

**Being Meuse**  
A Spatial Practice for River Rights



P5 Thesis Report  
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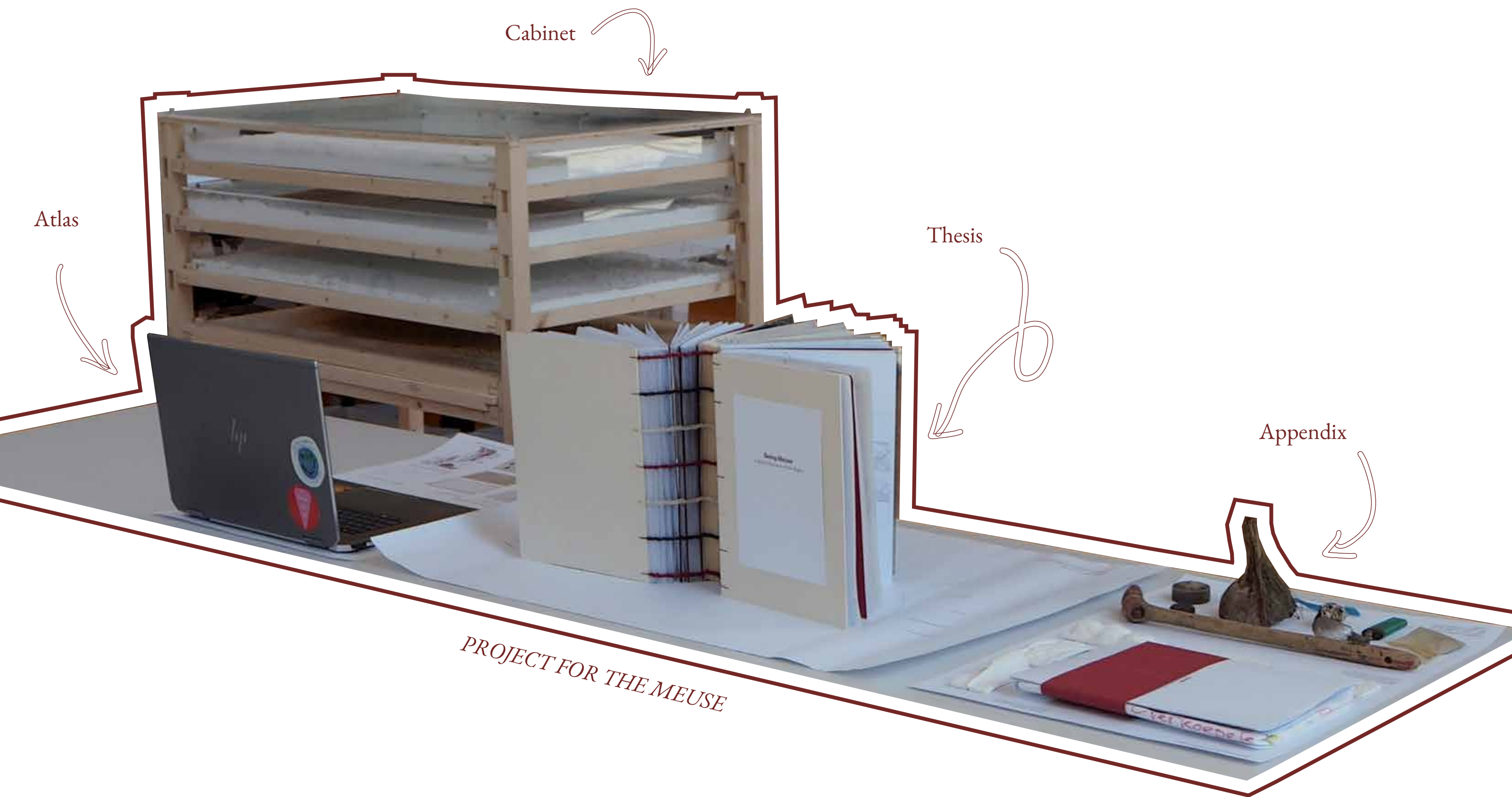
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MSc Architecture, Urbanism & the Building Sciences  
Track Urbanism

Made possible by:



*“The future must enter into you  
long before it happens”*

*- Rainer Maria Rilke*



Cabinet

Atlas

Thesis

Appendix

PROJECT FOR THE MEUSE



### Explanation

You are invited to explore the archive of the past year's journey along the Meuse river. As you delve into the report and wade through the pages, the explorations and outcomes of this past year will gradually unfold. The objects on both sides of the atlas on the previous page show the activation of the project in programme (Online Atlas & Nomadic School) and physical landing (Cabinet),

and the explorations and journeys that informed them (Appendix). Each can be found in the pages hereafter, reshaped from the cyclical physical shape shown in the photo into a linear digital format. In this digital version, some pages expand in width to ensure that the information printed on transparent papers in the physical book remains visible.

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## Abstract

This thesis investigates how posthuman and new materialist theories can inform urban design practices that cultivate ongoing care for more-than-human actors, with a particular focus on the Meuse River. Challenging dominant anthropocentric and extractive planning paradigms, the research reimagines the river as an agential being embedded within a web of human and nonhuman relations. Through methods grounded in situated knowledge, critical cartography, and relational thinking, the project explores how designers might listen to, interpret, and translate the language of the river into the urban practice.

The project consists of three interrelated components: (1) an open-source digital *Atlas for the Meuse* that collects a variety of translations of the river's agency and entanglements; (2) a physical *Cabinet for Counter Narratives*, a mobile table for discussion enabling collaborative reinterpretations of the Meuse territory; and (3) a *Nomadic School for Designers* that hosts site-specific

workshops where participants co-create alternative cartographies. The three elements are designed to work together as the Cabinet travels across the river basin to facilitate workshops on-site, producing collaborative Cartographies of Dialogue that are subsequently integrated into the digital Atlas.

Together, these components translate theory into an ongoing practice of engaging-with and caring-for the places one designs with. By encouraging slow, attentive design processes and interdisciplinary inquiry, the project repositions the urban designer from master of space to mediator of complex ecologies. As the atlas expands, it gathers situated evidence that supports recognition of the river's intrinsic rights and cultivates a sense of guardianship among those living along its basin. In doing so, the project contributes to the Rights of Nature movement from an urban design perspective, amplifying the voice of the river within the discipline and beyond.

**Key words:** Posthuman Urbanism, Critical Cartography, Rights of Nature, More-than-Human Design, Design as Mediation

## Motivation

I am fascinated by the power of stories. By how they influence the way in which we think and act in the world. A story of specific interest here, is the one we tell of our relationship with non-human nature. In the Netherlands, where I was born and raised, and in Western Europe more generally, we tend to think ourselves separate from nature, which contributes to the ecological neglect, pollution, and inertia in the face of climate collapse that I see all around me.

Over time, I have become acquainted with different cosmologies where nature and culture are not seen as opposites, but as entangled and co-constitutive.

This has made me curious about whether and how we can (re)create a sense of belonging to the ecosystems we are a part of by telling a different story, and whether reweaving ourselves into a collective narrative can create a sense of urgency to take better care of the places we inhabit, and the multitude with whom this space is shared.

To be able to talk about this more generally, I have to start with the particular and first establish such a connection myself with the place in which I live. Hence, I devote this project to a lifeline that brings stories from elsewhere to my home in Rotterdam: The Meuse river.

**1.**

**Introducing the river**



Throughout history and up until today, the Meuse has taken many roles and displayed various faces. To understand the past and present roles of the river and find possible directions for the future, it is essential to conceptualise the river as relational body and active

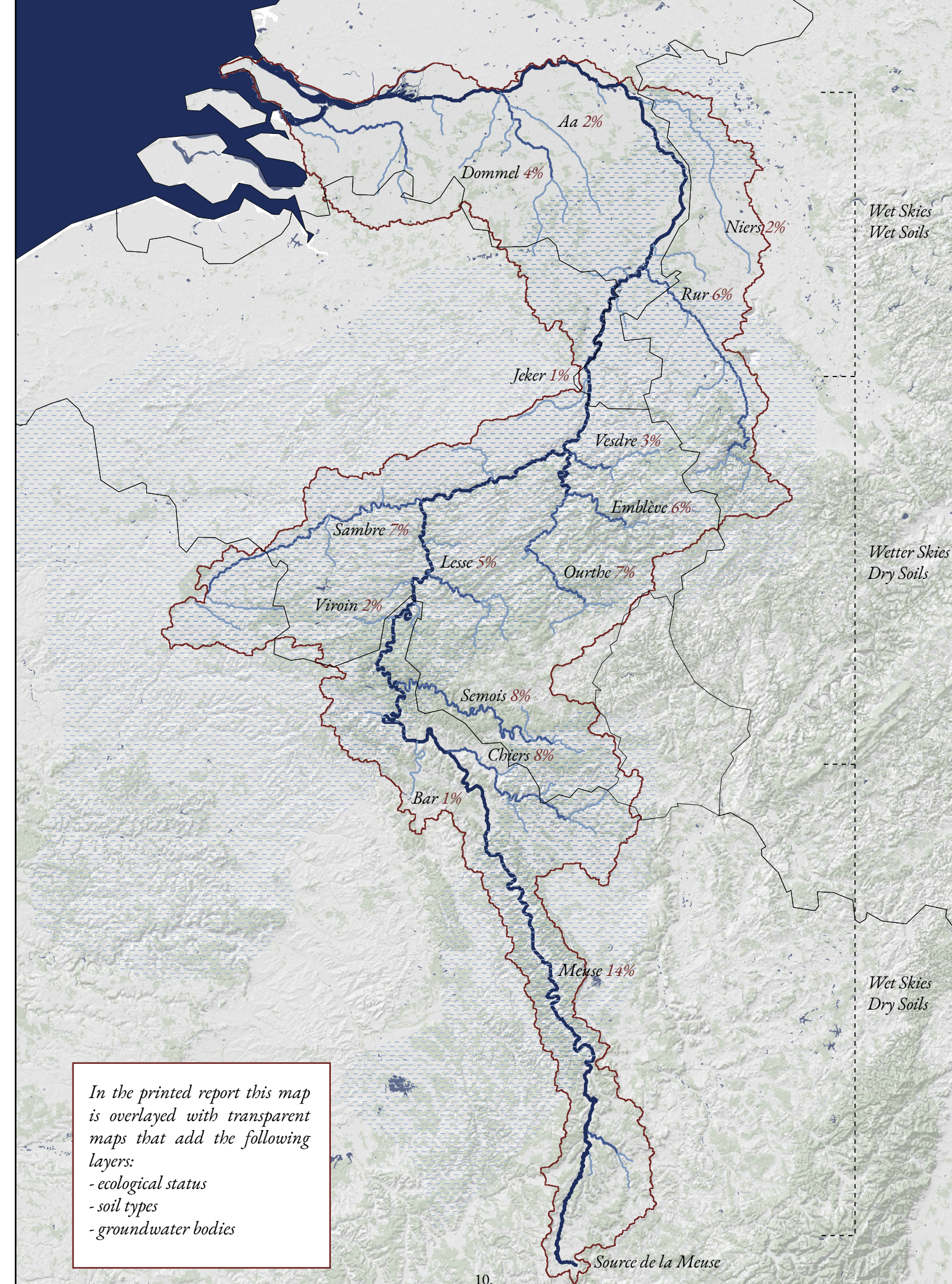
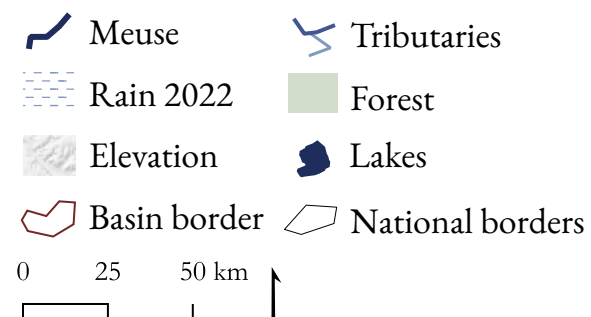
## 1.1 River | territory

The source of the river lies in Pouilly-en-Bassigny, on the Plateau of Langres in Northeastern France. From there she flows for approximately 950km northward towards the Ardennes Forest, through Belgium and the Netherlands, finding its way towards the Rhine-Meuse-Scheldt delta before flowing into the North Sea. With an approximate length of 950km, the Meuse is a medium-sized river within the European context. The river basin is relatively narrow, covering a total area of 35.000km<sup>2</sup>. Apart from the countries through which the principal stream flows (NL-BE-FR) small parts of the river basin lie in Luxembourg and Germany (De Wit, 2008).

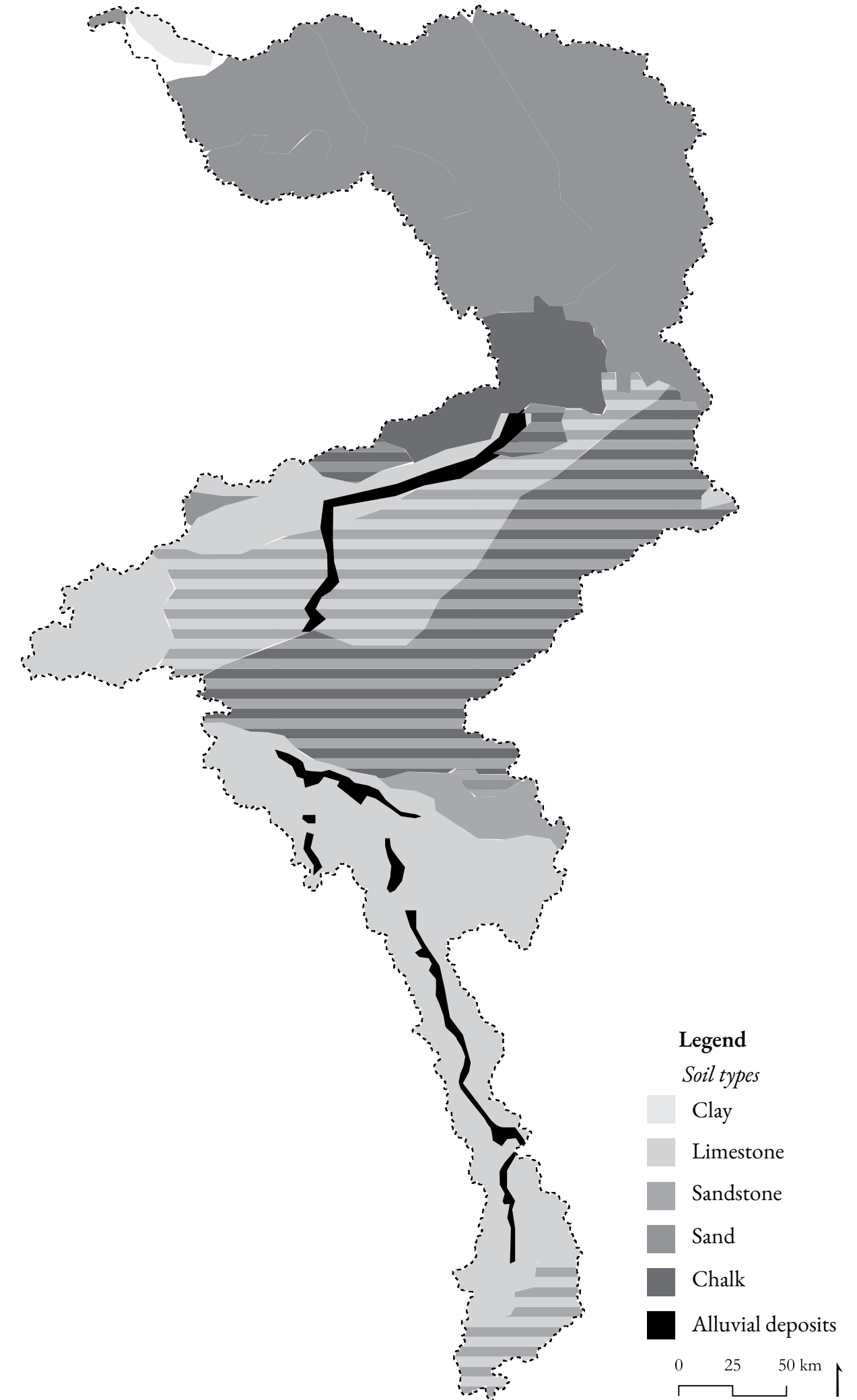
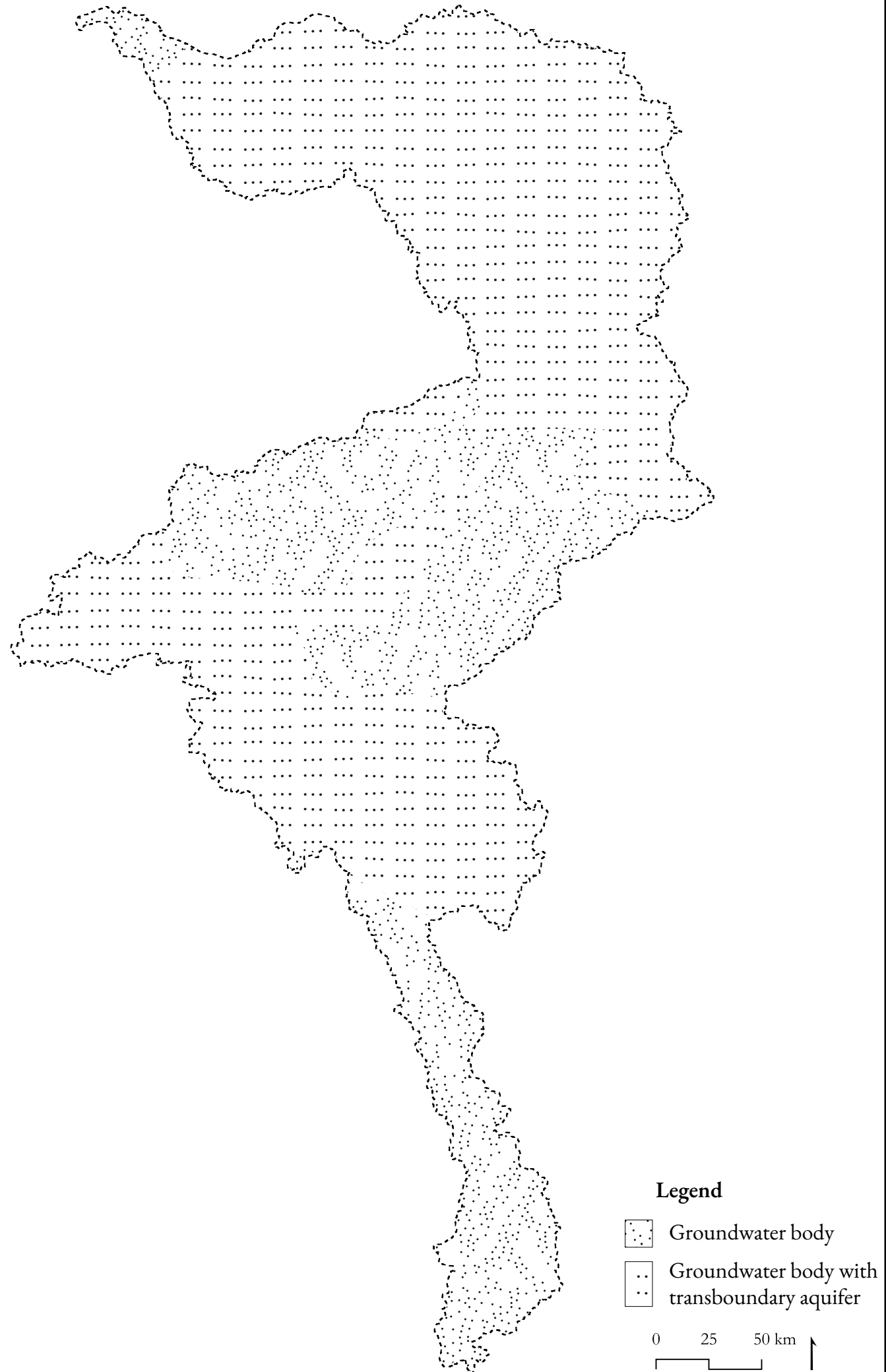
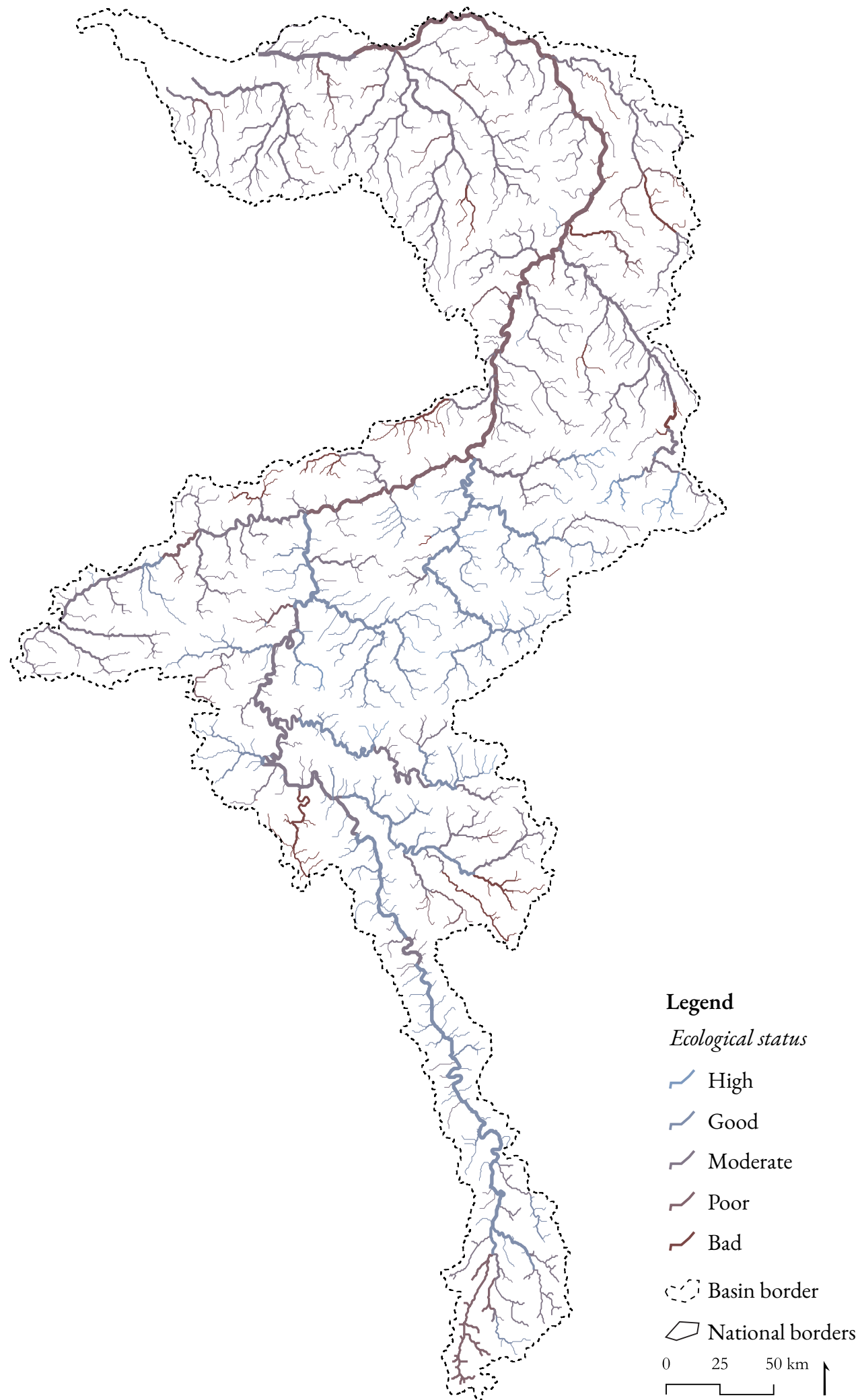
agent. In this understanding, the river actively (re)shapes the landscape and the cultures through which she flows. In turn, she is shaped and altered by the landscapes and cultures around her, showing their mutual influence and dependence.

The idea of a linear river is expanded once we consider the origin of the water that we call the Meuse. The river that leaves its source in Pouilly-en-Bassigny makes up 14% of the total. The largest part comes from its 15 main tributaries (62%), while the remaining 24% comes from small brooks and streams that directly feed into the Meuse (De Wit, 2008). The Meuse is a rainfed river, which makes discharge levels very unpredictable as it depends mostly on the climatic conditions of the rainy zone of the Ardennes. Discharge levels can fluctuate by a factor of 150, with measurements reaching lowest at 20 m<sup>3</sup>/s (Liege, summer 1976) and highest at 3000 m<sup>3</sup>/s (Liege, winter 1993) (De Wit, 2008).

### Legend







Aan de Maas

Aan de Maas gezeten  
turend in het zwerk  
het stadsgeraas geweken  
ontstijgt men aan zichzelf

Op hoger plan gekomen  
wiekend door de lucht  
de zwaartekracht te boven  
vindt men een ander terug

O vogel van verlangen  
wiegend op de wind  
verlos ons van elkander  
en van elkaars gewicht

- Jules Deelder, 1997

Along the Meuse

Sitting along the Meuse  
gazing into the sky  
the city noise subsided  
one rises above oneself

reaching higher planes  
flying through the air  
overcoming gravity  
one finds each other again

Oh bird of desire  
swaying in the wind  
free us from each other  
and from each other's weight



Mooder Maas

Pariës det haet zien Seine, in Kölle is de Rien.  
Paris has the Seine, in Cologne is the Rhine  
D'n alde blauwe Donau löp altiêd nog door Wien.  
The old blue Donau, runs still through Vienna  
Maar waat 't schoênste is, det weite wêj beslis.  
But where it is most beautiful, that we know for sure

Det is ôs Mooder, jao det is Mooder Maas.  
That is our mother, our mother Maas  
Die schoëne Majjem, die schoëne Mooder Maas.  
The beautiful Maas, the beautiful mother Maas  
Wie bôks bėj liefke, wie greun bėj graas.  
Like pants with shirt, and green with grass  
Zoë huërt bėj Venlo, os Mooder Maas.  
Thus belongs to Venlo, our mother Maas

Merieke hilt van wandele, maar noëts ens nao de hei.  
Marieke loves walking, but never to the heath  
En nao ôs Floddergetske, krieg ik um auk neet mei.  
And our Floddergetske, also doesn't come along  
Het zaet: det wetste bes, ik heb maar ein adres.  
It is as is: they know it well, I have just one address

Mestreech haet ziene Vriethaof, Remund 'ne ' kaoie zit ' .  
Maastricht has its Vrijthof, Roermond its seat  
In Tegele prônk d'n oëles, en Venlo haet ' de Pit ' .  
Tegelen has the Oeles on display, and Venlo has the Pit  
Maar ein dingk gans allein, det hebbe wêj gemein.  
But there is one thing that we all have, one thing that we share...

1.2 River | human

The river has been important in shaping the land. Not only by carving out its path across the territory but also through its entanglement with human cultures. The presence of the Meuse within the landscape played a crucial role in the history of the region. The riverbanks were fertile places, making it attractive for settlement. While the region was dominated by agriculture for a long time, once the time was ripe it also offered the perfect conditions for accelerating the industrial revolution. The industrial age of the European continent began in Belgium, and Liège was an important centre of developments. Conditions were perfect around the Meuse, as the valleys were sources of coal, the water could be used to generate energy, and the river facilitated the transportation of goods (Peumans, 2024). This allowed for rapid expansion of industries and urban areas. Looking at the river basin today, the Dutch and Belgian sections are highly industrialised and urbanised, while the French part is mainly covered by agricultural fields, with few smaller cities scattered along the riverbanks.

Within this network of economic, social, and ecological relations, the river took on different roles as trade route, cultural vein, natural barrier, strategic defence line, political border, and sculptor of different identities on each riverside, separated and united by the water. The river has been the inspiration of many writers, poets, and musicians, depicting her as muse (Dinant 1839, by William Turner), singing of her as mother (Mooder Maas, by Ad Pollux), or contemplating her depths (Aan de Maas, Jules Deelder). At the same time, the river could be a monster too. The capricious nature of the river has caused severe floods in 1993, 1995, and more recently in 2021, marking the collective memory of people living around the river (De Wit, 2008; Peumans, 2024).

The complex patchwork of (sometimes) conflicting interests necessitates mediation and gave rise to numerous laws and policies that were to aid this process. Local responses are different across the river basin. For example, in the case of floods, some regions constructed dikes and flood barriers (e.g. segment between Cuijk and Lith, NL), gave room to the river to accommodate natural fluctuations (e.g. Room for the River Programme, NL) while others turned their backs to the river (e.g. city of Charleville-Mezieres, FR).

These examples lift a veil to a system that pervades through the entire basin, namely, that strategies and policies focused on the river often end at national borders. What's more, these policies are aimed at protecting the river insofar as this protects human interests but are inadequate to protect the river in itself (WWF, 2024). Since the turn of the century, however, European member states have set an ambition for integrated water management with the introduction of the Water Framework Directive (European Commission, 2000). In the case of the Meuse, an International Commission has been established, but practice shows that nation-state thinking still dominates thought and practice.

The relationship with the river is marked by dualities. On the one hand, people have altered the river to best accommodate for human (economic) life, while on the other hand people have learned to adapt to her capricious swelling and shrinking. Her rhythm is both carefully attended to and actively ignored. She divides people and unites them, carves out borders while ignoring others. Large scale industrial, agricultural, and urban projects aim to control the river, while history teaches that once the water rises, she is the one to decide.



1.3 River | alteration

The climate crisis is intensifying both the frequency and severity of floods in the Meuse River basin. Perhaps even more concerning is the increasing risk of droughts (Klijn, Leushuis, Treurniet, van Heusden & van Vuren, 2022). Human activities, in particular large-scale agriculture, industrial production, intensive shipping, and widespread urbanization have led to high pollution levels, often rendering the river water unsuitable for drinking and diminishing the quality of life for all who depend on it (RIWA Maas, 2024). Modifications to the river’s natural course have further degraded its ecological health, reducing natural habitats and weakening the

resilience of the ecosystem. The Meuse is no longer the life vein she used to be. Today, the river exists as an assemblage, neither natural nor entirely man-made. It is a nature-culture landscape, a product of continuous human alteration.

This blurs the separation between the natural and the artificial, leaving no room for escape as there is no ‘pristine nature’ to return to. Hence, we have to stay with the trouble that we have created and take responsibility for what is found.

Legend

- Agriculture

Industry

Urban

Port area

Mineral extraction
- Cities along river

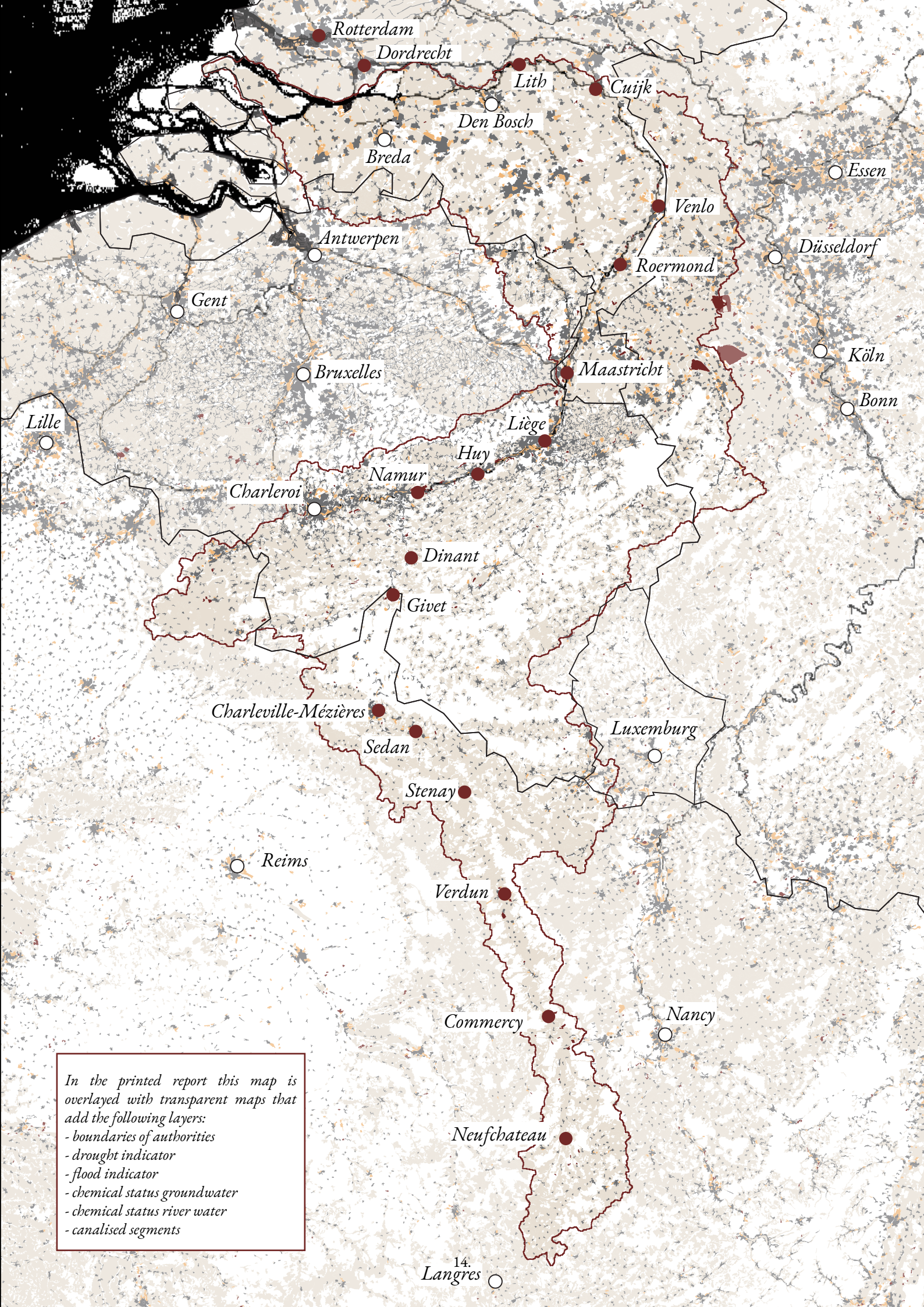
Ship density

National borders

Basin border

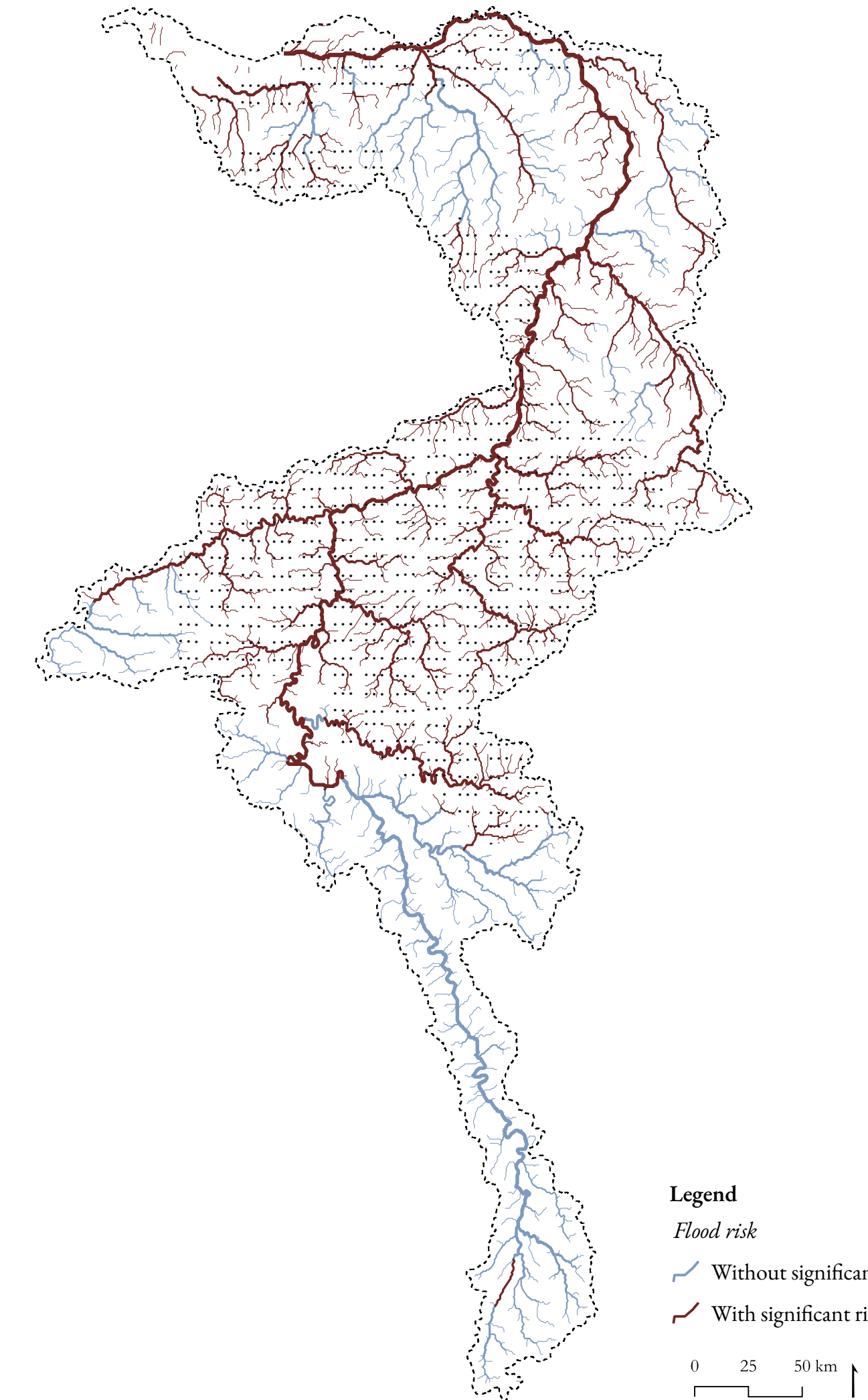
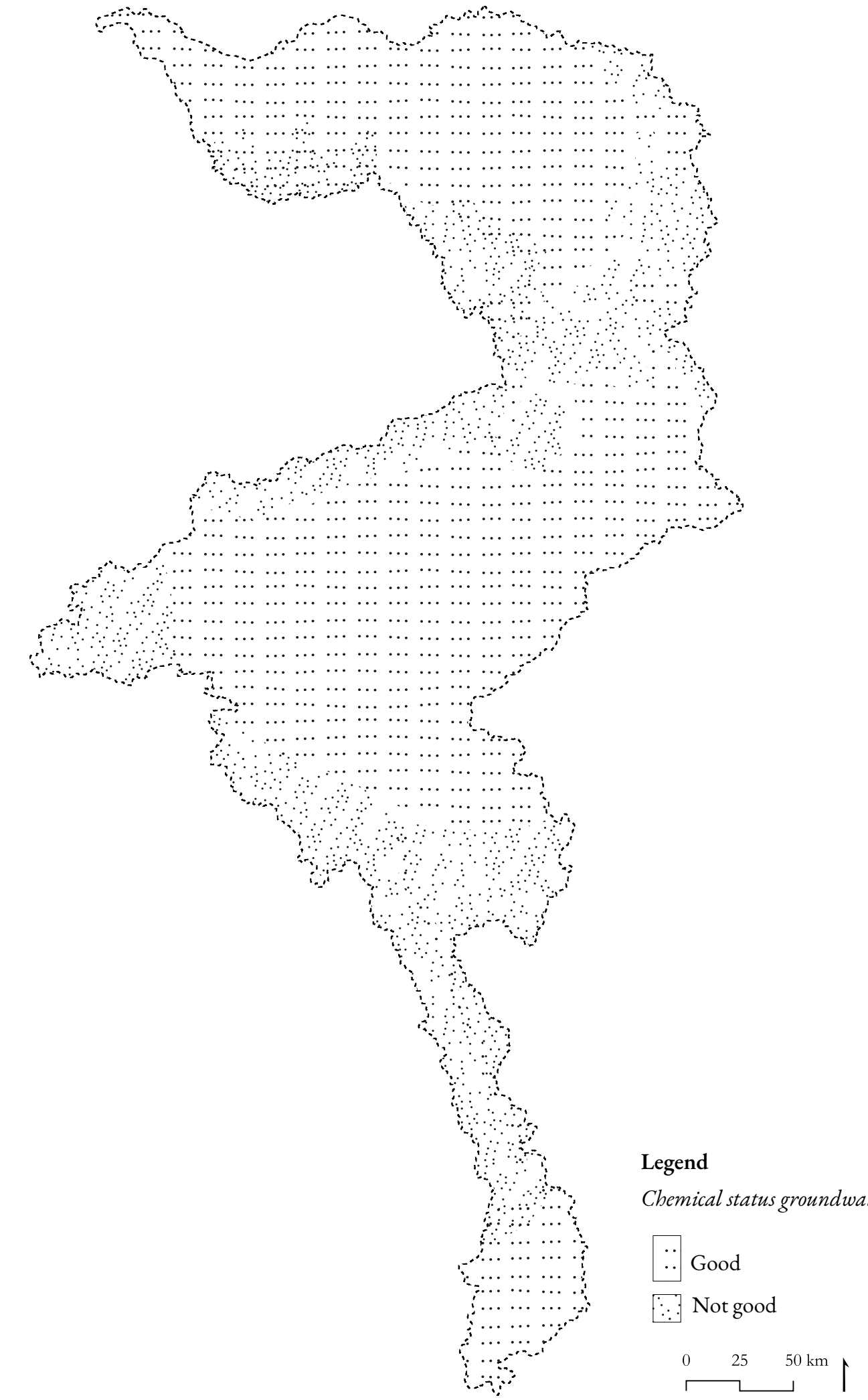
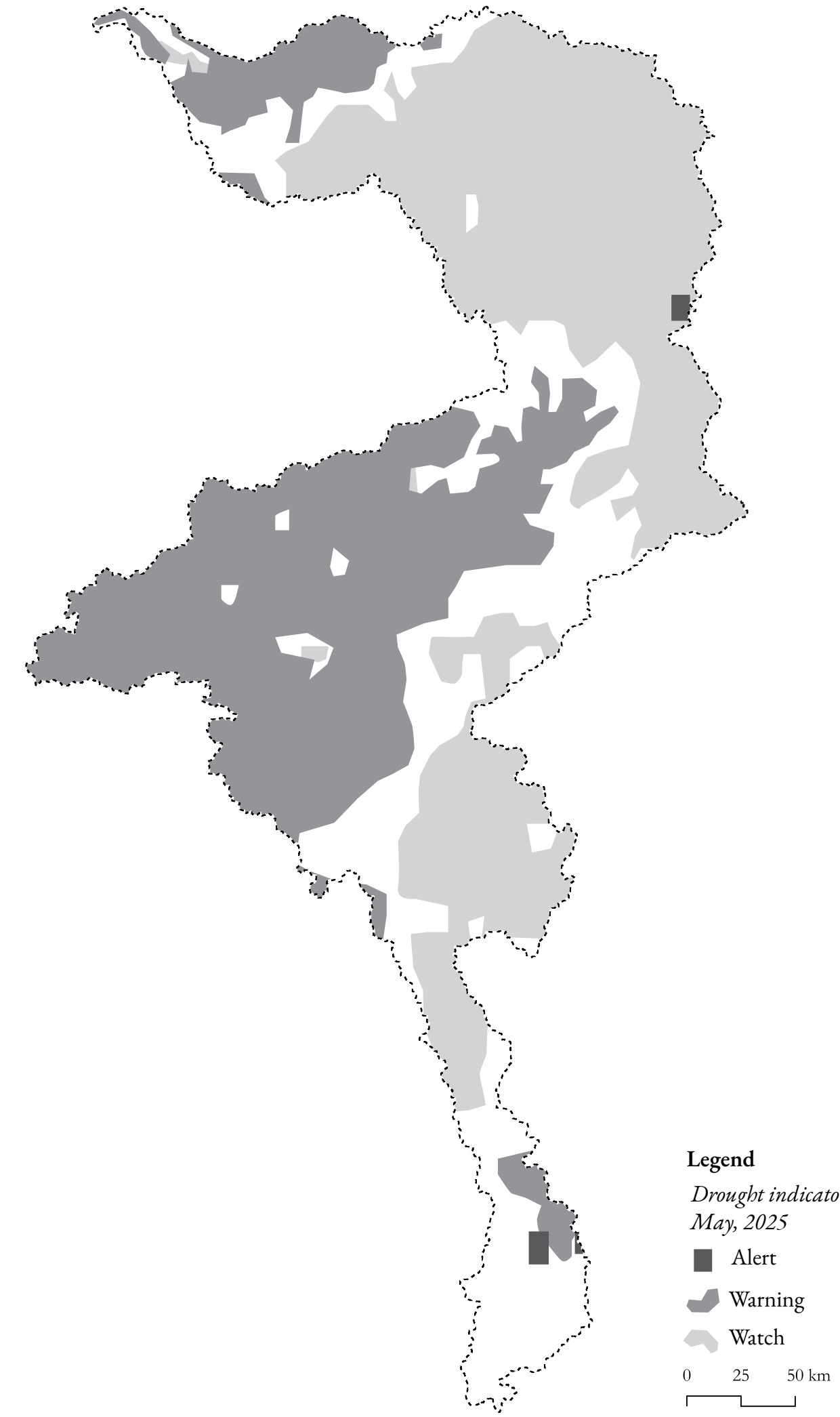
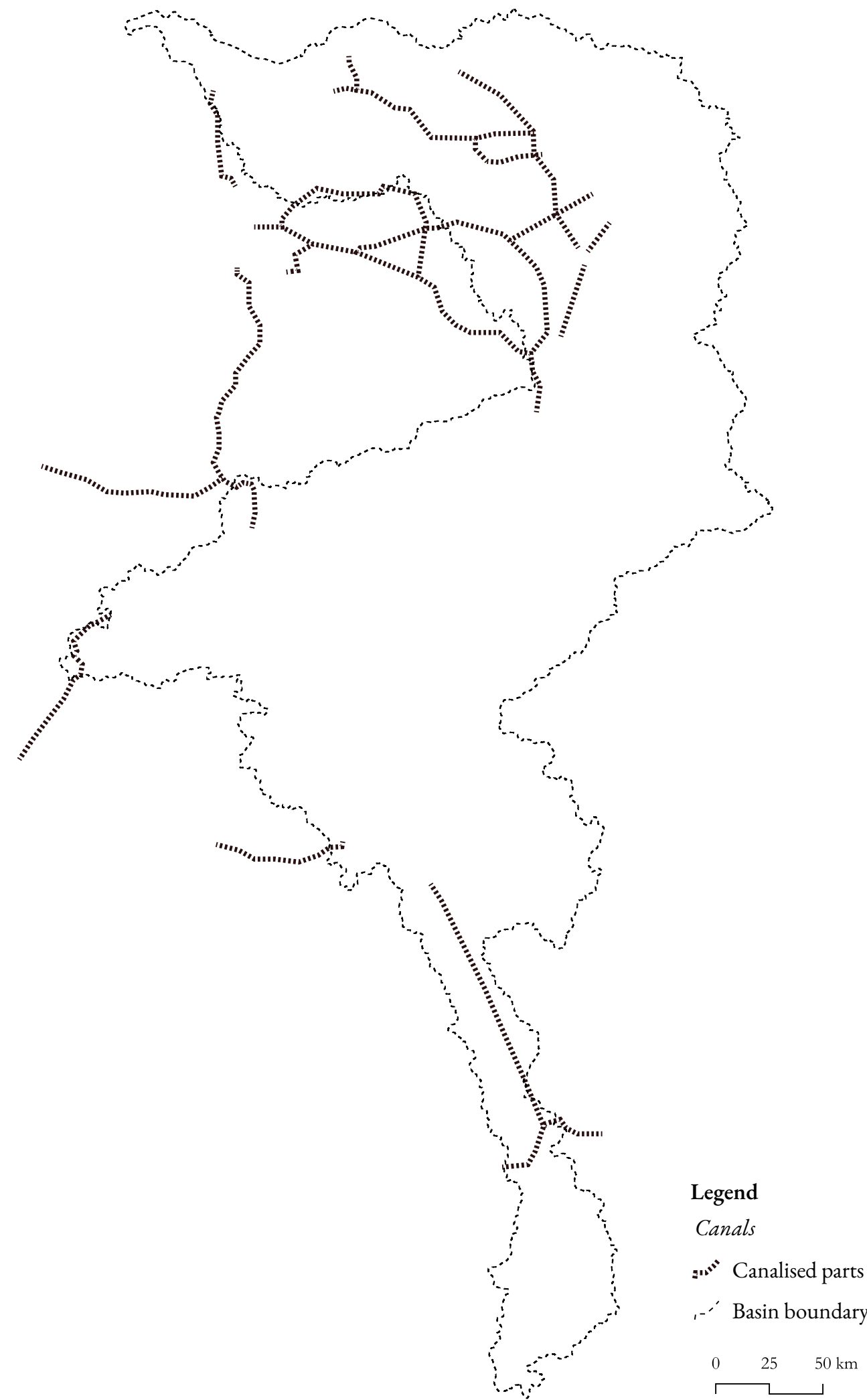
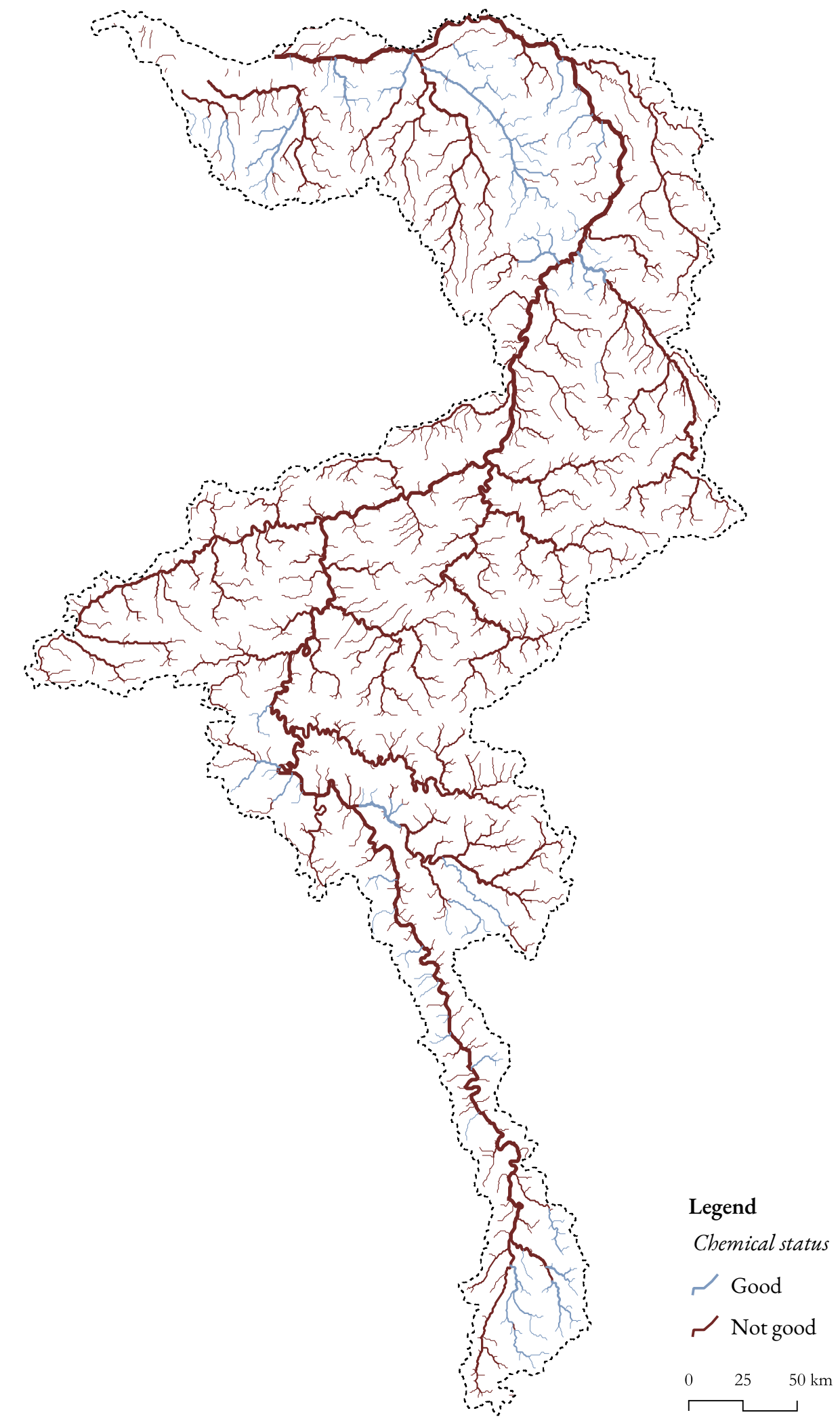
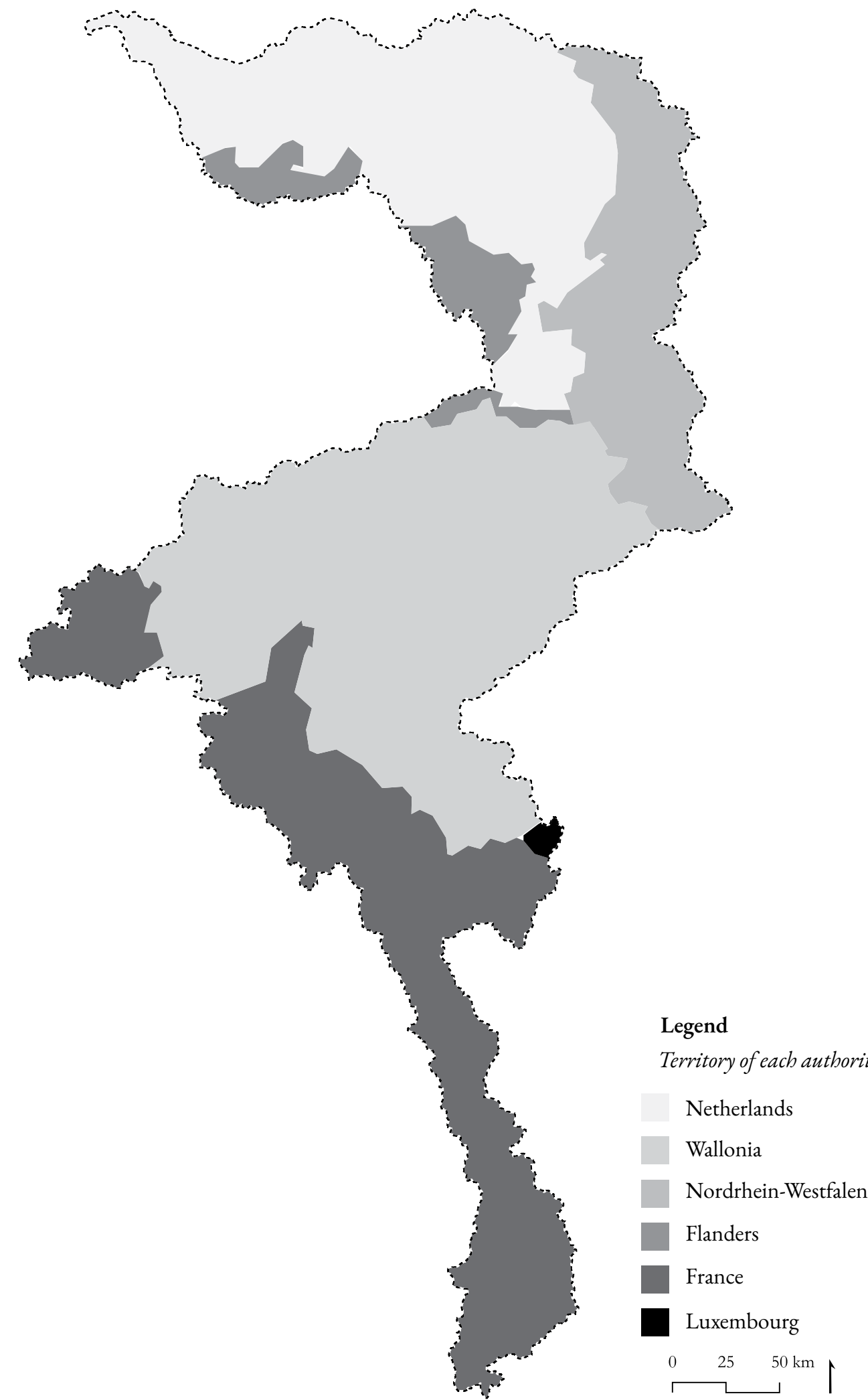
Cities surrounding the river

0 25 50 km



In the printed report this map is overlaid with transparent maps that add the following layers:  
- boundaries of authorities  
- drought indicator  
- flood indicator  
- chemical status groundwater  
- chemical status river water  
- canalised segments





I am the Meuse   la Meuse   de Maas			rather than depth, creating an orchestra with the stones that I move around and across.
I am water. I am a river .			
I am disturbed, disrupted; exploited and extracted.			Plants grow in my bed and sway along with my meandering course.
I am a ruin, remnant of centuries of absent care. I am altered nature, a cultural landscape. I am life, and I am filled with possibilities for return.			<i>Alteration</i>  I feel a pull. From this point onward something was lost that I didn’t realise could be taken. I am no longer whole.
Let me take you on a journey through the territory that is me.			Your need for navigation and control cut channels along my side, and injected barriers across to control my flow. My body is split as I fill your bypasses and locks. Forced to lie still I scream for breath, saddened by the sight of fish that can no longer find their way downstream, and the plants whose seed cannot be dispersed.
<i>Source</i>  I carry my name - the Meuse – as I emerge at the Plateau of Langres in northeastern France. Before I appear as small stream out of the monument you built to celebrate my source, I am deeply emersed in karst systems, in limestones, and permeable rocks. The plateau is a sponge that gathers all that my body once was and might become.			<i>Water</i>  I am joined by La Chiers. Carrying water, stories, and memories that now fuse with mine. I am not one but multiple.
I say might, because the water collected in this castle can carry different names, depending on the route it follows towards the sea - The Marne, the Aube, the Seine –			I am born only out of rain, and most of that falls onto the mountains in the Ardennen, where drops unite in streams, that run through the forest resting on the rolling hills.
but as the Meuse I rise.			This first encounter is one of many to come. Together these waters are three quarters of the sum that makes my body whole.
<i>Water</i>  I like the tickling sound that my body makes as I fall off the stones you placed around my source. My body is small enough to hear			I greet you all.
each			<i>Pollution</i>  My water is changing. Hot waters enter as intrusive chaos, a mess of molecules colliding and clashing. These waters are mine, but were temporarily taken up by your pipes to run your engines or cool them down. This rise is most pronounced near Chooz and Tihanghe, where I cool your nuclear plants.
Individual			
drop			
Tickled by the tiny plants I wade through the first meadow, starting my journey north. As I move, my body slowly grows larger. In width			Elsewhere unfamiliar elements are added to

my stream. Toxins and plastics that you cannot or do not want to take out of the water you discharge. I do not know where it started nor exactly where it comes from, it is all pervasive by now.

Flow I will regardless, but I worry for the life that is entangled with mine.

Culture

I continue through magical lands, that have long been a source of inspiration for poets, painters, writers, and leave lingering questions of existence and time, braiding my waters together with legends and tales that most of you have long forgotten.

Water

Gradually I grow to proportions you are familiar with. As I meet the Sambre near Namur, and the Ourthe and Amblève near Liege.

History

As my body stretches wide and deep, it opens opportunities.

In the past, my waters inspired you to think beyond the linear, towards exponential growth. Taking all there was to take, pumping,  
firing,  
blasting,  
smoking,  
pipes reaching beyond the clouds.

In the present, many factories lie empty, their dirt exported to lands out of sight. But their tangible riches and mental infrastructures remain. My body still connects your harbours and transports goods from sea to sea, a system that carves on continental scales. Compared to your grand visions of the future, caring for my body pales into significance.

But these visions are separated from the ground,

separate from lived realities, as they fail to understand what gives true colour to a little life, like yours and mine.

Alteration

I am ripped. Torn in pieces of a totally different scale than the tiny splits in France. The Royal albert Canal redirects my water to Antwerp and Brussels. Having passed far beyond my borders we will not meet again.

The Juliana Canal follows shortly after, and while herself filled with ships rather than life, she releases part of my body from the strict path I have been forced to follow, bringing me back to times in which I freely roamed the lands, determining my own borders instead of adhering to yours.

Extraction

Mining activities have altered my body across the entire basin, but here most severely. Countless artificial lakes appear as craters where my sediments were taken out.

Of similar proportions you see scraping scars, visible from high up, the bare surfaces left after my sands were itched of. Gravel for your concrete, sand and clay for your bricks.

My body holds up the space in which you currently sit; and so we touch each other all the time, unknowingly.

Multiple

I enter a web of water with different smells, colours, textures. I confluence in air and under ground, before we do so on the land. Again and again, I merge. I loose track of where I begin and end. I greet the streams, creeks, and majestic rivers, and braid together with the Rhine, Scheldt, and Waal, the delta in which land and water are now interchangeable.

Mouth

The last step of my journey is a stark reminder of all that I have seen. My full surrender into the sea is blocked by the Haringvlietdam. 17 sluices, of unfathomable strength, turn my dynamic body into a lifeless limb. Little exchange is allowed through the small openings; all to keep your land separate from sea and crops safe from salt, accepting as slight inconvenience that the tides cannot sway, ecosystems impoverish, and few fish can migrate in and out.

I squeeze my body through the crevices in tiny sips, because move I must. While the mighty release of my stream disappeared from sight long ago, nothing is truly lost. As each drop contains my full world and memory, bringing life to the present in their fall.

After the initial shock of temperature and salinity fades, all that I am  
stretches . . . out

i n f i n i t e l y  
in all  
di-  
rec-  
tions.

As I can no longer locate myself, I surrender to the depths. The faint sound of the rumbling waves high above roll across a surface that is no longer mine.

Before long,  
only silence remains.

Knitting patchy stories

I tried to make a linear story, taking you from A to Z. But just like this one, each such attempts will fail.

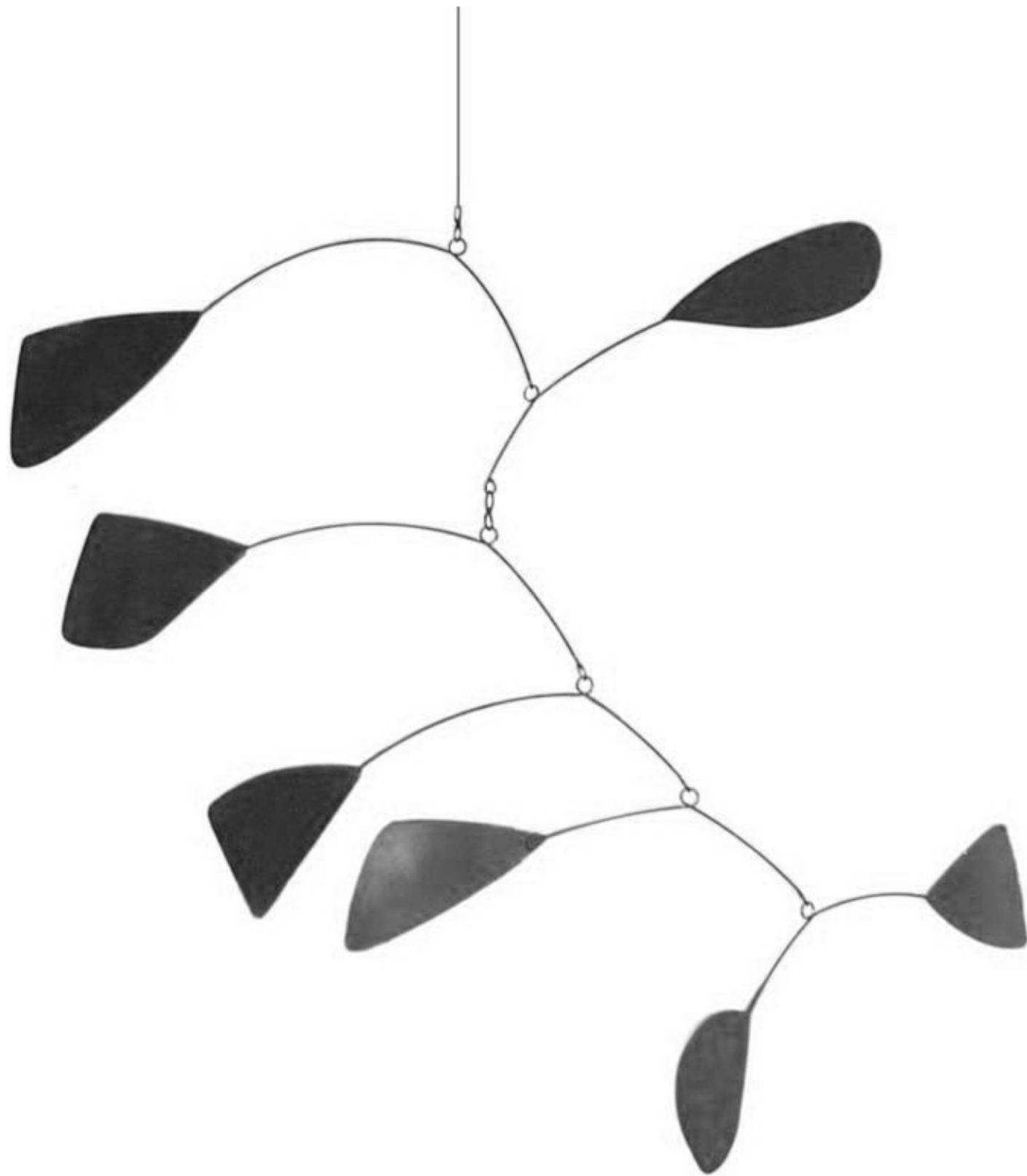
As you see, I am everywhere. I converse with the mountains and rocks, and together we give shape to life. I seep through cracks in surfaces, float through skies and soils, into histories, through industries and crops, through your bodies and those of other critters.

I am not just a line labelled Meuse on the map; I am entangled with other rivers, inseparable from the water in the sky and soil. I am often invisible, shaping cultural, spiritual, economic and political relations and conversations. I am a territory, a sea of water that covers the land and fills that life confined within my basin borders. And thus, as you listen, new borders are drawn.

This project in which I take part will thus not be told according to a linear logic either. Instead, every story ties into another story, already written or yet to come.

## **2.**

### **Problematization & Relevance**



*Mobile by Calder*

*A reminder that our actions can change constellations, endowing us with an ethical responsibility and creative task*

The river Maas does not stand alone as altered natureculture landscape, but is exemplary of a wider societal and disciplinary context. The investigation of this specific river serves as a case-study: a line that I can

hold on to, that gives me direction and focus. Moreover, the pathways found along the course of the Meuse can perhaps inform routes elsewhere too.

## 2.1 Problematisation

Reconceptualising the Meuse as altered nature shows how the multiple crisis that we see emerging in both the social and ecological realm are often connected. Moving away from the Meuse, such altered landscapes can in fact be found everywhere. Humans reach into every corner of the globe leaving no place untouched (Brenner, 2009). Moreover, we have become a force of geological proportions as our social systems have disrupted the climate and caused widespread ecological decline. In many ways, our societies are intertwined with these natural balances and flows (see *Introduction*). These disruptions create new and different places of abundance and scarcity. This is breeding ground for conflict and socio-economic injustices. It are often marginalised groups that are first to suffer from the effects of absent

ecosystemic care (e.g. water allocation during droughts) and silencing landscapes can be a way to silence people as well (e.g. indigenous groups). The Anthropocene as proposed name for our current epoch symbolises this weight humanity put on the planet, while the Capitalocene acknowledges that this humanity is not homogenous (Moore, 2016)

The scale of our impact also gives us a responsibility. We have to learn how to deal with the consequences of our actions, and search for alternative pathways that repair damage done and prevent us from making the same mistakes. Instead, we need to find ways to establish practices of reciprocal care between us and the environments we inhabit.



