> —Martin Hoyem

As it is evident, the methodology has traces of an ethnographic approach. The outsider tries to get involved in a context that is unfamiliar. Observing, examining and drawing it, the site is interpreted. There is a vivid enthusiasm to observe even the smallest detail of the novelty that appears. But it is not a passive attitude, there is also collaboration. There is a constant curiosity to learn from what is being experienced at every moment, to contribute and help. There are moments of solitude and silence with the landscape, and moments of intense melancholy.

Some site explorations took place at the time of the site visit and after it, were far away from the site ('nonsite'). **Collect and draw** is an approach with some objects collected on-site that were then drawn and photographed in a 'nonsite'. In the same way, **Collect and press** is an abstraction of the landscape with some plants collected and pressed in a sketchbook while the site visit was taking place. Here time is frozen, but it is not the same, it has new meanings. **Drawn on site** is a fraction of time experienced and frozen in the drawing lines, it is the experience of a moment in the landscape that will never be again. Finally, **Bottled landscapes** is an attempt to keep the smells of the landscape in order to return to them for an instant.

"There's a different set of coordinates, so that each one produces a different experience within the same dialectic, you might say, between the site and the nonsite. That's a constant site and nonsite dialectic. You have to refer to that thing in the Land Art catalogue. That gives you the broad general area where all of them, all of the nonsites exists. But then each nonsite… is a different experience" (Smithson 1996, 221).

Fig. 56: Drawn on site: Trees in the floodplain

Fig. 57: Drawn on site: Old ferry port Wahrenberg

Fig. 58: Beaver tracks

Fig. 59: Collect and draw: pieces of wood left behind by the beaver

Fig. 60: Tipic sandy beach of the Elbe

Fig. 61: The groyne

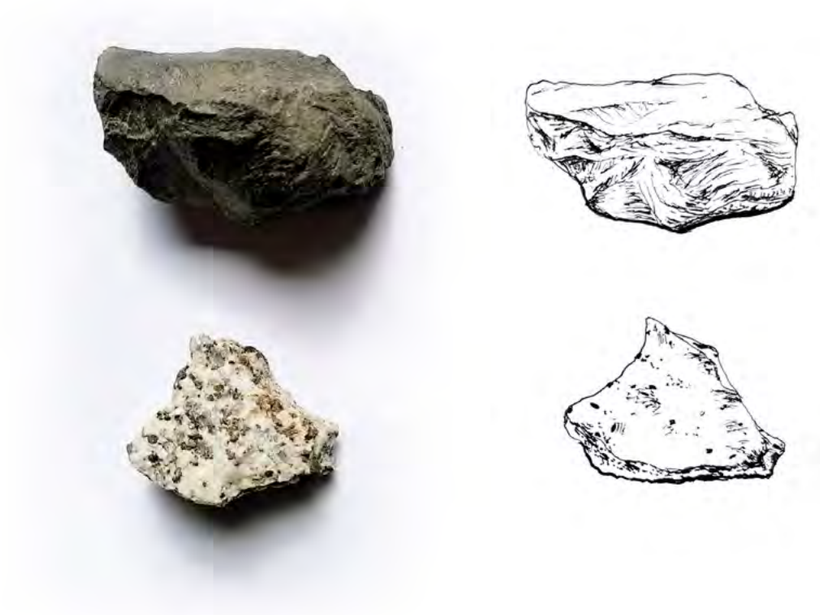


Fig. 62: Collect and draw: rocks of the bank river

Fig. 63: Drawn on site: Wahrenberg and the dyke

Fig. 64: The colour of the dyke






Fig. 65: Collect and press: flowers of the dyke

Fig. 66: Magnifying flowers of the dyke

Fig. 67: Among the floodplain forest

Fig. 68: Collect and draw: female and male catkins of *Salix alba*

Fig. 69: Pollitz, Gemeinde Aland - Landkreis Stendal, Sachsen-Anhalt

DISCOVERING THE HINTERLAND

Sometimes it seems that the landscape is only one and no differences can be distinguished among its hidden diversity. The gaze is often lost among this immense green patch, which sometimes seems infinite.

