

GHOSTS

A dark, atmospheric photograph of a person in a yellow dress standing in a wooded area at night. The person is seen from behind, standing on a path or clearing. The surrounding trees and foliage are silhouetted against a dark, moody sky. The overall tone is mysterious and haunting.

STUDIO URBAN NATURE

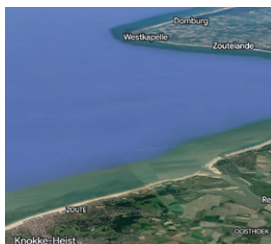
2023 - 2024

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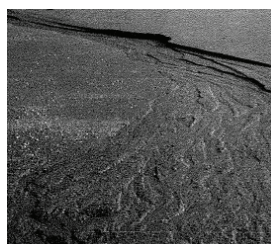
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FOREWORD

Cities are the homes and habitats of most people in the world today. They are rightly considered a built and artificial environment, which often seems withdrawn from nature. However, few cities escape the extreme conditions that nature imposes on them, whether it is dust storms in Dubai, snow in New York, or floods in Paris. Nature is adapting in cities, taking advantage of the available opportunities and seeking new possibilities to reproduce. In turn, cities modify the natural systems and change the biogeochemistry of their habitat. The extent of this modification of nature has increased over the last half-century. While cities initially relied on their immediate environment for food and supplies, today they depend on increasingly extensive territories and networks to meet their metabolic needs (i.e., cities concentrate 60% of the worldwide population and depend on rural hinterlands for 80-90% of their material and energy needs).

If cities are not the opposite of nature but are entangled with it, what to do with the age-old opposition between culture and nature? Likewise, what to do of the city and countryside dichotomy once the survival of cities depends on increasingly large and remote territories, linked by entwined, endlessly proliferating supply chains? Can we refer to these territories still as “rural”, in the traditional sense of a subordinated region, lagging progress-wise and mostly undertheorized by architects? Is this notion still valid to grasp the reality of those out-of-town territories, haunted by their pasts and shaken by contemporary dynamics of global interconnectedness?

The studio proposes reconceptualizing rural territories beyond the current opposition city-countryside, which we deem at the root of the current climate crisis. It does this as part of NeRu (newruralities.eu), an Erasmus+ Cooperation partnerships program (2022-25) gathering six design units within the universities of ULB, Politecnico di Torino in Italy, Universidade da Coruña in Spain, Universidade do Minho in Portugal and Universitet Po Arhitektura Stroitelstvo I Geodezija of Sofia in Bulgaria, and ETH Zürich in Switzerland.

Nadia Casabella, François Vliebergh, Axel Fisher

“Limit of the Zoute dunes and polder in Knokke,” picture taken by Jean Massart in September 1904, published in the book *Recollecting Landscapes*, Notteboom & Uytenhove (eds.), Roma Publications, Amsterdam.



THE STUDIO

“Our era of human destruction has trained our eyes only on the immediate promises of power and profits. This refusal of the past, and even the present, will condemn us to continue fouling our nests. How can we return to the pasts we need to see the present more clearly? We call this return to multiple pasts, human and not human, “ghosts.” Past ways of life haunt every landscape. We see this clearly in the presence of plants whose animal seed dispersers are no longer with us. Some plants have seeds so big that only big animals can carry them to new places to germinate. When these animals became extinct, their plants could continue without them, but they could not disperse their seeds very well. Their distribution is curtailed; their population dwindles. This is an example of what we are calling haunting. Imagined futures also haunt anthropogenic landscapes. We are willing to turn things into rubble, destroy atmospheres, and sell out companion species in exchange for dreamworlds of progress. Haunting is quite eerie: the presence of the past can often be felt only indirectly, so we extend our senses beyond their comfort zones. Human-made radicesium has this uncanny quality: it travels in water and soil; it gets inside plants and animals; we cannot see it even as we learn to find its traces. It disturbs us in its indeterminacy; this is a quality of ghosts.”

“Haunted Landscapes of the Anthropocene”, by Elaine Gan, Anna Tsing, Heather Swanson, Nils Bubandt. *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene* (E-book). University of Minnesota Press

Since last year, the design unit is committed to exploring the European rural territories. It does that shielded by the New Rural Pact and intrigued by the recent trends that since the COVID-19 pandemic have shaken these territories. Indeed, the lockdown mainstreamed online working while exacerbating the longing for nature and a sense of belonging. People flocked to the countryside in search of the rural landscapes and the self-absorbed

communities they had seen in the movies or remembered vaguely from their childhood. They discovered instead a new rurality, extremely diverse yet recognisable in its big traits: an aging population living in isolation and lacking essential services, a dying economy being humbly reanimated by the growing dependence of cities upon the countryside (for energy, food, raw materials, cheap logistics...), a massive abandonment of the built

fabric leading to plummeting land prizes, yet a solid heritage in the form of buildings and anthropized landscapes.

Our approach to this new rurality, or new *ruralities* (if we are to underline their diversity), wishes to be above all exploratory. It starts from the hypothesis that these territories are traversed by a pre-modern, pre-industrial layer that persists in the form of ghosts: the vestiges and signs of past ways of life still charged in the present. As humans reshape the landscape, we forget what was there before. Ecologists call this ignoring the “shifting baseline syndrome.” Our newly shaped and ruined landscapes become the new reality. Although sometimes development happened so abruptly that many pre-industrial traditions still exist. Ghosts point to our forgetting, showing us how living landscapes are imbued with earlier tracks and traces, and can serve as a source of inspiration for its actualisation.

Anna Tsing often interrogates in her work the validity of the idea of progress imposed by the modern project. Activities historically

associated with rural territories, like agriculture and fisheries, were dramatically disrupted when the idea that they needed to be modernized and made productive entered their realm. The more-than-human histories through which ecologies were made and unmade, the deep connection between the various livelihood activities and the ecosystems they took place within, was broken for good. The incommensurability that governed past relationships was replaced by a system designed for universal legibility following standardisation. Part of such incommensurability derived from the fact that the farmers or the fishers did not see themselves at work, operating within “the discipline of wages” (1). For instance, fishers saw their activities not as “work” but as “actions” punctuating their subsistence routines, from “going to the beach and collecting oyster and clam with simple gear”, or “throwing a large rock out from the boat as part of casting anchovy nets”, in everyday and ritual relations with non-human earth beings (e.g. the sea, the fishes, the shells, the nets...). So did farmers. There is no

Cow gurads used to lead the milk cows to the dunes for grazing from May on. They would stay on the leased grounds all day long, returning by 5pm to the farms in the polders for milking.



“Dunes,” by Paul Mathieu (Brussels 1872-1932)



reason to idealize such subsistence strategies though, other than because of their endurance.

Europe, through the New Deal and new schools of thought like “degrowth” or the “doughnut economy” (2), next to academic contributions like the “ecological redirection” (3), is rethinking the development and growth model that has sustained the western modernization project since the 17th century. The notion of “planetary boundaries” that a group of scientists led by Johan Rockström and Will Steffen introduced in 2009 and, before that, the idea that growth might be subject to a “limit” that the team of researchers led by Donella H. Meadows brought in by the late 70s, has demonstrated that there are critical ecological processes that, if crossed or exceeded, could lead to abrupt and irreversible environmental changes, threatening the stability of the Earth’s systems. These concepts have become central in discussions about sustainable development and environmental conservation. Because we do not have a planet B to carry on our business as

usual, we need to evolve in the direction of quitting productivism. Progress trained us to keep moving forward, to look up to an apex at the end of a horizon. It is time to enlarge our horizon and let ghosts haunt back the life-enhancing entanglements (and cosmovisions) that modernization wiped out. Seen retrospectively, those past entanglements seem able to sustain today alternative forms of modernization and development (4).

(1) Tsing, Anna (2009) “Beyond Economic and Ecologic Standardisation”, *The Australian Journal of Anthropology* 20, 347–368.

(2) [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747107/EPRS_BRI\(2023\)747107_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747107/EPRS_BRI(2023)747107_EN.pdf)

(2) <https://lest.fr/fr/activites-scientifiques/2023/01/17/lest/heritage-et-fermeture-une-ecologie-du-demantelement#:~:text=Plaidant%20pour%20une%20%C3%A9cologie%20du,Le%20Monde%2C%203%20septembre%202021>

(4) Escobar, A. (2008) *Territories of Difference: place, movements, life, redes*. Duke University Press.

THE SITE

Our working area is wedge-shaped, stretching between Damme, Zeebrugge and Breskens, in Zeeuwse Vlaanderen (NL), halfway between Belgium and the Netherlands. It covers a coastal zone on the North Sea, with the shore, the dunes, and the Polders behind, stretching over 10-15 kilometres inland and running parallel to the coastline. It is generally known as the Zwin region, recalling the sea inlet that once irrigated it and gave sea access to Bruges. Inland, the area is characterized by its flat (minimal height differences that do not exceed 4-5m) and rural character, crossed by a network of ditches, waterways, and canals, which, together with the sluices and dykes, serve to protect the coastal polders from being swamped. Built structures like houses and barns punctuate the landscape. Along the coast, we find the towns of Knokke-Heist and Breskens, interspersed among other beach resorts, and the port of Zeebrugge, which merged last year with Antwerp. Even though the port is mostly and infamously

known by the RO-RO platform and container port, it also hosts the most extensive fish auction in the country.

The plan is to look at the sea-to-land continuity during the first semester, focusing on the sea and the seashore (energy, higher ocean temperatures, El Niño and climate change, fisheries, dredging, sea defence, the seashore from a historical perspective, new personas, drought, freight logistics, ...). We will dedicate the second to the interdependencies between the seashore and the polders (a sparsely inhabited territory that thrived on the shadow of industrial agriculture and is today suffering from new environmental regulations, lacking affordable housing, and deprived of a few essential services like convenient health care or public transport). However, depending on each studio participant's plan, this semester's split can still be questioned.

Yet, the many borders regulating this area compromise this

ambition to dive into the sea-to-land continuity. National borders, because it straddles Belgium and the Netherlands. Cartographic borders, because the instances in charge of producing the sea and land maps differ, and so the methods they deploy. Policy and sectoral borders, since the sea is regulated by marine spatial plans that are distinct from land use plans (1). This sharp line has been questioned for some years, and reflected on recent policy initiatives like T.OP Kust, research by design trajectories like Metropolitan Coastal Landscapes 2100 or the Urban Coastal System, and transnational cooperation agreements between the Flemish and Dutch ministers (5). The truth is that operationally the sea and the land keep being apart, with separate attention dedicated to the seashore because of sea defence plans (6). Finally, significant cultural and terminological borders remain: the understanding of what ‘rural’ is changes across borders, and the spatial planning lasagna does too.

