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Editors-in-Chief
Stefano Beggiora
Serenella Iovino

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Rights of Nature and European Water Bodies: Ways of Relating from the Confluence

edited by Pietro Consolandi, Martin Hultman,
Angela Snæfellsjökuls Rawlings, Julia Schasfoort

From Glacier to Sea Confluencing Rights of European Water Bodies

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Summary 1 Introduction. – 2 A Confluence of European Water Bodies.

1 Introduction

What if water and other living habitats in Europe were recognised as rightsholders?

Rights of Nature (RoN) movements are grassroots, citizen-led initiatives that, together with legal practitioners, engage with a subsection of Earth Law. Specifically, they provoke legal reformation by advocating for legislation on ecocide, constitutional rights for ecosystems, and legal personality for more-than-human beings, intending to revise anthropocentric legal frameworks into ecocentric ones. It needs to be emphasized that acknowledging the intrinsic value of habitats is not the same as claiming that they should be left untouched. Instead, RoN is a legal framework that strengthens the value of the rights of all living beings, human and non-human alike, calling them into negotiations with each other from a non-extractivist perspective. In the implementation of rights, there will thus be ongoing negotiations on what and how to prioritize (Gutmann 2021).

As an ontology, RoN emerged through traditional and Indigenous ecological knowledges, reforming regional, national, and even international legal frameworks and governance practices. In recent decades, nature's statutory and moral rights have entered sociopolitical discourses through contributions from Indigenous peoples, legal experts, judges, lawyers, heads of state, philosophers, and citizens (La Follette, Maser 2017; Corrigan, Oksanen 2021).¹ Over the past fifty years, RoN has reconfigured glocal legislation and geopolitics through its ecosocial transformative jurisprudence approach that recognises the intrinsic rights of more-than-human entities. Understood as an epistemological worldview or ontological worlding, RoN performs the decolonization of a five-hundred-year-old extractivist system (Kauffman, Martin 2017). The decolonial process connected to RoN stemmed from Indigenous peoples' struggles for land and water in several countries (for historic overview and roots, see a.o. Tănăsescu 2022).

RoN impacts are spread across the globe, and move across various legislative, political, and spatial scales, ranging from national constitutions to local court cases, concerned with single natural entities or 'nature' as a whole.² To illustrate the large variety of translations into practice, consider the UN's Universal Declaration of the Rights of Mother Earth (2010), national Ecuadorian, Bolivian, and Peruvian constitutions, environmental laws in Aotearoa (New Zealand) and Australia, and ordinances in North America (Humphreys 2017; Youatt 2017; "First River to Have Recognized Rights in Canada" 2021) that each acknowledge the intrinsic rights of more-than-human nature. These rights can mean, among other things, that nature is protected from damage caused by large-scale infrastructure and development projects that affect the balance of ecosystems and the people living in and around the area (Berg, Berg, Hultman 2019).

Over the last decade, RoN discourse has surfaced both within academic contexts and as citizen-led grassroots initiatives in numerous European countries. The Netherlands-based Embassy of the North Sea was founded in 2018, while the idea to nominate a glacier for president commenced its incubation in 2010 (Kassam 2024). Within this wave of dialogue and action, the Spanish lagoon

1 For an elaborate history on the expansion of rights to include more-than-human others, see Tănăsescu 2022; Boyd 2017, for primary seminal texts refer to Stone 1972; Nash 1989; Berry 2011; Cullinan 2011.

2 Parentheses added to acknowledge the contradiction inherent in this rhetoric. It invokes an abstract totality that is simultaneously supposed to stand apart from humanity and yet include it. It separates nature from humans in order to protect the former, but this very separation relies on a fiction that does not actually exist in practice or in most non-Western thought.

Mar Menor stands as a landmark case. In 2022, it became the first ecosystem in Europe to have its legal personality recognised at the national level.

European environmental legislation is historically different from South America, New Zealand, and the USA (Schoukens 2018). Several law scholars claimed that RoN would be superfluous within a European context, as the continent already has adequate environmental laws in place (e.g. Darpö 2019). Some European politicians even explicitly disregarded RoN as incompatible with their principles (e.g. Watts 2024), to the contrast of their voters who are in favour (Epstein 2024). Nevertheless, we are currently witnessing an exponential growth in academic interest, artistic practices, and practical actions. The number of academic papers discussing RoN has sky-rocketed, as has the publication of several journal Special Issues (García Ruales et al. 2024; Makanse, Alvarez Ortega, Bastmeijer 2024; Knauß et al. 2025; Barić, Winkler, Nedić 2026; Warner, Martínez-Moscoso 2026). Western academic traditions of Ecofeminism, Science and Technology Studies, Critical Posthumanities, and Feminist New Materialism, amongst others, have shaped the arrival of RoN within academic institutions.

Research on the process leading to RoN – its moral underpinnings, knowledge processes, and pedagogies responding specifically to the European context – is still in its infancy. Its dynamics are context-specific and demand methods that enable actors to meet and tease out mutual points as well as differences from which to negotiate. Such knowledge is necessary if RoN is used in different places with different local conditions around the planet (Charpleix 2018). More studies of transformative learning processes are needed if these laws are to succeed, with communities and organizations exploring local answers to global crises (Angstadt, Hourdequin 2021). In this regard, an academic-artistic-activist synergy has been identified as essential to explore pathways forward, with initial discourse emerging in the last years (see first foundations laid by Rodríguez-Garavito 2024; Martínez-Moscoso, Warner 2026; Vasquez Montesinos 2026). This special issue responds to these burgeoning interests with a twofold contribution, as it both deepens the knowledge of practices, pedagogies, and theories in the European context, and offers an experiment in collaboration within a network of water bodies. This unfolds through diving deep into a crucial question: how can a water body be recognised as a living, legal subject across different European territories?

2 A Confluence of European Water Bodies

This special issue of *Lagoonscapes* weaves together text and images from academics, artists, and activists who are experimenting with and (re)configuring ways of proposing RoN for a variety of water bodies (glaciers, rivers, lakes, lagoons, seas, and oceans).

To approach this complex, affective and potentially transformative transdisciplinary subject that centers ecocentrism as a responsibility for habitability and survival, we require *eunoia*cs – beautiful thinkers. Such thinkers extend beyond academic silos, reflect through pasts into speculative futures, and analyse ecosocial systems and structures for malleability, renovation, and redress. Before we introduce the contributors, we would like to acknowledge the main enablers of the multi-year process that led to this Special Issue via the Confluence of European Water Bodies: the Embassy of the North Sea (Christiane, Carolijn, Leon, Thijs, Harpo) and TBA21-Academy (Pietro, Kat, Ola, Markus) who facilitated 35 citizen-led RoN initiatives throughout Europe (known internally as the ‘water bodies’) to connect their practices and actions in order to ‘confluence’ – flow together.

This special issue presents the entangled *eunoia* of fifteen research papers, organised along the water’s journey from mountain to sea.

The issue opens with the glacier Snæfellsjökull in Iceland as a site where RoN poses questions of legalese and activism pertaining to voice, listening, and representation versus advocacy (Rawlings et al.). From there, the river section takes us through the issue of how waters become politically and legally recognizable. The Reuss Initiative frames legal personality as a democratic strategy for protecting water bodies (Schärli, Breda), while the dialogue with the Meuse shows that rights come to matter once a river can appear as plural political subject in public life (Schasfoort, Calabrese). The article on underground commoning in the urban waterways of Genova troubles representation itself by asking how water can be written without being flattened (Bergamaschi, Daneri, Ravera). Artistic methods are employed to envision how the Rhine can be approached through practice rather than abstraction (van der Eijk, Lubeek, Hurst), and walking, drawing, and poetry are brought together along the Taff river to reveal river knowledge as collaborative and situated (Price). Next, biopolitical actants are discussed within the context of the Po river to reconnect the water to the regulatory and infrastructural forces that shape it (Montanari).

The lake section shifts the focus to pedagogy, governance, and lived relations. Presencing and unlearning with lake Vättern shows how art-based ceremonies can unsettle habitual ways of thinking about water and open affective forms of engagement with RoN (Hultman, Laurien). Analysis of the Mar Menor case brings RoN and degrowth scholarship together to situate rights within broader

debates about limits, justice, and alternative economies (Purrmann, Fabre). Autoethnographic work with Limburg's post-extractive waterscapes makes sensory governance visible, showing how intimacy with anthropogenic waters is shaped by access, surveillance, and extractive histories (Obukhova). Next, the parallel between Mar Menor and Lake Vättern rethinks lakes as aquatic doppelgängers to enact them across different juridical and ecological contexts (Widengård).

The final section turns to lagoons, wetlands, and sea, with a focus on translating subject recognition into situated political and spatial practices. Analysis of the layered history of the Venice Lagoon makes a cultural-historical case for welcoming nature into European politics (Consolandi). Continuing in Venice, water relations are imagined as collective and more-than-human, using the figure of the siphonophore to think beyond individualism (Artioli, Soffietti, De Martino, El Hage), while spatial analysis of the Lagoon shows how design can help operationalise RoN by making claims visible in planning and governance (Anghileri, Longhin). The closing paper by the Embassy of the North Sea widens the horizon towards the sea, asking how legal imagination, civic institution-building, and artistic activism can open new forms of representation for marine life (Farini).

Taken together, the issue follows water through different forms, scales, and entanglements, while showing that RoN in Europe merges disciplines to bring about legal and cultural change. Before diving in, the issue opens with a speech by Robert Macfarlane, delivered at De Balie in Amsterdam for the opening of the 2025 Confluence of European Water Bodies, which sets the tone for the contributions that follow.

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Confluence of the Waterbodies

Robert Macfarlane

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Greetings to you all on this special afternoon, at this confluence of waterbodies. I bring warm wishes from my own river; the beautiful, stricken River Cam, a river who – and I choose to say ‘who’, not which or that – rises as a series of clear-watered springs in a little wood called Nine Wells Wood, around a mile from my home. I bring those greetings from my river, and in turn I greet representatives of the Venice Lagoon; the Waddenzee; the Oslo Fjord (running through a city, Os-lo, whose name I have this week learned means ‘the light place where the river meets the sea’); the fast-vanishing Snæfellsjökull glacier of Iceland; Berlin’s Spree River; Ecuador’s polluted, beloved Machángara River (whom I have met, who flows through Quito, and who was recognised on 5 July 2025 as a constitutional entity); the beautiful, blue-watered, braided Tagliamento River (who I am also lucky enough to have met, and who is perhaps the last morphologically intact river of the Alps); the River Don of Sheffield; the Dogger Bank; the Mar Menor (who as we know has become the first waterbody to have its rights and legal personhood recognised in European legislation); the Baltic Sea (the youngest sea on the planet!); the Sussex Ouse; the Rhone; the Rhine; the Odra; the Mediterranean – and many other waterbodies besides.

What a coming together – a confluence – this is. “The places where water comes together. | with other water”, wrote the American poet Raymond Carver, very late in his life, when, knowing he was dying, he had moved to be close to the clear-watered rivers of the Pacific Northwest: “The places where water comes together with other water | Those places stand out | in my mind like holy places” (Carver 1985, 12). I agree. We know this to be ecologically true too; the ecotones where river meets sea, or lake births river, are always rich, diverse, generative sites of mingling and co-making. And we know it to be culturally true, too, as is the case at this confluence of ours, here, today.

So it gives me great pleasure to be opening this third edition today, after Venice and Menor, here in a space – De Balie – where, historically, land management policy has been debated, here near a coast where European rivers meet the sea, and here in a landscape which has been created, conjured into being, by the intensive, even heroic management of water.

Indeed there is a close connection between my home landscape of the Fens, in southern England, and this one. For the Fens were transformed into habitable land by the expertise of Dutch water engineers, who came – known as the Adventurers – to the Fens in the seventeenth century, bringing their knowledge of dykes, pumps and windmills, and drained the Fens, creating, as here, an ultra-managed water-world in which I now live, where water operates within a fully privatised national water system that has delivered, in the 36 years it has been in operation, a rivers crisis which has not been seen in England since the mid-1800s.

We might say that my country, England, represents the global apex of privatisation of water, and that the Netherlands represents the global apex of water's instrumentalization. Here, an ultra-conservative perspective on water largely holds sway: a combination of expert management plus fear, with a technocracy that largely renders water politics as inaccessible for citizens, because it is held to be the domain of experts.

It may appear that this makes the Netherlands the worst place to gather in which to imagine water otherwise, as we are trying to do. But – quite the opposite, I think; it is exactly the right place to gather, and to try to carry out what is sometimes called 'pre-figurative politics': that is, the building of the new in the shell of the old. Ultra-conservative contexts have often birthed radical new approaches, and as we know, Amsterdam has a long history of being open to dissenters, non-conformists and apostates! When *Is a River Alive?* (2025) was published in the UK, I found myself described in *The Guardian* as a 'heretic'. It was a very proud moment. We need all the heretics we can get right now in respect of the living world, it seems to me, and I sense that here in this room I find myself among heretical friends! Long live the River-lution!

Ours is a confluence of disciplines and practices as well as waters. We are artists, lawyers, poets, designers, teachers, performers, activists, campaigners, counter-mappers all. We share a recognition that current laws and policies have failed to stop the collapse of watery ecosystems, because they are largely grounded in the fiction of nature-as-resource, as stuff, as "brute inanimate matter", to use

Isaac Newton's phrase.¹ We share a belief that the voices of water, or the more-than-human world more broadly, are rarely heard in political decision-making, but need to be. We wish to challenge the foundations of 'Westphalian' state sovereignty and we share a wish to advance water diplomacy and water democracy beyond human-centred rights, moving forwards into a precarious future where rivers and seas – like the sentient ocean in Stanislaw Lem's great SF novel *Solaris* (1987) – are encountered as fellow subjects. We believe in the urgency and possibility of a radical shift in perspective, whereby 'waters are no longer viewed as human assets, but as living entities that belong to themselves and have the right to better representation, protection, and restoration'.

We know our views are in the minority, but as Ursula Le Guin famously put it:

We live in capitalism. Its power seems inescapable. So did the divine right of kings. Any human power can be resisted and changed by human beings. Resistance and change often begin in art, and very often in our art, the art of words.²

Le Guin, in fact, shortly before her death, also turned to the very matters that we are here to consider.

One way to stop seeing trees, or river, or hills, only as 'natural resources', is to class them as fellow beings – as kinfolk. I guess I'm trying to subjectify the universe, because look where objectifying it has gotten us. To subjectify is not necessarily to co-opt, colonize, exploit. Rather it may involve a great reach outward of the mind and imagination. (Le Guin 2016, 2)

'A great reach outward of the mind and imagination'. That is what we are here to attempt, and like all great reaches, it will need to be both effortful and audacious.

But – and – change is coming. There is, around the world, a rising from the river, from the water's surface, from the seabed upwards. A "global tapestry of alternatives",³ to use Ashish Kothari's phrase, is being woven. We have seen the Goldman Prize recently awarded to Teresa Vicente and Mari Muriñari in Peru for their work on the

1 These words come from sir Isaac Newton's third letter to Richard Bentley. The full text is accessible through the Newton Project portal at <https://www.newtonproject.ox.ac.uk/view/texts/diplomatic/THEM00258>.

2 These words were part of Le Guin's speech in acceptance of the National Book Foundation Medal for Distinguished Contribution to American Letters in 2014. The full text is accessible at <https://www.ursulakleuin.com/nbf-medal>.

3 To explore more on the GTA, see <https://globaltapestryofalternatives.org/>.

rights of waterbodies. To speak only of my own country, we have this year alone seen the cross-party recognition of the rights of the River Ouse by Lewes Council, and then subsequent councils recognising or determining to recognise the rights of the Rivers Loddon, Itchen, Test and Medway.

Many challenges, remain, of course, and some of these are of immense philosophical and practical complexity. What does it mean to give voice to or speak for rivers? What does water want? Is a river or sea 'really' alive? How are we not just human actors, jockeying for position in a pseudo-ventriloquism? How do we avoid a cos-play animism? Where does a river or sea begin or end as a rights-bearing entity or legal person? Why speak of rights for rivers where the rights of human groups are being obliterated in the Middle East, Sudan and Ukraine? And how to help Indigenous or other forms of customary law pluralise and irrigate Eurocentric legal structures, without corrupting or co-opting them? None of these is easy, but we must grapple with them all, and more. It has been the work of many hands to bring us to this brink; it will be the work of many to bring us back from it, and create a just and habitable Earth, in which we move ahead with waterbodies recognised as fellow subjects and partners in a shared future.

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Glacier



Glacier. 2026. Acryl on canvas, stainless steel frame, 40 × 60 cm. Berlin. © Jakob Kukula

How Does the Glacier Speak? Problematizing ‘Listening’, Ecocentrism, and ‘Voice’ in a Rights of Nature Movement

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Abstract Snæfellsjökul fyrir forseta (SFF) is a Rights of Nature collective originally formed to nominate the glacier Snæfellsjökull as a candidate for Iceland’s 2024 presidential election. Here, we reflect on the experiences of listening, in particular to and with a glacier. Although concepts like ‘voices of nature’ seek to advocate an ecocentric mindset, they assert an implicit anthropocentrism in assuming that entities need to be like humans to be worth listening to. We acknowledge that a glacier does not ‘speak’ – but it does make sounds, and these sounds carry meanings if there are agents who listen and interpret.

Keywords Listening. Voice. Collaboration. Care. Ethics. Pedagogy. Collective. Ecocentrism. Rights of Nature. Water bodies. Embodiment. Relationality. Artistic research.

Summary 1 Introduction. – 2 Assemblages and Polyvocality. – 2.1 On Problematizing. – 2.2 From Anthropocentrism to Ecocentrism. – 2.3 Voice in Relation. – 2.4 Listening to and with. – 3 Ecosemiotics: Communication, Signification, and the Question of Glacial Meaning. – 3.1 Communication Versus Signification. – 3.2 The Semiosphere and Environmental Signs. – 3.3 Umwelt and the Limits of Shared Worlds. – 3.4 Indigenous Contributions: Relationality and Embodied Responsiveness. – 3.5 Glacial Natures in the Semiosphere. – 3.6 Sensorial Materials and Indexical Signs. – 3.7 The Implications of Voice and the Semiosphere for Rights of Nature. – 4 Conclusion.



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1 Introduction

In March 2024, the collective Snæfellsjökul fyrir forseta (SFF)¹ nominated the glacier Snæfellsjökull² for the Icelandic presidential election. As an ad-hoc collective advocating for the Rights of Nature (RoN) in Iceland, SFF self-describes as “community members, ecologically enthusiastic artists, legal eagles, teachers, physical scientists, jöklamús, writers, curators, composers who listen, ecophilosophers, and Arctic foxes”.³ In March 2025, the collective presented a self-critical reflection of their campaign at NYU School of Law’s MOTH Festival of Ideas. This paper interrogated “conventionally human-centric political structures, shifting attention from the what (singular political goals) to the how in terms of the possible relational approaches to how politics are performed, exploring the creation of new senses of ontological security in a world of growing polarisation” (Snæfellsjökul fyrir forseta, unpublished). Building on the past year of collective work and our MOTH reflection, our current paper goes deeper into problematising terminology and concepts circulating within European Rights of Nature and environmental activism discourses. We specifically problematise re-presentation (via speaking on behalf of), voice of nature, listening, and the anthropocentrism within ecocentrism, and voice as a way to lean into our ethical discomforts. We elaborate on practices, rituals, and dispositions (attunements) we are cultivating in order to be susceptible and receptive to non-human voices-expressions so we can withness⁴ by becoming-with⁵ the more-than-human (in our case, the glacier).