2.2 Relevance | societal

The increasing understanding of the entanglements between human culture and nature has giving rise to the posthuman turn. This thinking decentres the human, relegating humanity back to one of many species. It rejects claims of anthropocentric dominance and expands agency to non-human others that are equally active in (re)shaping our world. It gives attention to these non-human voices, in an attempt to make them matter and have them take up a larger part of our (political) consciousness.

This philosophical paradigm has been translated into practice in various ways, most famously by the Rights of Nature movement. This is the fastest growing legal movement worldwide and is giving a voice to natural entities like rivers, forests, and mountains by recognising their intrinsic value by law (Burgers & den Outer, 2021). The movement is strongest in South America, and globally we see that indigenous peoples play an important role. This is exemplified by the case of Ecuador, where the Rights of Nature are included in the constitution on the basis of the Quechuan principle of *sumac kawsay* (the good life), a main principle in the biocentric teachings of indigenous peoples of Ecuador, Peru, and Bolivia (Burgers & den Outer, 2021).

This guardianship based on mutual care offers an alternative to the European concept of stewardship (Burgers & den Outer, 2021). Following from this traditional European thought, it is perhaps unsurprising that the European continent is lagging behind in recognising nature’s rights. At the time of writing, there

is just one example of rights being recognised at the national level, which concerns Mar Menor in Spain. Apart from that, rights of nature are yet to be institutionalised (Burgers & den Outer, 2021).

Moving closer to home, there is the example of The Embassy of the North Sea, a group of artists and researchers that bring the question of rights back to the question of representation. Acknowledging the rights of nature is one possible way of including non-human entities in decision-making processes, but there are other ways as well. Rights are a way to negotiate on behalf of the entities whose rights are recognised, which requires that we learn how to listen and speak with these more-than-human entities. (Embassy of the North Sea, 2025).

This raises many questions of how to interpret, translate and mediate what is being said. The two definitions of representation both become important, as it is a question of portrayal [someone or something that represents] and speaking on behalf of someone else [the act or action of representing : the state of being represented] (Merriam-Webster, n.d.).

Investigating these questions in relation to the Meuse river can give insights for this wider context. Specifically, it is valuable to look at the language of the Meuse and how this voice take a larger role in our (political) consciousness, and how incorporating this language in our (design) practices can foster more just and caring outcomes.



Sea Mouth by Harpo ‘t Hart

*An artpiece made in collaboration with the Embassy of the Northsea. It is a life-sized sculpture of an otolith - the earbone that humans and fish have in common - and was placed on a Dutch beach to facilitate communication between passersby and the sea and her inhabitants.*



*Parliament of Plants by Céline Baumann*

*What if human life forms were not the only ones to be involved in decision-making processes? Landscape architect Baumann calls for a reconsideration of the relationship between humans and nature in the field of design and planning.*

## 2.3 Relevance | disciplinary

Urbanism, as a discipline, is an interdisciplinary practice that addresses real-world sociocultural, ecological, and technological challenges. It combines spatial planning with urban design and landscape architecture, that each bring distinctive theories, methods and techniques (Nijhuis et al., 2016). It works with spatial realities, which include the visible lines drawn on a map, as well as the often invisible lived realities and complex social systems layered on top.

Traditionally, urban projects often took the shape of masterplans. As the name already suggests, designers acted as authoritative figures dictating the future development of urban areas. This approach, rooted in modernist ideals, is based on the idea of control, order, and predictability, often at the expense of local contexts and specificities (Jacobs, 1961). The limitations of this approach have become increasingly apparent, and contemporary urbanism now recognises the city as a dynamic complex system that evolves through the interactions of different actors. In this context, the role of the urban designer is changing from single author to mediator or facilitator of the interests of a multitude of stakeholders.

In line with the societal paradigm shift towards the posthuman, the role of the urban designer is shifting again. The mediating role expands to include the

interests of more-than-human others with whom we share the spaces in which we live. As the divide between nature and culture blurs, challenges become ontological and relational. To respond to this, there is a shift taking place in the disciplinary dialogue: from practices of extraction and control to listening and reciprocity; from anthropocentric worldviews to an understanding of cities and landscapes as sites of multispecies entanglement; from a focus on efficiency and growth to nurturing slow and long-term processes of care, regeneration, and justice. This means we have to rethink how we design, plan, and govern. Urban designers are no longer just authors of space, but translators of complex ecologies. They must shift from acting as masters of form to becoming co-designers with the more-than-human world.

This also redefines what counts as ‘stakeholders.’ Rivers, soils, animals, weather systems each become agents with stakes in the outcomes of urban design, even if their voices are not always legible within traditional planning frameworks. Engaging with the Meuse as a relational body offers a space to investigate these shifting disciplinary grounds. What does it mean to co-design with a river? How can urban professionals learn to listen to more-than-human rhythms, flows, and urgencies? And how might this listening give rise to new forms of spatial justice?

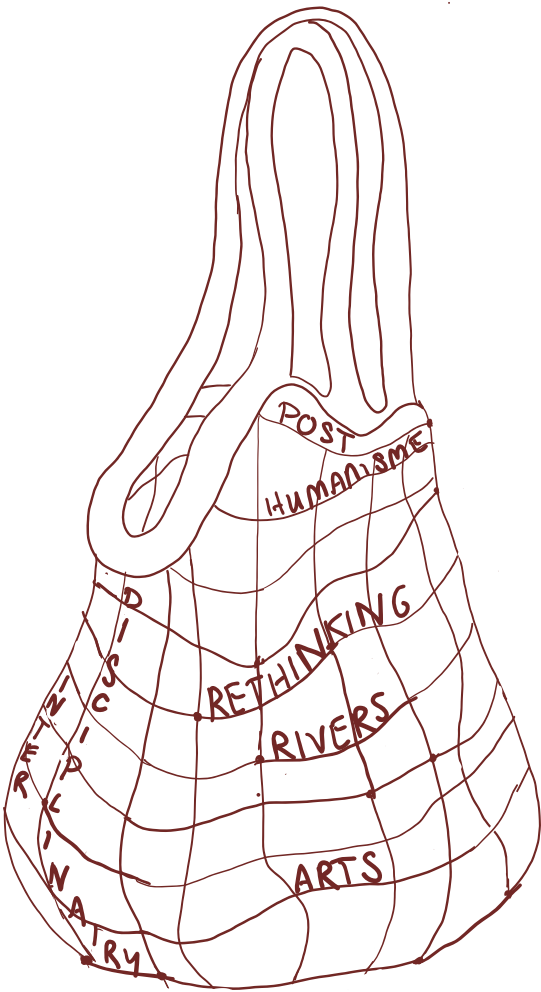
2.4 Relevance | Methodological

Traditional scientific methods, with their emphasis on objectivity and detachment, have been instrumental in shaping our understanding of the world. However, these methods are not neutral but are embedded within specific epistemological frameworks that influence the kinds of knowledge they produce. As such, they often perpetuate existing power structures and worldviews (Harding, 1991).

To envision and enact alternative futures, we should critically examine and expand our methodological toolkits. Literature on postqualitative inquiry offer insights here, as it lets go of traditional methodological rigor, and instead embraces a more fluid approach. St. Pierre (2019) argues for reading across disciplines to find new concepts to think with. With regards to this thesis, both literature on the posthuman and new materialist turn as well as crossovers into other disciplines could be

relevant to expand which solutions become thinkable in the case of the Meuse. Specifically the crossover into the arts can be relevant in this case. Both Manning (2016) and Rendell (2006) describe the potential of the arts to open up alternative ways of knowing and understanding urban spaces. Examples from practice that experiment with new representations of water bodies resonate with these writings, as they incorporate artistic practices ranging from the audio-visual (Kukula, 2024) to the performative (M. Letí, personal communication, Februari 21, 2025).

The case-study of the Meuse allows for an exploration of these disciplinary and methodological shifts. By engaging with the river not merely as a backdrop for human activity but as an active participant in the production of space, we might reimagine the relation between designer and the territory.



*A netbag:  
for collecting up methods  
and ideas to think-with*



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**3.**

**Inquiry**

3.1 Research Questions

<b>Q1</b>	<b>Q2</b>
How can urbanism contribute to restoring the agency of the Meuse river basin?	How can the theories, tools, or methods of the urban discipline be expanded to incorporate the language of the river?

3.2 Theoretical Framework

Explanation

In the introduction - under societal relevance - I already shortly mentioned the transition towards the posthuman turn. Through engagement with these writers, a reality emerges that is quite different from the one we assume to be true in our urban practice.

The writers included in the theoretical framework propose a fundamental reorientation in how we understand reality. It is no longer a stable, external world made up of isolated individuals, but a dynamic, entangled mesh of relations where beings emerge through interaction. Barad’s notion of intra-action (2007), Haraway’s description of sympoietic relations (2016), and Deleuze & Guattari’s concept of assemblages (1987) all challenge the nature-culture binary and foreground relationality as the ground of existence. Rethinking the world we inhabit through words like Gaia (Lovelock & Margulis, 1974) and the Critical Zone (Latour, 2015) emphasize that we share space with many more-than-human others.

All writers highlight the agency of these non-human entities, and make a political and ethical call to take response-ability (Haraway, 2016) and care for the

How to navigate

The reality described is entangled, messy, and cannot be understood from afar. The diagram aims to reflect this, by placing the concepts mentioned above into four webs of relations layered on top of one another.

In the darkest color in the background, we see a web that connects all concepts that describe this new reality as relational ontology. On top, and interconnected, is the invitation to engage with this reality through noticing, witnessing, and experiencing. Next, to translate and mediate what is found new representations are necessary, asking for experimental methods.

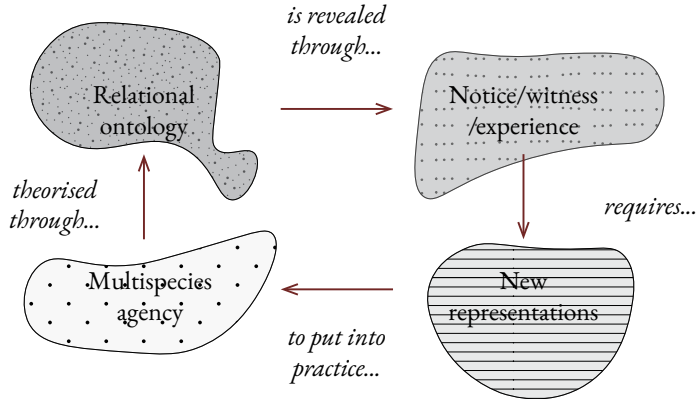
ecosystems we create together (Puig de la Bellacasa, 2017). With concepts like situated knowledge (Haraway, 2016), these thinkers highlight the inseparability of knowing and being in the world. They invite methodologies that are situated and embodied (Thrift, 2008).

This links to critical spatial practices that advocate engagement with places through field-work where walking is seen as spatial practice (de Certeau, 2011; Careri, 2016), linking to Tsing’s (2015) call for an arts of noticing. It gives a new role to scientists to give a voice to these myriad others that are often silent or silenced (Latour, 2015), and gives a creative task to urban designers specifically to translate and mediate these perspectives into alternative representations, through arts (Rendell, 2006) or critical cartography (Corner & MacLean, 1996; da Cunha, 2018).

The theoretical is thus made practical through specific urban methods that resonate with the literature, and together it can bring the reality described into being by contributing to restoring the agency of more-than-human others.

Together, this can contribute to the recognition of non-human agency theorised by literature, now put into practice.

The three concepts that appear in bold are emphasised because they are relevant in each of the four webs. The literature, the situated research methods, as well as the translation to political representation of the more-than-human indicate that knowing and being cannot be separated from one another, nor from their political and ethical dimension.



*Careri (2017)*  
*de Certeau*  
*(2011)*

*Corner &*  
*MacLean*  
*(1996)*

*da Cunha*  
*(2018)*

*Rendell*  
*(2006)*

*Thrift*  
*(2008)*

*Boelens et al. (2022)*  
*Stone (2010)*

*Barad (2007)*

*Deleuze & Guattari (1987)*

*Haraway (2016)*

*Latour (2015)*

*Lovelock & Margulis (1974)*

*Tsing (2015)*

*Puig de la Bellacasa (2017)*

Intra-action

Entanglement

**Ethico-onto-  
epistemology**

Fieldwork  
reveals hidden  
politics of the  
everyday

Reveal hidden  
logics of space,  
blurring nature  
and culture

Bodies, things,  
environments  
all make  
meaning

Assemblages

Rhizome

Non-  
linearity

Walking as  
spatial practice

Critiques  
dualisms in  
traditional  
cartography

Site writing

Multispecies  
entanglement

**Response-  
ability**

Symptosis

Situated  
knowledge

Multispecies justice

Critical Zone

Agency of  
non-humans

Parliament  
of things

Scientist as  
translator

Rights of Nature

Gaia

Critical spatial  
practice

Reality as  
interscalar

Arts of  
noticing

Movement

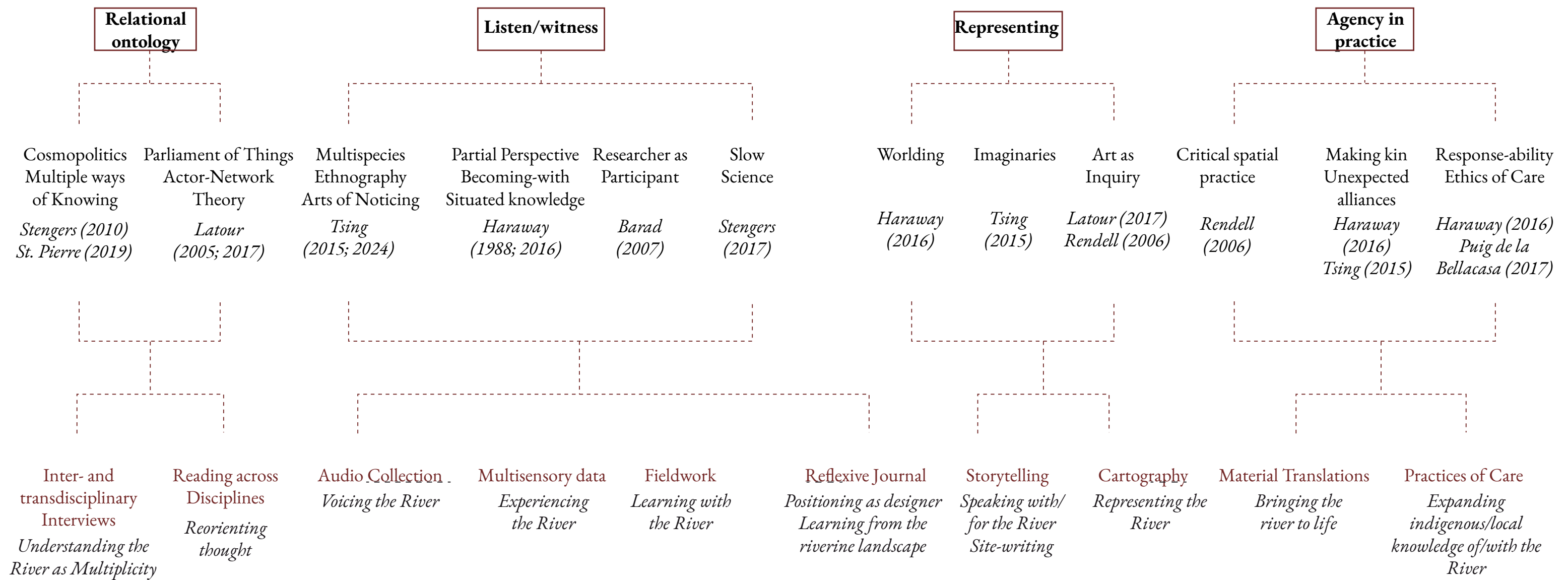
Care through  
touch

Non-human  
timescales

Matters of  
care

**Ethical &  
political**

Lines of Inquiry



Explanation

The research questions already hint to the relationship between method and outcomes. As Kuhn (1962) argued in *The Structure of Scientific Revolutions*, research methods are never neutral. In fact, they are embedded in scientific paradigms and therefore tend to (re)produce existing realities. From this perspective, existing methods in urban research are not just tools for observation and learning but processes that actively influence design outcomes.

In response to this, St. Pierre (2019) proposes post-qualitative inquiry: an approach that rejects

methodological rigor and instead proposes a reading across philosophy, social theory, and the history of science and social science to find concepts that can reorient thinking.

The methodological framework is therefore renamed as *Lines of Inquiry*. Rather than proposing existing urban methods for investigation, theory is taken as a starting point to find actions for inquiry. Some lines of inquiry presented here are already part of the urban toolbox, others might add an additional interdisciplinary layer.

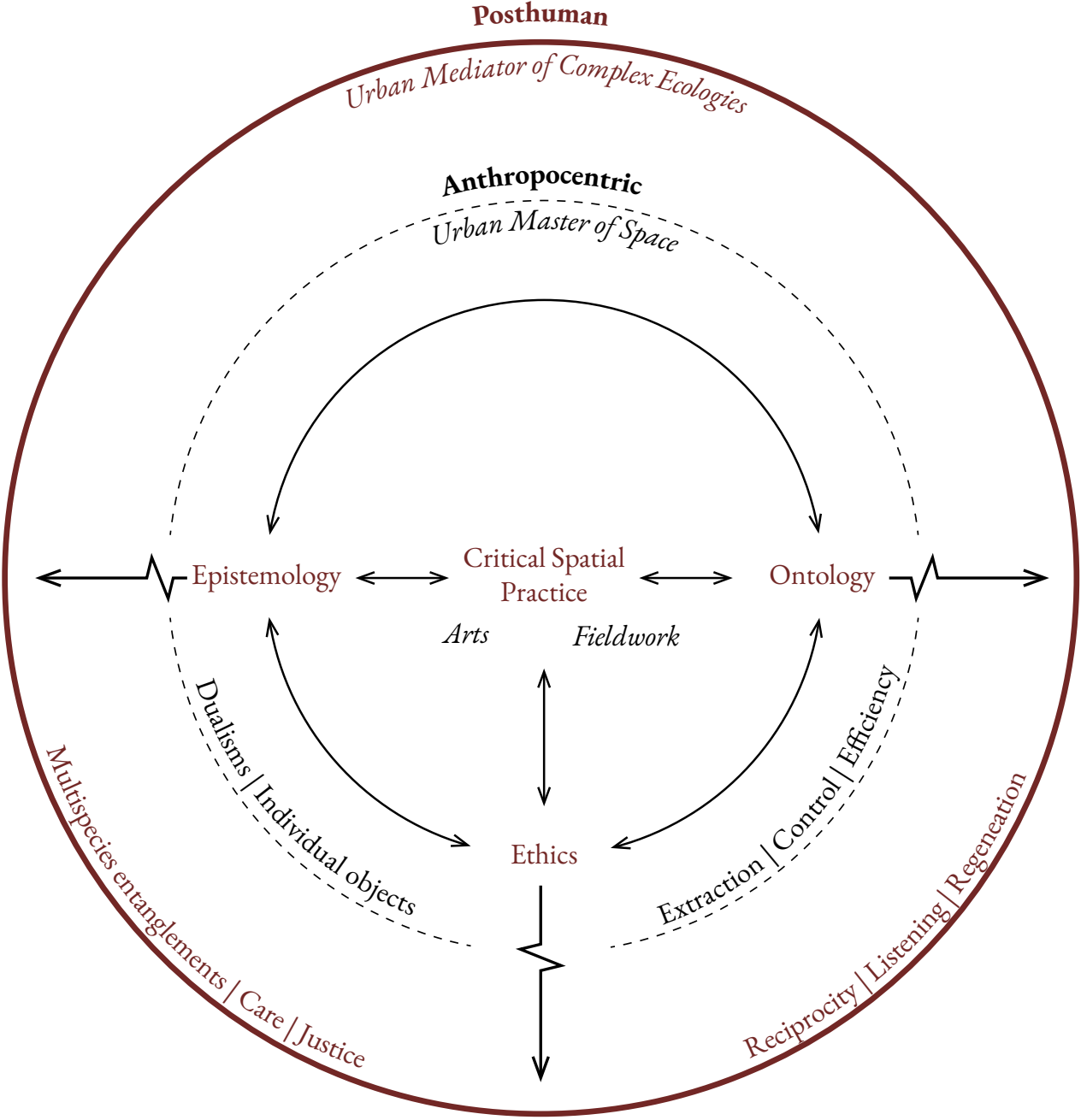


Conceptual Framework

Explanation

The emphasis on ethico-onto-epistemology that emerged from the theoretical framework now takes central stage. These three elements follow from a critical spatial practice that mixes the arts with fieldwork. The bi-directional arrows indicate that this entangled concept is produced through these methods, and produces them in return, which we saw in the entangled layered theoretical framework as well.

Together, they disrupt the Anthropocentric paradigm that describes a dual reality of individual entities, to investigate and produce a posthuman reality that is relational, with an embedded call to care for a more-than-human world. During this process, the urban designer is repositioned from a master of space to a mediator of complex ecologies.

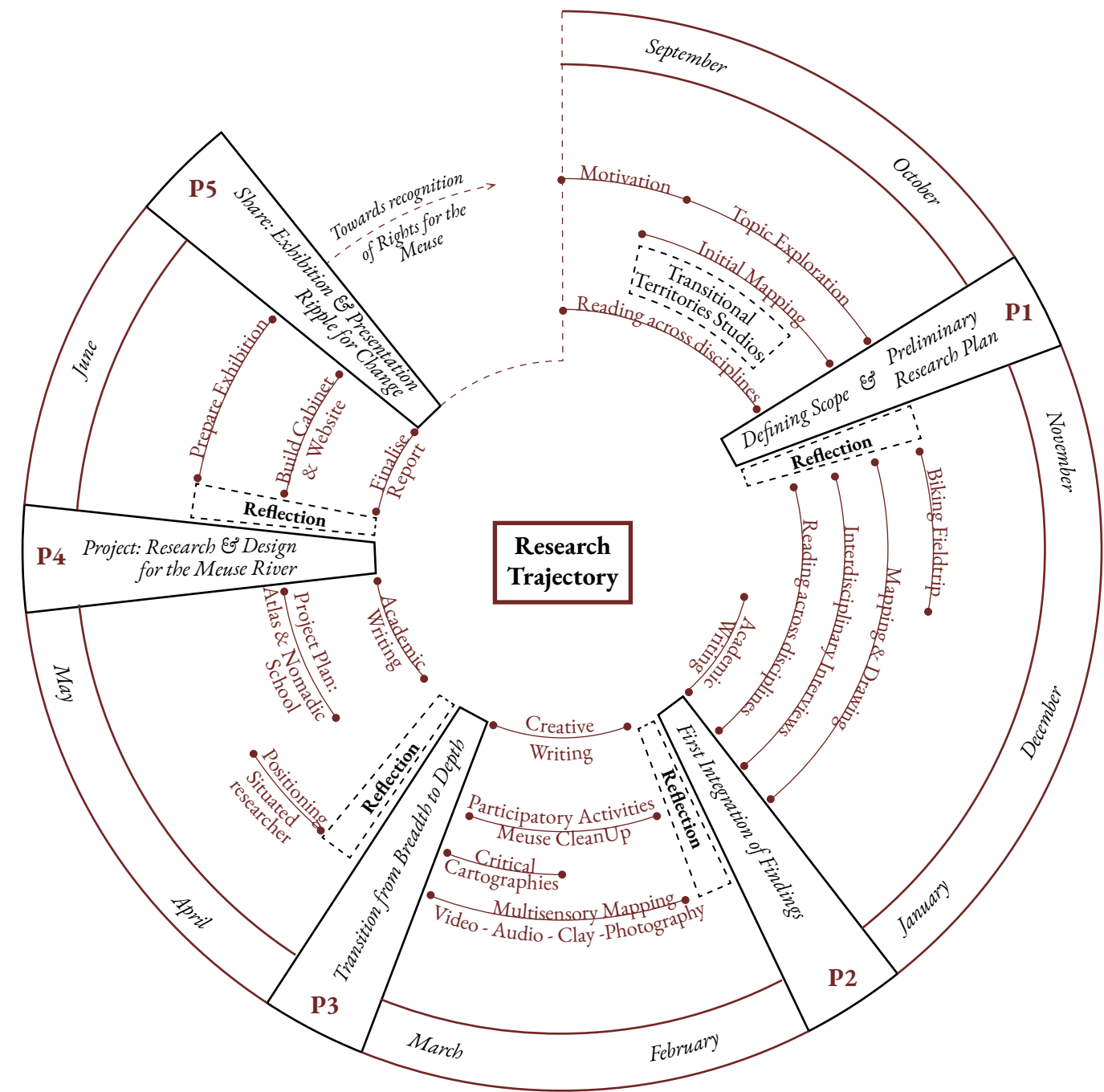


Trajectory

Explanation

This thesis project spans across 10 months, a full academic year. The year follows a 2-3 month rhythm, where 5 presentations (P's) mark the transition between different phases in the research project. The cyclicity of time, process, and project outcome is emphasised by the round shape.

While some research steps are confined between lines and dots, many are open-ended and continue(d) working on me and the project as time progressed. This overview gives a hint of what can be found in the pages to come.



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**4.**

**Learning-With  
Literature | The River**

4.1 Literature

A short review of the literature is important to understand the context within which this thesis sits. Several thinkers and their texts have profoundly transformed my thinking and thereby influenced the paths chosen along the way. Rather than serving an informative role prior to the project, the literature review is therefore located here, as fundamental part of the project itself. Traces of this overview will re-emerge in subsequent chapters, weaving together thinking and practice.

These traces are found at the beginning of each of the subsequent chapters. The essay intermezzo's explain the movements made within each chapter through a theoretical lense, bringing back some of the thinkers introduced in this literature review, as well as introducing others.

4.1.1 A new narrative

The power of stories

Stories are powerful actors. We are made up of them, and in fact, the universe of the story is psychologically necessary to us. Phillip Blom beautifully described this during the Book Club he led about Facing Gaia by Bruno Latour (P. Blom, personal communication, Oktober 26, 2024). Reality is chaotic, and stories can help us navigate. Even since childhood, we hear stories about good and wrong, how to behave, and we use them to understand and shape who we are. Over time, we construct narratives about us as individuals, and we do so collectively about who we are as a society, each guiding us in our behaviour. As such, stories do not only describe reality, but they actively produce it.

Some stories are very convincing. With regards to the context (Western Europe) and focus (climate disruption and the relationship between human and non-human

nature) of this thesis, the narratives of extraction and stewardship seem to be very persistent. Stories are acts of framing: they explain the past in a certain light and help determine present behaviour to move towards a (desired) future. Latour (2015) argues that climate change is not just an environmental problem; it fundamentally alters political, cultural, and philosophical frameworks. It demands a rethinking of humanity's place on Earth, and is thereby a fundamentally philosophical question. If we are to respond to the climate crisis, we need new stories through which other paths of action become visible and necessary.

Haraway (2016) offers a beautiful transition here, knitting together philosophy with the power of stories and language. She describes how stories actively create worlds, endowing them with agency to alter our realities.

*“It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties. It matters what words make worlds, what worlds make stories”*

- Haraway, 2016, p. 12

The new story

To act differently, we need new stories to guide our actions. I encountered a hopeful narrative amongst various writers that are part of the ‘ontological turn’ in contemporary theory and sit within posthuman, new materialist, and poststructuralist traditions. They propose a fundamental rethinking of what it means to

exist, relate, and act in the world. To do this, they offer new concepts and language that challenge modernistic, anthropocentric, and dualistic worldviews. Instead, they highlight interconnectedness, acknowledge agency beyond the human, and dissolve traditional dichotomies.

My first introduction to this body of knowledge was the book *Staying with the Trouble*, written by Donna Haraway (2016). In this book she tries to navigate the ‘trouble’ that we live in through experimental and linguistic methodologies. By introducing new words like sympoiesis, response-ability, becoming-with, string figures, and more, she weaves together a new description of the world we inhabit. Her language is poetic, which gives them the narrative power to immerse the reader into this new world, truly letting it come to life. Her writings sometimes remind me of a musical piece, where motifs are repeated and reappear in different contexts, complexifying their meaning.

One of these motifs is the Chthulucene, her alternative name for the Anthropocene or Capitalocene. Unlike the latter two, the Chthulucene is made up of “ongoing multispecies stories and practices of becoming-with” (Haraway, 2016, p.55). The Chthulu is the alternative for Anthropos, proposing a world that is not centred around the human but lacking a centre as it describes an entangled world. Referring to the Greek chthonios meaning “of, in, or under the earth and the seas” (p. 53) it aims to make both humans and other critters again with, and of, the earth. It evokes figures like Gaia and Pachamama to stress the interconnectedness and shared responsibility of earthly life. Name it the Chthulucene or else, but what is essential is its proposal for a necessary, alternative story that can act as a “netbag for collecting up what is crucial for ongoing, for staying with the trouble” (p. 55).

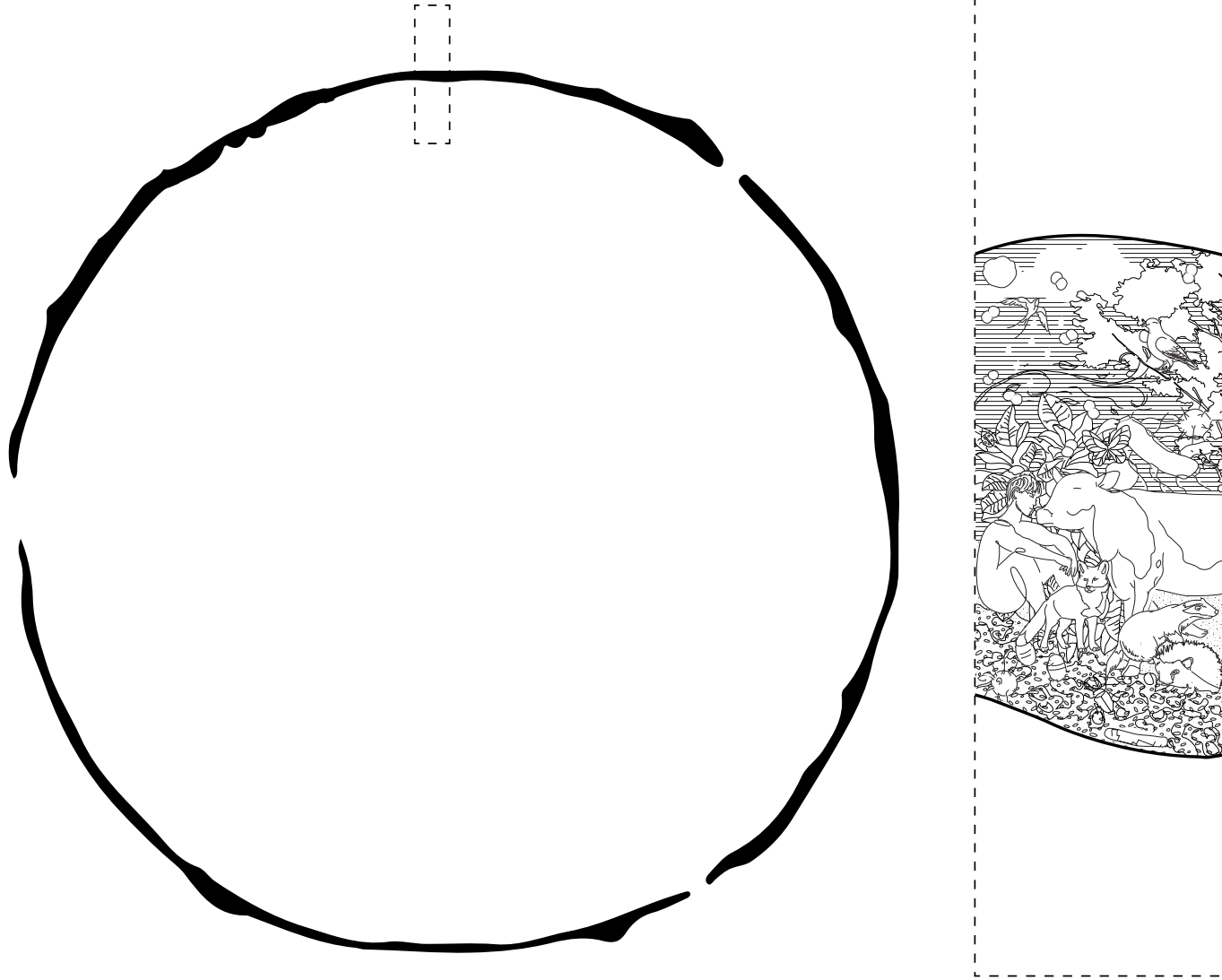
That the fitting shape for a story (or novel) might be that of a bag is what Ursula Le Guin wrote in her book *The carrier bag theory of fiction* (2019). The link to Le Guin requires us to zoom out a little, because when talking about stories it is not just the content but also the form that matters. I noticed that many of the books included in this review - specifically those of Haraway (2016) and Ana Tsing (2015) - write up stories that are open-ended and that keep working on the reader long after the book is finished. Their stories allow for continuation and ongoingness, as they are open-ended in multiple directions rather than linear progressions towards a predefined end point.

Le Guin (2019) helped me think through this as she reconceptualises the story as a container – a bag – that

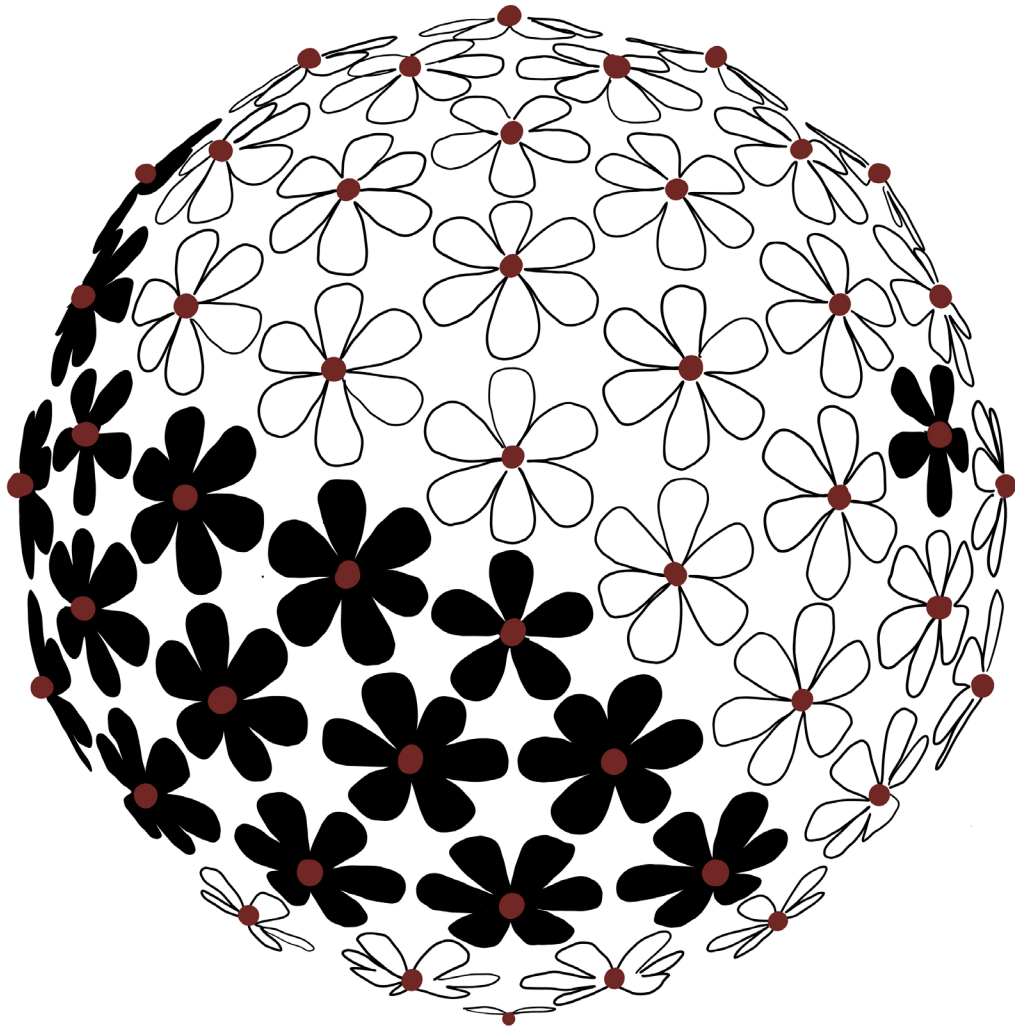
holds things together in particular relations to one another and to us. She traces the significance of the bag all the way back to the origin story of human culture, arguing that the carrier bag, not weapons – sticks, arrows or swords -, were the first cultural device (Le Guin, 2019; Fisher, 1980). “If it is a human thing to put something you want, because it’s useful, edible, or beautiful, into a bag, or a basket [...] then I am a human being after all” (p. 32-33). The problem, she states, is that we have all let ourselves become part of the killer story, and might get finished along with it. Hence her search for the right nature, subject and words of the other untold story: the life story (2019, p. 33). If stories are bags, they cannot be reduced to conflict, as they are neither fully conflict nor harmony, because the goal is not to find stasis but “continuing process” (p. 35). This resonates with Haraway’s interest in “stories (and theories) that are just big enough to gather up the complexities and keep the edges open and greedy for surprising new and old connections” (2016, p. 101).

The idea of continuing process links to the Gaia Hypothesis formulated by Lovelock and Margulis (1974). They describe a relational, dynamic ontology which reframes the earth as a self-regulating system that tries to stay in homeostasis to create conditions conducive to life (Lovelock, 2021). With Gaia, they show how living organisms regulate the planet’s chemistry in their own interest, together maintaining a dynamic steady state. At the time their theory was introduced, it received a lot of criticism, mainly because of its seeming conflict with Darwinian theory of evolution (the biosphere cannot evolve if we accept organisms as the unit of selection). Recently, however, their theory became widely accepted with the Amsterdam Declaration on Earth System Science in 2001 (IGBP, 2001).

Latour (2015) expands on the idea of Gaia by urging us to stop imagining ourselves as living “on top of” the Earth. Instead, we have to learn to think of ourselves as inhabitants of the critical zone: the thin and fragile layer of the planet where life is possible (Latour & Weibel, 2020). We share this critical zone with incredibly many actors, a.o. microbes, tectonic plates, rivers, algae, wind, animals and plants, that each transform this zone according to their own interests. Humans thus become just one actor among many in a dynamic parliament of things (Latour, 2015).



Adapted from *The Thickness of the Critical Zone* by Alexandra Arenes (2019) in Latour & Weibel (2020)



Conceptualisation of Daisy World - a model developed by Lovelock (1983) to prove the Gaia Hypothesis



## *Rethinking time and space*

This interconnected reality calls for a rethinking of time and space, which are no longer linear or static. The dominant perception of time, Chronos, imagines history as linear, progressive, and inevitably moving towards a more developed future. It consists of before and after, and divides past from future (Murriss & Taylor, 2022). The promise of this imagined future cannot arrive soon enough, as is reflected by the high speed associated with Western European cultures of production, extraction, and everyday life.

On the other end sits Aion, a childlike slowing down of time that allows for a full immersion in the present. (Murriss & Taylor, 2022). Tsing (2015) proposes the arts of noticing as a method to allow for aionic time, recommending that we “look around rather than ahead” (p. 22). This process might just help us notice the specificities of a dense, entangled present that would have gone unnoticed in the race towards an imagined future. Barad (2007) argues for a deconstruction of time, where she does not favour one perception over another as that would confirm the idea of progress that they reject. The linear perception of time should hold space for a multiplicity of other interpretations.

Similarly, space is rethought, as it is no longer just a physical but relational phenomenon. The co-constitutive nature of reality is highlighted through concepts like intra-action and assemblages. Intra-action, first introduced by Haraway (1992) has been developed further by Barad (2007). Its hyphenated spelling indicates a shift from an individual to a relational ontology. It invites us to think of ‘things’ or ‘objects’ not as separate entities, but as complex entangled phenomena.

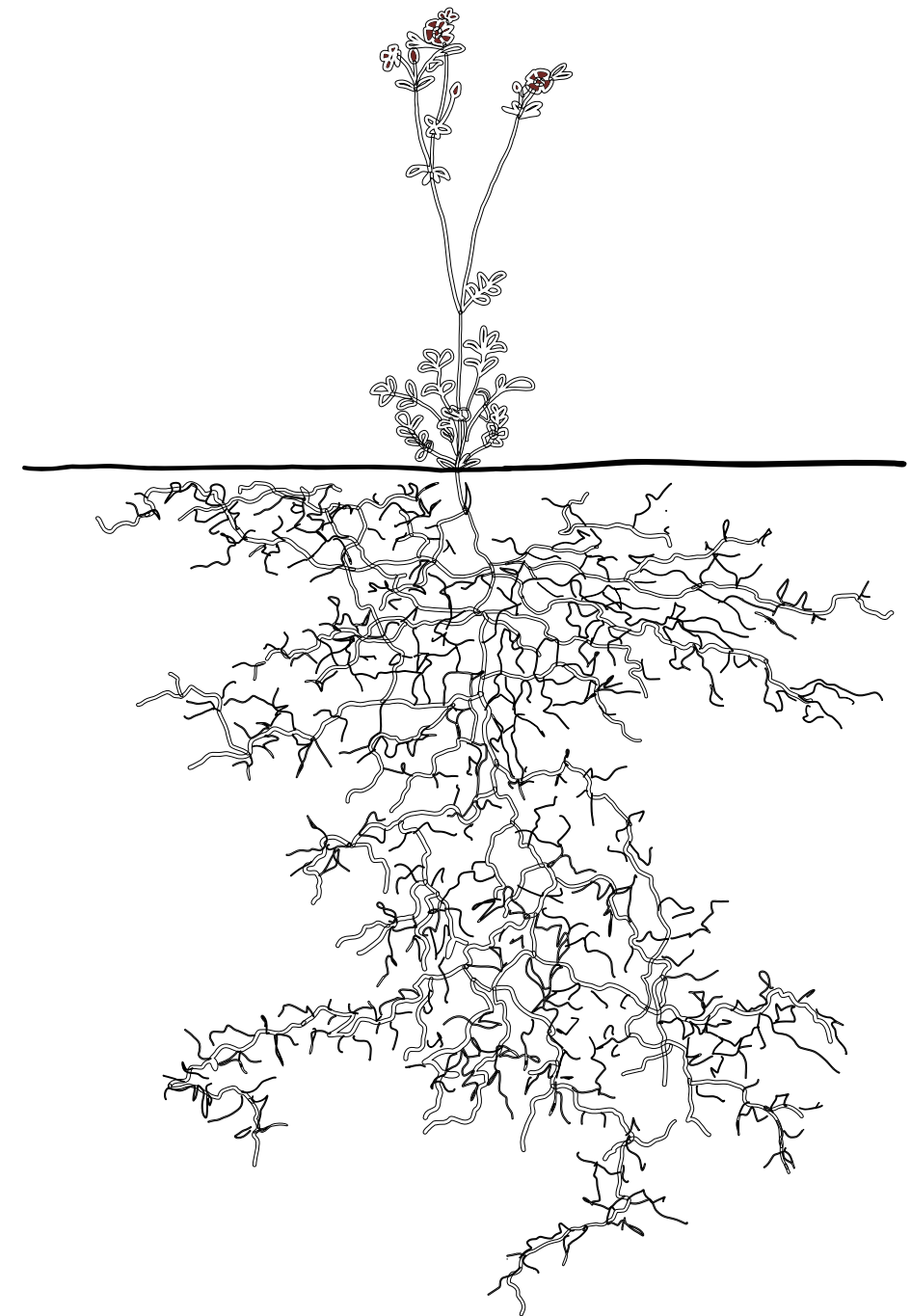
While similar to the word interaction, it has a radically different meaning. Intra-action describes existence as relational, in which entities do not precede their relations but emerge through them. This describes an ontological shift from the ‘individual’ existence, in which interaction (note the spelling difference) takes place between entities that exist individually before they enter into interaction with others (Barad, 2007). The concept of intra-action challenges Cartesian dualisms such as subject/object and nature/culture, highlighting the inseparability of being and becoming.

Assemblages are the places within which intra-actions unfold. Assemblage theory, explored by Deleuze and Guattari in *A Thousand Plateaus* (1987) holds a similar invitation to challenge an ontology of unity and separateness (Fullagar & Taylor, 2022). As is reflected by the name, it is concerned with how bodies, practices, languages, and histories are assembled, not within fixed structures but in constant flux. Reality becomes multiple, and entities are multiplicities (Mol, 2002). This shifts the focus away from the elements themselves towards that which lies between them: the in-between space that holds a set of inseparable relations (Deleuze & Guattari, 1987).

Tsing (2015; 2024) traces examples of such assemblages in practice through conducting anthropological research across various disrupted landscapes. In her book *The mushroom at the end of the world* (2015) she follows Matsutake mushrooms from the forests in Oregon onto the markets where they are traded, and further across the Pacific towards Japan where they are sold and passed on as gifts. Along this journey, different meanings, values, and roles are assigned to these mushrooms, depending on the space and context within which they emerge, showing their multiplicity.

As assemblages form and re-form across time and space, we, as participants in these entanglements, are ‘contaminated’ by these encounters. For Tsing (2015) this results in entangled landscapes of ‘contaminated diversity’ (p. 33). Through encounters in assemblages, we disturb and are disturbed (Sneegas, 2016). Despite the negative connotation that might accompany this word, this process does not need to be negative. Instead, such indeterminate encounters can generate new possibilities for co-existence and flourishing. This is a point echoed by Wall Kimmerer (2020) who reminds us that ecosystems can thrive with human interference.

The assemblage expands from the relational into something interscalar in *The Patchy Anthropocene* (Tsing, Deger, Saxena & Zhou, 2024). In this book, the writers show that the planetary crisis is not uniform but patchy, and that this global trend is translated into unique local conditions. These local patches are, however, connected by global corridors, making assemblages multi-scalar as the local and global mutually influence one another.



*How do our drawings influence the way in which we think about the world?*

*In primary school we learn to draw flowers and trees, separate from our houses and from one another, but are they ever isolated? Connected with roots to mycelium networks to soil microbes to chemicals and on and on it goes. What if we draw an open-ended world? Where we cut the network by our frame of interest without denying its continuation beyond.*

*Political and ethical dimension*

In a relational world, space becomes inherently political and ethical. Our actions have consequences, as they are connected to myriad others in complex assemblages. This is a call to care-full action, as we suddenly have the power to change existing constellations and configurations. This gives us a political and ethical responsibility as well as a creative task.

Response-ability, a term coined by Haraway (2016), extends beyond the similar term of responsibility to imply an embodied, situated capacity to respond within webs of entanglement. It is not about abstract moral obligation, but about the specific material capacity to respond to the world that we are a part of; to learn to listen, witness, interpret, and act within these relations. Response-ability insists that our ethical positioning is not neutral or external but always implicated in the world-making processes we participate in. This challenges the distant ‘gaze from nowhere’ central to modernist science, instead explaining knowledge as situated and partial (Haraway, 1988). This invites participation, attentiveness, and an openness to care for the relations studied.

This links to Barad’s concept of ethico-onto-epistemology (Barad, 2007), which is a concept used to describe how ethics, ontology, and epistemology cannot be separated from one another. As Haraway (1988) explains in her article on Situated Knowledges, knowledge-making is always situated and shaped by the relationships and specific situation in which it unfolds. Intra-action entails that we as researchers are always already implicated in the worlds we study. This relational embeddedness requires an ethical accountability that is not external or used as justification afterwards, but a fundamental part of the practice of knowing itself. This means researchers should pay close attention to the configurations they participate in, and take responsibility for the worlds they bring into

existence. Research is then not just an act of representing reality, but inherently a practice of intervening in it, which should be done with care.

In a world conceived through such situated entanglements and intra-actions, care becomes a necessary practice. Puig de la Bellacasa (2017) expands Latour’s notion of matters of concern into matters of care, emphasising the political potential of making neglected things matter. Care involves maintaining, continuing, and repairing the world such that we can live in it as well as possible, human and non-human alike. Care, especially for those without a voice, is always non-innocent as translation and interpretation runs the risk of appropriation the other’s experience. To do this as well as possible, Puig de la Bellacasa (2017) argues that we should break with linear, rapid timelines to align ourselves with the slower, cyclical rhythms of ecological systems. Even though the ecological crisis demands rapid action, the rhythms of ecologies are important for thinking in long-term continuities.

Thinking-with and being-with are inseparable. Both Haraway (2016) and Puig de la Bellacasa (2017) insist that the way in which we imagine spaces affects their material realities. Arts thus crosses over into science containing an activism for creating this new world. The open-ended stories written by Haraway (2016) and Tsing (2015; 2024) teach that research is not about producing complete, definitive knowledge but about tracing lines of entanglement to thicken the understanding of local patches and assemblages. Latour (2004) reconceptualises the research process as an act of translation and negotiation that makes the more-than-human relation partially knowable without pretending to fully capture it.



*Relational embeddedness of the researcher in practice  
Research is never isolated, but a situated practice with  
ethical responsibilities*

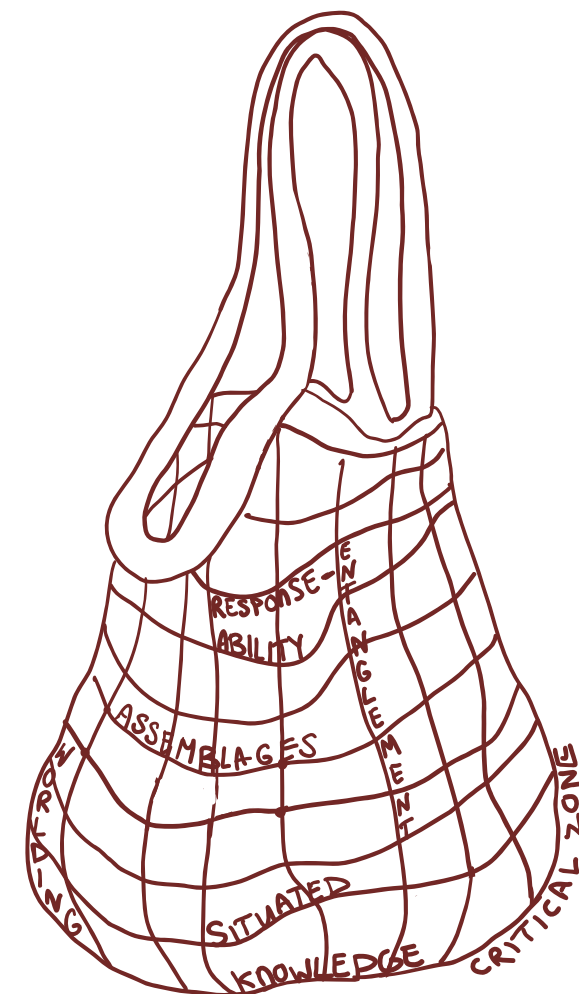
### *The new story*

With this capacity of the story to bring worlds into being, either through storytelling or other art forms, we cycle back to the beginning. The above just traces an outline of the richness of literature that puts the new story into words. I hope that it gives an insight to what is at stake in the stories we choose to tell, and how to tell them. The involvement of the researcher in contaminating the reality they investigate, as well as the responsibility that should be taken for the worlds they bring into being, give a hint to the relevance for the urban discipline in which this thesis sits.

The narrative(s) explored here call for a shift in perception: from separation to entanglement, from control to care, from linear progress to cyclical co-existence. These are not just conceptual philosophical ideas that remain in the abstract, but descriptions with actual practical, political, and spatial consequences.

These stories ask us to reimagine our place in the messy web of life and to attune our practices of knowing, being and caring accordingly. They invite us to stay with the trouble, rather than 'fix' or master the world; to become-with its uncertain ecologies, and to trace relations through assemblages thick with meaning, holding past and future together in a cyclical and slow pace.

With regards to the urban discipline, there is imaginative work still to be done to understand how we can imagine and create spaces through the lense described above that are better equipped to care and repair a world shared by many others. In the chapters that follow, I will explore what this could mean in the case of the Meuse, reconceptualising the river as dynamic assemblage shaped by more-than-huma relations. By placing design in conversation with the concepts and stories introduced here, I hope to better understand how a situated, sympoietic, and response-able practice might begin to take form.



*A netbag:  
for collecting up new  
concepts to think-with*



4.1.2 Glossary for the urban

As we have seen above, many writers think up new words and concepts to communicate what they want to say. They reinvent language in order to tell a different story.

Glossaries come in handy here, as they give an accessible overview of the concepts to think-with.

Since the literature is used to tell a different story in the context of urban design, critical reflections and questions are added that link the term to the discipline. As such, it can be used as starting point to think about these concepts together.

Assemblages

Dynamic constellations of heterogeneous elements (people, materials, environments, infrastructures, etc.) that come together temporarily in particular spatial and temporal configurations. They are always in flux, resisting fixed structures.

- How do the materials, actors, and ecologies of a site form a specific assemblage?

- What (unintended) assemblages might emerge from design interventions? (e.g. feral ecologies in response to infrastructure projects)

Critical Zone

The fragile, thin layer of the Earth that is conducive to life, where interdependencies are dense. The zone is a place of political and ecological negotiation.

- How can urban design contribute to the habitability of this zone for its many inhabitants, not just humans?

- How can urban designers negotiate the complex ecologies that emerge in this zone?

Entanglement

Becoming-with

A concept that describes how entities come into being through their relationships with others. Existence is a process of mutual becoming.

- How can urban design acknowledge and support co-evolving relationships between human and non-human inhabitants?

- What forms of urban becoming are being cultivated or excluded in a given project?

A condition of inseparability where entities do not pre-exist their relations but emerge through them.

- How can design reveal and respect the entangled nature of urban systems?

- What entanglements are made visible or invisible through specific spatial arrangements? How can we shift attention?

Entities

Contamination

How encounters, even disruptive ones, can create unexpected possibilities for life.

- How can urban design allow for spontaneous encounters rather than simplify urban spaces for predictability and control?

- What forms of productive contamination are already present in the urban site, how can they be given space?

Things, beings, or phenomena - human and more-than-human - that are not separate individuals but shaped by webs of relations through which they emerge.

- How do materials or objects used in design change in role or function if they are conceptualised as entities instead of passive objects?

- Are certain entities systematically excluded from design imaginaries?

Ethico-onto-epistemology

This concept merges ethics, being, and knowing, arguing that these are not separate domains but co-constituted.

- *How do urban design methods and tools influence what is considered right, or valuable?*
- *What implicit values are present in design processes and how might they be made explicit? How does this shift outcomes, actions, or knowledge practices?*

•

Gaia

Lovelock and Margulis’ conceptualisation of the Earth as a self-regulating, living system.

- *How can design acknowledge the Earth as a responsive, more-than-human system?*
- *What does it mean to co-design with Gaia, rather than attempt to control it?*

•

Intra-action

A term to describe that entities do not precede their relations. In this, it differs from interaction, which assumes pre-existing individuals that enter into interaction after

- *Can design foreground intra-actions rather than isolate functions or uses?*
- *How does it relate to urban concepts like the palimpsest?*

•

More-than-human nature

A way to acknowledge that humans and nature fall within the same category, challenging dualistic interpretations of a nature – culture divide.

- *How can urban environments foster connections with more-than-human others?*
- *What design processes attend to multispecies flourishing?*

•

Patchiness

The uneven, fragmented nature of global processes and their unique manifestations in local environments.

- *How do global trends manifest in specific urban patches? How do the global and the local interact?*

•

Response-ability

A term for an embodied, situated ability to respond to others in a web of entanglements.

- *How can urban design build capacity to respond to complex, place-specific needs?*
- *What forms of attentiveness are needed to practice response-ability? How do we decide what to respond to?*

•

Staying with the trouble

A call to stick with the messy, muddy, and troubled reality of the present world. The question is not just how to survive, but how to stay with this trouble: how to nurture forms of life and coexistence within damaged landscapes.

- *What does it mean to ‘stay with’ environmental or social trouble spatially?*
- *What is the role of fieldwork and ethnography in discovering life amidst the ruins?*

•

Situated knowledge

Knowledge that is always partial, embodied, and shaped by context and position. This contrasts with the distant gaze from nowhere often assumed by modern science.

- *Whose knowledge counts in the design process?*
- *How can we become more aware and explicit of our situatedness and partial perspectives?*

•

String figures

A metaphor to find connections between stories, knowledge, or else, in creative and non-linear ways.

- *How can design processes weave stories and entities together rather than giving the illusion of a coherent, controllable, and predictable whole?*
- *Can historical, ecological, infrastructural specificities of a place be seen as strings that need careful holding? What do imaginations like this evoke?*

•

Sympoiesis

This means ‘making-with’. It is a simple word that is central to our reality as nothing makes itself, nothing is really ‘autopoietic’.

- *How can design foster sympoietic processes that include many co-creators?*
- *What spatial forms allow for ongoing, collaborative world-making?*
- *How does acknowledging this give rise to a more humble stance?*

•

Worlding

The process of making a world in myriad ways. It holds that worlds are not pre-given but actively created.

- *What world(s) are brought into being by design interventions?*
- *How do images, regulations, and narratives participate in worlding?*

~ • ~

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4.2 The River

Building upon chapter 3 and the literature review, this chapter holds the fieldtrip as essential and fundamental means of exploration and learning with the river. In line with the call of postqualitative inquiry to read across disciplines to find actions for research, this extensive fieldtrip became not just a possible, but a necessary practice.

As soon as the research process allowed, I embarked on a 17-day journey by bike, in November 2024. I used ethnographic methods as I followed the course of the river from source to mouth. It allowed me to bring together theory and practice, mind and body, and it introduced an interdisciplinary lense as I encountered many others with diverging perspectives along the way.

Essay 1

•

Fieldwork  
On Situated and Embodied Learning

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as the essay is stapled on top of the page.

## Journey

To get to know the river, it was necessary for me to go out and meet her. In line with the motivation behind this thesis – building a connection with the land we live on/of/with - I first need to establish such a connection myself. To do this, it is important to become sensitive to the specificities of this patch of earth beneath my feet; to get acquainted with what it means to belong to this place and not another.

Desk research is insufficient to build this connection. First, because it cannot reveal the complexity and depth of lived realities. Second, because it is inherent in the method (note the name) that the researcher is positioned as outsider, looking at the field from someplace else (i.e. a desk).

In line with ideas of situatedness and slow science, I decided to bike along the river, travelling from the source to mouth covering a distance of approximately 1100km. This decision follows from the literature and the precedents in River Rights declarations, in which rivers are positioned as living entities that should be considered as an indivisible whole rather than separate limbs (e.g. in Te Awa Tupua Act, New Zealand Parliamentary Council Office, 2017), and should be investigated by venturing out to allow for a physical

encounter (Goethe, 1808/1995)

Apart from the symbolism in following the river from beginning to end, following the river in this direction also includes the poetic gesture of ‘travelling home’, literally and figuratively.

*“we should find ways to decrease the distance between [the world we live in and the world we live from], so as to begin our landing on Earth - without crashing.”*

- Latour & Weibel, 2020, p.110

•

### *Situated learning*

The act of biking was a response to the dominant scientific ‘view from nowhere’; a method to acknowledge that I as researcher have a body that is always situated somewhere, and that the place *from which* a view comes, influences where it can and will *go towards*. This position is beautifully laid out by Haraway in her article on situated knowledges (1988). Through the act of biking as field research, words become redundant as this position does not need to be argued for but is *experienced*.

I was constantly confronted with the mediating role of my body: my presence enables (unexpected) encounters with other bodies, the strength of my body determines how far I can travel, the reach of my sight how much I can see, my past, present and future awareness and sensitivities what I notice, my openness or closedness whom and how many others I encounter.

The meaning derived from experience and the qualitative data that I collect becomes contingent, as it is woven together with my body that mediates what I encounter and pay attention to. Fieldwork thus enables a confrontation with my own situatedness and underscores the unattainable epistemological standards of the ‘bodiless observant mind’.

•

### *Political and ethical dimension*

Since knowledge is situated, it always carries political and ethical dimensions. It stems from particular political and historical positions, and is socially constructed (Haraway, 1988; Latour, 1987). A more ‘objective’ or honest science then comes from explicitly acknowledging one’s partial perspective rather than trying to deny there is one. I gradually came to reflect upon the political and ethical dimensions of my

research as the fieldwork progressed. Over the course of three weeks, spending 8 hours with the river every day, combined with learning about the stories of many human and non-human inhabitants of the riverbanks inevitably make one care about the water and the life around it. Maria Puig de la Bellacasa (2017) writes about this, stating that care is invoked by “embodied, embedded relations in closeness with concrete conditions” (p. 95). The immersive characteristic of biking – being outside, exposed to weather, sounds, smells – over the course of many consecutive days (16) allowed me to cultivate an affective connection with the river, as I saw and experienced a change in form, ecologies, and rhythms over time, breathing life into an otherwise passive blue line across the landscape.

The river as being, as living entity, emerged as I learned more about her. Besides embodied learning, this includes learning through scientific data as well. By observations and conversations about the hydrology, biology, and climatology of the river, complex characteristics and dynamics are exposed that position the river as living ecosystem. Latour (2015) assigns a political role to environmental scientists because their instruments and equipment allow them to give a voice to the silent and/or silenced landscapes under investigation and speak on their behalf. I noticed indeed



that the voice of the river can be found in many, and varied places. This reveals the river as multiplicity and shows that representation can take on multiple forms.

In their role of representing more-than-human nature, scientists can no longer be separated from politics, which means they should be explicit about “where [they] are situated”, “whom [they] represent and for whom [they are] fighting” (Latour, 2015, p. 32). Latour states that, through their science, they assemble a different political body and an alternative coherent cosmos. This highlights both an ability and a necessity for a response. Haraway (2016) brings these two words together, in stating the ‘response-ability’ we have and should cultivate in deciding what is needed to maintain, continue, and repair the world in such a way that we can all live in it as well as possible (Puig de la Bellacasa, 2017).

These writers put into words what fieldwork let me experience: having witnessed, listened, and opened up to transformative encounters adds political and ethical layers, calling for care and commitment. What emerges is a dataset that no longer holds detached information but a situated reality. Such knowledge cannot remain passive but is a call to action and draws me into a continuous search for my ability to

respond to what I have learned.

•

### *A call to action*

In the process of travelling along a linear line on the map, I ended up following myriads of different stories, each circling from the river through the territory and back. As I learned with the river landscape, the circularity of the Earth got new and additional meaning.

As Latour (2015), describes “to know and not to act, is not to truly know” (p. 140). If we would truly know that the world is round, we would not continue our extractive and exploitative modes of production and consumption as our linear logic would already have bowed down to land back on the ground. Truly knowing that the world is a sphere means that the consequences of our actions circle back to us; only when we see their negative consequences, we understand the degree to which we are responsible for them (Latour, 2015; Sloterdijk, 2013).

The cyclical shape of the Earth becomes more plausible as we find more and more loops through which the earth can be described. The field trip observations, combined with interviews and desk research unveiled a great number of such loops, showing

entanglements between human and more-than-human (infra)structures. It made me especially aware of the proximity of the negative consequences of our actions, as I encountered them in the landscape through which I travelled and inside the bodies I met; as well as my own. *Experiencing* this, rather than just passively *knowing* about it is what adds urgency to this knowledge, necessitating action.

*“... we have to slip into, envelop ourselves within, a large number of loops, so that, gradually, step by step, knowledge of the place in which we live and of the requirements of our atmospheric condition can gain greater pertinence and be experienced as urgent. The slow operation that consists in being enveloped in sensor circuits in the form of loops: this is what is meant by ‘being of this Earth.’”*

- Latour, 2015, p. 202

To me, the language of this paragraph is very tactile. To ‘envelop oneself’ as a call to direct engagement, to touch. Puig de la Bellacasa (2017) describes the importance of touch in care, as touch is always reciprocal. Fieldwork is a way to touch the landscape and allow yourself to be touched in return,

as change is inevitable if you engage through wind and weather. Touching means proximity and forces us to ‘land on Earth’ (Latour & Weibel, 2020) and revalue the uniqueness of our local conditions (Tsing et al., 2024). This link to the local is important, because global trends have unique expressions in local patches (Tsing et al., 2024). Walking through the loops described by Latour (2015) should thus be done again and again, in different locations, and by each and every one of us to cultivate sensitivity, responsibility, and care for the fragile spaces we inhabit.

I noticed that through the fieldwork I indeed developed a sensitivity to the landscape. The slow science (Stengers, 2017) of travelling by bike allowed me to listen, to witness, to interpret. I learned through different encounters, as well as through spending time in silence with the river itself. It revealed environmental injustices and places of displacement, (re)locating myself and the river into the ruins of capitalism and environmental disaster rather than viewing them from afar thinking that the consequences are felt elsewhere and elsewhere.

At the same time, the journey also revealed possibilities for life and paths of return. Taking the time to notice (Tsing, 2016) might indeed just help us find life in between the economic

and ecological trouble we have created. Learning with the river, encountering both the riches that exists as well as the beauty that was lost emphasize the importance of strengthening what is already there, repairing broken flows, reclaim slow and non/human time, and to collaborate with the more-than-human. Keeping this in mind, the following chapters explore what an urban project for the Meuse can be.