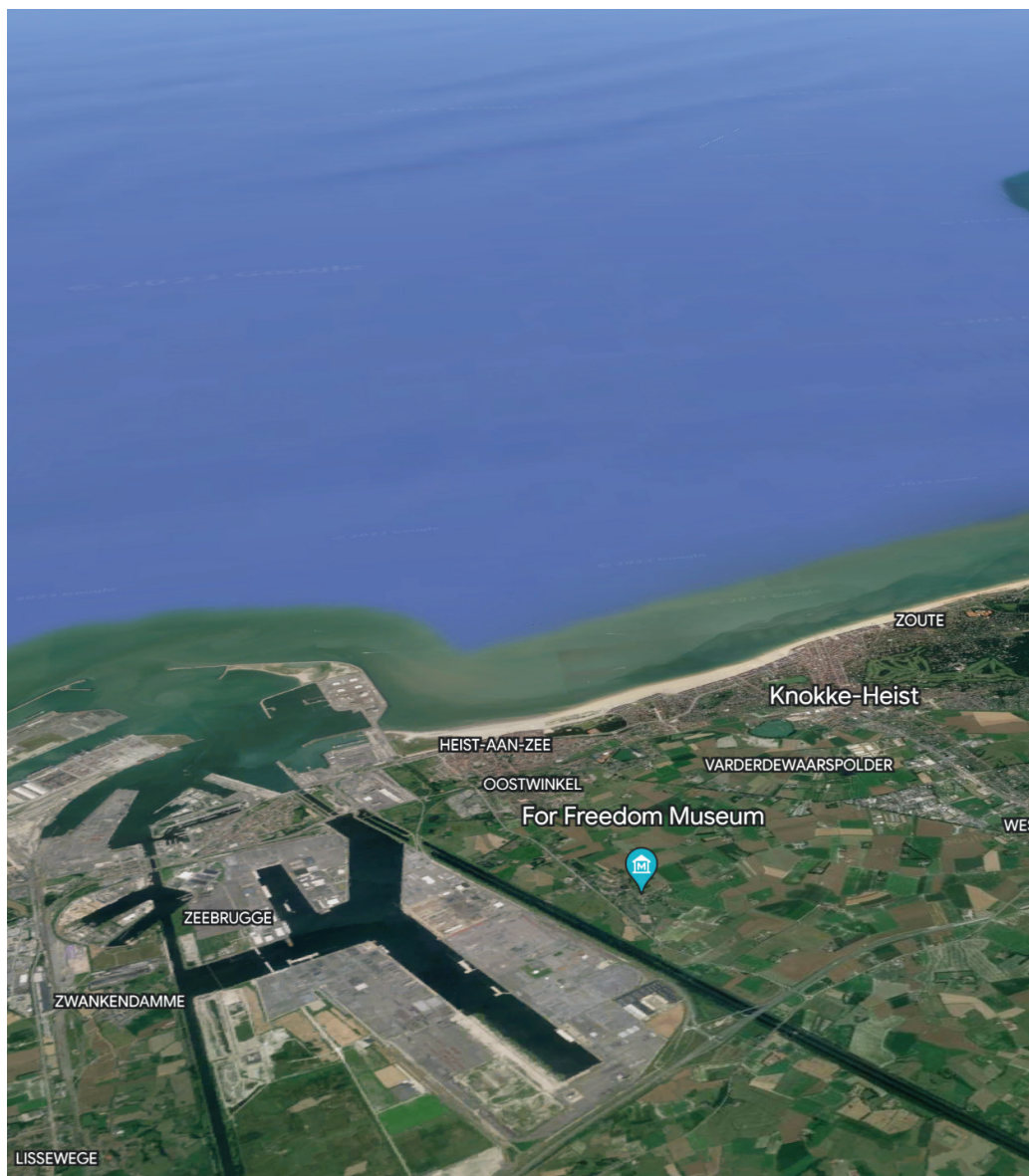
Belgian Flanders and the Netherlands have indeed different definitions of rural areas. In Flanders a village is ‘rural’ when

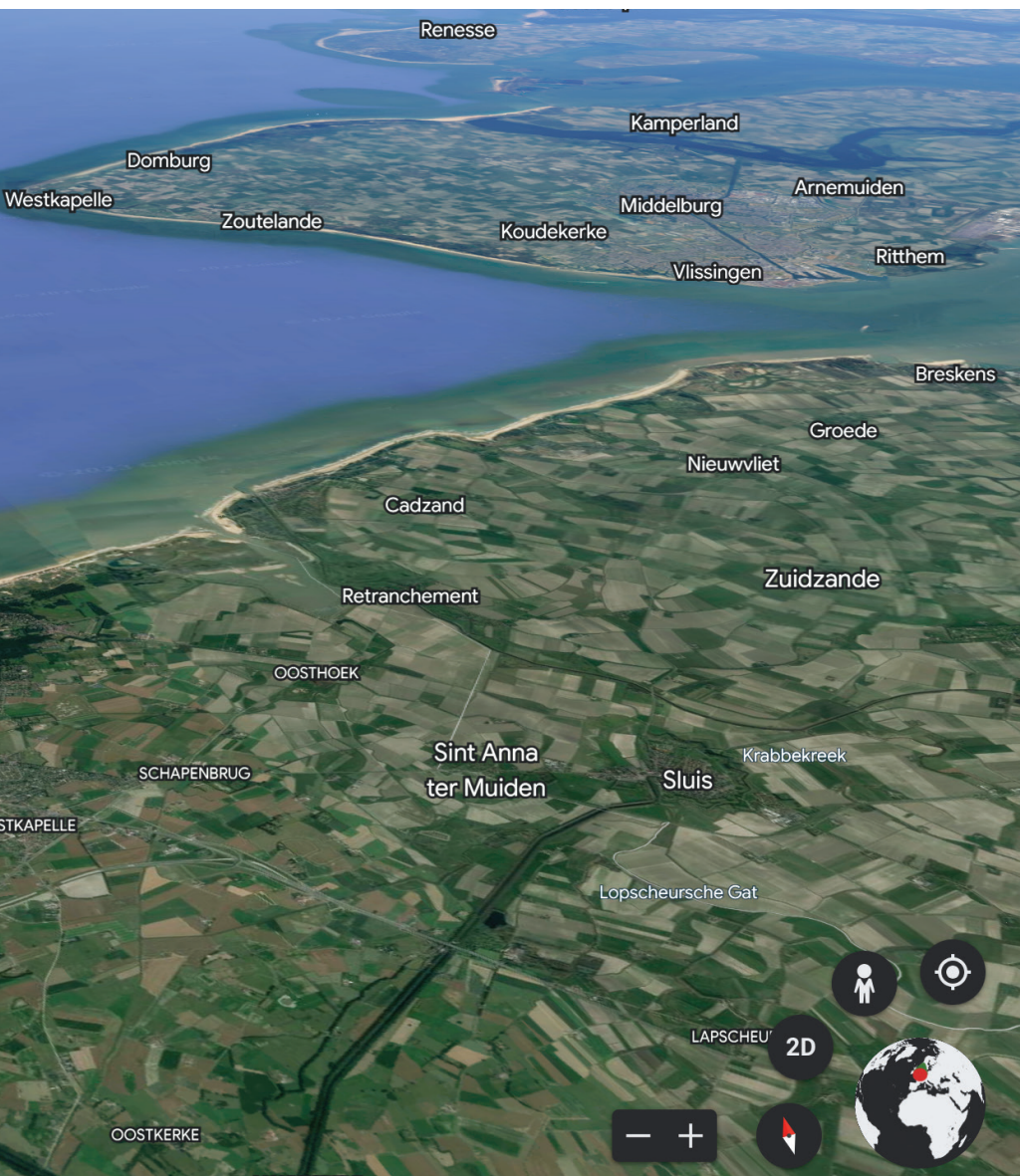


“Polderschuur” or typical polder shed near Knokke-Heist (<https://polderblues.be>)



The fish market @ Visserskaai - Ostend (around the turn of the 19th to the 20th century)





the population density is below 350 inh/km² or the built-up area is lower than 15%. In the geographical analysis, Flanders' statistical sectors are categorized in 'urban', 'periurban' and 'rural' to draft policy. Urban sectors score above the threshold value for the land uptake (32.5%), population density (13.5 inhabitants/ha), and employment density (10 workplaces/ha). Subsequently, 'periurban' sectors border on urbanized sectors and have land uptake higher than the threshold value of 32.5%. Rural sectors fall outside the threshold values (7).

Whereas in the Netherlands, the CBS or Netherlands Statistics defines rural as an area with a surrounding address density of less than 1 000 per square kilometre (8). Other than through density, rural areas or 'platteland' refer to the land outside the city, which is reserved primarily for agricultural activities. In terms of policy, the most important policy instrument governing rural areas is the European CAP (Common Agricultural Policy), of which rural development is a part. In Belgium, rural development is a

regional competence, whereas in the Netherlands, it remains national. Both the Flemish region and the Netherlands have a Rural Development Plan (RDP) 2014-2020; and both approved their modification this year.

Flanders' program is built around four themes: young farmers, innovation and training, improving agriculture's sustainability (both environmental and economic), quality and vitality of the countryside aimed primarily at diversifying the rural economy, promoting rural tourism, and fight poverty within rural communities (9). The Netherlands' focus lays on restoring, preserving, and enhancing ecosystems related to agriculture (10). Moreover, the implementation of the CAP Strategic Plan is carried out in by the Rural Network, responsible for bringing together the organizations and government departments involved in rural development, overarching the various measures. Every member state within the EU has a rural network or CAP network (11). In Flanders, it depends on the Flemish Department of Agriculture and Fisheries (12). In the Netherlands,

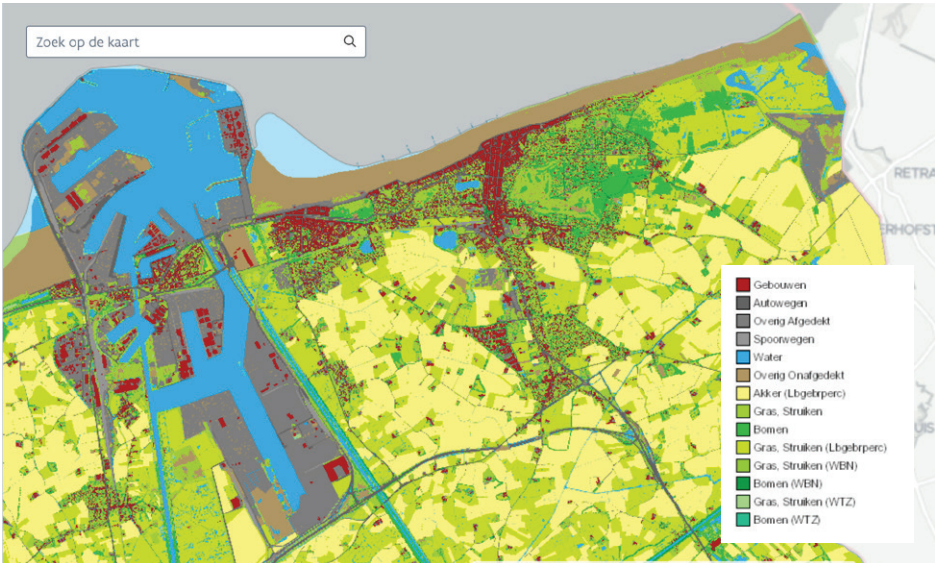
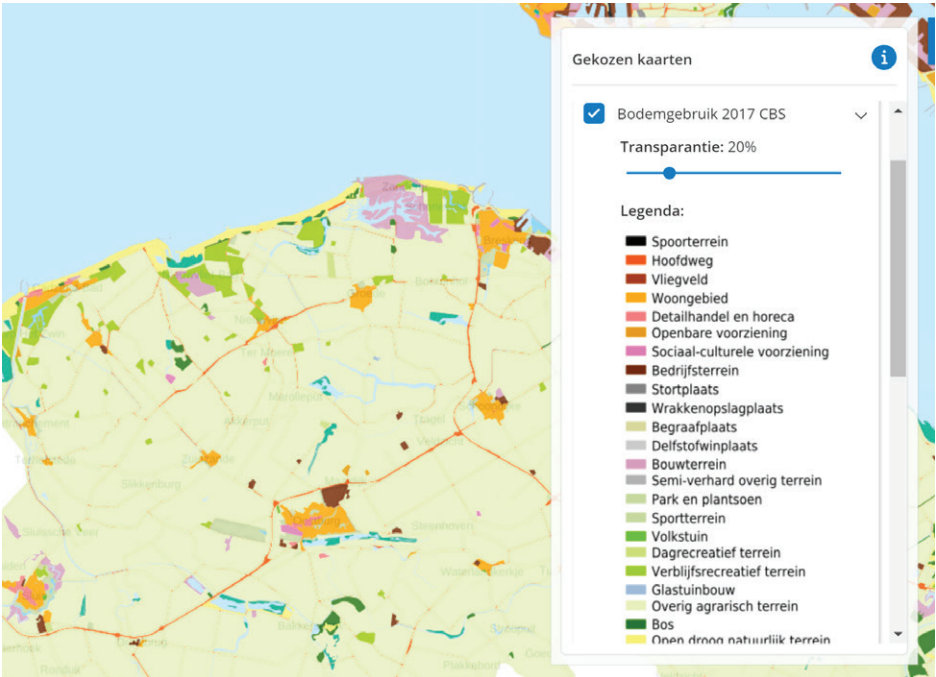
its is known as “Netwerk Platteland” (13) and it depends on the Ministry of Agriculture, Nature and Food Quality.