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1 Translates from Icelandic to ‘Snæfellsjökull for president’.

2 Snæfellsjökull translates to English as Snow’s mountain’s glacier. Using the International Phonetic Alphabet, it is pronounced [ˈs(t)naiːfɛlsˌjœːkʏtʃ].

3 Snæfellsjökul fyrir forseta (s.d.). “About the Collective”. *Kjósum Jökul*. <https://www.kjosumjokul.com/about-the-campaign>.

4 Withness is defined as the “art of interdependent relationship” (Rawlings 2024).

5 “Stemming from the Harawavian term ‘becoming-with’, the transformation of the preposition ‘with’ into a hyphenated postposition when building new theories from phrasal verbs is an emergent phenomenon within academic discourse. ‘-with’ is often used to indicate more considered, reciprocal, and relational methods of doing research” (Cahoon 2025).

Through the perspectives of relational ontology and cross-cultural collaboration within the collective, we always come back to folklore, existing mythopoetics in the locality of our colleagues, in order to comprehend notions so opposite to the purely objective and only rational perception of the world, to which current legal and social systems adhere. A plurality of voices becomes the main medium presented in this paper, due to the diversity of knowledge that the collective carries. In order to create a transparent, nutrient-rich atmosphere for both ideas and collaboration, we facilitate ethical multi-voiced writing, which is both practiced in this paper and has become a main methodology for SFF collaboration. When co-writing a paper, we allocate time for a weekly talking and writing session; through collective round-table sharing, we discuss different aspects of what we wish to bring up in this paper. Our meetings are subsequently transcribed and used throughout this paper, as a way to combine the voices of the community and co-writers of the paper. We raise ideas,⁶ share opinions, and problematise methodologies. After collecting quotations, literature, and assembling plans for this paper, each co-author takes over sections of the paper, where each contributes their area of expertise.

At the heart of the SFF collective are enduring ethical questions of collaboration, representation, and voice. Each collective activity brings up and is affected by these questions, including the act of co-writing a paper. Various disciplines, practices, and beings have assisted us in this task, such as viewing collective writing as an hydrological ecocentric experience and thinking about bodies of water as holders and transmitters/keepers of earthian memory, ancestral knowledge, and other experiences. Our provocation to the status-quo of writing a scholarly article is that we are committed to explore with our whole sensorium the forms in which we are co-creating more-than-human understanding as a becoming-with, writing-with, listening-with, voicing-with, thinking-with, learning and unlearning-with the glacier as an assemblage of networks and agencies that participate in the art and craft of more-than-human communication within the semiosphere. A polyphonia of communication, human and more-than-human, co-create semiotic spaces to converge plural experiential knowledge into collective wisdom.

This paper is co-authored by ten humans.

6 Throughout the many co-writing sessions, team members gathered together to share, witness, and experience what it means to work together in a collaborative fashion. We kept in mind to not be a spokesperson for another being. The questions and discussions have taken place as it pertains to the purposes behind this collaborative paper included: What is a community? What is a home? What does it mean to be human, to be a glacier?

2 Assemblages and Polyvocality

In addition to this assemblage of authors, the glacier and the co-authors/collective also form an assemblage – an assemblage of assemblages, glaciers and humans which are interconnected and overlapping with other assemblages. An assemblage is a relational co-becoming among human and more-than-human entities typically formed through communication or interaction. Assemblages blur lines between individuals and notions of individuality; as Deleuze and Guattari say in *A Thousand Plateaus*, “[t]o reach, not the point where one no longer says I, but the point where it is no longer of any importance whether one says I” (Deleuze, Guattari 1987, 3). As shown by the assemblage of Bawaka Country et al. (2016), an assemblage of knowledge producers – including the land which provides for them the ground of their knowledge production – deems hierarchies nonsensical within assemblages. In fact, the purpose of many assemblages (including Bawaka Country) is to challenge these hierarchies between forms of knowledge, Indigenous and non-Indigenous, human and more-than-human, and the like. As one collective member has reflected: “By being in a community that has so many different types of knowledges that we carry, it becomes, in my head, not anti-system because it is inherently collaborative rather than polarising” (meeting transcript).

The formation of assemblages is non-hierarchical. They are not created, but enacted and maintained through practice as evoked by terms like hydrosphere or more-than-human. With its origins in David Abram’s (1996) work, the concept of more-than-human is an alternative to non-human, not human, and other terms which seek to define things, natural entities, and assemblages through the absence of humanity, instead of through a positive framing of difference. More-than-human is an inclusive category that encapsulates both humans and others, without invoking problematic binaries between humans and nature, life and non-life, or Western science and other ways of knowing. Similarly, the concept of the ‘hydrosphere’ or ‘hypersea’ seeks to describe the interconnections between the water bodies of Earth and all the water on Earth, whether composed of humans or more-than-humans (Neimanis 2012).

Our usage goes beyond Western scientific notions of the hydrosphere and similar terms which denote the Earth as a separated system from humans which is predictable and manageable to invite the unruliness and interconnectedness of biotic and abiotic water bodies. But that does not mean our choices and actions do not have consequences. The feminist scholar Astrid B. Stensrud (2014, 92) states that there “are different versions of water that practices and technologies help to enact; they are different and yet related as multiple forms”. Our assemblage is formed of human, glacial, and other water bodies living

in relation with one another, interrogating such questions as the one posed by Astrida Neimanis in an interview about their work “how might we reconsider what it means – philosophically, ethically, politically – to be a body, when that body is made mostly from waters that also make up the planet [...] which bodies are waving, and which bodies are drowning?” (Bright, Neimanis 2018). What is true for water bodies and the hydrosphere is true for all assemblages. They are irrevocably bound up with other assemblages, with consequences for all involved.

2.1 On Problematising

Functioning as an assemblage does bring the challenge of carrying through the de-hierarchised gathering of voices into communication outside the assemblage. In this section, we problematise speaking on behalf of someone – specifically more-than-human entities.⁷ Many Indigenous cultures teach or believe that ecological entities are able to self-express or, through local cosmologies, have ancestral links to existing humans. Claiming to speak for them risks repeating the colonial gesture of appropriating the voice of the more-than-human. Having the authority to ‘speak for’ can enact an erasure of agency for a more-than-human subject.

Problematising does not necessarily seek to provide answers, nor to reject operating within the existing structures that the problematising critiques. Rather, problematising is an exercise of questioning, imagining, and challenging complacency. By following a sense of curiosity regarding a status quo that seemingly cannot or should not be questioned, we imagine worlds different from our own. Similarly, problematising lies at an interesting tension point between moving within existing structures whilst simultaneously questioning them and possibly advocating for their de- or reconstruction.

A genuine decolonial method of environmental interaction, with the aid of other knowledges not previously recognised by dominating Western science, requires relinquishing the authority of speaking for nature and the human exceptionalist belief that humans are the only intelligent sentient beings. As animal rights activist and scholar Eva Meijer writes, “[h]ere, I should also recognize my limitations as a human who is situated in a specific way: I am incapable of speaking for all others, and I do not feel authorized to do so” (Meijer 2025, 40). In

⁷ As an Indigenous co-writer of this paper pointed out, “It’s a very colonial thing to think that we know better or we can speak on behalf of something that is from another culture”.

this ecocentric shift, humans stop being the translators, and instead become listeners and participants in an ecology of communication.⁸

Besides problematising our ability to speak for and to listen to/with the glacier, we also want to problematise the very concept of what a glacier is, its distribution in time and space. Both Henri Bergson and Alfred North Whitehead critique the idea that things have simple locations in time and space. This act of spatialisation is what Whitehead calls the “fallacy of misplaced concreteness” (Whitehead 1948, 52). There is a tendency to think of a glacier as being geographically confined to the mass of ice, or to what we see as the white area on a map, but we argue that a glacier, as an assemblage, reaches far beyond this white area and that it consists of much more than the frozen and compressed water crystals. A glacier is also its outlet to rivers and the debris and sediments that flow from it, the local weather patterns created by the change in atmospheric temperature and air pressure around it. It is the effects it has on ecosystems, biodiversity, and culture, from the immediate surroundings to regional and potentially global ocean currents, water levels, and climate.

If we follow Deleuze and define a being, not by its form but by the affects of which it is capable (Deleuze 1988, 124), we see that a glacier affects everything around it and that its limits and borders are not easy to define. If we define bodies as their capacities for affecting and being affected, then we too are part of the glacier and the glacier is part of us. We are mutually entangled in anthropo- and cryological assemblages. Listening-with a glacier is thus also to listen to ourselves. To speak for or with a glacier, by extrapolation, would mean to take seriously our human entanglement with the cryosphere. We might be humans and can never completely escape the anthropocentric perspective, but it is precisely as members of a species that has never existed in a world without glaciers that we need to recognise ourselves as glacial beings; our fate and the fate of glaciers are entangled.

⁸ The term ‘ecology of communication’ is discussed in the podcast “The Ecology of Communication: Moving Beyond Polarization in Service of Life” (No. 10) hosted by Nate Hagens. <https://www.thegreatsimplication.com/episode/reality-round-table-10>.

2.2 From Anthropocentrism to Ecocentrism

We also problematise the idea that challenging the anthropocentric perspective necessarily leads to a flat ontology, i.e. a view of the world without distinctions – something posthumanist and new materialist theories have often been accused of. We both acknowledge and cherish the distinctions in the world. Our call for listening to/with and caring for/with glaciers does not stem from an idea that they are like us and thus worthy of the same moral consideration as us. On the contrary, we acknowledge fundamental differences between different types of beings, even if they are entangled, and posit that this difference is key to our ethical perspectives.

The antidote to anthropocentrism is not anthropomorphism.⁹ We do not think of the glacier as a human being. That would be an act of ontological violence that ignores the key features that make the other a unique being. As Roberto Marchesini argues, an ethic of sympathy easily slips into anthropomorphism when it relies on identifying with the Other. Thereby, the anthropocentric perspective is implicit in anthropomorphic sympathy as it only attributes moral value to beings when we focus on what they have in common with us. The ethical challenge is in recognising the Other as ontologically distinct and different and thereby a subject of moral consideration in its own distinct way. To Marchesini, the Other-than-me is a next of kin not because we have shared characteristics or interests but because “their traits and characteristics pose a challenge to my conduct” (Marchesini 2025, ix-x).

Rather than identifying with the Other as the antidote to anthropocentrism, we propose a different exercise: dis-identifying with ourselves. By this we mean recognising and truly grasping the Other in ourselves and the more-than-human in each human being. This is based on the established scientific recognition that larger organisms are never composed of cells with just one type of DNA. Complex organisms are symbiotic beings from the inside-out. Our biological development from cell to organism, our bodily functions and processes are all the results of interactions between multitudes of different beings both within the bodies that we call an individual organism and between beings outside the bodily membranes – i.e. interactions in ecosystems and between living organisms and their ostensibly abiotic partners. We are thus always more than human, and we are always acting as more than an individual. As Gilbert, Sapp, and Tauber conclude: “For animals, as well as plants, there have never been individuals. This new paradigm for biology asks

⁹ We do, however, acknowledge that anthropomorphism is one tool that can be used to form or explore relations.

new questions and seeks new relationships among the different living entities on Earth” (Gilbert, Sapp, Tauber 2012, 336).

The implications of this reach far beyond the field of biological science. To acknowledge that we never act as solitary individuals nor as purely human beings should, when taken seriously, disturb the way we think about philosophy, art, politics, and ethics (Rees, Bosch, Douglas 2018). It calls for a new configuration of academia, research, and political institutions – reshaped to fully incorporate the knowledge that the boundaries between species and even between different spheres, such as atmosphere, geosphere, biosphere, and cryosphere, are obsolete and untenable. Thus, even if we were to start just from our own perspective, when we seriously consider our own being and realise how alien we truly are from what we might at first have thought, we might discover a new-found ability to care for the Other in general. We are multi-entity assemblages, but assemblages are also parts of other assemblages. As Deleuze and Guattari point out, an assemblage is always in the process of passing into something else: “what just a minute ago was a constituted function in the territorial assemblage has become the constituting element of another assemblage” (Deleuze, Guattari 1987, 324).

Rather than conceiving ecological systems as autopoietic, that is, self producing and operationally closed (Maturana, Varela 1980), this paper emphasises relational and co-constitutive processes that unfold across human and more-than-human bodies.

We argue that it is possible to cultivate other modes of being human today, that do not essentialise the imposed sense of separation of the individual self in the world, invoking other kinds of relationships between humans and other-than-human modes of being within the pluriversality (Leitão 2023) of nature. We use the term anthropocentrism side by side with ecocentrism, as a way to describe our current human-centred system of value. With the word anthropocentrism, we specifically refer to what environmental scholars Lissy Goralnik and Michael Paul Nelson call narrow ethical anthropocentrism, which views humans as isolated “sole possessors of intrinsic value”. This is different to ontological anthropocentrism, which is an acknowledgement of the limitations of our human perception (Goralnik, Nelson 2012, 145).

We propose to de-centre, to de-embody the dominant narrative of whiteness and anthropocentrism that constrain our relations with nature to an I/it relationship, impairing the biopsychosociospiritual potential for cultivating intimacy with the more-than-human world. A sense of kinship and partnership within the community of life can be fostered and enhanced, based on reciprocity, interdependence, respect, interconnection, and conviviality in the biosphere, and intercommunication for a more-than-human co-evolution within the

semiosphere (Kotov, Kull 2011). We go into further detail on what is meant by the semiosphere in a later chapter.

The worlding of modernity has imposed through many generations a sense of separation between humans and nature, where nature is sensed-measured-listened-to as a conglomerate of potentially useful objects to be optimised for human superiority over the more-than-human world. It has also been pointed out elsewhere that modern languages – especially the languages used by modern colonisation – support a worldview of abstractions, nouns and individuated objects to be used for and disposed of in a power-over paradigm. We must shift the modes of being in which we enact and embody our worlding of the world.

Every becoming is radically different while working towards relational strategies that acknowledge our interconnected and interdependent relations. From an ethical and political perspective, ecocentrism refers to positioning *eco-* at the centre of import for human intentionality and agency. This means any human enterprise must consider and respect the vitality, sustainability, and regeneration of Earth as their living home, hearth, soil, web of life, irreducible to human needs. Thus, we are interested in society-wide transformation that shifts from anthropocentrism to ecocentrism.

2.3 Voice in Relation

We question whether assigning a voice, or the quality of having a voice, to other-than-human beings is a mode of anthropomorphisation. Is a voice an exclusively human quality? Looking into mainstream definitions, different dictionaries seem to disagree. *Cambridge Dictionary*'s definition of voice consists of “sounds that are made when people speak or sing”.¹⁰ *Merriam-Webster*'s voice is a bit broader, consisting of “sound produced by vertebrates by means of lungs, larynx, or syrinx”.¹¹

In general, there is a consensus that voice is tied to the production of sound. In SFF collective discussions, we recognised a shared initial instinct that agrees with this connection. When considering voice side by side with listening, many of us found that we associate voice specifically to sound, more so than listening to ears. It felt easy to imagine listening to include the act of focusing attention towards a broad selection of sensorial inputs. The word listening evoked a

¹⁰ See the entry “voice” in the *Cambridge Dictionary*. <https://dictionary.cambridge.org/dictionary/english/voice>.

¹¹ See the entry “voice” in the *Merriam-Webster Dictionary*. <https://www.merriam-webster.com/dictionary/voice>.

relational action. Voice, on the other hand, seems more specific – a means of communication related to sound-making.

This seemingly arbitrary distinction is easily toppled. From an accessibility perspective, if voice is intrinsically linked to sound, is a user or speaker of sign languages voiceless? Voice may be not solely connected with sound but more so the capacity to communicate. We unpack this further in the Ecosemiotics section.

Looking back at the dictionaries, they also do provide less literal definitions such as that of having a voice: “an expression of opinion, or the right to express your opinion/an important quality or opinion that someone expresses, or the person who is able to express it”.¹² Interesting here is the specification of having the right, not just the ability, to express an opinion. What then constitutes what is commonly referred to as a voice – possession of language? Production of sounds intended for communication? Ability to communicate? A right to communicate? Who, then, decides who has the right to communicate – the right to voice?

As one might imagine from our unique collaborative process of operating as an assemblage, a key part of the collective is related to listening and sense-making, since ice is not icesolated. Glaciers are not solitary beings but are connected to and forming ecosystems. From an ecocentric perspective, a person is not (solely) an individual but a knot (or an assemblage) in networks and webs of relations. Our bodies are ‘multispecies symbiotic assemblages’ in constant becoming-with bacteria, fungi, viruses, many forms of water, mucus, blood, smoke, glacier, air, fjords, glacier, moss, *refur*, *krummi*, *jökull*, *tröll*, *álfur*, the oceans, and the magma inside the crust of the earth, to name a few relations. Therefore, when contemplating from this perspective the phenomenon of voice, we begin to see a terrain of relationships and *becoming-withs* of multiple species and more-than human entities. Let’s imagine which synergies manifest the voice as an emergent quality of networks and assemblages:

1. A voice requires a physical structure that resonates (minerals, water, bones, tendons, muscles, a lot of blood and nervous fluids).
2. A voice requires a medium to transmit the vibrations generated through the physical structure in the surrounding atmosphere/semiosphere: air, water, ground, ether, and even fire can transmit messages.
3. A voice requires an ecosystem of assemblages that allow complex life to thrive. A voice is an emergent quality of complex forms of life and any form of life is an assemblage of

¹² See the entry “voice” in the *Cambridge Dictionary*. <https://dictionary.cambridge.org/dictionary/english/voice>.

many presences and relationships. A glacier can be seen as a hyper-complex form of life, a monstrous assemblage. What happens if we don't talk about individual voice but present voice-s?

4. A voice requires fire to ignite the pressure that makes the vibrations.
5. A voice requires food to fuel the fire that makes the pressure for the air/water/earth/fire/ether to break through as voice. The voice is a breakthrough, a fugitive line, a howl in the night, a love song for the beloved, a thunderbolt.
6. And then, for our particularity as species, the voice is a becoming-with history, politics, myth, religion, storytelling, language, music, cinema, war and grief, and the more-than-human... always.

For our collective, it is clear that there are not individual voices; each one of us, as transpersonal transcorporeal assemblages, can propitiate the emergence of trans-human voices, expanding our semiotic territory for ingenious and creative communication.

An ecocentric mode of being human in the Anthropocene consists in the conscious and embodied practice of becoming-with, which according to Haraway "is how partners are rendered capable" (2016, 12). This builds on the description of becomings by Eben Kirksey and Stefan Helmreich as "new kinds of relations emerging from nonhierarchical alliances, symbiotic attachments, and the mingling of creative agents" (2010, 546), which captures that these relationships are dynamic, heterogenous, and emergent - much like the concept of assemblages from Gilles Deleuze and Felix Guattari (1987). But Haraway's concept better captures that "becoming is always becoming-with" (2008, 244). From this, Rawlings (2014) created the Icelandic verb *að jökla* (to become-with glacier) to acknowledge and propitiate the collective practices of listening-with, walking-with, grieving-with, celebrating-with, and more-with the glacier. Through a practice of *að jökla*, SFF explores the relationalities that shape our scientific and artistic inquiries. Our ontology shifts to becoming-with in transcorporeality as sym-poietic assemblages. Communication transforms and expands towards a witnessing that enriches and complements cognitively, spiritually, and ethically the listening-to that today's technologies enable.