~ • ~

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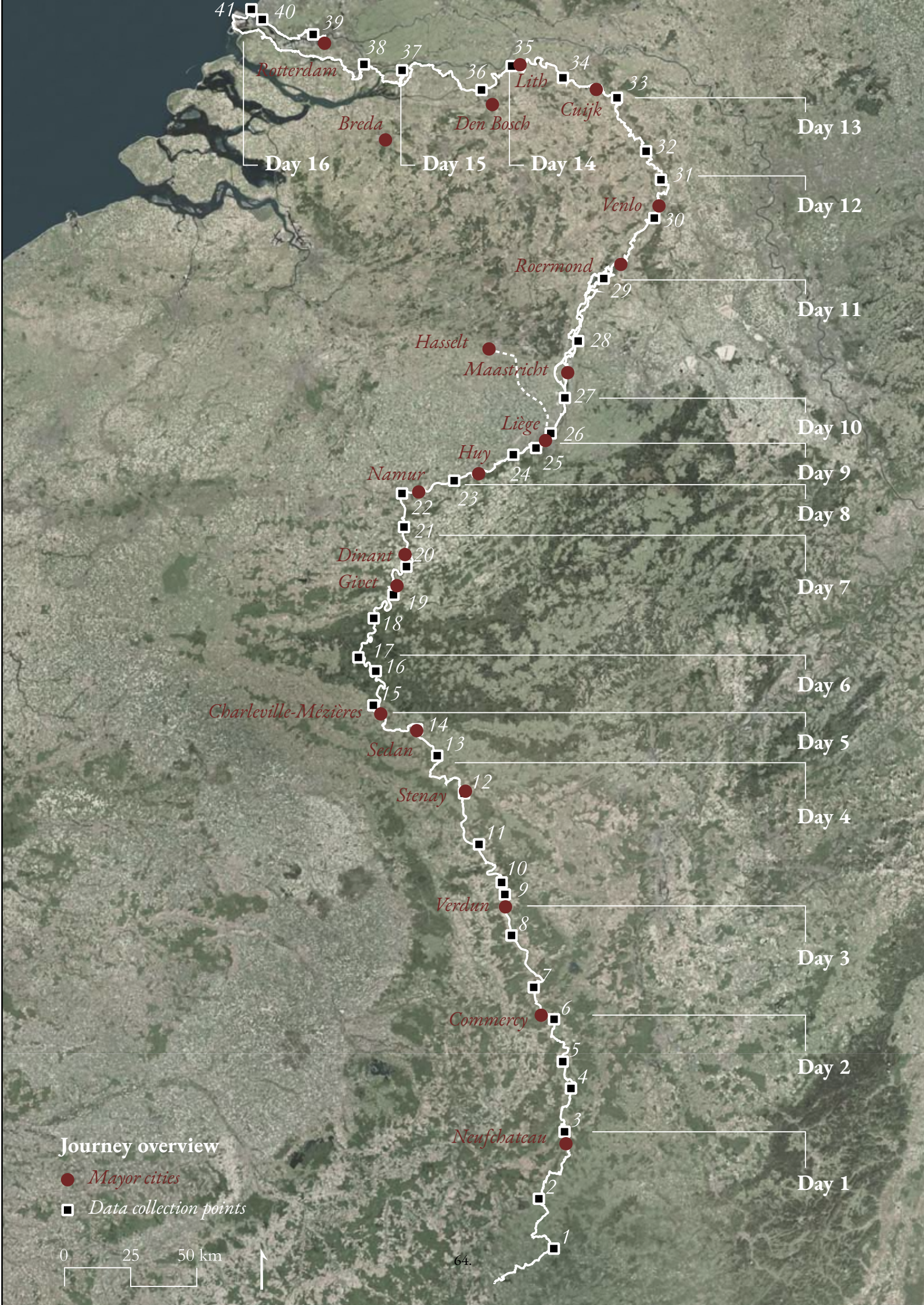
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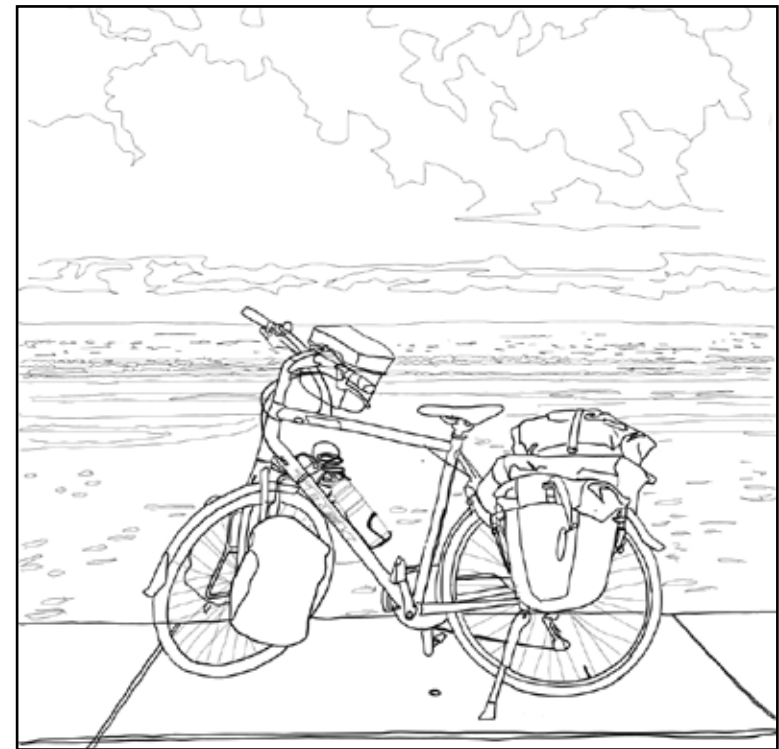
4.2.1 Overview

Days:	16
Kilometres travelled:	1.050
Hours of biking:	72
Hours of sleep:	128
Hours of journaling:	20
Data collection points:	41
Interviews:	14









4.2.2 Preparations

To both structure and put limits to the observations done during the biking trip, I drew up some guidelines beforehand:

1. Every 25km stop and note:

- Location
- Weather
- Sensation
- Sounds
- River body type
- Reflection
- If relevant note: assemblages<sup>1</sup> or events<sup>2</sup>

2. Take photos and make audio recordings.

Situatedness

I set up these nodes of observation to reflect on the river’s ecology, rhythms, and relationships. These “pauses” are fragments of the river’s story, as encountered by my specific vantage point as visitor/traveller/researcher. This fragmented nature of the observations reflect my partial perspective as I cannot capture the river in its entirety.

Questions to keep in mind

- How does each node contrast with the one before?
- How does my body interact with the landscape?
- How does each stop connect to the river’s larger identity?
- What cultural narratives do I come across?
- What historical traces do I encounter?

Multiplicity

To better understand the river as multiplicity, various companies, organisations and individuals were contacted for interviews beforehand, while others happened spontaneously along the way.

1 Assemblages of human and non-human actors (Tsing, 2019). Note examples of cooperation (e.g. plants stabilising river banks) or competition (invasive species outcompeting local species).  
2 Key events as described by Actor Network Theory (Latour, 2005). Note where the river is visibly altered or enacted differently (e.g. blocked by a dam or changing ecology)



Notebook for Field Observations



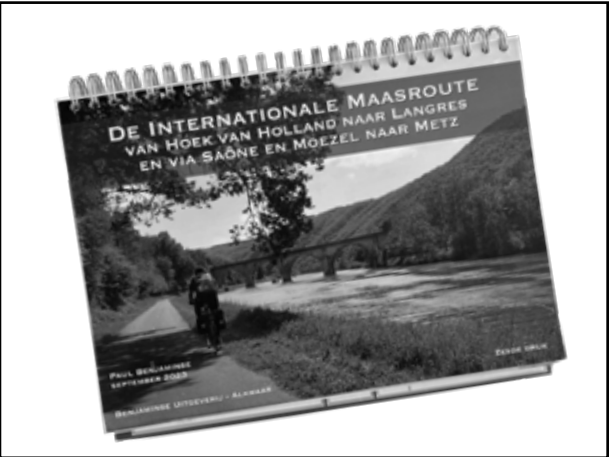
Maps & Sticky Notes



Camera



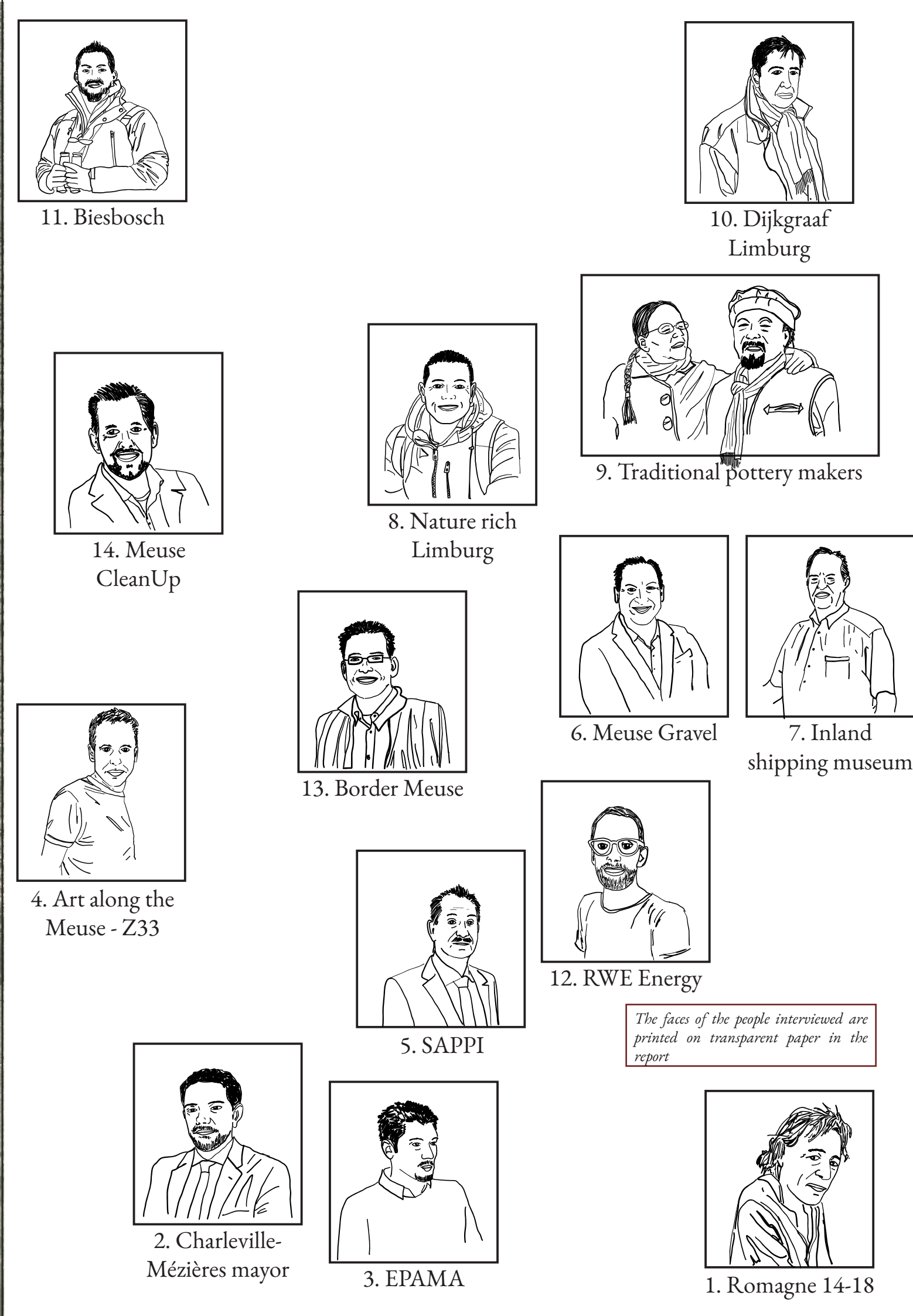
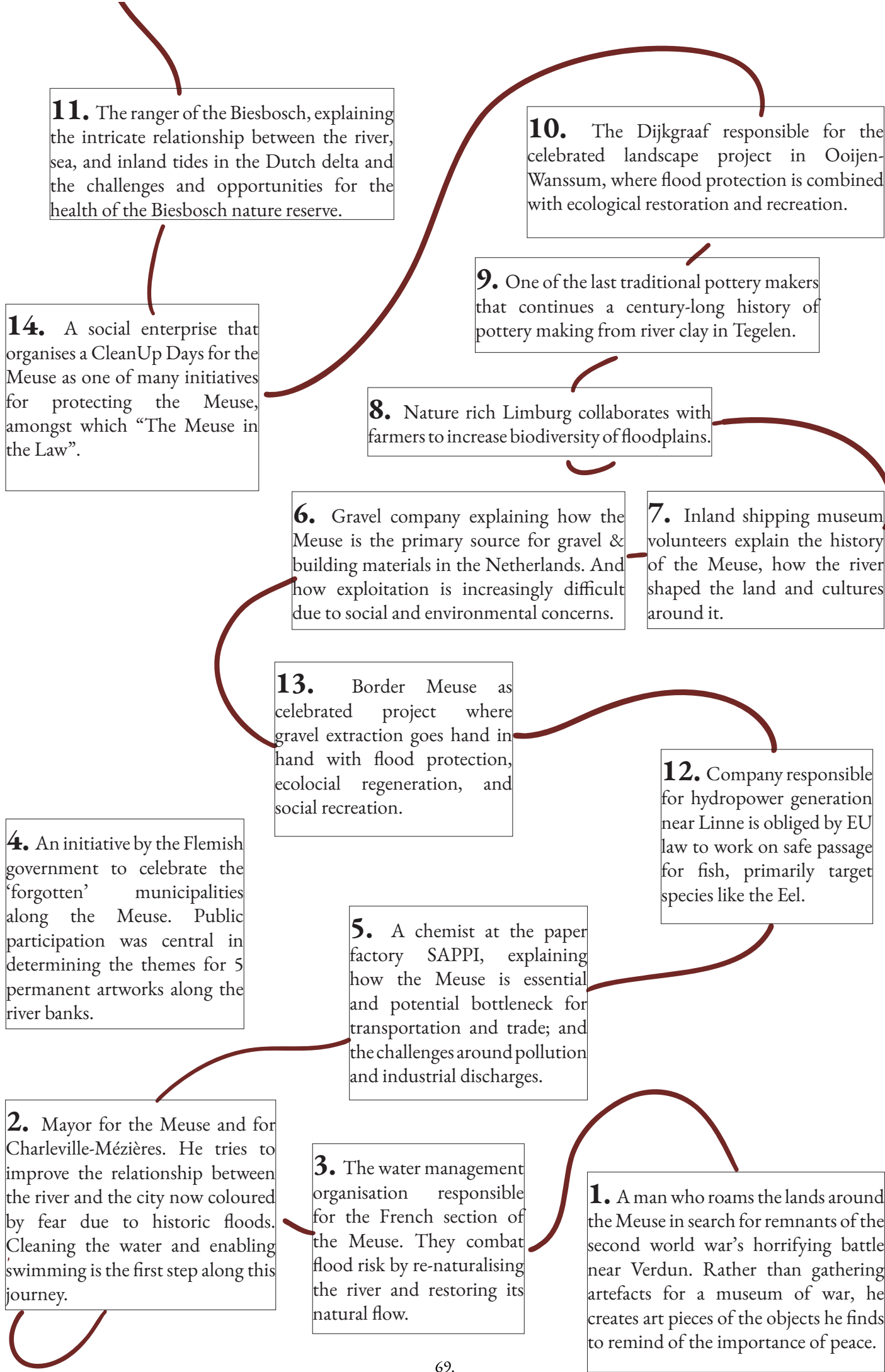
Audio Recorder



Bike Route Planner

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The faces of the people interviewed are printed on transparent paper in the report

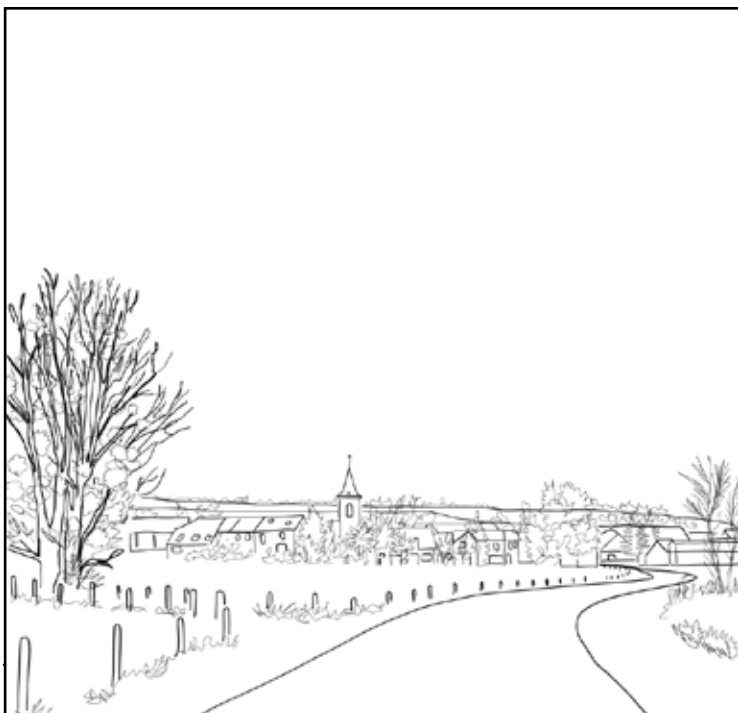
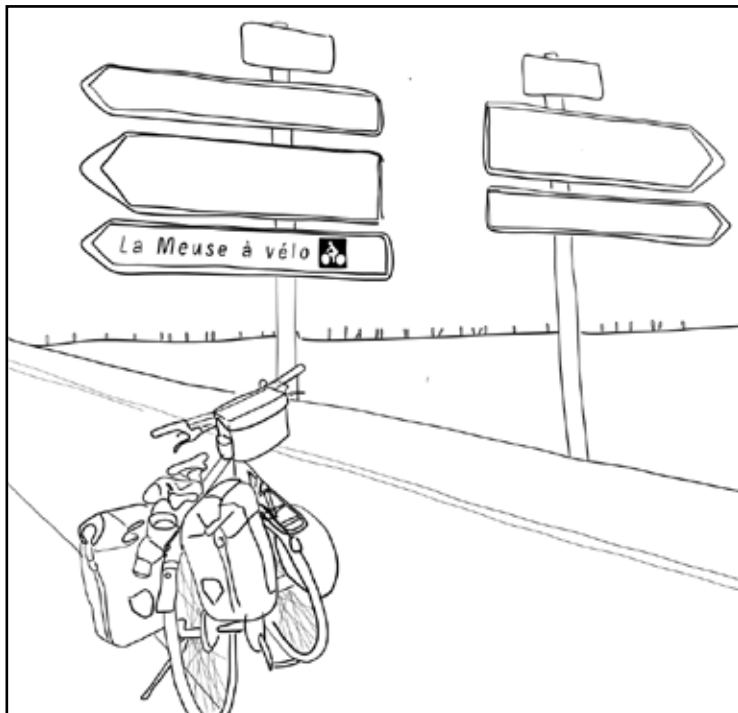
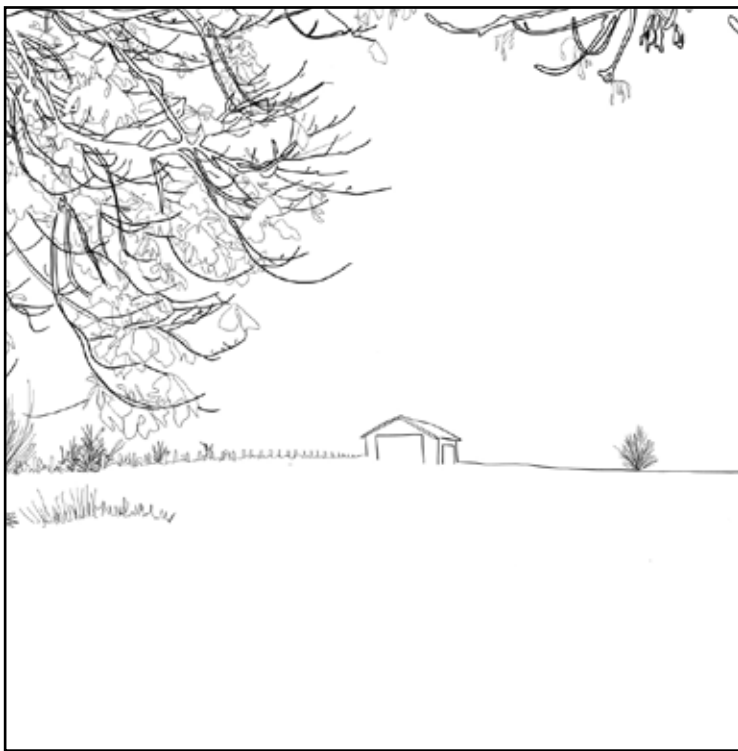
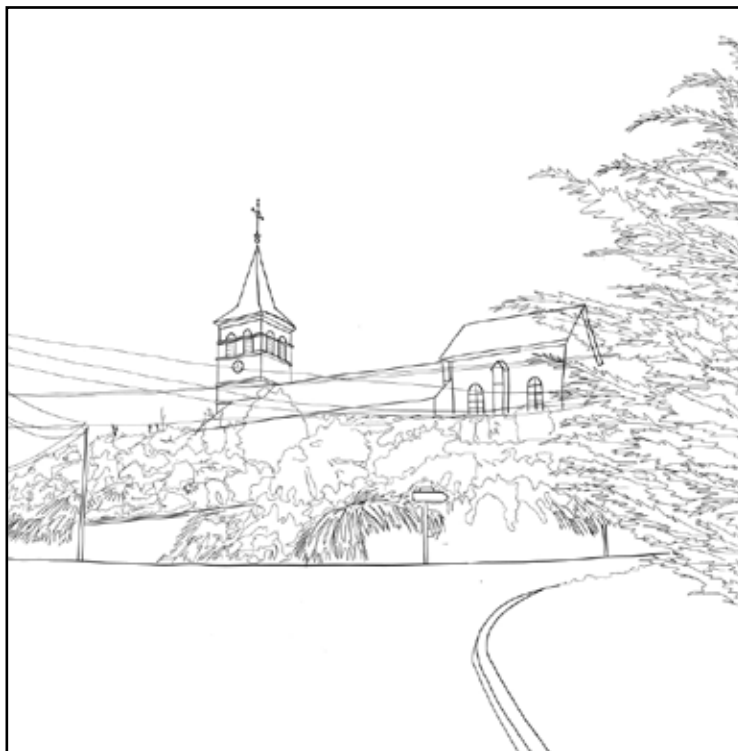
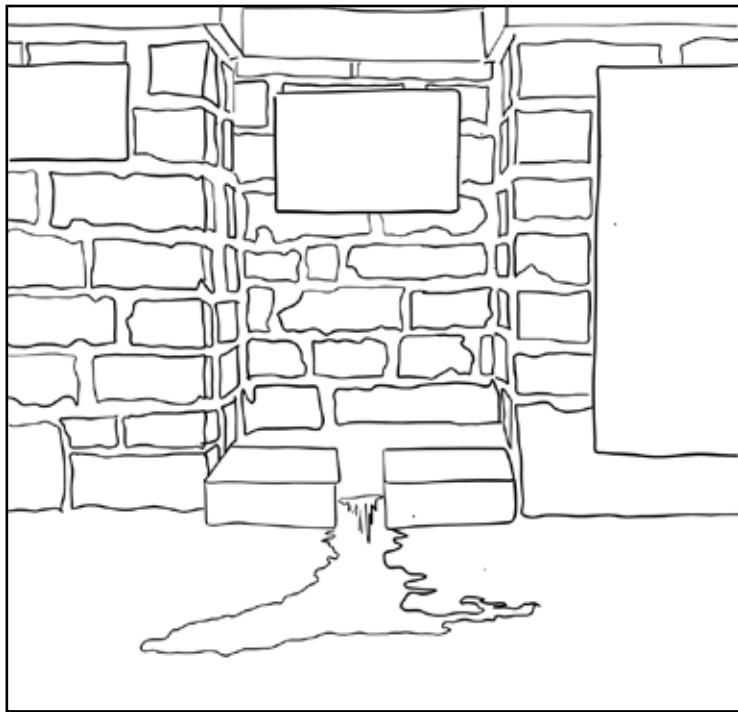


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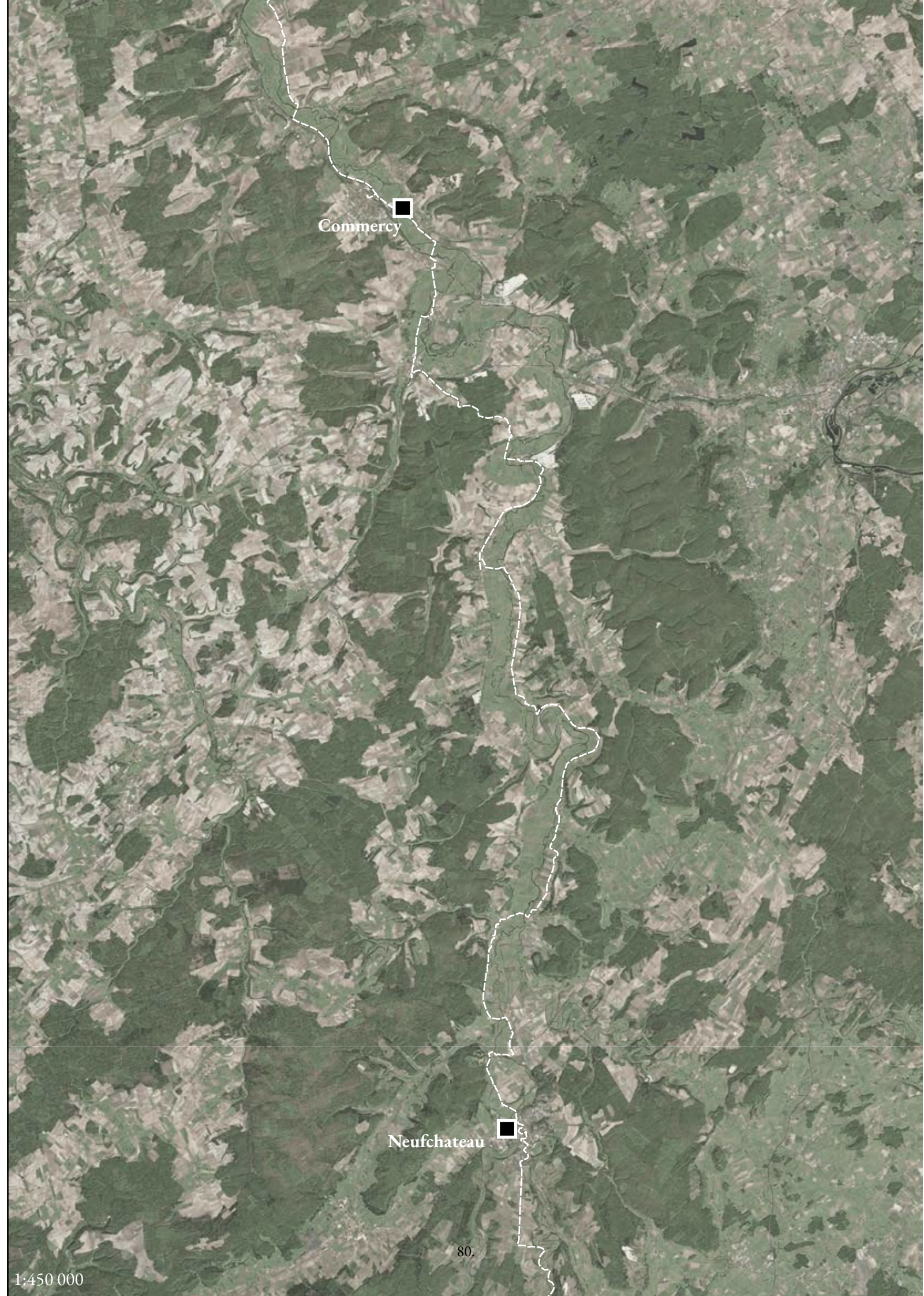
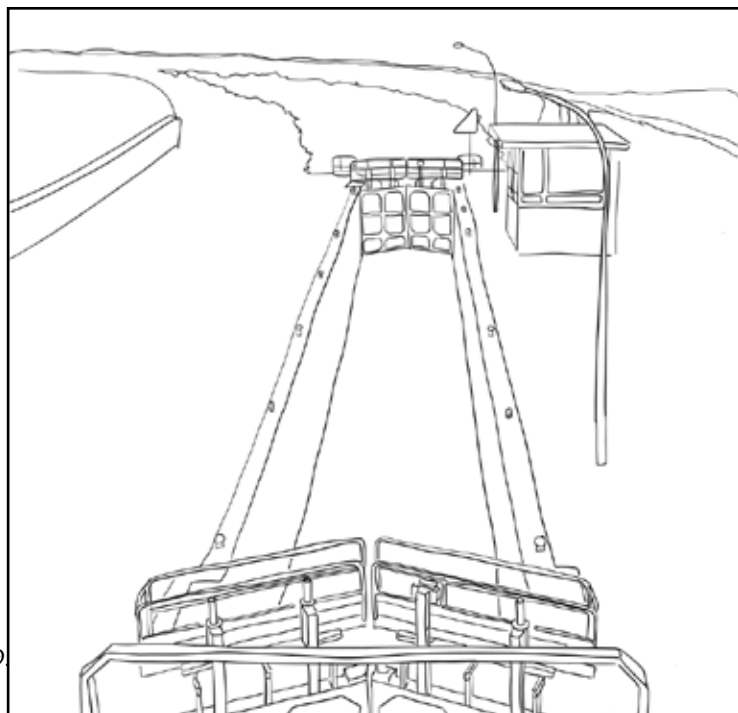
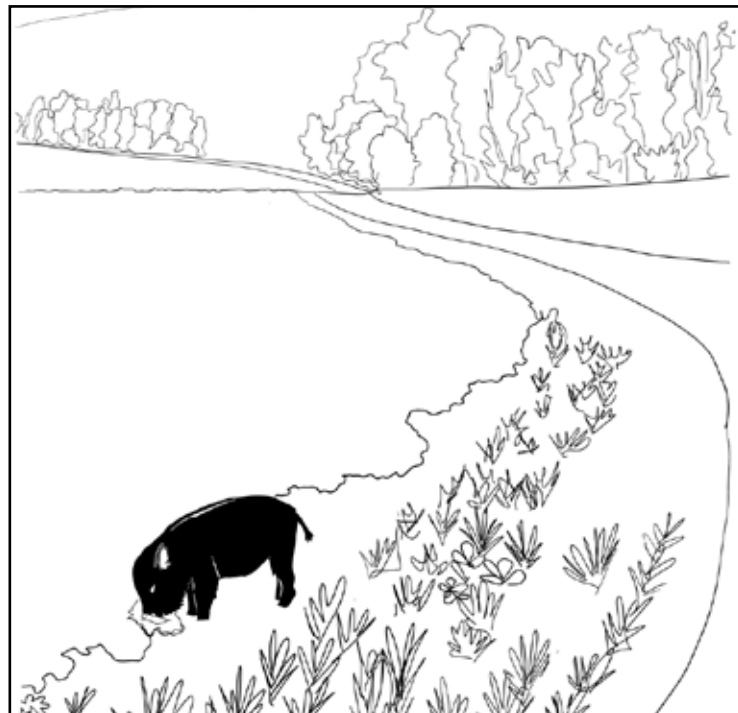
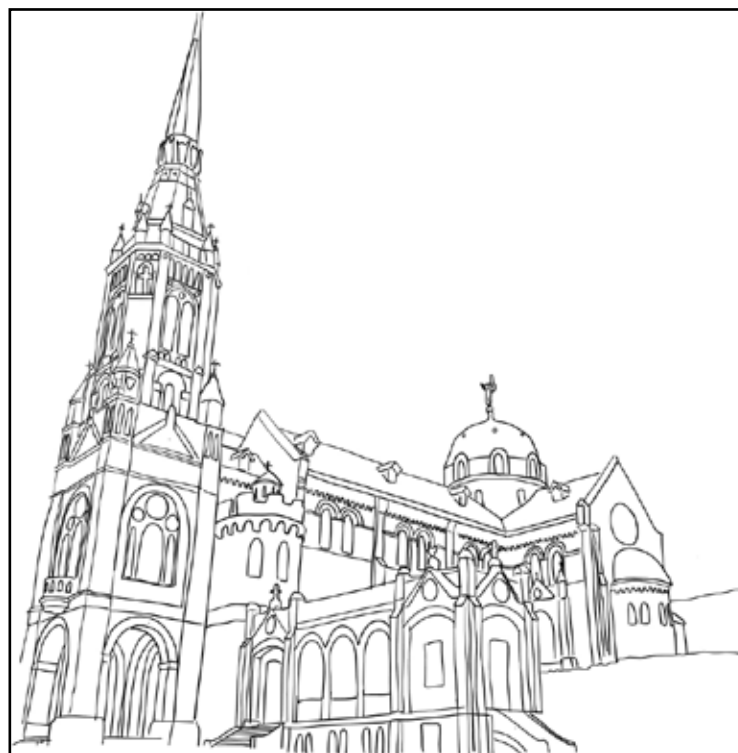
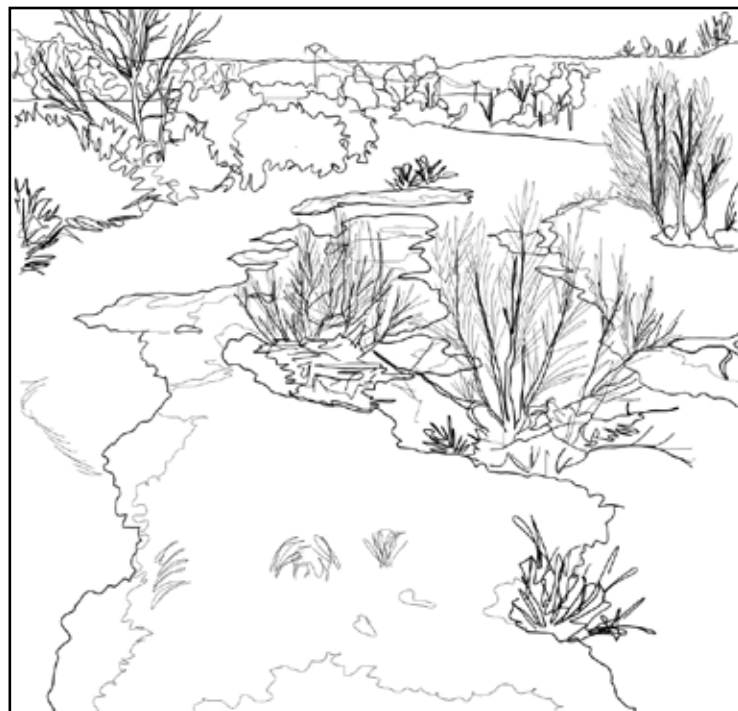






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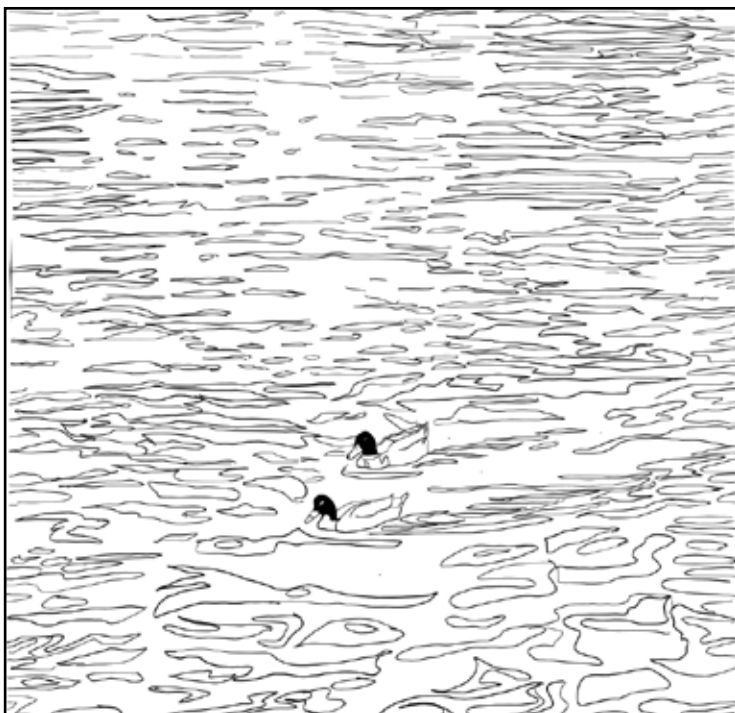
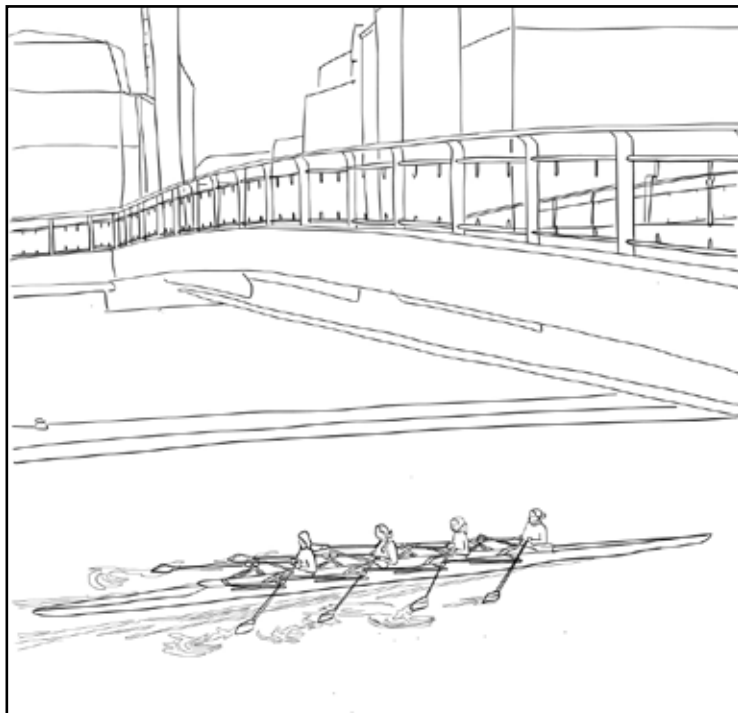
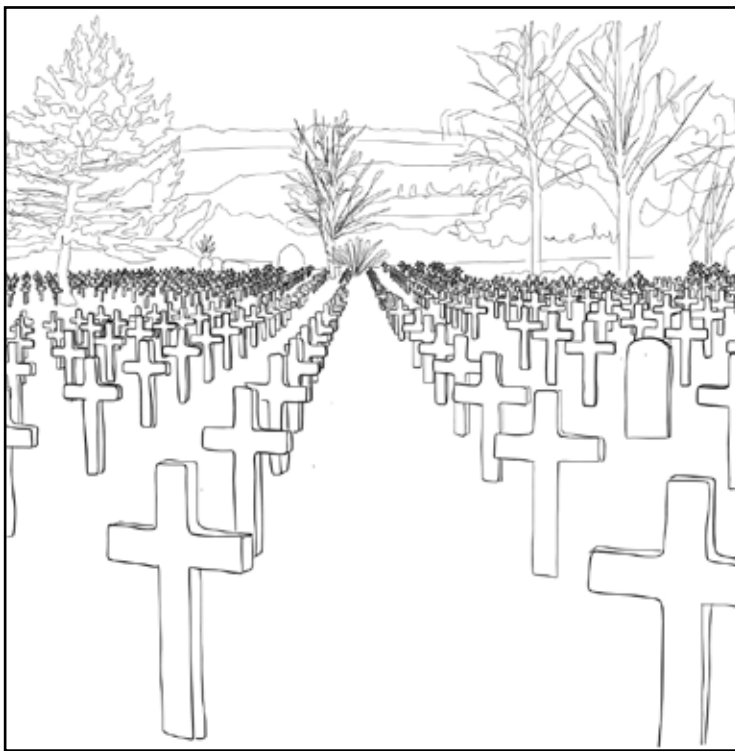
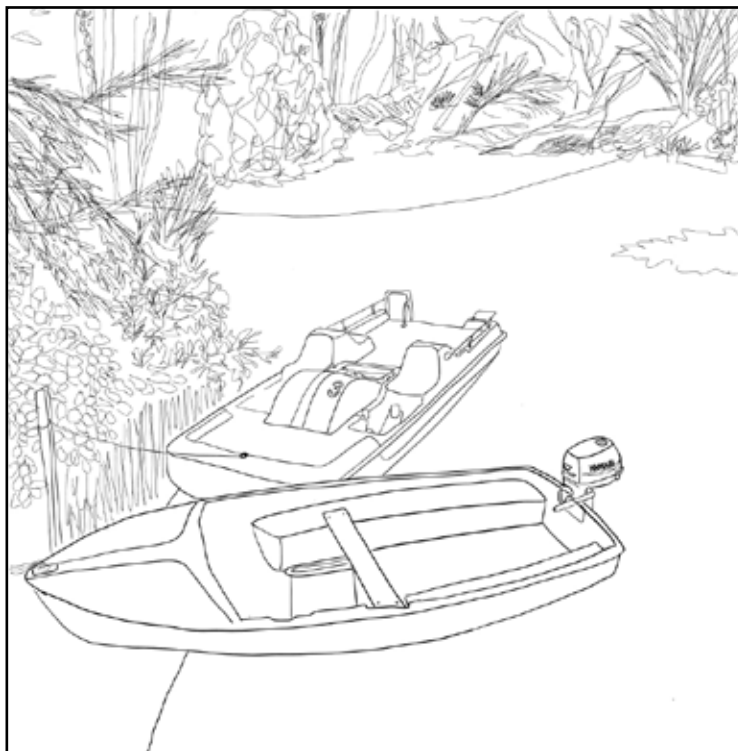
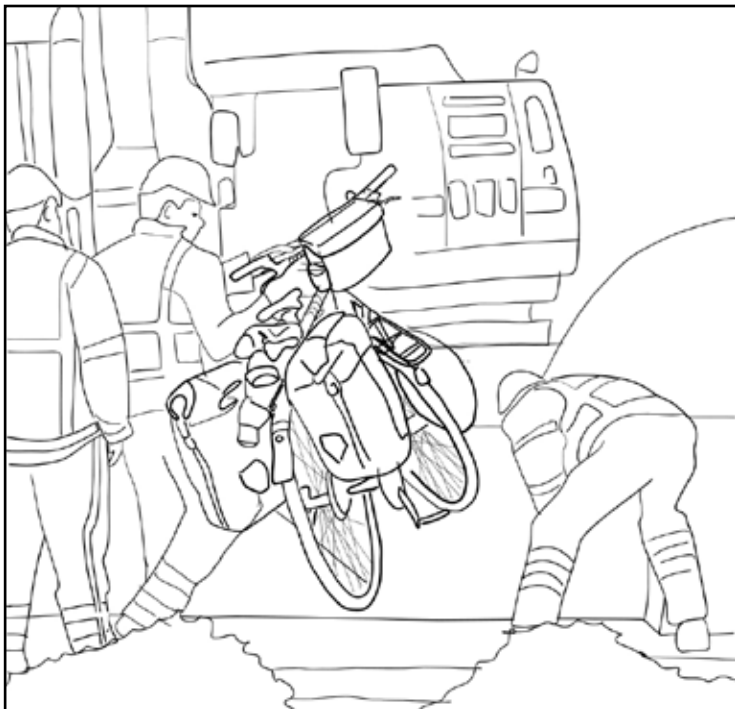
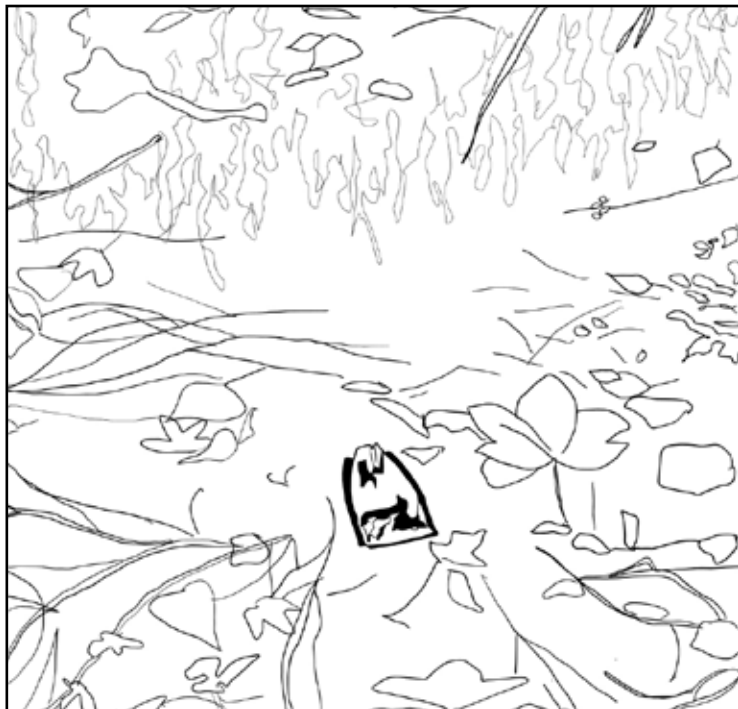






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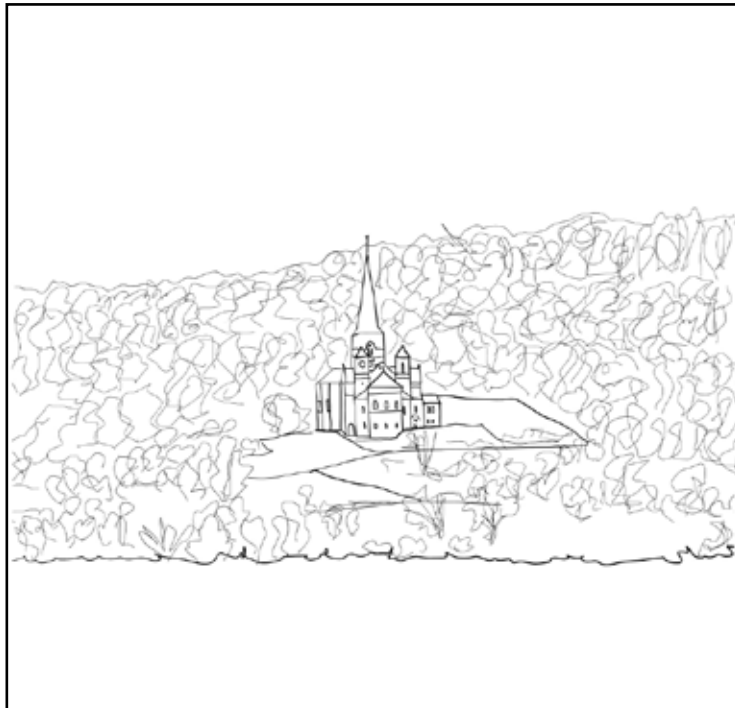
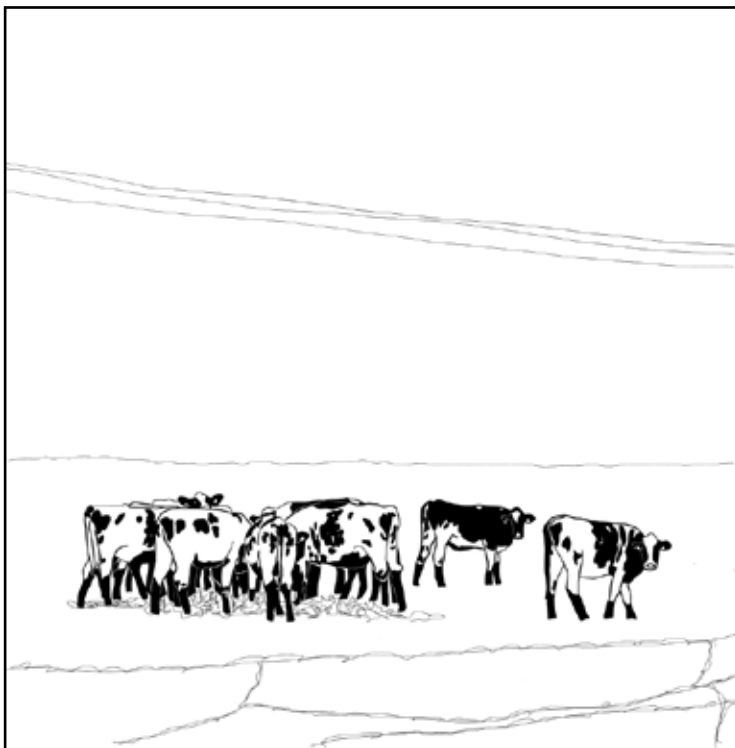
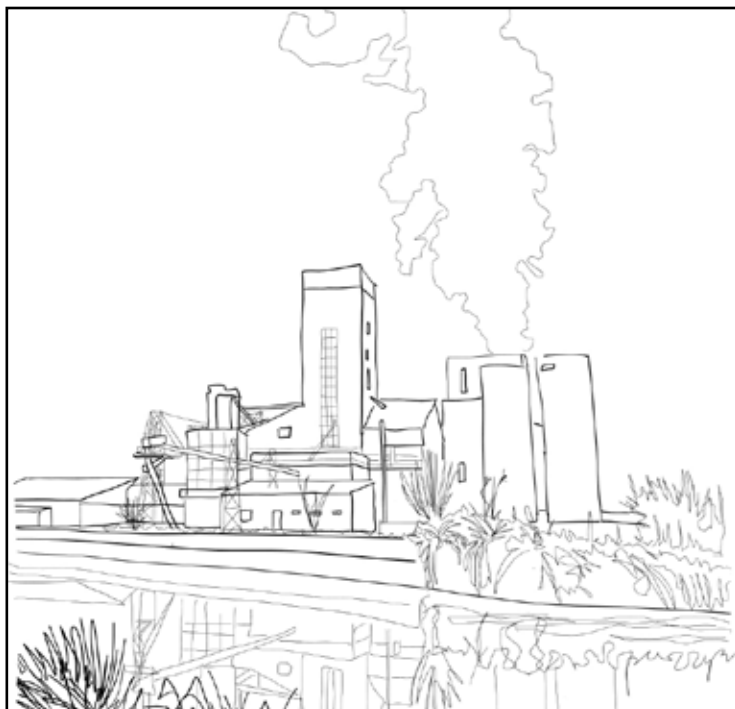






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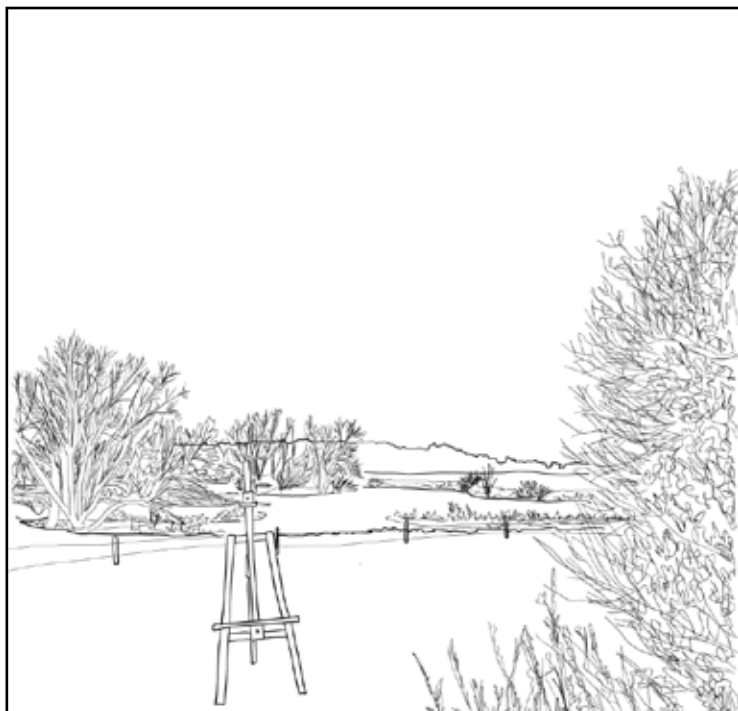
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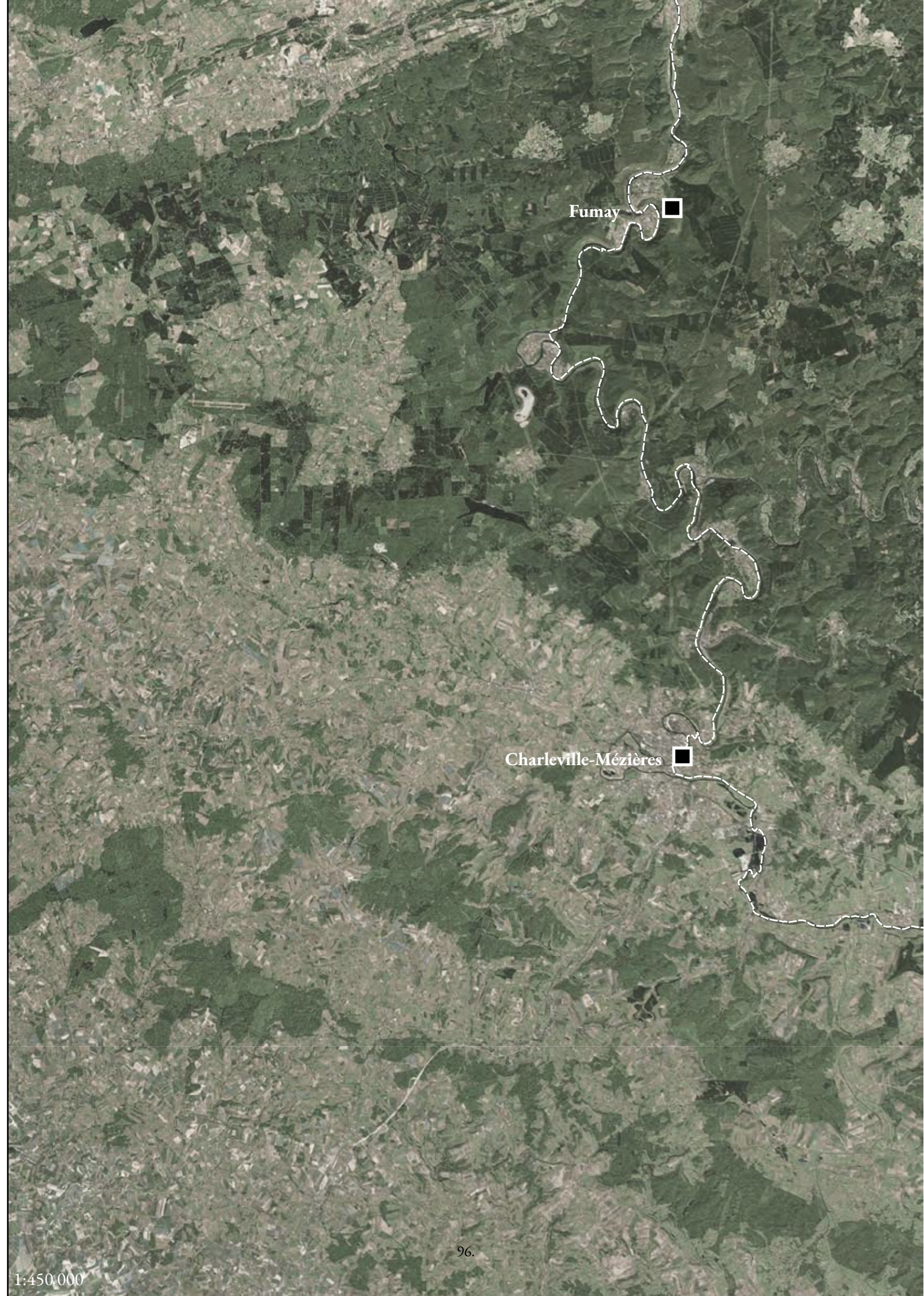
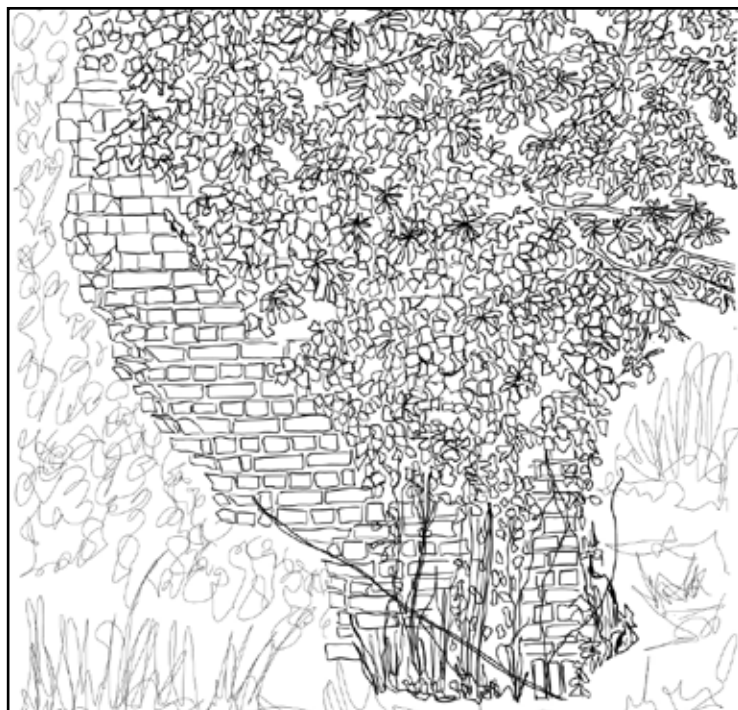
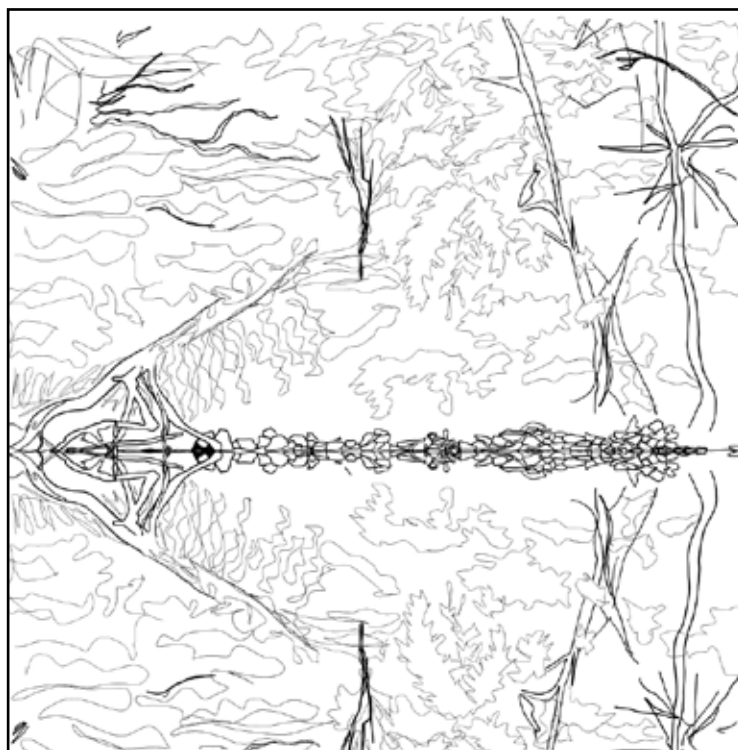
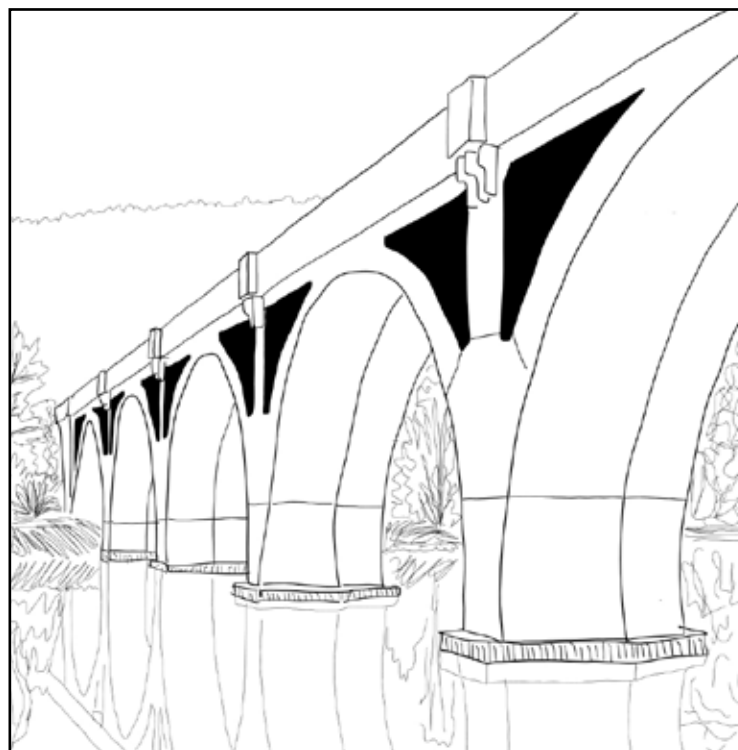
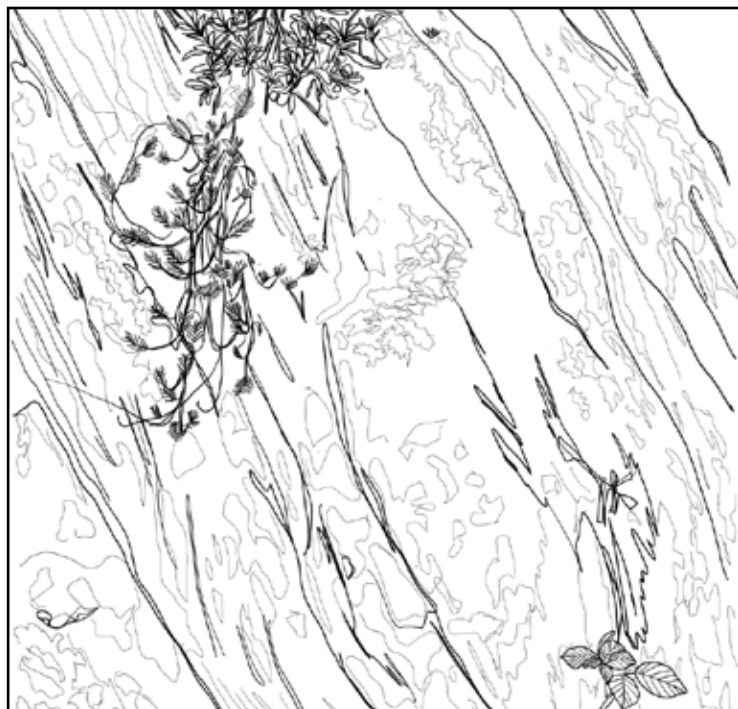






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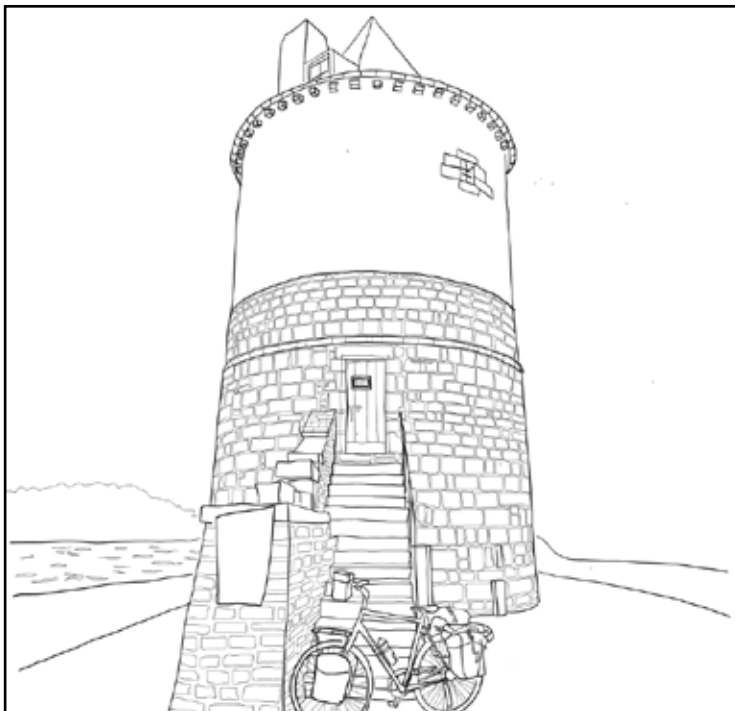
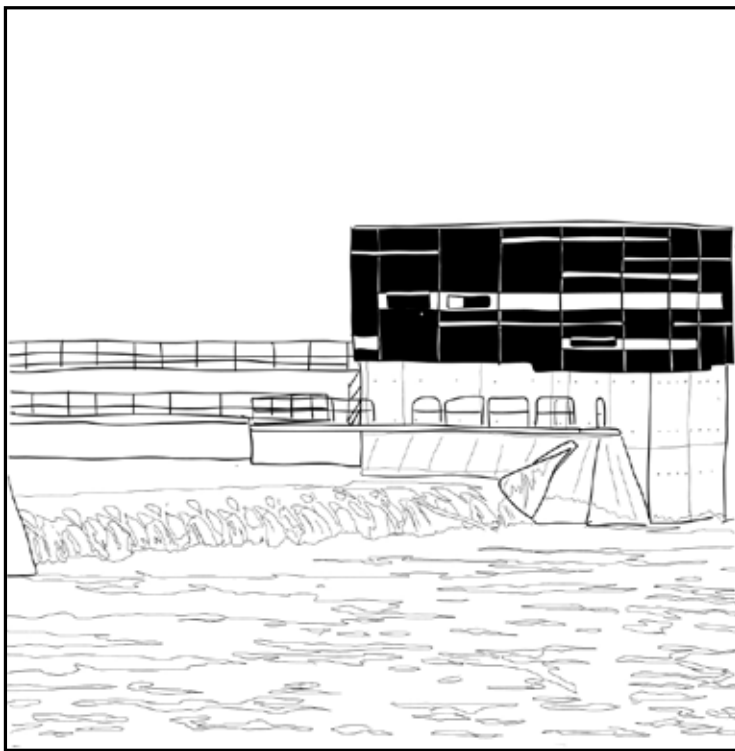
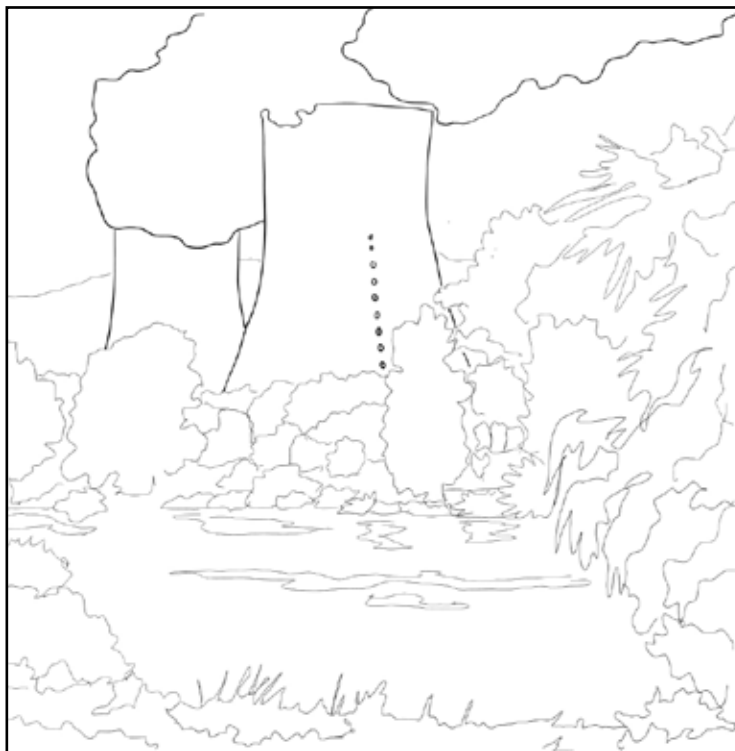
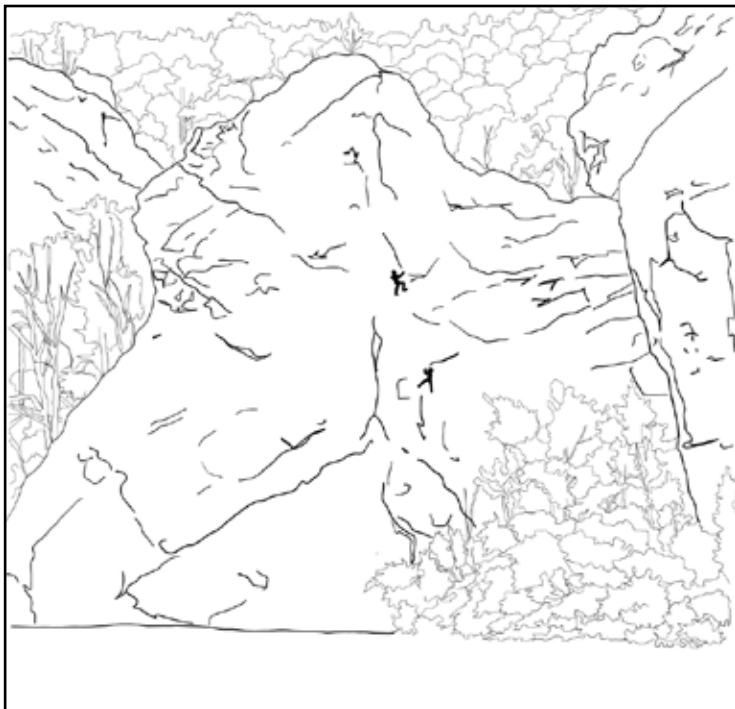
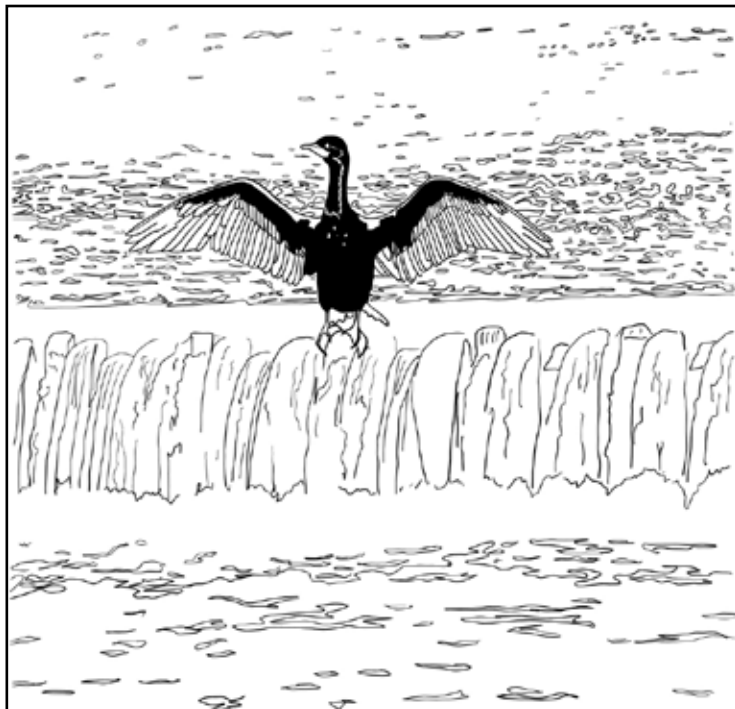