Besides these two important policies, Flanders knows a certain proliferation of governmental initiatives and sources of funding addressing many of the problems or challenges that concern the rural areas (14). For instance, the Flemish Bouwmeester has started LEEFBUURTEN, a ‘research by design’ trajectory for the revitalization of village cores (15), next to “LABO RUIMTE Boerenland” (16), inspired by the European Commission study “Farmers of the future” (17). Other interesting initiatives include: BUURTEN OP DEN BUITEN (18), supported by the King Baudouin Foundation and the Flemish Land Agency; the DORPSATELIERS (Village Workshops), supported by the socio-cultural association ‘Landelijke Gilden’ (19)), who is extremely active in raising awareness of the specific issues affecting the rural territories and their inhabitants, notably through the “Plattelandsacademie”, dedicated to disseminating knowledge on

various topics that are important for the Flemish countryside: poverty, aging, climate change, mobility, etc.; or DORPSBELANGEN (The Village Interests,), financially supported by the Flemish Land Society.

In the Netherlands, the government created in 2021 the ‘Study group spatial planning for the rural areas’ (21) to make concrete planning recommendations by putting agriculture and nature first as the largest users of space, but also as functions that are under heavy pressure. The starting point for the study group was the fact that the multiple problems (including nitrogen deposition, greenhouse gas emissions, water shortages, loss of biodiversity, soil subsidence, inadequate water quality, and salinization) show that the limits of the physical system of water, soil, and nature in the Netherlands have been reached and sometimes even exceeded. This study helped to inform the National Spatial Vision (22) for the section “Future-proof development of the rural area”, the most updated spatial planning outlook for the Dutch rural areas (23).

Screen captures from GIS atlases: top, the Dutch part (<https://www.atlasleefomgeving.nl/>), below, the Flemish one (<https://www.geopunt.be>)



- (1) Regarding the North Sea Marine Spatial Masterplanning, <https://maritime-spatial-planning.ec.europa.eu/sea-basins/north-sea>. For the Belgian Marine Masterplan, <https://www.naturalsciences.be/en/news/item/19091>. And for a Belgian Marine Spatial Planning overview, <https://www.vliz.be/imisdocs/publications/ocrd/252462.pdf>
- (2) <https://omgeving.vlaanderen.be/top-kust>
- (3) <https://www.vlaamsbouwmeester.be/nl/instrumenten/labo-ruimte/metropoli-taan-kustlandschap-2100>
- (4) <https://www.vlaamsbouwmeester.be/nl/stedelijk-systeem-kust>
- (5) Like the collaborative research in the Scheldt delta, <https://marineatugent.be/background-flemish-dutch-delta-col-laboration>, or the Delta Atelier, <https://deltaatelier.eu/>
- (6) Coastal Vision, <https://www.vlaanderen.be/kustvisie>
- (7) Poelmans Lien, Crols Tomas, Vermeiren Karolien, Vanacker Stijn, Willems Peter, Pisman Ann (2020), “Verstedelijke, randstedelijke en landelijke gebieden in Vlaanderen. Indeling op basis van statistische sectoren,” study carried out on behalf of the Flemish Environmental Planning Agency.
- (8) <https://www.cbs.nl/en-gb/our-services/methods/definitions/rural-area>
- (9) https://agriculture.ec.europa.eu/common-agricultural-policy/rural-development/country/belgium_en(4) <https://www.vlaamsbouwmeester.be/nl/stedelijk-systeem-kust>
- (10) https://agriculture.ec.europa.eu/common-agricultural-policy/rural-development/country/netherlands_en
- (11) https://ec.europa.eu/enrd/home-page_en.html
- (12) <https://www.vlaamsruraalnetwerk.be/>
- (13) <https://www.netwerkplatteland.nl/>
- (14) <https://www.smartrural21.eu/countries/belgium-flanders/>
- (15) <https://www.vlaamsbouwmeester.be/nl/subsite/leefbuurten>
- (16) <https://www.vlaamsbouwmeester.be/nl/instrumenten/labo-ruimte/boerenland>
- (17) <https://publications.jrc.ec.europa.eu/repository/handle/JRC122308>
- (18) External Neighbourhoods, <https://kbs-frb.be/nl/buurtten-op-den-buiten#:~:text=%22Buurtten%20op%20den%20Buiten%22%20is,de%20contacten%20tussen%20buurtbewoners%20bevorderen>
- (19) Rural Guilds, <https://www.landelijk-kegilden.be/>
- (20) https://www.dorpsbelangen.be/?page_id=5
- (21) <https://www.rijksoverheid.nl/actueel/nieuws/2021/05/12/studiegroep-ruimtelijke-inrichting-landelijk-gebied-kiezen-en-delen>
- (22) <https://www.novistukken.nl/default.aspx>
- (23) <https://www.novistukken.nl/richting+geven+op+prioriteiten/toekomstbestendige+ontwikkeling/default.aspx>

THE SEA: MULTIPLY THE WORLDS

Despite this long list of policies and plans, what we aim at in the design unit Urban Nature it is not the application of known tools to respond directly to well-defined symptoms, but rather an “imperfect holistic exploration of a holistic problem that is beyond us.” The tools (maps, models, participant observations, workshops, dialogue between actors and contrasting knowledge, etc.), will have to be tested and adapted each time, in the manner of Gilles Deleuze when he invites us to “think through the milieu” both without reference to an ideal goal and without separating the object of inquiry from the environment it needs to exist.

How the sea is represented influences both the reality and its possibilities. Developing a sea-to-land perspective asks us to recalibrate our perceptions. Today, the space sea is mainly represented as a commodified, static, and inert space. One of the challenges will

be to reverse this perspective by, for instance integrating in our descriptions of the sea its inherent fluidity, or the human and more than human entanglements that populated a long history of interaction and co-construction, but also accept the sea as a vast space, largely foreign to humans.

We could start by recognizing that life forms are not sitting in the sea, but they produce it. Lovelock and Margulys introduced the idea of micro-organisms getting organized to reflect excessive sun: the *Emiliana huxleyi*, a micro-organism living in the plankton of the ocean that uses CO₂ from the atmosphere to produce calcite (CaCO₃) structures. By sticking together, they create white clouds floating in the ocean. These clouds reflect the light and thus contribute to the cooling of the atmosphere. Both processes, catching CO₂ and cooling, are a feedback for the increasing climate change. Unfortunately, it is

Exhibition of the BREAKWATERS project, showing what lies underneath the Staten Island Ferry route (SCAPE, 2018)



not enough to neutralise climate change, but it illustrates a global climate impact of living processes, a sort of Daisy World process.

Around the same time as Lovelock and Margulys' discovery, Vinogradov formulated the Diel vertical migration (or DVM) hypothesis (1): at night, organisms tend to migrate upward towards the surface, and in the daytime, they follow a downward movement to deeper waters.

This occurs in many (but not all) epipelagic and mesopelagic species, or between the sea surface and the 1,000 m deep. The carbon fixed by phytoplankton in the upper sunlit layers is carried down to deeper depths by organisms that feed on it but do live or may be eaten at depth. While moving up and down, fish excrete nutrients like nitrogen and phosphorus. These nutrients, when released into the water, can contribute to nutrient enrichment in some areas and result in a higher species diversity in the open ocean than would otherwise be possible in a relatively homogeneous environment. Additionally, fish feces play a key role in neutralizing carbon dioxide in the marine environment: when fish drink seawater they

excrete calcium as calcium carbonate — a chalky substance that can make seawater more alkaline and diminish the carbon dioxide in the water. Otherwise, more acidic waters decrease certain fish's ability to detect predators, what can put the entire food web at risk. Ultimately, the fish regulate the seawater to increase its survival chances.

We live on a living planet, and our stories and maps should convey such richness and complexity. As geographer Stuart Elden notes, "cartography does not just represent the territory, but is actively complicit in its production." (2). Because marine spatial planning documents inadequately represent the activity of fishing, dependent on seasonal, ecological and economic cycles, fishing is relegated to a "cartographic silence" that ends becoming a "political silence" that weakens this activity in any negotiation in which other industries (like cables or pipelines) compete for space or rights.

Moreover, the efficiency measures that were introduced in the wake of the fisheries' industrialization

in Europe, like the upscaling of companies, the redundancy-making of traditional fishing methods, the grouping of auction places, and the geographic specialization of the fished species and their matching quotas, all can be seen retrospectively as measures that anesthetized a complex understanding of the sea and put a halt to many livelihoods.

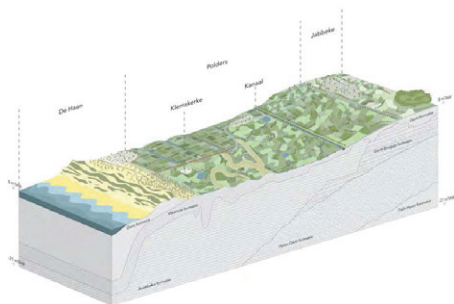
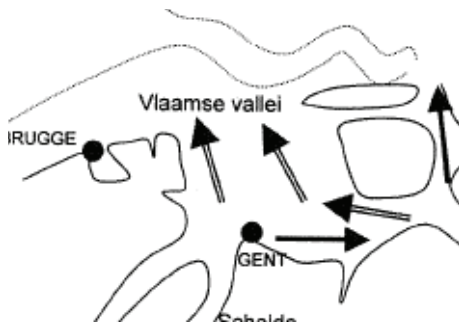
Pacific navigators drew on stars, currents and winds to navigate the vast ocean. We wish to adopt a similar approach: navigate by seeking support on the things we see, around us, like whales, container ships, underwater vibrations, fish, pieces of plastic, plankton, fishers, or oil rigs, in a follow-the-thing attitude. When we say Zeebrugge we need to see the chemical pollution, the microplastics, the arrogance of port authorities, the tons of metal parked on tons of concrete by the sea, the tern and gull birds being smashed by the blades of the wind turbines, the immigrants frozen in a truck cabin on their immense journey to UK, the abusive dredging that wipes out all life forms and triggers unanticipated streams. We cannot afford naivety

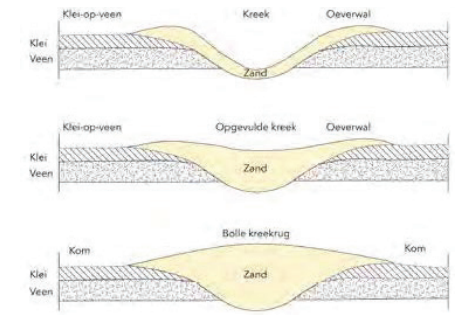
any longer, nor arrogance. Today's oceans threats are thousand and one.