This is a landscape out of the ordinary, at least for people who are not used to the plains. The Hinterland is immense and beautifully framed by its forests, sometimes found next to swamps, in which the croaking of frogs add melody to the landscape. The sounds of tranquillity that the landscape emits in a place as remote as this one, makes you think in solitude about its unmistakable beauty and laboriousness to still be alive. The landscape is characterized by its artificiality as well. Not so much by its groynes (on a human scale they seem not as magnificent as when viewed from a bird's eye view), but by its extensive dykes that create views, paths and particular sensations over the landscape. The angled dykes always hide landscapes but also discover views, sometimes creating some precious ones, and often the ritual of going up and down their ramps seems a moment of transition to then discover the previously hidden beauty of the landscape behind. Yes, this strange artificiality is the particularity of this site.

As the astrophysicist Hubert Reeves often says, if we were to fail, if the biodiversity extinction crisis were to escalate, the planet would be able to recover just fine. The planet has always recovered from species extinctions, no matter how important they were. Life on Earth is extremely robust.[1]

—François Letourneux

The first important realisation of being on site was to understand the condition of the river, to understand that its riverbanks were composed of a lot of diversity. The hinterland, on the other hand, is not. Extensive agriculture and pastures dominate this landscape. Monocultures create a monotonous landscape for the eyes and also for the soil. There is a hint of a landscape that has ceased to be, and a landscape that can also become another.

1 Gilles Clément, *Espèces vagabondes: menace ou bienfait?* (Toulouse: Plume de carotte, 2014).

Fig. 70: Extensive green dyke

Fig. 71: Rapeseed field

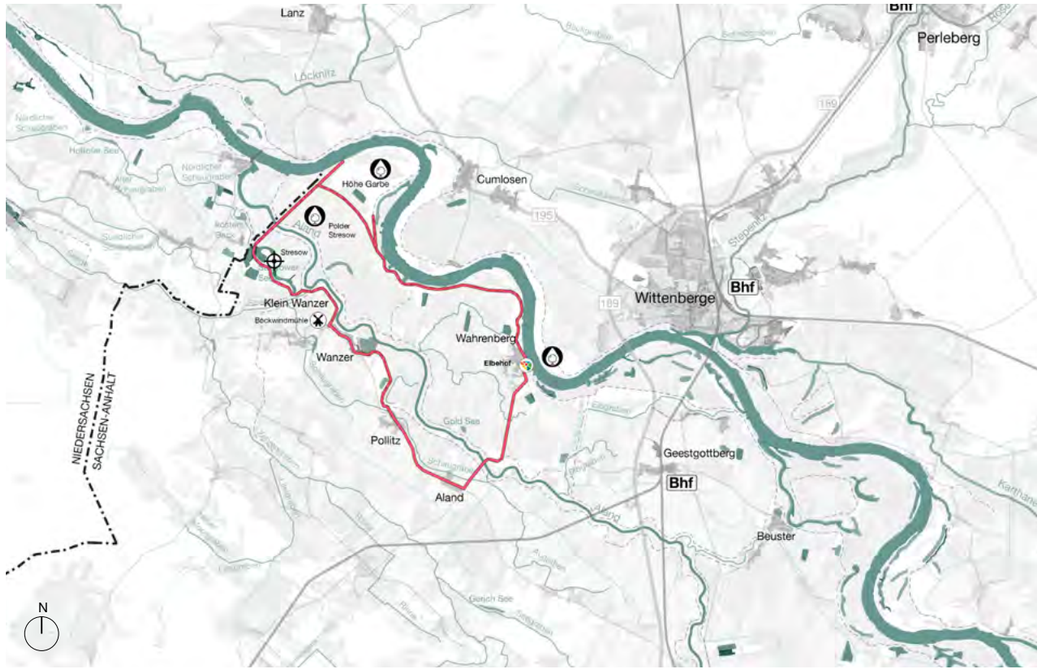


Fig. 72: Route map

As can be seen on the map, the circuit started from Elbehof, continued through Aland, advanced northwards through the other villages passing by the Polder until the Stresow Memorial. Then it continued to the Hohe Garbe to finish the return journey along the river to Wahrenberg.