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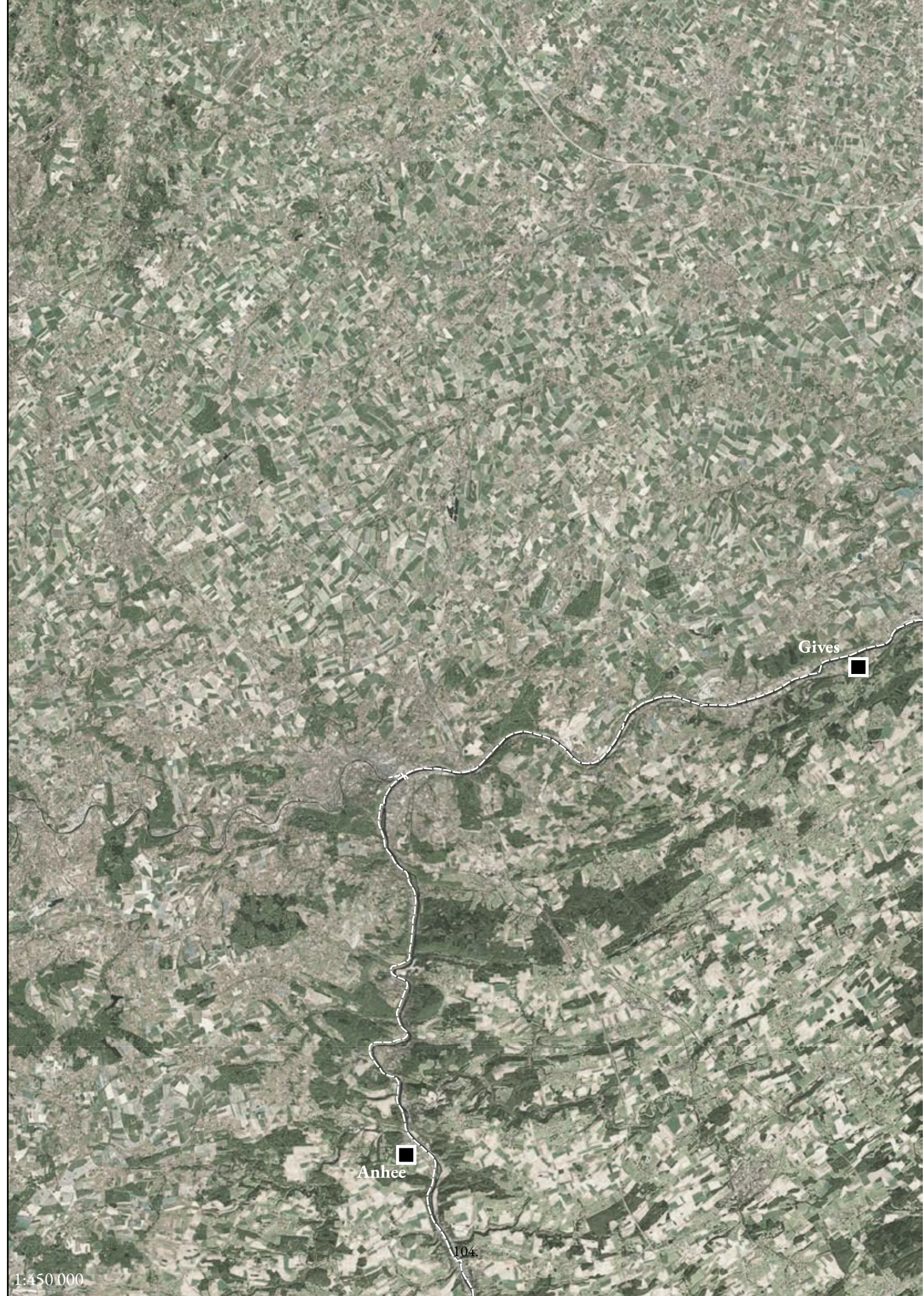
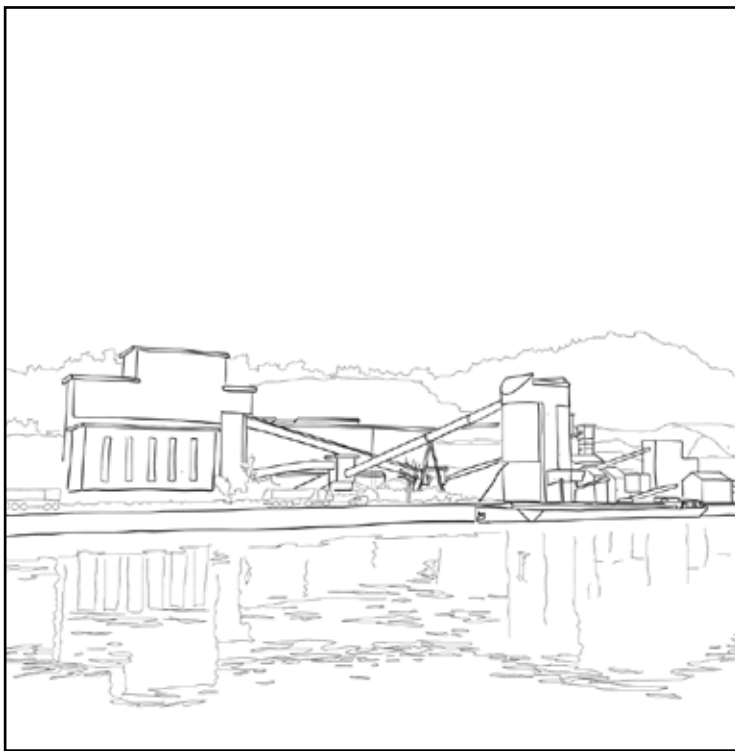
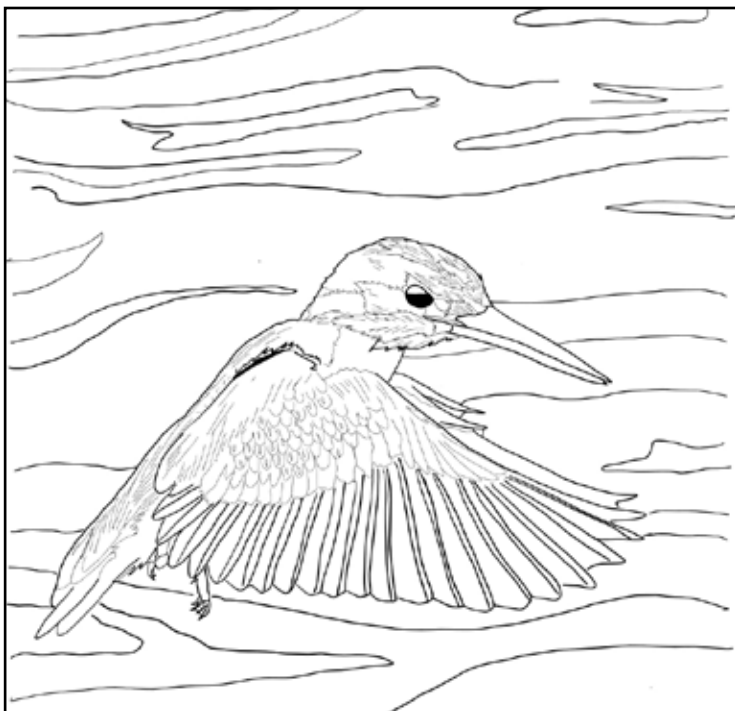
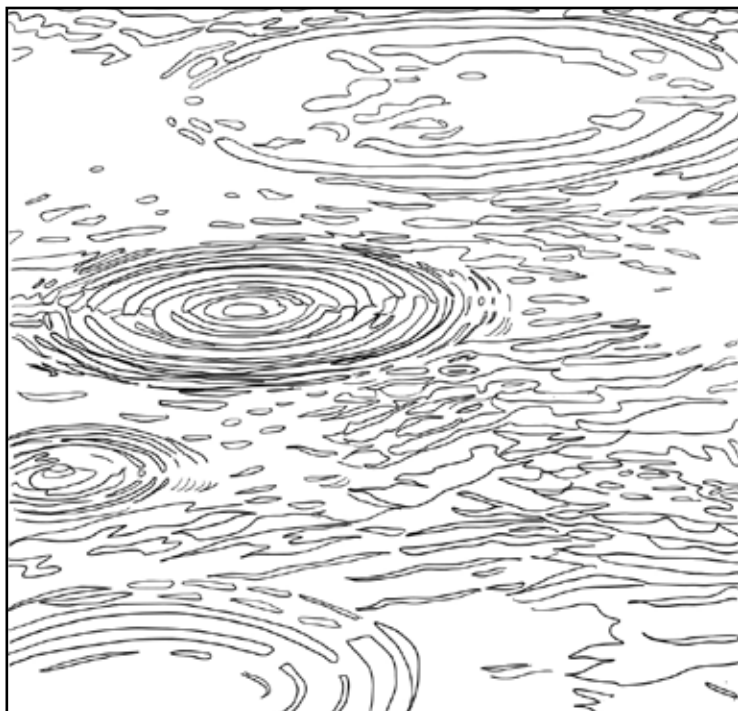






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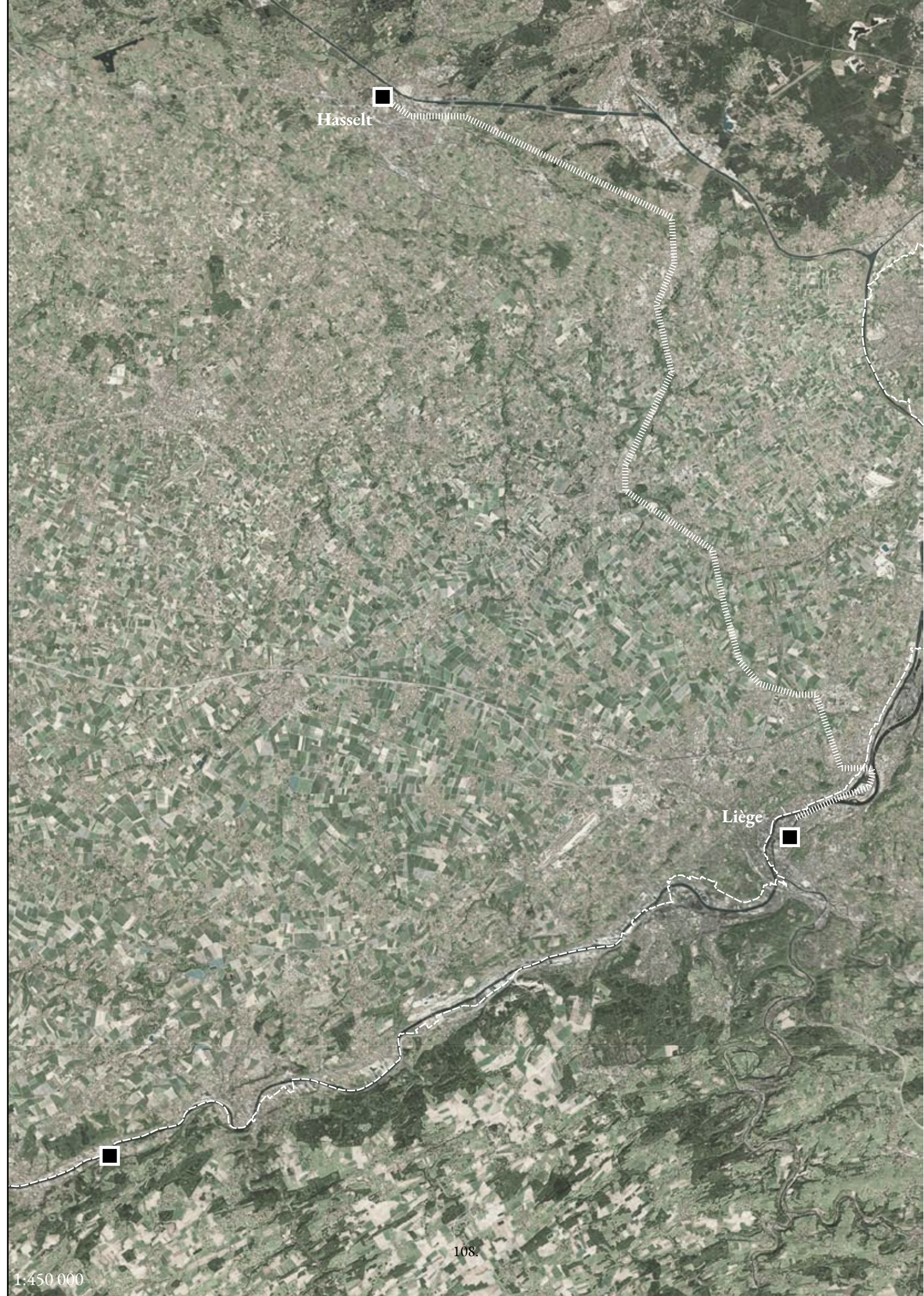
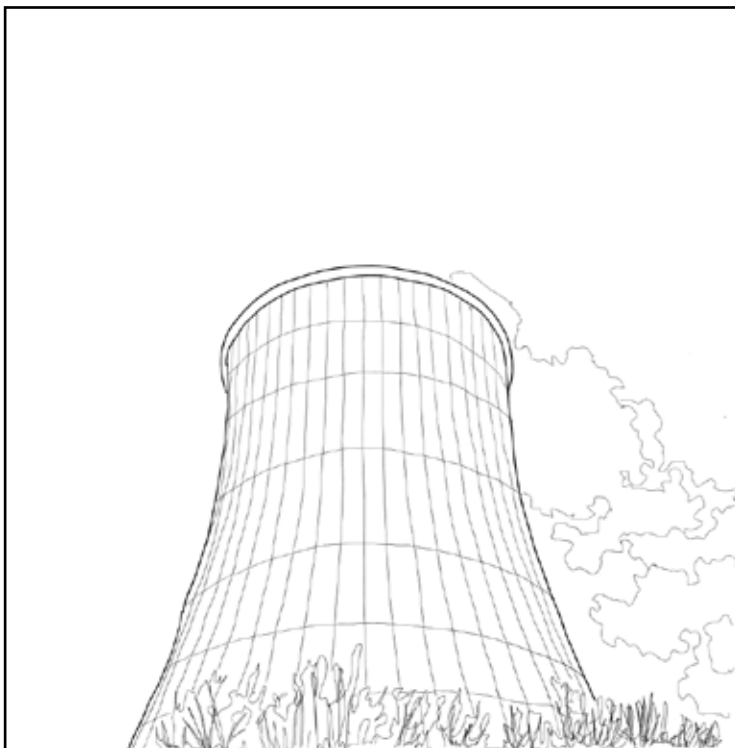
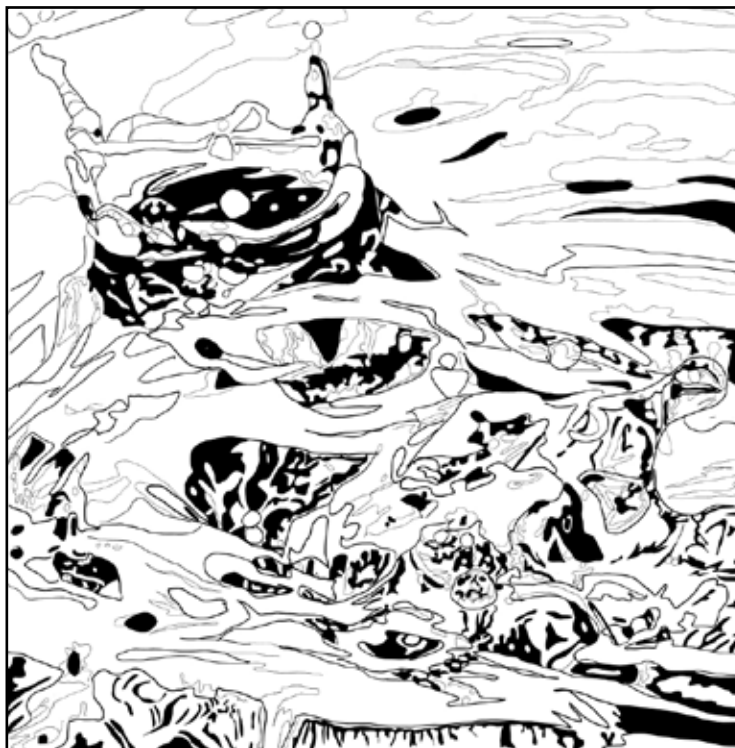
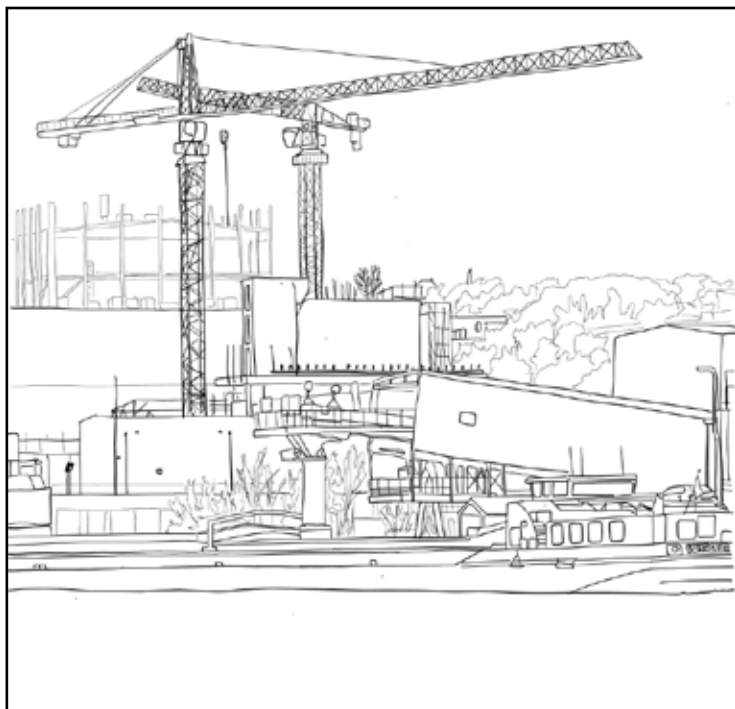






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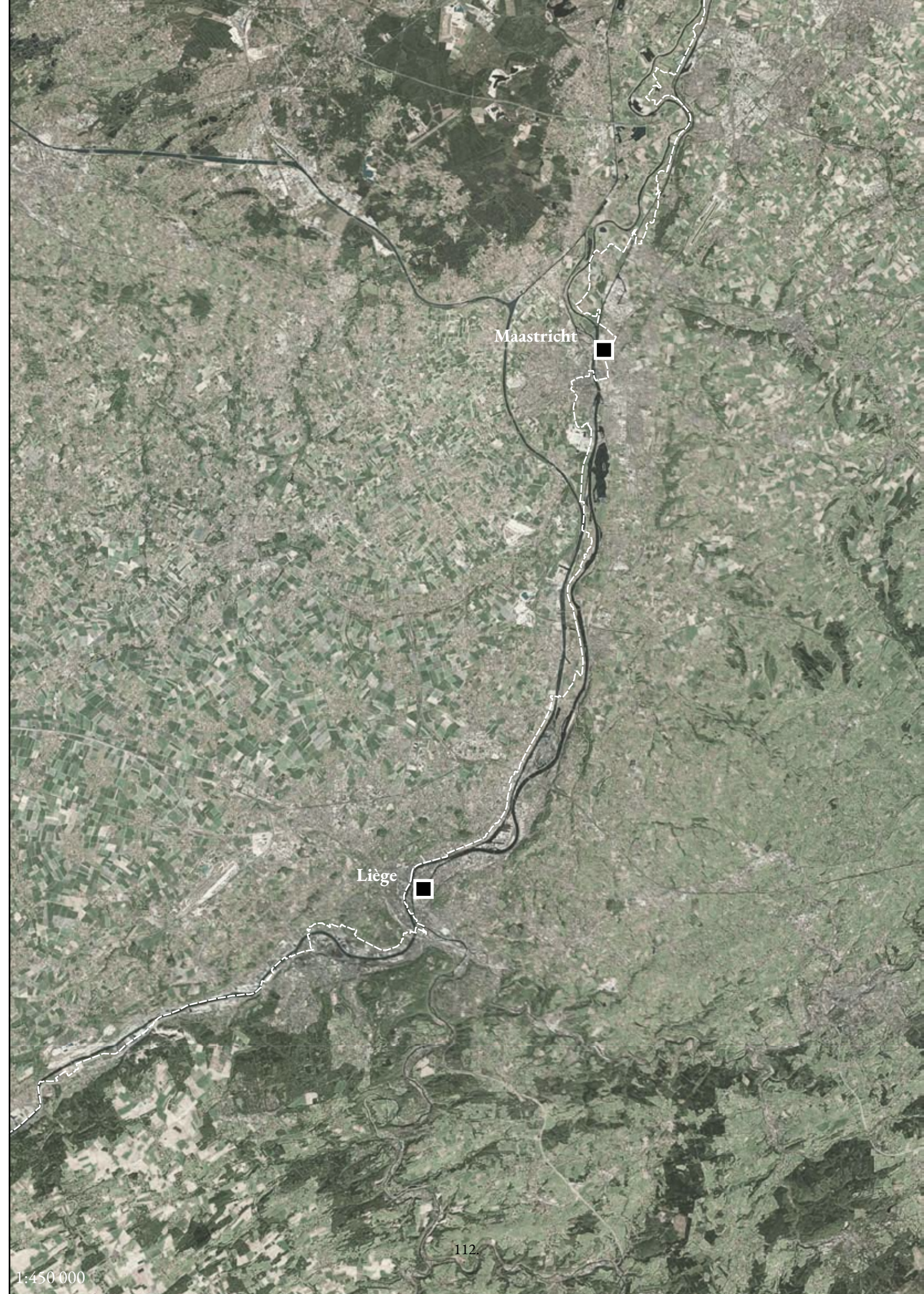
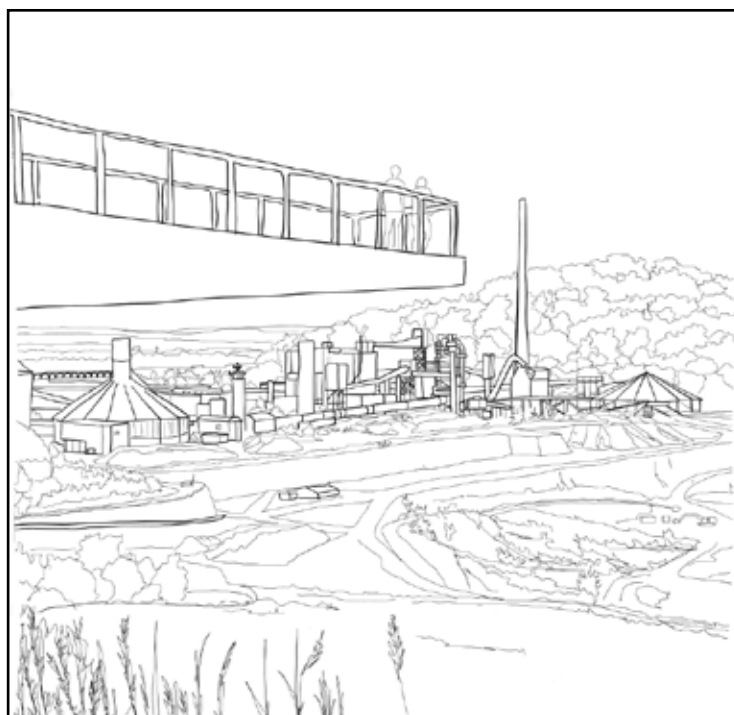
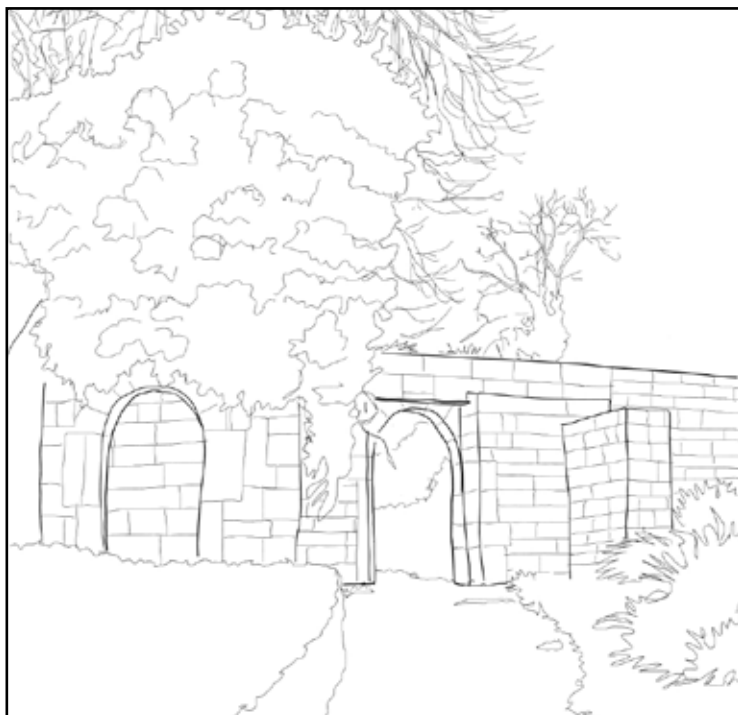
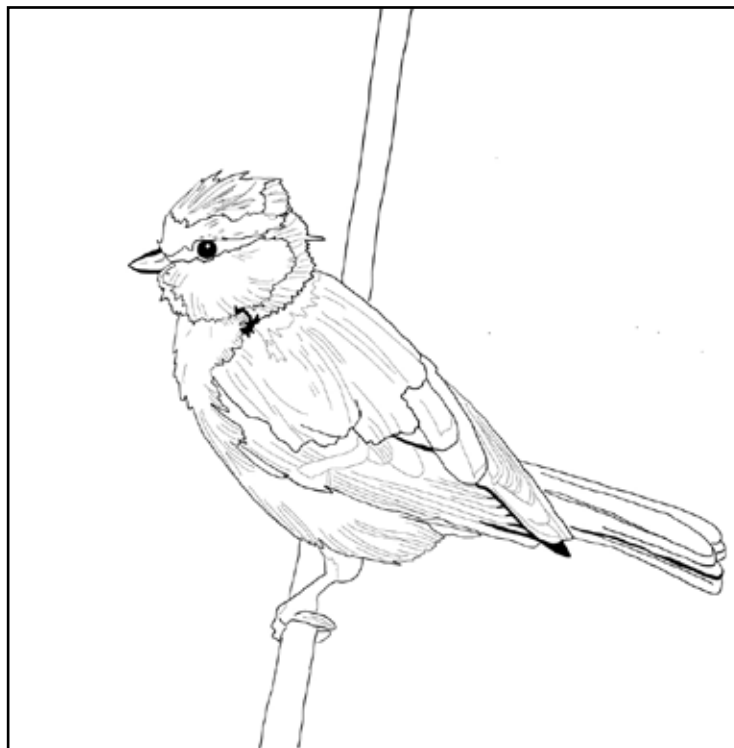
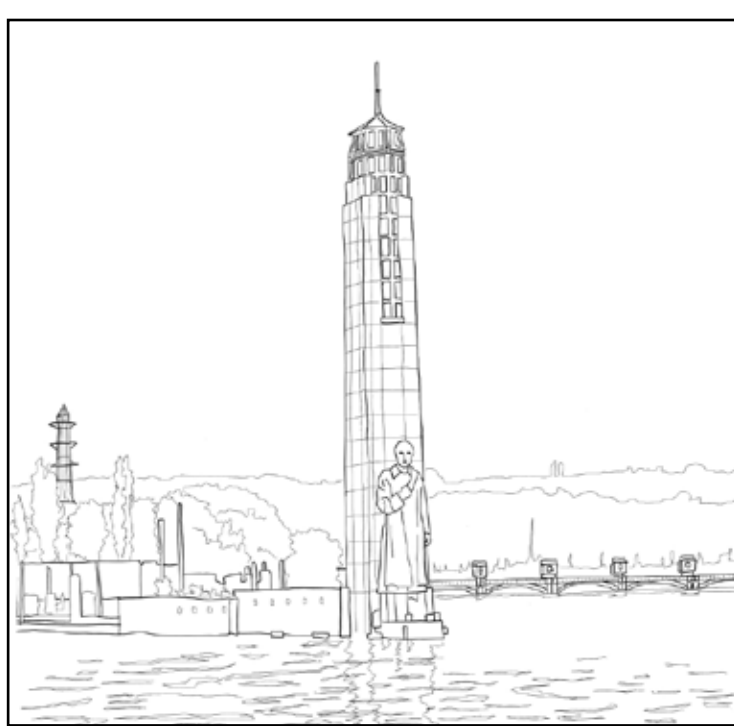
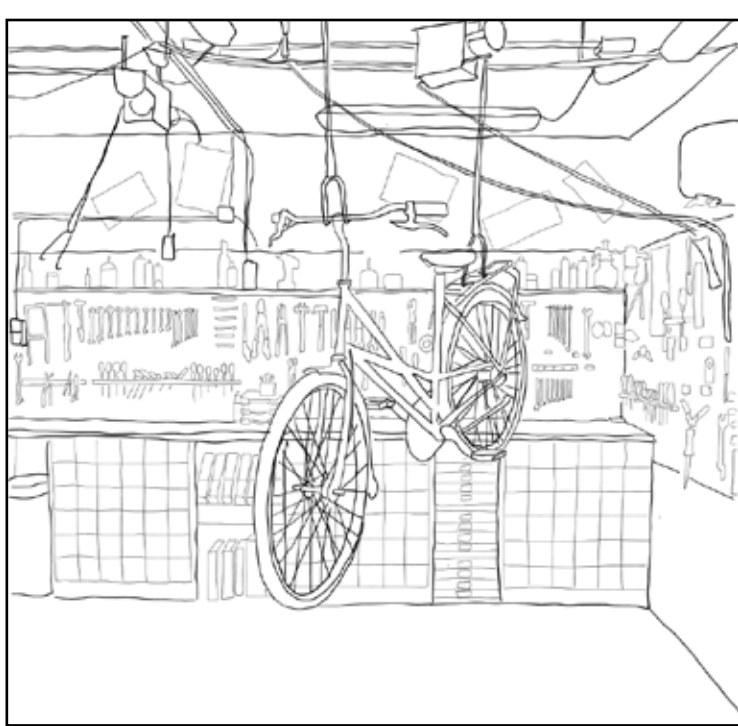






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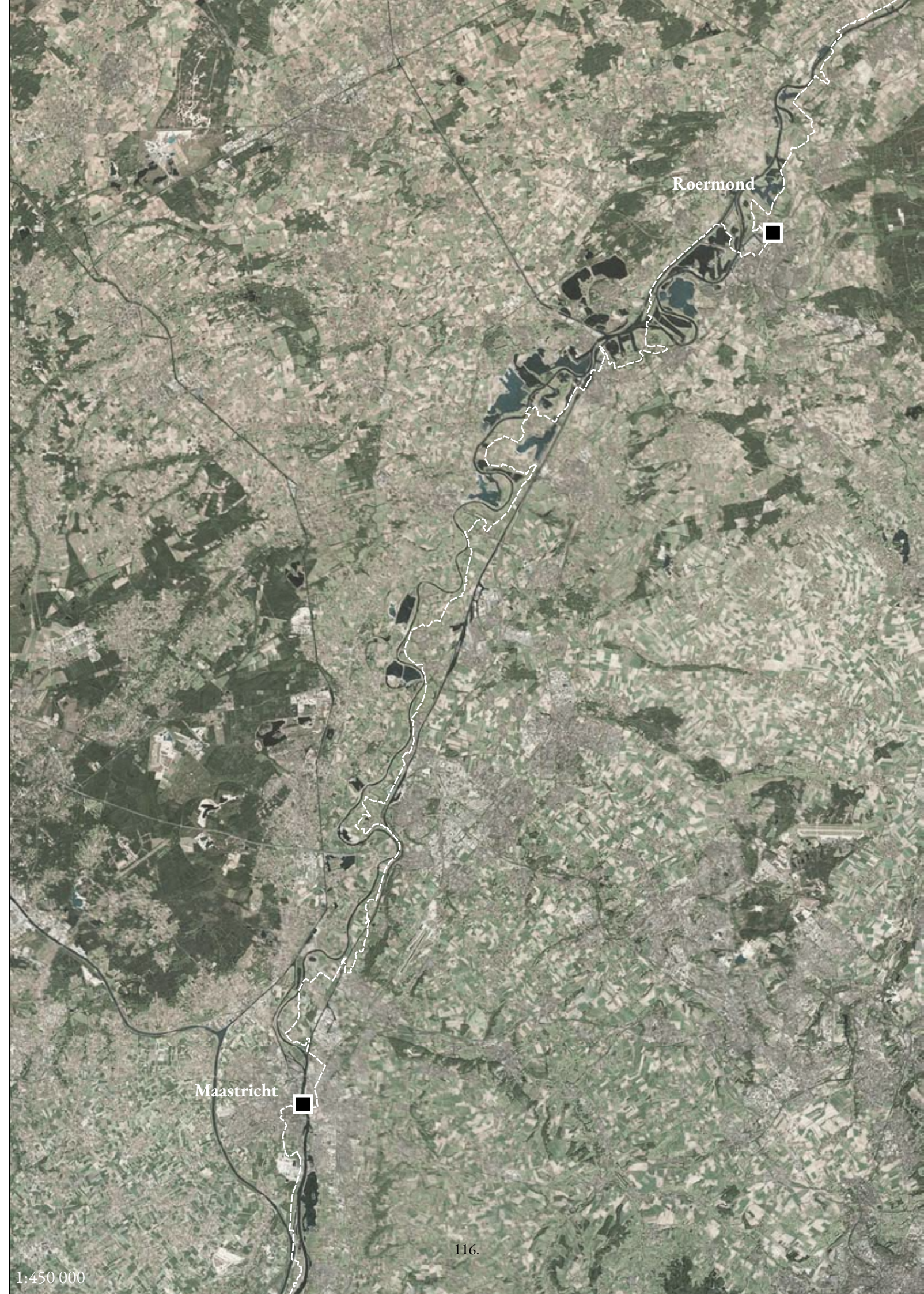
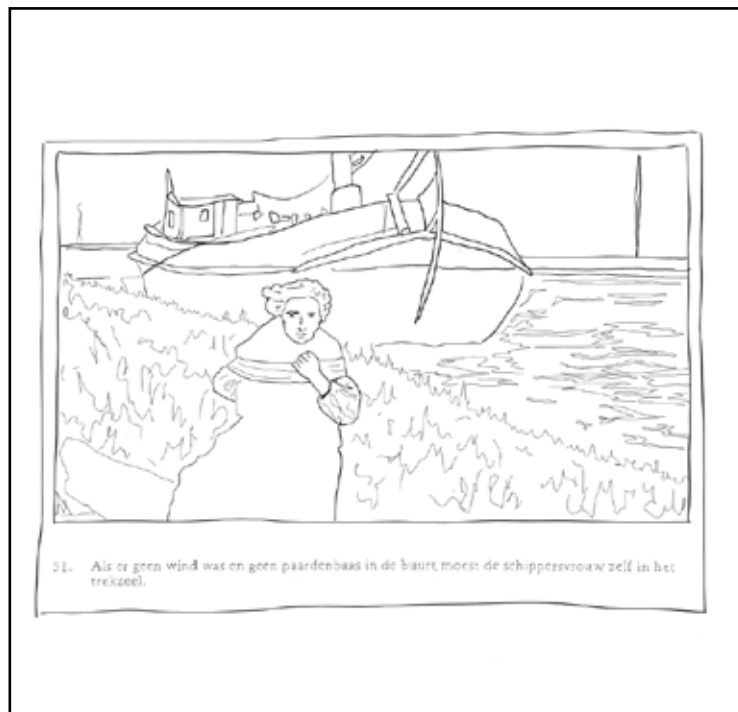
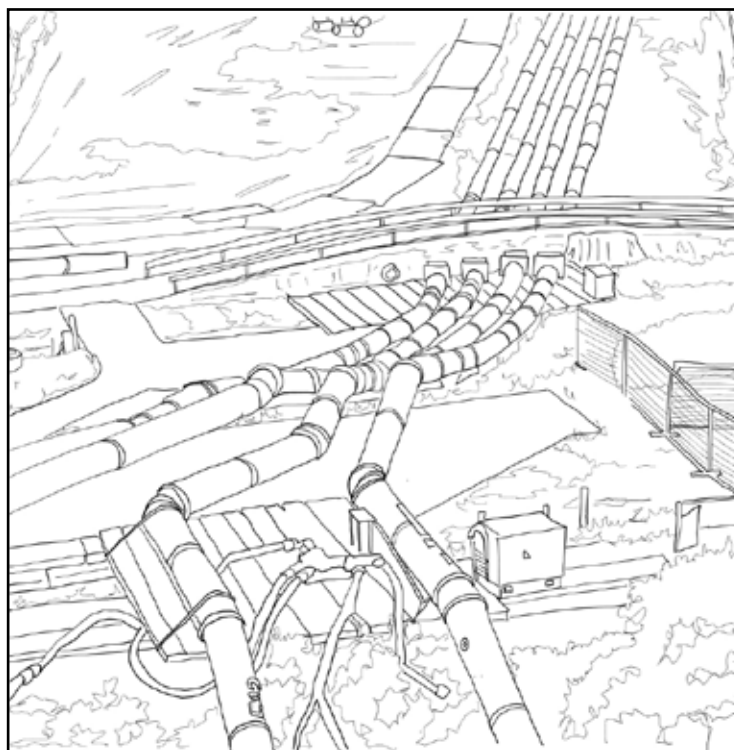
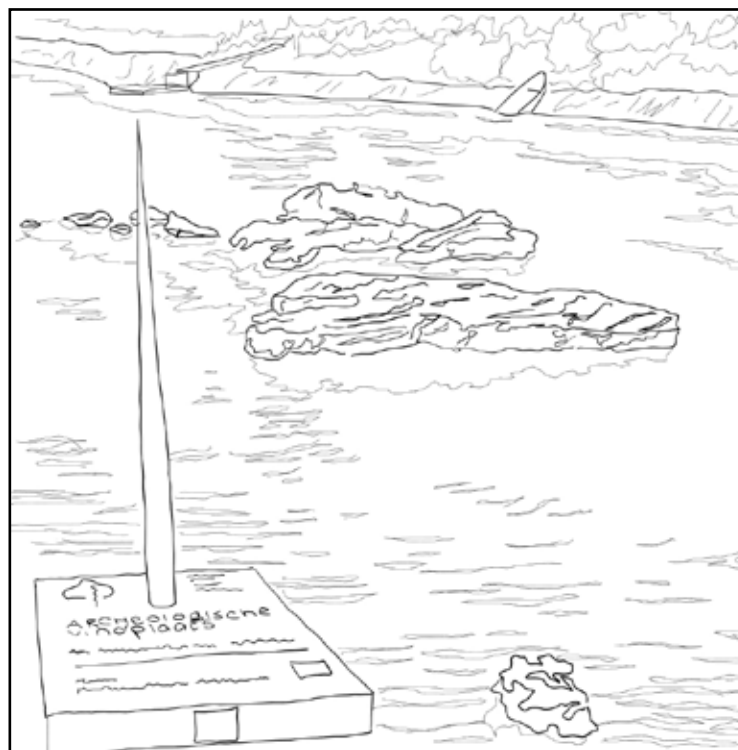






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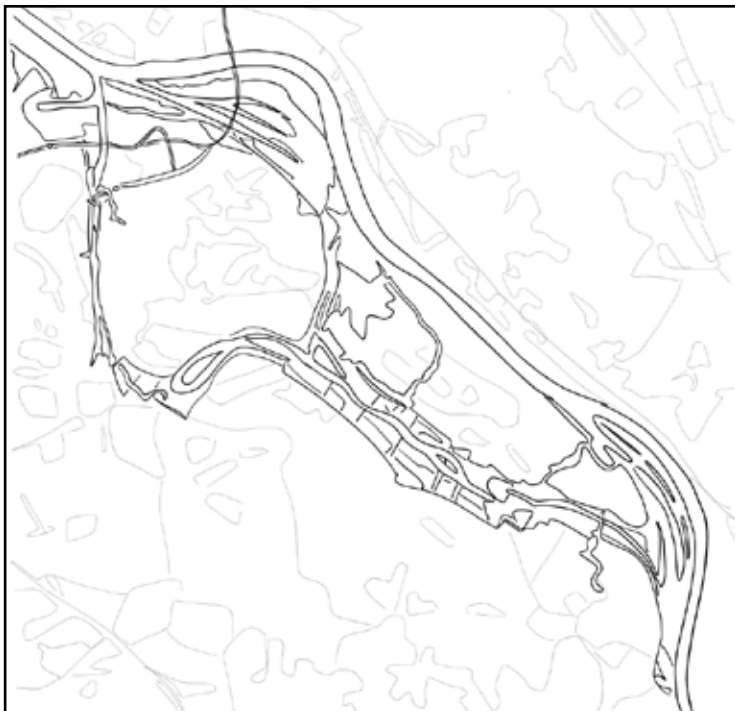
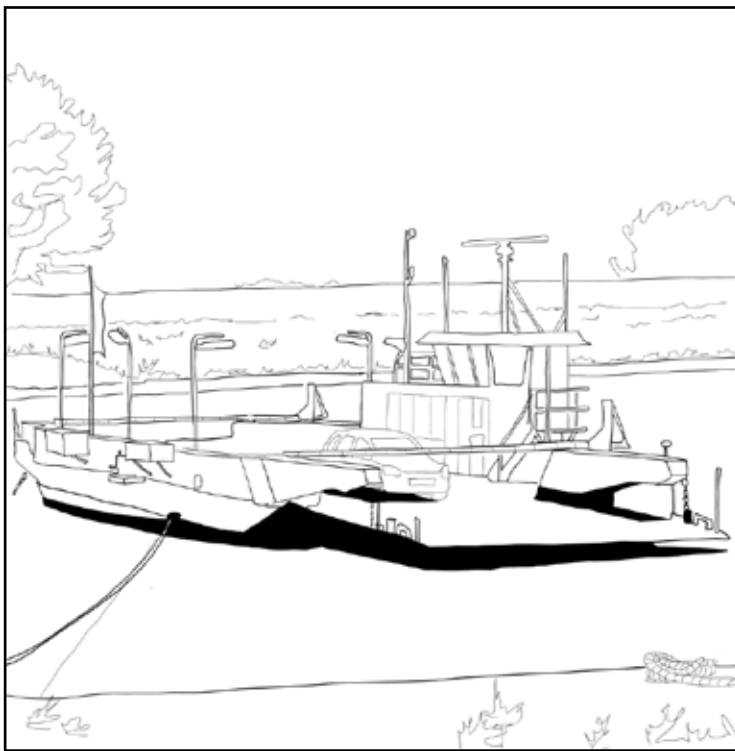
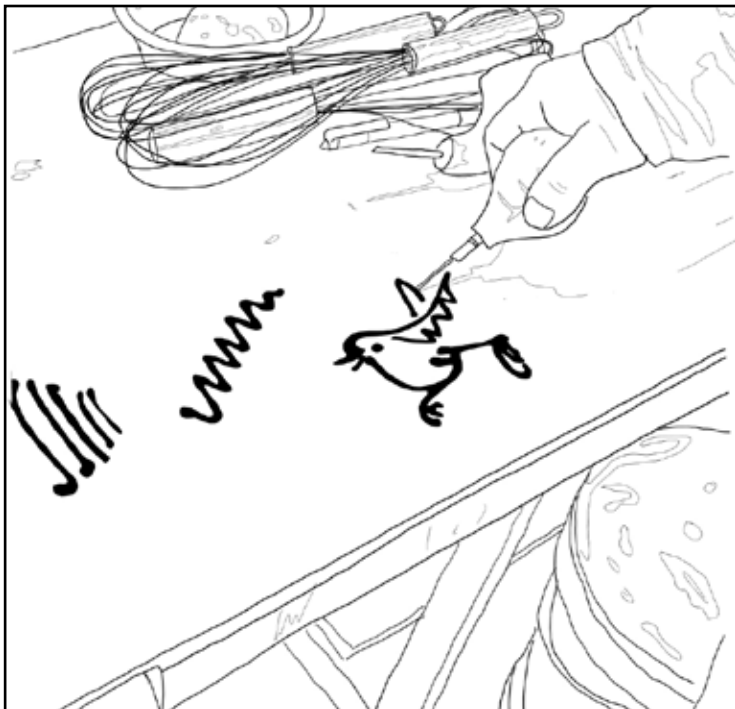
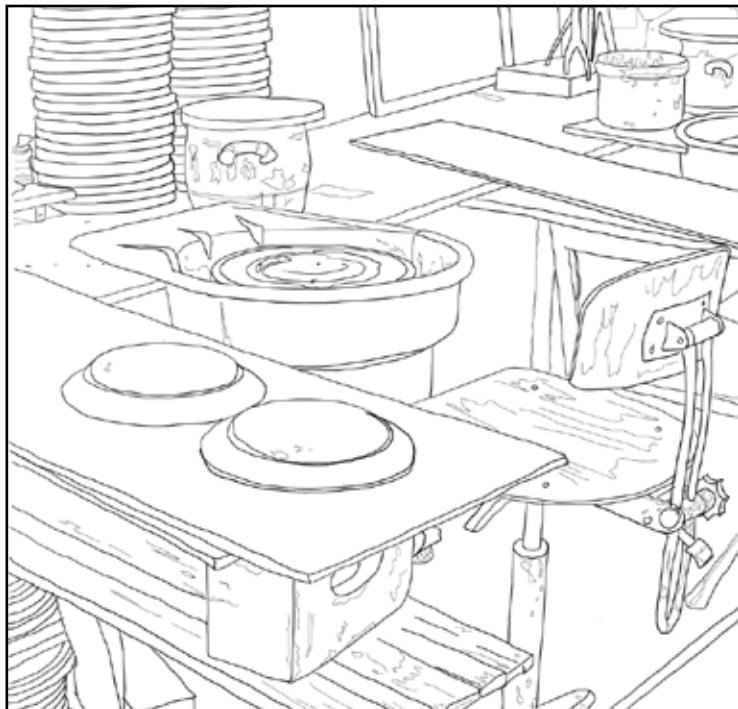






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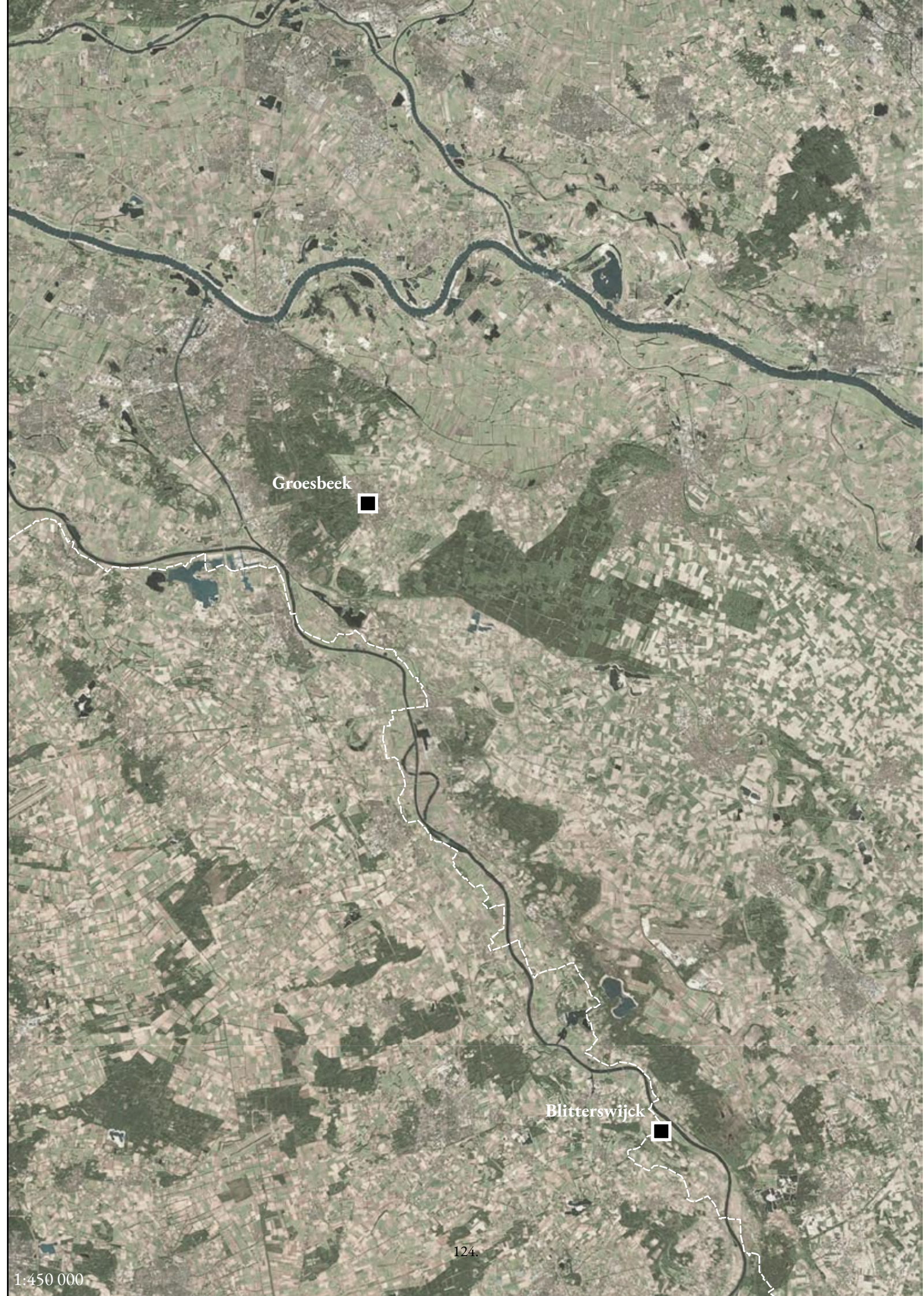
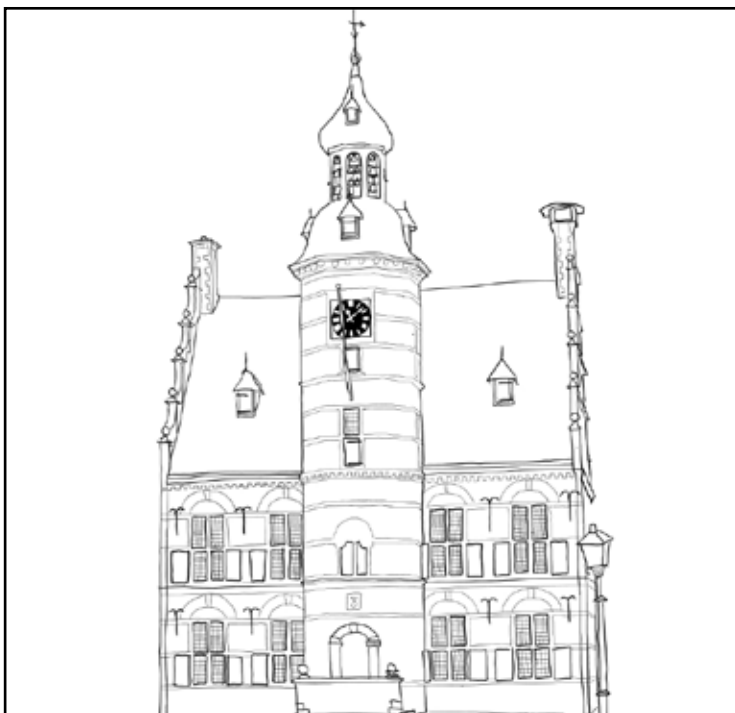
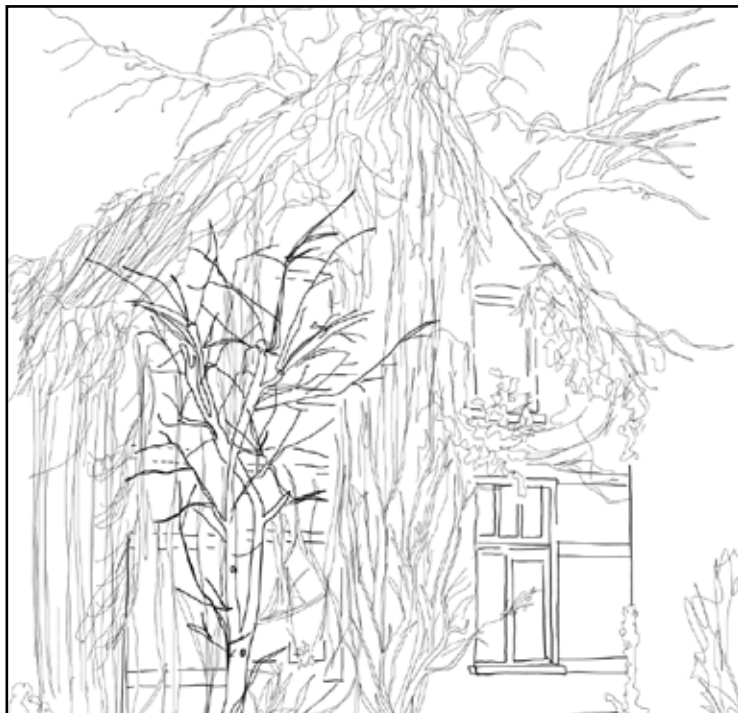
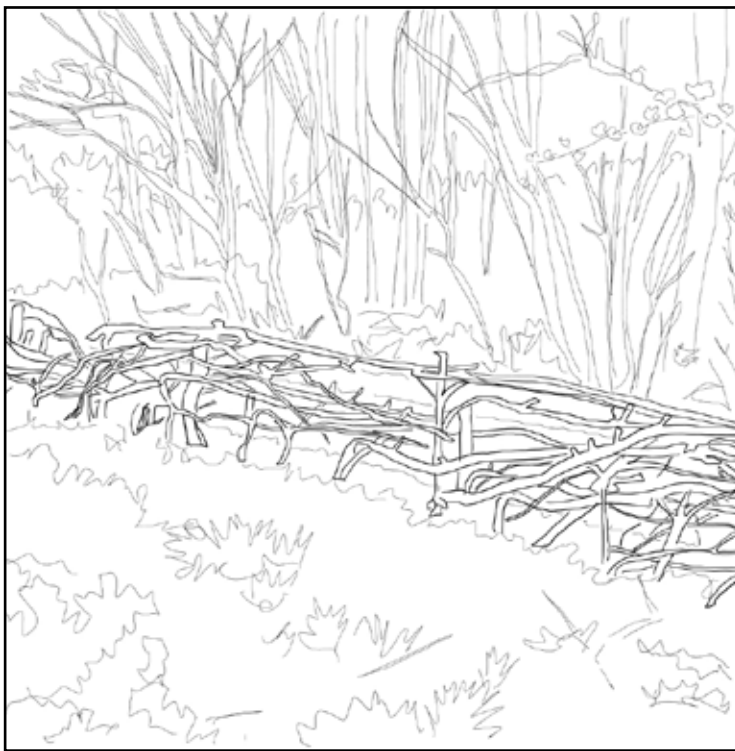
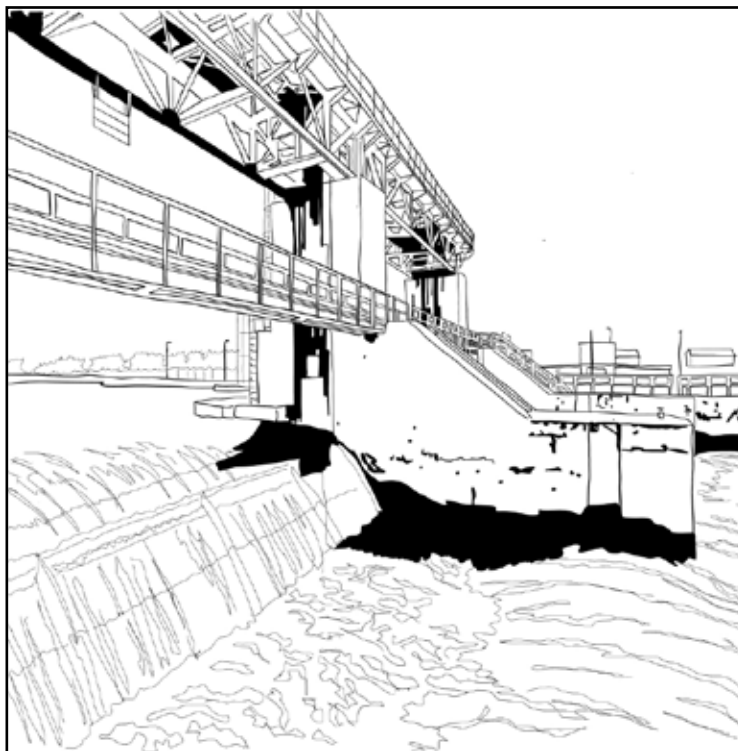
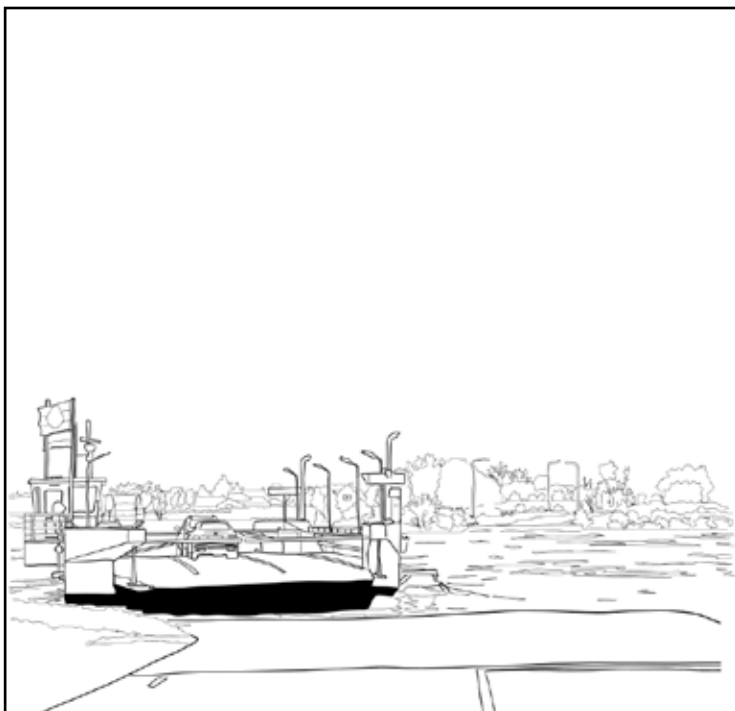






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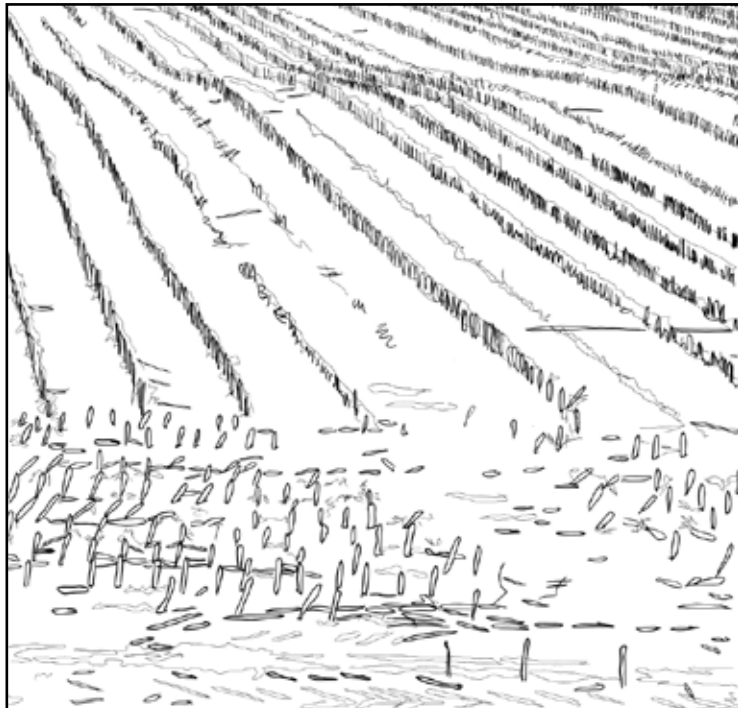
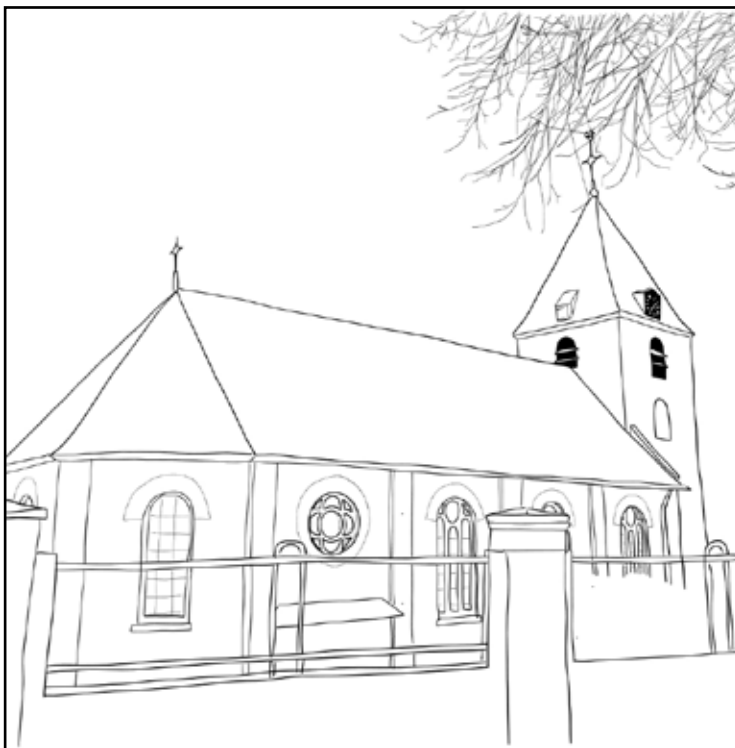






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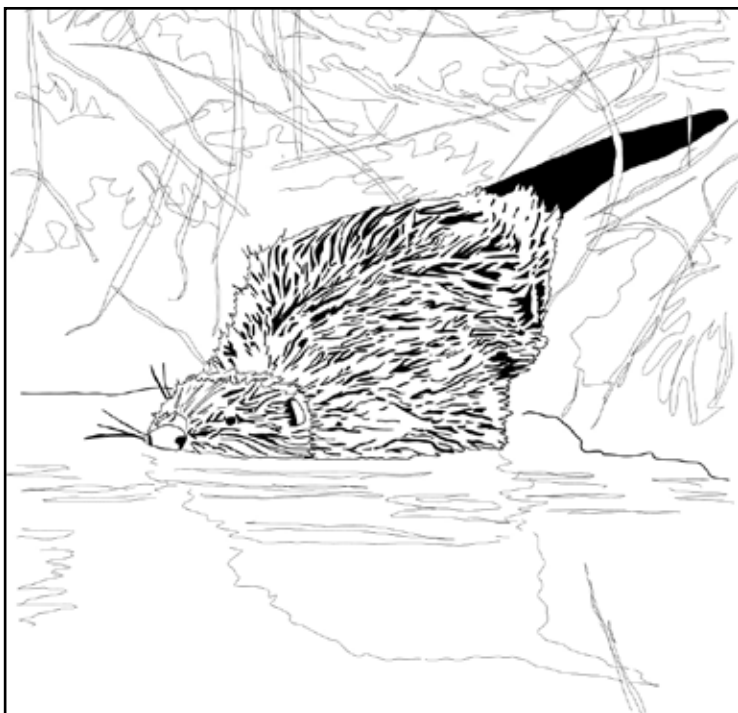
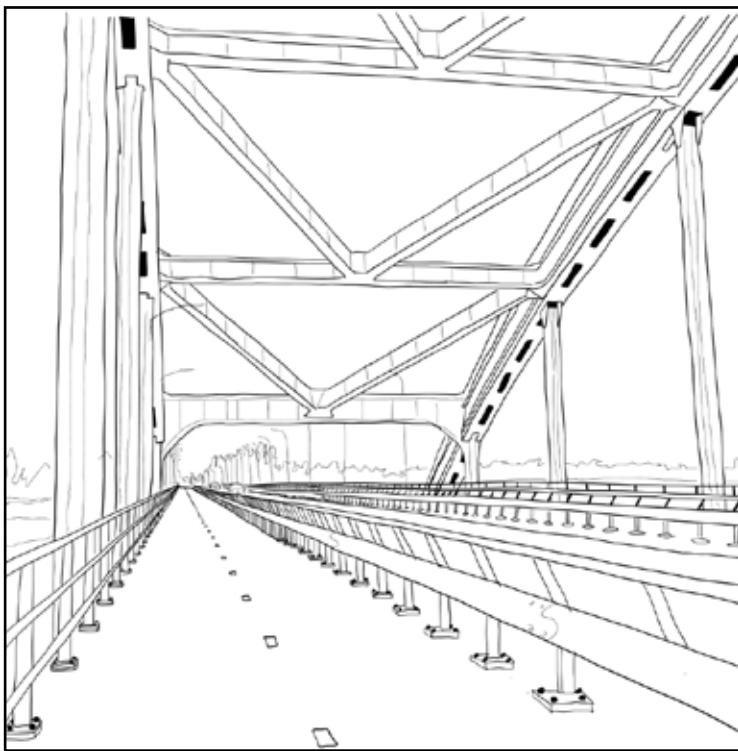