The coastal plain: a rich history

The present-day coastal plain is the result of a combination of anthropic interventions, and long-term sea tidal movements carrying sediments, eroding, and altering the sea level. About three thousand years ago, the area was governed by natural/geological processes, like storm surges and the ebb and flow of the sea. 2000 years ago, the average sea level was more than a meter lower than today. There were also slight changes in the climate, alternating warmer and colder periods well into the 18th century: the warming in the early Middle Ages was followed by the Little Optimum in the Middle Ages and the so-called Little Ice Age in the 17th century.

Parallel to those changes, storm frequencies changed too. On the anthropic side, the construction of dykes and other coastal defences altered the natural sedimentation and erosion patterns, as well as the interaction between land and water. Along the shore, its turbulence could





break the foot of the dunes and enter the coastal plain where tidal channels were eroded.

About 1000 years ago, we can see a very thinly populated natural landscape limited to the terps or sandy elevations, exploiting the peat ground for energy, fishing on the creeks and along the beach with barges, and dominated by water. Hundred years later, the great storm surge of 1134 formed both the arm of the Scheldt (later called Western Scheldt) and the Zwin arm, when the sea entered it from the Sincfal, an old sea basin separating the Zeeland islands from the Flemish coastal area.

The water penetrated through the sea inlets Sluisse Gat and Zwarte Gat. From these tidal inlets a large system of channels was scoured out, facilitated by the fact that the Pleistocene sandy soils found along the coast were often hardly or not at all covered by peat, and only Tertiary fluvial deposits of clay were found inland on Zeeuws-Vlaanderen buried by Pleistocene fluvial-estuarine sediments. The expansion of tidal channels occurs more easily in sandy soils than in peat beds. The Zwin region was formed at that

moment.

This direct access to the sea brought a short period of economic prosperity to places such as Damme, or Sluis, known today as the “disappeared ports of the Zwin”. By 1250, the Sluisse Gat became the most important sea inlet for shipping to these ports, but as the diking and land reclamation progressed, transforming the Zwin region into fertile agricultural land punctuated by big farms, the silting in the inlet increased, hence endangering its navigability.

The fishermen were therefore obliged to moor their boats on the beach. Because the fishermen liked to live as close as possible to their boats, Noorddorp was created next to the village center of Koudekerke. This Noorddorp, also called Heist, must have been created around 1175 and it grew quite quickly. The following fish species were captured: herring, mackerel, plaice, haddock, salmon, eel, cod and fatty fish. Herring probably made up the largest share, salted on board and stored in baskets. The oldest fishing boats were quite small and open, and they were used for coastal fishing. From 1300 on, bigger vessels

allowed the fishermen to venture further into the sea. In the spring they sailed off the coast of eastern England to catch early herring. They spent the months of August and September in the south of the North Sea. From November they stayed closer to home, off the Flemish coast.

In the early fourteenth century, a large sea defence was erected along today's Flemish coast and in Zeeuws-Vlaanderen. Despite some breakthroughs, this dyke withstood the great storm tides of the late Middle Ages, reducing the amount of seawater reaching the salt marshes and easing the process of land reclamation for almost three centuries. In the older polders, irregular and large block-shaped plots were created, with remnants of tidal channels often used as plot boundaries in the lower parts (Oudland). Land use also considered the nature and moisture of the soil. Old clay and peat grounds remained pasture. Sand creek ridges became farmland. In the more recent reclamations, a regular and planned pattern of plots was created (Nieuwland).

From the thirteenth century, and

also during the following centuries, the fishermen suffered greatly from the successive wars. They often fell victim to pirates. During the many wars, fishing boats were often requisitioned by the government. For example, in 1304, after the naval battle at Zierikzee, Heist fishermen were obliged to bring the remaining troops back to Bruges.

As the coastal plain transformed into cultivated landscape connected by a dense network of waterways and paths, the strength of the tidal effect in the Zwin was greatly reduced because of the ongoing reclamation on both sides of the channel. At high tide less and less seawater could flow in, so that at low tide it only slowly drained back to the sea. Much of the sand brought in remained in the trench and sandbanks formed.

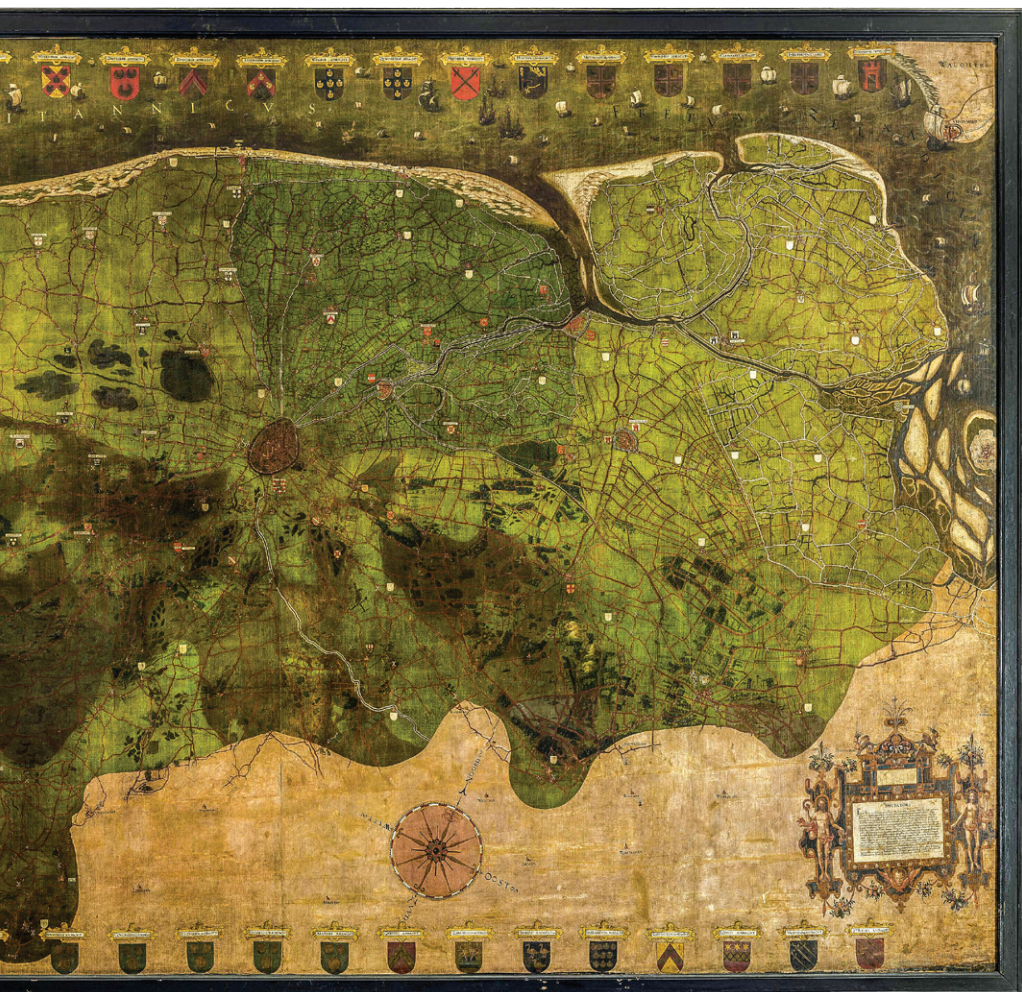
By 1400, the first fish mongers, acting as mediators in fish sales, appeared in Heist. The fish traded by the sea would be transported inland by foot or barge, and the boats fleet kept growing. Around 1500, the sandbanks already hindered shipping to such an extent that the few (small) ships could only enter the Zwin at high tide.

The map of the *Brugse Vrije*, drawn by Pieter Pourbus in the period 1561-1571, shows quite accurately the situation in the Zwin region after the medieval embankments and before the start of the Eighty Years' War (1568-1648), which profoundly changed this polder landscape. Fortifications were erected on both sides of the Zwin, linked into lines, such as the Cantelmo Line. The water-retaining dykes were repeatedly breached and reconstructed at various places along the Zwin. The action of ebb and flow created new tidal channels.

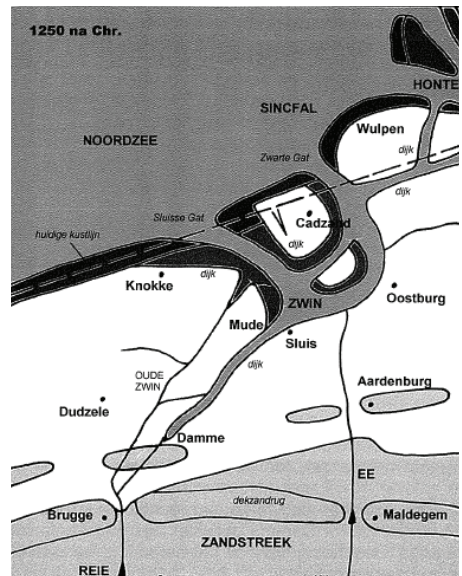
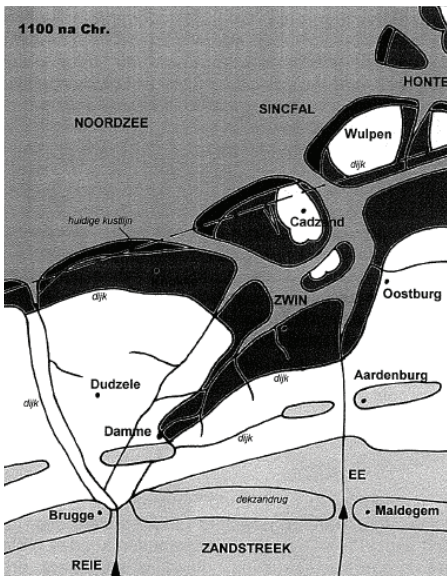
Certain parts of the medieval landscape were wiped out due to the combined effect of stronger tidal currents and a significant increase in high water levels. Most of the islands disappeared into the waves, and even Cadzand had to deal with considerable coastal erosion and lost the northernmost polders to the sea. In contrast, the western polders were threatened by the Sluisse Gat, which moved eastwards. The fishermen began to focus more on beach fishing because of the insecurity at sea



First clear and topographically reliable representation of the Zwin region was only made between 1561 and 1571, in the map of the *Brugse Vrije* by Pieter Pourbus, realized based on real topographic measurements on the site itself.