a rainy day in the Hinterland

landscape impressions

Fig. 73: The Aland, Elbe tributary river

Fig. 74: Panoramic view of the Aland

Fig. 75: Greater white-fronted gooses (*Anser albifrons*)

Fig. 76: View from a wet grassland looking at Pollitz

Fig. 77: Tipic view of a bog

Fig. 78: Drawn on site: grassland, dyke and forest

Fig. 79: Dyke and Polder

Fig. 80: Magnifying drops of the dyke

Fig. 81: Drawn on site: Bockwindmühle Wanzer

Fig. 82: Bockwindmühle Wanzer. Photography from Seehausen-altmark.de

In Wanzer stands the famous *Bockwindmühle*, which was restored by the community with great commitment between 2001 and 2007. Today, guided tours take place inside the mill and outside it is used for various activities among the locals. Since 1611 Wanzer has been known as a mill site, the renovation of this historic site it is a great example communal engagement in the area.

Fig. 83: Old branch of the Elbe river

Fig. 84: Livestock in the Hohe Garbe

Fig. 85: Last road in Hohe Garbe

Fig. 86: View of the Hohe Garbe from the dyke

The access to the Garbe is forbidden. A hint of the total picture of the landscape can be seen from the track that allows access for maintenance machinery. Great amount of willow trees appears along the route, revealing the richness and diversity of the place.

On the way back to the dyke there is a wide view from the Garbe. There is a hint of abandonment, something is missing here. Fortunately, cows are grazing in some areas, and their presence brings new colour to the landscape.

Fig. 88: Dyke and river

Fig. 89: Collect and draw: pieces of wood

Fig. 90: Collect and draw: Brachypodium stem

Fig. 91: Entering to Höhbeck

ISLAND MOUNTAIN IN THE GLACIAL VALLEY

> In many ways, geology is about understanding “wyrd” -the ways that the secret stories of the past hold up the world, envelop us in the present, and set our path into the future. The past is not lost; in fact, is palpably present in rocks, landscapes, groundwater, glaciers, and ecosystems. (…) there is deep satisfaction in recognizing the distinctive “styles” of past geologic periods. And we, too, dwell in geologic time.[1]
>
> —Marcia Bjornerud

In the middle of the Elbe floodplain the very prominent Höhbeck rises to 60 metres. It is the island mountain that remains of an “Ice Age” *Grundmoräne* of the Elbe glacial valley. It is located in the transitional area between Atlantic and continental climate, offering optimal conditions for many animal and plant species. For such a small area, the diversity of Höhbeck is immense. Its forest mosaic shows two faces: In the south, the former heath areas were afforested with pines and in the north is covered by a pristine mixed deciduous forest. The areas in the north of Höhbeck, in combination with the forested slopes, form valuable biotope complexes and habitat structures for rare and endangered animal species. A path with several panels shows the geological importance of the area and leads up to the observation tower to get a bird’s eye view of the landscape.

1 *Timefulness: How thinking like a geologist can help save the world* (Princeton: Princeton University Press, 2018), 162-163.