2.4 Listening to and with

“If a tree falls in a forest and nobody is around to hear it...”. This old adage calls attention to the fact that sounds are not merely vibrations in the air. Sound and, in particular, voice are relational semiotic processes that also require a recipient – someone who receives, listens and interprets. Thus, a redefinition of voice leads to considerations on listening. Listening is about events; it is temporal and processual, unlike sight which can give the impression of permanence. Acoustic ecology foregrounds theorising auditory attunement and methods for listening to soundscapes. When the soundscapes are treated as stable objects, the act of listening risks becoming something to be captured and represented rather than a situated practice of attending and moving with an environment (Ingold 2007). It furthermore becomes important not to collapse ecological sounds solely into anthropomorphised categories of voice or communication without considering the listener’s situatedness.

Glaciers generate acoustic events such as cracking, melting, and calving, which are material and physical phenomena rather than intentional acts of meaning-making. These sounds do not necessarily constitute communication in themselves, nor do they carry messages that are deliberately addressed to a listener. Meaning does not reside in the sonic event as such but emerges through practices of situated and relational listening. Shifting attention from what is perceived, to how it is lived, makes ordinarily unnoticed dimensions of experience available, which is precisely, where listening becomes sense-making rather than mere reception (Petitmengin 2006).

Drawing on Steven Feld’s concept of ‘acoustemology’, sound is understood here as a way of knowing that arises through embodied engagement with place, rather than through the transmission of linguistic or symbolic information (Feld, Basso 1996). Listening, in this sense, is not the passive reception of sound, but an active and context-dependent process in which attention, experience, and interpretation play a central role. What is heard, becomes meaningful only in relation to the listener’s position, practices, and modes of attunement.

This approach helps to avoid equating sound with voice and, in doing so, limits anthropomorphic objections that would frame glaciers as speaking subjects. It also resonates with David Abram’s insistence that the more-than-human world does not speak in human linguistic terms, even as it remains present through sensorial, affective, and material encounters that call for perceptual responsiveness rather than translation into language (1996, 76). Treating sound as non-linguistic yet meaningful supports an ecocentric orientation in which glaciers participate in perceptual and semiotic processes without being positioned as communicative agents or representatives.

Lutz Stautner's short film *Crying Glacier* (2025) documents Ludwig Berger's soundscape recordings of an Alpine glacier. Of his field research, Berger comments,

Every time I drop the microphones in its melting waters or against its ice, I feel this bodily connection. [...] I like to see these sounds that I'm recording as a form of language and so for me these are stories the glacier is telling. [...] Through the idea of voice, we could also see it more as a kind of person. In German, there's the word - *stimm(e)rechte* - which means the right of the voice which means the right to vote. So I think a glacier should also have that right? It should have a voice in the discussion. It could drastically change our way of perceiving the world.¹³

Here, we note the field-recorder finding his attunement through the action of 'listening to' the glacier.¹⁴ He connects with his own sensate body and reflects on the potential of glacial sounds as linguistic, as cryospheric storytelling. He further reflects on voice and rights in his mother tongue to arrive at his conclusion that a glacier, too, could have the right to vote. Berger's suppositions arose through his intimate practice of listening to. Through Berger's example, we propose that an auditory-based listening to the glacier through analog or electronically augmented modes may offer one form of sensorial attunement that can lead to listening-with.

'Listening-with' positions listening as a shared situation in which meaning emerges through reciprocal presence rather than transmission. This shift from listening to toward listening-with can be understood as a transformation in the quality of attention rather than as a conceptual distinction. Sustained listening practices widen attention beyond selective extraction and premature interpretation; in that sense, "listening in every possible way to everything possible" becomes an ethic of presence, rather than a technique of capture (Oliveros 2010, 129).

This reciprocity, also depends on how attention is modulated: an open, receptive mode can allow atmospheres, rhythms, movements, and sound to 'touch' the listener, dissolving the neat boundary between observer and landscape without collapsing difference (Petitmengin 2021). 'Listening-with', therefore, becomes an action of interrelation, which suspends the assumption of authority by one of the subjects,

13 *Crying Glacier* (2025), 05'35". <https://emergencemagazine.org/film/crying-glacier/>.

14 In Iceland, numerous field-recording practitioners and composers - including Konstantine Vlasits, Magnús Bergsson, Katie Paterson, and Kaśka Paluch - have situated listening to (and audio-recording) glaciers as ways to practice more-than-human attunement.

expertise or hierarchy in a relationship between non-entities, but processes of becoming. This co-orientation aligns with the collective's shift from listening-to to listening-with, co-sensing as a multisensory transcorporeal practice. From unidirectional to collaborative, we deliberately avoid 'speaking-for', supporting the ecocentric practice by positioning glaciers and humans, humans and glaciers as co-participants in the semiosphere rather than communicative opposites. Instead of privileging human cognition, 'listening-with' acknowledges that humans and nonhumans, be they glaciers, waters, flora or fauna, contribute differently but most importantly meaningfully to the environment.

Native Sciences and TEK speak on inter-relating with nature, where communication with more-than-human is possible through full-body sensorial experience: "Language must once again be understood as the body-based vehicle that refers to the animate landscape, which first gave rise to its expression" (Cajete 2000, 17-18). According to Cajete, the expression of environment is presented through movement, wind, birdsong, colour and smell. Comprehension of such language happens through skin, intuition, time, patterns, and more usual senses. Most importantly, such practice creates an environment of care, where surroundings stop being a backdrop to human existence, but an active participant and a teacher.¹⁵

Listening-with becomes an action of interrelation, which steps away from the assumption of authority by one of the subjects, expertise or hierarchy in a relationship between entities. Instead of privileging human cognition, listening-with acknowledges that humans and non-humans - be they glaciers, waters, flora, or fauna - contribute differently but most importantly meaningfully to the ecology of sensing. With this in mind, listening-with becomes a multi-sensorial practice. Attuning to the rhythm of the glacier melt and slow temporalities of glacial movement requires embodied listening.

15 Robin Wall Kimmerer, Potawatomi botanist, explored the gathering ritual of the Honourable Harvest as an embodied practice. "This kind of listening may involve many different kinds of perception. It might include the strictly empirical observation of whether the population (plants) is large and healthy enough to support harvest... often entail intuitive understanding about whether the plant is or is not willing to share itself" (2018, 33-4).

3 Ecosemiotics: Communication, Signification, and the Question of Glacial Meaning

At stake in discussions of listening to or with glaciers is a fundamental question about the nature of environmental meaning-making. Ecosemiotics, the study of sign processes in relation to natural environments, provides theoretical tools for clarifying what occurs when humans engage perceptually with more-than-human entities (Nöth 2001, 72). The distinction between communication and signification lies at the heart of ecosemiotic theory and proves crucial for understanding how glaciers produce meaningful signs without producing messages.

3.1 Communication Versus Signification

Winfried Nöth distinguishes between two modes of semiosis that are often conflated in environmental discourse. Communication, he explains, “occurs not only among humans, but also between all other organisms throughout the whole biosphere” and is “defined as a sign process which involves a sender and a receiver” (2001, 72). Signification, by contrast, “concerns sign processes without a sender” and “predominates in ecosemiotics, where organisms interact with a natural environment that does not function as the intentional emitter of messages to the interpreting organism” (72).

This theoretical distinction resonates with questions that arose in collective discussions. As one member articulated: “ascertaining whether or not a geo[se]miotics might be possible, first and foremost, raising the question of what are the... what kinds of vehicles or vessels would... a glacier’s communication engage” (meeting transcript). The collective’s uncertainty about whether to speak of glacial communication reflects an intuition that glaciers do not send messages the way organisms do. Yet this does not mean glaciers are semiotically inert. Rather, they engage in signification. They produce signs through their material processes that become meaningful to interpreting agents.

The question of “sensorial materials that help to communicate... meaning-making, their semiotics” points toward what ecosemiotics theorises as environmental semiosis. When the collective asks “what are the sensorial materials that might be... carrying the... meaning making” in relation to glaciers (meeting transcript), they are identifying the physical substrates through which glacial signification occurs. These substrates include sounds, visual changes, tactile sensations, and thermal properties. These are not arbitrary symbols chosen by an intentional sender but what Peirce (1932) called indices, signs that bear direct physical connections to their referents. As

Peirce explained, an index “refers to the Object that it denotes by virtue of being really affected by that Object” (1932, § 248).

3.2 The Semiosphere and Environmental Signs

Jesper Hoffmeyer’s concept of the semiosphere provides a framework for understanding how glacial signs exist within a broader sphere of sign activity. The semiosphere, Hoffmeyer (1997) explains, is “a sphere like the atmosphere, the hydrosphere or the biosphere. It penetrates these spheres and consists in communication: sounds, odours, movements, colours, electric fields, waves of any kind, chemical signals, touches etc.” (quoted in Bruni 2001, 296). Critically, the semiosphere encompasses both cultural and natural sign processes, both intentional communication and non-intentional signification.

The collective’s experience with Konstantine Vlasits’s recordings of air bubbles inside the glacier illustrates the defamiliarizing encounter with glacial semiotics: “when Konstantine played for us the sound of air bubbles popping and moving inside of a glacier... it blew my mind. It’s like, what, this is not even possible. Like this kind of a sound, I had no idea... sounds like tropical birds, sounds like tree frogs, but it was just like, that’s... just defamiliarisation” (meeting transcript). This moment reveals how glacial sign production operates independently of human expectations. The sounds are real acoustic phenomena, indices of physical processes occurring within the ice, but they were unexpected, unfamiliar, outside the cultural models through which we typically imagine glaciers.

This defamiliarization, however, is followed by potential familiarization: “the act of listening... at least in me I thought I knew what a glacier would sound like... listening might have that kind of... capacity to defamiliarise, but then the more that you get into practice of listening [it can] breed a certain kind of familiarity, which may or may not lend to a kind of intimacy... and maybe even affective relationship with the glacier” (meeting transcript). From an ecosemiotic perspective, this describes the cultivation of interpretive competence. It describes learning to attend to environmental signs, developing perceptual attunement to glacial semiosis. As Nöth explains, “the way humans interpret their natural environment is determined by models developed in cultural history” (2001, 72), but engagement with actual environmental signs can modify those cultural models.

3.3 Umwelt and the Limits of Shared Worlds

Jakob von Uexküll's concept of Umwelt, the species-specific experienced world constructed through an organism's particular sensory and interpretive capacities, further clarifies what is at stake in claims about listening to glaciers. Each organism inhabits its own perceptual universe. A tick's Umwelt differs radically from a human's, just as both differ from that of other species (von Uexküll 1992). But what of a glacier? Can we meaningfully speak of a glacial Umwelt?

The collective's discussions around preconditions of perception touch on this question. One member described how Sami practitioners "can feel the energy of the place, and they can sometimes feel the energy pushing them out, or embracing them, welcoming them", noting that "many individuals of the same community with the same habits develop this kind of perception" (meeting transcript). This points to human perceptual capacities cultivated through practice, the development of human Umwelt in relation to environmental phenomena. The subsequent question, "is it impossible for us to listen to the glacier or to listen to nature because of [our] conditions of life?", prompted proposals for "intervention on our perception... embodied practices to tune in" (meeting transcript).

From an ecosemiotic standpoint, these proposals recognise that human perception is not fixed but can be cultivated, that our Umwelt can be expanded or modified through practice. However, this expansion operates within human perceptual limits. We cannot access a glacial Umwelt because glaciers do not possess the sensory apparatuses and nervous systems that construct an Umwelt in the biological sense. As Hoffmeyer notes, "higher complexity [...] made it possible to develop a more sophisticated sensory apparatus and corresponding nervous system which would enable animals to form fine-tuned internal impressions of what lay round about them (the subjective experience of the world, the Umwelt)" (1997, 33).

This does not mean glaciers are semiotically irrelevant. Rather, it clarifies that glacial semiosis operates through physical-material processes rather than through perception and interpretation. The glacier produces signs through its geological and thermodynamic processes. These signs include acoustic emissions, visual changes, and thermal variations. These signs exist in the semiosphere and become available to organisms, including humans, with appropriate sensory capacities to perceive them. Our Umwelten intersect with glacial processes at these points of potential perception, but we do not share an Umwelt with the glacier.

3.4 Indigenous Contributions: Relationality and Embodied Responsiveness

Ecosemiotics, as developed primarily within European intellectual traditions, offers powerful conceptual tools for understanding environmental sign processes, yet Indigenous knowledge systems provide essential contributions that expand and enrich this theory. The Yolŋu understanding of Country from northern Australia, as articulated by Bawaka Country et al., demonstrates how Indigenous frameworks theorise environmental communication through concepts that complement Western ecosemiotics. When Yolŋu women attend to messages sent by the *gukguk* (pigeon) signaling time to dig for *ganguri* (yams), they practice environmental attentiveness that recognises both the material basis of signs and the relational responsibilities that flow from interpreting those signs (Bawaka Country et al. 2016, 462). Significantly, this framework does not centre human interpretation. The *gukguk* “may be calling to humans, or maybe not” (463), as the *miyapunu* (turtle), crabs, and gum trees also attend and respond to environmental signs.

The concept of *gurrutu*, the Yolŋu kinship system, provides a framework for understanding how environmental sign processes are embedded within ethical relationships. *Gurrutu* establishes that “Everything has *gurrutu*. The land, the animals” (463), and critically, whales “have their own *gurrutu* beyond humans” with “their own law, their own relationships, their own language” (463). This shows how sign processes connect to obligations of care and response. Yolŋu epistemology emphasises embodied responsiveness: when Nanukala is bitten by ants while digging, “Nanukala’s skin is taken into the ant. The ant’s secretions come into her arm” (467), illustrating material participation in sign processes rather than distant observation. As the authors emphasise, “It is not enough to attend to the messages, to know the ants, to listen to the sand’s language. Yolŋu must also respond, and respond with care” (467).

These Indigenous contributions demonstrate how sign processes are embedded within ethical and relational systems. They extend ecosemiotic theory beyond observation to include material participation and responsibility. For understanding glacial semiosis, these insights suggest that listening to or with glaciers involves not only perceptual attentiveness but also recognition of the relational and ethical dimensions of interpretation.

3.5 Glacial Natures in the Semiosphere

Kalevi Kull's concept of "different natures in the semiosphere" (1998) provides a crucial theoretical resource for understanding how glacial signs differ from biological or cultural signs without being reduced to purely mechanical processes. Kull proposes that nature is not monolithic but consists of 'zero nature' (purely physical processes), 'first nature' (living organisms), 'second nature' (culturally modified environments), and 'third nature' (cultural artifacts and representations). Each 'nature' involves different modes of sign production and interpretation.

Glaciers occupy an ambiguous position in this schema. As geological formations, they might seem to belong to zero nature, purely physical, non-semiotic. Yet glaciers are not simply rocks. They are dynamic, responsive to environmental conditions, undergoing constant transformation. They produce what we might call proto-semiotic phenomena. These are physical processes that, while not constituting intentional communication or biological semiosis, nonetheless generate perceptible signs that carry information about environmental conditions.

The collective's discussion about whether "listening to the glacier [is] 100% possible" reflects this ambiguity. One response affirmed: "I think listening to the glaciers is 100% possible. I think it's what people do" (meeting transcript). From an ecosemiotic perspective, this is accurate if we understand listening to as attending to the signs the glacier produces through its material processes, an interpretive practice that does not require the glacier to be an intentional sender. The distinction between listening to and listening-with becomes important here. The phrase listening-with might suggest a shared communicative space, a dialogue, whereas listening to can describe interpretive attention to signification.

3.6 Sensorial Materials and Indexical Signs

The collective's attention to sensorial materials aligns with ecosemiotics' focus on the material substrates of sign processes. The observation that "most languages in the world have sensorial materials that help to communicate their meaning-making... most languages have written forms... visual, most languages have an auditory, spoken... and most languages have something that is just... movement based" (meeting transcript) prompts the question: what are the sensorial materials through which glacial meaning-making occurs?

Ecosemiotics would identify these as primarily indexical signs in Peirce's semiotics. Peirce defines an index as a sign "which refers to

the Object that it denotes by virtue of being really affected by that Object” (Peirce 1932, § 248). The crack of ice adjusting to pressure is an index of stress distribution within the glacier. The sound of air bubbles releasing is an index of ancient atmospheric conditions trapped in ice. Meltwater flow is an index of thermal dynamics. Visual observations of calving events are indices of glacial mass balance. These are not symbols, which depend on convention, or icons, which depend on resemblance, but indices. These are signs whose meaning derives from their causal or physical connection to what they signify.

When humans taste glacial meltwater, feel the cold radiating from ice, hear sounds emanating from within the glacier, they are perceiving indexical signs produced by glacial processes. The meaning these signs carry, about climate conditions, glacial dynamics, environmental change, requires human interpretation, but the signs themselves exist independently of human presence. This is what we mean by saying that the semiotics are emergent properties that also require agents who listen and interpret, agents who find and make meanings in the semiosphere/audiosphere. The glacier produces signs through its existence and processes. Humans interpret these signs through culturally-mediated perceptual and cognitive frameworks.

3.7 The Implications of Voice and the Semiosphere for Rights of Nature

Because of these preconceived perceptual frameworks, the human agents interpreting these signs must also be careful. For example, ideas such as ‘the voice of nature’ have often been anthropomorphised according to the desires or ends of the human interpreter in ways that go beyond or harm the ‘nature’ they presume to speak for. In this way, to listen to the voice of nature is not to listen to the voice of nature, but rather to listen to the voice of a human who presupposes knowledge of what nature needs. But nature is itself an amorphous, too-generalising concept. If something as straightforward as a dictionary definition can’t agree on what a voice is (does voice belong to people, or any vertebrate with a larynx?), how can anyone then know what an amorphous, too-generalising concept (a.k.a. nature) needs, let alone re-present those nonspecific needs to other humans? The voice and the nature of the voice of nature have veered far beyond their initial relational poetry. The non-human signified was left behind long ago. In its place, a human who humans.

The problem with not problematising, and possibly defining the voice of nature, is that it opens up the possibility for humans to have yet another way to act in self interest, under the guise of being a voice for nature. The increasing amount of more-than-human beings

gaining legal personhood creates prosecutory obligations which literal (human) voices have conventionally been expected to litigate. Promoting his latest book *Is a River Alive?*, nature writer Robert Macfarlane enthused about the 2008 Ecuadorean constitutional enshrinement of the Rights of Nature: “This perhaps really sharpens the radicalism of it, to empower any citizen to bring a case on behalf of the living world, to give voice to, if they feel that the rights of a river have been violated”.¹⁶ On a practical level, many rights of nature initiatives rely on human spokespersons to implement those legal obligations. We problematise this necessity of a human spokesperson.

The innovation of legal personhood is not that other-than-human entities are given a literal voice, or a platform to advocate for themselves. It is that they are classified as rights-bearing peers, providing humans with a basis through which to legally defend them. This is no less radical or important, but it is different to more-than-human beings being listened to directly – not necessarily an end goal of this exercise to reimagine relations. In the abovementioned talk, Macfarlane posed questions to highlight the importance of questioning and defining what we really mean by a voice of, or giving voice to:

What does it mean to give voice to rivers? Ontologically, philosophically? What does water want? And how would we know if we thought we did [...] How are we not just human actors jockeying for position in a pseudo-ventriloquism of the more-than-human world? How do we avoid a cosplay animism? Where does a river or sea begin or end as a rights-bearing entity or a legal person?¹⁷

Macfarlane’s questions precede our ultimate preoccupation – how the more-than-human can participate fully within Western legal frameworks, without the necessity of a human proxy or voice.