The Zwin region in 1100, 1250 and 1565. Black stands for dunes, dark grey for peat, light grey for the Pleistocene fluvial-estuarine sediments, and white for the polders (https://www.zwinstreek.eu/geschiedenis/)

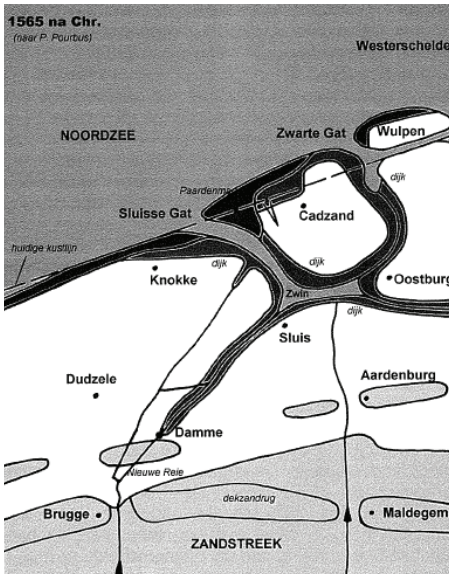


due to the many sixteenth-century wars. They dragged the nets behind horses. But because they destroyed many small fish with this technique, trawls were banned in 1531 and 1538. In 1575, the parish of Heyst was robbed and burned by the rebels of Vlissinghe.

In 1604, Sluis was conquered by the States of the Netherlands. The connection between the Zwin and the canal to Bruges was closed south of Sluis. With that, the Zwin as a shipping route between Bruges and the sea had been done away with for good. Shortly after 1600,

Bruges turned west to realize a new connection with the sea, building a canal to Ostend.

In the seventeenth century and the first half of the eighteenth century, not a single fisherman is mentioned in Heist. This did not mean that there was no fishing, but this was limited to beach fishing, mainly practiced as a complement to farming activities. The reconstruction of the Polder in Zeeuws-Vlaanderen was carried out. They were parcelled back according to a regular and rectilinear pattern.



Plans were made to embank the salt marshes along the Zwin, whose tidal channels had remained open. The dunes of Knokke, meanwhile continued to grow in the direction of the Zwin estuary. Together with the Blankenberge fishermen, the people of Heist practiced small-scale fishing, i.e. the fish was brought ashore fresh. The sea catching contained whiting, brill, sprat, turbot, skate, crab, mussels, rodbeard, sole, dab, cod and shrimp.

After 1800, the sea inlet was closed off, only a small channel near the Belgian-Dutch border remained. In

the 19th century, the Zwin region was still intersected by a network of canals or “reien”. With their high rows of trees, these canals provide a striking compartmentalization of the once wide landscape in the Zwin region.

The two 20th century wars had important front along the Belgian coast, and massive destruction followed. The post-war reconstruction brought major changes: the port of Zeebrugge, a modest port created in 1907 to give a sea access to Brugge, was expanded and transformed into a petrol-based harbour linked to major traffic routes and to Antwerp, where the raw material would be transformed in the petro-chemical complex. Tourist and recreational facilities were planned along the coast, and fishing communities were pushed away (3).

(1) https://en.wikipedia.org/wiki/Diel_vertical_migration

(2) Elden, S. (2010) “Land, Terrain, Territory,” in *Progress in Human Geography*, 34:6

(3) Marie-Claire Chaineux, M.-C., Charlier, R.H.(2016) “Fishermen Cavalry”, *Journal of Coastal Research* , Vol. 32, No. 2, pp. 434-442

BUOYS & CHANNELS

What about today? The use of our seas is on the rise. At the same time, we hear climate change will increase the sea level and the frequency of big storms. But climate change is already happening: the ocean's temperature is rising, with unknown consequences for the way the water and the air currents will flow in the near future and for El Niño-Southern Oscillation (aka ENSO). Other tipping points have already been reached: nitrogen cycle (related to the amount of nutrients in the sea and the soil), ocean acidification (due to carbon storage in the seabed), ocean pollution, altered currents, and silting because of intense dredging... All those changes will have consequences for the natural resources and the use of (marine) space (1).

In the following lines, we sketch, supported by various sources, some of the topics that we find intriguing and that could be used as a departure point for your spatial analysis and design work, as if they

were the buoys at sea marking safe channels for sailing craft. The list is far from limiting, though.

THE BOUNTIFUL SEA

The seawater is one of Earth's most valuable natural resources. It provides food in the form of fish, shellfish, and seaweed. We think fishers, and we see the weathered and heroic faces of fishermen. Fishing is often seen as a male activity. However, women play an essential role in the fisheries sector, especially in small-scale family businesses. Either they are involved in the fishing activity itself, on board or foot as shellfish gatherers, or they support the industry through onshore activities such as fishing gear preparation and maintenance, transporting fish to auctions, sales, processing unsold fish (by salting, drying or pickling it), logistics or even the development of tourist activities. A study (2) estimated that female employment represents about 13 % of the total employment in the European fisheries sector.



This percentage soars in the seafood and aquaculture areas: about 25% of the workforce are women, and about 50% of the fish processing. In comparison, for seafood, it is estimated at 75 % in Costa a Morte in Spain and 90 % in Plodovi Mora in Croatia.

Parallel to this invisibility of day-to-day tasks performed by women, we find the mythical female roles, like the Haenyeo (3) in Jeju Island or the Ama (4) in Okinawa, both female divers specialized in shellfish (e.g. Avalon, oysters, sea urchins, sea cucumbers, octopus), and seaweed (e.g. agar). Even in modern times, these females dive without scuba gear or air tanks, making them traditional free divers. When they float back to the surface, they produce a unique sound like a whistle, giving off an uncanny, otherworldly feeling when it happens within a group of divers. This breathing technique is a way of releasing carbon dioxide and taking in oxygen. Their existence might be due to the Kuroshio Current, bringing warm water from Ecuador to the Eastern Philippines, along the coast of China, and up

to the seas around Taiwan, Korea, and Japan. As the current hits Japan, it splits in two, with one arm longing the bottom of the Korean peninsula. The warm current keeps the water temperature mild and facilitates diving. The Kuroshio Current significantly affects the North Pacific Ocean's physical and biological processes, including nutrient and sediment transport, major Pacific storm tracks, and regional climate. The current noteworthy nutrient transport also results in a biologically rich ecoregion supporting a critical fishing industry and diverse marine food webs (5).

The seawater is likewise the habitat of increasingly important organisms with enormous potential for fighting disease. Such abundant life can become a form of biocontamination, like in Zeebrugge, where the intensive transcontinental commercial ship traffic transports larvae of alien species in ballast water tanks or as adults attached to hulls (6). Although there is no clear evidence that alien species have driven native species to extinction in the North Sea, they

are known for having irreversibly modified certain functions of the North Sea ecosystem, exceeding the more often considered effects of eutrophication and toxic substances, even rivalling those of the fisheries industry. Changes on the sea bottom, like mineral mining (chloride, sodium, magnesium, sulfur, calcium), sand extraction, or regular dredging inside ports, have an adverse impact by disrupting the biochemical balance of the seawater.

Other negative effects of human activity include overfishing, excess nutrients, rising atmospheric carbon dioxide, and pollution.

Next to transporting alien species, shipping can be the source of many problems, such as oil spills or regularly release of air pollutants in the form of sulfur dioxide, nitrogen oxides, carbon dioxide, hydrocarbons, and carbon monoxide.

On the other hand, some 290 shipwrecks lie in the Belgian part of the North Sea alone. Wrecks at the bottom of the sea are known for their potential to increase biodiversity in an otherwise sandy environment. Slowly, the wooden

or steel structure becomes buried under a layer of sand and overgrown with various algae and animals such as sponges and anemones, species that would not naturally occur in the area due to the lack of a hard substrate. Wrecks, therefore, can create biodiversity hotspots parallel to their negative environmental impacts due to the oil, lubricants, paints, fire extinguishing materials, metals, bombs, and cargo left in them (7).

Which kind of project would trigger the ecological regeneration of the shore? How could this become a source of renewed marine resources and economies (also economies to empower women) while assuring the recovery of the coastal habitat? What amenities do these women need to transform their secondary occupation (to complete the household income in one way or another) into a full-fledged job?

THE THREATENING SEA

The Belgian coast is part of a dynamic, sandy coastal system. That coast is continually changing, driven by the varying rising speeds of the sea level over the past thousands

of years. For the sake of curbing the risks for the urbanized areas of storm and spring tide and land loss due to coastal erosion, a series of beachheads and sea dykes have been installed. To complement this defence system, and to combat the combined danger of rising water level and the extra wave height during storms, sand replenishment coupled with dyke reinforcement have been realized, changing the Belgian coast drastically by distancing the sea dyke further from the sea by widening and raising the beach zone. Quays are being reinforced on the port, canal, and estuaries, walls are kept at sufficient height, and tidal surge barriers are erected.

These solutions are known as 'hard' or 'grey' infrastructure, which performs right in the case of emergencies but ruins the shore ecosystem. Other strategies, known as 'soft,' work on sedimentation-enhancing processes and exchange polders or *wisselpolders* that offset land loss and improve flood safety by creating new land, like in the Dutch Perkpolder project (8).

Next to the sand that moves

because of the estuarine and sea currents, key to the constitution of benthic communities, there is the continuous dredging of the Schelde mouth to give access to bigger and bigger ships reaching the port of Antwerp and Terneuzen and Zeebrugge. This last, because of the extension works, changed the sand sedimentation processes and increased the siltation rates of mainly mud. The suspended particulate matter (SPM) concentration from high outside to low inside the harbour basin settles quickly within the first hundreds of meters. The port was extended seaward to its present form from 1980 to 1985, with the construction of two 4-km-long breakwaters extending about 3 km out into the sea. The outer port is maintained at a depth of up to 15.5 m below LAT (lowest astronomical tide). The port and the channels are thus substantially deeper than the nearshore area, where water depths are generally less than 10 m below LAT. About 5.3 million TDM (tons dry matter) per year or 15,000 TDM/day of mainly fine-grained sediments is dredged in the outer port and is disposed at authorized disposal



sites in the North Sea, at 5–15 km from the harbour. The fluid mud layer inside the harbour basin has a thickness of up to 3 m in front of the entrance of the Albert II dock, decreasing to 2 m at the harbour entrance.

As Charlier & De Meyer (9) recall, the combined action of fishing, farming and animal husbandry, even if it perturbed the original environment, it did not alter the basic appearance of the land, with their drainage works and a few structures to preserve the soil from the sea. The first significant changes came with tourism and harbour development. Tourism can be traced as far back as 1784 in Ostend. A sea wall was built in Knokke in 1890, when a violent storm destroyed its western sector, the new promenade being built 100 m further inland on dune territory. But tourism also meant the construction of hotels, boarding houses, holiday camps, cure establishments, houses, villas, cottages, and eventually apartment buildings and camping sites.

Gradually, walking paths and roads began to crisscross the dunes, and the population soared. Destruction

of the natural environment has been hastened by stone embankments, which disrupted the beach-dune natural balance; because of the construction by the German occupation forces of an 'Atlantik Wall' during wartime; because of an unfettered building by real estate promoters; by the siting of homes in the dunes; and because of sand starving by dredging offshore for the building industry and for the sea defence. By 1976, the width of Belgian beaches varied from 30 to 50 m; at low tide, the beach area represented about 1775 ha but shrunk to a mere 253 ha at high tide. On peak days, the total demand for beach, dune (2167 ha) and wood space (370 ha) surpasses the room we got by and large.

How do we design resilient coastal landscapes able to break storm surges and consolidate green infrastructure solutions (aka. building-with-nature solutions) to protect from the effects of sea-level rise? Is it still feasible to keep dredging the harbours to accommodate more considerable ship demands? Is sand extraction to be used for sand replenishment along the coast or for the

construction industry still an option?
Do we need to dig a hole under our feet?