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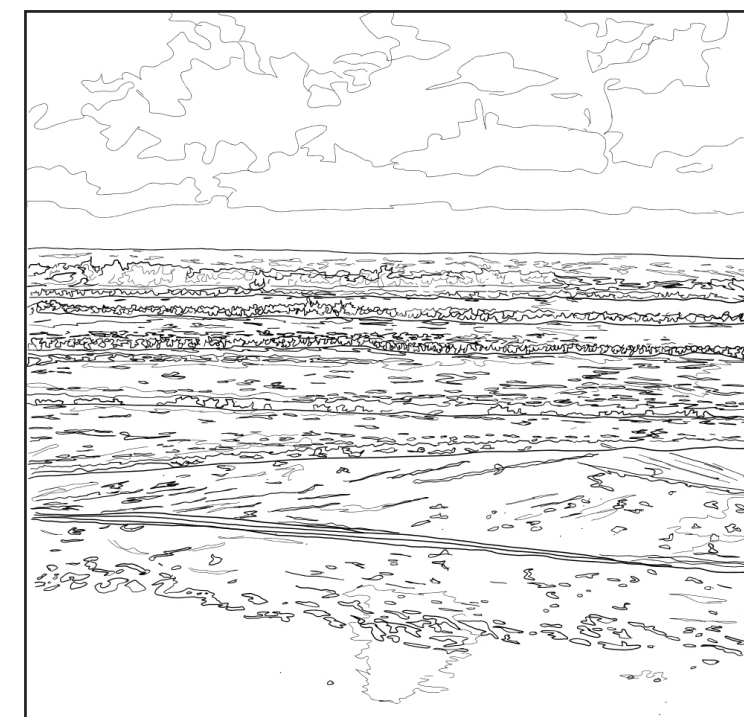
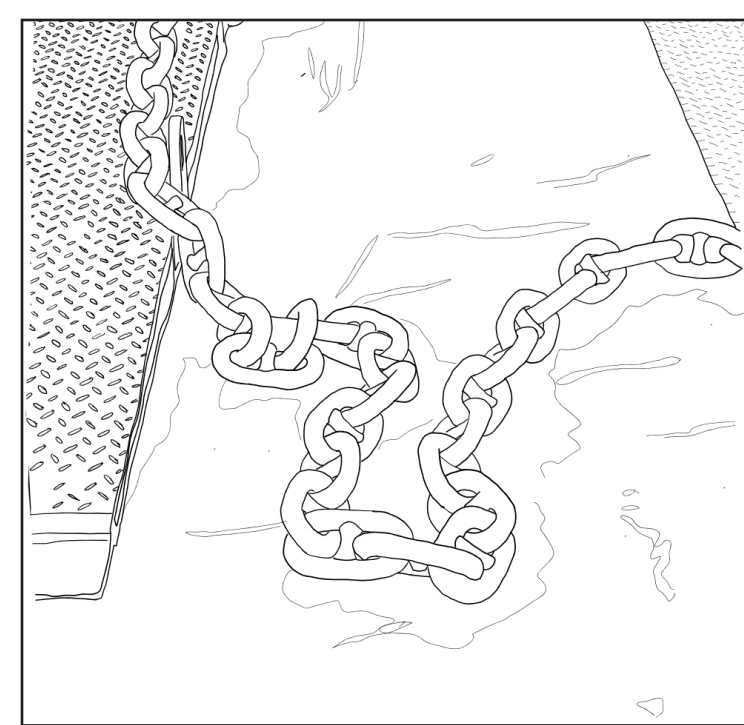
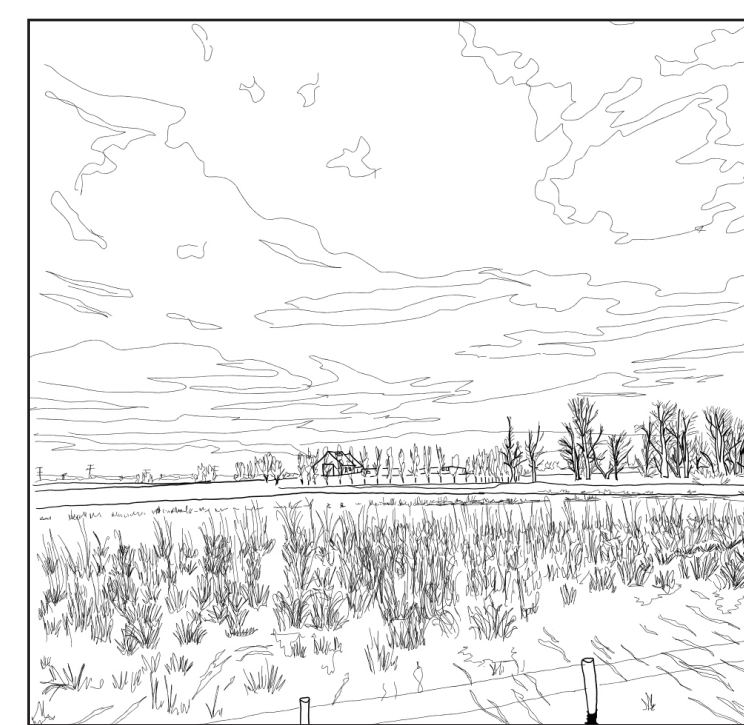
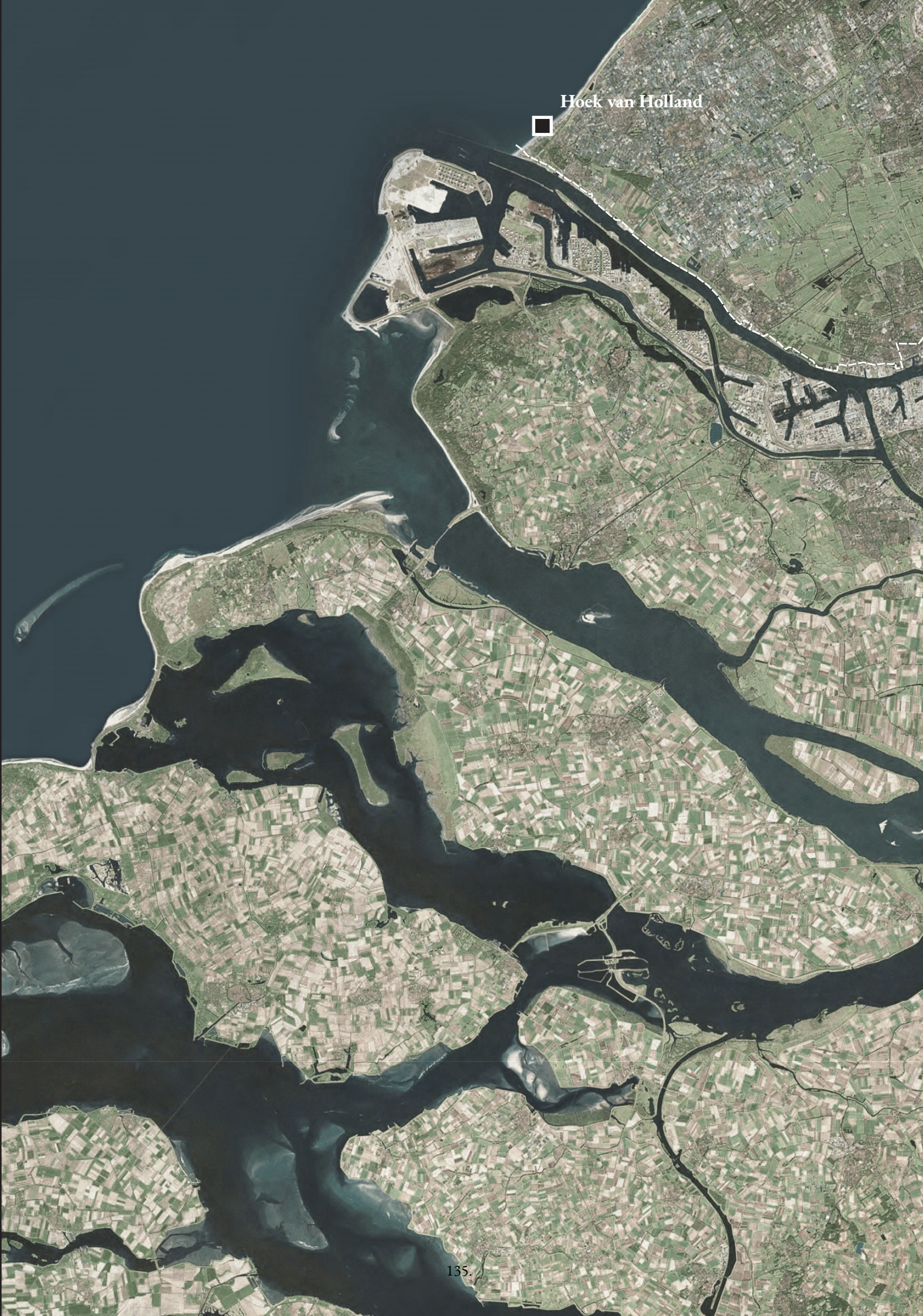






**Day 16.**







# 5.

## **Translations Narrating & Visualising Multisensory Mapping Relational Thinking**

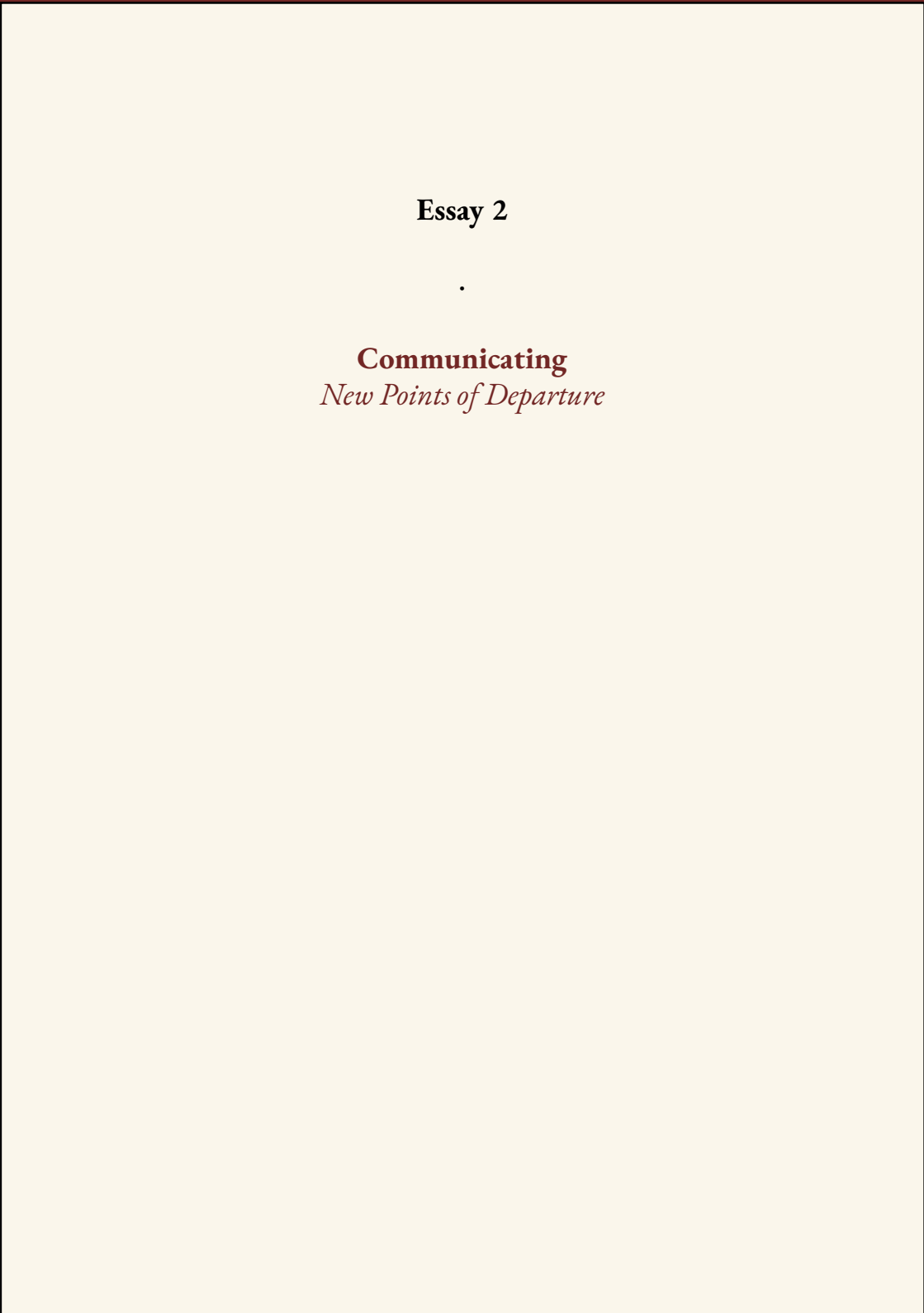
From the learnings with literature and the river, lines of curiosity emerged. I did many experiments to see how I could bring forward the voice of the river. Out of these learning explorations, three processes taught me the most about designing in, and learning-with the river: narrating & visualising, multi-sensory mapping, and relational thinking.

I will delve into each of these in the chapters below. The chapters start with an essay, show my exploration and process, and close with a conclusion.

The format of the book suggests linearity, but as you go through the chapters cyclicalcy is revealed as their contents are both product and process.



5.1 Narrating and visualising the territory



*Page number repeats as the essay will be stapled on top of the paper*



## Mapping

During the fieldwork I spent a lot of time with the river. Being with the river allowed me to learn from her. My thoughts undulated as my legs moved at her pace. She was a mirror, literally and figurately, and combined with all the thinkers she became a being, an entity pulsating with life. In designing our spaces, and investigating the multi-layered nature of the territories we inhabit, we often forget the perspective of the non-human others with whom our lives are entangled.

To add depth to the Meuse territory, I felt it was necessary to make alternative maps that include the perspective of the river itself. The two-dimensional lines on the classical map in an atlas suggest the idea of a simplified canvas, with complex realities reduced to land-use classifications. The familiarity with these lines and boxes gained in design education evoke particular meanings and suggest a particular way of thinking about space.

To invite myself and other designers to think differently about the territories in and with which we design, it is important to critically reflect upon the maps we use as starting point.

In line with the importance of storytelling (see *chapter 4: literature*

- *a new narrative*), either through words or other media, I decided to start an alternative subjective atlas of the Meuse territory, writing about the landscape from the river's perspective, and juxtaposing the reality of the river with traditional (geographical) data to challenge our ideas of space.

### *Design as mediation*

Representation inevitably introduces ethical and political problems, as taking care of a silent/silenced more-than-human entity involves "thinking for" and "speaking for" with the inherent risk of appropriating or consuming their experience (Puig de la Bellacasa, 2017). Representation is non-innocent, and mistakes will be made.

This makes it a valuable exercise all the more, as the uncertainty and ambiguity inherent in spaces inhabited by innumerable others is humbling. What's more, it made me more sensitive to the fact that this delicate process of interpretation and all that is lost in translation and transmission is in fact present in all urban projects, albeit less visible in projects where interests can be communicated through verbal language. This repositions the designer

as mediator of complex ecologies instead of master of spatial configurations.

### *Narate and visualise*

Writing can bring new and different worlds into being: it is a method of inquiry (St Pierre, 2015). Aware of how the form of writing influences and constrains contents, scholars of the 60s and 70s started to experiment with different genres of writing to encourage different ways of thinking (St. Pierre, 2015). To learn more about a topic, it is valuable to translate data from a single project in a variety of different shapes, ranging from personal narratives, essays, and biographies, to fiction, performance, and poetry (St. Pierre, 2015).

I have seen this coming back in the literature studied, as the books written by Tsing (2015; 2024) sit somewhere between novel and ethnographic research, Haraway's scientific language merges with the poetic (2003; 2016), and Latour mixes his lectures with staged performance (Zone Critique, 2018) and makes various allusions or direct references to theatre and dance in his writings (2015).

The forms I chose are 1) writing from the river's perspective, and 2) translating

this text into a subjective map. To bring together the data and geographical information from desk analysis, with the language and perspective of the river experienced in fieldwork, I had to move away from the classical map into multi-dimensional collages. This expressive tool helps to show that the canvas, once you immerse yourself in it, is actually filled with messy layers containing both life and ruins, beauty and decay, collaborations and conflict.

I noticed that this process is both a *method*, shedding new light on the data collected, deepening my understanding, as well as *outcome*, opening possibilities for communicating ideas with different audiences. This process of communicating requires letting go of control. After all, language, whether visual or written, cannot fix a particular meaning. Writers cannot control the interpretation of their text, as each reader brings their own lived experiences with them into the texts they read (St. Pierre, 2015). Derrida is famous for his theorisation of *difference* to explain how words, once spoken or written, take up an existence of their own, changing into something different from that what was initially intended: "word and thing or thought never in fact become one" (Spivak, 1974, p.vii).

Especially with more poetic language, meaning escapes language. Both



the written language, and the visual translation are therefore stories *in becoming*, that might just plant the right seed to bring a different world into being.

•

*Reshaping territory  
Thickening its meaning*

This exercise of imagining the perspective of more-than-humans (Morizot, 2021) raised concerns that desk research could not have revealed. Geospatial data and policy documents that we work with in the urban discipline reflect dominant narratives, are produced by, and are likely to reproduce the status quo. The intuitive encounters with human inhabitants, as well as the slow encounter with the river during the fieldtrip were valuable for collecting non-dominant stories. Mixing these stories and the perspective of the river together with data and geographical information into one image adds an additional layer to reality. Brought together, it has the potential to (re)shape our political and social realities as representation can make different things matter and can facilitate whose concerns are being heard (Puig de la Bellacasa, 2017).

The process of making these collages revealed unexpected places

of degeneration, conflict, and displacement, as well as possibilities for regeneration and return. It confronted me with the fact that structures that seemed neutral before (e.g. dikes) are actually implicated in politics and ethics and should be handled with care-full consideration. This alternative subjective atlas of the Meuse can thus give rise to different urban projects where the designer mediates and translates to create conditions conducive to life.

~ • ~

*References*

Haraway, D. J. (2003). *The companion species manifesto – dogs, people, and significant otherness*. University Of Chicago Press

Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.

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Morizot, B. (2021). *On the animal trail*. Polity Press.

Puig de la Bellacasa, M. (2017). *Matters of care: Speculative ethics in more than human worlds*. University of Minnesota Press.

Spivak, G. C. (1974) Translator's Preface. In: Derrida, J., *Of Grammatology*. Trans. G. C. Spivak. Johns Hopkins University Press.

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Zone Critique. (2018, February 14). *INSIDE, A lecture-performance by Bruno Latour* [Video File]. YouTube. [https://www.youtube.com/gzPROcd1MuE&t=921s&ab\\_channel=ZoneCritique](https://www.youtube.com/gzPROcd1MuE&t=921s&ab_channel=ZoneCritique)



5.1.1Intro

The focus of this chapter lies on narration through the power of written word, as well as the making of collages. It is important to mention that this is just one possible way of translating the voice of the river. As can be found in part 3 of this chapter, it is important to position oneself as researcher into the network under study. As reseachers, we are implicated in the outcomes, giving us a political and ethical responsibility.

To do this well, it is important to make use of the unique abilities one has as individual - hence the importance of situating oneself. For me personally, narrating and visualising are the logical choice due to background, experience, and interest. Others can make contributions in different dimensions, based on their unique skills and talents. These explorations are therefore just a ripple within a broader wave of listening and translating the voice of the Meuse.



5.1.2 Overview

7. Encounters with pottery makers and gravel companies highlight the duality between local practices of care, and regional practices of extraction and exploitation.

6. A story that keeps on coming back in various conversations is the environmental injustice near Geleen, where the chemical industrial complex Chemelot has permission to discharge toxins into the river Meuse. Who pays the price and who carries responsibility?

5. As I flow across borders almost without noticing, the river follows in my tracks. At the same time I am separated from the land on the other side of the river bank, seemingly close but out of reach. Borders are fluid and porous, temporary or permanent, depending on our gaze, scale, and perspective. What are the social en ecological implications of the open or closed borders we draw?

4. My encounter with legends and tales in this region hint to a past in which the Meuse took a more prominent role in our cultural consciousness. As something to fear but also to admire for its might.

3. Watching a flock of starlings in the sky near the river banks made me ponder movement. Considering the timespan of the river, even the most static structures start to move. A pulsating world with countless rhythms that we hardly perceive.

2. The disappearing of the river beneath the soil was my first introduction to the magic of the landscape. The thought of the river traversing unknown places made her alive for the first time.

1. My journey started at the source of the river. While learning about how the river is everywhere around us all the time, what is the meaning of such a place?





5.1.3 Assemblages narrated

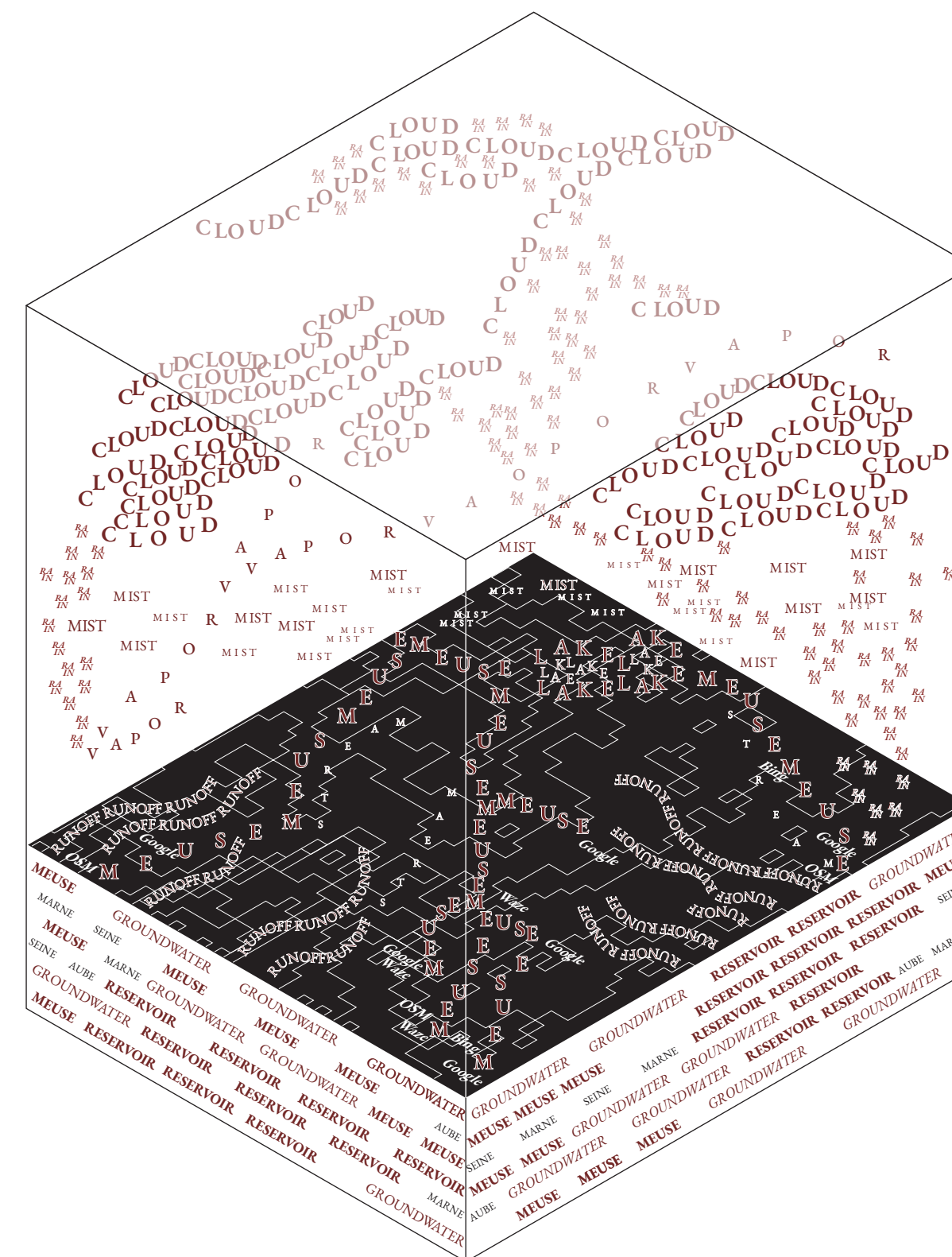
The following pages hold a glimpse of what an alternative atlas through the eyes of the Meuse could look like. On the left page you will find the familiar satelite image of a chosen assemblage. The text describes how this specific geographical space is experienced by the Meuse river.

The collage on the rights translates these words into a visual collage that reinterprets the specific region. Traditional geographical information and classical data are combined with local stories and a humble interpretation of the voice of the river.

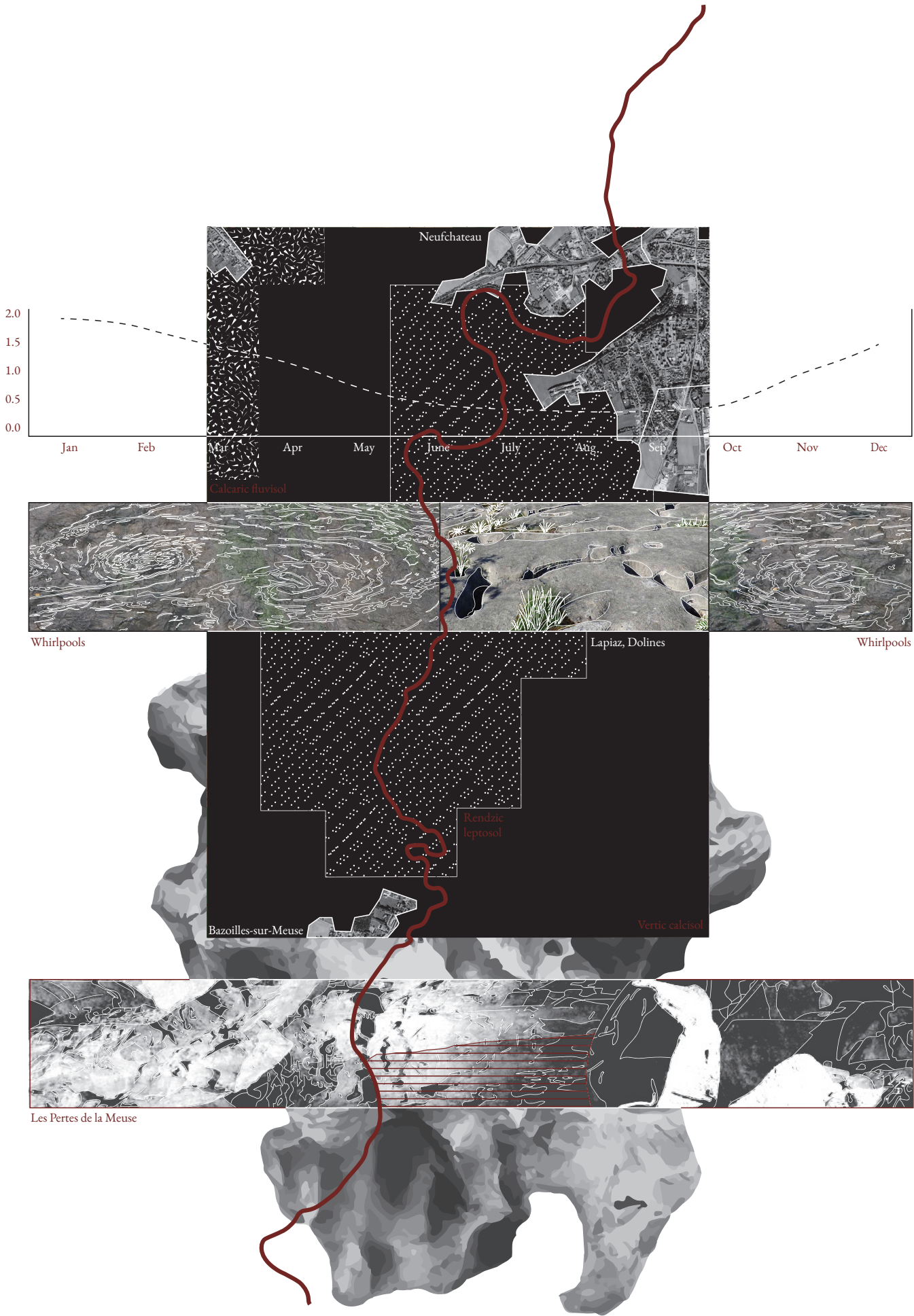


You think in lines. In beginnings and endings. From A to B. I do not have a beginning nor an ending, I simply am. Everywhere. I flow through air, over- and underground. I inhabit bodies, bodies inhabit me. I can take the shape of wind, drops, or forceful streams. You think you can measure me and capture my freedom in a freezing moment. Your static truth lies in coordinates and distances. You celebrate some part of me, carving my birth into stone thinking that this will resist change. But time is ruthless, and she is on my side. Even your maps cannot seem to decide where the water is. Depending on which source you consult blue lines appear elsewhere, and there they remain, even when I haven't fallen from the sky in a long time. In the end, you just have to come and visit me, see for yourself where your maps speak true.

After all, where is the water if not all around us?







Conversation | Exchange

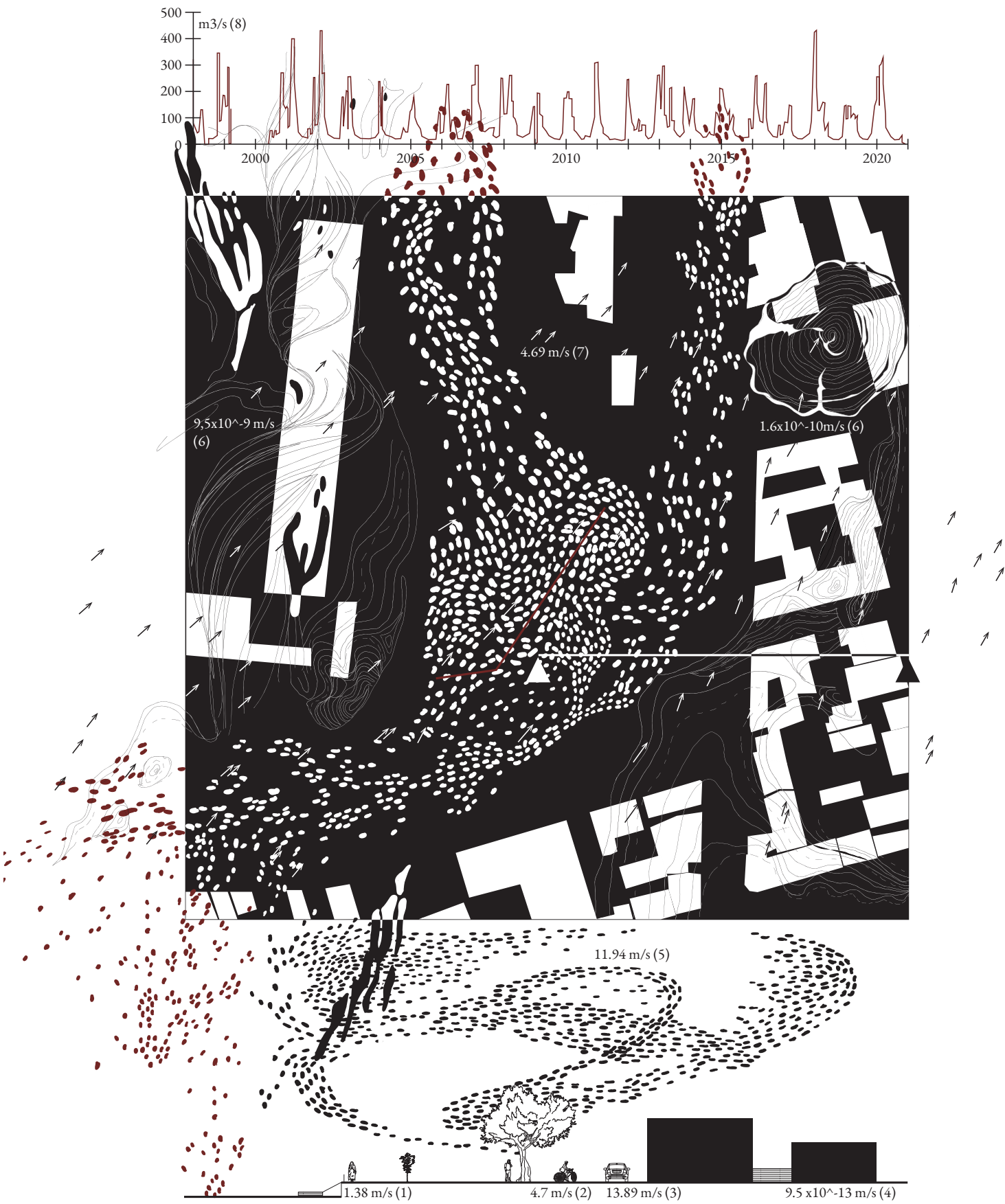
What we see is a partial perspective. The world is shaped according to what our senses allow us to perceive. And the world holds as many realities as eyes that can see.

In this karst landscape north of Bazoilles-sur-Meuse, you often see my flow just like anywhere along my stream. Those with keen eyes might already expect something special, noticing the whirlpools at my surface. A few months a year, I communicate l the dual worlds I inhabit more explicitly, as I disappear completely before your eyes. When my body transports little water, I reveal the lapiazes and dolines of my bed. My absence leaves questions.

It is not only these few months that I disappear. All year long a part of me escapes your gaze, and I explore a different world. One of magic, where stones are not solid but can dissolve by my touch. A world of caves and tunnels, hollows and caverns. My dripping body becomes a sculptor of stalagmites and stalactites, and I create rivers underground. I carry stones and stories with me back to the surface, greeting you and what was left of me before entering Neufchateau.







## Rhythm | Movement

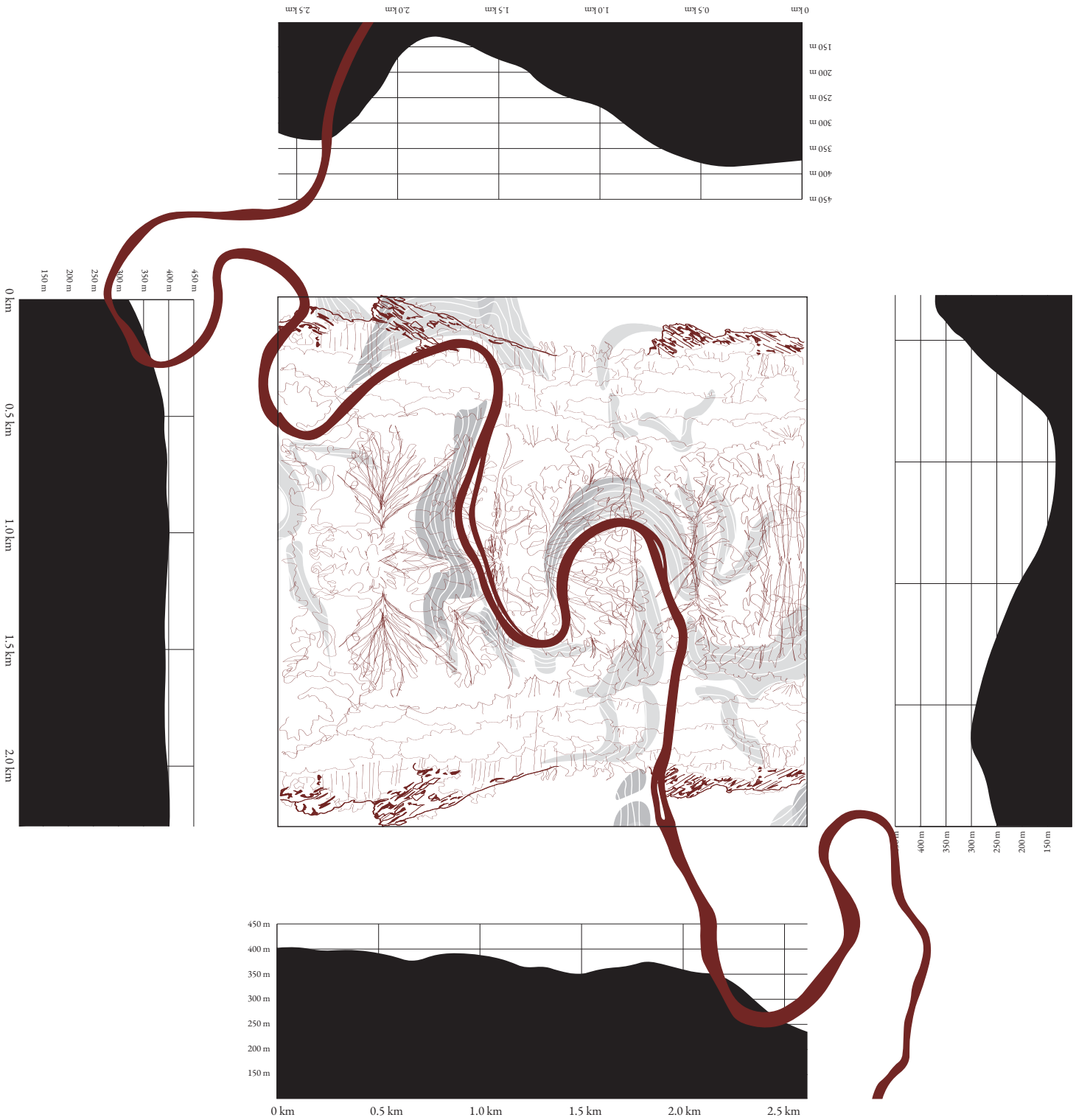
The movement of my body is emphasized here as you hear me falling off the dam you built in your city. To get a grip on the spaces you inhabit you draw them motionless; lines and blocks made permanent and immovable. I don't believe it is an act of ignorance, just a desire for control. After all, if things do not pause how can you draw their borders, and how can you act in such chaotic landscapes of temporary lines? You are not naive but just selective in your perception.

Some things you consider belonging to the realm of movement; you would even be surprised if they stood still: your own bodies, the vehicles in which you and others move, and the starlings, as they perform their choreographies in the sky. Other movements you consider worth measuring, as they fulfill your desire for forecasting, risk reduction, and anticipation for the future. You measure the speed of my waters and the wind that blows over them and your heads.

I see and perceive differently. I inhabit a world that holds different truths and meanings in the same location. To me, everything is rhythm, and dance. I have seen the soil change shape, buildings erode and rebuilt, people and other animals come and go. Decay and regeneration. Part of an endless choreography of cycles and flows.







**Silence | Reflection | Pause | Non-human Time**

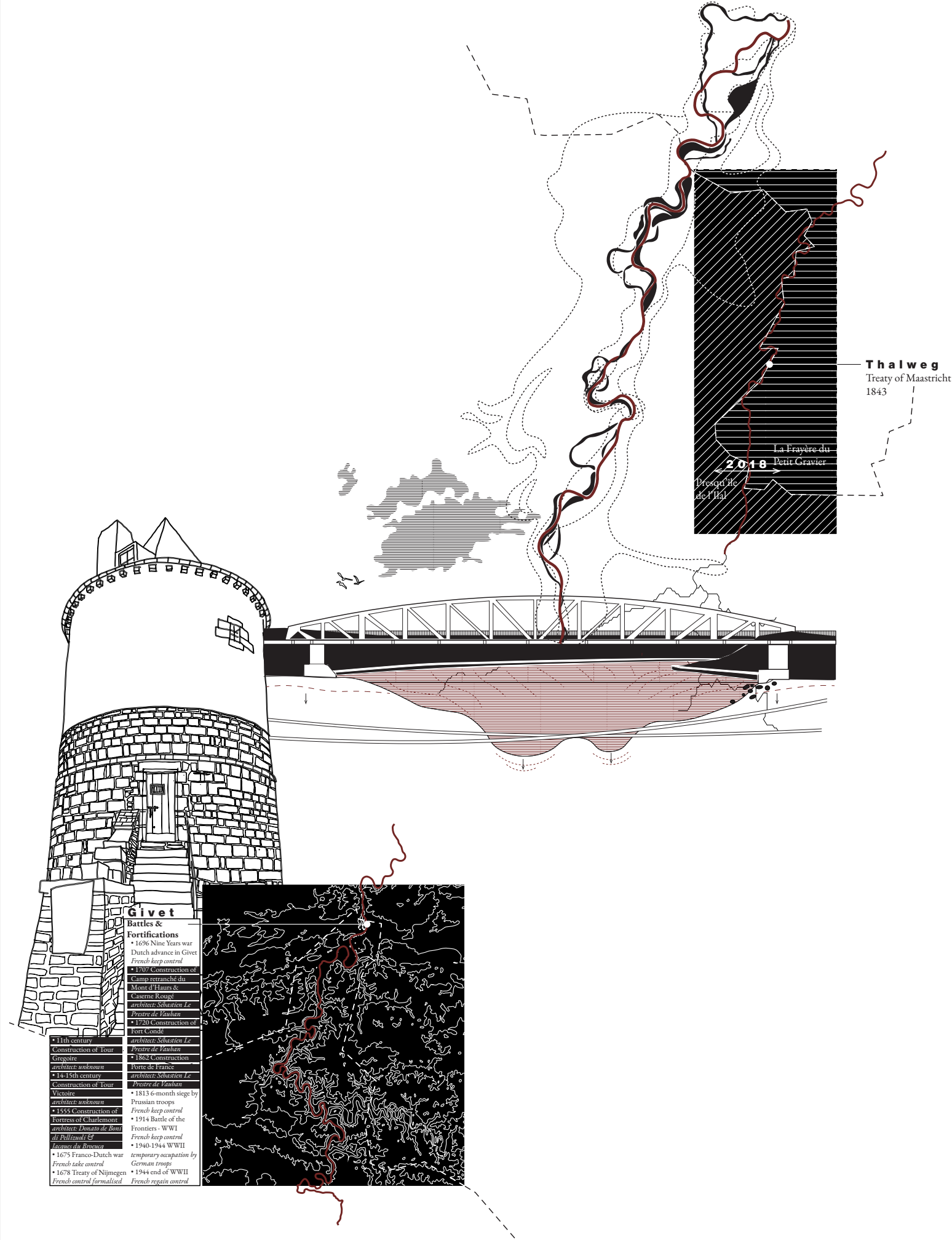
My body is squeezed between ridges, an enveloping embrace that guides my meanders. You cannot see far into the distance as rock walls rise in front, steering you gaze down- and inward. My body does not show what's inside, I just mirror those who look upon me. I do not speak, and while that might frustrate you, silence is my resistance to your haste. In silent solitude you hear what lies inside. I am the river, the river is me. Running from A to Z just makes you numb to the cyclical nature of time, in which your actions deposit their consequences close by.

My nature lends itself well for reflections and stories of becoming and return. In some places, like here, the landscape through which I travel strengthens this nature of mine. This place has been magical for you since long. Unsure of how to explain the formation of these rocks, you tell the legendary story of three adulterous sisters turned into stone and bound to sit forever on my banks. These mountains ask you to travel into deep times, into incredible forces that split the earth's crust and pushed it to heights that have since been slowly eroding into the shape that sits before you at this point in time.

Caught between motionless sculptures on each side, time slows down, and stretches out infinitely in all directions until you are fully immersed. As we become one, only the beauty and calmness reflected on my fleeting surface remains.







## Border duality

### Fixed | Fluid

You use the deepest point of my fluid body as point of reference - to draw permanent lines across the landscape. My fluid nature is in conflict with these politically laden lines, I have been in different places before and will be in the future. The landscape is my memory. As I shift my body the lands on my sides suddenly carry a different name.

Also at smaller scales, you project the logic of boundaries onto my body, thinking you can outsmart my nature. You built reinforced river banks, dikes, and dams, limiting my vertical and horizontal freedom. As one's nature cannot be denied, my need for free flow means the only way forward is down. The pillars of your structures made fragile, and your pipes laid bare. Confronted with the consequences of your attempt to simplify, you decided to give me back my freedom to flow, and thus in circles we go. You'll be surprised what else you would know if you took the time to listen.

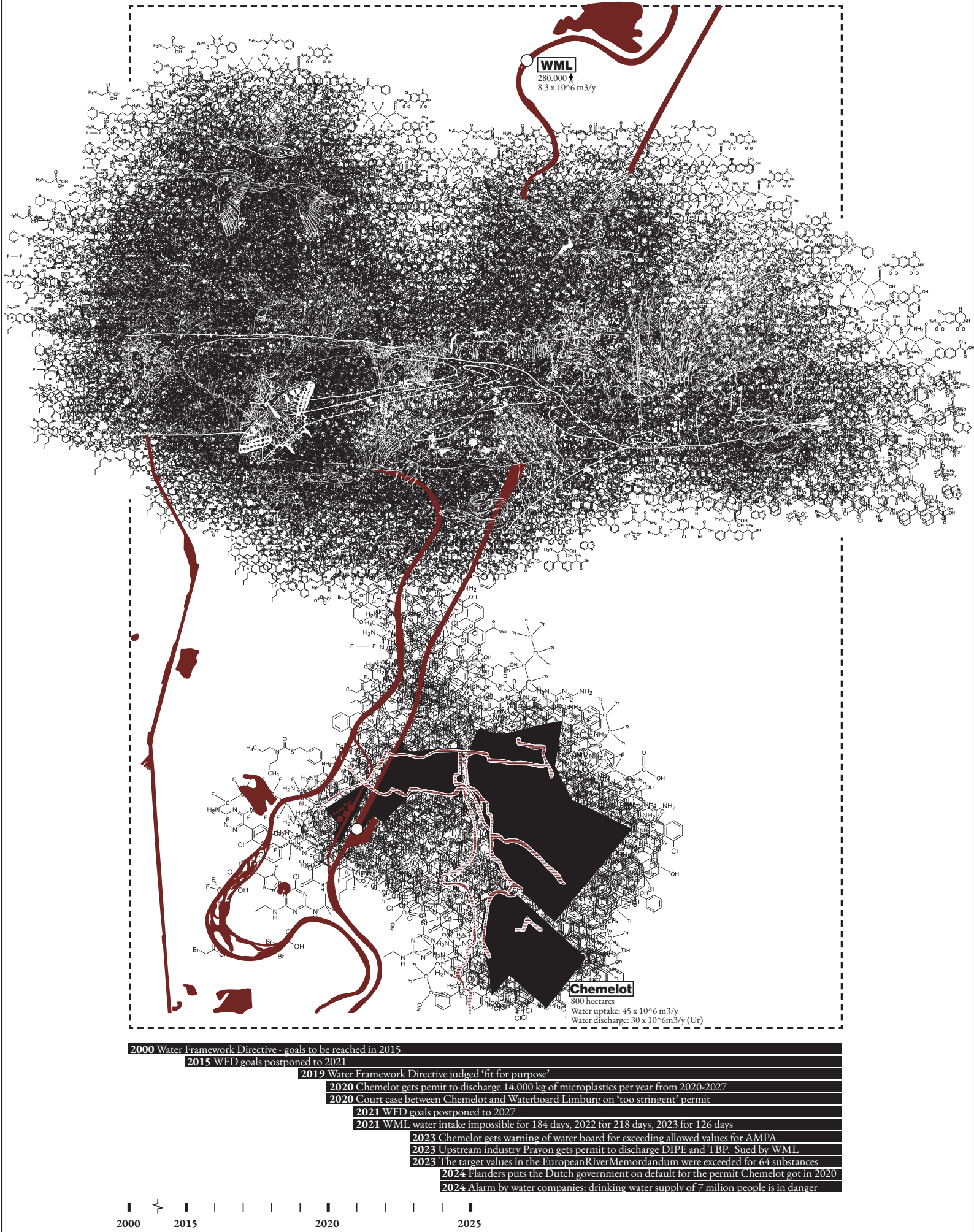
### Natural | Man-made

I do not divide, I collaborate. I converse with the rocks and the rolling hills over the course of centuries. In short timespans I shift sediments, making small alterations, but in the end our timelines converge in the creation and relocation of rocks and hills. Together we shape and change the landscape we both inhabit. With little resistance I follow the path laid out for me.

Your borders are conceptual, and have short lifespans. They do not follow the land but are blindly imprinted on them. To counter the logic of my connecting body, you instrumentalise me as natural barrier, making you feel safe from sieges. With your watchtowers and fortresses you try to resist political revolts of time and make this (once) continuous (now) protruding piece of land wave under the same flag.







**Environmental injustice**

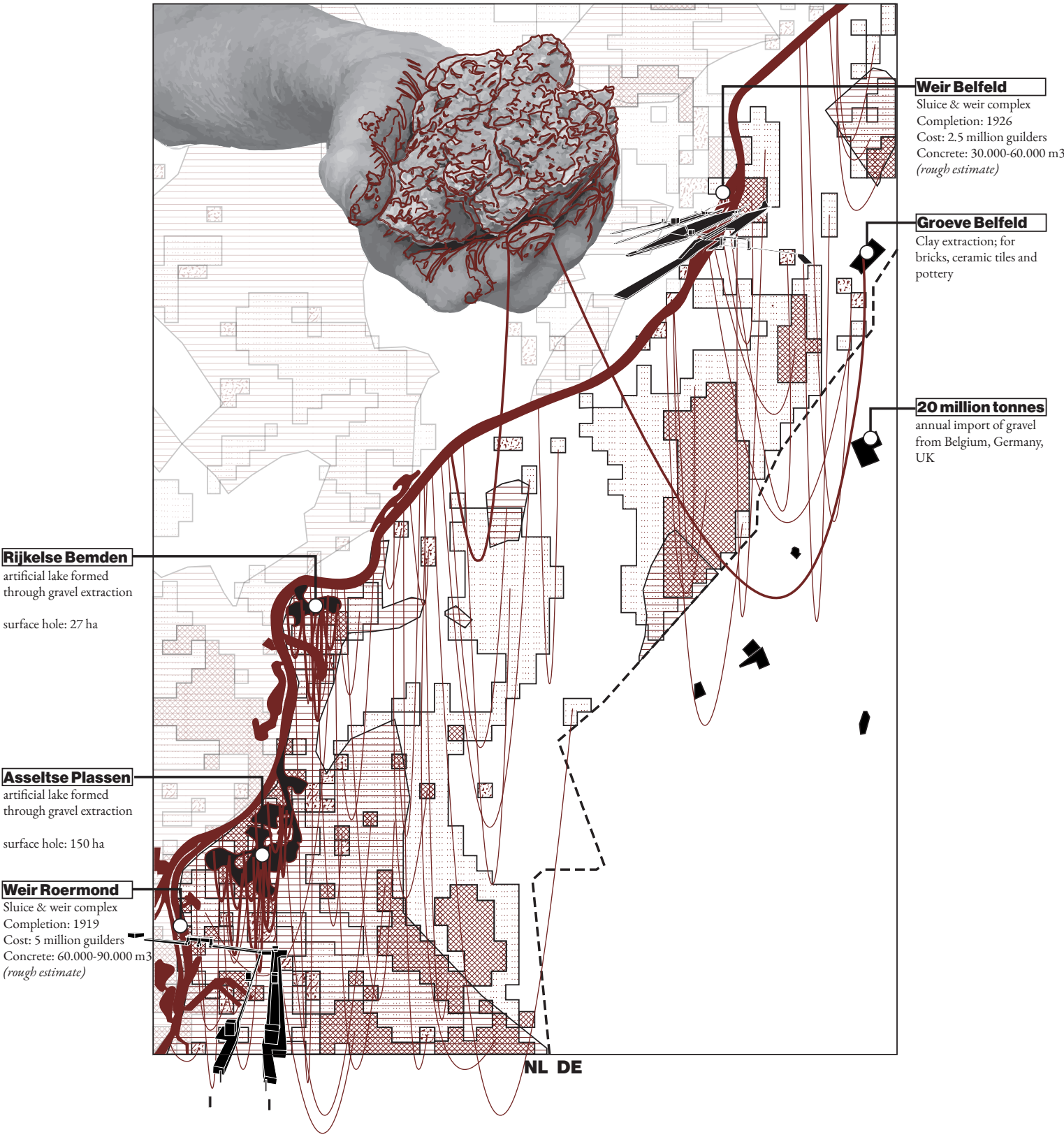
I am filled with substances I do not recognize as my own. Nonetheless they dissolve into my body, invisibly colonising my volume as though they rightfully belong.

There is nothing I can do. As passive bystander to my own toxicity and complicity. Well aware of the poison that I am I flow towards those who naively trusts my good intentions, and thirstily welcome me with open arms. My tears disappear into my waters before anyone can be alarmed, and my screams are muffled away into the roaming of the water, ships, and machines. I do not recognise myself, as my veins meant to bring life now pulsate with toxins. How is it that you do not see that this toxic landscape is your body too. The chemicals you lawfully discharge seep and creep into all the life that depends on me, leaving nothing untouched.

All our bodies are wastelands now.







### Reciprocity / Extraction

The clay held in cupped hands stands in stark contrast to the crater-shaped scars you left on the landscape. With your touch you feel the weight of my skin, while the cold distance that the machines allow easily overlook the fragile balance that I am.

There is no sin in taking; as long as you give in return. Just like reciprocity goes in circles, so does your bottomless taking eventually leave holes in your own existence. We take part in the same whirlpool of circles and cycles, you and I. The structures you built inside my waters from the gravel, sand, and clay you take inhibit my replenishing nature. While my waters move through and over your sluices, my sediments cannot follow the same path. If you take too much in one place it will eventually land on your own account.

We are tied together by fragile strings. Hollowing out further will benefit neither one of us. We have to learn how to navigate this chaotic web of threads together and let life flourish by reciprocal touch.

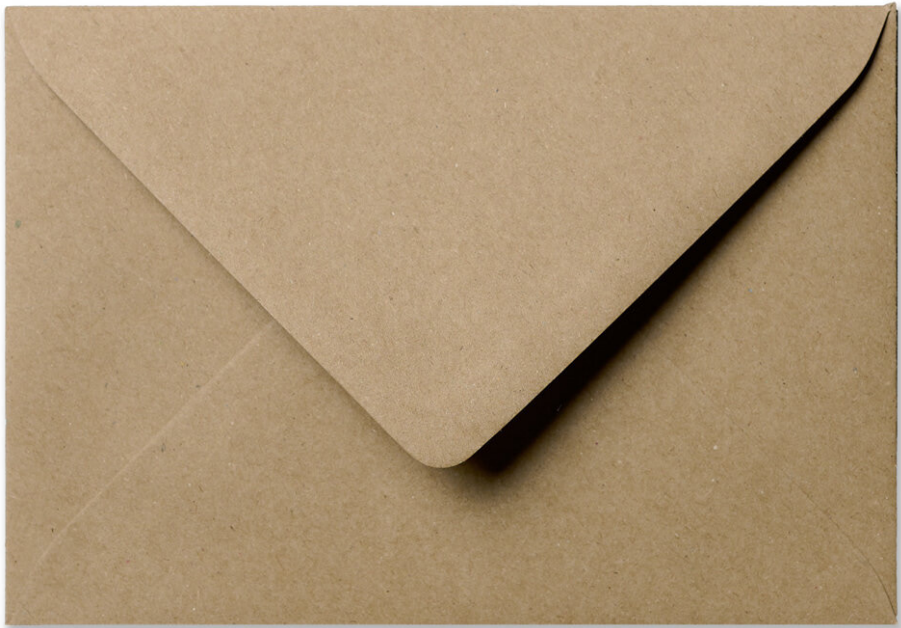




5.1.4 Conclusions

The process of narrating and visualising are both product and method to reveal the agency of the river. In terms of outcome, it explores a possible answer to the first research question: translating the river’s perspective in narrative and visualising it in collages makes the voice of the river louder in the assemblages investigated here. This voice can be a starting point to mediate the interests of the river in the assemblages investigated here, as it can give rise to critical questions or can expose concrete situations that require a response. As such the collages are a product, offering a new point of departure.

At the same time, they propose a method and thereby link to the second research question. The assemblages shown here offer just a glimpse of the complex relations found in local patches across the river basin. The activity of making these collages, uncovering layers and tying them together were a valuable exercise for me to think differently about these patches. This method could be used by designers as way to explore the territories in and with which they design. Starting a project with making these subjective maps can give rise to questions, stories, or actors that would otherwise have remain hidden.



Envelope is added to the page with a description of a workshop that turns the exploration of the chapter into a method



Narrating & Visualising

Goal: to bring a different (additional) reality into being. Thickening the meanings and perspectives that matter in a given location. Adding layers. Entangled way of storytelling in which the landscape is an active agent. Storytelling & artistic interpretation = about shifting perspective.

1. Experience the territory (slow movement)

Go for a walk in the your design location. Allow for intuitive encounters: which non/human actors capture your attention/seem important. Choose one to focus on.

2. Listening to the territory

Different opportunities for learning emerge as you walk; territory as teacher. Attentiveness to ‘silent’ patterns around you by sitting still, experimenting, listening, reflecting; Imagine the territory from the perspective of your chosen non-human actor. What comes to matter? What becomes irrelevant? Which spaces emerge as spaces of conflict (that might otherwise seem neutral if considered from human perspective only)? You can look up information about your non/human actor to enrich your understanding.

If time allows: interview residents, scientists, biologists, activists or other relevant actors about their view on the assemblage of the non-human actor and territory of choice

3. Drawing & narrating the territory

a) Choose a relevant part of the territory based upon step 2. Write a short description (200-300 words) of the territory from the perspective of your non-human actor. This helps you focus for the next step.

b) Make a map of the territory from the perspective of the non-human actor. Drawing gives a language different from words. Move beyond transmitting cartographic information (make a collage mixing drawing, photo, data, maps etc.).

c) Reflect: how does emphasis shift? What are the implications for design? Which aspects of the territory suddenly get a lot of attention that you would otherwise forget? Perhaps connections emerged between your territory and other places? Do borders shift?

Key takeaways

- [1] Ambiguity
- Necessity to “go out” --> limits to what data can tell
- [2] Conversation/Exchange
- How can design allow for dialogue to take place between water & soil (e.g. remove artificial river banks)
  - How can anomalies be included as space of curiosity & learning rather than problematic creaks to be ironed out of the plane surface

- [3] Rhythm / Movement
- Everything constantly moves; how can I make space for decay and regeneration
  - How can the design allow for movement; give space to all that is alive; e.g. birds, water, trees

- [4] Silence/Reflection | Pause/ non-human Time
- Design places for reflection, inviting a standstill that counters our fast-paced lives
  - Emphasize/highlight the magic of the landscape

- [5] Border Duality
- Natural/man-made
- With which borders do we design
  - Border regions are at the edge of our governance systems and often forgotten, while the river-border is a place of life and importance
  - What are the implications if we choose different boundaries within which our projects sit?

- Fixed/fluid
- Work with rather than against fluid borders and porosity
  - What can we learn from the past about where the water was, and will at some point be in the future

- Conceptualise this as “water territory”
- Amphibious architecture
- How can landuse accomodate for ‘wetness’, in which there is no clear demarcation between water and land? Agriculture/palludiculture, work with seasonality and natural flows

- [6] Environmental Injustice
- Expose injustices as designer --> urbanism as forensic project
  - How can I, in my role as designer, contribute to rectification --> take ethical and political stance.

- [7] Reciprocity/ Extraction
- What materials do we take and how do we use them?
  - Can we design in such a way that materials eventually cycle back e.g. design for circularity
  - Design such that natural flows and cycles are not interrupted



5.2 Multi-Sensory Mapping

Essay 3

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Representing  
*A Multi-Sensory Experience*

*Page number repeats as the essay will be stapled on top of the paper*



## Embodied Learning

### *Duality of body and mind*

The fieldwork forced me to acknowledge the presence and active mediating role of my body within the research project. This felt uncomfortable at first, not sure of how to include bodily knowledge within an academic setting. The scientific tradition in Northwestern Europe that I come from is, despite longstanding criticism, still grounded in the Cartesian dualism of body and mind. Within this duality, there is a clear epistemological hierarchy that prioritises the mind as a source of objective scientific knowledge over bodily ways of knowing that are often positioned as subjective or experimental (Grosz, 1994; Harding, 1986).

The body-mind divide has been used to maintain certain power structures, as the bodily is often equated with nature, with the feminine, and with knowledge systems of marginalised groups like those of indigenous communities. The mind-body duality has been used to justify systems of gender and colonial power. Writers like Harding (1991) and Keller (1985) show how the devaluation of embodied knowledge mirrors broader patriarchal structures that equate reason with masculinity and bodily knowledge with the feminine. In a similar vein, Smith (1999) highlights

how indigenous knowledge systems that are deeply rooted in bodily, relational and situated ways of knowing have been systematically devalued by scientific practices.

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### *Space as multi-sensory immersion*

Fieldwork is a multi-sensory experience and emphasises the importance of each of them. Each sense draws the body and one's awareness into the landscape in different ways, directing and redirecting one's attention. Once these senses were activated, I became attuned to aspects of the landscape that would otherwise have gone unnoticed.

*Swimming in the river, tactile*  
*Biking along the river, vestibular*  
*Observing the water surface, visual*  
*Hearing the river, auditory*  
*Smelling the touch of rain, olfactory*

Phenomenology offers an important conceptual foundation to these explorations. Merleau-Ponty (1945), famous for his *Phenomenology of Perception* argued that perception is not a passive reception of external stimuli, but a bodily, lived relation to the world that is inherently multi-sensory. Knowledge, then, does not arise from

detached observation but from being-in-the-world.

Within the urban discipline, the sense of vision has always had a unique position, given the discipline's concern with aesthetics and beauty. Perhaps that is the sense that let's itself most easily be justified, as Puig de la Bellacasa (2017) describes vision to be most closely aligned with the mind as it enables the technoscientific gaze and distant, asymmetric observation, reminding of the 'gaze from nowhere' that Haraway (1988) warned scientists of.

To oppose this distant gaze, Puig de la Bellacasa advocates a revaluation of touch, which requires proximity and direct contact; it is always reciprocal since you cannot touch something without being touched in return (2017). The act of moving along the river highlighted not only touch and vision but gave additional weight to the other senses as well.

It is interesting that a spatial discipline like urbanism, that produces multi-sensory places, often does not include these senses in the *investigation* of space. While they are implicitly taken into account when one conducts fieldwork, they are not often acknowledged formally as data input. I was therefore curious to see what would happen if I would map out the territory through a

sense that is different from the visual.

Not deciding upfront, but curious about where the journey would take me, I used my field journal to become more attentive to a variety of senses. I noted down the sensations of the weather on my body, sounds I heard, smells I noticed, notable things to be seen, and reflections on my movements along the route. Apart from writing, I made sound recordings and short videos of the water, took photos, and made drawings of the surrounding area.

These ideas find resonance in recent methodological developments, with great attention to fieldwork as critical practice, to challenge conventional divides between theory and practice (Baptista & Veleviski, 2023).

Manning's (2015) work on research-creation, for instance, explores how creative acts like sound recording, drawing, or video-making are not just artistic outputs, but active processes of thought. Rendell (2006) explicitly links this to spatial practices like urbanism, proposing critical spatial practice as a way to rethink architectural and urban work through the lens of the arts. Building on a variety of spatial theories, she suggests that incorporating art into spatial disciplines is not just decorative, but politically and ethically necessary as it "holds special potential for



transforming places into spaces of social critique” (p. 13).

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### *The voice of the river*

In response to the question of how to restore the agency of the Meuse, I was drawn mostly to delve deeper into the role of sound. First, because sound, whether loud or silent, present or absent, can consume your experience and completely shift attention. Second, because of the literal link to interpreting and translating the language/voice of the river.

While biking, I noticed that the space the Meuse took up in my consciousness was very much influenced by whether or not I could hear her. In a natural setting, near the source, I could hear her trickling and tingling as I biked alongside her. As she grew bigger, the sound changes into a deeper rushing and swaying. As her course is more heavily altered, canalised and normalised she becomes increasingly silent. The diminishing sound was paired with an increasing density of human life as I moved from the desolate agricultural fields in France to the busy urban and industrial regions in Belgium and The Netherlands. This intensified use of space was accompanied by various sounds that overshadowed the voice of

the water.

At some point, I started to see trends, hearing the difference between particular rumbling sounds (weirs), strange silence (canals or sluices), and tickling (waves), or licking (rippling on the riverbank). These trends shifted my attention to new places of conflict that would otherwise have remained neutral. Canals and sluices are important outliers, as not only the river, but also the birds living around the river fell silent. They are an example of how structures that seem neutral or innocent are implicated in assemblages that might take care of us, serving economic interests of shipping and trade, but neglect the interests of others.

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5.2.1 Intro

During the fieldtrip I recorded parts of the river territory every 25km. As I spend 10-30 minutes at each node of observation, there are multiple recordings of each place, adding to a total of 144 recordings.

I used these recordings to create an alternative map for the river territory in two ways. First of all, it is valuable to know where in the river basin the specific sounds come from. Hence, the sound recordings are uploaded on a webpage, including a stamp for coordinates, date, and time of the recording. This way, the sounds can be used for academic purposes. The webpage will be open-source, allowing others to make contributions to the auditory atlas of the Meuse river.

Travelling through an online sound-map of the Meuse can be a valuable tool and method for designers. After all,

as was noted in the preceding essay, paying attention to sound can reveal new places of conflict, possibilities for return, or highlight aspects of the landscape that often remain hidden from sight.

Secondly, I used the recordings the create a soundscape of the river territory. While the separate sounds can be used as data input, they are not yet capable of bringing the river Meuse to life. After listening and witnessing, I decided to translate the multiplicit being of the Meuse into an immersive soundscape. In the same way as water acts when you dive in, the soundscape fully envelops the listener, inviting curiosity to the attentive ear that slowly colours in the landscape with the imaginations and associations that the sounds evoke. The mixture and contrast between different souds give a hint of the multitude of characters and roles that the river can play.



5.2.2 Overview

Number	Measurement day	Location	Latitude	Longitude
1	1.1	Source de la Meuse	47.974296	5.633392
2	1.2	Bridge near Levécourt	48.142292	5.558130
3	2.1	Bridge Neufchateau	48.367282	5.687706
4	2.2	Between Traveron & Sauvigny	48.512353	5.720105
5	2.3	Bridge near Chalaïnes	48.601903	5.678638
6	2.4	Canal de L'Est bij Euville	48.742951	5.634755
7	3.1	Just outside Brasseitte	48.849007	5.531980
8	3.2	Bridge Villers-sur-Meuse	49.021053	5.419926
9	3.3	Verdun	49.156473	5.386293
10	4.1	Between Belleville-sur-Meuse & Bras-sur-Meuse	49.196062	5.370161
11	4.2	Sivry sur Meuse	49.321341	5.255885
12	4.3	Stenay	49.489001	5.180241
13	4.4	Little lake near Autrecourt-et-Pourron	49.612081	5.044961
14	5.1	Sedan	49.698400	4.943133
15	6.1	Charleville-Mézières	49.776419	4.722543
16	6.2	Bridge near Montherme	49.887554	4.734823
17	6.3	Dam and sluice near Orzy	49.932396	4.646886
18	7.1	Near Montigny-sur-Meuse	50.059070	4.724320
19	7.2	Watchtower in Givet	50.135144	4.823925
20	7.3	Chateau de Freyr	50.226230	4.889674
21	8.1	Near Burnot	50.353682	4.877073
22	8.2	Namur Citadelle Island	50.461618	4.867086
23	9.1	Michel's house near Gives	50.502653	5.130391
24	9.2	Near Flemalle	50.585851	5.429164
25	9.3	Bridge Liège	50.607318	5.543633
26	10.1	Outside Liège	50.654000	5.617927
27	10.2	Border NL BE	50.767462	5.689321
28	11.1	Near Elsloo	50.948504	5.756490
29	11.2	Maasbracht	51.146837	5.885637
30	12.1	Harbour near Venlo	51.370687	6.166015
31	12.2	Near Lottum	51.458443	6.174439
32	13.1	Bridge Well	51.547780	6.099386
33	13.2	Natural area between Gennep and Milsbeek	51.715159	5.952454
34	14.1	Bridge close to Keent	51.777540	5.679634
35	15.1	Lith	51.814419	5.420737
36	15.2	Bridge near Hedel	51.739721	5.268461
37	16.1	Fort Werkendam	51.800920	4.867528
38	16.2	Dordrecht water bus station	51.819527	4.674871
39	16.3	Merwedehaven	51.912725	4.418573
40	16.4	Maeslantkering	51.959173	4.161781
41	16.5	Hoek van Holland beach	51.990789	4.106632

Table 1: location sound recordings



Different sounds are translated to 'stamps' that are laid on top of the map, in the physical report this is printed on transparent paper



5.2.3 Exhibiting what is there | Open source auditory map of the Meuse



<https://meuse-atlas.nl/sounds/>



5.2.4 Translating what was found | Soundscape of the river Meuse

Landscapes come with specific soundscapes that change across space and time. As I travelled along the course of the Meuse, she became a multiplicity, expressed differently through interactions, materials, infrastructures. The soundscape of the river does therefore not include only watery sounds as one might expect.

All the sounds that are produced through the interactions of the multiplicit being of the Meuse are a reflection of the territory of the river. The soundscape is therefore a mixture of all the sounds that I recorded along the river course. This includes explicit sounds of the water body itself, as well as the sounds produced by the activities in which she is implicitly present.

Just like photographing the region, sounds can capture spaces in a unique place and time. *Phonography* literally means sound-writing. By paying attention to sound we write places in a different way. The soundscape aims to highlight the Meuse as complex assemblage, shaped by dualities: at times ominous, at others friendly and kind, both capricious and predictable, mysterious with hidden depths and also crystal clear, simultaneously calm, soothing, and soft versus chaotic, perturbing, and wild.

“The sound at any location is an integral of many processes, living and physical (material), historical and contemporary, political, social, cultural and spiritual, economic, ecological, geographical and meteorological.”