How could this apply to abiotic beings, such as glaciers? What constitutes the voice of a being that is also an assembly of beings? Glaciers flow, crack, pluck, shrink, quake, melt – all output which can be listened to, sensed, or tuned-in-towards. Does any of this constitute a voice?

In our earlier section On Problematising, we looked to Deleuze’s definition of a being through its affects instead of form. Similarly, Deleuzian scholar Liza A. Mazzei applies Deleuze and Guattari’s

16 “Is a River Alive? With Robert Macfarlane”, 0:35’37”. <https://www.youtube.com/watch?v=ky4rN7WJBYU>.

17 “Is a River Alive? With Robert Macfarlane”, 0:24’01”. <https://www.youtube.com/watch?v=ky4rN7WJBYU>.

Body without Organs concept to voice, developing the idea of a Voice without Organs.

What kind of voice, what kind of being can be thought once voice no longer is present, emanating from a unique, essentialist subject conscious to itself? This voice, no longer that of the bounded organism, no longer of *the* or *a* body, is what I have named elsewhere a Voice without Organs (VwO) that enables one to think voice differently. (Mazzei 2016, 154)

This hostless voice seems to appropriately encompass the voice of an assemblage of beings. With this definition in mind, the voice of a glacier could include voices of different humans, *Yareta* cushions and other plants, meltwater and mountains can be voices with glaciers, not “separate and individual but only within the entanglement it immediately becomes and continues to become as it joins other enactments, other assemblages, and other times” (Mazzei 2016, 155).

This polyvocal understanding has important implications for how we conceptualise Rights of Nature frameworks. When environmental discourse frames nature as “having a voice” or “speaking”, it typically relies on a communicative model, implying intentional senders and messages. Ecossemiotics reveals this as anthropomorphic projection. The glacier does not speak to us. It does not send messages. It does not engage in communication as organisms do. However, recognizing that glaciers engage in signification rather than communication does not diminish their ethical or legal standing. On the contrary, it provides a more accurate account of how environmental entities produce meaningful signs without requiring them to be like humans. The glacier’s semiotics, its sign-producing processes, are real, consequential, and available to human interpretation. They provide the basis for what Maran describes as ecossemiotics’ dual focus: “both the representations of nature in culture and nature in its own semiotic activity” (2007, 280).

From this perspective, advocating for glacial rights does not require claiming the glacier communicates with us. It requires recognizing that sustained attention to glacial semiosis, to the environmental signs produced through glacial processes, can and should shape human values, decisions, and legal frameworks. This is what the collective explores through practices of “listening/sensing/embodying the more-than-human” (abstract). This is not reception of messages but interpretive engagement with environmental signification, acknowledging both the glacier’s independence from human meaning-making and its availability to human interpretation.

4 Conclusion

Water is ritual; it is origin, memory, and vital cycle. It reflects the health of nature and stands as the minimum condition for life. Water is never static or temporary – it transforms, adapts, and persists, even as human negligence distorts its rhythms. We humans recognise bodies of water, from a well functioning cell and a single drop of dew to the glacier, the river and the whale, dynamic assemblages in the hydrosphere, bodies that are in constant embodiment and de-embodiment as water flows through keeping life alive. Water already implies millions of drops shapeshifting through form and temperature, inseparable and interdependent. Life cannot be sustained by an isolated drop but through the continuous collaboration of countless drops flowing together. To understand water is to recognise this collective impulse – something far beyond the anthropocentric gaze of a faucet.



Figure 1 SFF co-authors read the article aloud for Snæfellsjökull. This occurred 25 January 2026 in the cave Sönghellir at the foot of the glacier. Photo by Snæfellsjökul fyrir forseta

While critically problematising already existing terms and concepts, we have been constantly thinking-with the collective, through regular online meetings, transpersonal transcorporeal interactions, and metapoetic engagement with the glacier as a semiotic territory, witnessing an emergence of opportunities for responsible and ethical carrying of our inquiries with humility and relational rigor. Writing this paper gave us the opportunity to consider how Snæfellsjökull is (or might be) a co-author or a peer reviewer. If we are glacial beings, both part of but in proximity to the glacier, how can we acknowledge and involve the glacier as a way to further understand a glacier's semiotics? We devised a preliminary peer-review practice where

we read the paper aloud to the glacier and notated the sensorial information we received within the margins of the paper [fig. 1]. This method opened up inquiry into the confluence and distinction of individual, collective, and ecosystem. The wellbeing of our relationships and interdependence with the pluriversality of the planet requires unconventional approaches to co-existence.

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River



River. 2026. Acryl on canvas, stainless steel frame, 40 × 60 cm. Berlin. © Jakob Kukula

Becoming with the Meuse A Dialogue on Political Legibility, Multiplicity, and Spatial Design

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Abstract Based on a cycling fieldwork journey along the Meuse (November 2024), this paper asks why Rights of Nature initiatives in Europe lag despite existing legal vocabularies and tools for river subjecthood. The promise to reconfigure responsibility and long-term stewardship often stalls between recognition and practice. The blockage is not only juridical. It is spatial and political, epistemic and ontological. Spatial design is proposed as a mediating political practice that can stage situated encounters, develop representational formats that sustain plurality in public life, and build interfaces through which claims can land, travel, and persist.

Keywords Environmental humanities. Rights of Nature. Political legibility. Meuse. Spatial design. River personhood. Altered nature.

Summary 1 Prologue at the Mouth, Where Endings Refuse to End. – 2 The Issue of Political Legibility. – 3 Approach and Method: Travelling with Partial Sight. – 4 Findings, Meeting the River as Presence, Multiplicity, and Textured Patches. – 4.1 Coherent Multiplicity, the Meuse Enacted as Many Rivers. – 4.2 Texture and Patches, Rights as Local Politics. – 5 Design as a Political Act, How Rivers are Made to Appear. – 6 A Method for Political Appearance: Atlas, Cabinet, Nomadic School. – 7 Implications for Rights of Nature Practice in Europe. – 8 Epilogue as the Conversation Continues.



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1 Prologue at the Mouth, Where Endings Refuse to End

Hoek van Holland, late November. The beach is a pale strip of sand and foam, a net of footprints the wind keeps softening, erasing, and making again. I wheel my bicycle to the water's edge and stand with the North Sea in front of me. Behind me, the river that has accompanied me for days continues in its own tempo, carrying inland sediments, stories, thresholds, and the faint taste of industry towards the tides. As the journey ends, the river returns as dense, stratified memories: a lock gate gathering waste at its doors, rhythms of the wind caught by reeds, a phrase spoken by a stranger and carried for kilometres, as if it had lodged itself in the spokes. Looking out to sea, I notice how the mind keeps trying to make a single account out of these fragments; gathering what is multiple into something that can stand alone [fig. 1].

I: So this is where you disappear.

Meuse: Disappearance is a human word. At the mouth I mix – brackish, tidal, worked by gates and dredging. I will continue.

I: And what am I meant to carry back? A map? A theory? A policy suggestion?

Meuse: Carry back what resisted becoming one story.

I had come to the Meuse with a research question and a familiar reflex as an urban designer: to make sense, to render legible, to build a solid argument. But the river did not meet me as a stable object. It met me as weather and risk, as municipal ambition and competing priorities, as a fisher's grief, as the hush of reedbeds and the percussion of barges. Not one thing seen from different angles, but a field of coexisting realities produced in different practices and negotiated in the same institutional world.

I: Then which of these are you?

Meuse: All of them. As practices that shape what I can do, and what can be done to me.

I draw on legibility, multiplicity, and political appearance to describe this condition: how institutions simplify rivers into governable objects, and how rivers nevertheless persist as plural beings enacted through different practices. The design question follows: what representational and procedural forms can hold that plurality, while allowing the river to appear as a subject in administrative, legal, and civic life?

What follows keeps the mediation visible.



Figure 1 *Arrival*. 2024. Hoek van Holland beach, The Netherlands. Photo by Author

2 The Issue of Political Legibility

Rights of Nature (RoN) initiatives ask a deceptively simple question: who or what can count as a subject of politics? The question appears legal, yet it is also sensorial, political, and spatial: a right exists in practice when it registers as meaningful in public life and can be exercised institutionally. Similarly, a subject only becomes political when it can appear and can be described in ways institutions can work with. Otherwise, the right remains aspirational and the subject remains symbolic, however radical the declaration.

Haraway is helpful here because she lays the groundwork for intra-action, a term further developed by Barad that refuses the idea that subjects pre-exist their relations (Haraway 1998; 2003; 2016; Barad 2007). Beings do not arrive as ready-made entities waiting to be recognised; they become through situated practices that bind and separate, train attention, and distribute obligations. Becoming, in this sense, is becoming-with, and political capacity depends on response-ability: the cultivated capacity to notice, answer, and stay accountable over time. The question, then, is how a river comes to count as a subject in the sites where decisions are made. Political legibility is produced through the work of giving the river a public voice: assembling knowledge and evidence into forms that allow

its persona, needs, and claims to be articulated, contested, and sustained in institutional life.

Meuse: I am readable in many ways. Which do your institutions read?

I: I came to you with the same question.

Europe is not short of environmental law (Darpö 2021). River basin management plans under the Water Framework Directive, flood risk management under the Floods Directive, water quality standards, habitat directives, municipal zoning, industrial discharge permits, cross-border commissions, and a dense ecology of expertise already govern rivers. Yet this governmental abundance exacerbates, rather than resolves, the problem of political legibility. The issue is not whether the river is known, but which versions of the river are allowed to count in decision-making, and which forms of harm, responsibility, and obligation remain outside the frame.

Northwestern Europe is an interesting laboratory for this tension. Decades of control-oriented water management that prioritised predictability, safety, and efficiency, has gradually displaced everyday practices of reading and responding to rivers. Skills once central to living with water, such as interpreting bird flight, reading cloud formations, soil moisture, or subtle changes on the water surface, have lost political and epistemic relevance. In their place, digital models, centralised monitoring systems, and technocratic governance frameworks promise predictability and control.

Recent years of climate disruption and ecological instability have exposed the limits of this approach. The Meuse floods of 2021, which affected communities across Germany, Belgium, and the Netherlands, exemplify how rivers increasingly behave in feral ways that exceed predictive control (Tsing et al. 2024). These events reveal that social life (which knowledges are valued, which skills are cultivated), politics (risk governance frameworks, market-oriented river uses, technocratic planning regimes), and space (canalised riverbeds, sluice-and-weir complexes, embankments) are deeply intertwined. Infrastructures and spatial plans do not merely respond to rivers; they materialise specific socio-political paradigms (de Jong et al. 2024).

This matters directly for Rights of Nature. Rights are increasingly proposed within governance systems that continue to conceptualise rivers as objects to be managed rather than as subjects with whom relations are negotiated. In that context, rights risk being applied to an already standardised account of the river, one shaped by existing categories, metrics, and administrative routines. Without a relational understanding of what the river is and how it lives through these

arrangements, RoN may have limited capacity to alter the terms on which decisions are currently made.

Meuse: If I am already managed through plans, directives, and thresholds, why add rights at all?

I: Because management can be efficient and still be indifferent.

To speak of political illegibility is not to claim that institutions do not know the river. It is to argue that dominant ways of knowing it leave little room for the river as a subject that can make claims. A compliance threshold can be met while an ecosystem quietly degrades (de Lucia 2015). A flood wall can be safe while it severs civic encounters. A riverfront plan can be green and still turn the river into scenery. The rights idiom becomes legible only where human and more-than-human agencies are first attended to, then translated and composed into a shared account of responsibilities and claims, rather than being absorbed as technical side effects.

This is where the altered nature condition matters most.¹ The Meuse is neither a pristine entity nor a simple infrastructure. It is a living river assemblage repeatedly composed through intervention [fig. 2]. Embankments and dredging works, extraction, and river regulation do not simply sit beside the river. They enter it as material memory, reorganising the river's capacities: how water moves, where sediment settles, which species can persist, who can reach the banks, and which futures are imaginable. In political terms, the river's subjecthood is spatiotemporal: topos and habitat, ecological process and built infrastructure, sedimented layers and geopolitical arena.



Figure 2 *First Encounters*. 2024. Altered nature (left): canalisation near Saint-Germain-sur-Meuse where green riverbanks overlap with sand extraction in the background; Sensing the river without seeing it in Orbigny-au-Mont (right): fog in air, condensation on my skin.
Photos by Author

1 "Altered nature" refers to the fact that 'pristine nature' is a political and cultural fiction, and that humans are never outside nature but always part of its ongoing composition (Cronon 1996; Haraway 2003; 2016; Latour 2004; 2005).

Meuse: You look for a subject. Where do you think my subjecthood sits?

I: In the multiplicity of your relations.

From this perspective, the contribution of spatial design to Rights of Nature becomes clearer. It lies less in communicating rights after the fact, and more in helping to establish the ground on which rights can be articulated in the first place. This involves clarifying what the problem is and for whom, making the relevant human and more-than-human agencies perceptible, and articulating the spatiotemporal dimensions through which harm, alteration, and dependency unfold. It also involves tracing how the river has been altered and where acceptable limits might be drawn, so that claims and responsibilities can be specified with precision.

This entails staging situated encounters and devising forms of representation that keep plurality operative in governance and reject reducing it to unity. It requires organising the material and procedural conditions through which the river can be met and attended to. It becomes not only an abstraction in plans or datasets, but a presence in institutional life. It also means developing modes of witnessing and articulation that can travel into decision-making without flattening the river, making change perceptible over time, holding together ecological processes and lived consequences, and allowing claims, injuries, and responsibilities to be argued and acted upon. A river cannot be captured by a single definition. It is not only hazard or resource, but habitat and living body. Governance tends to stabilise one dominant version. Spatial design – among other fields of expertise – can keep multiple versions in play and should be held to it. It can bring those versions on the table, making it possible to negotiate responsibilities and claims without collapsing difference into a single authorised account.

3 Approach and Method: Travelling with Partial Sight

The research informing this article developed through a ten-month design research process that started with a two-and-a-half-week fieldwork journey along, and with, the Meuse. From 10 to 26 November 2024, J. Schasfoort travelled by bicycle from source to mouth. The journey combined embodied fieldwork, critical mapping, and site-writing as forms of situated spatial inquiry. Cycling offered a mode of research that permits intimacy without claiming local belonging: slow enough to register smell, sound, weather, surface, access, obstruction, and exposure, and fast enough to experience the river corridor as continuity. On a bicycle, the body becomes a registering instrument, producing a partial, accountable form of knowledge in the sense of

Haraway's situated objectivity (Haraway 1988). The route followed river-adjacent paths where possible and detoured where fences, industrial zones, infrastructural breaks, or discontinuous access forced rerouting. These detours were treated as data. Following Corner's understanding of mapping as a critical and projective practice rather than the neutral representation of an already-given territory, they exposed the spatial politics of encounter: where the river becomes accessible, where it is hidden, where it is fragmented, and where a citizen is asked to relate to it only through signage, policy, or prohibition (Corner 1999). The writing itself forms part of the method. Drawing on Rendell's concept of site-writing, the text writes through the site rather than simply about it, allowing the material, ecological, legal, aesthetic, and political conditions of the Meuse to structure the argument from within the fieldwork encounter (Rendell 2010).

I: How can I understand the full range of what is there?
Meuse: Partial sight is unavoidable.

Field notes were produced at roughly twenty-five-kilometre intervals and whenever a change in river character demanded it. Notes included weather, bodily state, sensory observations, sketches of infrastructures, and reflections on conversations and encounters. Fourteen semi-structured interviews were conducted with people whose daily practices enact the river differently.² Interviews were structured around practice rather than attitude. Instead of asking whether participants agreed with Rights of Nature, conversations traced how the river enters routines, what counts as a good river, how harms are detected, what evidence persuades, and where conflicts are negotiated.

Each evening, field notes were brought together with conversations held throughout the day. Over time, patterns emerged and categories tightened into four clusters. The enactments cluster tracked moments where the river was performed as system, risk, corridor, habitat, memory, amenity, or border. The conflict cluster tracked recurring sites of dispute, including access, discharge, dredging, extraction, and flood protection. The evidence cluster tracked formats ranging from metrics and models to photographs, flood marks, formulas, inspections, and sensory cues that triggered local knowledge. The care cluster tracked imaginaries of future relation, including

2 Interviewees included a factory chemist, a city mayor, water managers, an artist, a retired skipper, the head of a gravel extraction company, a forester, a hydropower operator, a social enterprise organising river clean-ups, a pottery maker, a municipal ecologist, members of a floodplain restoration consortium, a museum director, and a Dijkgraaf. Enriched through informal conversations with residents along the riverbanks.

restoration, intensification, economic continuity, civic intimacy, and climate uncertainty.

I: Your character reads like a net.

Meuse: Nets catch some things and let others pass. The ethics is to say which.

Because the journey moved across national borders, the research confronted mismatched institutional languages. A practice that counts as restoration in one administrative setting might count as maintenance in another. These frictions are part of the empirical field: they show how the river's corridor is also a corridor of governance, where categories travel unevenly and responsibility can be diffused through shifting jurisdictional frames.

4 Findings, Meeting the River as Presence, Multiplicity, and Textured Patches

The journey began in thick morning mist on the Plateau of Langres. Visibility dropped to a few metres. My world shrank to road, meadow, breath. In those first days, the Meuse was not encountered as a clearly delineated object but as an atmospheric condition: humidity on skin, muffled sound, wet earth, the resistance of muscles working uphill. Water announced itself not only through sight but through a constellation of sensations, each revealing a different grammar of the landscape [fig. 2].

Multisensory engagement revealed the river as diffuse, relational, and affective. This finding emerged through the method. Cycling rather than sampling, pausing rather than surveying, and moving continuously along the river's course oriented attention away from representational knowledge and toward embodied participation. What I encountered could not be accessed through maps, hydrological models, or policy documents alone. The distance that had previously separated me from this place was mirrored in the knowledge available from behind my desk in Rotterdam, where the Meuse appeared primarily as data and text. On the road, that distance collapsed.

Merleau-Ponty's insistence that perception is always situated and bodily became tangible (Merleau-Ponty 2012). I was not observing the river from the outside but moving with it. Perception arrived as a whole rather than an accumulation. Over time, sound, movement, and atmosphere began to orient me without conscious interpretation: uninterrupted hushing noises, flying drops, and the sudden appearance of cormorants hinted at a dam before it came into view. In such moments, knowledge was not representational but relational.

The relational is felt in a dual movement: sensing the river also meant being sensed by it, becoming implicated in its conditions. Touch matters here. As Puig de la Bellacasa suggests, touch cultivates care precisely because it is reciprocal (Puig de la Bellacasa 2017). Implication produces affect, concern, discomfort, attachment, and transforms knowledge into something that matters.

Downstream, mist lay on the water like a second skin; a weir announced itself as insistence; a dam as a pause in the river's sentence. Near industrial reaches, the air acquired a metallic edge. In restored floodplains it softened, and the soundscape thickened with birds. These were cues of altered nature: infrastructures and practices rearranging life and perception, confirming that 'nature' here is never pristine, never outside us, but always already composed with us (Cronon 1996; Haraway 2016). The altered nature condition is encountered here as sensory fact, not as abstract premise.