THE SINKING POLDER

Polders were generally created by a stepwise process of embankment and land reclamation for agricultural purposes: land stretches were firstly dyked to prevent flooding by the sea, and land was subsequently drained. They aren't entirely flat: the sea nibbled tidal channels on the clay substrate, which were successively filled with sand, resulting in a micro-relief of elongated creek ridges (3 to 4 metres) with a sandy subsoil, and depressed soils (with slumps of 1 to 2 meters deep) of moist clay soils. Most farms are built on sand. The clay and peat parts compacted under the influence of intense drainage, and they sunk compared to the sand areas, hence resulting in an inverted relief.

The rainwater that falls into the dune and other sandy areas infiltrates very quickly, forming a freshwater bubble in the subsoil that keeps the salt beneath. In the coastal polders, the infiltration possibilities are somewhat limited,



“The procession of August 15th at Heist-by-the-Sea,” Jan Verhas (Dendermonde, 1834 – Schaerbeek, 1896)



“Washing turnips,” Evariste Carpentier (Kuurne, 1845 – Liege, 1922)

and the water is drained to the sea as quickly as possible with the help of ditches and canals. If there is no rain for a long time, the reserves still present in the subsoil shrink, leading to drought. Where fresh water is absent in the subsoil, brackish or salt water ascends by capillarity towards the surface. This process is called salinization. The effect on the groundwater system is further enhanced by the many channels that flow into the sea and bring salt water inland.

The gradual industrialization of agriculture has managed to increase food output, contributing to eradicating hunger and famines and even reaching enough surpluses to engage in relevant export economies. As a result, Flanders has been able to accumulate sufficient capital to drive industrialization and the late-20th-century shift to a service economy. Nevertheless, this process relies on the gradual detachment of the rural landscape from its cultural dimensions and former sociological and ecological considerations. Its quality, formed by the interaction between anthropic and natural characteristics, has decreased.

One of the examples is the disappearance of a typical semi-open cultural landscape in the polders, known as “bocage.” The small plots were lined with hedges and rows of trees, ensuring that the water was retained on them, thus exerting a very positive effect on the water storage capacity of the landscape and keeping the brackish or salt water in the subsoil at bay. The hedges themselves accelerated the infiltration of water into the soil because of the root system of the plants but also because it attracted rodents that dug tunnels, allowing the water to penetrate the ground at an accelerated rate. The hedges and rows of trees also prevented erosion and contributed to creating subtle plateaus due to years of working the land. Primarily because of the upscaling of agriculture, leading to the merging of small irregular agricultural plots and the introduction of accelerated drainage solutions, this “bocage” was deemed redundant and eliminated.

Nowadays, Flemish agriculture is meeting with dramatic constraints. The decades-long heavy investment into specialized crops, in dairy production, and in pork and poultry

production has determined a problematic dependence upon mechanization, fertilizers, non-renewable energy consumption, and, more importantly, credit. The same investment has contributed to a large share of Flemish greenhouse gas production and surface water pollution. Simultaneously, shifts in consumption trends towards less meat, less intake of lactose and dairy-derived products, less industrialized staple crops, and short supply circuits question the dominant farming economies and cultivation patterns.

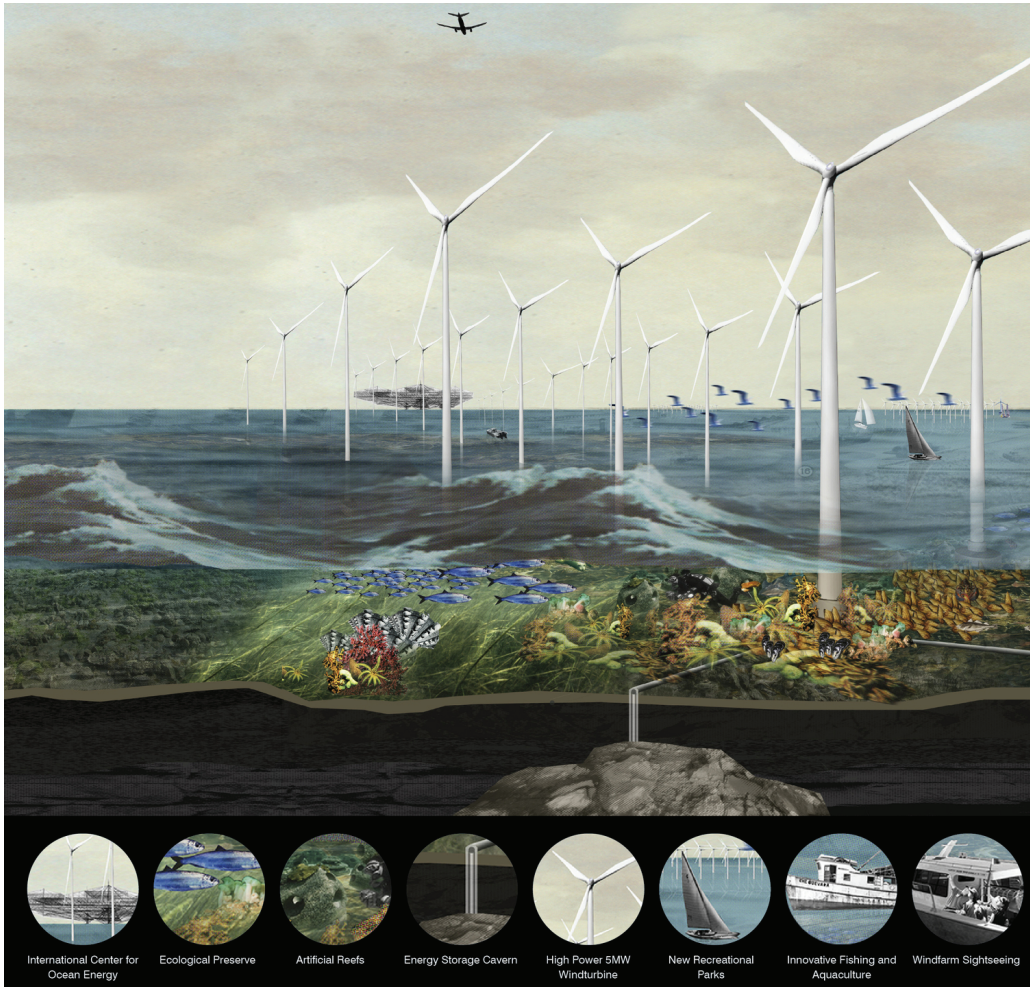
The pressure over the current farming model is enormous and politically sensitive, while paths to transition for farmers still need to be well-established. In parallel, the abundant spatial claims that exist for these open areas, mainly related to energy and food production, but also the new regional and EU environmental regulations (nitrogen cycle, pesticides, fertilizers, new crops...) make that this landscape should develop multifunctionally, to accommodate those diverse needs. What can be the alternatives to the industrial agricultural model that has devastated our landscapes

and is posing a clear threat to the future of our food provision? How do we involve the very farmers in developing those alternatives, the first victims of our socio-technical lock-ins? And in which way this territory will be physically affected, both in terms of its infrastructure and outlook?

THE INTERLOCKED WORLD

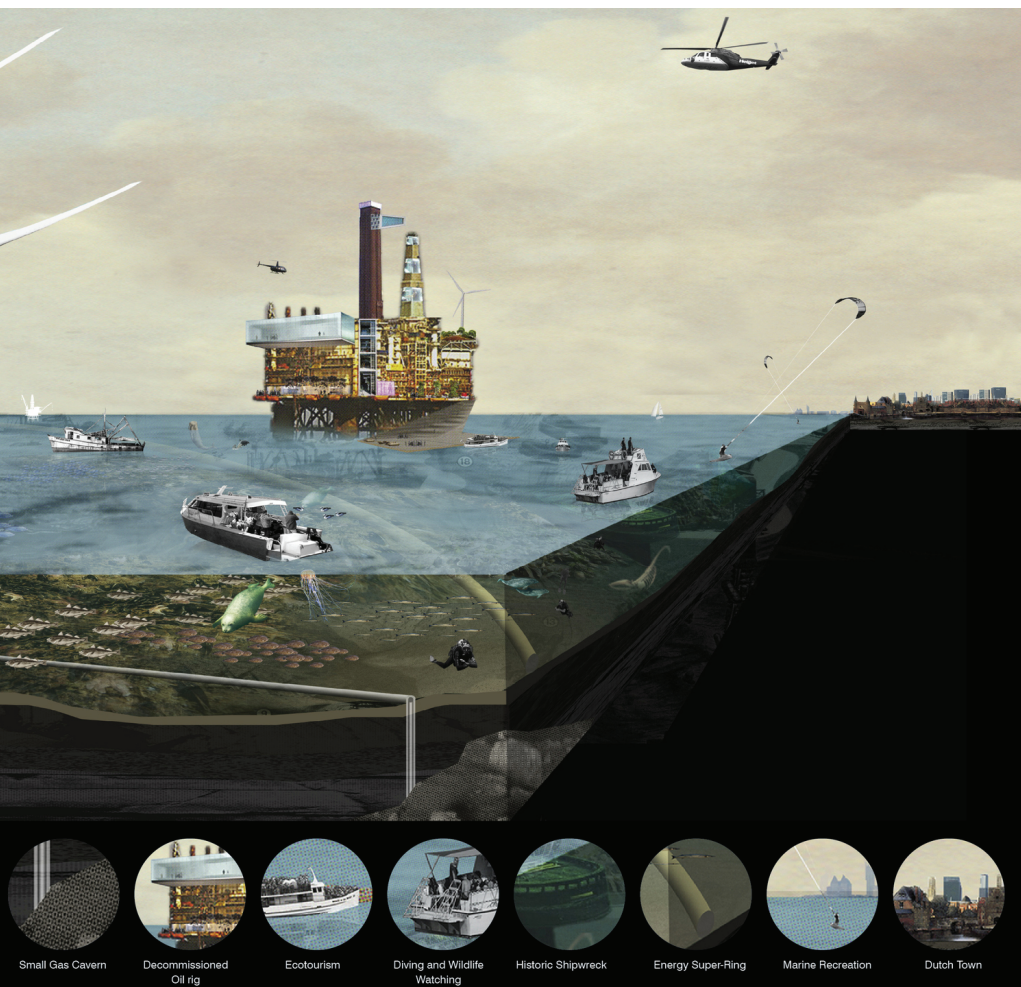
The Earth system is a complex and interconnected series of processes and components that make up our planet's environment. An example of such interconnectedness is "El Niño," a climate phenomenon that refers to the periodic warming of sea surface temperatures in the central and eastern equatorial Pacific Ocean. Under El Niño conditions, when sea-surface temperatures are above average by about 15 degrees or more, additional heat is released into the atmosphere, leading to warmer years on average. This phenomenon is known as El Niño-Southern Oscillation or ENSO.

But today's world is also highly interconnected economically and socially, as the ports of Zeebrugge or Antwerp so poignantly demonstrate, major global gateways. Events in



one part of the world can have far-reaching consequences elsewhere. However, such interdependence counts upon the existence of a sophisticated infrastructural scheme we often forget, and we only remember when it fails or ceases to exist.

Transport and water infrastructures were the first to be collectively built, profoundly changing the form of territories while introducing an unknown organizational complexity. Since the second half of the 20th century, energy has gained momentum and become,



together with telecommunications, a new crucial infrastructure whose territorial impact is less evident because it is less visible. However, because of the new EU emissions' goals agreed upon to counteract the planet's warming up, most member states attempt to accelerate the

energy transition and 'decarbonize' it by relying on green, renewable options.