Fig. 92: Woodland canopy from Höhbeck observation tower

Fig. 94: Bottled landscapes of Höhbeck

Fig. 93: Collect and draw: Quercus fruit and Kiefer cone

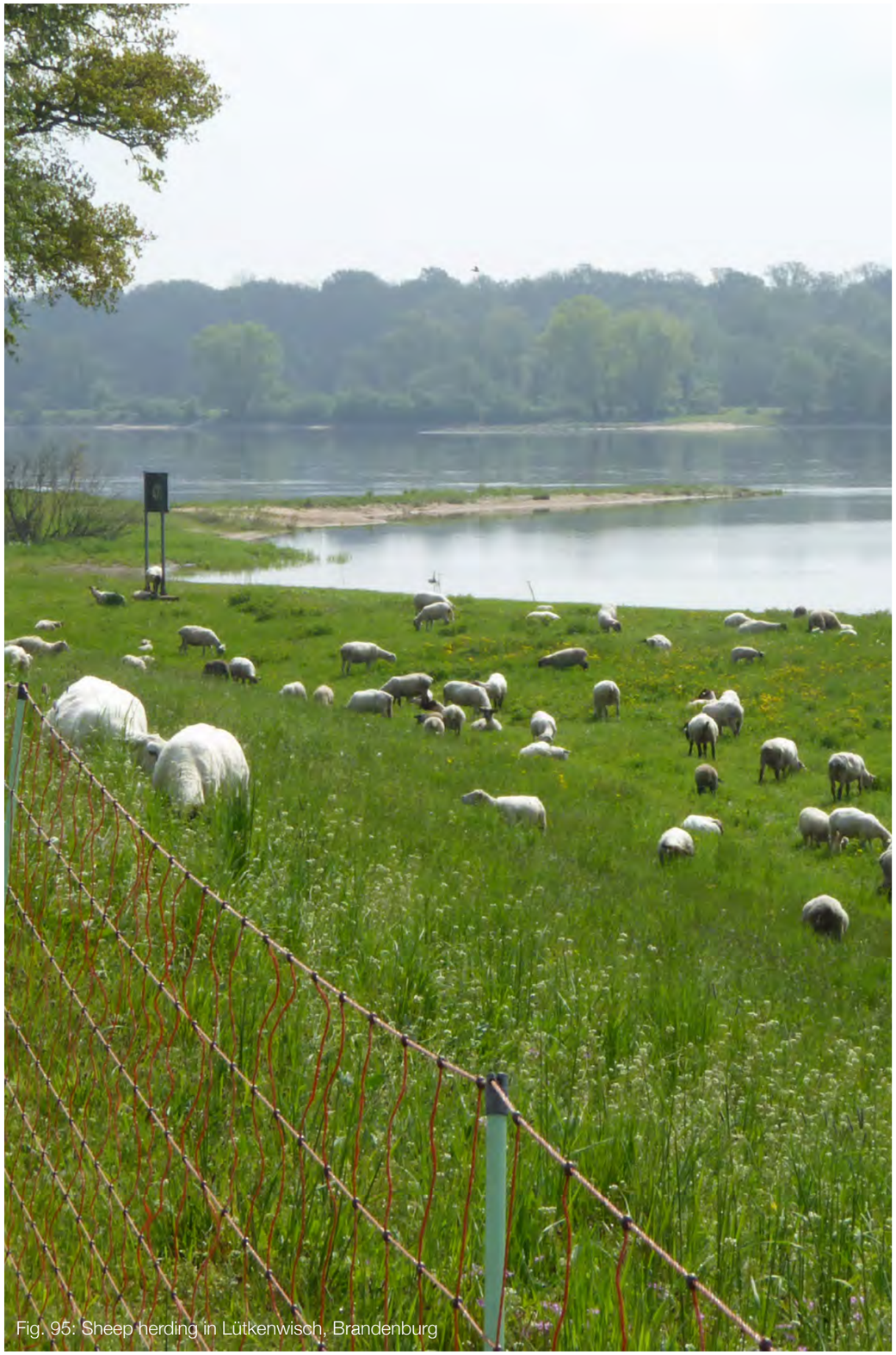


Fig. 95: Sheep herding in Lütkenwisch, Brandenburg

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> He reminds us that curuosity about our surroundings is an essential part of what means to be a human and is, in fact, essential to our survival as a species on Earth.[1]
>
> —Felix de Rosen talking about Joey Santore

