

# Will Water Want / Wil Water Wat

How can the Dommel's voice be incorporated into urban development plans?

Hoe kan de stem van de Dommel worden betrokken bij het ontwerpen van de stad?

## Heavy metals from the source

Location: Kempens plateau (Belgium)

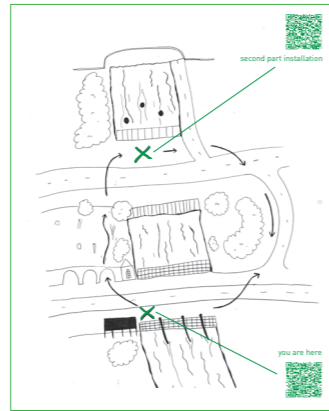
In the source area of the Dommel, across the border in Belgium, factories emerged in the early 19th century as part of a polluting industry that discharged heavy metals into the soil and water. Locally, this led to the disappearance of greenery in the immediate vicinity, forming what is now known as the "Dommel Sahara". One of these factories in Neerpelt is still active today.

These heavy metals are still found in the Dommel. Cadmium, zinc, lead, and copper are mostly bound to the sediment, making swimming safe. However, cows grazing on the banks and floodplains of the Dommel do ingest these metals through plants grown on the sediment. These cows are kept separate in the slaughterhouse as not all their meat is suitable for human consumption.

This invisible metal pollution cannot be easily cleaned up because it is widespread in the watershed, and the costs are high relative to the benefits. As complete recovery is not possible, the focus lies on preventing further damage: producers will have to be more careful with the production of metals and the processing of waste products.

How do you clean a landscape from human pollution when it is so scattered within the ecosystem?  
 How do you implement restoration when the negative impact on species during dredging of polluted sediment is greater than the immediate benefits?  
 How can you truly ally with the species that live with significant amount of metals in their bodies every day?

This scenario reveals how many decisions are made around human-centred interests. Besides cows, earthworms are also affected by the metal pollution. This leads to the poisoning accumulating within the food chain when larger animals eat these worms. Hence, grasses, birds, and badgers also suffer from the aftermath of the factories in the source area.



Location: following a series of glass objects interacting with the stream of the Dommel River

## Voice of the Dommel

Location: project location Dommel

The Eindhoven municipality has commissioned Land-Ally to let "the voice of the Dommel" be heard in the area development of the new district around the station: KnooppXL. By applying the Land-Ally research method, we concluded that the river at this location has virtually no voice anymore, as it is constrained by human constructs, forms of regulation, and pollution elsewhere in the river. This study, therefore, calls attention to a larger problem: the accumulation of human influences in the watershed.

In addition, Marte Mei, as an ally of the Dommel, created a series of objects with which the flowing water can interact one-on-one, thus producing sound and exercising its will. Through these objects, the public is invited to reflect on water as an entity and question the practical, sensory, and perhaps even spiritual connotations attached to it.



Dommel's art location. An installation hangs from the bridge, allowing the visitor to listen to sounds produced by the water flowing past the objects.

An alliance with nature requires room for experiencing nature as a basis for a symbiotic relationship between humans and their surroundings. The idea that we are one with nature remains a hollow concept if we don't create spaces to physically experience this. Designing cities from a human-centred perspective invites us to sometimes take a step back, such as by building around existing trees or waiting for an ant to cross the road.

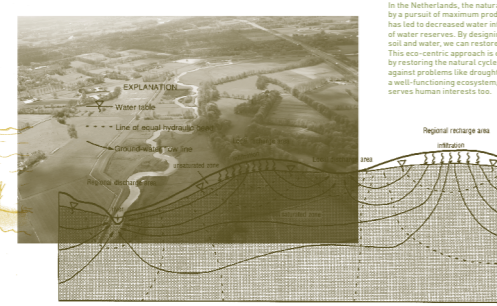
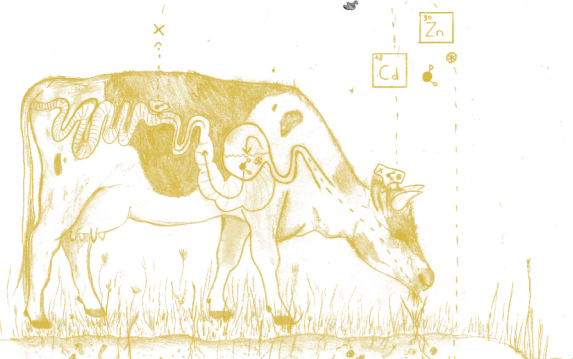
Along the banks of the Dommel around the station, there are currently hardly any places to sit, lay down or walk by the river. One is forced to stand on a busy cycle path to listen to the river through the installation. Is the cyclist patient enough to allow this experience? Or is a redesign of the area needed to facilitate such connections?

What is a river?  
 Or who is a river?  
 Is a river just the water that moves from point A to point B, or also the living context around it, as part of the ecosystem that exists there, like the plants, the ducks, and the fish?

## Soil Sponge

Location: Infiltration zone and groundwater recharge

The Dommel is not an isolated river but is part of a catchment area that extends from across the border in Belgium to the mouth at the Meuse. Here, water finds its way: it infiltrates into the higher sandy areas and then appears in the lower river valleys, letting the Dommel flow. Over the past century, the landscape has been shaped to be as useful as possible for humans. By straightening meandering streams, draining marshy areas with ditches, pumping up water reserves for drinking, and irrigating the land in dry times, not only has the landscape changed, but so has the water cycle. The soil has lost its sponge-like capacity and can no longer retain water well, meaning there are no reserves during periods of drought.