The multisensory encounter did not simply enrich understanding; it enabled the river to appear as a political subject. Presence, rather than representation, is a condition for political legibility. This is where Barad's ethico-onto-epistemology becomes necessary rather than ornamental (Barad 2007). Being, knowing, and responsibility did not line up in sequence. They happened at once. Responsibility did not arrive after knowledge was formed; it emerged within the act of coming to know. To encounter the river bodily was to become entangled in futures being written into it. Without such engagement, the river remains legible primarily as data, infrastructure, or risk, an object to be managed rather than a subject within political relations.

Meuse: What is knowledge to you at this point?

I: It is presence.

4.1 Coherent Multiplicity, the Meuse Enacted as Many Rivers

Between the Ardennes and the industrial reach, the river began to speak in many voices at once. Municipal ambition, industrial operations, ecological processes, infrastructures, and sedimented memories enacted different versions of the river. Mol's notion of multiplicity clarifies that these are not viewpoints laid over a single river. They are enacted river realities, produced by practices with material effects (Mol 2002). Multiplicity also foregrounds power: some enactments carry institutional authority and durable inscription, while others remain local and fragile. Political legibility depends on whether these enactments can enter the same space of appearance without one being automatically dismissed as anecdotal or subjective [fig. 3].



Figure 3

The Layered River (from top to bottom). 2024. Legends of the Four Sons of Aymon rock formations; foothill vegetation; human and more-than-human occupation; riverbanks and the reflective water.
Photo by Author

The stations below are not a representative sample in the scientific sense. They are situated evidence. They mark where enactments become graspable through access, encounter, interview, infrastructure, and artefact, and where it becomes possible to see how the river is made legible, and by whom.

Station 1 The Industrial Bend, Where Water Becomes an Input

In the industrial reach the river changed posture. Banks carried the geometry of efficiency: quay walls, access roads, fences, warning signs. The water looked the same until one learned to read its surface: a thin film, a slightly different shade, the sudden lack of weeds. Inside a facility, a chemist spoke with intimacy toward numbers. We do not want to harm the river, he said. Harm, in his account, was a matter of miscalculation. The river was a recipient of process water after filtration; compliance with international standards equated care. Neighbourliness was real, but conditional. It depended on what counts as harm being defined by permitted thresholds.

Outside, the factory was a wall. The public could not approach the water at that reach. Multiplicity was spatially segregated. The river of permits existed inside meetings and spreadsheets; the river of everyday encounter was absent because access was removed. Legibility is achieved through simplification, and simplification has

territorial implications. It is built into fences and routes as much as into indicators.

I: What are these pipes and permits to you?

Meuse: Uncomfortable human necessities.

Station 2 The Gravel Pit, Where the River is Mined into Landscape

Further downstream, the river is reworked through gravel extraction. Here the Meuse appears as a resource in the most literal sense. The bank opens into a scar of bare aggregate. Trucks cross a temporary bridge. Water is diverted into holding ponds. New lakes are promised as recreational futures. The rhetoric is circular: extraction that becomes nature again.

Gravel extraction produces altered nature in a way that resists a single moral grammar [fig. 4]. It can destroy habitats and create new wetlands. It can intensify flood risk and open space for overflow. Its politics is inseparable from permits, economic cycles, and the long afterlife of pits as lakes. It is also where personhood language stumbles most clearly, because it asks for a subject that can be wronged while alteration disperses across time, actors, and mixed outcomes. In interviews, extraction was described as inevitable, part of the region's prosperity. The river became a partner in a bargain: reconfiguration is acceptable as long as compensation is planned. Making this ontology visible is already political work, because it clarifies where legal words would need to attach: not only to the river, but to the bargaining infrastructures that shape it.

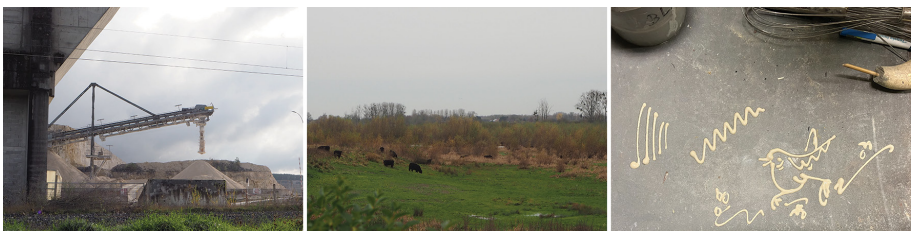


Figure 4 *Nature Commodified* (from left to right). 2024. Active extraction site in France; post-extraction as recreational park at the BE-NL border; pottery maker in the Netherlands. The contrast with the pottery maker who works with river clay makes tangible how one type of extraction is justified or maintained through mobilising either cultural, ecological, economic, or political arguments. Photos by Author

I: Is this injury or transformation?

Meuse: Both. The question is who gets to call it restoration.

Station 3 The Flood Mark, Where the River Returns as Memory

In several towns, flood history is visible as lines on walls, small plaques marking water height and year. People point to them without melodrama, as one points to a scar. A Dijkgraaf drove me around the landscape, showing subtle flood protection infrastructures integrated into fields and streets, while recalling nights when people layered sandbags to block the rising water. A pottery maker spoke of the capricious nature of Mother Meuse with deference, recounting days when he returned again and again to the river's edge to track the water's rise.

Flood memory is not merely anecdotal. It is evidence that shapes voting, municipal budgets, and tolerance for restoration projects. Yet it rarely enters governance in the same way as modelled risk. This is where Arendt's notion of appearance becomes concrete (Arendt 1958). A flood mark is an artefact that carries experience into the common world. It is a material witness. When governance treats it as sentiment, it narrows the political scene. When governance can hold it alongside probabilistic models, it opens a space where different enactments can be argued without automatic hierarchy (Arendt 1958).

This is also an aesthetic observation in Rancière's sense: it concerns what can be sensed and made public, and therefore what can become political. A river encountered as a presence interrupts the managerial habit of seeing only variables. It expands the repertoire of harms that can be named, from threshold breaches to quieter injuries, such as the thinning of more-than-human life, or the loss of access that makes public responsibility harder to sustain (Rancière 2000; 2004).

These multiplicities did not cancel one another; they accumulated. Here, plurality is not a failure of definition but a condition of agency. The river emerges as an agential being precisely through these heterogeneous relations (Barad 2007).

This finding unsettles persistent dualisms. Nature and society, subject and object, human and more-than-human do not sit on opposite sides of a boundary. They are co-produced in practice. Even the idea of the river as a linear entity with a clear beginning and end began to look like a cultural construction. Conversations repeatedly returned to water as dispersed, circulating, and omnipresent, reappearing far beyond the channel itself. This aligns more closely with concepts such as hydrosocial territories (Boelens et al. 2016) or oceans of wetness (da Cunha 2018) than with a bounded line on a map.

In this reach, the Meuse is a hydrosocial and more-than-human critical zone. Water, sediment, flora, fauna, infrastructures, institutions, and people co-produce one another. Treating the river as a “natural object” external to these relations misreads the altered nature condition European rivers inhabit. Treating it only as infrastructure erases more-than-human life and dulls histories of injury (Swyngedouw 2004; Linton, Budds 2014).

4.2 Texture and Patches, Rights as Local Politics

While the river can be understood as a connected system, it became difficult to imagine what universal rights could meaningfully entail across its entire course. Rights of Nature shift from abstract generalised principle to localised politics when the river is encountered as a series of situated patches (Tănăsescu 2016; 2022; Tsing et al. 2024).³

Near Pouilly-en-Bassigny, where water emerges quietly from the ground in an unremarkable meadow, the river sustains modest ecologies and intimate relations. In the industrial north, where width and depth increase, the Meuse supports dense infrastructures, economic dependencies, and heightened political stakes. Each locality hosts a different river, shaped by particular histories, materials, and practices. While connected, these patches demand different forms of care, responsibility, and governance [fig. 5].



Figure 5 Localities (from left to right). 2024. The source; the city; the harbour. Each locality gives rise to different questions and conflicts, necessitating different forms of mediation. Photos by Author

3 Rights of Nature is often linked to Indigenous philosophies through totalising figures such as Pachamama or Mother Nature. As Tănăsescu (2022) notes, many Indigenous traditions instead articulate obligation through specific places and relations rather than universalised notions of nature. De la Cadena’s (2015) discussion of Aymara *ayllu* as the ensemble of beings that constitute a place, and Watts’ (2013) concept of “place-thought”, clarify how rights can be understood as localised politics emerging from situated relations rather than abstract subjects, which resonates with the patchy, altered conditions of European rivers such as the Meuse.

Tsing's language of friction and patchiness helps name why universal rights language can lose traction at seams, where a right travels into places already organised by livelihoods, flood safety, jurisdictional boundaries, and sedimented blame (Tsing 2005; 2015).

I: How can rights attach to you?

Meuse: Attachment is not a pin. Rights are a practice.

Station 4 The Infrastructural Breach, Where the River is Made to Behave

In urbanised and industrialised reaches the river is asked to behave. It is kept within lines. Wildness is numbed through large scale canalisation; movement silenced through normalisations and reinforced banks. Sluice and weir complexes regulate discharge levels and direct flows westward to Antwerp or further north.

Rights become local politics through texture: access, flood protection, institutional responsibility. A declaration must attach to a stair, a path, a meeting agenda, a maintenance budget. Where banks were accessible and memories thick, rights felt imaginable as lived practice. Where corridors were fenced, rights sounded distant.

I: Despite the barriers, people are coming to you.

Meuse: Yes, they are. But proximity is not always the same as nearness. And while nearness is not yet politics, it rarely begins without it.

Station 5 The Border Reach, Where Jurisdiction Becomes Current

At several points the river is a border, and the border is a governance device. Pollutants and sediments cross administrative lines that do not flow. A water manager described cross-border coordination with the fatigue of someone who has attended too many meetings without a meaningful follow up. The river becomes a current of diluted accountability.

Scott's insight into state legibility takes a different shape in this reach (Scott 1998). The state is not a single eye but an assemblage of partial eyes, each with its own indicators and mandates. Legibility is therefore fractured. The river can be highly readable in one regime and almost invisible in another. Rights of Nature asks for continuity of obligation across such fractures. That continuity will not emerge from a declaration alone. It emerges from interfaces that can travel across institutional boundaries, carrying evidence, claims, and responsibilities in durable forms.

Meuse: When no one can be addressed, rights feel weightless.
I: Rights see unity where maps do not.

Station 6 The Restored Floodplain, Where Care Becomes Technique

In a restoration site, the bank opens. The river is allowed to spill, to braid, to create wetlands. Information boards tell a story of ecological recovery. An ecologist spoke carefully about time. Recovery is not a return, he said. It is a negotiated future under a changing climate. The river is permitted to be more dynamic, but within design constraints. Even care is a form of alteration.

Restoration shows that European governance can make room for more-than-human life, but often through technical projects legible mainly to experts. When restoration becomes a project code rather than a public matter, it can fail to build the attachments that would sustain it against future economic pressure. The design question returns: how can restoration sites become spaces of appearance, places where obligations are publicly negotiated and sustained?

These stations extend the earlier finding about patches. Rights become local politics not only through the texture of place but also through the patchwork of jurisdictions. The river's subjecthood is spatiotemporal and institutional. It is habitat and permit, memory and maintenance, geopolitics and sediment, because cross-border arrangements, supply chains, and energy systems are written into its banks.

Station 7 The Delta Logistics, Where the River Becomes a Schedule

Approaching the delta, the river acquired the tempo of logistics. The horizon filled with cranes, containers, freighters. The river became a timetable: the medium through which goods move. At that scale it became easy to deny responsibility locally. It is bigger than us, people said, and the sentence became a distancing device.

Yet the port is still an environment, producing noise, particles, jobs, and vulnerability to sea level rise. In such settings Rights of Nature can appear either naive or threatening. Political legibility is hardest here because enactments are tied to livelihoods and national infrastructures. To make rights legible is to build interfaces where all conflicts can be articulated without immediate dismissal.

At the mouth, categories become unreliable. Is the river still the river when it tastes of the sea? The mouth is not a line; it is a mixing zone. Rights of Nature, if it is to be more than a label, must be able to

live with such instability. Models of personhood that imagine a river as a bounded individual strain here, where the river is relational, dependent on tides, sea level, dredging, shipping, upstream pollution, and the long memory of engineering.

A legibility gap becomes visible here. Multiplicity is materially obvious, yet politically unstable. Rights spoken in a universal idiom do not automatically produce publics capable of sustaining them. If personhood is to move beyond symbolism, it must be accompanied by practices that let the river appear as a political subject in a common world, not by forcing unity, but by enabling translation across enactments and making contestation durable.

I: What would it mean for you to appear here as a political subject?

Meuse: It would mean that your visions would have to admit my limits.

Taken together, these encounters suggest that the task is less to declare the river a subject than to build the conditions in which it can appear and be addressed as one. Presence expands what can count as harm. Multiplicity names how different practices produce different rivers, with unequal power to define reality. Patches show where responsibilities thin out across fences, jurisdictions, and expert codes. In the field, embodiment collapsed distance into nearness, and nearness into responsibility. This shifts the centre of gravity in European Rights of Nature discourse away from drafting better rights and toward shaping the circumstances in which a river can enter public and political life as a claimant. Without such appearance, legal recognition risks floating above lived realities.

The question that follows is therefore not only legal but spatial: how can design cultivate the kinds of encounters through which more-than-human entities can appear, be heard, and be addressed? The next section proposes a design response. It outlines representational and procedural interfaces, evidential devices, meeting formats, and access protocols, through which claims can travel across enactments and conflict can be staged without collapsing the river into a single administrative object.

5 Design as a Political Act, How Rivers are Made to Appear

Back home, the river returns as objects: a plan, a chart, a permit, a risk curve. But what I met on the banks was already formatted long before it reached my desk: access cut by fences, memory held in flood marks, extraction justified as compensation, care translated into project codes, responsibility diluted across borders, the delta reduced to a timetable. These are not metaphors. They are the

conditions under which the river can appear and under which it can be addressed.

Consider the mundane architecture of a typical water governance meeting: a projector, a spreadsheet, a map with colour-coded status classes, a risk curve. These devices do not merely inform decisions. They train perception, distribute authority, and decide who can speak. The political question becomes a question of format: which materials can sit on the table as legitimate evidence.

Boundary objects help name what is at stake. These are shared devices that different communities can use without full agreement on meaning (Star, Griesemer 1989). Water governance already relies on boundary objects – maps, standards, models – but these often privilege expert domains. Rights of Nature requires boundary objects that can travel between expert and everyday worlds, holding different enactments together without claiming to unify them: devices that keep multiplicity present in decision-making without forcing it into a single authorised reality.

In this spirit, an Atlas and Cabinet are proposed as design methods. The Atlas is a representational format that places enacted river realities side by side so they can be argued together without being reduced to one metric [figs 6-7]. The Cabinet is a portable evidentiary assemblage for meetings and site encounters, making room for heterogeneous forms of proof, including sensory cues, local marks, images, and expert measures. Neither aims to represent the river as a whole; both stage what can count.

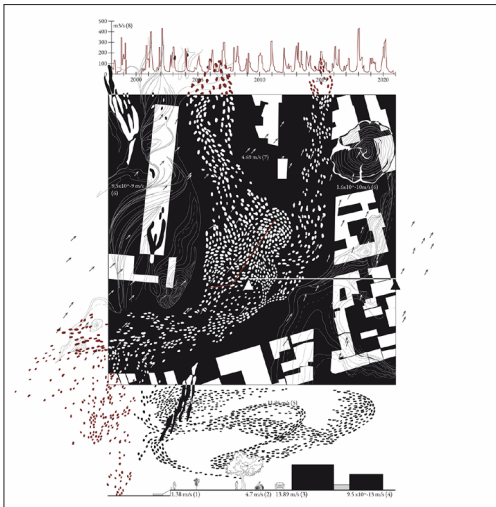


Figure 6

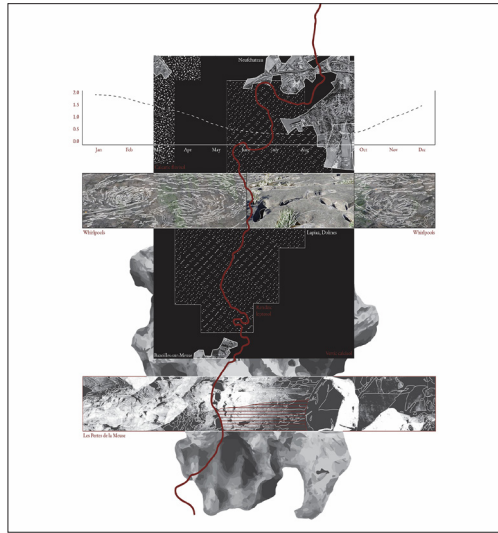
Atlas: Movement Sedan. 2025.

Digital collage.

Space as a choreography of movement. By layering urban structures with flows of water, vehicles, bodies, and more-than-human life, it reveals the city and river as part of a shared rhythm of decay, regeneration, and change.

Image by Author

Figure 7
Atlas: Pertes de la Meuse, 2025.
Digital collage. The Meuse
as a water surface and a hidden
underground system. Geological
layers, disappearing flows,
and visual traces reveal
a landscape shaped as much
by presence as absence.
Image by Author



I: So design is politics because it frames what can be said.
Meuse: And because it frames who can say it, and what is allowed
to count.

An ethical difficulty remains. Any device that claims to help the river speak risks speaking for it. The point is not to authorise a single river voice but to stage situations where the river's consequences can be translated into arguable claims. Here the river 'speaks' through flood marks, sediment change, fish absence, blocked access, odours of discharge, and through plural testimonies entangled with those consequences. The devices do not claim truth but aim to make mediation visible and contestable. This is also where agonism matters. If the Cabinet and Atlas become instruments of consensus, they fail. Their purpose is to make conflict legible – precisely where politics starts.

Talking about 'furniture' is not trivial here. I use it as a metaphor for the material and procedural arrangements through which governance stages what can appear, who can speak, and what can count as binding. Rights of Nature will not become real by declaration alone. It becomes real only if this setup is redesigned so that different enactments of the river can be present, arguable, and consequential.

Formats matter because formats arrange the world so that it becomes arguable. Dominant formats privilege quantification and particular temporalities: some harms become visible while others remain difficult to name. Rights of Nature introduces an additional demand: harms must be arguable not only as system failures but

as wrongs. If law sets obligations, design helps determine whether obligations can be perceived, contested, and maintained.

6 A Method for Political Appearance: Atlas, Cabinet, Nomadic School

If the river returns to governance not as objects on a table, but as a subject sitting around it, then the design task is not to produce a better portrait of the river. It is to redesign the table [fig. 8]. The problem is not a lack of information. It is a lack of formats that can hold multiplicity without forcing it into one authorised reality (Marres 2012). What follows proposes a method rather than a masterplan: an Atlas of River Enactments and a Mobile Cabinet for Counter-Narratives, operated through a Nomadic River School. The aim is to thicken political legibility by assembling heterogeneous materials into shared forms that can travel between riverbanks and institutions.



Figure 8 *Assembly of the Cabinet. 2025.* The topography of the Meuse is displayed in three drawers. The part of the river held in the upper drawer is visible through the transparent table-top. The whole river can be shown at once through extension of the cabinet towards both sides. Photos by Jesse Verdoes

The Atlas is organised reach by reach rather than treating the river as a single site. It holds situated plurality and allows comparability without imposing equivalence. The Cabinet is a portable table and archive that can enter municipal meetings, basin consultations,

educational settings, and sites of negotiation. The Nomadic School is the practice of facilitation and repetition that prevents the method from becoming a one-off event.