We often forget that the energy transition will depend on the availability of other scarce resources (i.e. rare metals like lithium) and, above all, abundant space. Space

will be demanded by photovoltaic panels, the cogeneration facility feeding on the local heat network, the hydrogen plant, and the batteries protecting us from the variability of the renewable energy supply. Renewable energy sources (their production, storage, and distribution) are voracious in space. Then again, to generate 1 gigawatt of electricity with a wind park, we need 25 times more materials than an old thermal plant would require, which need to be extracted somewhere. Furthermore, decarbonizing the economy will reach far beyond the reduction of emissions and towards the transition from petrochemical to biochemical industries: organic wastes generated in the city will become essential resources to support its development.

Transport infrastructure determines our mobility choices (or lack thereof). Mobility is crucial for access to health and educational infrastructure and jobs. Transport poverty is also one of the reasons why people lack access to (parts of) social life. However, the current transport system cannot be considered sustainable. In 2019, Flanders approved a new decret

regulating public transport, “Basic Accessibility” (10). The former motto, “accessibility for everyone, everywhere” (known as basic mobility), mutated into “higher performance and reliable mobility” (or basic accessibility). This decret introduced a more robust hierarchy of service (organized in three levels: core, secondary, and on-demand) coupled with higher independence in managing public transport inside newly defined “transport regions.” Because of streamlining public transport services, bus lines in the rural areas vanished because they were not profitable enough. How to react to this, avoiding that the rural poor get punished twice? (they cannot afford a private car, and no other alternatives, type mobility as a service, shared vehicles, etc. exist) Two distinct questions arise: how do those left-behind areas in a diffusely urbanized territory stay accessible? Is it by relying on a dense bike network built on the old *trage wegen* and *buurtspoorwegen* networks?

On the other hand, the core network is far from performing as of yet, which compromises the modal shift from private care to public transport

and, thus, the national government's GHE reduction targets. For instance, the passenger line between Ghent and Antwerpen shares the tracks with the freight line between Zeebrugge and Antwerp, causing delays for both services. EU is deriving huge funds to shift as much freight transport from the road to water and rail. Ambitious projects are in the pipeline for constructing several lines traversing Europe to China. That is why tomorrow's mobility faces two major challenges: sustainability and inclusiveness.



"After the meal," by Jan Stobbaerts (Antwerp 1838-1914)

- (1) <https://ilvo.vlaanderen.be/en/themes/marine-production-and-the-marine-environment>
- (2) <https://epthinktank.eu/2021/10/15/women-in-fisheries/>
- (3) <https://en.wikipedia.org/wiki/Haenyeo>
- (4) [https://en.wikipedia.org/wiki/Ama_\(diving\)](https://en.wikipedia.org/wiki/Ama_(diving))
- (5) https://en.wikipedia.org/wiki/Kuroshio_Current
- (6) About 40% (16 of 80) of North Sea estuarine biota is considered to be of exotic origin, https://www.researchgate.net/publication/253862066_Globalisation_in_marine_ecosystems_The_story_of_non-indigenous_marine_species_across_European_seas
- (7) The EU-funded North Sea Wrecks project was initiated in 2018 and

united nine partners from Belgium, the Netherlands, Germany, Denmark and Norway. The project aimed to develop a tool to estimate the potential environmental impact of wrecks and war wrecks before commencing sea-related activities.

- (8) https://en.wikipedia.org/wiki/Sedimentation_enhancing_strategy#:~:text=Sedimentation%20enhancing%20strategies%20aim%20to,to%20offset%20sea%2Dlevel%20rise.
- (9) Charlier & De Meyer (1992) "Tourism and the Coastal Zone: The Case of Belgium", *Ocean & Coastal Management* Volume 18, Issues 2-4, pp. 231-240
- (10) <https://www.vlaanderen.be/basisbereikbaarheid/het-decreet-basisbereikbaarheid>

W1: 19/09	INTRODUCTION
W1: 22-24/09	FIELD WORK
W2: 26+29/09	MAPPING
W3: 03+06/10	ASSEMBLING
W4: 10+13/10	ASSEMBLING
W5: 17+20/10	LANDING
W6: 23-27/10	INDIVIDUAL PROJECT
W7: 30/10-03/11	AUTUMN BREAK
W8: 07+10/11	LANDING
W9: 14+17/11	REFINING
W10: 21+24/11	REFINING
W11: 28/11+01/12	DEMONSTRATION
W12: 05+08/12	DEMONSTRATION
W13: 12+15/12	CHARRETTE
W14: 18-22/12	SEMESTER JURY

APPROACH

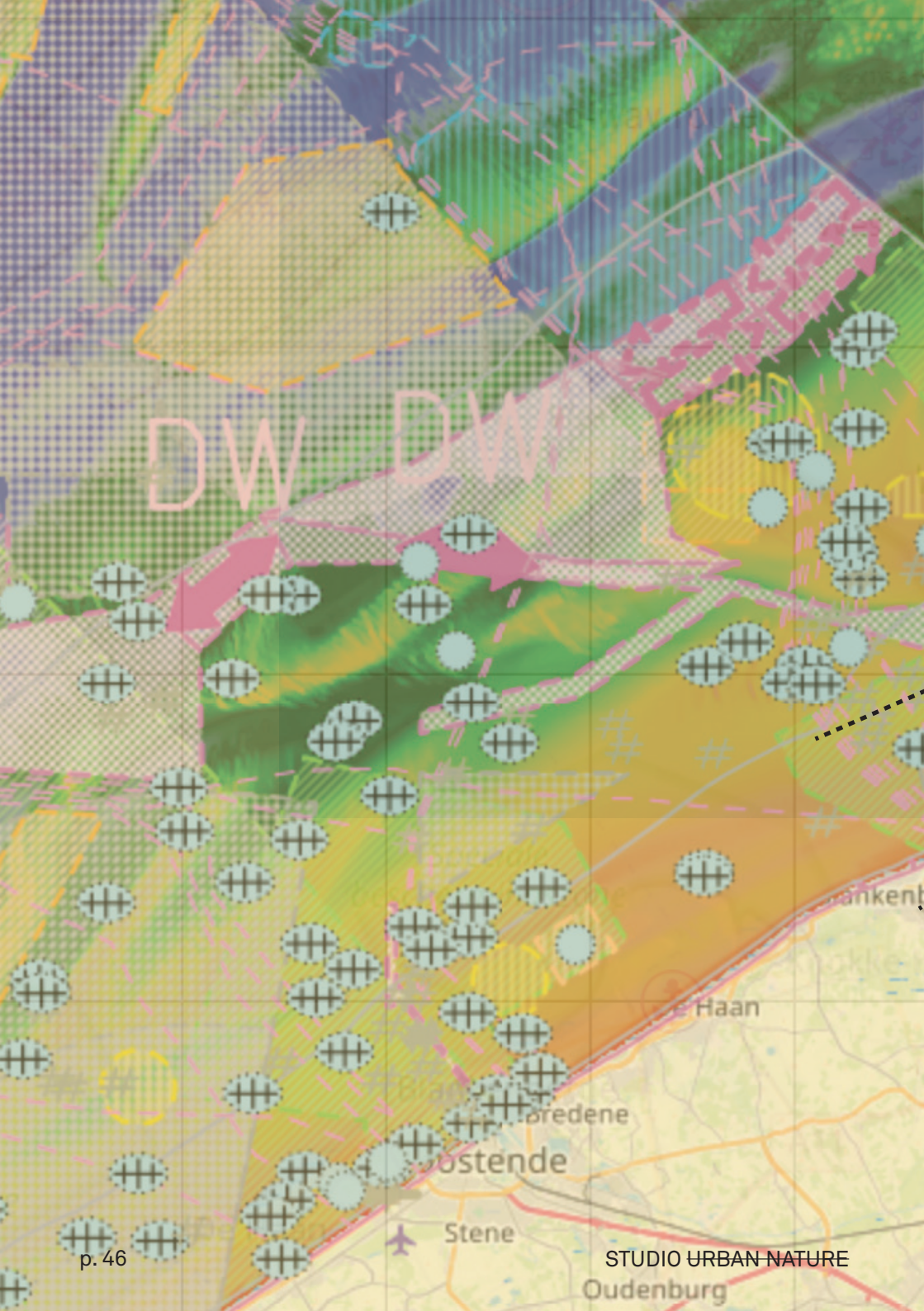
As announced before in this text, the first semester will be dedicated to the sea and the seashore, and the second to the interdependencies between the seashore and the pol-
ders. Above all, it will be a question of caring for the territories we will investigate, connect, and interact with.

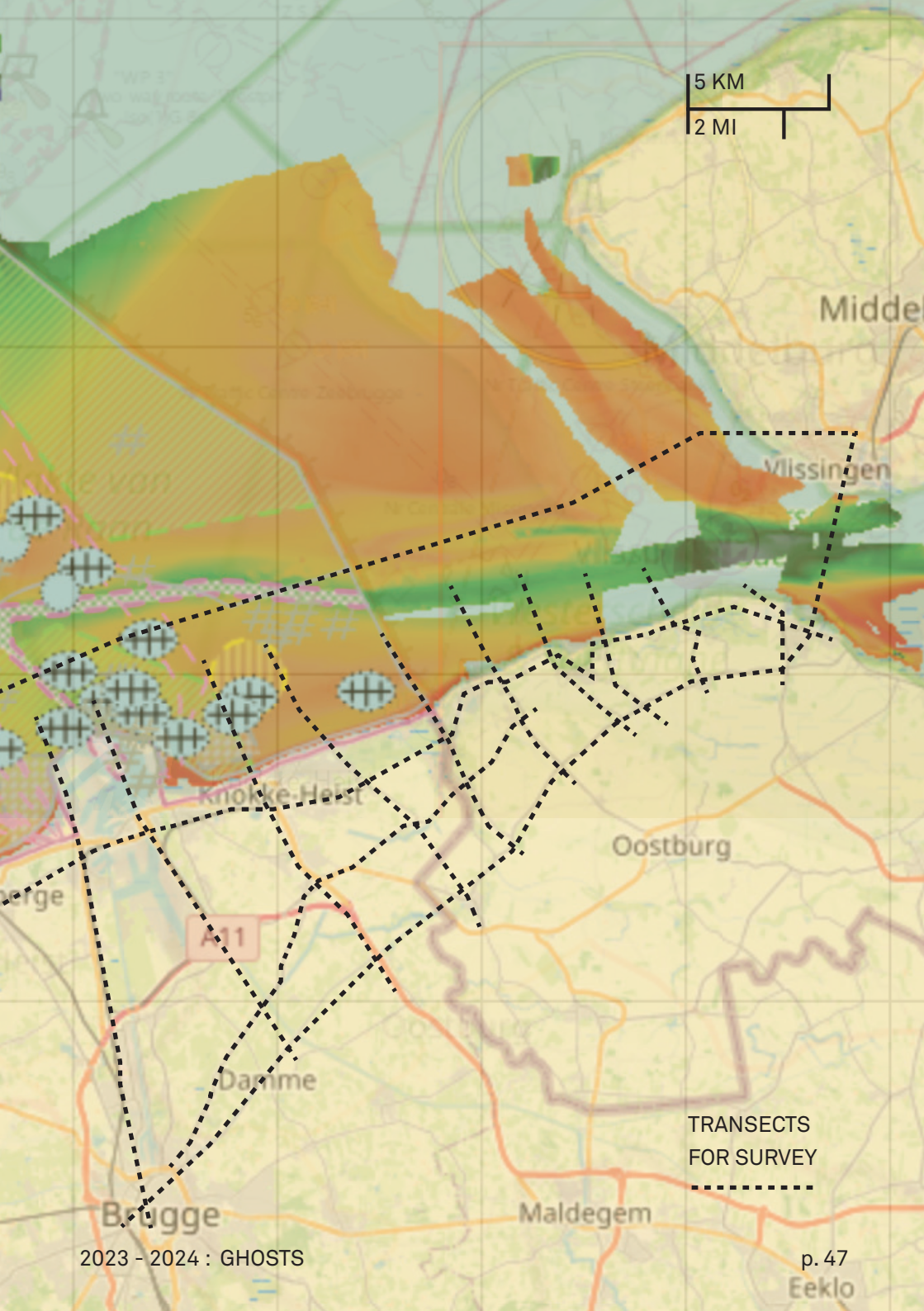
We will start with an immersive workshop in situ (2 nights/3 days, from September 22nd-24th). The study area is vast, and the best thing we can do is to put ourselves there, spend time onsite, and look, listen, smell... We will lodge in a youth hos-
tel in Dudzele and use our time to have a direct, without filters, experi-
ence, taking everything seriously and cultivating a form of attention that refuses to disqualify anything we encounter. For this design unit, if adequately disentangled, every humble trace can become the seed of a fascinating project instead of an irrelevant bit. Anything goes, from enquiring, gleaning, walking, reading to speculative cartography (<https://>