- D. Simpson, 2003

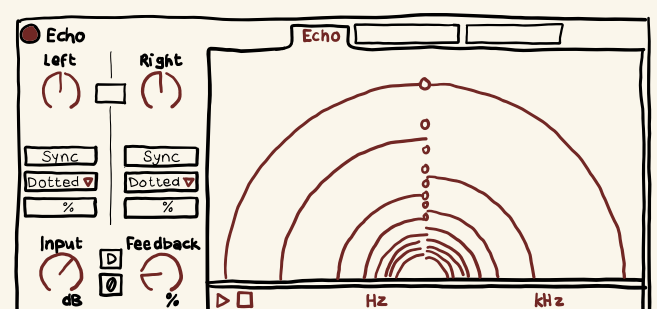
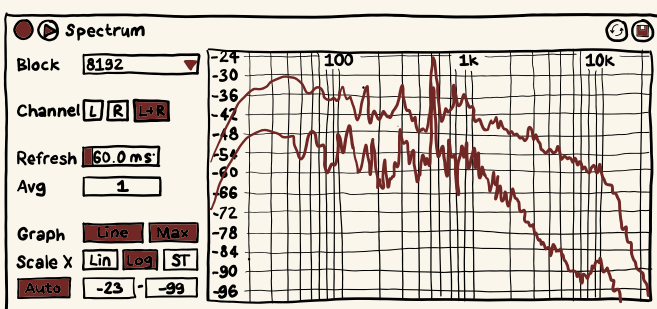
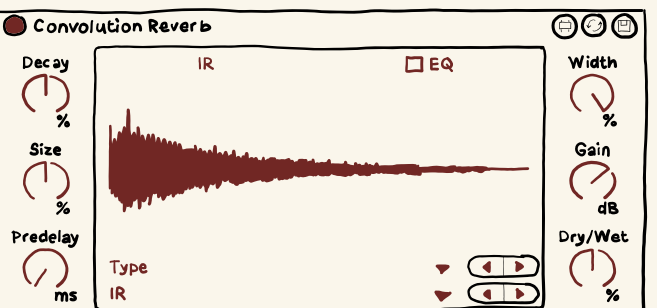
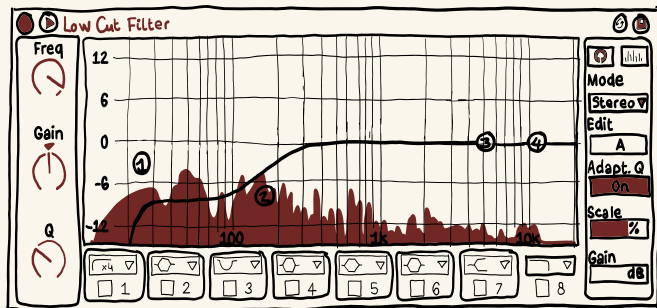
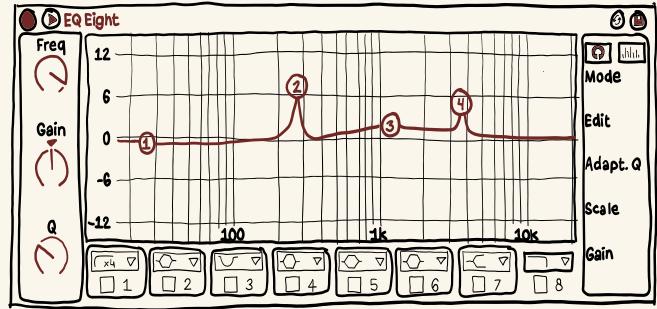
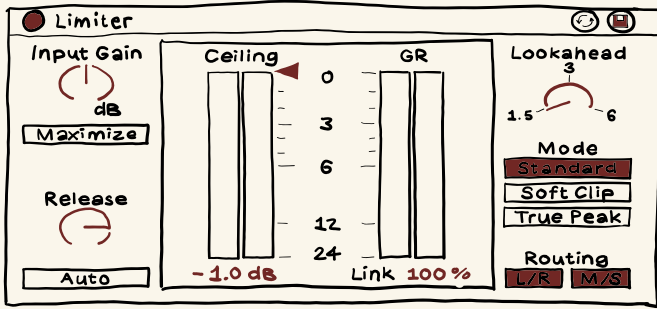
Interdisciplinary collaboration

To make the soundscape, I reached out to a sound designer from the conservatory in Amsterdam, Christian Nijeboer.

After discussing what the soundscape should communicate, we got to work. We cleaned up the data shown in Table 1 on page 167, taking those of pour quality out, and loaded them into Ableton - an audio editing software.

To stay close to representing the sound of the Meuse territory *as they are*, the entire soundscape is made using only the recorded sounds. Effects are used to amplify specific aspects, but nothing artificial is added to the auditory landscape.

Drawings of the different effects applied in ableton can be found in the tiny flip-books stapled on top of the page



Work Process Ableton

Low cut filter

Reduces lower frequencies in the audio. Used to reduce the overpowering wind present in many recordings.

Compressor

Reduces the highest peaks such that the overall signal level can be turned up. This is useful as some recordings have sudden bursts, while others are relatively flat.

Limiter

Makes sure sounds do not go beyond a certain level (here: -1dB).

Convolution Reverb

This takes a real-world space and digitally simulates the reverberation of that space. As we do not want to add anything that is not found along the river banks, we chose one of the recordings (see locator map, recording #) to be used as room within which the sound reverberates.

EQ Eight

Brings out certain frequencies. Again, because of the dominance of the wind in many sounds, higher frequencies are highlighted.

Spectral Tracing

Keeps the loudest partials in a sound.

Echo

The sound is taken through an echo.

Soothe 2 plugin

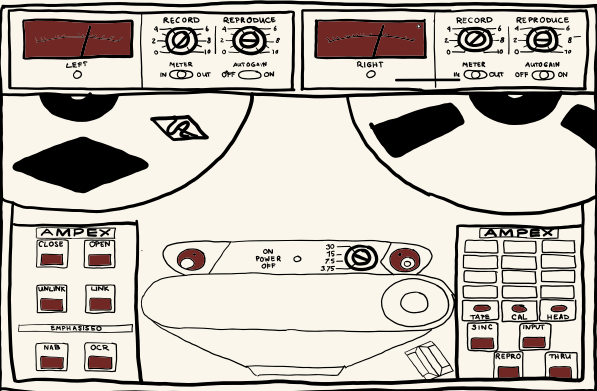
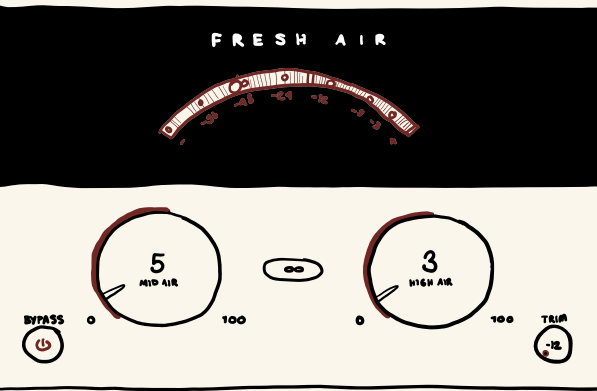
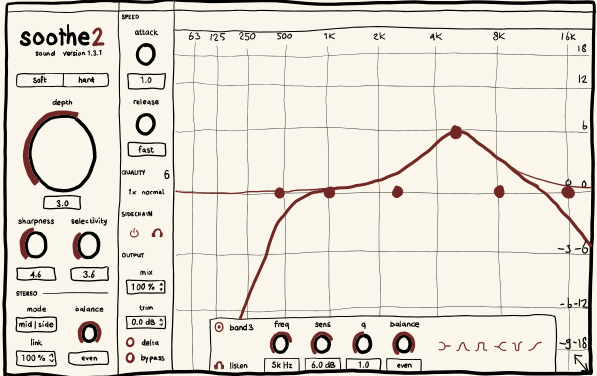
Reduces harsh sounds; it is a dynamic EQ based on input, so it only kicks in when needed. This results in a smoother, more balanced sound.

Fresh Air plugin

Highlights pleasant mid-air frequencies.

AMPEX

The whole sound runs through a tape emulator called AMPEX.



Effects

Plugins





<https://on.soundcloud.com/ddknMwf5cKkWpYBd8>

*Envelope is added to the page with a description of a workshop that turns the exploration of the chapter into a method*

5.2.5 Conclusions

The investigation of space through sound highlights new places of conflict and possibilities for return that I would otherwise not have noticed. Being open to multi-sensory data, and recognising its valuable input could have transformative potential for urban projects. Besides, depending on the visual alone allows you to take the position of outsider, as this data can be accessed through satellite images or street view technologies. To become attuned to other senses you need to go out, slow down, and become silent to hear what is being communicated. This allows for a listening practice that is more inclusive to more-than-human perspectives.

Besides that, this process allows for a more humble stance in translating the voice of the river. After all, as was stated in the previous paragraph the act of translation and representation of a silent/silenced other risks appropriation of the other’s experience. Rather than interpreting the voice myself and translating it into images (Chapter 5.1) this soundscape amplifies the voice of the river *as it is*.



Multi-Sensory Mapping

Goal: to bring a different (additional) reality into being. Thickening the meanings and perspectives that matter in a given location. Adding layers. Entangled way of storytelling in which the landscape is an active agent. Storytelling & artistic interpretation = about shifting perspective.

This exercise is done in a group. The goals is to make a subjective atlas for the river Meuse. Using critical cartography to include more-than-human perspectives.

1. Go out. Choose an area along the river that you will investigate as a group.
2. Start exploration individually (30min-60min). Walk along the river, observe the surface, its flow, smells, sounds, sensations on your skin. Slow down and take time to notice. How do you use different senses to **read** the river

Things to consider: sounds, smells, touch, movement, etc.

3. Get back together as a group and share your experiences.

4. Together, choose one sense to focus on. Think of how this sense allows you to **listen** to the language of the river.

5. Translate the perspective of the river into a multisensory artefact.

Be creative; it can be a soundscape (sound), sculpture (touch), performance (movement) and so much more!

~ • ~

- Products:
- Map of the area you investigated
  - Present your multisensory artefact
  - Reflection: what is the added value of this as method for researching space, and how can it be used as tool for design?



5.3 Relational Thinking

Essay 4

•

Responding  
*Within relational entanglements*

*Page number repeats as the essay will be stapled on top of the paper*



## Transformative Encounters

The fieldtrip allowed for intuitive and unexpected encounters and conversations. It allowed me to collect the stories that this river writes together with the landscape and the people and more-than-human lives that are entwined with it. The combination of experience, observation, and interviewing both land and people revealed the multiplicity that the river is, i.e. the different roles and identities she adopts depending on the context and relationship in which she appears.

As I followed the course of the river, I saw traces of contamination everywhere, interpreted here in Tsing's use of the term, as "transformation through encounter" (Tsing, 2015, p. 28). All the stories that I gathered from industries, inhabitants, artists, and politicians, showed that the river, the landscape, and the life around it evolved together. It reveals our precarious state as being vulnerable to others and being mutually dependant (Tsing, 2015).

•

### *River as territory*

Even though my journey was bound to follow the course of the river, these relational networks carried me far away into distant locations. The Meuse thus

became something much bigger than her cartographic conceptualisation as line on a map, but rather as encompassing an entire territory of her own. Designing together with the river thus means to design with/in this web of relations, not just with the river as separate component in the landscape. Since this web of relations changes constantly, the borders of the river territory are constantly remade and redefined, depending on the historical and socio-political context. Taking care of such a dynamic system thus requires ongoing reflection, repositioning, and re-acting. The river makes a good point of departure as the effects of caring practices aimed at the river will ripple onto others whose lives are intertwined with the water. Nevertheless, as care goes in both directions, starting points for regeneration might also be found in unexpected places elsewhere.

Apart from the relational presence of the river that turns the line into a territory, the physical presence of the river stretches far beyond the riverbed as well. Dilip Da Cunha (2019) reconceptualised rivers as 'ubiquitous wetness', as water is not just in rivers, oceans and in lakes, but in also in the air, soil, vegetation, and on 'dry' land, just in varying degrees. With this concept, he challenges the land-water binary that

we see in traditional cartography and is guiding in urban plans. By rethinking the river as an ocean of wetness, designs that work against the water, or aim to keep the water out, become nonsensical. By accepting that water is present everywhere, we are called to co-design with the water and to rethink space as co-inhabited.

•

### *Territorial representation*

In urbanism, territory has traditionally been bounded by the edges of political jurisdictions. Maps, policies, and analyses often stop at national borders, subtly suggesting that design should do the same. But what if we took the river itself as the organising principle of territorial thinking? Latour (2015) advocates for acknowledging a multitude of territories that make up our political arena and to change the discourse away from the traditional conflicts between nation-states into a conflict between territories. The future of politics lies not in nation-states but in conflicting, overlapping territories that each make their own claims to land, water, and survival. Each delegation is equally legitimate, regardless of whether they are called 'The Meuse', 'France', or the 'Ardenne Forest'. This is part of the process of landing on Earth (Latour & Weibel, 2020) as there is nowhere to

escape to; and the only way forward is back down. The urban project then becomes one of negotiating between these overlapping territories.

This brings us back to the Rights of Nature movement and the role of the urban discipline in its operationalisation. The urban designer can make a contribution to restoring the agency of the Meuse by amplifying the voice of the territory and its claim to space (see *Chapter 5.1 and 5.2*) and by becoming good ecosystem builders within these territories. Both are acts of translation, mediation, and participation. After all, rights do not exist on their own but are recognised because they are actively enacted, protected and maintained.

Hence my curiosity to delve deeper into who inhabits this space? What relationships sustain it? And how might those be strengthened through design? An urban project for the rights of the Meuse does not simply declare rights; it cultivates the relationships that allow those rights to be lived. This requires a territorial lense that honours both the unity of the river as indivisible whole from source to mouth as well as her multiplicity and entanglement with the landscape through which she flows.

•



### *Positioning within the network*

As the river is reconceptualised as territory made up of a network of relations, taking action becomes a practice of weaving: changing existing patterns or adding and subtracting new strings. Earlier writings on the situatedness of the researcher hold that I should place myself within this web, and not assume the position of researcher-outsider (see *Essay 1*). Weaving myself to the network as individual with specific knowledge and capabilities gives priority to some relationships over others, simply because a specific set of relations lies within the reach of either my knowledge, capacity, influence, or interest.

Since I undertake this project from the position of an urban design student, I have a partial perspective through which I interpret the network, which allows me to find specific connections while also being blind to others. Mistakes will be made but that should not withhold one from taking action.

Here I am always reminded of the words of Robin Wall Kimmerer in *Braiding Sweetgrass* (2020) where she combines indigenous wisdom with scientific methods to show that the idea of “pristine nature” as something that is better left untouched does not hold. On the contrary: ecosystems thrive

through exchange and interference, as long as this is practiced with respect for natural flows and cycles of restoration to maintain a healthy balance.

•

### *Strengthening the network*

The river teaches about slow time, about cyclical, and about long-term thinking. When thinking through the abundances and scarcities of the network with these values in mind, new threads emerge that can allow for ongoing care and maintenance of the health of the river. Analysis of relationships from my partial perspective reveals gaps between local practices of reciprocal care between individuals or communities and the river, as these practices are often invisible or isolated.

To restore the agency of the river, an urban project for the Meuse should thus create a connection between existing practices of care by building a bottom-up network that crosses national borders. To incorporate the language of the river into the urban discipline, new lines of connection and care should be established between designers and the river. Designers can contribute to the strength of this bottom-up network by translating the knowledge that circulates there into physical design projects.

My *journey* spanned across the entire river body, hence my *project* for strengthening the network does so as well.

•

### *The atlas*

To amplify and connect different voices, I propose an online atlas for the Meuse that expands over time. As I mentioned in the motivation preceding this thesis, I am interested in the power of stories. During the research process, I have found that through *experience* we each write personal stories, which are very strong in provoking action. To do justice to the plurality of interpretations of reality, we need a plurality of stories. Hence, the atlas takes the shape of an open-source website, inviting contributions from others. The Atlas will thus be a living project, allowing for autonomous and decentralised growth, where learning is ongoing and shared.

The investigations in the previous components (*narrating & visualising the territory, multi-sensory mapping*) can be a starting point for the atlas. As these different lines of inquiry are combined, several components emerge: *entities* are entangled within *assemblages*, explored and uncovered through *journeys*, crossing from the local to the global, and mixing poetic interpretations with

geographical and scientific data. The website thus reminds of the theoretical framework, as it is a layering of different webs to create an entangled whole.

•

### *Physical landing* [River Cabinet]

Besides the definition of the river as assemblage of relationships, the project has revealed the river as physical presence - a body that is an indivisible whole from source to mouth. To do justice to this understanding and represent the river as tangible reality, I designed a River Cabinet. The river is interpreted as archive, as *netbag* that collects up a wide variety of stories (Le Guin, 2019). When aligning the drawers of the cabinet, the river body emerges, and those who encounter it get a first glimpse of the depths she holds.

The Cabinet aims to spark curiosity and wonder for this river that runs through the landscape we call home. The physical presence is a reminder to take the time to notice and to listen to the landscapes in which we all take part. The translation into an artefact of this size allows for movability, which turns the cabinet into a travelling exhibition that allows the Meuse to take up literal space in our social and political consciousness.



•  
*Physical landing*  
 [Nomadic School]

The Cabinet creates space for the Meuse, and can invite people to further explore the territory online. Yet, to really stimulate exploration and translation of the online atlas into physical space we need a programme to accompany the physical and digital objects.

To weave urban designers into the network, I propose a nomadic school for designers. This school offers temporary programmes that travel across the river basin to 1) stimulate the elaboration of the atlas, which is done through physical engagement with the site through *journeys*, and 2) guides the translation of atlas entries to physical *projects*. These journeys and projects can be added to the atlas in the respective sections. New assemblages are revealed as the school is hosted by different locations across the territory. As the atlas and the reach of the school grow, existing assemblages tainted with injustices can gradually be reshaped as the school is invited to search for possible responses together with the localities who are affected by them.

•  
*An open-ended story*

The Atlas, Cabinet, and Nomadic school together create a network of care for the river, by establishing new connections and strengthening existing ones. It creates a network of voices that witness, listen, and represent the river, as well as interpret, mediate and translate what is found into projects that foster care.

Just like the river, each element of the project flows, either through travelling physically, or having a shape that allows for *continuing process* (Le Guin, 2019); each connects across borders, as they take the river basin as starting point for territorial thinking while acknowledging that its boundaries are porous and might connect to places far beyond; each brings people and places together around a shared line - a river bed - but their reach is non-linear, messy and chaotic, reminiscent of the reality within which they live.

•

*References*

da Cunha, D. (2018). The invention of rivers: Alexander's eye and Ganga's descent. University of Pennsylvania Press.

Kimmerer, R. W. (2020). Braiding sweetgrass: Indigenous wisdom, scientific knowledge, and the teachings of plants. Penguin Books Ltd.

Latour, B. (2015). Facing Gaia: eight lectures on the new climatic regime. Polity Press.

Latour, B., & Weibel, P. (2020). Critical zones - the science and politics of landing on Earth. MIT Press.

Le Guin, U. K. (2019). The carrier bag theory of fiction. Ignota

Tsing, A. L. (2015). The mushroom at the end of the world: On the possibility of life in capitalist ruins. Princeton University Press.



### 5.3.1 Understanding the Network

The urban design discipline is, at its core, an interdisciplinary practice that should mediate and negotiate the interests of numerous stakeholders (see *Introduction*). There are many tools and methods available in the urbanist's toolbox to map the network of stakeholders within the territory under investigation.

Before we can understand our place in the network under study and before we can *act accordingly*, we have to map out the network of both human and non-human stakeholders. I use tools from the Transition Territories design studio as well as tools learned through a workshop during the After Summer School of the Nieuwe Instituut in Rotterdam.



Where and how to act

Relevant actors

This thesis project is part of the Transitional Territories Studio, that, in line with this thesis topic, extends the stakeholders that ought to be considered beyond the human. A framework was offered to list relevant actors by looking at four different categories: Natural capital, cultures of production & reproduction, collective capital, and institutional and regulatory infrastructure. The definitions for each category are found below.

Arranging each of the categories around a square make the suggestion that one should draw connections. As the image shows (grey lines in background) this soon

becomes an unnavigable mess. To understand which actors and relationships are most relevant or important for the health of the territory as a whole, it is worthwhile to position myself within the network first and draw the specific relations that emerge from there.

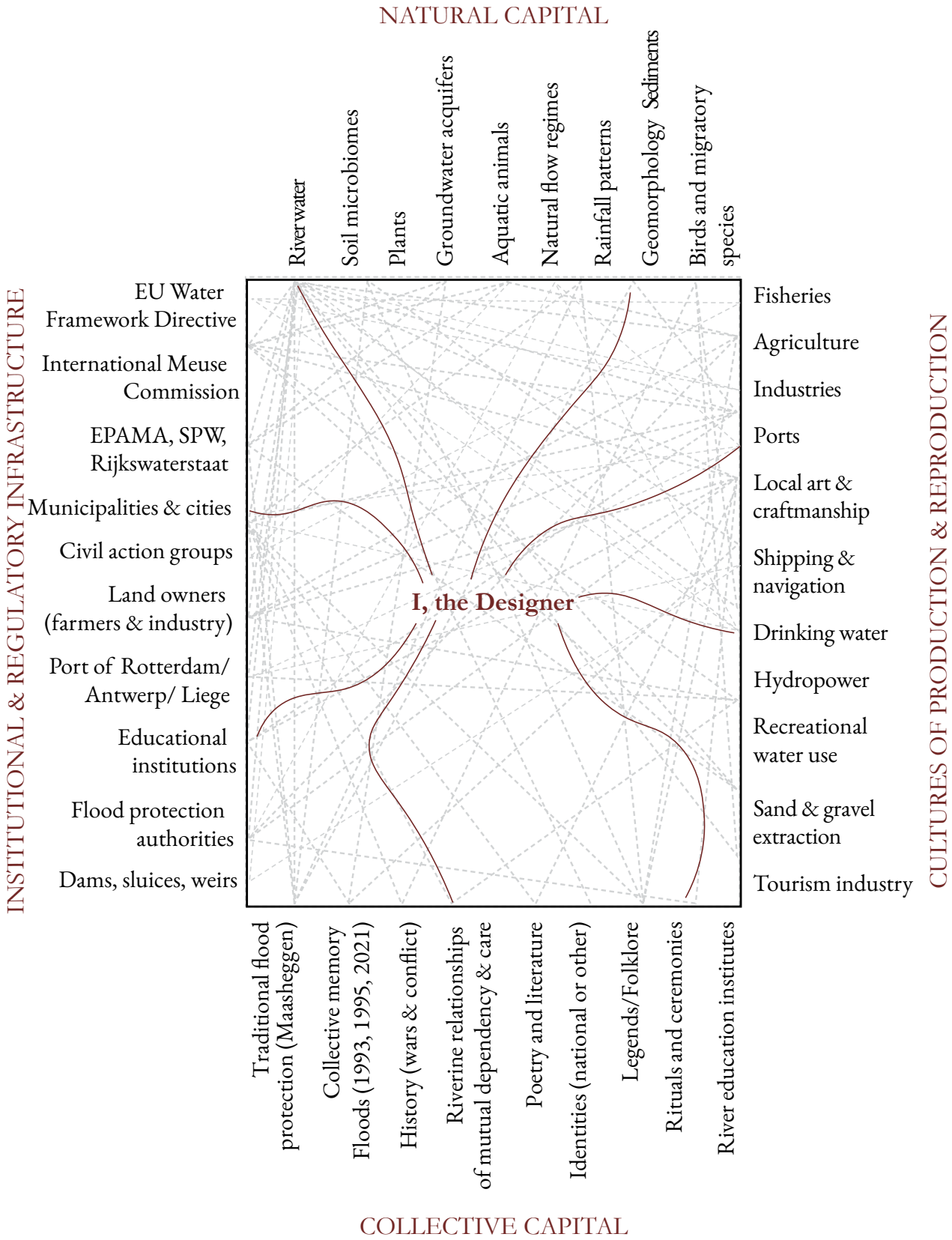
This partial perspective can help cut the network in certain places, as some relationships might emerge as relevant while others remain hidden, either because they do not suit the specific time and context within which this thesis is positioned, or because they lie outside of my range of influence, knowledge, or abilities.

*Natural capital*  
These are the non-human entities and systems that constitute the ecological foundation of the river's being. They maintain the river as a living system.

*Cultures of production and reproduction*  
This category captures socio-economic systems that transform, utilize, and are shaped by the river, both materially and symbolically.

*Collective capital*  
These are the cultural, symbolic, affective, and communal dimensions of the river: how communities relate to it, what meanings it holds, and the stories it tells.

*Institutional & regulatory Infrastructure*  
These are formal bodies, policies, frameworks, and systems that regulate or manage the river and its uses.





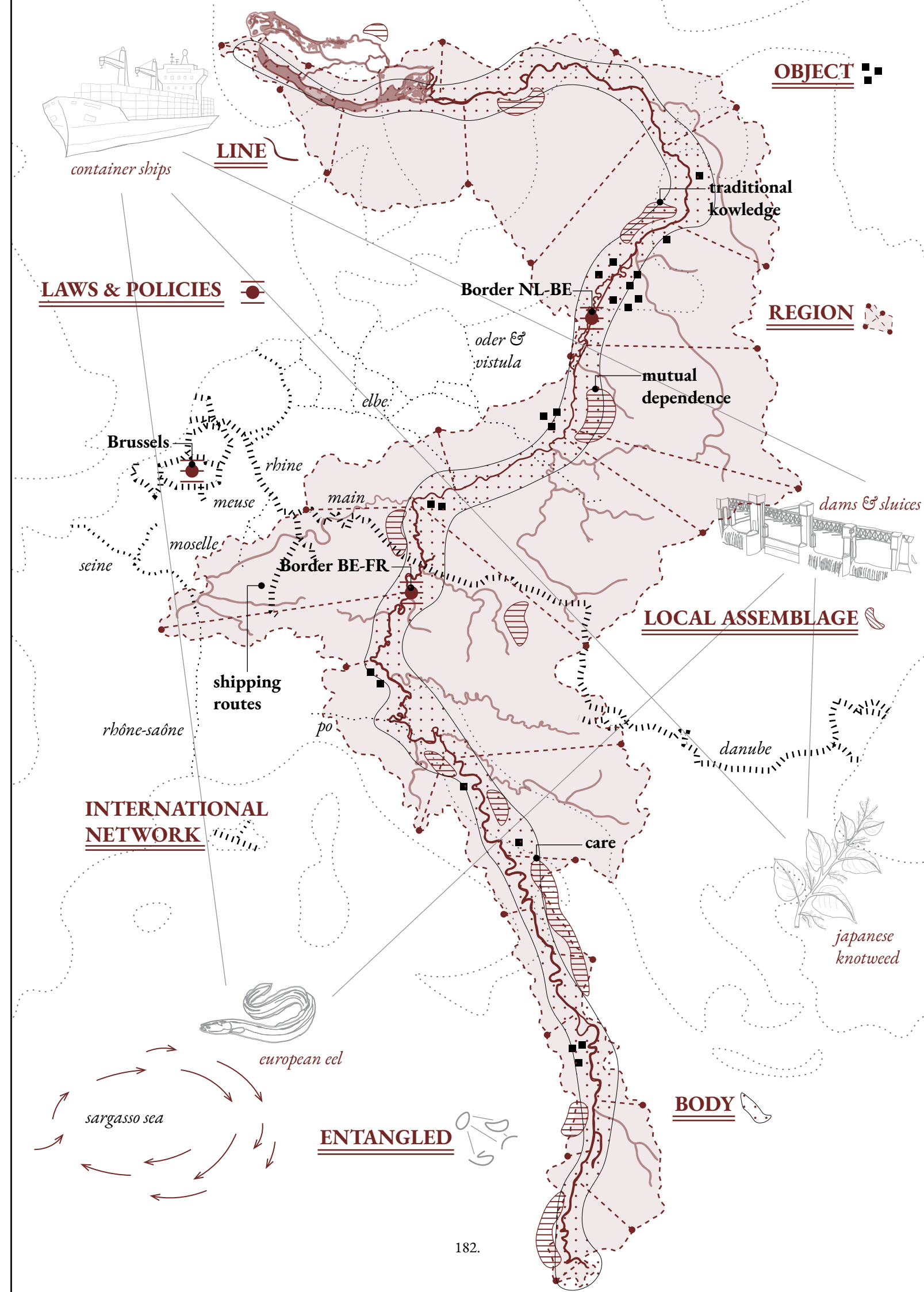
### Spatial boundaries

Another way to cut the network is through defining the spatial boundaries of the territory. The fieldwork is guiding here. Interviews and informal conversations place emphasis on specific relations, places, and entities. As I listen to what they have to say, new borders for the Meuse territory can be drawn.

The borders of a river are traditionally defined by the boundaries of the river bed, and for some this extends to the drainage basin. Through the conversations that highlight the multiplicit nature of the river, she extends

far beyond these traditional perceptions. Some spoke of eels who travel across the entire Atlantic Ocean to grow old in the Meuse, others told me about the gravel crisis that necessitates imports from Germany, and yet others highlight the vast inland shipping network of which the Meuse is just a part, a section of a route across the entire European continent to the Black sea.

As such, the range of influence of the Meuse extends far beyond the traditional perception of the river banks.





Classifying relations

The entities that populate this territory are defined by specific relations. To decide where and how to act, I was inspired by a workshop hosted by the Zoonomic Institute in Rotterdam (K. Kuitenbrouwer, personal communication, October 3, 2024). The aim of the workshop was to find out how we can become good ecosystem builders.

**Step 1.** Identify which bodies shape your project (organisational bodies, legal bodies, more-than-human bodies, human artefacts, and publics with narratives).

**Step 2.** Classify whether they are merely present, involved, or key bodies

**Step 3.** Sense and listen

**Step 4.** Characterise whether relationships are degenerative, regenerative, or neutral.

Missing Relations

The map in the unfoldable booklet shows the three countries that were most dominant in the map of the Meuse territory - NL, BE, and FR - through which the principal stream flows. The actors that I encountered, or spoke of, populate the map. Many actors fall within the squares of the respective countries, indicating that systems of governance mediate and negotiate their interests. More-than-human actors like sediments and plants largely fall outside of legal and policy frameworks, reflecting their lack of representation.

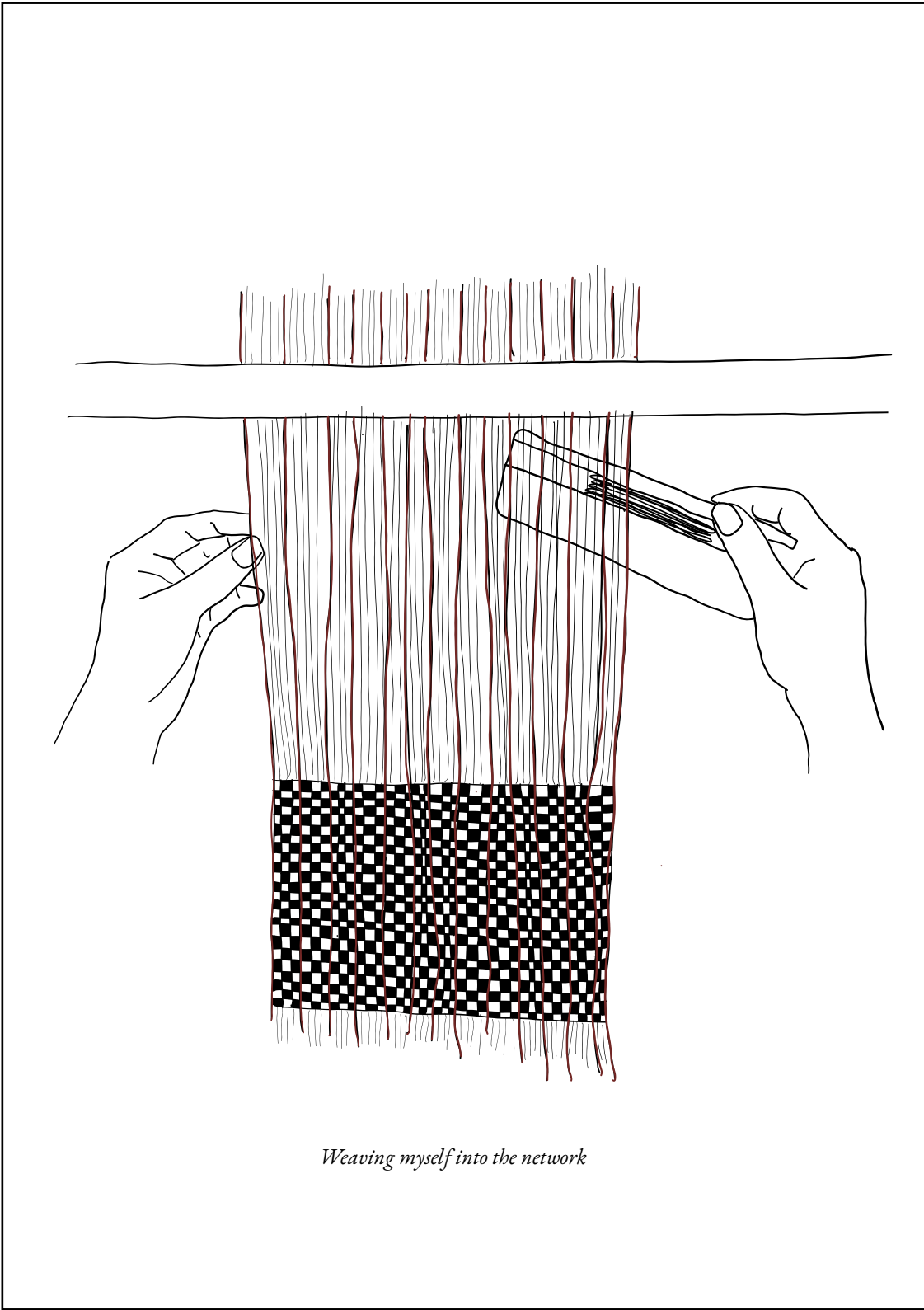
The European Water Framework Directive emerged as one of the most important policies for the Meuse river. It is an attempt to establish cross-border management of the river and improve water quality and protection. To do so, it gave rise to the International Meuse Commission (IMC) in 2006. Apart from that, the only network of relations that crosses national borders is the network of mayors for the Meuse, established by Li An Phoa as part of her initiative Drinkable Rivers.

To do so, Kuitenbrouwer proposed a four-step process, outlined below. Especially step 2) *classifying*, and step 4) *characterising* relations are relevant here, as this can reveal the relationships that are in most urgent need of change/attention.

While hopeful, this network has not yet been able to take adequate action to protect the river (B. Ravignon, personal communication, November 15, 2024). The same goes for the ICM, as data, policies, and decisions are still dominated by nation-state thinking.

More effective action for protection, regeneration and care, is instead found at the local level. Local connections with the river, through arts, histories of identity, and clean-up days, appear to be strong and abundant. However, these practices easily go unnoticed within top-down decisionmaking processes.

As I weave myself into the network, my situated and partial perspective reveals certain relationships that fit the scope and focus of this thesis project. What seems to be missing is a *network that both amplifies and connects local voices of care* across the entire river territory. The upcoming sections of the chapter show my translation of this missing link into an urban project for the Meuse.

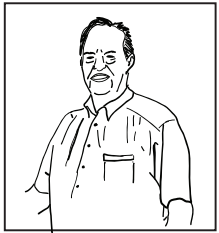


Weaving myself into the network

This weaving drawing is the A5 cover of a foldable page in the book, when opened, A4 drawings and an A3 map are revealed (shown on next pages)



## Conversations



Inland shipping  
museum



RWE Energy



Biesbosch



SAPPI



Meuse Gravel



Consortium  
Grensmaas



Maas CleanUp



Romagne 14-18



Nature rich Limburg



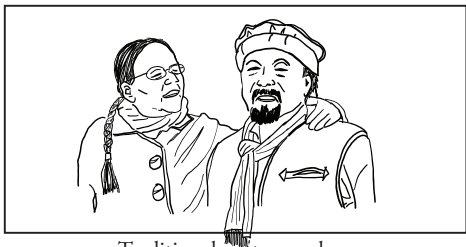
Charleville-  
Mézières mayor



EPAMA



Art along the Meuse -  
Z33

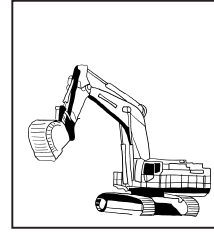


Traditional pottery makers

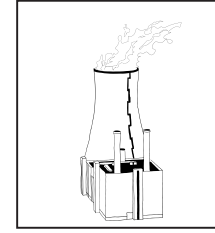


Dijkgraaf Limburg

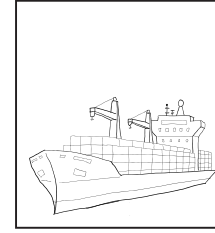
## Entities



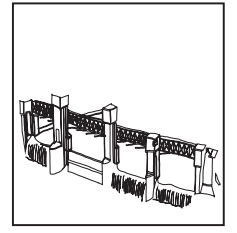
Extraction companies



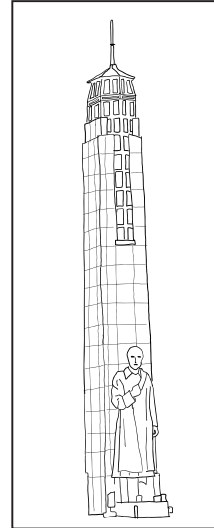
Industries



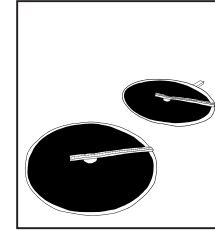
Ports



Sluices, weirs, dams



Canals



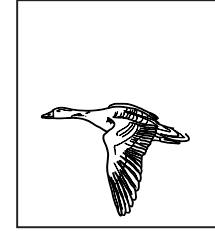
Drinking water  
companies



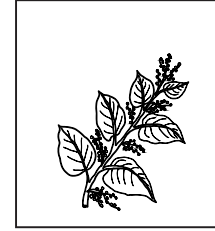
Water



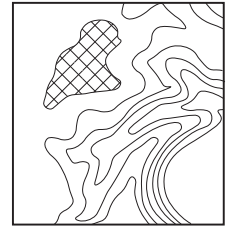
Sediments



Migratory birds



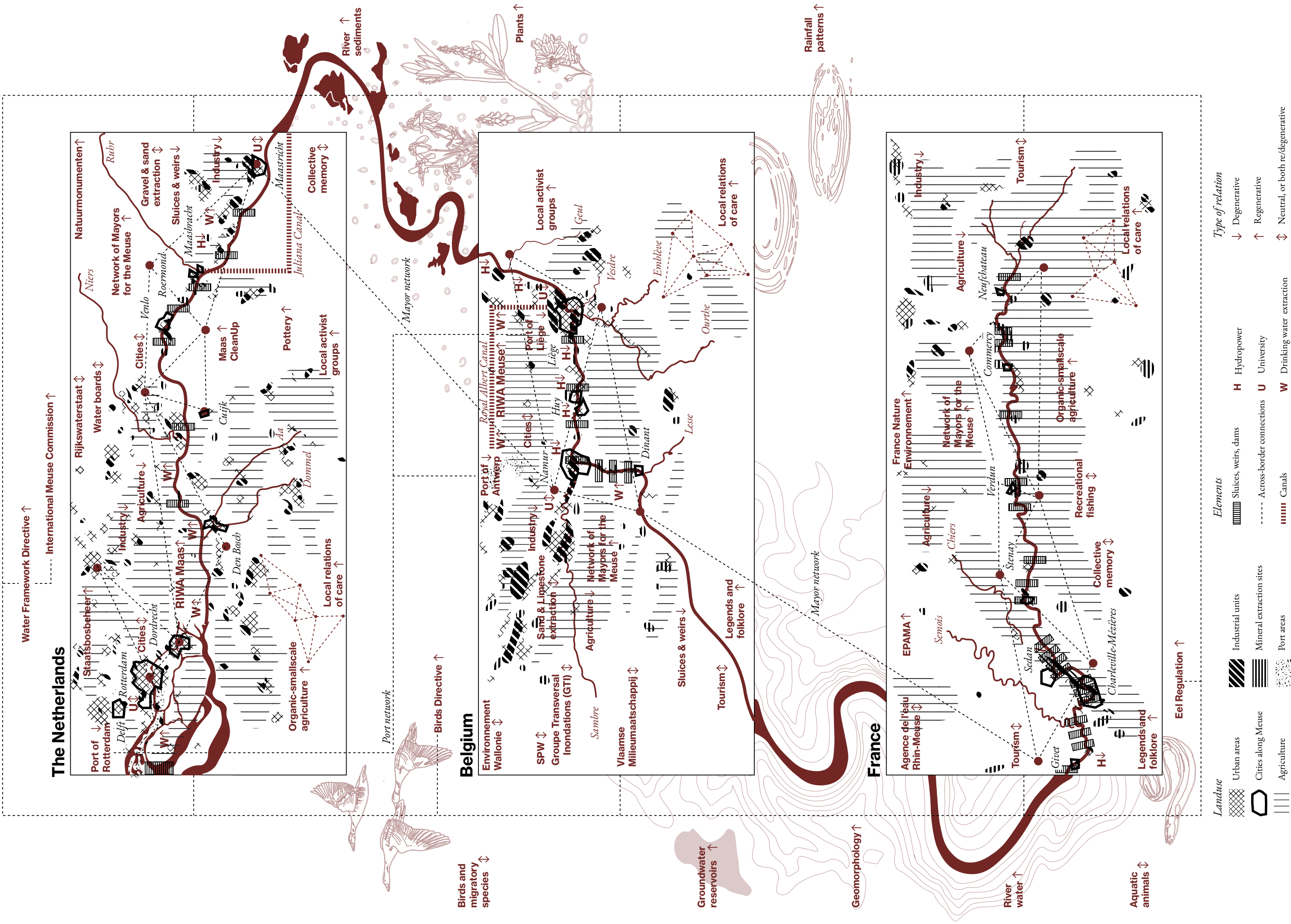
Riverine plants



Geology & reservoirs



## European Union





5.3.2 Strengthening the Network

To both construct new networks of care, as well as strengthen existing ones, I propose an online alternative atlas for the Meuse territory that goes hand in hand with a nomadic river school.

Pt. I

Alternative Atlas for the Meuse  
*open-source website*

The Atlas is both method and tool. It is a tool that can be consulted by designers when they are working on a project in the Meuse river basin. The alternative cartographies in the Atlas show stories of dialogue between the river and the practices and relationships around it. Since maps inform our interpretation of the world, new visualisations might make different projects thinkable. Specifically, it could make room for projects where the river is no longer an object to control, but a subject with whom we co-design.

It is also a method, because the website is open-source. Designers are invited to add their own critical cartographies to the website. Throughout this process, they practice with listening, witnessing, and interpreting the voice of more-than-human others. As the Atlas grows over time, caring relations are cultivated and strengthened.

Pt. II

Nomadic River School  
*Cabinet for Counter Narratives &  
Programme for Designers*

To ensure that relationships are strengthened and built, a Programme is needed to activate the Atlas. I translated this into a Nomadic River School for Designers.

A Cabinet for Counter Narratives travels through the river territory and initiates workshops for designers. The workshops are guided by specific questions, themes of expertise, or by specific urgencies (e.g. needed negotiation on behalf of river in cases of environmental injustice). Each workshop adopts one or several parts of the river territory and aims to collaboratively create a new cartography that can be uploaded onto the online Atlas.

The Cabinet itself is a physical representation of the river territory, as the river landscape is found in each of its drawers. The Cabinet presents the river as ongoing archive, as open-ended story. It is an invitation to go out, meet the river, and collect local stories that can reveal the complexities and messy entanglements that lie below the clean, but unfinished, white canvas.







# THE MEUSE ATLAS

*Stories of a River*

This Atlas of the Meuse river is an evolving and open-source project. It aims to restore the agency of the river Meuse through a reinterpretation of the territory. It acknowledges that nature and culture are entangled in complex assemblages that may change across time and scales. The borders of the river territory are therefore unclear as they remain in constant flux. Rather than trying to structuring spatial realities by clear demarcations, this atlas represents a messy reality, that gradually unfolds itself as you delve in and wade through the various pages. Curiosity may lead you from the river body through infrastructures, across the land into practices of extraction, encountering human and more-than human inhabitants along the way.

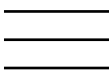
Some journeys are short and quickly loop back to the beginning while others take you deeper into the Meuse’s territorial depths. Entries range from poetic to scientific, acknowledging that each makes a unique contribution to our understanding of space. The Atlas is a call to action: journey into the territory yourself and add your own entries to the Atlas, or use the alternative maps found here as input for spatial projects.

Over time, this website collects the evidence for the beingness of the river to enable the formal recognition of her rights by law. As we practice listening, translating and negotiating on behalf of the river, we practice how we can act as guardians for the river territory such that we can all live in it as well as possible.

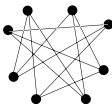
Explore



Overview

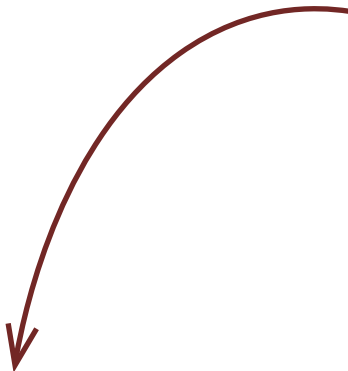


User guide

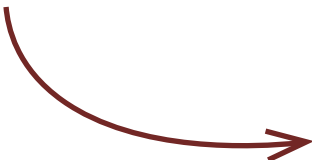


*Both these pages can be unfolded, revealing 2A3's that show different pages of the website.*

Delve into the next page...

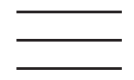


Or discover online...





Overview



Emerging Narrative

Negotiated Cartographies for the Meuse

Diary of a River

Counter Projects through Co-Design

Nomadic School

Learnings of a River Landscape

Sounds

Photos

Inhabitants

Journeys

Governance

Traditional Knowledge & Cultures

Established Narrative

Floods

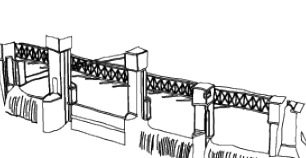
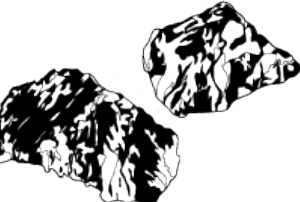
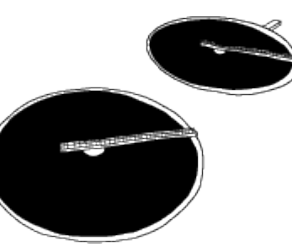
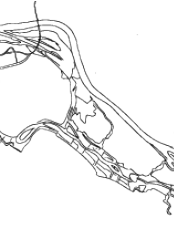
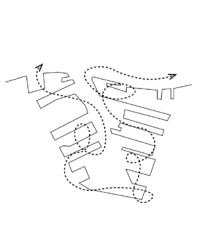
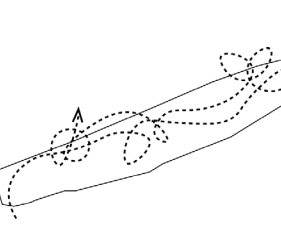
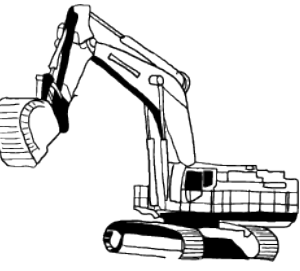
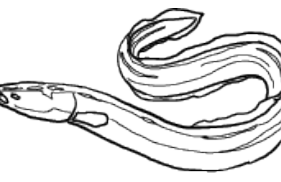
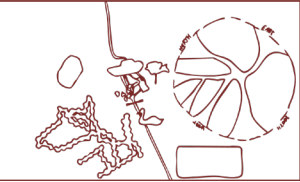
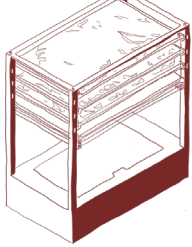
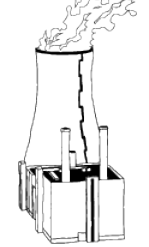
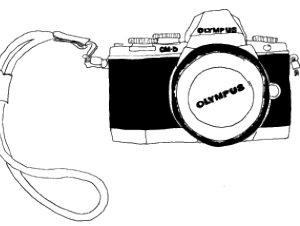
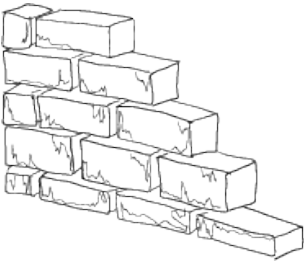
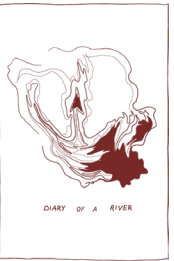
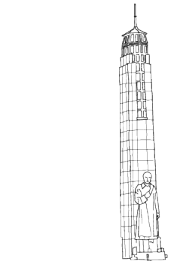
Droughts

Pollution

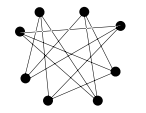
Project in Becoming

Rights for the Meuse

Explore



User guide



Intro

This is a nonlinear website that invites visitors to follow their own lines of curiosity. As the visitor dives in and wades through the different pages, the Meuse territory slowly unfolds, revealing its beauty and richness amidst its messy complexities.

Learn

When you click *Explore* you arrive at a page with all the entities that inhabit the Meuse river territory. Clicking on an entity that captures your attention will take you to the relevant page with *Learnings of a River Landscape*. Data pages include sounds, photos, inhabitants, journeys, governance frameworks, and traditional knowledge & cultural practices. These data pages can be part of either Established River Narratives, or Emerging River Narratives.

The *Established River Narratives* explain problems and urgencies of the river territory that we are all familiar with: floods, droughts, and pollution. These narratives are largely top-down, anthropocentric, and based on data that describe problems to be solved.

The *Emerging River Narrative* teaches about local and more-than-human stories that are often silent/silenced, gives rise to different questions, and sheds a new light on familiar elements. These emerging narratives take the river as being as starting point, which redefines the problems and invites practices of care and guardianship.

The Emerging Narrative is not there to replace the Established Narrative, but rather to expand upon it in order to make new solutions and ways of co-habitation thinkable.

Act

The emerging stories amplify the voice of the river in a multitude of ways. Throughout this process, the river is repositioned from object of study to partner in design. The role of the designer shifts as well, as we practice listening to the river and negotiating on her behalf. The intuitive cartographies that emerge from listening practices can be found under the *Nomadic School* section. The synthesis of the different listening outcomes of the participants in the workshop of the Nomadic School is translated to a *Cartography of Dialogue*. These cartographies are alternative interpretations and translations of the river territory. As these counter narratives are layered on top of one another, the new Atlas for the Meuse gradually comes into being.

Project in becoming

As the Atlas grows over time, evidence is gathered for the beingness of the river and her entanglement with human and more-than-human life. It can therefore contribute to more widespread recognition of the rights of the river Meuse.



5.3.2.2 Nomadic River School - Cabinet

Cabinet for Counter Narratives



Basic

The entire river basin is portrayed on three panels. These panels are separate drawers in the cabinet and can be viewed through the transparent table top. On top of this transparent table, a new map can be composed for the landscape that lies below.



Zoom

In case the workshop focuses on a specific local area, or extends beyond the boundaries of the drawers, a fourth drawer can be placed above. This drawer is filled with sand, and allows the participants to draw their own map of the territory under investigation.



Extend

In case the workshop revolves around the entire river basin, the cabinet can be unfolded such that all three panels are visible simultaneously. This feature is valuable also when working on a smaller scale, as it reminds us that the river is an indivisible body from source to mouth.



Activate

Upon opening the lid in the bottom part of the Cabinet, participants find poles with which they can manually extend the cabinet. 3 perforations in the cabinet's legs allow for adjustability, as the drawer can be placed on different heights. Additionally, the spaces in the bottom stimulate on-site exploration as participants find a camera, an audio recorder, field journals, and other tools for mapping.



5.3.2.3 Nomadic River School - Programme

Nomadic School - process of counter mapping

The cabinet works together with the website through workshops organised on-site. These workshops have the following general procedure:

- Step 1. Choose location in grid of 7.5x12km. These distances can be covered in a day and suit the dimensions of the cabinet’s table top.
- Step 2. Go out and gather stories, artefacts, sounds, experiences, images etc. of the Meuse. Allow for intuitive encounters.
- Step 3. Gather around the cabinet, bring objects together on top of the table and the respective landscape. Share, listen, discuss. Draw the outlines of the objects gathered and write an anecdote for each element<sup>1</sup>. Upload on the Meuse Atlas Website under *Nomadic School*.
- Step 4. Translate into an alternative interpretation of the Meuse territory. Upload this story on the Meuse Atlas website under *Cartographies of Dialogue*.

Nomadic School - lense through which to explore the territory

The workshops have a specific lense to add some focus and adjust it to the needs of the local context or interests of participants.

- Option I. Through the site
- Option II. Through a question
- Option III. Through specific expertise

1 Inspired by Spoerri, D. (1966). An anecdoted topography of chance (E. Williams, Trans.). Something Else Press.

5.3.2.4 Example workshops

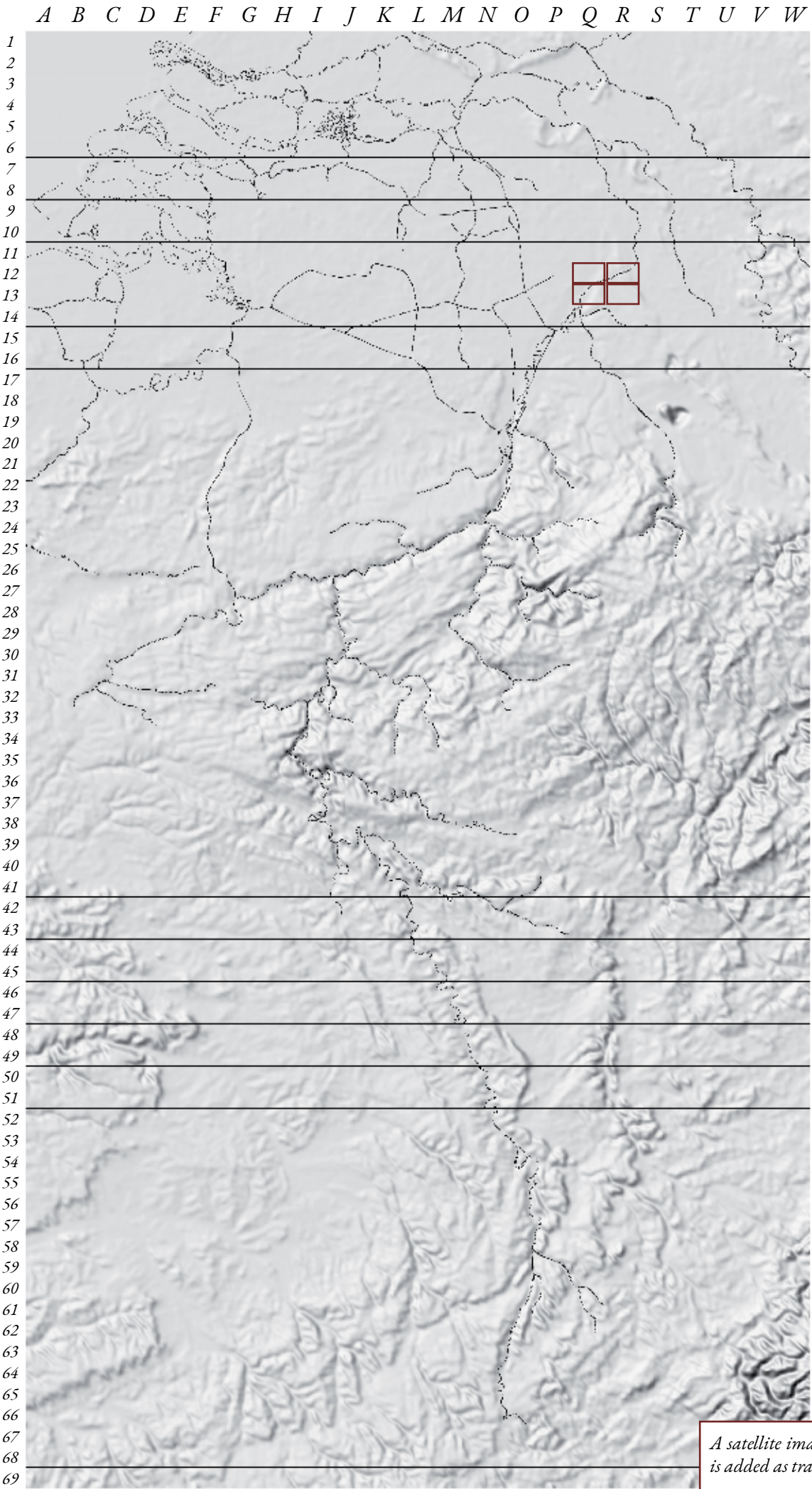
The following pages give an example of how each of the different lenses could be translated to practice. Some are reconfigurations of my own experience and stories that have been mentioned before, while others are made through collaborations with others.

Option I. Through the site  
This example follows from the field journey. I created a map from the stories and experiences gained during the biking trip in plots R12 & Q13, R13 & Q12.

Option II. Through a question  
This example is based on a workshop I gave to a group of architecture students from Finland on the 15th and 16th of May, 2025.

Option III. Through specific expertise  
This example follows from the collaboration with a sound expert from the conservatory in Amsterdam. Together we explored the Meuse territory through the lense of sound.





A satellite image of the region of study is added as transparent film

Option I. Through the site

Step 2.  
Objects/artefacts/stories gathered through intuitive encounters:



Gravel



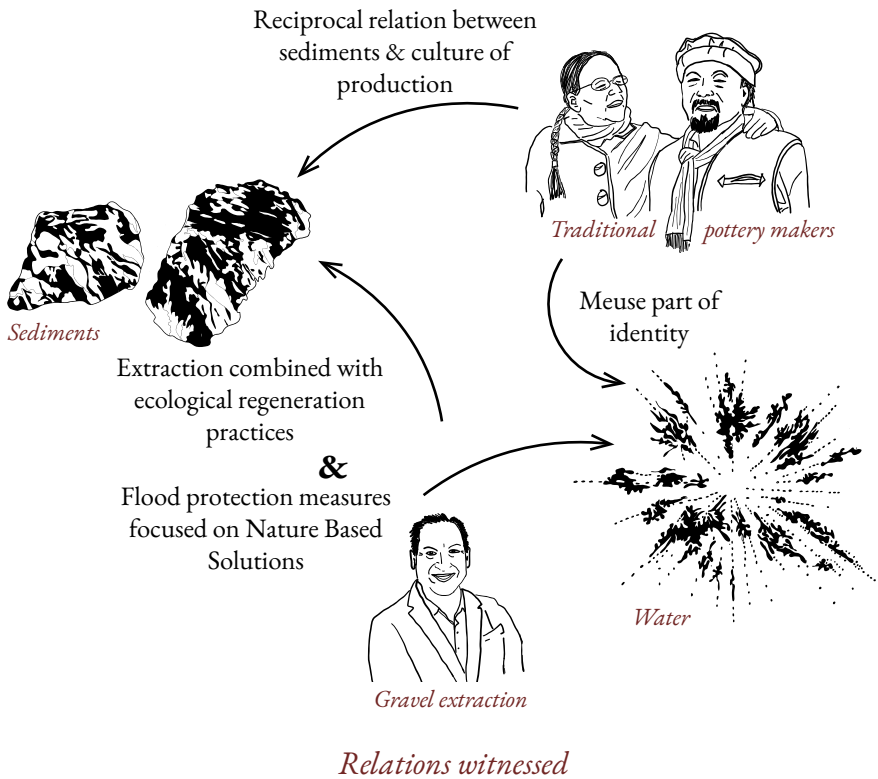
Cup from River Clay



Sand



Obstruction symbolising the sluice & weir complexes encountered en route



Interview recordings

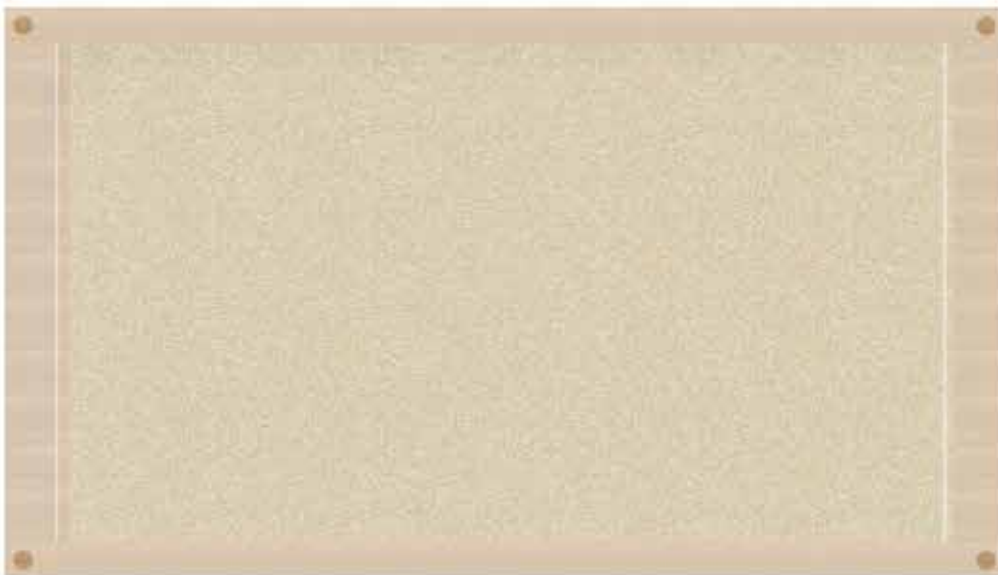


Step 3.

1.  
The panel that contains the rectangle studied is visible from above



2.  
To zoom in on the specific area studied, place the sand drawer on top



3.  
Draw the plan of the region studied



4.  
Place a piece of tracing paper on the table and arrange the objects and stories accordingly.





## Testimonies

**1.** Gravel extraction companies tell me about the national halt on gravel extraction due to social resistance and ecological damages. In the midst of multi-crises, companies can no longer operate without considering social responsibilities. The development of the border Meuse is an example of a win-win situation in which gravel is extracted to make room for the river. As the river can freely meander here, natural balances will be restored over time, while the region becomes attractive for recreation and is protected from floods through nature based solutions.

No gravel permits have been issued so far for after the finalisation of the Border Meuse project. None of the people there could tell me what would happen then, as our society is still dependent on gravel and sand, especially for construction. It can potentially give a push to circularity in the built environment, but present techniques are not yet fit for the scale required to build the 1M homes by 2030 as planned by the Dutch government.

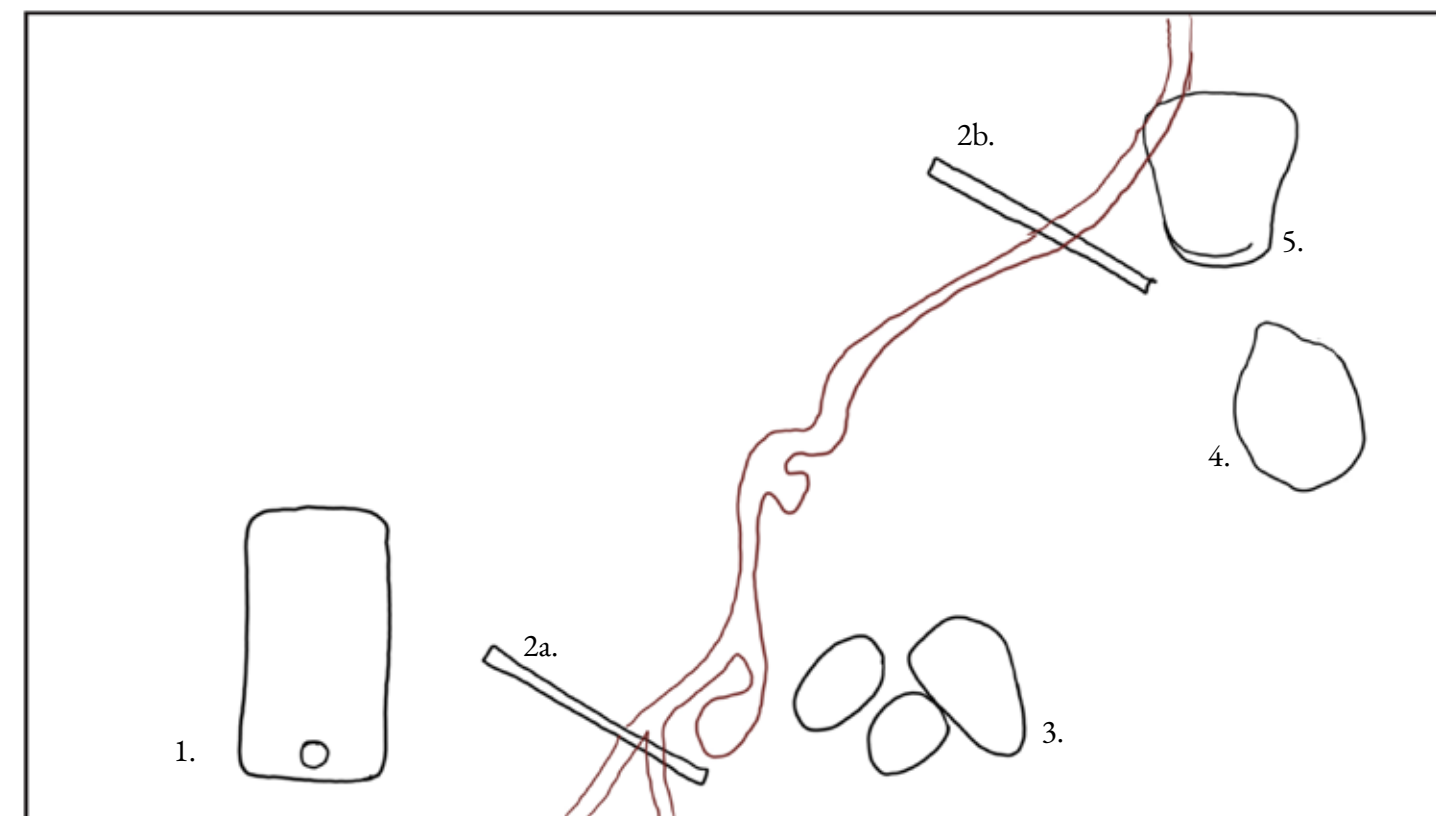
**2.** Two of the seven sluice-and-weir complexes in the Dutch segment of the Meuse are located here. These obstructions of the river make natural sediment transport and replenishment impossible. The structures are built from the sand and gravel that their existence makes impossible to transport. Combined with excessive extraction, these complexes represent unsustainable practices as this, by default, cannot be continued into the future forever. Today, we already see evidence of this through the looming global sand and gravel crisis.

**3.** Gravel. As I hold these small stones and listen to people talking about it, I learn that much of the Netherlands is constructed out of the Meuse river body. The gravel is used in concrete and most of it is sourced from the Meuse. The part of the Rhine that runs through the Netherlands is a later stage of its full trajectory, and thus primarily deposits sand and clay.

**5.** Draw the outline of the objects on the piece of tracing paper, as well as the outline of the river. Number each of the objects and write the testimonies gathered.

This map and stories should be uploaded on the Meuse Atlas under *Nomadic School*.

## Map of Chance Encounters



**4.** Sand. Much of the sand from the Meuse is used for constructions, both for building as well as flood protection structures like dikes. Just like the sluice-and-weir complexes the structures we built out of sand touch and change the body that they came from.

A museum director tells me that river sand is perfect for making sand sculptures as the grains are more ‘square’ compared to the round grains found on the beach. Along the border Meuse, an artist created an ephemeral sculpture that was to remind us of periodical floods of the Meuse as it was placed at a height high enough to remain as the river remained low, and low enough to be taken away when waters rose. By now, the sculpture has disappeared.

**5.** A pottery maker tells me about varieties of clay and pottery techniques. The clay from the Rhine is finer than that of the Meuse, making it more appropriate for more delicate processes like pottery. Again, the Meuse emerges as base for our constructions, as her clay is perfectly suited to make more coarse products like bricks. Several brick factories used to be located in this region, but as their production was industrialised they gradually disappeared.

The pottery maker tells me about his relationship to this river that he has lived with for all his life. “Mother Meuse” is what they affectionately call her in this region. Not only for her kindness but also for her capricious nature of swelling and shrinking.

He tells of how the Meuse was a place to escape to as teenager, a place for adventure, and place that adds rhythm to a year and a day, a place that reminds of our smallness in a wide world.