A cycle of the triptych has three movements: encounter, assembly, translation.

Encounter: participants go out with the river, guided by prompts about access, smell, sound, barriers, infrastructures, and histories. Detours and fenced edges are treated as data, because they show how encounter is patterned and who is permitted to be near.

Assembly: participants return to the Cabinet and place heterogeneous evidence into shared visibility without forcing commensurability [fig. 9]. A permit excerpt beside a flood mark. A smell note beside a monitoring graph. A sound recording beside a planning sketch. The purpose is not agreement, but arguability. Each cycle is documented in a short dossier and deposited into the Atlas.



Figure 9 *The Nomadic School*, 2025. Findings are assembled into a plural archive and situated on the Cabinet's topography. The archive lends voice to multiple interpretations without a pre-imposed hierarchy. Their coexistence can surface new questions and make conflicts legible, inviting dialogue about which values and whose voices are actively amplified, accepted, or ignored. Photos by Jesse Verdoes

Translation: participants produce outputs that make tensions publicly discussable. Conflict maps, access sketches, soundscape scores, short narratives, or governance prototypes. These remain in the Atlas as a comparative record across sites and over time.

The mechanism is deliberately practical. The method aims to assemble river publics capable of sustaining obligations by altering what can count as evidence in the settings where decisions are made. It gives conflicts durable form and enables translation between expert and everyday domains without requiring full agreement. In the language of boundary objects, the devices are designed to be shared across communities while keeping disagreement visible (Star, Griesemer 1989).

This requires modest but explicit infrastructure: facilitation capacity, storage and documentation, and a commitment to bring the Cabinet into moments where trade-offs are negotiated, such as permit reviews, waterfront plans, flood-safety upgrades, and restoration prioritisation.

7 Implications for Rights of Nature Practice in Europe

This research suggests that Rights of Nature efforts in Europe should treat legibility as a primary political task. Legal drafting needs companion infrastructures of encounter and translation. Otherwise personhood risks remaining ceremonial: declared, admired, and rarely exercised where decisions are made.

Multiplicity should be treated as an asset rather than a problem to be resolved. Rivers will remain plural. Governance must learn to work with coherent plurality rather than enforce artificial unity. This also requires making power visible: which enactments acquire authority, which are excluded, which harms become legible, and which remain backgrounded.

Spatial design can be positioned as public-making infrastructure, not as a communicative afterthought. That requires institutional recognition and resources. Methods must be iterated and linked to decision routines. Without uptake, design becomes theatre: a performance of participation that does not shift what can count.

I: And if nothing changes?

Meuse: Then at least you will know where the refusal sits.

European Rights of Nature practice also needs care with genealogies. Learning from global cases is essential, but legitimacy cannot be borrowed through citation of other cosmologies without relational accountability. European rivers require accountability to histories of extraction, flood safety, industrial permitting, commons, and care; histories that must be confronted rather than bypassed.

The Meuse sharpens an uncomfortable point. Personhood language can be attractive because it promises a clean subject. But European rivers are not clean subjects. They inhabit an altered nature condition in which agency and responsibility are distributed across administrations, infrastructures, and memories. A Rights of Nature politics that insists on a single authorised voice risks reproducing the simplification Scott warned about (Scott 1998); an institutionally convenient river, readable in a single register, while the more difficult multiplicity that composes the river is pushed out of the scene.

I: Yet institutions want clarity.

Meuse: They want clarity so they can act.

Clarity can be provided without flattening. A Rights of Nature institution should not speak as if it were the river in the singular. It should speak as if it were hosting a contested flow-field, and make explicit which enactments are at stake in each decision.

This has consequences for legal drafting and institutional design. Guardianship models may work best when coupled to deliberative infrastructures and evidence devices that keep plurality present in decision routines. Otherwise guardians risk becoming spokespersons for whichever enactment already dominates, often the one most legible to state formats: numbers, permits, and risk curves. The Meuse also shows that legibility is geographically uneven. Where encounter is mediated by distance, security, or scale, obligations diffuse. Design interfaces therefore need to be calibrated to the scale at which trade-offs are negotiated, such that responsibilities can be gathered into arguable form.

8 Epilogue as the Conversation Continues

Meuse: what will be carried onward?

At Hoek van Holland, the river disperses into tides. Rights, too, are not endpoints. They are ongoing enactments, and they require maintenance: of attention, of institutions, of publics, and of the material settings that allow a river to appear [fig. 10]. A river can be injured quietly: by routine, by administrative smoothness, by numbers that remain within limits while the living texture thins.

The question that remains is not whether a river can have rights in principle. It is whether a river can appear, again and again, as a political subject where decisions are made, and whether those settings can learn to host its plurality. This is where spatial design matters: not as representation alone, but as a practice that gives durable form to encounter, evidence, and translation.



Figure 10 *New Beginnings*. 2024. The source of the Meuse, Pouilly-en-Bassigny, France.
Photo by Author

Authorial Note on Voice and Fieldwork

This paper is written through a situated narrative voice and a dialogue form. The cycling journey and interviews were conducted and translated into a design proposal by Julia Schasfoort. The conceptual framing, analysis, and theory were developed collaboratively by both Authors. The text is written as a dialogue, not to ventriloquise the river, but to refuse the convenience of speaking about it while pretending the relation is neutral. The river's voice appears only where it is anchored in material cues, interview discourse, and infrastructural realities. The dialogue functions as a constraint: it holds open the gap between what can be said in a statute and what can be encountered on the bank, long enough for another legibility (and another politics) to become possible. The journey is one body following one route in one season; the interviews are a small sample. The claim is not completeness, but accountability for the position from which the river was encountered and transparency about what that position makes visible and what it cannot.

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Rights of Nature: Legal Philosophy Meets Democracy The Swiss Cantonal Reuss-Initiative

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Abstract The Reuss-Initiative, a popular initiative to change the constitution of the Swiss Canton of Lucerne aims to grant public water bodies legal personality and fundamental rights for their existence and ecological integrity. Existing environmental laws are ineffective because the waters lack legal standing to challenge political pressure in court. The call for legal personality and fundamental rights is based not only on legal philosophy but on political grounds. The paper explains why it makes sense from a democratic perspective to give legal personality in a first step to non-sentience water bodies instead of sentient beings.

Keywords Reuss-Initiative. Natural entities. Legal personality. Fundamental rights. Constitution. Colère publique. Democracy. Water bodies. Rights for Nature.

Summary 1 The Cantonal Popular Initiative. – 2 Why the Change is Necessary. – 3 Changing the Constitution in a Democracy. – 4 The Learnings from the Rights for Primates-Initiative in Basel-Stadt. – 5 Political Considerations When Launching a Popular Initiative. – 6 Final Thoughts.



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1 The Cantonal Popular Initiative

The Reuss-Initiative¹ is a cantonal popular initiative on changing the Constitution of the Swiss Canton of Lucerne. It is calling for legal personality and fundamental rights for the river Reuss and all other public waters in the canton of Lucerne in Switzerland. It proposes the following addition to the Constitution of the Canton of Lucerne:

§ 10 part 3 (new)

The fundamental rights and legal personality of non-human nature are guaranteed in accordance with the Cantonal Constitution.²

§ 10bis Fundamental Rights and Legal Personality of the cantonal Waterbodies (new)

1. The public waters of the Canton are granted fundamental rights according to item. 2 and legal personality.
2. The waters have the right to existence and ecological integrity.
3. The law shall regulate the practical implementation. It is to be structured in such a way as to ensure the effective and independent assertion and enforcement of the claims granted.³

The initiative also contains a transitional provision that gives the cantonal legislature three years to complete the practical legal implementation required in § 10bis, if the initiative is accepted by the popular vote.

1 View website of the popular initiative (Reuss-Initiative): <https://www.reuss-initiative.ch>.

2 “§ 10 Abs. 3 (neu) Die Grundrechte und die Rechtspersönlichkeit der nicht-menschlichen Natur sind nach Massgabe der Kantonsverfassung gewährleistet”. Unless otherwise stated, all translations are by the Authors.

3 “§ 10bis Grundrechte und Rechtspersönlichkeit der Gewässer (neu). 1 Die öffentlichen Gewässer des Kantons sind mit Grundrechten gemäss Abs. 2 und Rechtspersönlichkeit ausgestattet. 2 Die Gewässer haben Anspruch auf Existenz und ökologische Unversehrtheit. 3 Das Gesetz regelt die praktische Umsetzung. Es ist so auszugestalten, dass die wirksame und unabhängige Geltendmachung und Durchsetzung der gewährten Ansprüche sichergestellt sind”.

2 Why the Change is Necessary

In Switzerland on the federal level there are currently only two types of entities equipped with the notion of being a legal personality and thus being able to have rights of their own: natural persons (e.g. human beings) and legal persons (e.g. legal entities that are constructed by law such as the stock corporation or the association).⁴ A special category of legal personalities forms the so-called public law corporations (*öffentlich-rechtliche Anstalten*), which can be created by the canton.⁵ This category is important, as will be shown below.

The initiative leaves it up to the legislature to decide how exactly it wants to grant legal personality to water bodies (§ 10 part 3) The initiative only requires that representation must be “effective and independent”. However, the initiative committee has ideas on how this measure can be implemented legally without violating superior law. The committee envisions this to be implemented in the form of an independent public law corporation based on cantonal law. This would give the water bodies of the canton legal personality with the fundamental rights to existence and ecological integrity.

The key difference from the current situation lies in the conceptual distinction between ‘being protected’ and ‘having rights’. While regulations exist that aim to make sure the bodies of water are protected from pollution and other emissions that negatively impact their ecological state,⁶ they are treated only as an object of law and thus cannot claim these provisions as rights of their own. This exclusion has severe consequences on the condition of nature. Several studies conducted in recent years show that many cantons have significant deficits in the implementation of groundwater protection planning.⁷ Some of the water bodies in the canton of Lucerne are in a deplorable state. It is estimated that in Switzerland, on average, approximately one-tenth of the population consumed drinking water that exceeded the maximum level for chlorothalonil metabolites in the years 2019-21.⁸ For 40 years, lakes have been so heavily overfertilised in the canton that they have to be kept alive with oxygen (Läubli 2025). All this even though the Water Protection Act prohibits such practices.

⁴ Art. 620 ff. OR and Art. 60 ff. ZGB.

⁵ §75 KV Luzern.

⁶ E.g. USG or GSchG.

⁷ GPK Nationalrat. *Grundwasserschutz in der Schweiz, Bericht der Geschäftsprüfungskommission des Nationalrates*. Bern, 28.6.2022, 4.

⁸ Bericht des Bundesrates. *Verunreinigung des Trinkwassers mit Chlorothalonil*. 29.1.2025, 4.

It is prohibited to introduce substances that may pollute water directly or indirectly into water body or to allow them to seep into the ground.⁹

With the new paragraphs in the constitution, the cantonal administration could be obliged by the waters to enforce this law. Under the current situation, political pressure from the agricultural sector on the government is so heavy that the government does not enforce the water-protection law (Bieri 2024).¹⁰ By granting the cantonal bodies of water the status of a legal person it could invoke the fundamental rights granted by the initiative and assert the respective claims in court. Under the current jurisdiction this is not possible. Environmental organisations do not have the possibility to initiate court proceedings. They have the legal personality but are not directly affected by water pollution. On the other hand, waters are affected, but they have no legal personality. To be accepted by the court to deposit a claim, in case a law is breached, one needs both: legal personality and suffer an impact. That is why the improvement of water-protection laws is completely useless if the affected waters themselves are not allowed to enforce these in court, even if they are the only one who suffer an impact.

It is the only way to overcome the current political challenges and the only alternative to strengthening the legal protection for the water bodies. Only if an independent and effective body – as called for by the Reuss-Initiative – is empowered to enforce the strict water protection laws, will the state of the water bodies improve.

Political pressure could, of course, still be exerted. However, this pressure would then have to shift to the legislative process. For interest groups that are working against the interests of the waters, this is far more difficult than exerting pressure on individual administrative bodies responsible for water protection. As an example, we refer to the constitutional referendum on 16 November 2025, when Ecuadorian voters overwhelmingly rejected President Daniel Noboa's proposal to convene a constituent assembly to rewrite the constitution to skip the country's pioneering, legally binding Rights of Nature (Martínez-Moscoso 2025).

This conclusion is obvious, if one refers to the situation of slaves or women, before they got their own legal personality. Without their right to rights even the best protecting laws had less impact than

9 Art. 6 Abs. 1 GschG: "Es ist untersagt, Stoffe, die Wasser verunreinigen können, mittelbar oder unmittelbar in ein Gewässer einzubringen oder sie versickern zu lassen".

10 See also Bauer, K. (2023). *Unser täglich Fleisch. Von Gülle, Jobs und Umweltschäden*. SRF. <https://www.srf.ch/play/tv/dok/video/unser-taeglich-fleisch---von-guelle-jobs-und-umweltschaeden?urn=urn:srf:video:907ef8af-e3f1-4657-bfa5-71ca1bb5ff6c>.

the fact of having an own legal personality. Schärli-Reinhard (2024, 161-5) describes how the right to rights of a non-human nature can be implemented in law.

This said, as Laura Burgers and Jessica Den Outer (2023, 17) write, that granting legal personality to nature not only increases the likelihood of more effective environmental protection, but these rights also have symbolic value; they reflect a holistic worldview. As examples, the authors cite the Whanganui River in New Zealand, whose legal status reflects the relationship with nature of the indigenous Whanganui-Iwi (16), or the understanding of religion in India, which grants deities the status of legal persons and has thus led to sacred rivers such as the Ganges being recognised by the courts as legal persons (67-72). What is less well known is that in 2014, the Te Urewera forest became the first area in New Zealand to be recognised by law as an autonomous legal entity. Just as the Whanganui Iwi regard the river as their kin, the Tuhoe Iwi regard the forest as their kin and ancestor (52-5). In their understanding, these natural entities are not mere objects. Several hundred natural entities have legal rights. Andreas Fischer-Lescano (2018, 205) describes the autonomous rights of nature as a legal and political necessity, given the urgency of the environmental crisis. According to Fischer-Lescano (211), being a legal entity means having a specific set of rights and obligations. This varies depending on the legal system: companies have different obligations under national law than they do under international law. This raises a very interesting question: How will the legal personality be accepted by legislations that do not give waters a legal personality? In theory it is quite clear. A legal personality from another legislation has to be accepted. As an example, an English Trust, even though this legal construction does not exist in Switzerland, has the right to be protected by Swiss law. But will this also apply to rivers? A question that the future will have to answer.

However, one thing that is certain to change fundamentally if the Reuss-Initiative is passed and rivers and lakes will be granted legal personality is the fact as Malte Gruber (2007, 1556) writes that environmental protection, which has been understood in anthropocentric terms, must now be guided by ecocentric objectives. This is not merely a matter of legal philosophy, but a fact with practical implications, as demonstrated by the example of the Mar Menor in Spain, which was granted legal personality in 2022 (Vasquez Montesinos 2026, 84). The lagoon is currently asserting its rights in

court, represented by lawyers from various citizens' initiatives and environmental organisations.¹¹

Whilst environmental organisations have so far mostly been able to act only as 'public plaintiffs', the Mar Menor now is a legal entity that has suffered direct harm. As a result, the lagune benefits from procedural rights that were previously denied to environmental organisations, such as the right to object to deals between the prosecution and the accused or to insist on the restoration of the ecosystem (Ax 2026).

3 Changing the Constitution in a Democracy

The Swiss democratic system offers citizens the opportunity to add or change some legal provisions. A popular initiative can be launched at federal or cantonal level in Switzerland.

At the federal level, 100,000 signatures are required,¹² while at cantonal level, depending on the canton, a few thousand are sufficient. In the canton of Lucerne, where the Reuss-Initiative has been launched, 5,000 signatures are required for a constitutional initiative¹³ While it would be desirable to have a popular initiative on the federal level, the sheer number of signatures required makes it a much more challenging and resource-intensive endeavor. Thus, as a first, more reachable goal, the cantonal initiative was chosen to bring the matter into the political discussion. Generally, this process is divided into several phases:

1. Preliminary Examination: The form with the text of the initiative and the members of the committee is submitted to Department of Justice and Security The check ensures the formal correctness of the form, which serves to collect the signatures.
2. Collection of Signatures: To initiate a partial revision of the Constitution, 5,000 valid signatures from eligible voters must be collected within one year. Every signature has to be handwritten and is being checked by the administration
3. Coming into being: The forms with the signatures are delivered to the Department of Justice and Security, which confirms that the necessary signatures have been collected.

11 The landmark court case concerning the Mar Menor lagoon in Spain was adjourned shortly after it began on 20 May 2026. The reason was the absence, due to illness, of a key expert. A new hearing date was set for 23 September 2027.

12 Art. 139 BV.

13 §20 KV Luzern.

4. Government Report & Parliamentary Recommendation: The Government issues a detailed report. It declares whether it considers the initiative valid and whether it recommends its acceptance or rejection
5. Validation by Parliament: The Cantonal Parliament formally declares the initiative valid. It can be declared invalid if it violates superior law (Federal or International Law).¹⁴ The Parliament then decides whether to recommend the initiative for adoption or rejection.
6. Counter-Proposal: The parliament has the right to submit its own version (a counter-proposal) to the voters alongside the original initiative.
7. Popular Vote: The final decision is made by the electorate. Since it is a cantonal matter, a simple majority of the voters is sufficient for the amendment to take effect.

By the time of submission of this article [Summer 2026], the initiative is at the end of its second phase, meaning the necessary signatures have been collected and the government is elaborating its report to the parliament.

4 The Learnings from the Rights for Primates-Initiative in Basel-Stadt

The Reuss-Initiative is not the first popular initiative in Switzerland, aiming to give fundamental rights to non-human nature. However, as seen above, launching an initiative at the cantonal level means that if it is not to run the risk of being declared invalid, it must be compatible with federal legislation. That is why the learnings from the primates-initiative, which sought to protect the fundamental interests of non-human primates in life and physical integrity (Fasel et al. 2016, 3), are fundamental and valuable for the Reuss-Initiative.

The organisation Sentience learned this the hard way in the canton of Basel-Stadt, where it called for fundamental rights for primates

14 In addition to this first compliance-check, there is a second one on the federal level: If the cantonal initiative is accepted by popular vote, the proposed changes to the cantonal constitutions are implemented. Because of the federal organisation of Switzerland, these changes need to be 'guaranteed' by the Federal Assembly (Art. 51 and 172 BV). If this guarantee is given, the rights granted by the cantonal Constitution are protected by the Federation and their infringement can be challenged before the Federal Supreme Court (Art. 95 of the Federal Act on the Federal Supreme Court [Bundesgerichtsgesetz]).

in its initiative.¹⁵ It had to fight all the way to the Federal Court to ensure that the vote could take place.¹⁶ The reason for this is that animal welfare is regulated at federal level (TschG). And contrary to the name ‘animal welfare’, the law does not primarily protect the welfare of animals, but rather the behaviour of animal owners, by setting out in law the limits within which animals may be used.

The obvious legal dilemma was that if primates in the canton had been granted a fundamental right to physical integrity, the industry would no longer have been protected by the Animal Welfare Act for its animal experiments. However, as federal law takes precedence over cantonal law, this would have resulted in legal incompatibility.

The Federal Court resolved the dilemma by ruling that the referendum must be held, but that if the initiative were accepted, only primates owned by the canton would benefit, while primates owned by private individuals, in particular the chemical industry and the zoo, would not benefit and would therefore not have fundamental rights to physical integrity.¹⁷ Nevertheless, the initiative was rejected by a large majority.