drawingmatter.org/) or participant observation... Anything that will help us relearn multiple forms of curios-
ity and attunement to the complex-
ity that shimmers around us.

To guide us in this endeavour, we will follow the lines or transects tran-
scribed on the next page in groups of 2-3 people. The groups will be formed during the first week and, in any case, before reaching the place of Dudzele. The group's focus will depend on the year of study:

- The BA3 students will use the shorter, transversal lines to the shore to map the vernacular architecture and understand the mechanisms of landscape construction at a small scale.
- The MA1 students will work on the longer, transversal lines to the shore to focus on the in-between scale, unpacking the 2D representation of maps to start imagining how to compress the complexity of what we see in a model.





5 KM
2 MI

Middelburg

Vlissingen

Oostburg

Knokke-Heist

Danime

Brugge

Maldegem

TRANSECTS
FOR SURVEY

- The MA2 students will work on the longitudinal lines parallel to the shore and those in the sea.

The output of this work will be to re-enact the transects in the classroom and to elaborate a comprehensive “catalog” that would integrate knowledge about the vernacular architecture, the 3D model and the intermediate sections, and a series of thematic maps (the MA2 will get a quick training on how to use GIS to mount those maps).

Next to this factual knowledge, students are warmly invited to make their own fascinations grow. To keep track of this, transforming it into an educational experience, each student will produce a “fascination notebook” throughout the year, which will be submitted with the rest of the work at the final jury. Every individual student will use it during the jury to demonstrate to which extent it has contributed to their respective design production.

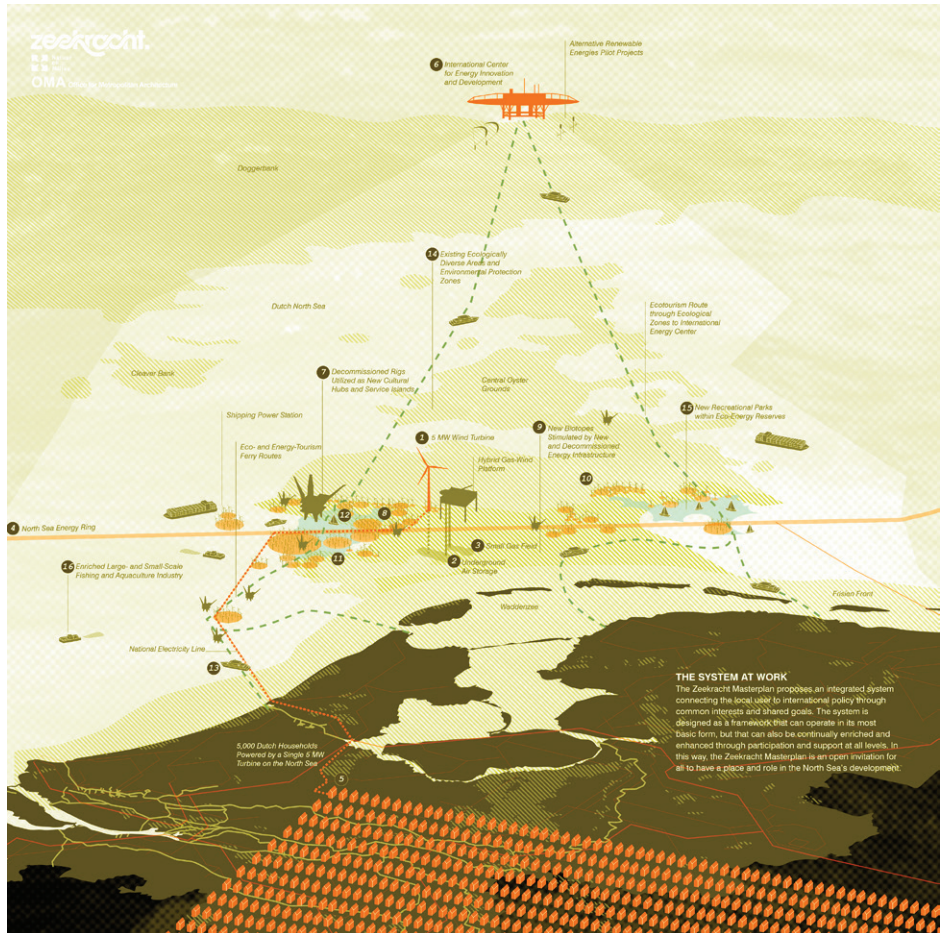
The idea, once again, is to multiply the worlds and to get hold of whatever means the students will get at their disposal to achieve this. The work will anyhow be organized in a strict sequence that intends to ar-

ticulate the different phases of the design work (see previous page for the exact sequence):

- FIELD WORK or diving into the many worlds
- MAPPING or representing the many worlds
- ASSEMBLING the diverse knowledges about the many worlds
- LANDING those knowledges into a project for a specific place
- REFINING the project (the conditions the spatial projects needs to exist and the situations it will generate in terms of use, temporality, etc.).

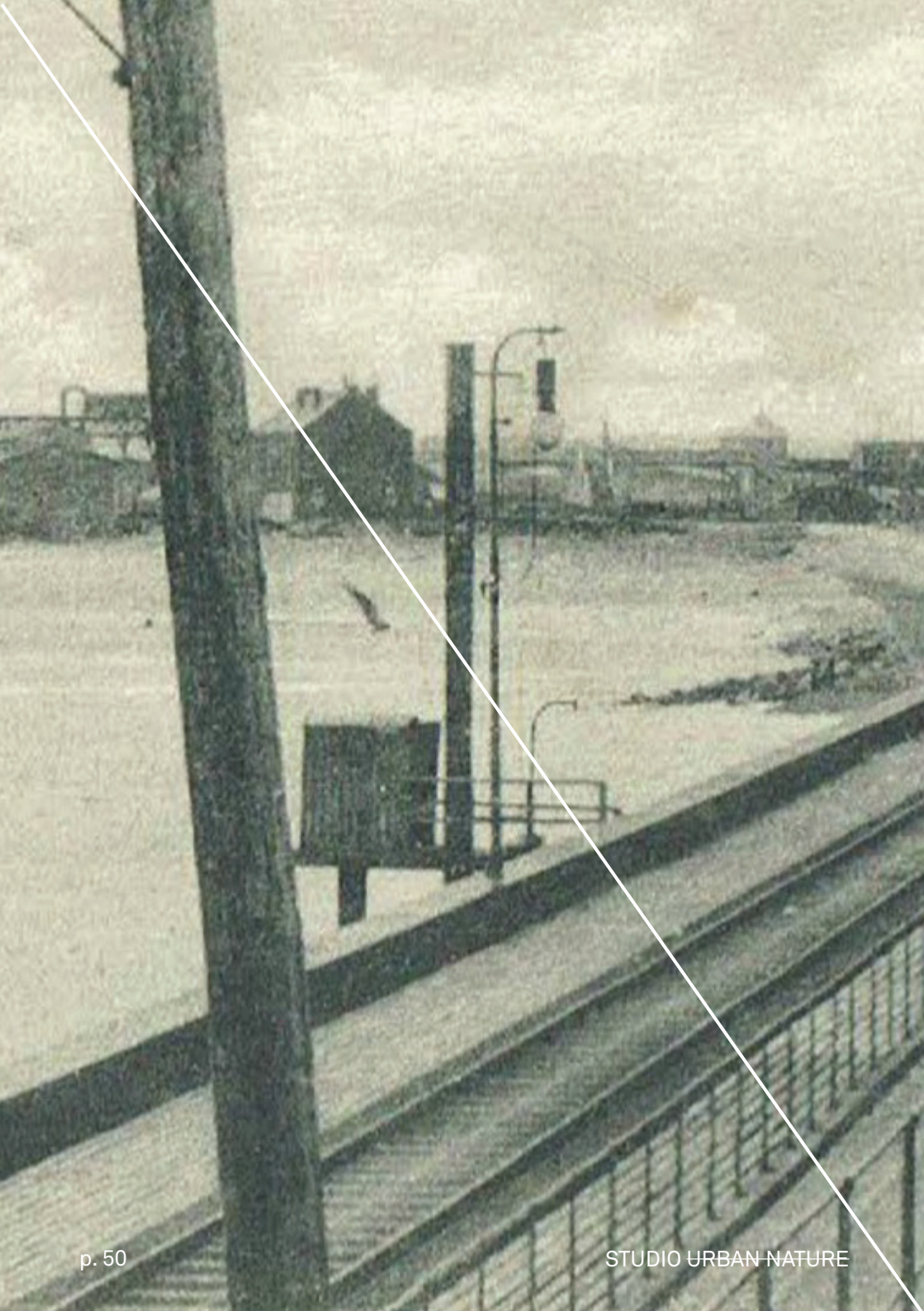
The work can be done in groups of 2-3 people. This group work will be complemented with two short, individual exercises, one each semester, organized during the PROJECT WEEK (23-27.10.2023, and 11-15.03.2024).

Because many of the topics the studio addresses need the support of other disciplines (biology, oceanography, environmental sciences, agronomy...), this year we will be linked to a multidisciplinary initiative born inside the ULB called the “Boîte de Sciences” (pulled by



Etienne Toffin and Gregoire Wallenborn).

Additionally, a series of lectures have been planned to inspire and inform your work (summarize on the next page).



UPCOMING EVENTS

22-24/09 Field trip (Youth Hostel @Dudzele)

19/09 Roxanne VANHAEREN (Atelier Romain) on the
“Atlas of Flanders”

29/09 Giulia RAVERA (GIS instruction for MA2, all day)

20/10 Charlotte GELDOF (Dept. Omgeving,
Flemish Government) on the work by “Magnificent
Surroundings”

Date TBC Prof. Carola HEIN (TUDelft)

Date TBC Nicolas PRIGNOT (St. Luc – ESA)

Date TBC Prof. Milica TOPOLOVITCH (ETHZ)

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