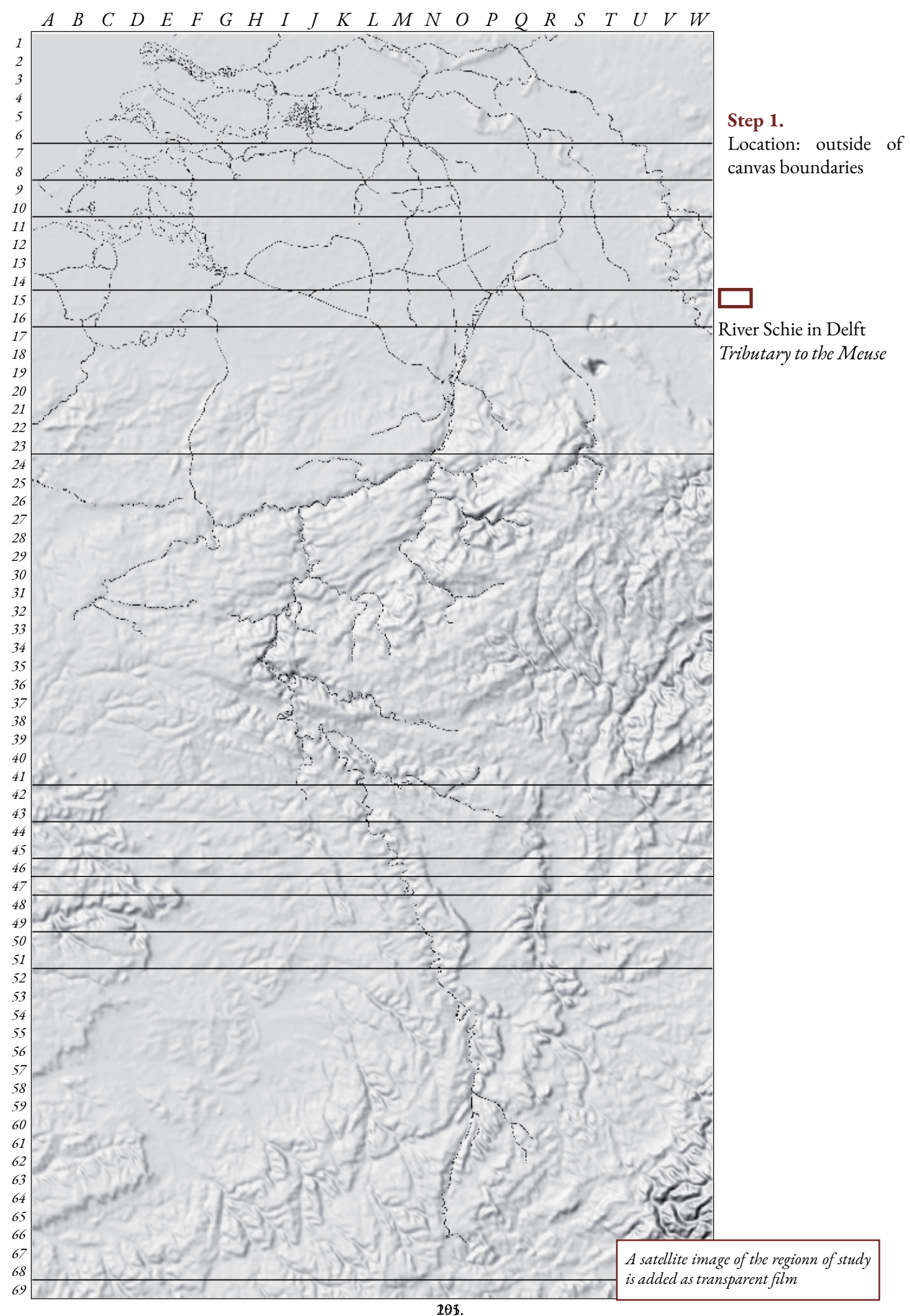
## Step 4.

Translate into a new cartography for this specific region.

This subjective map should be uploaded on the Meuse Atlas website under *Cartographies of Dialogue*.

See p. 160 for the outcome.





**Option II.** Through a question

**Workshop setting**  
On the 15th of May, I hosted a workshop for a group of architecture students from Finland. On the 16th the students presented their findings and experiences of the river. Due to time constraints, we did not have the time for *Step 4. Translation.*

Nonetheless, I experienced it as a valuable exercise to see whether the mapping method proposed here could easily be followed and performed by a group of design students that had no prior experience with this type of mapping.

**Question - general | specific**  
Due to the introductory nature of the workshop, the question that was asked is quite general. This was intentional in order to keep explorations open and free as I was curious to see what the students would bring along when given the freedom to follow their own lines of curiosity.

In the future, questions could be more specific and tailored to the local context. E.g. in response to the negotiated map found on p. 158, a workshop could be hosted on how to repair the environmental injustices suffered by the river through design.

**Question:**  
*How can the river Schie help us rethink spatial questions and design outcomes?*



*Finnish students presenting the stories, objects, sounds, and images collected on-site*



**Step 2.**  
Objects/artefacts/stories gathered:

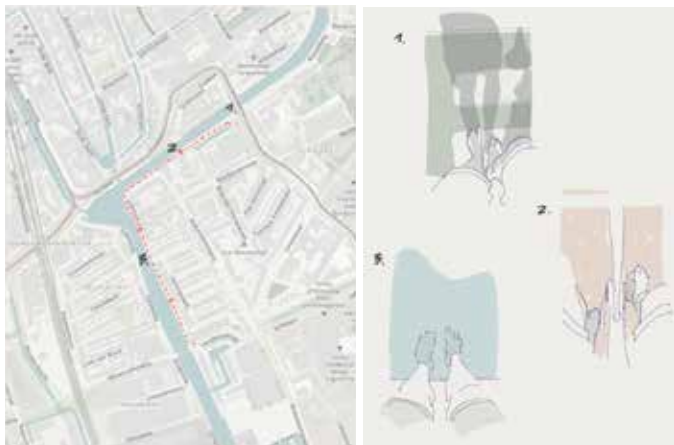
Each students followed their own interests and noted down the things that captured their attention. Some engaged their senses, while other tried to experience the territory through the eyes of the river.

**Multi-sensory immersion**

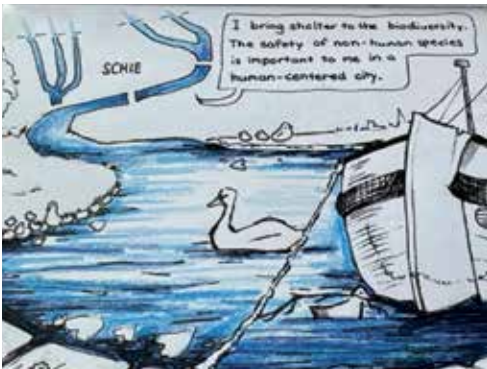
*Objects collected*



*Places sensed*



*Sounds of the Schie*



*Biodiversity*

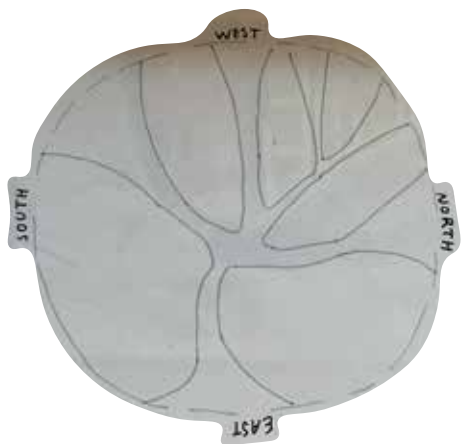


*Plants and seeds  
carried by the stream*

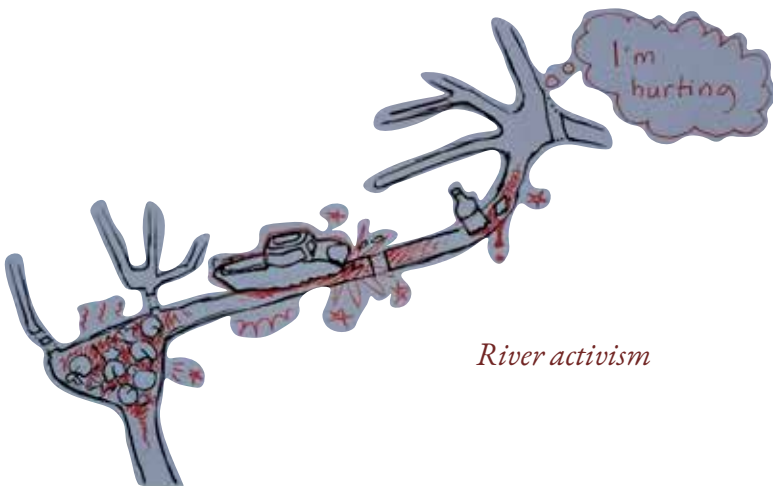
*Pathways beside and across |  
Leisure and water activities*



**Visualising and Narrating  
through the eyes of the Schie**



*Infinite reach of the river*

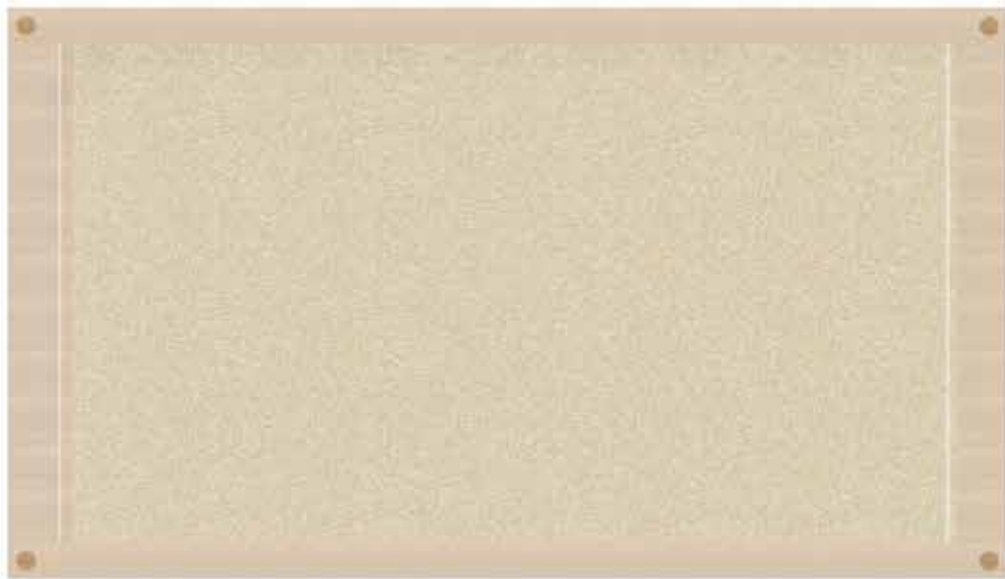


*River activism*



**Step 3.**

**1.**  
The Schie lies outside of the territory captured in the landscape drawers. Hence, immediatley place the sand drawer on top.



**2.**  
Draw the plan of the region studied



**3.**

Place a piece of tracing paper on the table and arrange the objects and stories accordingly.





## Testimonies<sup>1</sup>

**1.** a) a rusty bike chain, b) a flattened Coca Cola can. I decided to walk around barefoot. I went into the water at one place, walked through the grass and biked for a short while. I brought objects with me that I encountered along the way. There were materials that were pleasant and allowed me to get close to the river. Others hurt and were violent, we really had to watch out where we stepped. How do we expect non-humans to walk around here comfortably if we do not want to walk barefoot here ourselves?  
*(comments paraphrased by me)*

**2.** Student 1) I paid attention to the sounds around the river and compiled them into this messy soundscape. to me, this represents the rhythm of the river: there is no clear order, because that is what the river is as well.

Student 2) Sounds were carried by the water. While waiting in a park it seemed as if we were part of the group who was working on the other side. It felt inclusive.

Perhaps rivers are good places to design spaces for laughter and coming together.

Student 3) I did not hear the river a lot. I liked the calmness though, as there were very few cars.

*(comments paraphrased by me)*

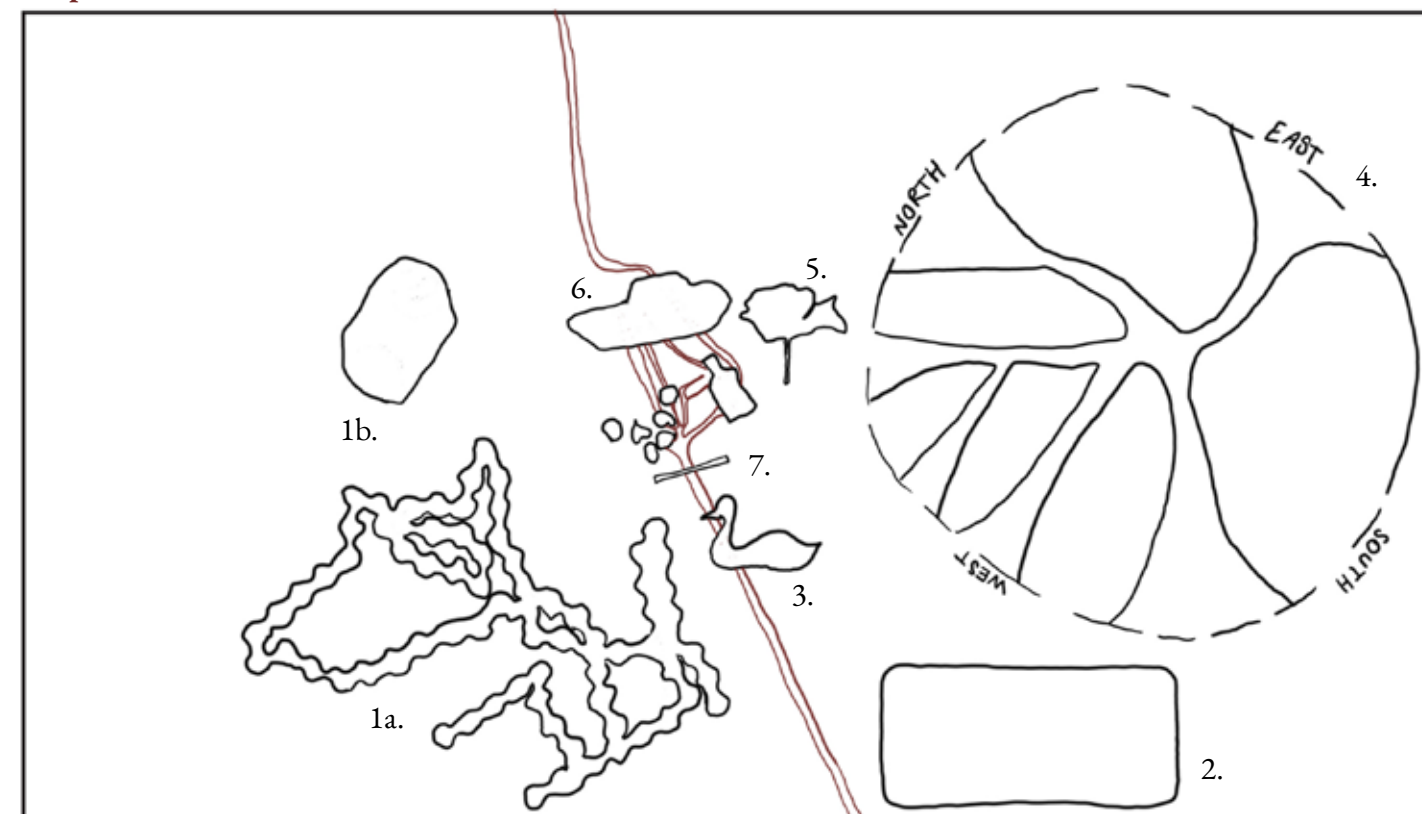
**3.** I bring shelter to the biodiversity. The safety of non-human species is important to me in a human-centered city. As I walked along the Schie River, my attention was drawn to all living things and animals. The first thing I noticed was a duck carrying a big branch towards a boat in the dock to make a nest there. I also noticed a lot of duck families with small ducklings carried by the flow of the river. The river offers peace in the hecticness of the city, and creates greenery in the urban landscape. The animals refresh the river's surroundings and bring balance to the cityscape

- Manriikka Osara

**4.** Draw the outline of the objects on the piece of tracing paper, as well as the outline of the river. Number each of the objects and write a corresponding testimony.

This map and stories should be uploaded on the Meuse Atlas under *Nomadic School*.

## Map of Chance Encounters



**4.** The rowers see straight lines and corners, but those do not exist for the river. The river exists in multiple places at the same time. It can feel everything at the same time. The circle map shows how the river reaches out. If the map was bigger, the ends would combine at the edges.

**5.** I was fascinated by the leaves and sticks that float inside the water and I was wondering where it would go. Would it accumulate somewhere? And if not, where does it go?  
*(comments paraphrased by me)*

**6.** The boats roaring hurt my ears. It spreads fear through my friends. I cannot help them. I can just wait for calmer times. I am stuffed with thing I do not know. I try to carry them to the shore, but there is always more of them. They make me feel dirty. There is too many of my green friends. They just keep growing. I feel like I cannot breather, it's too hot and crowded.

- Veera Suutari

**7.** I guide people by my side because they have wanted to come to it. I limit their movement, but they have found ways to cross me. I'm wearing many bridges that i did not ask for. But at the end of the day, I'm superior. No one tells me where to go, but still I've been forced into this form. If I get the chance, I'll be able to pry myself out of even the smallest gap.

People spend time next to me. They've built different kinds of stuctures that float on top of me. They socialize and do all kinds of things. I give them refreshment and bind the warmth of the sun to myself. Sometimes I don't get praise, just garbage on top of me. Some people look at me, others don't. I would like to continue my journey in peace.

- Netta Rajala

<sup>1</sup> All these anecdotes are written by the students themselves. I have added all the names that were communicated to me.



**Question:**

*How can the river Schie help us rethink spatial questions  
and design outcomes?*

We did not have the time to translate the map of chance encounters into a Cartography of Dialogue for the Schie. Instead, I asked the students to reflect on the question.

**Reflection by students**

- 1.** Rethink materials, allow for proximity to the river & make surfaces welcoming for human and more-than-human skins

**2.** Remove cars, create spaces of joy around the river such that it spreads across the city as the water carried the sounds

**3.** I never thought about the feelings and emotions of nature when planning things in the city. I always considered it to be practical and plain. I think it is very mind-opening to take on a perspective like this.

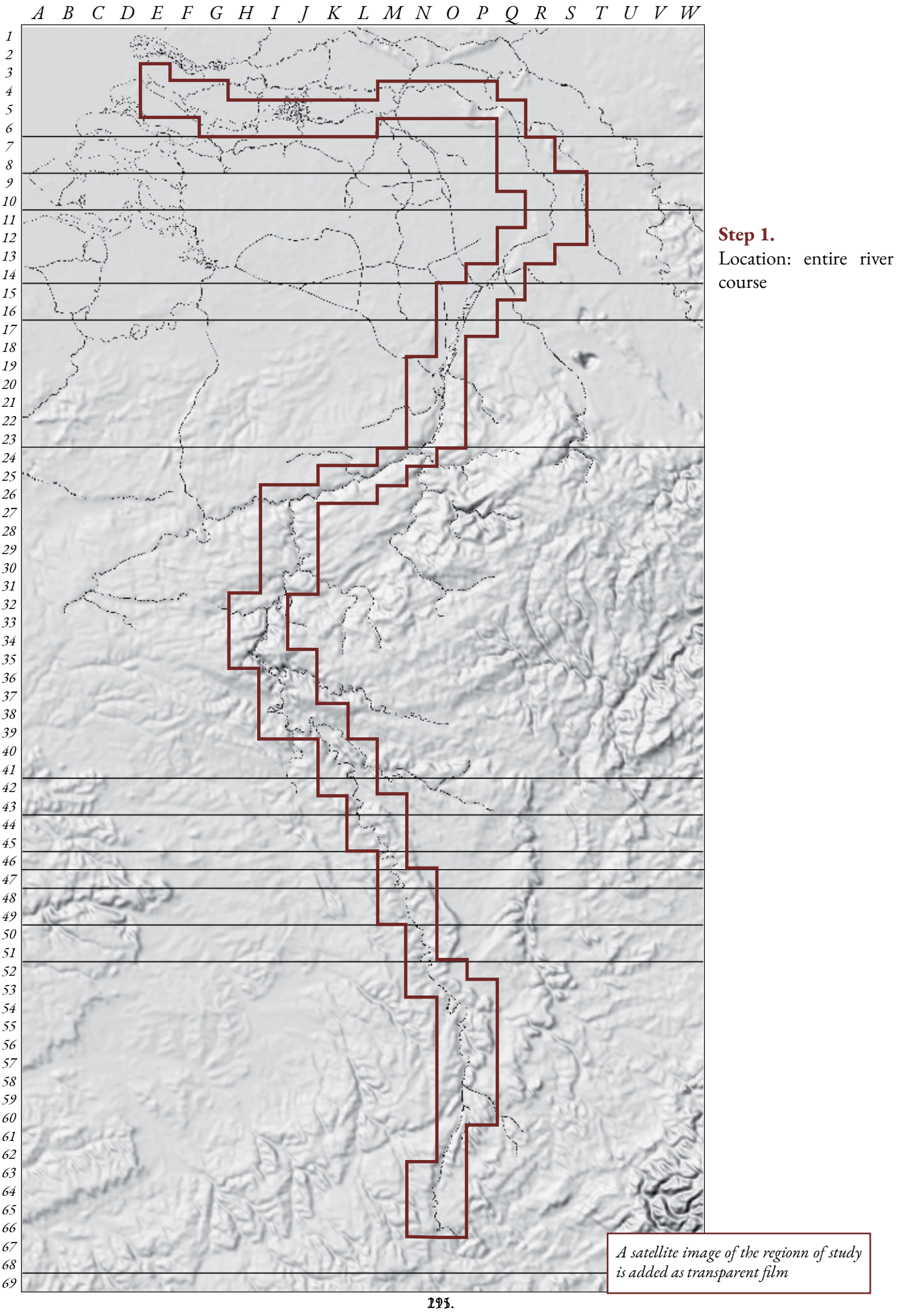
**4.** If the river feels everything at the same time, where should the maps end that we draw?

**5.** *No reflection.*

**6.** This can be used to get/give an activist perspective and attitude towards the protection of riverine diversity. This exercise teaches to be empathetic towards rivers. I thought about the negative stuff, about where the river “hurts” and why. Noise from motors, trash from people, and overgrown vegetation.

**Reflection on workshop**

The student reflections above show that there are some aspects of space that receive more attention than they would have gotten in regular field work. While valuable, the most important takeaway from the workshop is that the river became more *alive* to the students: as they *practiced listening*, the river became a *being*.

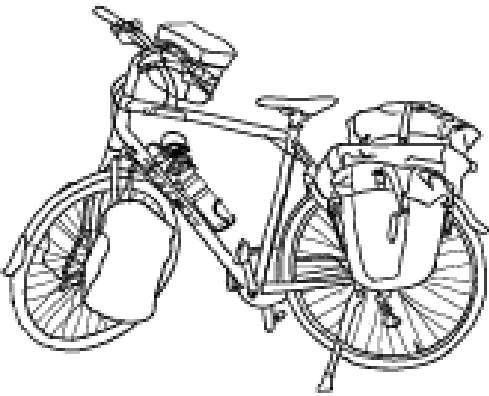


**Option III.** Through expertise

**Step 2.**  
Objects/artefacts/stories gathered:



*Sounds recorded along the way*



*Subjective experience and memory of sound transitions*



*Field notes on auditory experience*



**Step 3.**

**1.**  
The auditory data collected covers the entire river course, hence the cabinet should be unfolded to view all the panels

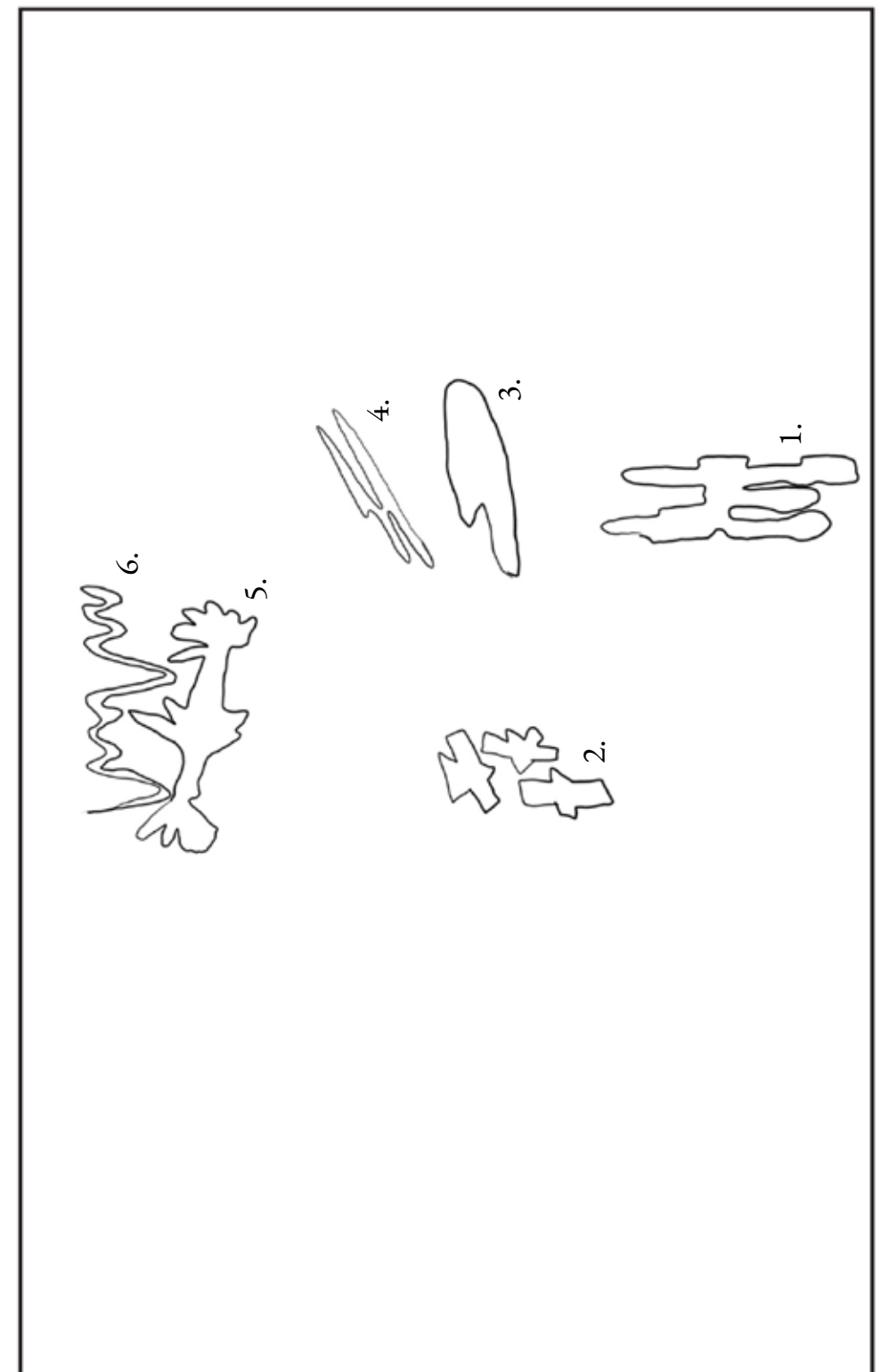
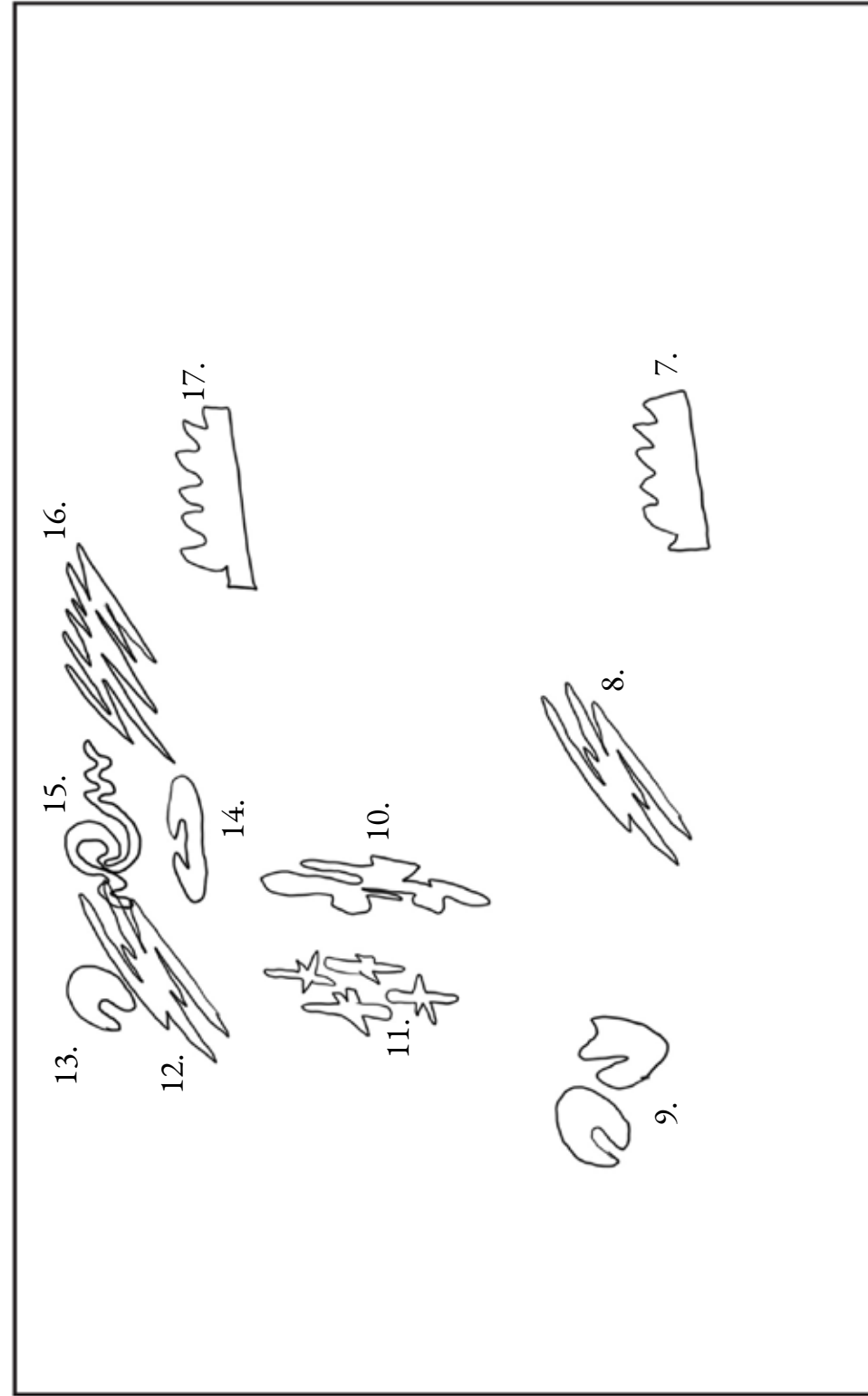
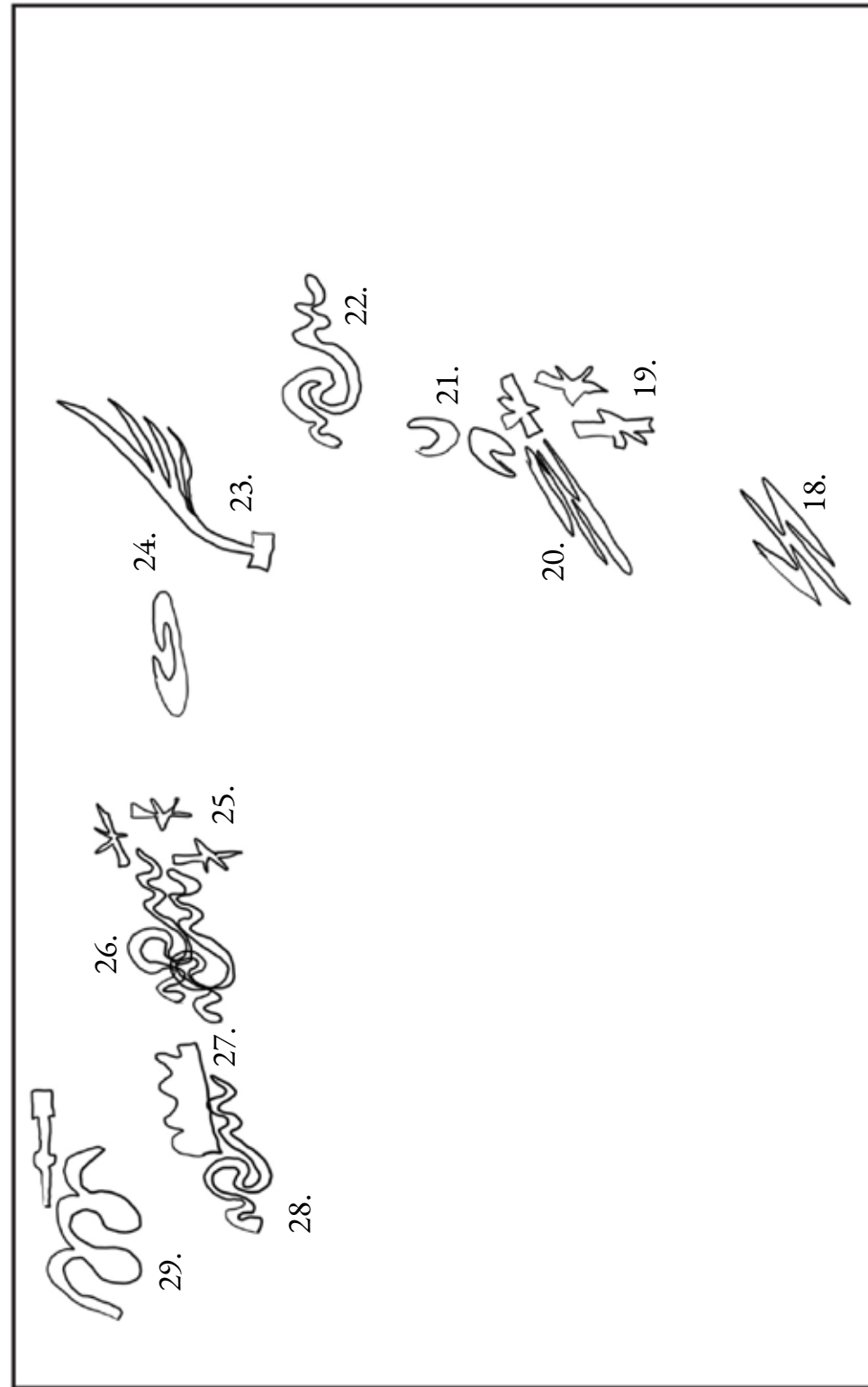


**2.**  
Place a piece of tracing paper on the table and arrange the objects and stories accordingly.

Since sounds are not easily translated into objects, I placed the most important sound experiences on the table by making small drawings on the tracing paper. Their location on the map indicates how distant or close the sound was experienced.



## Map of Chance Encounters



*The map of chance encounters is added on transparent paper on top of the next page*



3.

Number each of the objects and write a testimony.  
This map and stories should be uploaded on the Meuse Atlas under *Nomadic School*.

### Testimonies

1. Tickling sound of the water as it falls of the stone monument built to celebrate her source
2. Birds in the distance as I travel through desolate French towns.
3. The river stream is small, and river banks natural. Up close, the undulation of the shallow waters make a licking sound as they move through and over the plants and soil.
4. In the silence of the surroundings, I can hear the soft hush of my bike's tires across the pavement.
5. Surrounded by meadows, the silence is interrupted occasionally by the distant hum of a tractor.
6. While often silently gazing in my direction, ruminating grasses and thoughts, the quiet is sometimes interrupted by their mooing.
7. Industries ring, hush, and hum a low sound, far in the distance.
8. Cars are harsh. As I share the road with them they completely overtake the auditory experience of the landscape. A flash, extremely loud and incredibly close.
9. Passing through some bigger town, human voices are added to the mix, as they softly buzz in the distance. Private conversation kept safe from anonymous ears.
10. The soft tickling sound returns as small streams run along and into the Meuse. To amplify their music I have to dismount my bike and squat down, listening closely. A quiet movement for pause, a short standstill of time.
11. Birds sing their cheerful songs in the distance.
12. Bursting sound of cars fill all space there is as I enter a city.
13. A place populated with conversations and voices.
14. The water sounds are welcomed as rain arrives. The drops create an orchestra on the surface. The calm mirror now replaced by a dark moving surface full with hidden depths, chaotic as millions of tiny drops pierce its surface.
15. A deep constant hum can be heard along the river banks. As toned down sounds of the heavy motors of the ships are not carried far.
16. As the bike path merges with the highway the violent sounds reflect the unsafety felt in mind and body. As cars rush and industries are ominously quiet, the sounds of the Meuse have left: there is no place for her here.

17. Industries rumble in the distance, signifying something is underway, haunting those on the move, but never approaching close enough to look one in the eye. Monster disappear when seen, they say.
18. Cars in the city consume not only ears but also sight. Watch or you might fall.
19. Along the river and the bushes, bird songs hop up and down, loudening and softening as we are both on the move.
20. Along the beautiful cycling paths it is not my own tires but those of visitors that I hear.
21. The additional eyes that come to behold the beauty of the Meuse and the life around speak in soft voices to one another. Sharing bread, water, and the location of the bird that flickered into sight.
22. Boat sounds abound, this time more up close. They reverberate through my feet as the ferries that produce them carry me across the water.
23. Again, sounds force me to a standstill. The choreography of the wind with the reeds is of deafening beauty.
24. A day filled with rain brings me back to the thread I set out to follow. The river split up in fragments, landing on my body, the grass, and the steel bridges. The dragging sounds of my tires on the wet pavement are the backdrop to my day.
25. In the wet natural reserve I am surrounded by bird songs.
26. The waterbus is deafening, unapologetically announcing its arrival. A dramatic entrance might be justified as I re-enter the city of departure, my home town recognised by the white swan that bridges the river body.
27. Industries softly hum, or remain menacingly silent as white or grey clouds dot the skies.
28. Container ships rumble as I pass through a seemingly infinite port area.
29. The in-and-out, up-and-down of an undulating body of unfathomable vastness. The sea fills up my complete experience. The whistle and hush of the strong winds blend with the rolling waves, turning all to one.
30. As I dive into the ice-cold salty waters, only silence remains.

### Step 4.

Translate into a new cartography for this specific region.

This subjective map should be uploaded on the Meuse Atlas website under *Cartographies of Dialogue*.

### Cartography of Dialogue

#### Dialogue

Together with Christian, the sound expert, I discussed what the soundscape of the Meuse should represent. The table with a collected overview and something tangible to refer to, can make discussion easier.

This specific cartography takes the shape of a soundscape. This example workshop shows how depending on the type of expertise that gathers around the table, different outcomes can emerge. The definition of a map is gradually extended as people with different skills and expertise participate in the Nomadic School.

#### Multisensory cartography

The soundscape aims to highlight the Meuse as complex assemblage, shaped by dualities: at times ominous, at others friendly and kind, both capricious and predictable, mysterious with hidden depths and also crystal clear, simultaneously calm, soothing, and soft versus chaotic, perturbing, and wild.

The soundscape should be true to what was found along the river banks, but should also invite questions. Not all that the river is easily understood.

The various characters that come along as the soundscape is played highlight the beingness of the river. Just like humans with innumerable dispositions, the river too has various faces.



<https://meuse-atlas.nl/soundscape>

### 5.3.3 Conclusions

Analysis of the network from my partial perspective revealed a need for strengthening existing local networks of care as well as establishing new ones. Top down standardised solutions should be supported by local voices that can reveal specific relations with and through the river that are relevant in local patches and might bring different questions, urgencies, and problems to the fore.

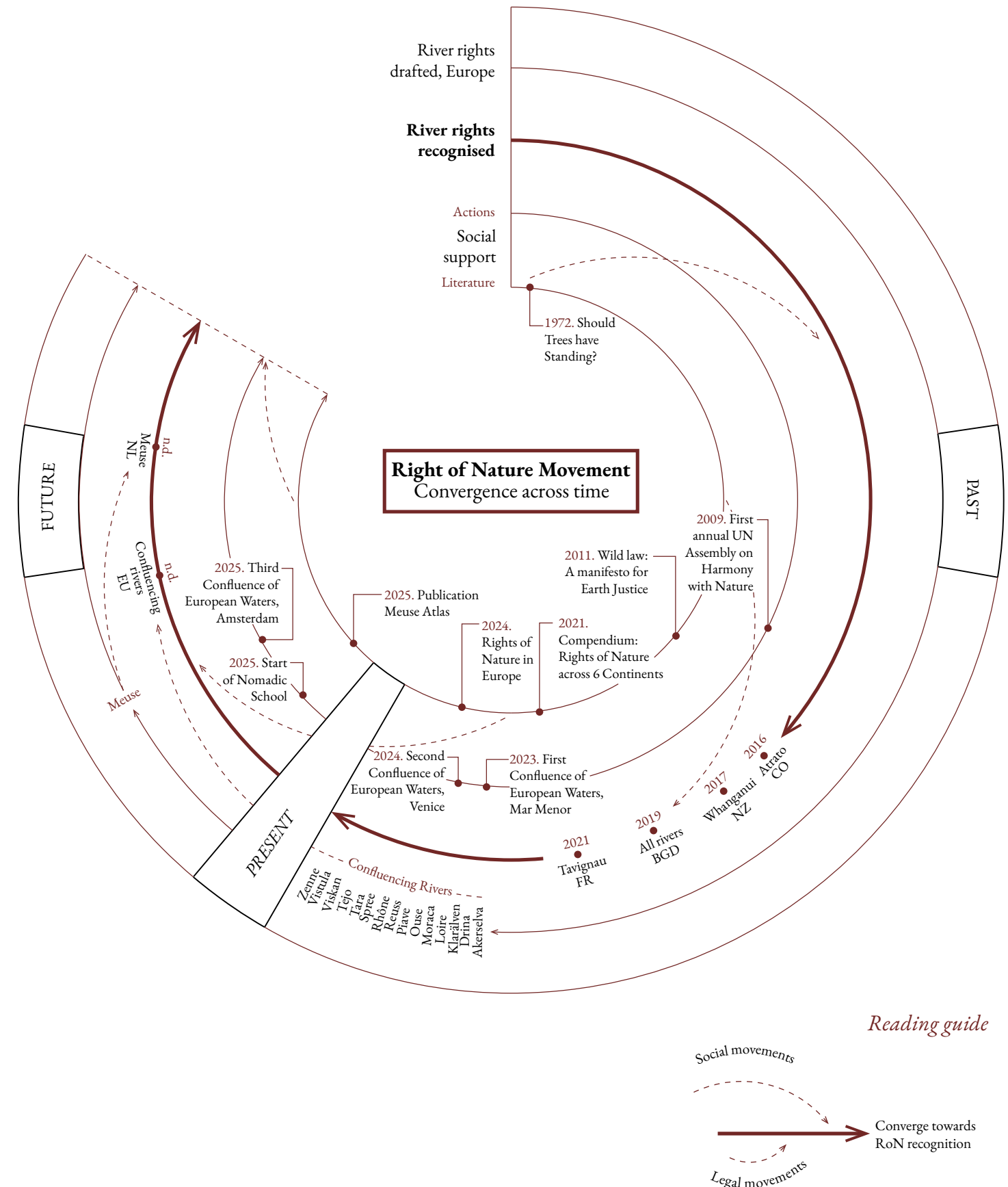
My proposal is to create an open-source online Atlas for the Meuse, combined with a Nomadic School that hosts workshops on-site facilitated through a Cabinet for Counter Mapping.

The goal of the Atlas and School are to make different solutions thinkable in future design projects with the river, where the river acts as partner in design rather than object to control.

As the Atlas amplifies the voice of the river, her needs can be taken into account in future spatial projects, while the School enables designers to practice listening to more-than-human others.

Apart from repositioning the river and the designer, the experiments show that the Cartographies of Dialogue can be used as evidence for the beingness of the river. Hence we circle back to the Rights of Nature movement described at the beginning of this thesis (see p. 21), as the atlas can be used as evidence to argue for the recognition of the river's intrinsic rights in the future. Moreover, as designers practice listening to the river through the workshops, the future guardians of the river are trained who can uphold these rights once they are recognised by law.

### Contribution to Rights of Nature movement over time





## 6. Summary & Conclusion

## 6.1 Summary

### *Full circle*

I started out this research with a love for stories, and how they have the power to bring certain realities into being. This project has given me space to learn, play, explore, and to be curious.

While the explorations carried me in different directions, they eventually converged towards the same point: a new story for the river Meuse.

### *Process*

This thesis explores how posthuman and new materialist theories can be translated into urban design practices that foster ongoing care for more-than-human actors, with a specific focus on the Meuse River. Challenging anthropocentric and extractive planning traditions, the work repositions the river as an agential entity within a dynamic network of human and nonhuman relations. Through a methodological approach that emphasizes situated knowledge, the project experiments with listening, interpreting and translating the language of the river through critical cartographies and relational thinking in order to both conceptualize and materialize alternative design futures.

### *Outcome*

The outcome is a multi-faceted project comprising three interrelated components: (1) an open-source digital atlas that offers a platform to imagine new territorial realities by making visible the agency of the Meuse and its entanglements; (2) a physical Cabinet for Counter Narratives, that acts as table for discussion to colour the white canvas through the eyes of those that gather around; and (3) a nomadic school for designers that activates the atlas through collaborative workshops across the river basin. It grounds theory into practice and aims to foster enduring relationships of care between the river and those that live and work together with her.

The Nomadic school produces alternative Cartographies of Dialogue that reinterpret the river territory by including the voice of the river itself. Taken together, these cartographies present the river as a being, an entity with intrinsic rights. As the Atlas grows over time, evidence is collected that can contribute to the formal recognition of the rights of the Meuse. Additionally, the activities of listening, witnessing, interpreting, and negotiating that the Nomadic School promotes can foster attitudes of guardianship across the river basin. Through (re)weaving connections between people and the river, awareness is created of the fragility of the strings that tie us all together. This can contribute to creating a sense of belonging and activism for protecting the spaces we inhabit such that we can all live in it as well as possible.

## 6.2 Conclusion

### *Revisiting the Research Questions*

**Q1:** How can urbanism contribute to restoring the agency of the Meuse river basin?

The Atlas for the Meuse highlights the voice of the river through alternative cartographies. The digital atlas is both a tool and a method, as well as a product and process to restore the agency of the Meuse river basin.

First of all, it is a tool that can be consulted by designers as they undertake projects in the river territory. Using the alternative cartographies as data input can help include the voice of the river in design negotiations and decision-making processes. Designers can add new atlas entries to the website through participating in the workshops of the Nomadic School and through engagement with the Cabinet. This process of listening, interpreting, translating and mediating the stories found on-site into Cartographies of Dialogue allows designers to practice with including more-than-human voices in their analysis of space.

Second, the atlas is a product, as each Cartography of Dialogue represents a ripple of influence that touches the designers who engage in the workshop as well as the region under study, making multi-species justice thinkable step-by-step. At the same time, it is a project in becoming, as the new cartographies will gradually collect the evidence for the beingness of the river, which can allow for the formal recognition of the river's rights in the future.

**Q2:** How can the language of the river be incorporated in the urban discipline?

The workshops of the Nomadic School, facilitated through the Cabinet for Counter Narratives, offers a new tool and method for urban designers to practice listening to more-than-human voices.

The urban designer is already equipped with tools that allow for non-verbal expression and communication, both visual and beyond. Specifically, practices that allow for an 'arts of noticing' such as the slow science of fieldwork journeys made by foot or bike should be emphasised. This brings attention to non-human timelines, and creates a connection beyond rational understanding. Additionally, the language of nature can be incorporated by taking a more interdisciplinary approach. Reading across disciplines can offer new concepts to think with. Specifically relevant for restoring the agency of more-than-human actors are texts from posthuman literature. These thinkers offer a new narrative that can bring different worlds into being by providing the concepts and mental figures that make alternative pathways thinkable.

As new thoughts emerge through fieldwork and interdisciplinary reading, the arts are valuable for translating these learnings into new cartographies through which the designer humbly translates the voice of the river. In this process, the role of the designer shifts from master of space to mediator of complex ecologies. Space can no longer be conceptualised as predictable, controllable or uniform, but is instead shaped by a complex layering of different territories, where each delegate (be it the Meuse or The Netherlands) should be taken equally seriously.

The listening practice proposed here repositions the river as partner in design, embedding her voice deeply into the urban design practice.



## 7. Reflection

*1. How do you see the relation between your graduation project topic, the studio topic, your master's track (Urbanism), and your master's program (MSc Architecture, Urbanism and Building Sciences)?*

The graduation project topic of restoring the agency of the Meuse river through a critical reflection on the tools and methods used in urban design ties in to the studio topic, the master track, and the master programme in different ways.

*Transitional Territories Studio*

This year I have been part of the Transitional Territories graduation studio, centred around the topic of altered nature – poetics of change. The studio is founded on a strong combination between theory and design and takes as starting point the premise that present-day urban developments and patterns of resource consumption are unsustainable. It advocates critical thinking and cross-disciplinary methods to develop alternative projects that question existing ecological biases. The theme of altered nature holds that landscapes are products of nature-culture dialogues and exchange, while the poetics of change aims to envision a caring response to this reality. The task of writing this reflection made me revisit the websites and publications of the studio and as I write it down, I am surprised by the similarities, showing how the lense of the studio has been influencing my work in the background.

I started out working on the Meuse because I could imagine it as altered landscape, but the research process made me realise this more fundamentally and more deeply. In comparison to other student's projects on landscapes and activities where socio-environmental injustices are extremely loud and clearly visible, the alterations of the Meuse seemed innocent and kind, less urgent. Staying with this river over the course of a year gave new meaning to these altered landscapes that the studio describes, in fact, made me realise that they are all around us, we all live within them. Environmental injustices and ecological decline is easily allocated to distant places, but the lense and tools of the studio brought this activism into my own backyard.

*Urbanism Track*

The master track (urbanism), "integrates the social, cultural, economic, and political perspectives with the natural and man-made conditions of the site" (Website TU Delft, track: urbanism, consulted May, 2025). The thesis draws in a more philosophical and ethical layer

that is currently not always considered a part of the 'conditions of the site'. Posthuman and new materialist theories position more-than-human nature as something alive, not as passive background to human activity but as active participant in worldmaking processes. The thesis project is in dialogue with the master track, in that it is critical of the knowledge that is valued or included to inform urban design projects. Methods for acquiring data and knowledge do not always reveal what is there, but can be biased to certain truths. By bringing in concepts and methods from other disciplines, perspectives on the territory can shuffle. Through investigation the agency of the river, the voice of the water can be included in urban design projects. The aim of the thesis to expand the urban toolbox (a new atlas as method for thinking otherwise) is thus a way to push disciplinary boundaries by opening up to the diversity and richness of different perspectives.

*Master Programme*

The MSc AUBS programme is built on a multi-disciplinary way of working to find integrated solutions for the built environment. It promotes blending knowledge from design with the social and the physical sciences. I think the project fits well within this framework. I have gotten the opportunity to delve into the theories and tools of other disciplines, and apply them to an urban/landscape project [the Meuse]. Precisely because I have been allowed, and encouraged, to cross these disciplinary boundaries I am able to "dissent-within" the discipline of urbanism, as described by Puig de la Bellacasa (2017). Rather than moving away from the urban discipline thinking that other disciplines have more to offer for understanding space, I have gotten more firmly rooted in the discipline through offering care-full critique. Just like the river – and any other space for that matter – a person, as well as disciplines are in constant flux. I am thankful that the combination of the topic, studio, track, and master programme have allowed me to experience this and to humbly make a contribution to continuing this movement of both the river landscape, the discipline of urbanism, and myself as urbanist in becoming.

*2. How do you see the relation between research and design in your graduation project?*

Research and design are inseparable in this project. Cross-disciplinary research invites a rethinking of dominant epistemologies in urban design. The questioning of

human-centred approaches to space reshapes how we know about and represent the territories we work with. Design acts as both method and outcome in this project. The design of speculative cartographies, multi-sensory mapping, and conceptual modelling are products and processes that gave rise to the online atlas as archive of the river territory. This design is simultaneously method and tool to, respectively, invite alternative ways of knowing and relating to the Meuse, and be consulted by designers who undertake a project that takes place within the borders of the atlas. The design outputs (e.g. multispecies maps, river biographies, networks of care) are research artifacts in themselves, serving to question existing frameworks and have the potential to bring spatial projects into being that acknowledge the agency of the river (and other non-human actors) based on co-design and that give room to a plurality of perspectives.

*3. What do you see as the value (and limitations) of your way of working: your approach, your used methods?*

To me, the value of this year lies in the enrichment of reality. The elaborate fieldwork, enabled so many encounters and opened up a richness to the territory that I work in that I would not have understood so deeply if I stuck with desk research. The practice of listening to elements like the river, whose perspective is usually not included, also adds additional layers of richness to the landscape. On a personal level, it has left me with such a deep sense of awe and wonder for the richness and complexities of our lived realities. The 'immersion' in a place has made me even more eager to learn more and continue practicing caring futures after I graduate. Knowing I will never be able to understand or experience all there is means discovery and learning is without end. I am grateful that this methods reaffirmed this, as it makes me eager to continue learning and practicing caring futures after I graduate.

Beyond the personal, I think the value of the methods used lie in their capacity to reframe urban spaces as holding multiple and more-than-human perspectives. The alternative forms of the atlas entries (multi-sensory, poetic, non-linear temporalities) move beyond mere technical understandings of space. This opens up possibilities for imagination and raises new ethical questions that call designers to take action within the landscapes they care for.

However, the approach also faces limitations. Translating non-human voices into human-readable formats involves a risk of anthropomorphism or appropriation. Also, because the project deviates from normative frameworks, it may struggle to gain traction within more traditional design practices. Due to the limited timeframe of this thesis project I have not been able to investigate the consequences of the atlas for translations into a spatial design project. The method should not replace, but add to existing frameworks. The project might be seen as too poetic or one-sided as it aims to give more attention to this other way of doing research and interpreting the territory. I am curious to see what happens if the two are brought together in a spatial design process, and how the knowledge held in the alternative and traditional atlases are mediated.

*4. What are the academic and societal value, scope and implications of your graduation project, including ethical aspects?*

Academically, the project contributes to growing discourses around post-human urbanism, critical cartography, and ecological design. It opens a space for theorizing the role of representation and narrative in spatial justice, and for questioning the epistemic foundations of urban practice.

Societally, the work aligns with global movements that recognise the intrinsic value of non-human nature, exemplified by the Rights of Nature movement. The reach of this movement stretches across the globe, from Ecuador's constitution to the Whanganui River in New Zealand, and to Mar Menor and the Embassy of the North Sea, bringing it closer to home. By envisioning design practices that respect the autonomy and rhythms of natural systems, the project contributes to ethical frameworks for co-habitation in times of climate crisis.

Representing the voices of those who do not speak our language is an ethical responsibility, but requires caution. As mentioned before, it risks misinterpretation or appropriation. It asks us to be humble in what we can and cannot do, and to be transparent about our partial perspectives and interpretive limits. Transparency and openness about our political and ethical stance, as well as our tools and methods is necessary to take careful action for better futures.



5. *How do you assess the transferability of your project results?*

The core idea underlying the atlas is to enable situated re-interpretations of a territory, attuned to local ecologies, temporalities, and narratives. This is a process that can be valuable in many other contexts as well. It can be transferred to other altered landscapes, especially those that take on a wide variety of social and ecological roles across various scales, places, and times (deltas, wetlands, forests). While the maps are specific to the Meuse in a specific time period (knowledge gathered up until 2024-2025) its open-source shape means that the atlas can remain relevant in the future, as knowledge can be added. Its conceptualisation of the river landscape as archive means that the website could also be a place to remember extractive and exploitative practices that will (hopefully) become part of a distant past.

The process of mapping otherwise, and engaging with a territory as archive and living entity in constant flux can inspire broader applications in urban design, participatory planning, and environmental advocacy.

6. *How has the project influenced the way in which you see yourself as (future) urban designer?*

The project is critical of the traditional urban master of space, and rethinks the designer as mediator. During the process my relation towards my potential future role as designer has shifted in two ways. On the one hand, I have come to think that the design discipline is not my place. The project centres slow processes of listening and careful translations, that clash with the fast-paced environments of urban design firms. Having become sensitive to these languages I can no longer leave them unattended, making such fast paced environments that do not hold space for these rhythms less attractive.

On the other hand, the fact that I have been allowed and enabled to undertake this research within the boundaries of the discipline highlights there are places where there is room for such practices. I have a tendency to find unexplored terrains more interesting than those that I have already traversed, which has made me a bit restless in academic explorations, being more comfortable dancing around disciplinary edges than in the middle of them. Yet this project, and the guidance of Luisa, have made me also more at home in the urban discipline. As I mentioned above, the richness that the project reveals

means that the unexplored terrains are vast and endless within the discipline of urbanism already, and there is no need to venture out. Despite the hesitance to adopt the label of urban designer, I am more certain that there are many subsections within the discipline that align with my way of working, understanding, and learning together. I am excited to find them after I leave university.

7. *How do you see the relation between thinking and doing, theory and practice?*

Urban design is a practical discipline. It always manifests itself spatially. I noticed that the engagement in social complexities sometimes stifles. Knowing practices are not neutral, and because I am operating in landscapes of relations, my actions have consequences. It can be difficult sometimes to take action, knowing that there can be many consequences that I cannot foresee.

At the same time, engagement with reality reveals injustices that require action. I am ethically called to speak on behalf of the Meuse, whose voice deserves to be heard, accepting that I will make mistakes.

I find it difficult sometimes that ideas can seem so flat once they are outside of your head. Much richness of the initial idea is lost in translation. The trajectory of this thesis, and the necessary requirement to translate ideas to action, has shown me how there is also beauty in this effort, despite the many things that are lost along the way. Making things real, turning them into actions or physical objects, is the only way to (re)make our present realities. There is a duality here, but by moving from one side to the other, there is unity. On the one hand, there is a love for the richness of abstract thought, while on the other is the fulfillment of seeing a physical presence or effect take place. Translation makes the conceptual ideas travel beyond the boundaries of myself as individual. There is beauty in sharing

I notice that the awareness of my position, with infinitely much I do not know, I do not always feel capable of making the bridge between the external. I am looking forward to start working. The university is the realm of abstract thought, while practice can teach me more about the translation process that I am less experienced in. The thesis trajectory is therefore representative of this transition into a new life phase, travelling off the university grounds into practice.

Appendix.

Appendix I. Photos of Thesis Report/Archive & Cabinet of Counter Narratives

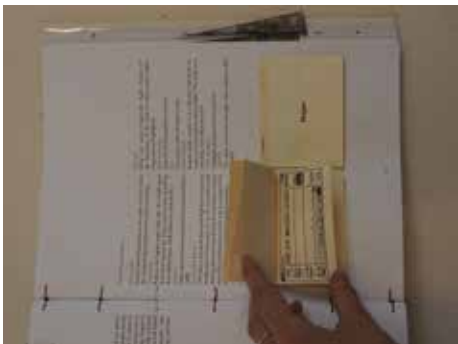
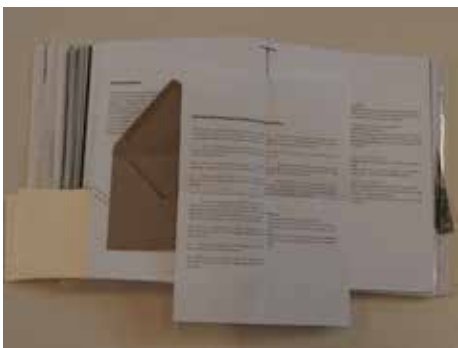
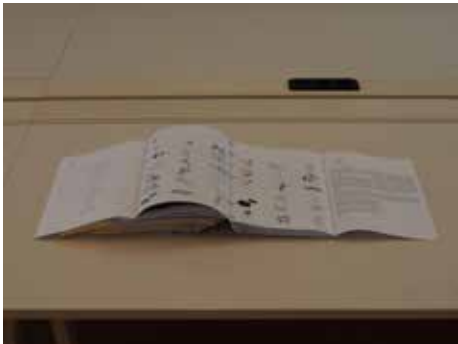
Thesis report as exhibition & river archive

I binded the thesis report together by hand. The messy and care-full work add to the character of the book as living archive of the river and the open-endedness of this year's journey.

The index is printed in a half circle on a large piece of paper, turning the report into an exhibition piece. Two white pages are added on the sides, where dotted lines

show the outlines of the appendices and explain the website and cabinet that are part of the report but cannot be added in print.

The continuous sheet of paper shows how the report is inseparable from the physical manifestations in both artefact and activity.





*Cabinet for Counter Narratives*

The cabinet consists of

- three drawers with the Meuse river from source to mouth
- one sand-drawer
- 2 plexiglass sheets that fit on top of the dowels added to the corners of each drawer (to extend the table top once the cabinet is extended)

A box at the bottom with:

- 4 poles with which one can extend the cabinet and view the river as a whole
- a little stool to get a better view on top of the map
- artefacts for fieldwork: camera, sound recorder, maps, pens, notebook with fieldwork suggestions, transparent paper for making Maps of Chance Encounters



Appendix II. Focus and Integration Intensive - Geographical Urbanism

This week’s intensive aimed to contextualise design in the Anthropocene. We had to analyse our topic through 4 different lenses:

- human x city
- human x more-than-city
- more-than-human x city
- more-than-human x more-than-city



The invisible Anthropocene River

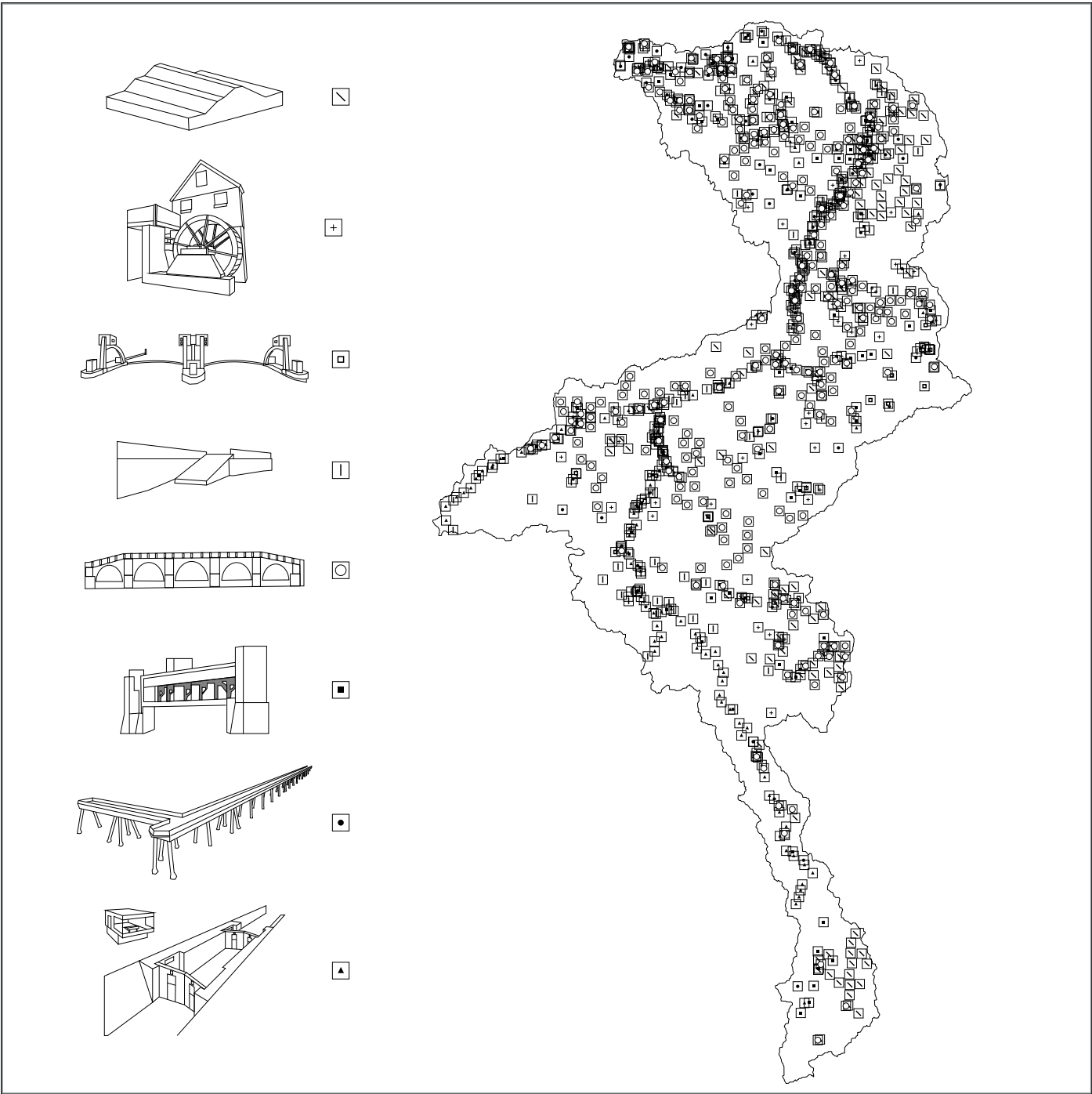
The river is an altered landscape. This leads to feral behaviour by the water itself, beyond our control. The drawings aim to show the presence of the water without drawing the water itself:

- 1) Human interventions as semiotic systems that show the presence of water, water-related infrastructures reveal the course of the river
- 2) Shipping data on the number of vessels reveals the location of important waterways
- 3) Pollutants found at the drinking water facilities show the water, but also what lies along her banks, in the watershed, and the bodies that depend on it,

4) Boundaries of watersheds determine whether rain flows towards one river or the other. The small width of the Meuse basin make flood predictions difficult as the uncertainty range in our weather models might allocate raindrops to the wrong river.

While map 1 and 2 seem calm and controlled, 3 and 4 show that this is often an illusion. Each show our entanglements with the river and how our behaviour is not without consequence. The water will intrude if we do not change course.