In the Netherlands, the natural water cycle is interrupted by a pursuit of maximum productivity and efficiency. This has led to decreased water infiltration and the disappearance of water reserves. By designing the landscape as an ally of soil and water, we can restore the soil's sponge-like capacity. This eco-centric approach is essentially a win-win situation: by restoring the natural cycle, we also protect ourselves against problems like drought. Since we ultimately depend on a well-functioning ecosystem, restoring ecological balance serves human interests too.



In the future, it will be more often dry or very wet. The Dommel needs space to deal with this. This way, enough water can be captured and retained during wet periods for dry times, and the landscape becomes a sponge again. By directing water and soil, the landscape can be smartly and cohesively designed: for example, nature's wet spots, agriculture on fertile ground, and construction in areas without flood risk.

What would the Dutch landscape look like if it were designed by seas and rivers instead of the human engineers who have tried to tame these water forces through large installations and infrastructure?  
 How do we as humans adapt to this original design force?  
 And which of today's interventions are suppressing these natural processes? Consider how, as human designers, you can see water as a source of inspiration rather than an obstacle.

## Water in the City

Location: Citycenter of Eindhoven

In Eindhoven, the Dommel forms an 'ecological corridor' for various animals and plants such as beavers, bats, birds, and insects. In the urban environment, the river provides them not only safe passage; it is also a living environment and breeding ground for these non-human species. In a human-centred design for the city, a river is often seen more as an obstacle or decoration than as a living ecosystem. Bridges, dams, and high banks are built with human needs and safety in mind.



Photographer: Lohman, A. Source: image and sound collection Regional Historisch Centrum Eindhoven. Title: Sophie van Wierbergen with the "Dommel" river in the background, 03.1963 - 03.1963

The challenge lies in integrating the Dommel as an active part of urban infrastructure without compromising its ecological functions. By creating greener banks and modifying bridges and weirs, the river can once again fully fulfill its role as an ecological corridor. An ecological corridor is also valuable for city dwellers: it offers space for relaxation and interaction, shading provides cooling, and it serves as a buffer for high and low water. Thus, natural values and ecosystem services can coexist.

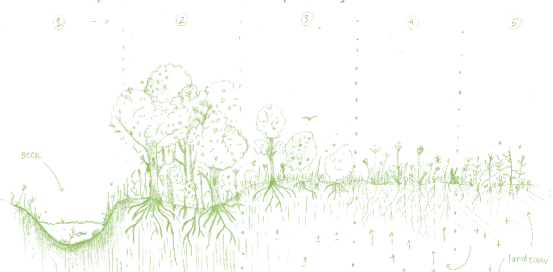
Restoring the river in the city as a habitat for non-human entities not only benefits flora and fauna; it serves human interests as well. To feel like a part of the "river ecosystem" and to understand the fluctuating water levels flowing through it, you need a place to experience that. By seeing the effects of drought and heavy rainfall, and allowing space for humans to experience these fluctuations, the river in the city changes from a man-made water conveyance into an ecological haven, reminding us that we are part of something greater.

Do we live in the habitat of the duck and the beaver, or do they live in our?  
 Where does the river end, and the land around it begin?  
 What are the boundaries of a river when it is so influenced by the surrounding context and, conversely, when the river has so much influence on the life it flows by and through?

## Pollution from Land Use

Location: agriculture alongside to the Dommel

Rural areas play an important role in growing food. However, fertilizers and pesticides are used that are harmful to aquatic life. An excess of nutrients, which come from manure in the river, can result in not enough oxygen in the water for a healthy water system. In addition, the unpredicted shade from trees along the banks can significantly raise the water temperature. The carrying capacity of the ecosystem is then exceeded, meaning it can no longer handle the additional load (such as pollution or nutrients) without negative consequences for the environment and the species living there.



To allow the stream to flow unobstructed through this landscape, buffer strips can be laid that filter the water running off the land of sediment, nutrients, and toxic substances. Ideally, no pesticides should be used, and a switch should be made to organic farming. This can be combined with education, recreation, and landscape care. In this way, the ecosystem can function well again, something we humans depend on!

We have shown that people shape waterways, but conversely, water has also shaped human living environments. Communities have gathered around water as a life-sustaining entity. The cluster of villages around the Dommel has made Eindhoven grow into a city. When we see water this way, as a shaper rather than something to be shaped, as a carrier of life, as something that nourishes not only the local environment but everything downstream, how would you make space for this entity to live in Eindhoven?

### LEGEND: THE THREE PERSPECTIVES

The scientific approach describes the ecological situation at each location and explains the impact human interventions have on life in and around the water.

Land-Ally is about building an alliance with the water as an entity, to move away from manipulating the river for human-centric purposes and instead to stimulate a more equitable collaboration.

Questions to the River is a hypothetical dialogue with the water. Here you find questions to yourself and to the river.

**Intro about poster:**  
 This map illustrates the Dommel River from its source in Belgium to its mouth at the Meuse River. A selection of 5 locations has been made where various perspectives are used to reflect on the relationship between the will of water, human landscape interventions, and the well-being of local ecosystems.

**Info about the author:**  
 Land-Ally is a design and research collective focused on forming an alliance with nature. Land-Ally conducts site-specific research on ways to collaborate with non-human entities such as animals, plants, fungi, and matter. These studies are translated into spatial design

in the form of landscape interventions or temporary installations. Land-Ally is a foundation with ANBI status. Visit: [www.land-ally.com](http://www.land-ally.com)

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