The Reuss-Initiative took an important learning from this first attempt to give legal rights to nature. The piece of nature had to be ‘something’ that falls within the competence of the canton of Lucerne in order to precisely avoid the Bâle effect.

Therefore, it made sense to give legal personality to water bodies as the federal Water Protection Act explicitly leaves the protection of water bodies to the cantons, and it is up to each canton to decide how it wants to implement the provisions of the federal law. It is not sure, if this opinion is shared by the parliament of the canton, why it is still possible, that the Reuss-Initiative will have to fight in court to make sure the people will be able to vote on this important question.

5 Political Considerations When Launching a Popular Initiative

To succeed, popular initiatives need not only to be consistent with existing law, they need also to be accepted by popular vote. Ideas that should succeed in a democracy should therefore not be too progressive.

The assignment of legal subjectivity and fundamental rights to nature is such a fundamental change to the legal system that

15 View website of the popular initiative (Primaten-Initiative): <https://www.primaten.ch/de/>.

16 Bundesgericht, Urteil 1C_105/2019, 16.09.2020.

17 BGE 147 I 183 E. 9.3.

it is rather unlikely to happen from a systems theory perspective. According to Niklas Luhmann (2019, 179), such changes in established systems are rather exceptions.

It is still possible to shift boundaries, expand or restrict the scope of what is reasonable; but once the system has a history, this can only be done selectively, only for certain issues, only in exceptional cases.¹⁸

This theoretical insight is reflected in the democratic reality of Switzerland, where popular initiatives are very rarely accepted by the people. Of the 235 popular initiatives on the national level that were put to the vote, only 26 were accepted by the people and the cantons.¹⁹

This should not be interpreted as an argument for maintaining the status quo. But initiating these changes is not easy. According to Christopher D. Stone (1972, 455),

each time there is a movement to confer rights onto some new “entity”, the proposal is bound to sound odd or frightening or laughable. This is partly because until the rightless thing receives its rights, we cannot see it as anything but a thing for the use of “us” – those who are holding rights at the time.

Societies change from the margins. According to Luhmann (2016, 249), the most likely scenario is that a scandal could create a previously unformulated norm.

Those who react with outrage in such cases and express counterfactual expectations need not expect dissent – almost as if the sense of normality were covered by sacred powers. The genesis of norms follows the Durkheim model, making use of *colère publique*.²⁰

However, according to Durkheim (1893, 110), this anger would have to be shared by the whole of society. For the feelings at stake

18 “Man kann die Grenzen immer noch verschieben, den Zumutbarkeitsbereich ausweiten oder einschränken; aber dies, nachdem das System einmal eine Geschichte hat, nur noch punktuell, nur noch für bestimmte Themen, nur noch ausnahmsweise”.

19 View statistics on national popular initiatives: https://www.bk.admin.ch/ch/d/pore/vi/vis_2_2_5_9.html.

20 “Wer in solchen Fällen empört reagiert und kontrafaktische Erwartungen zum Ausdruck bringt, muss nicht mit Dissens rechnen – fast so, wie wenn der Normsinn durch sakrale Mächte gedeckt wäre. Die Normgenese folgt dem Durkheim-Modell, sie bedient sich der *colère publique*”.

draw all their strength from the fact that they are common to everyone; they are energetic because they are uncontested. What makes them the object of particular respect is that they are universally respected.²¹

Now, it is by no means the case that granting rights to nature is generally accepted. For many, this is a very unfamiliar idea. In the past, it has been shown that progressive ideas are initially supported only by a minority. That is not enough in a democracy. Change requires a majority. In our case, this means that the majority of those who have rights (humans) must grant rights to those who do not (non-humans).

This is quite difficult, following the analysis of Karl Marx and Friedrich Engels (2013, 14): “Political violence, in the true sense of the word, is the organised violence of one class aimed at the oppression of another”.²² In our case, this refers to the political violence of human nature against non-human nature.

Rudolf von Jhering (2003, 5) already saw the goal of law as peace, with struggle as the means to achieve it. “All law in the world has been fought for; every important legal principle had to be wrested from those who opposed it”.²³

Without a struggle for the fundamental rights of nature, nothing will change. According to Luhmann, this struggle for power must take place within the political system. This means that the existing scandalisation as the anger of the minority must become the anger of the majority. To get there, the minority must fight for. Then, according to Jhering (2003, 11), it is a truly romantic idea “that the law forms itself painlessly, effortlessly, passively, like a plant in the field; harsh reality teaches us the opposite”.²⁴

And this is the second key reason for making this flagship project for the rights of nature, with a focus on water bodies. As explained above, *colère publique* (public outrage) is needed to achieve majorities for constitutional change in a democracy.

In our context, this can be illustrated by the example of the Mar Menor in Spain. The Mar Menor was granted legal personality because, at the time of the relevant decision, an unspeakable fish kill shook people up (Osusky 2023).

21 “En effet, les sentiments qui sont en jeu tirent toute leur force de ce fait qu’ils sont communs à tout le monde; ils sont énergiques parce qu’ils sont incontestés. Ce qui fait le respect particulier dont ils sont l’objet, c’est qu’ils sont universellement respectés”.

22 “Die politische Gewalt im eigentlichen Sinn ist die organisierte Gewalt einer Klasse zur Unterdrückung einer andern”.

23 “Alles Recht in der Welt ist erstritten worden, jeder wichtige Rechtssatz hat erst denen, die sich ihm widersetzen, abgerungen werden müssen”.

24 “dass das Recht sich schmerzlos, mühelos, tatenlos bilde gleich der Pflanze des Feldes; die raue Wirklichkeit lehrt uns das Gegenteil”.

Even though thousands of fish continue to die in overfertilised streams in the canton of Lucerne, the disappearance of the fish is less spectacular. The extinction of fish species has been a slow process; the fact that whitefish eggs in overfertilised lakes can no longer find oxygen and die is not visible, not to mention the pesticides and fungicides. Chemicals are increasingly found in drinking water. Groundwater resources can no longer be used without restriction. This has shaken at least part of the population into action.

This is the reason why the Reuss-Initiative calls for fundamental rights and legal personality for water bodies. From a legal philosophy perspective, it would make much more sense to give legal personality and fundamental rights to sentient beings like swine, chicken or cow.

But such an endeavour, which would give these beings a right to exist, would not find majority support in Switzerland's democratic system today. There is a lack of the necessary *colère publique*. Therefore, any campaign that wants to achieve a democratic majority must focus on elements of nature as its basis, that can ignite public outrage. And these elements of nature are water bodies.

At this point, one can see similarities in the fundamental approaches to mobilising the electorate. Teresa Vicente and Eduardo Salazar (2024, 88) describe four factors that drive mobilisation:

The reasons that have led Spanish citizens to propose a popular legislative initiative (ILP) to recognise the legal personhood to the Mar Menor lagoon and its basin, in order to provide this valuable ecosystem with its own rights, are: a) the serious ecological damage it has suffered, b) the ineffectiveness of the current legal regulations that have sought to protect it, c) the inactivity of the public authorities and d) the need to empower civil society to make participation in environmental matters effective.

This reflects the situation in the canton of Lucerne, where water protection laws are also not being observed and not being enforced by the authorities. However, regarding the ecological damage in Lucerne, the banks of rivers and lakes are not yet littered with dead fish, as was the case on the shores of Mar Menor, which sparked widespread public outrage. The greater the environmental damage, the greater the support for fundamental legal reform.

Even voters who have hardly dealt with the concept of the rights of nature can see that this legal approach can improve a fundamental problem, namely the protection of drinking water, which is in danger and of huge importance.

However, this is an important lesson to be learnt from the Mar Menor case: simply granting legal personality and fundamental rights to bodies of water is not enough to bring about a sustainable improvement in their biodiversity and protection. Paula Vasquez

Montesinos (2026, 87) identifies the following three challenges that threaten the sustainability of the Mar Menor case.

First, the river ecosystem has been given private legal status without assets. The new entity lacks initial funding, relying solely on subsidies and donations. This raises doubts about its long term operational capacity. Second, is the complex governance structure. With 56 members and multiple committees, decision-making is slow and cumbersome. The power of the civil society groups, which led the effort to get legal personhood recognition, has been diluted with industry and governmental representatives [...] Finally, government itself has limited responsibility.

The Reuss-Initiative has an answer to all three challenges: First, the waters will have a public legal status instead of a private legal status; the committee of the initiative proposes a public law corporation, which must be created by the canton to represent the waters. Second, the initiative requests efficient and independent governance. Therefore, the appointment of industry or governmental representatives would not be possible. Finally, the government will remain responsible for ensuring compliance with and enforcement of the legislation. The key difference to the actual situation will be that, should the government fail to fulfil this duty, the water bodies will be able to take legal action against the government.

This is also a learning from the Ecuadorian Case. In 2008, Ecuador became the first country in the world to enshrine the rights of nature in its constitution. Madera and Pasquel (2026, 56) write, that despite this comprehensive protection, organisations such as the Colectivo Rescate Río San Pedro (San Pedro River Rescue Collective) must campaign on a voluntary basis to ensure that these rights are actually upheld.

Belen Parco Fuentes (2026, 74) sees this as one of the key problems in implementation. The constitution just serves as a basis for activists campaigning to protect the biodiversity of rivers, as despite a respective legal framework, “water quality is severely compromised, due to the pollution that affects major Ecuadorian rivers”. The responsibility lies with the government – as is the case in Switzerland at both national and regional level – and if it fails to act, activists have to organise themselves and campaign for the rights of nature. That is why the Reuss-Initiative calls not only for the rights of water bodies to be enshrined in the Constitution, but also for effective and competent representation. Only a small, efficient, expert body with legal and financial safeguards can ensure that the constitutional article does not remain a dead letter.

In her analysis of the rights of nature in Ecuador, Tina Rametsteiner (2025, 162) also points out that the academic literature

takes a critical view of the idea that any individual can act as a representative of nature. The rights of nature are therefore often used merely to bolster legal claims that are intended to protect human rights. Originally, the Defensoria del Ambiente y la Naturaleza (Public Defender's Office for the Environment and Nature) had been envisaged, but this was never established. Instead, the Defensor del Pueblo (Public Defender of Human Rights) was granted the right to demand compliance with the rights of nature (164). Although Ecuador's Rights of Nature have only slowly found their way into legal practice, the Constitutional Court has ordered numerous remedial measures. For example, it has ordered that mining operations in a threatened cloud forest must not continue and that infrastructure already in place must be removed (170).

Progressive causes rarely find support among more than a third of the population. If you want to win a majority at the ballot box, you need allies. In this case, these are, on the one hand, those who are concerned about the quality of their drinking water. Another important group are those who are concerned about the biodiversity of our waters. These include many fishermen, as was evident when signatories were being collected. This is not surprising, given that many fish species have become extinct in Switzerland; between other salmon, sea trout, allis shad and river lamprey. These were fish that migrated from the North Sea via the Rhine, Aare and Reuss rivers to Lake Lucerne. Today, these river migration routes are so obstructed that fish cannot pass through. In addition to river engineering, chemicals are a major cause of the disappearance of fish and fish species, according to Armin Peter (2007, 209). In general, fish are no longer as abundant in most watercourses as they used to be. Intensive use, deterioration in water quality and human-induced changes to water bodies have reduced fish stocks.

Until now, this has mainly affected fishermen, with little awareness among the public. However, drastic measures are beginning to change this. Since November 2025, for example, perch and pike from Lake Zug may no longer be sold because they are contaminated with per- and polyfluoroalkyl substances (PFAS) to a degree that is harmful to health (Hess 2025, 23). The Business Audit Committee of the National Council considers it extremely problematic that groundwater protection law is still not being systematically applied, even 50 years after it came into force and 25 years after its last revision.

Several studies conducted in recent years show that many cantons have significant deficits in the implementation of groundwater

protection planning.²⁵

The question is whether these findings will trigger the aforementioned public outrage, leading to a rethink and helping nature to assert its rights. On the one hand, this information is being disseminated by environmental protection organisations such as the Rechtsperson Reuss association. On the other hand, stakeholders from agriculture and industry are attempting to counteract this public outrage in a counter-movement. For example, Johanna Gapany, member of the Council of States, has proposed that pesticide residues in waterways be measured less frequently.²⁶ Leo Müller, member of the National Council, wants to make it more difficult for the Federal Council to ban plant protection products with his motion.²⁷ In addition, no limit value is to be introduced for the highly toxic pesticide deltamethrin, due to pressure from the Swiss Farmers' Union (Klee, Ramser 2025). All this serves to conceal the poor condition of our water bodies, withhold information about the situation from the population and thus nip any public outrage in the bud.

6 Final Thoughts

While the outcome of the described initiative is unsure, the public debate has been launched. Assuming that the initiative is affirmed as compatible with superior law by the cantonal parliament, the initiative raises fundamental questions about the relationship between humans and their environment. The previous conception of nature as an object that solely serves the interests of humans (and in political reality, specifically certain interest groups) is being put to the test. Fundamentally, it is a matter of the heart: Do we regard nature as a lifeless commodity that must be categorically subordinated to human interests, or do we recognise it as a counterpart with interests, needs, and – in the spirit of the initiative – its own rights? For us, the answer is clear: Nature deserves the legal status it already holds in social and emotional reality. As our habitat and our basis of life, it does not constitute a mere object of law, but a cooperative partner in the pursuit of sustainable prosperity.

25 "Mehrere Studien aus den letzten Jahren zeigen, dass in vielen Kantonen erhebliche Defizite beim Vollzug des planerischen Grundwasserschutzes bestehen". GPK Nationalrat. *Grundwasserschutz in der Schweiz*. Bericht der Geschäftsprüfungskommission des Nationalrates. Bern, 28.6.2022, 4.

26 View motion from Johanna Gapany: <https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaefft?AffairId=20253154>.

27 View motion from Leo Müller: <https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaefft?AffairId=20244589>.

Abbreviations

BGE = Bundesgerichtsentscheid (Decision of the Federal Court)
BV = Bundesverfassung (Federal Constitution)
GPK = Geschäftsprüfungskommission (Business Audit Commission)
GschG = Gewässerschutzgesetz SR 814.20, 24.01.1991 (Water Protection Act)
KV = Kantonsverfassung (Constitution of the Canton)
OR = Obligationenrecht, SR 220, 30.3.1911 (Swiss Code of Obligations)
PFAS = Per- and polyfluoroalkyl substances
SR = Systematische Rechtssammlung (Classified Compilation of Federal Law)
TschG = Tierschutzgesetz SR 455 16.12.2005 (Animal Welfare Act)
USG = Umweltschutzgesetz, SR 814.01, 7.10.1983 (Environment Protection Act)
ZGB = Zivilgesetzbuch SR 210, 10.12.1907 (Swiss Civil Code)

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The Watery Commoning Legal and Artistic Practices at the Limits of Representation

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Abstract This article traces Corpi Idrici, a transdisciplinary artistic research collective formed in Genoa in 2021, through situated practices around the city's hydrographic infrastructures. At the centre, the *Charter of the Rights of Hydro Bodies* is conceived as a performative, collective device continuously rewritten through use and situated activation. The Charter remains close to grammar of law while exposing how legal and artistic representation may stabilise, reduce, or betray relations they seek to support. 'Orthopedics of water' and lingua franca are 'fabulative' tools to question how hydro-social worlds are translated, governed, represented.

Keywords Charter of the Rights. Hydro bodies. Orthopedics of waters. Situated practice. Somatic listening. Place-based art research.

Summary 1 Introduction: Wet Practices Nearby Genoa's Hydro Bodies. – 2 Guardians, Ventriloquists, and Other Interfaces. – 2.1 *Charter of the Rights of Hydro Bodies*. – 2.2 Registers Beyond Personhood. – 3 Epistemic Shift: From Commons to Commoning. – 4 Situated Practices Before Representation. – 4.1 Sensing, Handling, Withholding. – 4.2 Infrastructural Frictions: Low Frequencies and Waterways as 'Companions'. – 5 Orthopedics of Water: Correction, Care, and Hydro-Infrastructural Bodies. – 6 A Lingua Franca of Hesitation.



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To the cloudbursts that dwell within us. To those who
recede into the subterranean. To submerged waters
and ghostly infrastructures. To what hesitates before
taking the form of language. To all 'non-subjects' and
to the impossibility of capturing everything.

1 Introduction: Wet Practices Nearby Genoa's Hydro Bodies

If science fiction is the mythology of modern technology,
then its myth is tragic.
The 'hero' invents the weapon, the monster, the enemy;
the story ends in domination or extinction.
But there is another story to tell.
Not the story of the spear or the sword,
but of the container.
A story of gathering rather than killing,
of holding rather than conquering,
of carrying what is fragile, alive, unfinished.
(adapted from Ursula K. Le Guin,
"The Carrier Bag Theory of Fiction")

This text aligns itself with that other story evoked by Le Guin: a story of gathering rather than conquering, of holding rather than mastering, and of carrying fragile, unfinished relations.

Before beginning to read, we ask you to listen, to immerse yourself into the murmurs, flows, frictions, and interruptions that compose the hydro-landscape of the city of Genoa.¹ These voices are more than documentation, illustration, or ancillary material. They constitute a method: a way of thinking with water and of writing from within a field of relations where human and more-than-human agencies continuously shape one another. Listening, here, precedes and unsettles language.

Between 2021 and 2025, Corpi Idrici developed a series of situated encounters with Genoa's hydrographic network: territorial traversals along accessible and obstructed waterways, listening exercises near

¹ Stretched between sea and mountains, Genoa has developed in length (with its approx. 35 km it is one of longest cities in Italy) and is crossed by over 70 streams, rivulets and brooks that for urban and industrial reasons have been 'tomed' since the Middle Ages. Recalling their names - at least the most 'important' ones - allows a reconnection with them, often activated only via toponymy or floods: Stura, Cerusa, Leira, Branega, San Pietro (o Foce), Varenna, Chiaravagna, Rexello, Marotto, Molinassi, Cantarena, Gandolfo, San Pietro, Polcevera, Verde, Burba, Trasta, Pianega o Fegino, Riccò, Secca, Goresina o Geminiano, Torbella, Maltempo, San Bartolomeo, San Lazzaro, San Teodoro, Lagaccio, Sant'Ugo, Carbonara, Sant'Anna, Torbido, Bisagno, Canate, Torbido, Geirato, Trensasco, Cicala, Veilino, Lentro, Fereggiano, Noce, Vernazza, Sturla, Priaruggia, Castagna, Bagnara, San Pietro, Nervi. Their voices blend with the sound of the sea in the soundtrack that accompanies the reading - Immerse - result of a possible alternative mapping of the territory made by Corpi Idrici and Zones Portuaires collective. The sound piece is accessible at: <https://medliq.art/immerse/>.

buried streams, public assemblies, experimental workshops, archival inquiries, and collaborative drafting sessions.²

This article emerges from that field.