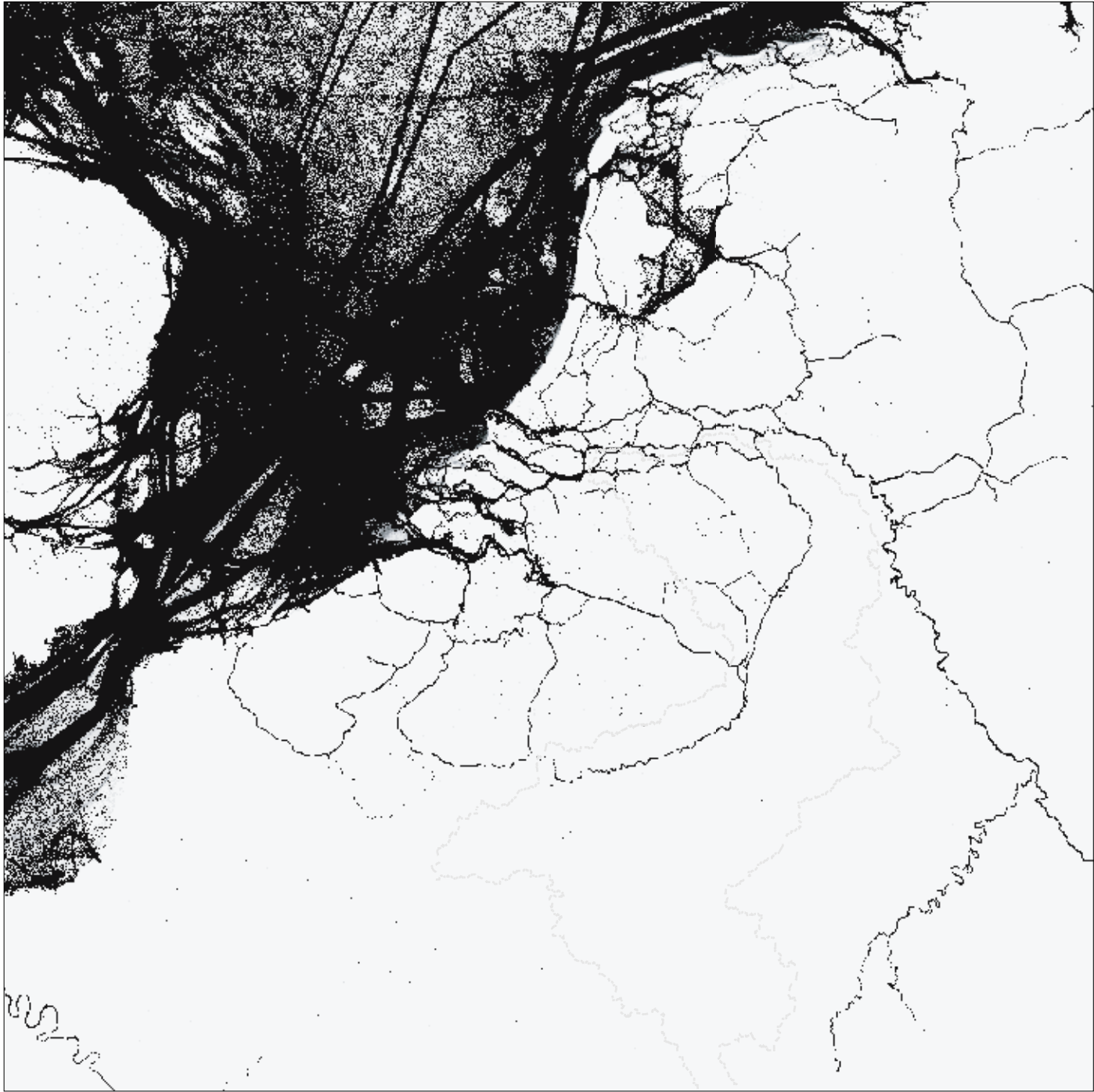
City | Human



Man-made structures responding to the river’s presence

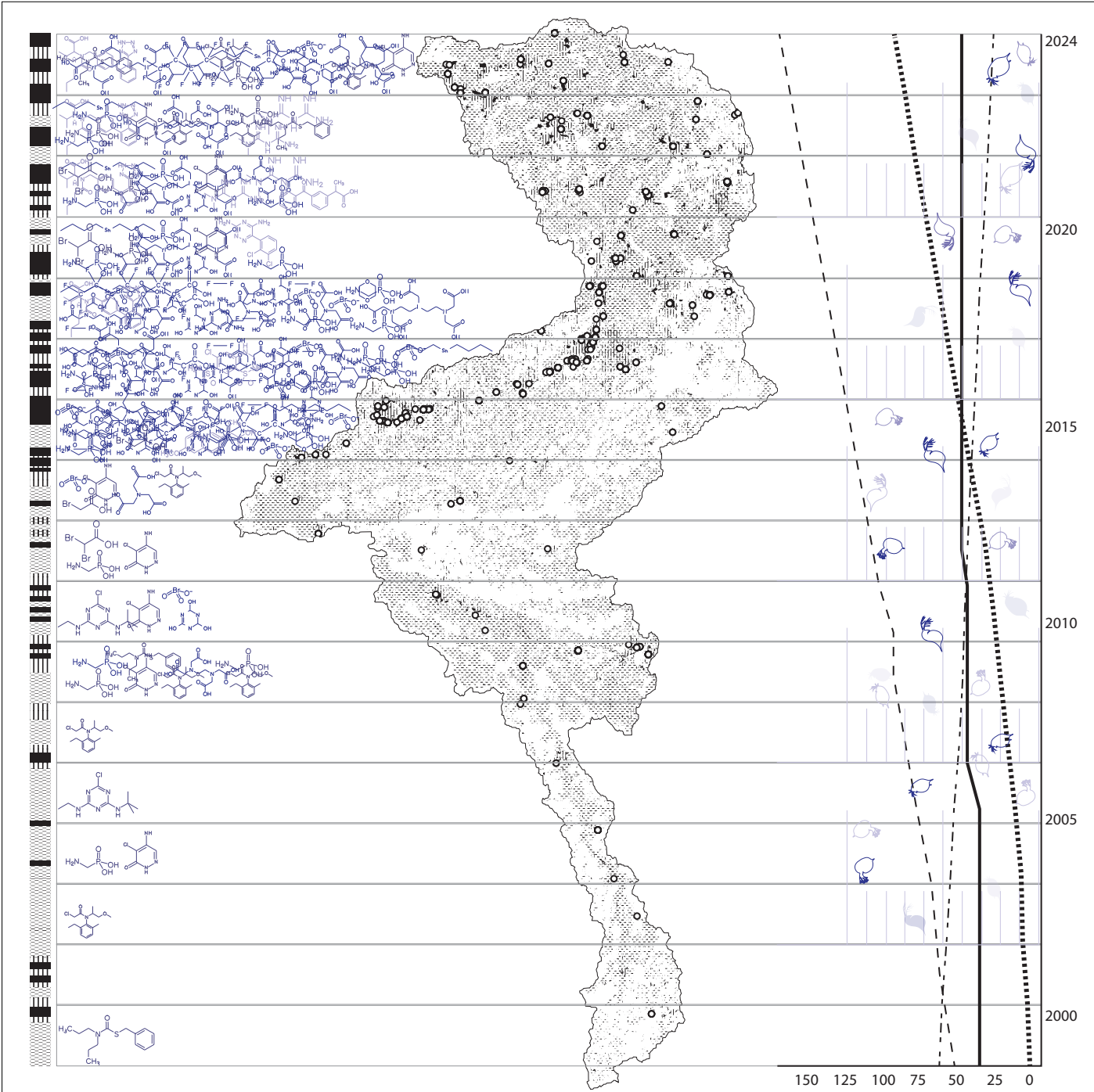
- 1 N 0 25 50km
- Dike/embankment
  - Weir
  - ⊕ Watermill
  - ◻ Pier
  - ◻ Hydroelectric powerplant
  - ▲ Lock-gate/sluiice
  - Bridge
  - ⌈ Slipway





*Inland shipping traffic density 2015-2021*

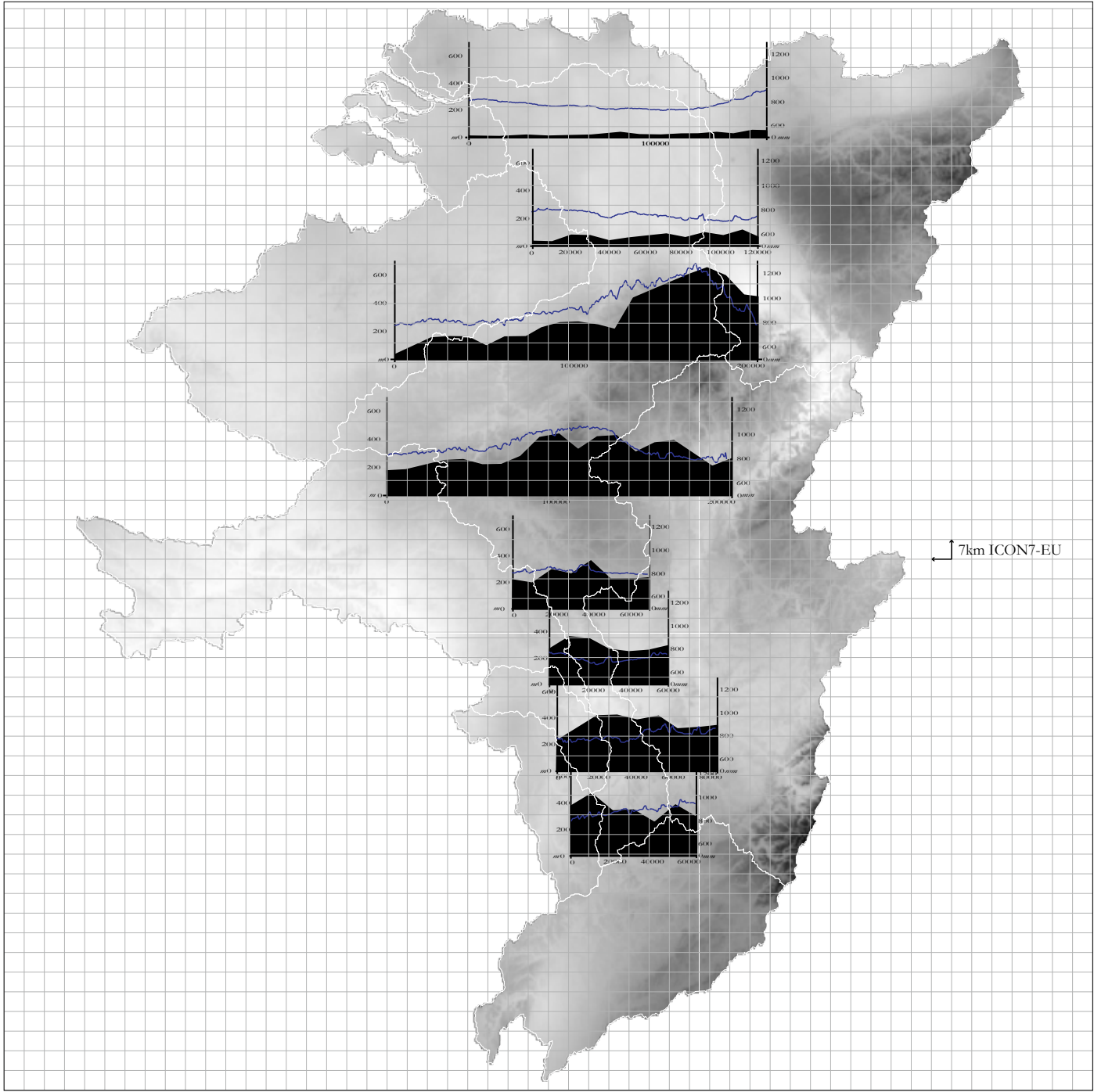
1 N 0 50 100km



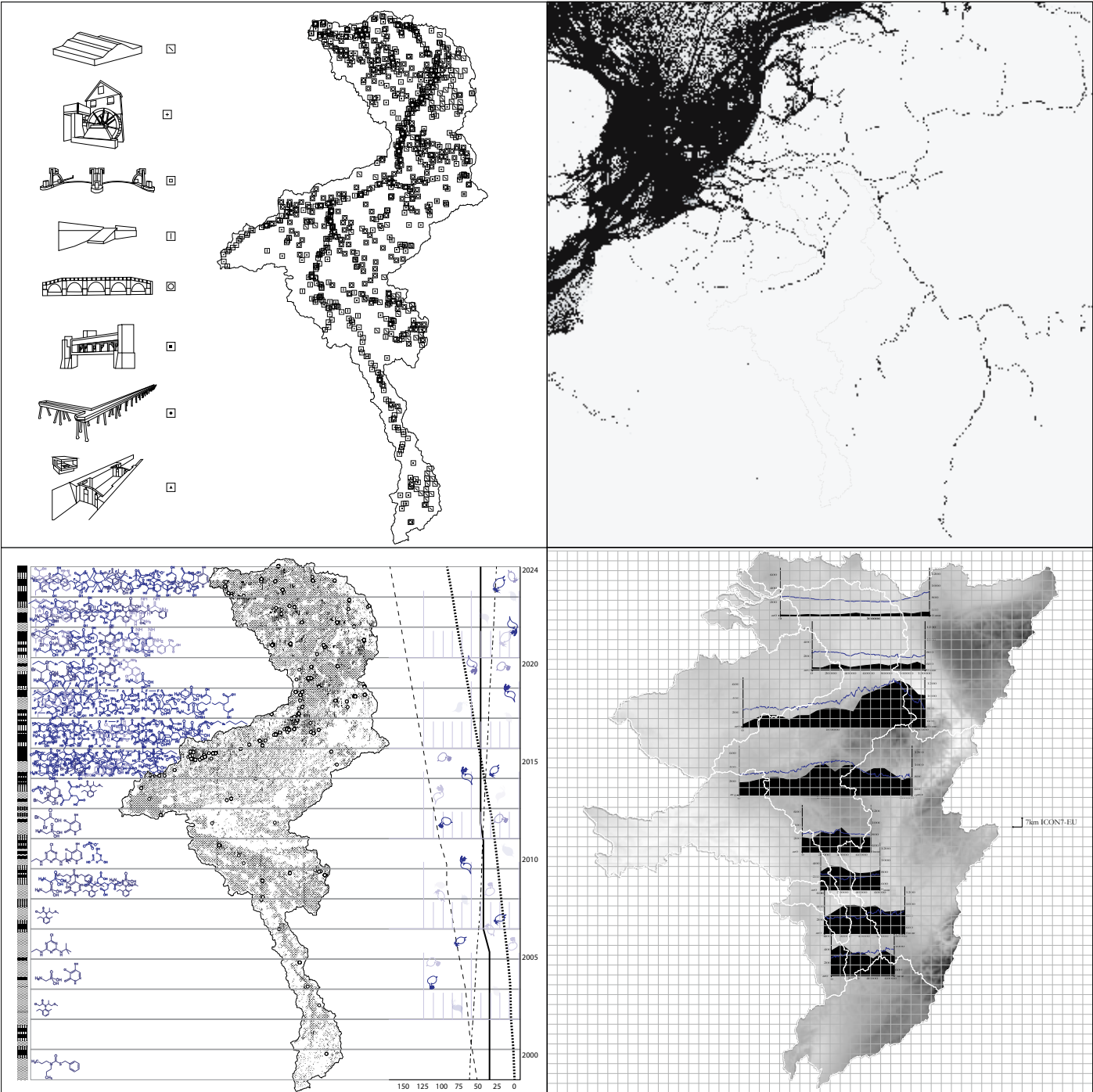
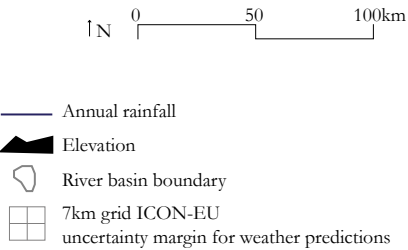
*Threatening substances found in Meuse waters, both measured and unkown*

1 N 0 25 50km

- Industry
- Urban
- Agriculture
- Polluters to water
- Pharmaceutical
- Pesticides
- Industrial
- Biocides
- Pharmaceuticals & chemicals
- Pesticides & herbicides
- Emerging pollutants (PFAS)
- WFD priority substances
- Daphnia bioassay



Uncertainty of weather predictions and into which riverbasin raindrops flow





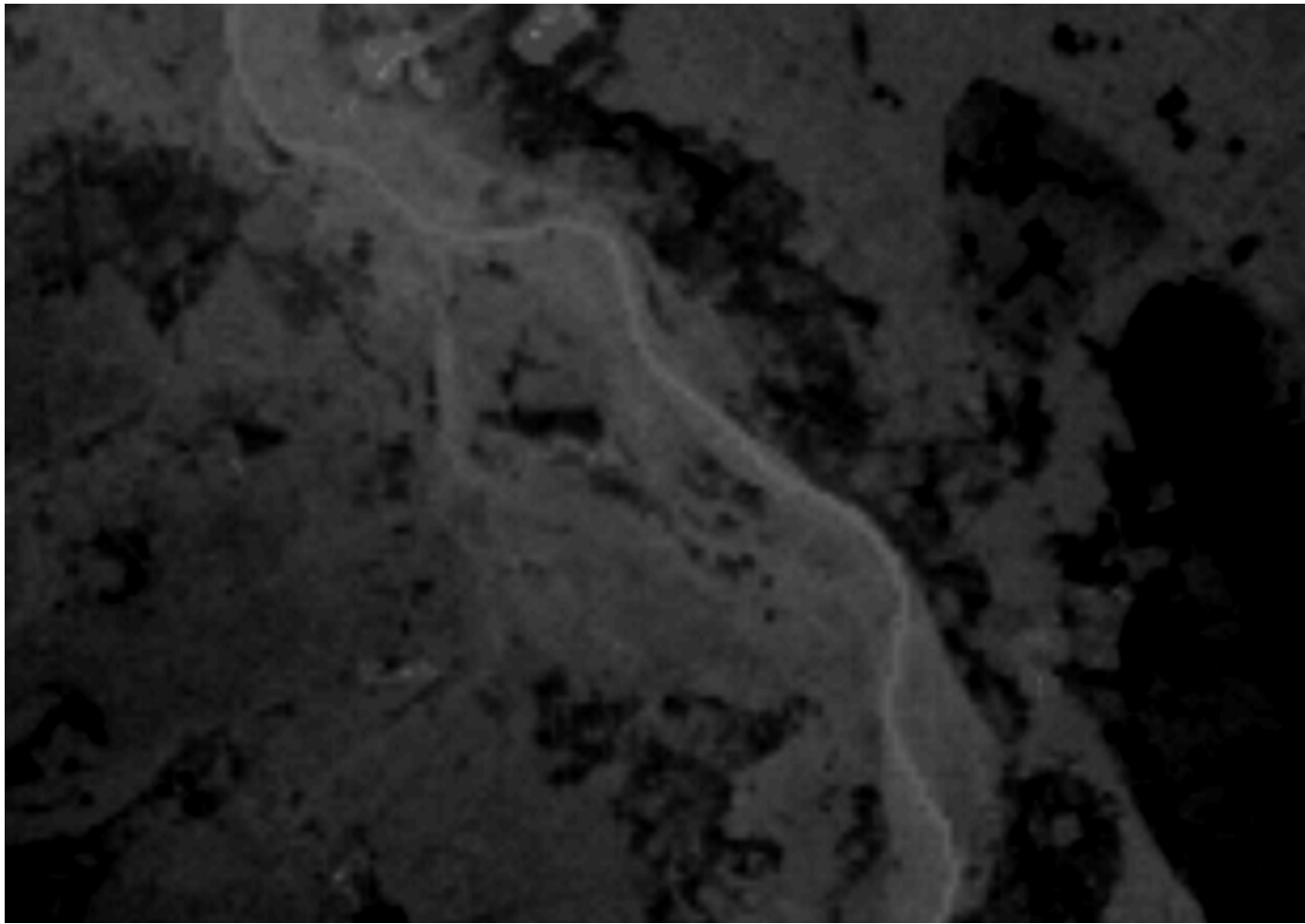
Appendix III. River Language Explorations

Past conversations with the soil

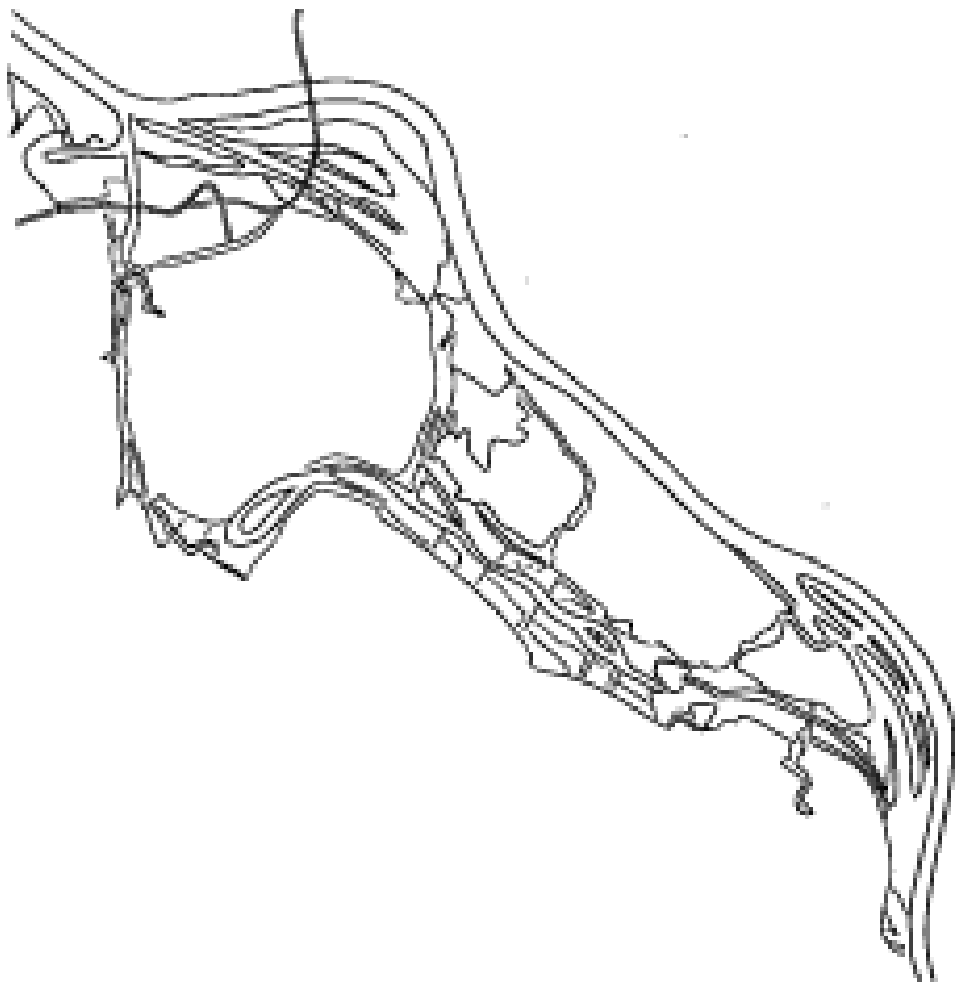
Analysis of the soil can reveal historic conversations between the water and the land. The interview with the former Dijkgraaf of Limburg highlighted this specific region, where the river used to braid her way through the landscape.

The water has a memory, and tends to return to places she had been before. This region was vulnerable to floods, until they decided to dug out the old waterway again, restoring the natural flow.

How do existing practices influence what we see? What would the landscape reveal if we look at it through the river’s eyes?



Height map of the location, showing lower regions where the river used to flow



Drawing of the landscape design for Ooijen-Wanssum  
The old river arm (south of main river) has been dug out again

River ID

Instead of adopting the eyes of the river, I wondered which aspects of the river would reveal themselves if I would analyse her from a very human-centric eye: the passport ID.

Initially, I thought ‘facts’ about the nature of the river would be very straightforward, as satellite data determined the exact latitude and longitude of the source, the

mouth, and the river course. However, research revealed the opposite is true, as all her characteristics are full of ambiguities and allow for multiple answers.

Rather than saying it is a ‘lack of knowledge’ this might actually reveal the nature of the being of the river: as something fluid, constantly changing. A being as a becoming.



ID Characteristics:

Name	Julia Schasfoort
Length	1.70m
Limbs	4
Origin	Delft
Destination	Unknown



ID Characteristics:

Name	Meuse/Maas
Length	Exact length unknown; 925km estimation
Limbs	15 large ones (main tributaries), unknown amount of smaller ones
Origin	Ambiguous; 3 sources (line); entire basin (surface); clouds/rain (section)
Destination	Multiple. Air, soil, surface water, vegetation, animals. More than one mouth into the sea; confluence with Rhine and Scheldt



*River materialised*

How does the river express herself through materials?  
How and when do we touch the river, perhaps unknowingly?

I biked along the river in Rotterdam for a few afternoons, observing the water and wondering how I could capture her physical presence. I collected objects and materials that are linked to the river in such a way that even without seeing the water, the river would come to mind.



*Objects collected*



*Objects researched*

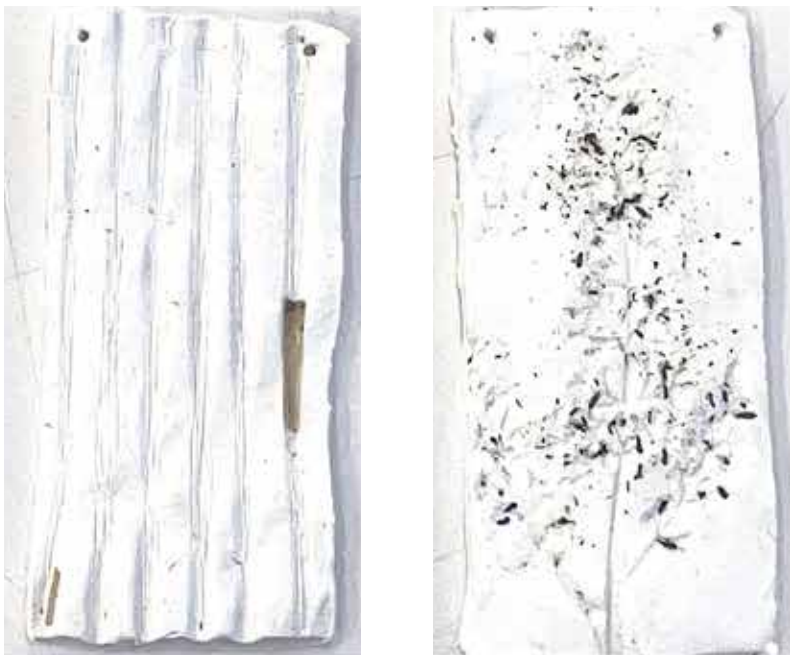
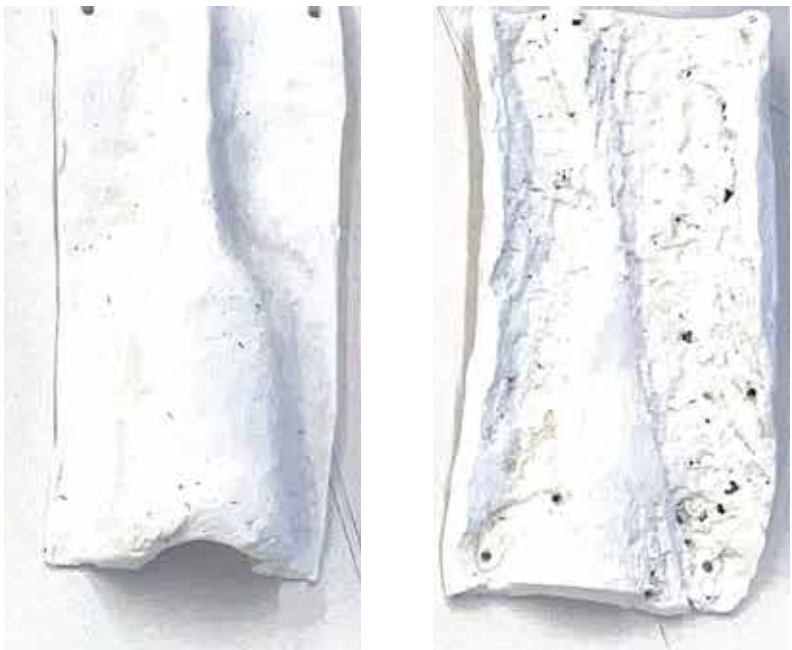
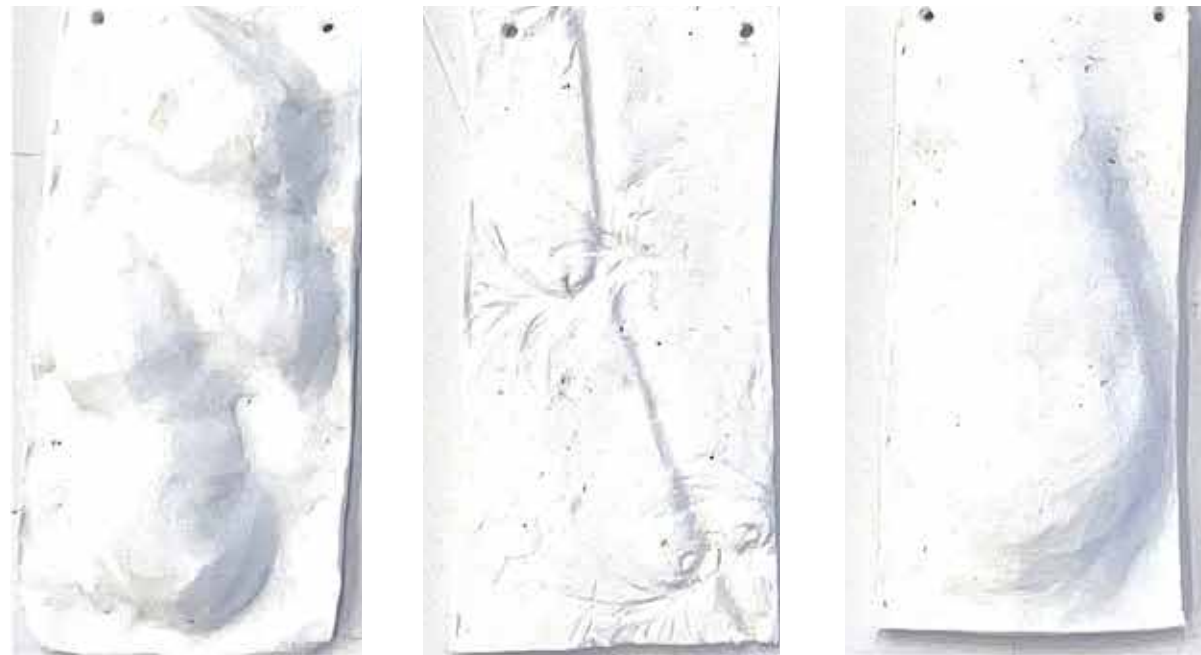
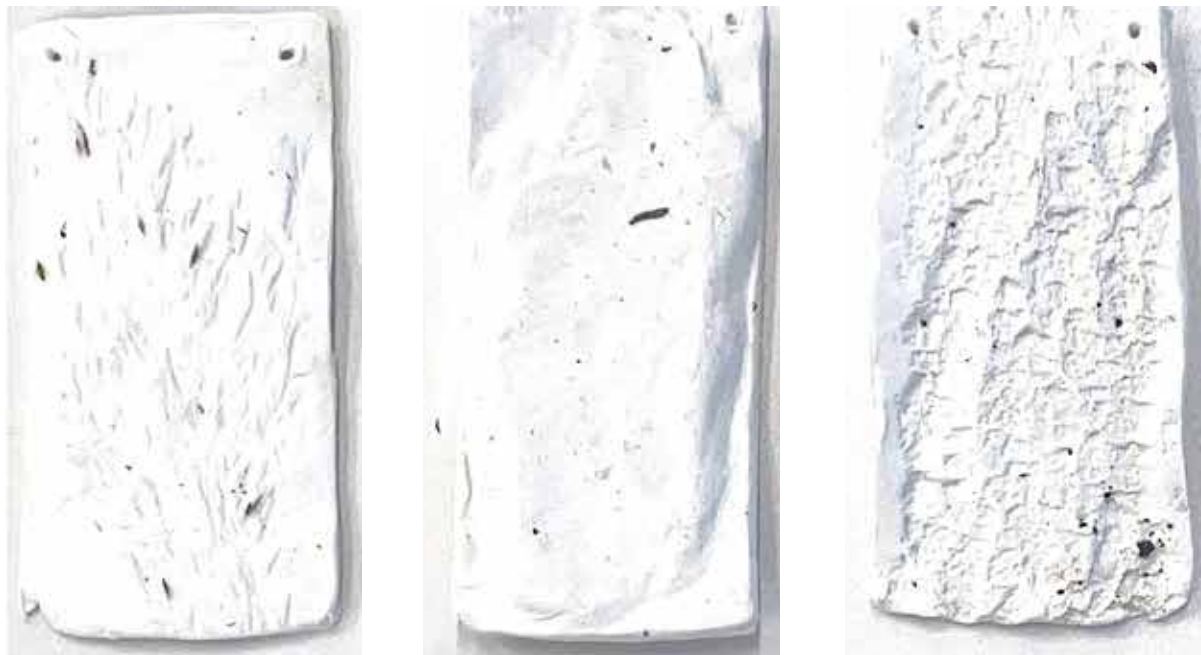


Objects that are made from body elements of the meuse: sand, clay, gravel. These are objects and materials we engage with everyday. If we would label them as belonging to or originating from the river, would we value her more? Think differently about her natural or unnatural flows? About cultures of extraction and exploitation? Lines of interrelation are everywhere, but often disappear into the background.

*River materialised - imprinted*

I wondered how we could capture the river's presence in a more permanent material. With a block of clay, I walked along the river banks, pressing the clay into materials that belong to the river. As the clay dried, the negative shape left behind acts as a footprint of the river landscape.

This exercise again highlights the river's elusive and ephemeral nature: the river itself can only be captured indirectly; through materials of different consistency, connected but not the same.





Locate oneself

As I biked along the river I navigate space through specific eyes, using roadsigns and landmarks to understand where I am and where I have to go.

It left me to wonder how the river knows where she is. Are there aspects in the landscape that are always the same and thus a point of recognition? How would the experience of the river chane along the route from source to sea?



Roadsign guiding me to the source of the Meuse



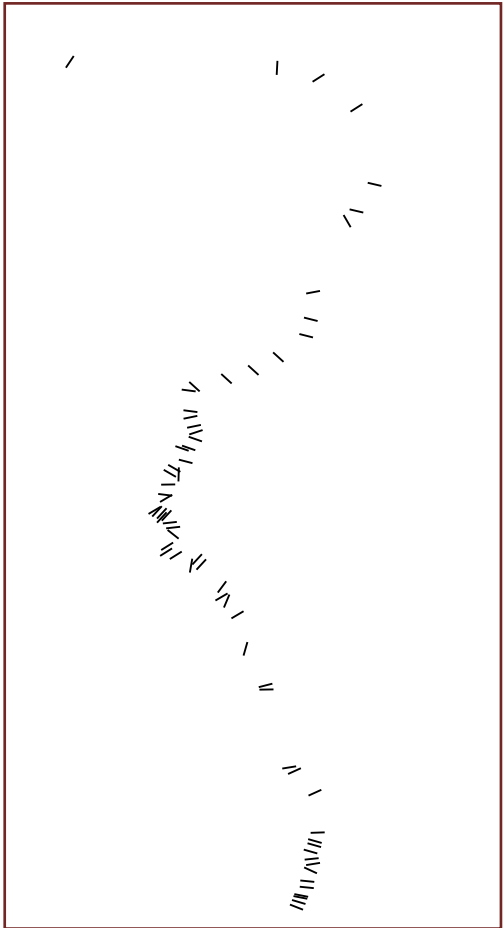
Landmark that signifies my arrival home



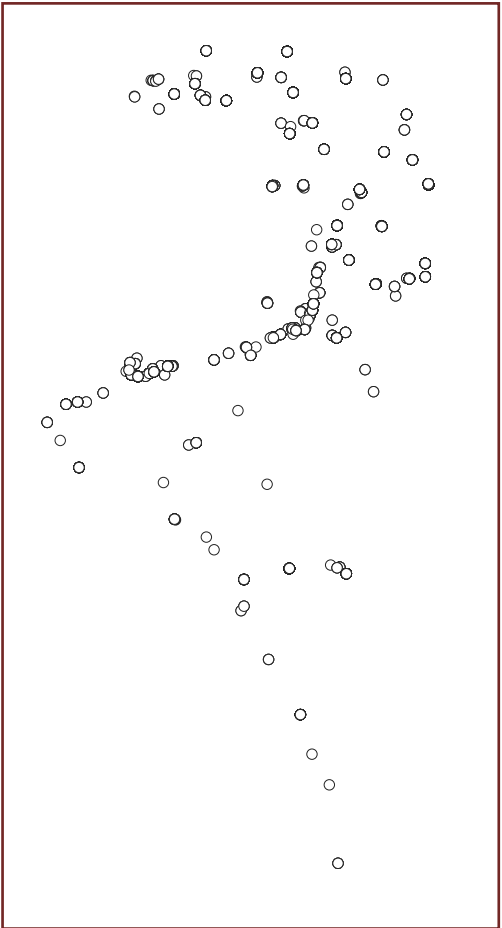
The church of Cuijk marking my arrival in town



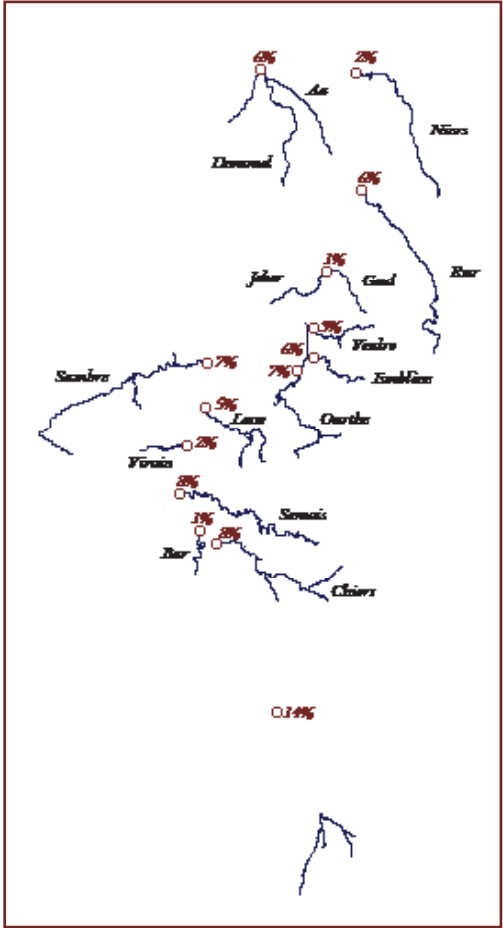
A sign telling me it is the Meuse I am about to cross



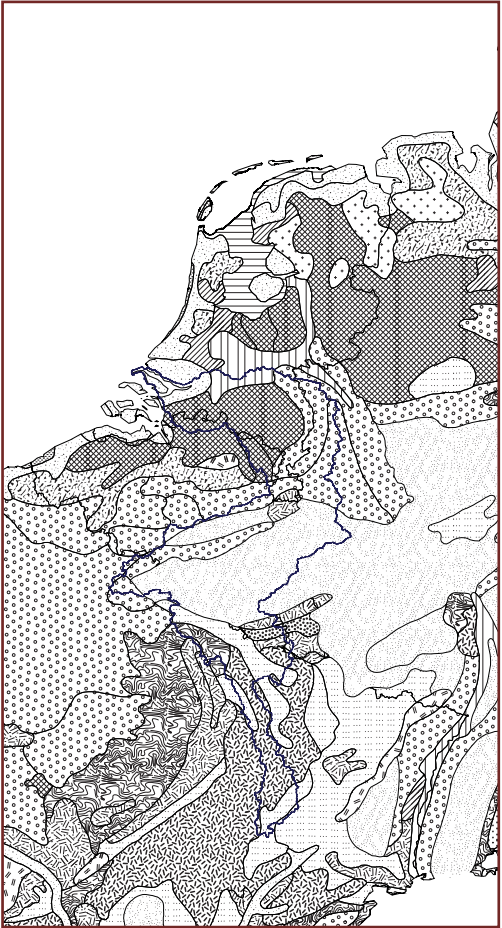
Dams and weirs  
Sense of location: interruption



Pollutants released to water  
Sense of location: chemical composition



Tributaries  
Sense of location: added volume



Soil types  
Sense of location: sediment composition

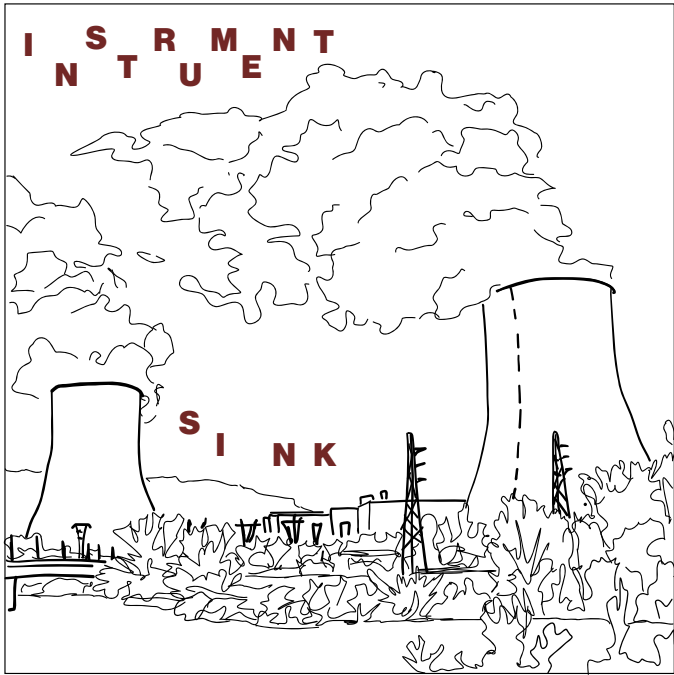
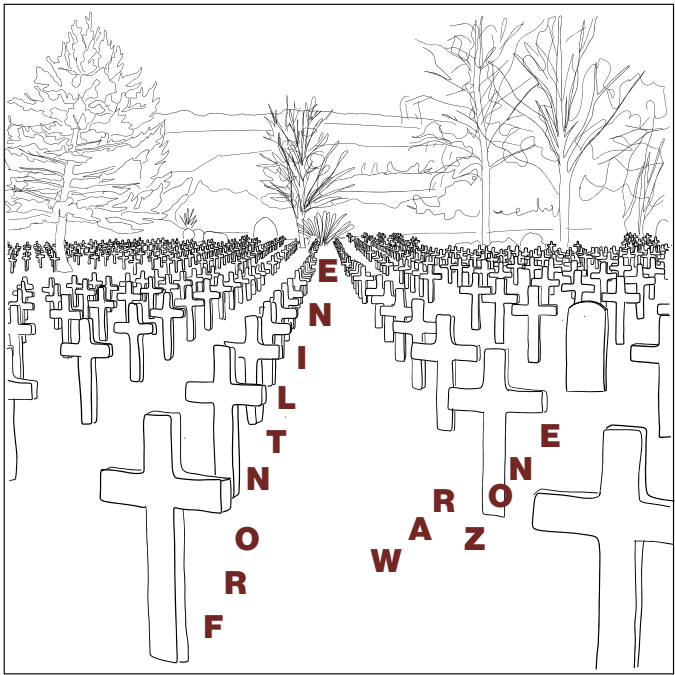
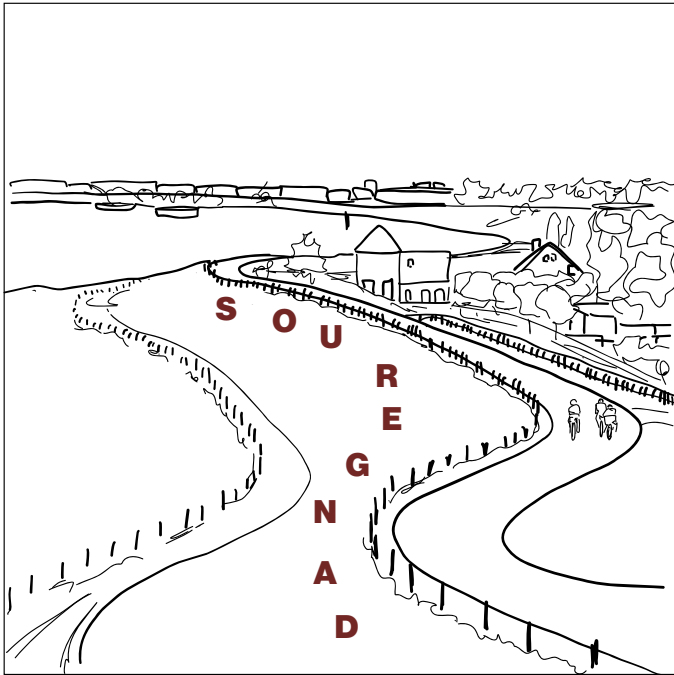


*River characteristics - human response*

The character of the river might also reveal itself through man-made structures. As I was biking along the river, I noticed that different places respond very differently to the river.

In some places, there were playgrounds next to the water, indicating gentleness of the water flow, while others made access to the water impossible as high dikes were placed to protect the land from the water.

In other places, the river banks were occupied by nuclear power plants and industries, highlighting the instrumentalisation of the river for economic gain. Yet other river banks were full of war cemeteries, reminding of how the river as natural border is likely to become a front line in wars, exemplified by the horrifying battle of Verdun.



*The voice of the river - literally*

The first thing that comes to mind when thinking of the voice of the river would be the sounds of the river water. As I spent time with the river, I noticed the water is often inaudible, overshadowed by other sounds. As the river was silent, she took up less space in my mind, leaving me to wonder:

*What if the river was louder than the traffic?*

I edited a video I made from a bridge crossing the Meuse. First, I left the sound as it was, which gives cars central stage. Second, I amplified the sound of the water, third, that of the wind, and lastly, that of the birds.

The sounds one hears change fundamentally what one sees and which aspects of space are highlighted. An urban project for the Meuse could thus think about how spatial designs can amplify the sounds of the river as that might shift our attention.





Time

The river has existed for centuries, experiencing vast timescales that are cyclical rather than short-lived and linear as we humans tend to do.

As I cannot easily grasp such timelines, I wondered how I could capture the passing of time through the water. As shown in the material explorations, the river is a source of drinking water. In Rotterdam, we drink water from the Meuse. The act of drinking is essential for life, and follows a daily rhythm. As I worked on this thesis, my tea rituals added pauses to my day, either alone or shared with others.

Over the course of 1.5 months, I kept and dried all the tea bags I used, noting down how many litres I consumed and with how many these were shared. Apart from showing accumulation across time, it highlights our dependence on the water, as well as cyclicity in a practice that we perform routinely, day in day out.

	tea bag	litres	additional people
28/02/2025	1	1	
01/03/2025	1	1	1
	1 1 cup		
02/03/2025	2	1.5	3
03/03/2025			
04/03/2025			
05/03/2025	1 2 cups		
06/03/2025	1	1	
07/03/2025	1 2 cups		1
08/03/2025	1	1	1
09/03/2025	1	1	2
10/03/2025			
11/03/2025	1	1	
12/03/2025	1	1	1
13/03/2025			
14/03/2025	1.5 1L + 1 cup		
15/03/2025	1.5 1L + 1 cup		
16/03/2025			
17/03/2025	1	1	
18/03/2025	2	1	
19/03/2025	1	1	1
20/03/2025			
21/03/2025	2	1.75	
22/03/2025	1	2	1
23/03/2025	1	2	
24/03/2025	2	2.25	1
25/03/2025	2	2	2
26/03/2025	3	2	1
27/03/2025	2	2	1
28/03/2025	1	1	
29/03/2025	1	1	1
30/03/2025	1	0.5	
31/03/2025			
01/04/2025			
02/04/2025			
03/04/2025			
04/04/2025			
05/04/2025			
06/04/2025			
07/04/2025			
08/04/2025	1	1	3
09/04/2025	1	2	
10/04/2025	1	1	1
11/04/2025			
12/04/2025	1	1	
13/04/2025			
14/04/2025	1	0.5	
15/04/2025	1	0.5	
16/04/2025	1	1	





## Wetness

The idea of a river as line is a Western concept, as Dilip da Cunha (2019) describes when he talks about ubiquitous wetness. As architect and landscape designer from India, he has been taught to think of rivers as lines, ridden with problems like floods. However, he argues that rivers are instead oceans of wetness, as their wetness does not begin or end in the river bed, but is in fact all around us.

This has implications for design because in an ocean of wetness, temporal increases of water levels are natural, which means 'floods' would no longer exist as construct

because the swelling is part of the natural functioning of the landscape.

I looked back in my photos to see where there were signs of this wetness along the river: it abounds. The top row shows wetness in the sky, the middle in the river bed, and the bottom on the soil.

What would change if we design with wetness instead of rivers?



Wet skies



Wetter soil



Wet soil





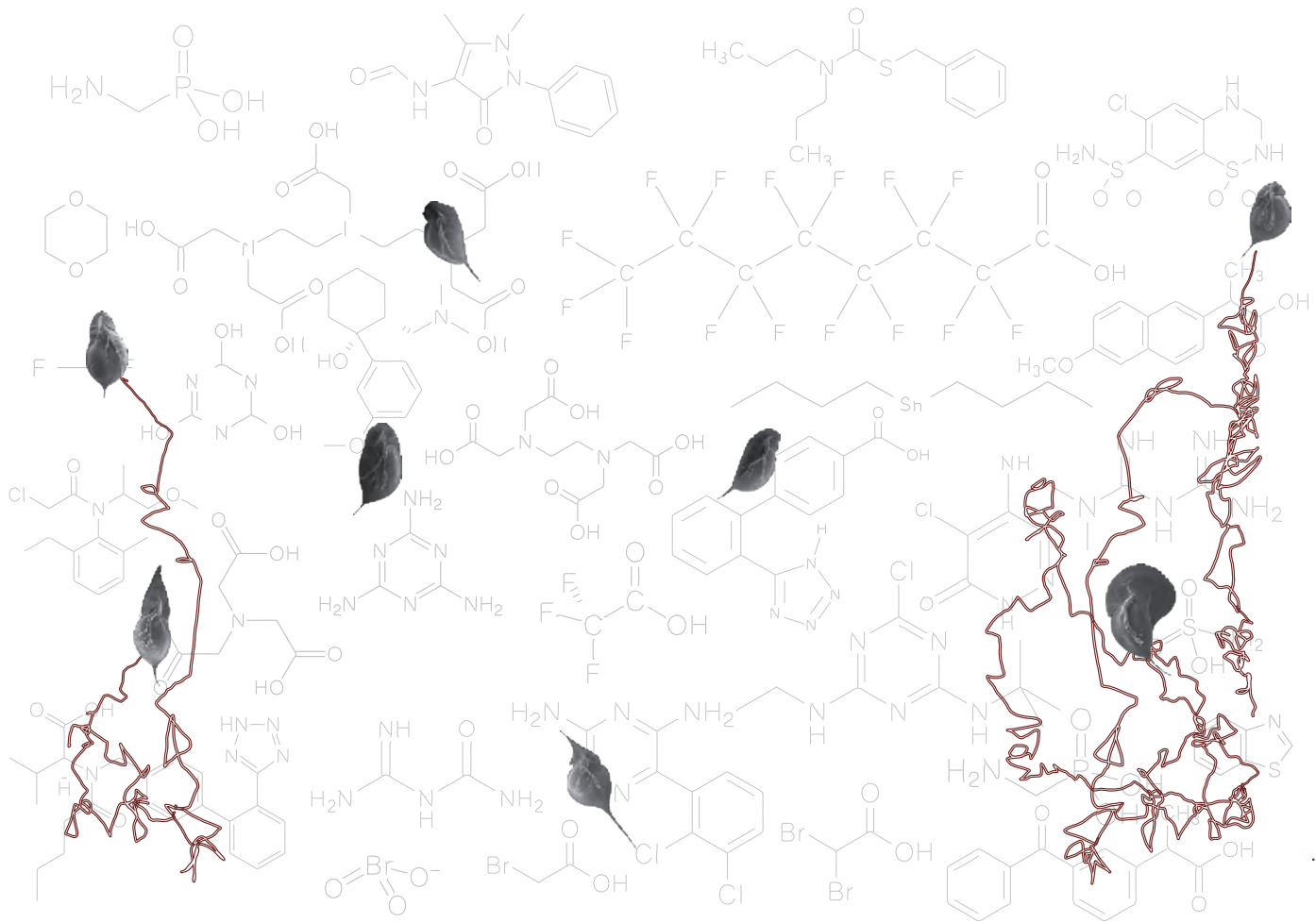
Whose eyes?

Thinking about more-than-human agency, it is interesting to notice that some other than human voices are embedded in our societal systems, while those of others are considered absurd or strange to listen to. One example of such a non-human entity that plays a vital role in the Meuse territory is the Daphnia.

This one-celled organism is used by water monitoring stations to determine whether the water is fit for consumption. As our scientific monitoring methods

are not adequate to check for unknown substances, the Daphnia is used as indicator. The movement of these little critters are analysed. Once these patterns change a lot, or once they sink to the bottom, an alarm is sent to drinking water companies to stop water extraction and processing.

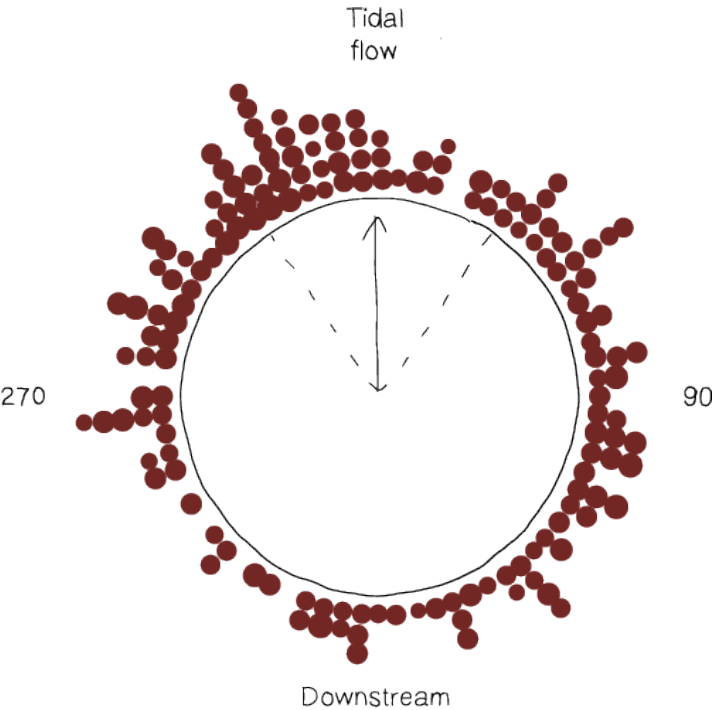
Whose eyes do we value in understanding and interpreting our world?



Similarly, what is left unseen when excluding certain perspectives of the world? Would we, for example, make different decisions about shipping networks that disrupt magnetic fields that eels use to navigate? Upon understanding the effects of certain infrastructures through other-than-human eyes, these can be viewed in a different light.

This leaves me to wonder what this would mean for the river:

How can the eyes of the river help us rethink practices or add ethical dimensions to actions that seemed neutral before?



Magnetic orientation of glass eels (*Anguilla anguilla*) with respect to the magnetic direction of the tidal flows.

(diagram adapted from Cresci et al., 2019)

Appendix IV. Understanding Existing and Emerging River Frameworks

Law & Policy

To understand present conditions as well as imagine ways forward, I analysed the Water Framework Directive - the most important water policy in Europe - as well as declarations of river rights from across the globe. Seeing how words and phrases differ to do justice to the being of the river, these emerging narratives point to what is missing in current policy narratives.

Water Framework Directive

22.12.2000ENOfficial Journal of the European CommunitiesL 327/1

I

(Acts whose publication is obligatory)

DIRECTIVE 2000/60/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 23 October 2000

establishing a framework for Community action in the field of water policy

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175(1) thereof,

Having regard to the proposal from the Commission<sup>(1)</sup>,

Having regard to the opinion of the Economic and Social Committee<sup>(2)</sup>,

Having regard to the opinion of the Committee of the Regions<sup>(3)</sup>,

Acting in accordance with the procedure laid down in Article 251 of the Treaty<sup>(4)</sup>, and in the light of the joint text approved by the Conciliation Committee on 18 July 2000,

Whereas:

(1) Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such.

heritage to us, not intrinsic in its own right

(2) The conclusions of the Community Water Policy Ministerial Seminar in Frankfurt in 1986 highlighted the need for Community legislation covering ecological quality. The Council in its resolution of 28 June 1988<sup>(5)</sup> asked the Commission to submit proposals to improve ecological quality in Community surface waters.

(3) The declaration of the Ministerial Seminar on groundwater held at The Hague in 1991 recognised the need for action to avoid long-term deterioration of freshwater quality and quantity and called for a programme of actions to be implemented by the year 2000 aiming at sustainable management and protection of freshwater resources. In its resolutions of 25 February 1992<sup>(6)</sup>, and 20 February 1995<sup>(7)</sup>, the Council requested an action programme for groundwater and a revision of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances<sup>(8)</sup>, as part of an overall policy on freshwater protection.

(4) Waters in the Community are under increasing pressure from the continuous growth in demand for sufficient quantities of good quality water for all purposes. On 10 November 1995, the European Environment Agency in its report 'Environment in the European Union - 1995' presented an updated state of the environment report, confirming the need for action to protect Community waters in qualitative as well as in quantitative terms.

(5) On 18 December 1995, the Council adopted conclusions requiring, inter alia, the drawing up of a new framework Directive establishing the basic principles of sustainable water policy in the European Union and inviting the Commission to come forward with a proposal.

(6) On 21 February 1996 the Commission adopted a communication to the European Parliament and the Council on European Community water policy setting out the principles for a Community water policy.

(7) On 9 September 1996 the Commission presented a proposal for a Decision of the European Parliament and

<sup>(1)</sup> OJ C 184, 17.6.1997, p. 20.  
<sup>(2)</sup> OJ C 16, 20.1.1998, p. 14 and  
<sup>(3)</sup> OJ C 108, 7.4.1998, p. 94.  
<sup>(4)</sup> OJ C 355, 21.11.1997, p. 83.  
<sup>(5)</sup> OJ C 180, 11.6.1998, p. 38.  
<sup>(6)</sup> Opinion of the European Parliament of 11 February 1999 (OJ C 150, 28.5.1999, p. 419), confirmed on 16 September 1999, and Council Common Position of 22 October 1999 (OJ C 343, 30.11.1999, p. 3). Decision of the European Parliament of 7 September 2000 and Decision of the Council of 14 September 2000.  
<sup>(7)</sup> OJ C 209, 9.8.1988, p. 3.

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of the Council on an action programme for integrated protection and management of groundwater<sup>(1)</sup>. In that proposal the Commission pointed to the need to establish procedures for the regulation of abstraction of freshwater and for the monitoring of freshwater quality and quantity.

(14) The success of this Directive relies on close cooperation and coherent action at Community, Member State and local level as well as on information, consultation and involvement of the public, including users.  
shared responsibility

(8) On 29 May 1995 the Commission adopted a communication to the European Parliament and the Council on the wise use and conservation of wetlands, which recognised the important functions they perform for the protection of water resources.  
relationality

(9) It is necessary to develop an integrated Community policy on water.  
river as indivisible whole

(10) The Council on 25 June 1996, the Committee of the Regions on 19 September 1996, the Economic and Social Committee on 26 September 1996, and the European Parliament on 23 October 1996 all requested the Commission to come forward with a proposal for a Council Directive establishing a framework for a European water policy.

(11) As set out in Article 174 of the Treaty, the Community policy on the environment is to contribute to pursuit of the objectives of preserving, protecting and improving the quality of the environment, in prudent and rational utilisation of natural resources, and to be based on the precautionary principle and on the principles that preventive action should be taken, environmental damage should, as a priority, be rectified at source and that the polluter should pay.  
instrumentalisation of nature

(12) Pursuant to Article 174 of the Treaty, in preparing its policy on the environment, the Community is to take account of available scientific and technical data, environmental conditions in the various regions of the Community, and the economic and social development of the Community as a whole and the balanced development of its regions as well as the potential benefits and costs of action or lack of action.  
prioritising scientific knowledge systems  
financialisation

(13) There are diverse conditions and needs in the Community which require different specific solutions. This diversity should be taken into account in the planning and execution of measures to ensure protection and sustainable use of water in the framework of the river basin. Decisions should be taken as close as possible to the locations where water is affected or used. Priority should be given to action within the responsibility of Member States through the drawing up of programmes of measures adjusted to regional and local conditions.  
fails to consider river basins as complex systems

(14) The supply of water is a service of general interest as defined in the Commission communication on services of general interest in Europe<sup>(2)</sup>.

(15) Further integration of protection and sustainable management of water into other Community policy areas such as energy, transport, agriculture, fisheries, regional policy and tourism is necessary. This Directive should provide a basis for a continued dialogue and for the development of strategies towards a further integration of policy areas. This Directive can also make an important contribution to other areas of cooperation between Member States, inter alia, the European spatial development perspective (ESDP).

(16) An effective and coherent water policy must take account of the vulnerability of aquatic ecosystems located near the coast and estuaries or in gulfs or relatively closed seas, as their equilibrium is strongly influenced by the quality of inland waters flowing into them. Protection of water status within river basins will provide economic benefits by contributing towards the protection of fish populations, including coastal fish populations.  
protection translates to financial benefits

(17) Community water policy requires a transparent, effective and coherent legislative framework. The Community should provide common principles and the overall framework for action. This Directive should provide for such a framework and coordinate and integrate, and, in a longer perspective, further develop the overall principles and structures for protection and sustainable use of water in the Community in accordance with the principles of subsidiarity.

(18) This Directive aims at maintaining and improving the aquatic environment in the Community. This purpose is primarily concerned with the quality of the waters concerned. Control of quantity is an ancillary element in securing good water quality and therefore measures on quantity, serving the objective of ensuring good quality, should also be established.

(19) OJ C 355, 25.11.1996, p. 1.  
<sup>(1)</sup> OJ C 281, 26.9.1996, p. 3.

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(20) The quantitative status of a body of groundwater may have an impact on the ecological quality of surface waters and terrestrial ecosystems associated with that groundwater body.

(21) The Community and Member States are party to various international agreements containing important obligations on the protection of marine waters from pollution, in particular the Convention on the Protection of the Marine Environment of the Baltic Sea Area, signed in Helsinki on 9 April 1992 and approved by Council Decision 94/157/EC<sup>(1)</sup>, the Convention for the Protection of the Marine Environment of the North-East Atlantic, signed in Paris on 22 September 1992 and approved by Council Decision 98/249/EC<sup>(2)</sup>, and the Convention for the Protection of the Mediterranean Sea Against Pollution, signed in Barcelona on 16 February 1976 and approved by Council Decision 77/585/EEC<sup>(3)</sup>, and its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources, signed in Athens on 17 May 1980 and approved by Council Decision 83/101/EEC<sup>(4)</sup>. This Directive is to make a contribution towards enabling the Community and Member States to meet those obligations.

(22) This Directive is to contribute to the progressive reduction of emissions of hazardous substances to water.

(23) Common principles are needed in order to coordinate Member States' efforts to improve the protection of Community waters in terms of quantity and quality, to promote sustainable water use, to contribute to the control of transboundary water problems, to protect aquatic ecosystems and terrestrial ecosystems and wetlands directly depending on them, and to safeguard and develop the potential uses of Community waters.  
need for shared value system

(24) Good water quality will contribute to securing the drinking water supply for the population.  
dependence

(25) Common definitions of the status of water in terms of quality and, where relevant for the purpose of the environmental protection, quantity should be established. Environmental objectives should be set to ensure that good status of surface water and groundwater is achieved throughout the Community and that deterioration in the status of waters is prevented at Community level.

(26) Member States should aim to achieve the objective of at least good water status by defining and implementing the necessary measures within integrated programmes of measures, taking into account existing Community requirements. Where good water status already exists, it should be maintained. For groundwater, in addition to the requirements of good status, any significant and sustained upward trend in the concentration of any pollutant should be identified and reversed.

(27) The ultimate aim of this Directive is to achieve the elimination of priority hazardous substances and contribute to achieving concentrations in the marine environment near background values for naturally occurring substances.

(28) Surface waters and groundwaters are in principle renewable natural resources; in particular, the task of ensuring good status of groundwater requires early action and stable long-term planning of protective measures, owing to the natural time lag in its formation and renewal. Such time lag for improvement should be taken into account in timetables when establishing measures for the achievement of good status of groundwater and reversing any significant and sustained upward trend in the concentration of any pollutant in groundwater.  
water as resource

(29) In aiming to achieve the objectives set out in this Directive, and in establishing a programme of measures to that end, Member States may phase implementation of the programme of measures in order to spread the costs of implementation.  
urgency, not delay

(30) In order to ensure a full and consistent implementation of this Directive any extensions of timescale should be made on the basis of appropriate, evident and transparent criteria and be justified by the Member States in the river basin management plans.

(31) In cases where a body of water is so affected by human activity or its natural condition is such that it may be unfeasible or unreasonably expensive to achieve good status, less stringent environmental objectives may be set on the basis of appropriate, evident and transparent criteria, and all practicable steps should be taken to prevent any further deterioration of the status of waters.  
not raising responsibility

(32) There may be grounds for exemptions from the requirement to prevent further deterioration or to

<sup>(1)</sup> OJ L 73, 16.3.1994, p. 19.  
<sup>(2)</sup> OJ L 104, 3.4.1998, p. 1.  
<sup>(3)</sup> OJ L 240, 19.9.1977, p. 1.  
<sup>(4)</sup> OJ L 67, 12.1.1983, p. 1.

257.

258.







Appendix V. Engagement with River Localities

Care for the river

To connect with the river, I participated in two clean-up days that were organised by the yearly Meuse Cleanup Initiative. On the 21st of March, I gathered waste in the Waalhaven, and on the 23rd on the Island of Brienenoord.

I was shocked by the amount of waste we found. We filled dozens of bags, and could have continued for hours more, especially in the Waalhaven. Waste has accumulated over the years into plastic layers of several metres thick. I even encountered a package from the Van Nelle Fabriek (not photographed), a cigarette factory in Rotterdam that closed its doors in 1944. This gives an indication of the amount of waste that has gathered here, and how long it remains.

This practice of collective cleaning can create a sense of activism. Apparently, waste does not travel far in the river. This means that when unusual products are found, it is often possible to find the source, which means something can be done about it. Zwerfie Rotterdam, initiator of this specific clean-up has achieved several successes in this way.

What can design do in this context? How can spatial planning prevent pollution? And how can a spatial activism for clean rivers take form?



Worker glove



Plastic bag often used for drugs



Foam intertwined with plant roots



Plastic lids



Coconut thrown in the river as part of Hindu ritual



Styrofoam



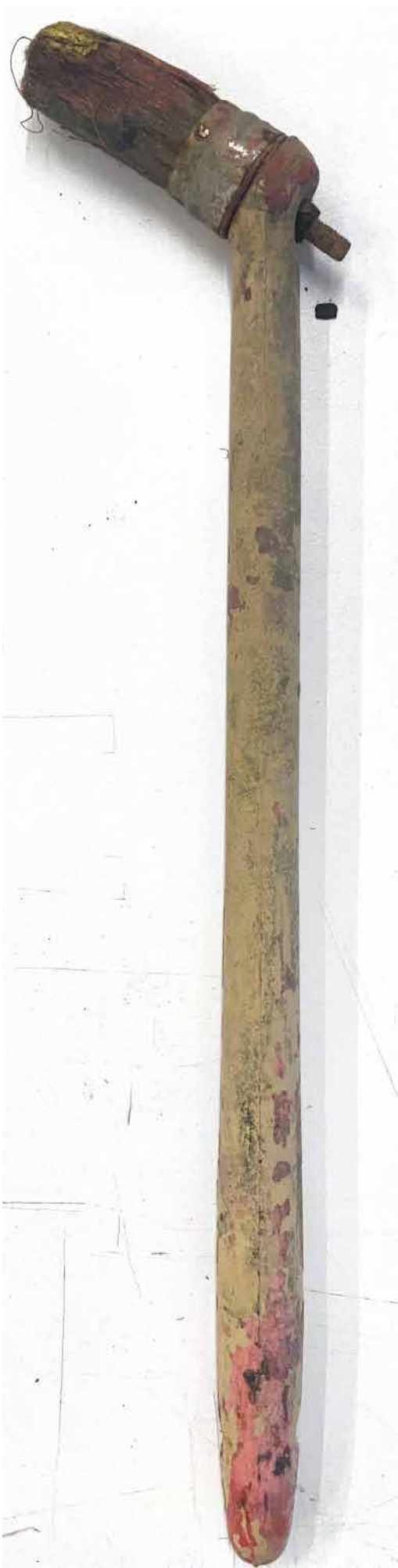
Plastic thread



Lighter



Plastic handle of a pan



Brush for painting



### Deep mapping

After the clean-up day at the island of Brieneoord, I organised a small workshop with participants and people who walked past to understand their perspectives on the river. I asked people around the island about

- 1) What the Meuse means to them
- 2) When they interact with the Meuse
- 3) What their ideal future for the Meuse looks like, and
- 4) Who should speak on behalf of the Meuse

This method is a form of deep mapping. Inspired by workshop on Flowing Futures: SciArt & Water, hosted by Zeynep Birsal & Jakob Kukula, and the presentation by Yoka ter Stege on deep mapping specifically (Y. ter Stege, personal communication, February 27, 2025).