The most valuable thing about knowing different projects at the site was experiencing their effectiveness. In other words, these projects have indeed transformed the landscape and people's relationship with them. In addition to this, different actors such as wild horses and sheep grazing do represent a very powerful collective cultural imaginary of the site. It is important to stress how these 'companion species' play a very important role in the way humans can relate to nature through their interaction. It seems obvious, perhaps it is, but it will be fundamental. It is important to re-emphasise the outsider's perspective. Because all these elements that are discovered elsewhere in the area appear as new opportunities for the proposal area. Perhaps obvious to locals but not to outsiders, the potential of these small actions in the landscape seems to be the axis of the strategy for the conception of a future landscape in the area of study.

1 *Crime pays but botany doesn't*, Wonderground, Issue 1 (Australia: Planthunter Projects Pty Ltd, 2021), 45.

Fig. 96: Panoramic view of “Naturschutzgrossprojekt Lenzener Elbtalaue from the new dyke

Fig. 97: “Naturschutzgrossprojekt Lenzener Elbtalaue” location plan. Plan from Trägerverbund Burg Lenzen e.V.

To restore a pristine, dynamic and functional floodplain landscape with its typical mosaic of species-rich habitats, the large-scale nature conservation project “Naturschutzgrossprojekt Lenzener Elbtalaue” was developed. Consisting of a dyke relocation, the creation of a new floodplain landscape and the implementation of pastures, the project combines nature conservation and flood protection in an exemplary manner.

It is located in the northwest of Brandenburg in the district of Prignitz, an important resting and migration area for numerous bird species. The *Bund für Umwelt und Naturschutz e.V.* (BUND) together with the administration of the *Biosphärenreservat Mittelelbe*, initiated and supported the large-scale nature conservation project in cooperation with other foundations and environmental associations. The project was based at the European Centre for Floodplain Ecology, Environmental Education and Visitor Information at *Burg Lenzen*.

Phases of the project (from a flyer of BUND):

-1992: First project ideas by the former nature park administration (today: Elbe-Brandenburg River Landscape Biosphere Reserve).

-1995: Preparation of the maintenance and development plan for the nature park.

-1994-1998: EU-LIFE project, preparatory work on dyke relocation and floodplain protection measures.

-1996 2000: BMBF research project “Floodplain restoration and floodplain forest development in the Elbtalaue in Brandenburg”.

-July 2001: Application for a large-scale nature conservation project.

-2002-2011 until 2022: Implementation of the large-scale nature conservation project “Lenzener Elbtalaue”. Evaluation of the large-scale nature conservation project 5 and 10 years after implementation.

Fig. 98: The semi-open pasture landscape

Fig. 99: Der Naturpoesiegarten, Burg Lenzen

Burg Lenzen is a visitor centre in the *Biosphärenreservat Mittelelbe*. Various exhibitions on the nature and history of the region take place here and attract many visitors. In the gardens, two open-air exhibition interventions are an interesting way of bringing people closer to nature. The *NaturPoesieGarten* consists of several works of art, inspired by German intellectuals, which teach the viewer about the relationship between man and nature.

Fig. 100: G.W. Leibniz natural philosophical art installation

Fig. 101: Auen Reich, Burg Lenzen: Wiesen Reich station

The *AuenReich* exhibition offers a natural experience through different representations of various biotopes of the floodplain with six stations. With various explorative elements, the interventions invite you to relax, enjoy the place and awaken the senses. If experiencing the garden of the Burg Lenzen was an experience for the senses, experiencing the place was an awakening to imagine new futures.

Fig. 102: Auen Reich, Burg Lenzen: Wasser Reich station

Fig. 103: Johann Amos Comenius station

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