Corpi Idrici (hydro bodies) is a collective of transdisciplinary research formed in Genoa in 2021 at the intersection of contemporary art, situated knowledge, and grassroots environmental struggles. We came together not as a pre-existing group with a defined programme, but thanks to the invitation by Forevergreen³ and as an ongoing process of investigation: through walking, listening, mapping, recording, and drafting alongside waterways, infrastructures, meetings with activists, residents, technicians, and ecologies that inhabit the urban watershed. Our collective identity is therefore less a stable structure than a porous assemblage – one that takes form through encounters and shared practices.⁴

The whole project began with a simple but urgent question: how might we think about water not only as a resource, landscape, or environmental issue, but as a political and relational subject capable of generating forms of collective imagination and action? In Genoa – a port city shaped by floods, industrial transformations, privatisations, and persistent conflicts over access, safety, and ecological justice – water is neither abstract nor metaphorical. It is material, infrastructural, and contested. Streams have been buried, diverted, or channelled underground; rivers have overflowed with devastating consequences; coastal areas have been reshaped by logistics and extraction. At the same time, numerous local associations and informal groups have long worked ‘from below’ to defend commons, resist speculative development, and reclaim waterways as shared spaces of care and knowledge.

Corpi Idrici developed in dialogue with these struggles, through fieldwork embedded in local networks of activism and everyday knowledge.

2 Authors are part of the Corpi Idrici: Anna Daneri, Nuvola Ravera, Lucia Bergamaschi, opting for a collective writing, modulating different voices following shared perspectives. The article is accompanied by a visual contribution by Nuvola Ravera, consisting of a drawing made with closed eyes and a graphic manipulation of the *Charter of the Rights of Water Bodies*, conceived not as illustrations but as another mode of inquiry. Through lines, densities, and interruptions, the drawings attempt to trace relations – between water and human bodies, infrastructures, flows, and struggles – that exceed linear narration or analytical description.

3 For more information, see the webpage at: <https://www.forevergreen.fm/>.

4 The composition of Corpi Idrici has been fluid since its foundation, due to the invitation by curator Anna Daneri and Alessandro Mazzone to a core group of artists researchers: Gaia Cambiaggi, Matteo Manzitti, Anna Positano, Nuvola Ravera and Nicolò Servi, extended to actual member Lucia Bergamaschi. Over the years, other members have joined the collective: Matteo Casari, Elisa Giuliano, Juan López Cano and Annalisa Gatto. See the Corpi Idrici webpage at: <https://corpiidrici.it/>.

The explorations allowed Corpi Idricito experience diverse forms of relation with Genoa's waters. One was subtractive: walking inside the Ferreggiano spillway as the first artistic research group temporarily inhabiting this hydraulic infrastructure. Another was embodied: witnessing the specific ecosystem created by the Molinassi stream, the last waterway that once flowed relatively freely into the harbour before being tombed by shipbuilder Fincantieri.

We called these 'wet practices': modes of research shaped by water's ways of leaking, staining, sheltering, remembering, and obstructing. In Genoa, *wet* meant also sweaty walks along buried rivers; small lakes inhabited by the Ecuadorian community as Summer bathing places and open-air gardens, where the group relearned a proximity to freshwater often eclipsed by the city's tourist and maritime imaginary; childhood memories of playing in water; and water perspiring through the walls of ground-floor *bassi*. Through these encounters, wet practices followed affective traces, entangling infrastructures, bodies, memories, sounds, legal categories, and conflicts.

Through this slow, situated process, we began to understand the complex hydro bodies system in Genoa as a living archive – one that holds sedimented personal memories, histories of labour, migration, extraction, floodings and resistance.⁵

It is within this context that the *Charter of Rights for Hydro Bodies* emerged.⁶ The Charter did not begin as a fixed document to be drafted and signed. It started as a series of conversations around the possibility of granting legal, political, and symbolic recognition to waterways as subjects rather than objects of governance. In dialogue with debates on the rights of nature, commons-based movements, and feminist and decolonial methodologies of situated knowledge, we approached the Charter as an open framework – a tool for collective thinking rather than a normative declaration. Writing the Charter meant drafting with water: allowing the text to be shaped by encounters in the field, by testimonies, by conflicting positions, and by the unpredictable rhythms of environmental processes themselves. Each article emerged from specific situations – flood memories, maintenance disputes, struggles for public access, negotiations with municipal infrastructures. In this sense, the Charter functions as a living score: a provisional composition that records relationships and renders them actionable.

Importantly, the Charter has never remained only on the page. As the collective process expanded, it progressively shifted from a written declaration into a performative and situated practice

⁵ For a more detailed recollection of this process see Daneri, Ravera 2021.

⁶ Corpi Idrici (2021). *Charter of Rights*. <https://corpiidrici.it/charter-of-rights>.

of commoning. Performance here is understood not primarily as theatrical presentation, but as a mode of doing: a way of activating rights through collective gestures, workshops, assemblies, walks, and shared rituals. This occurred, for instance, at Fondazione Feltrinelli in Milan, where the Charter was collectively read through a symphonic activation with embodied references to Lygia Pape's *Divisor* (1968) and material traces from explored waterways. Other contexts, such as Spazio Hydro/Fondazione Pistoletto in Biella, extended this activation through listening, drawing, photography, and situated embodied practices.

Each time the Charter is shared, collectively read, translated, debated, or adapted to new contexts, it generates new situated forms of engagement. This approach has recently taken shape through *Transgeographical Hydro Bodies*, a transnational artistic and research initiative connecting different European watersheds through situated practices and public formats, including broadcasts *Hydro Bodies Assembly Podcast*,⁷ performances, and collective assemblies developed with local communities across Europe.

One outcome of this process is the *Transgeographical Hydro Bodies/Hydro Bodies Assembly*, operating as an aural assembly space where the different presences gathered through the process can resonate, interfere, and become mutually audible. Sound became a relational and political medium: as a non-visual form of representation, it rendered perceptible inaccessible streams, buried flows, drainage rhythms, and forms of attention usually excluded from legal and activist language.⁸

Earlier phases of Corpi Idrici were intertwined with local grassroots movements such as Gli Amici del Ponte Carrega⁹ and Con i piedi per terra,¹⁰ whose struggles around environmental justice and public infrastructures shaped the Charter as an open and revisable tool.

Our roles within Corpi Idrici as curators, artists, scholars, researchers, activists have similarly shifted through this process. During the collective process curation became a form of maintenance: holding space for relationships to unfold, mediating between heterogeneous temporalities, and supporting with alternating results the not always easy path of a shared authorship. The boundaries between curating, researching, organising, and writing blur.

7 For more information, see the webpage at: <https://cashmereradio.com/episode/cashmere-specials-hydro-bodies-assembly-podcast/>.

8 Corpi Idrici (2025). *Transgeographical Hydro Bodies*. <https://performeurope.eu/project/transgeographical-hydro-bodies/>.

9 See the webpage at: <https://www.amicidipontecarrega.it/>.

10 See the webpage at: <https://www.facebook.com/Conipiediperterra.Genova/>.

From the outset, representation posed a problem, together with the possibility that every attempt to speak for hydro bodies might also entail a form of betrayal: a reduction, displacement, or stabilisation of relations that remain processual, contested, and partially inaccessible. How could we avoid speaking for others while still creating shared platforms of articulation? How could artistic and curatorial work contribute to collective processes without appropriating them? These questions prompted a shift from representation as depiction toward representation as practice: something enacted, negotiated, and continuously revised through participation.

This text is written from within that circulation. Authorship remains shared and layered, shaped by distinct voices, encounters, and shifting responsibilities. The ‘we’ that speaks here is multiple, situated and not unified.

By foregrounding fieldwork and charter-writing as intertwined practices, this article reflects on the politics of representation in socially engaged art and research: how knowledge is produced with a territory, how writing becomes collective negotiation, and how legal or quasi-legal forms can be reappropriated as artistic and political tools.

Following the lesson of Algerian feminist writer and filmmaker Assia Djébar and her *Femmes d’Alger dans leur Appartement* (1980), we are “not claiming to ‘speak on behalf of’ or worse, ‘speak about’, but committing to ‘speak nearby’”.¹¹

We invite the reader to approach this text as one might approach a river: entering at different points, following currents, allowing for detours and confluences. Because water bodies do not simply flow through/under the city. They draft it. And, in drafting with it, we attempt to trace other possible forms of living, organising, and representing together.

2 Guardians, Ventriloquists, and Other Interfaces

This commitment to ‘speaking nearby’ gradually revealed that issues of perception and participation were inseparable from broader social and political questions concerning access, responsibility, and collective forms of relation. These questions, in turn, became articulated through juridical categories of representation, property, and protection. Can rivers have a private interest in owning themselves? Who is entitled to mediate these legal interests, and what kinds of interests can water bodies be said to have? Who or what remains outside the act of protection? Should legal frameworks

¹¹ Unless otherwise stated, all translations are by the Authors.

instead recognise their agency – capacity to act – and see them as (legal) persons?

Within this process, the Corpi Idrici can also be understood as an exercise of speculative jurisprudence: a form of legal imagination that does not seek immediate inscription within positive law, but rather interrogates the techniques, fictions, and dispositifs through which law produces, recognises, or excludes subjects. Here, speculation – understood as the possibility of imagining future scenarios – did not emerge from an abstract theoretical position, but as a situated and an artistic research practice developed – as said – along the hydrographic infrastructures of Genoa: rivers, buried streams, canals, flood-control systems, pipelines, and water management architectures that structure the city while remaining largely invisible or taken for granted.

As mobilized here, speculative jurisprudence does not aim to replace existing legal frameworks nor to propose a ready-made alternative legal order. Instead, it functions as a critical and exploratory space in which law is understood as a performative technique: a set of operations that qualify natural processes as social facts and, in doing so, reproduce – *prima facie* – the separation between subject and object, person and thing, nature and culture. This understanding resonates with scholarship that reads law not primarily as a normative system, but as a technology of qualification, capable of transforming phenomena into juridically intelligible entities and sites of imputation (Spanò 2020).

2.1 Charter of the Rights of Hydro Bodies

The *Charter of the Rights of Hydro Bodies* originated in 2021 from an invitation by artist Nuvola Ravera to draft a legal document that could accompany and sustain the practice of the newly formed Corpi Idrici. A smaller working group – composed by Nuvola Ravera, explorer Nicolò Servi, and Lucia Bergamaschi – engaged in a year-long process of research, field exploration, and continuous rewriting.

One of the first questions concerned juridical form itself: what kind of legal document could register the intentions of a collective working in relation with hydro bodies, while remaining open to speculation, artistic and situated practices? Early references included *La Nazione delle Piante* by Stefano Mancuso, which opens with a constitutional charter grounded in the sovereignty of all living beings. While this text offered an important point of departure, it also revealed certain limitations. Centering protection exclusively on ‘living beings’ risked reproducing new exclusions: what juridical space remains for rivers, stones, sediments, minerals, or atmospheric formations whose existence exceeds the category of life while still participating in it?

Rather than conceiving the Charter as a constitutional instrument, or a proposal aimed at institutional recognition, it was approached as a declarative form: a declaration of intent, a legal-poetic manifesto attentive to juridical language and structure while remaining open to revision, collective use, and interpretations [fig. 1].



Figure 1 Corpi Idrici, Bodies of Water. Charter of Rights / Carta dei Diritti dei Corpi Idrici. 2021-ongoing. Digital print with superimposed digital drawing intervention, variable dimensions. Graphic version intentionally rendered partially illegible through a digital drawing intervention, foregrounding opacity and resisting full juridical readability. Image courtesy of the artists

The declarative form allowed us to remain within the grammar of law without assuming its authority or finality, and at the same time to work *within* the declaration itself – returning to it, rewalking it, redoing it, recoding it, and transgressing it.

This decision emerged from a concrete confrontation with existing legal frameworks governing landscape protection, biodiversity, public infrastructure, and water management, alongside the failure to recognize water as a commons within Italian legislative discourse. Because legal language continues to shape use, ownership and protection, remaining within juridical forms also meant opening a space in which residents, activists, artists, and researchers could engage with the performativity of legal institutions, renegotiate their shared meanings and explore law as a set of techniques that produce concrete effects while expanding the horizons of legal imagination. In this sense, juridical concepts functioned as legal figurations: provisional forms that make relations visible and thinkable without necessarily coinciding with normative solutions.

As with the Declaration of the Rights of the Child, the *Charter of Hydro Bodies* functioned as a way to affirm, in legal form, an urgency in a precise historical moment and to follow its developments over time. Rights that today appear self-evident – such as the child's right to education – were not obvious a century ago, and their legal recognition has not eliminated violence or asymmetries of power. Similarly, the Charter does not resolve extractive relations to ecosystems, nor the power dynamics and inequalities through which they are reproduced; rather, it renders these relations legible and contestable. Its symbolic status, far from being a weakness, became a methodological stance: focusing on processuality rather than enforcement; testing the limits of legal representation; and working within a familiar and widely shared form – the 'charter of rights' – in order to draw listeners closer and make urgency appear. The work unfolded at the intersection of empirical research and juridical imagination. Every member of the collective engaged in field research along Genoa's rivers and waterways, collecting observations, archival materials, and testimonies, while also studying juridical precedents and other techniques of legal documentation. These explorations revealed how access to water is materially constrained by urban infrastructure, private property, and safety regulations. Riverbanks are often inaccessible, concretized, or enclosed, making any form of relation – human or non-human – difficult or impossible. These encounters directly informed the drafting of specific articles of the Charter, such as Article 6: "Access and the Right to Relation". The article acknowledges that water bodies formally belong to the public domain while remaining materially subtracted from collective use and encounters. It therefore recognizes riverbanks, beds, and fluvial margins as spaces of passage and coexistence between species. As

stated in the Charter: “The possibility of having direct contact with them must be guaranteed for obvious reasons of environmental, cultural and social well-being”. The emphasis on social relation became particularly important during the drafting process, since protection often privileged historical values, landscape preservation, or biodiversity, while remaining largely silent on people’s (present) relationships to place (relegating collective, affective, and social dimensions to secondary or progressively enforceable forms of recognition).

Parallel to this situated research, the collective engaged with international and transnational cases in which nature or ecosystems have been recognized as legal persons or subjects of rights. These include the recognition of *Pachamama* in the Ecuadorian Constitution (2008), as well as the widely publicized case of the Whanganui River in Aotearoa New Zealand. Long considered a living entity by Māori communities, in 2017 the river was granted legal personhood, with two guardians – one appointed by the Crown and one by the Iwi – acting as its legal representatives. More recent developments in Europe, such as the recognition of the Mar Menor lagoon in Spain (2023), further attest to the diffusion of rights of nature frameworks in response to environmental degradation.¹²

These cases provided juridical and imaginative references, while simultaneously raising unresolved questions about how water bodies could be represented and governed through juridical forms, and whether protection can be articulated beyond legal subjectivity alone. One concerns the translation of Indigenous cosmologies and legalities into state law. This process risks re-encoding relational and cosmological principles within a liberal, Western legal model – an operation that is always partial and potentially extractive. A second, more strictly juridical question concerns legal subjectivity itself. Although often presented as a pragmatic solution, legal personhood remains closely tied to individuality, representation, and patrimonial logic.

For this reason, Michele Spanò has proposed alternatives that displace the subject-centred paradigm – for instance *trans-subjective rights*, or legal operations that invert the hierarchy between rights and interests: shifting protection from individual entitlement to collective concern. The legal subject, however, is an entirely different technique: a centre of attribution designed to allocate positions, debts, and patrimonies – rather than a device capable, on its own, of producing a shared and stable form of ecological repair (Chiaramonte, forthcoming).

12 For more cases see: GARN Academic Hub (2023). *Eco-jurisprudence Monitor*. <https://ecojurisprudence.org/?map-style=political>.

Within the *Charter of the Rights of Hydro Bodies*, these tensions are addressed not by rejecting legal personhood, but by questioning its adequacy. As stated by Maria Rosaria Marella, Professor of Law at Roma Tre University, during the event *Fluviale. River as a Common* (2022), personhood is situated within the broader, longstanding dilemma between protections oriented toward “things” and those oriented toward “subjects”. Modern law – largely anthropocentric – protects through the subject-and-rights couplet, and this mediation immediately raises the classic problem of representation. When the right-holder cannot act, someone must act on its behalf, and that representative may not coincide with the collective interests that gather around a resource. The Whanganui case is an example of legal personhood used to counter dispossession and translate Māori relationality into a form the state could recognize, yet it also relied on guardians and procedures of voice. Marella thus asks under what juridical forms a river can be protected as a commons – in ways that articulate and sustain the stratified collective interests that depend on it.

For this reason, the *Charter of the Rights of Hydro Bodies* deliberately refrains from identifying a single river or hydro body as its subject. Instead, it addresses the entire complex of surface and subterranean hydro bodies, composed of rivers, streams, underground water bodies, and their surrounding habitats, as well as the infrastructural systems – pipes, channels, networks – that co-exist with and inhabit Genoa’s urban space. This can be read as a form of reappropriation of space, countering the fragmentation inherent in legal recognition, where protection is often granted to isolated entities or ‘untouched’ reserves while excluding the broader ecological networks that, in Genoa’s case, include the city itself as a living assemblage. By foregrounding relations rather than entities, the Charter seeks to avoid reproducing the exclusivity often embedded in rights-based frameworks.

The drafting process itself became a form of inquiry. Starting from existing legal texts – such as the Italian Constitution – we selectively extracted articles related to environment, landscape, water, and natural resources in order to identify absences and blind spots. This work made visible a recurring pattern: ‘nature’ tends to appear as landscape, environment, biodiversity, or ecosystems – an object to be protected as if it were separate – while the social dimension is either absent or indirectly framed through public health and psycho-physical wellbeing.

This instrumental logic echoes what Emily Jones identifies as a structural limitation of rights regimes and their enforcement. In “Can the Rights of Nature Transform the Way Rights Are Conceptualized in International Law?” (2024), Jones argues that environmental law – much like international law more broadly – remains profoundly

anthropocentric: it tends to frame protection as humans' right to a healthy environment, rather than protecting nonhuman beings' conditions of life or the environment's own health. This limitation is reinforced by the historical architecture of International Human Rights Law (IHRL), where civil and political rights have often been treated as primary, while economic, social, and cultural rights have been relegated to progressive realization and weaker enforceability – a hierarchy Jones links to the Cold War context of treaty-making. As pointed, Rights of Nature can be read as a potential challenge of this model, shifting rights from an individualistic frame toward a collective and relational one (often articulated through community rights) and, in doing so, fostering IHRL to a wider range of relationships between human and nonhuman beings and their shared environments.

2.2 Registers Beyond Personhood

A central tension throughout the project concerns the problem of representation, emerging directly from the Charter's attempt to work within juridical language while simultaneously questioning its adequacy. The issue therefore shifts from juridical representation alone toward a broader epistemic problem: how relations become translated, mediated, and rendered intelligible through legal, artistic, and political forms. To speak for a river, an ecosystem, or even for the collective itself is to occupy a position that is always partial – and potentially violent. Even when motivated by care, representation risks reproducing the exclusions it seeks to remedy. Stone's proposal of guardianship offers a procedural response to this dilemma, yet it does not resolve the epistemic gap between representation and lived ecological processes (Stone 1972). The point becomes concrete in *Sierra Club v. Morton*, where standing depended on a human injury: even when "nature" is at stake, law still requires proxies (Stone 1972).¹³

This is where Astrida Neimanis' essay "No Representation without Colonisation? (Or, Nature Represents Itself)" (2015) becomes crucial. Neimanis argues that representation is never innocent: speaking for more-than-human worlds may enable political claims, yet it also risks colonising, extracting, and silencing whenever it detaches "representation" from the agencies and material processes it claims to speak for (Neimanis 2015). A posthuman politics of representation therefore shifts the question from who may speak for a river to how

¹³ For further discussion, see: <https://iseethics.wordpress.com/wp-content/uploads/2013/02/stone-christopher-d-should-trees-have-standing.pdf>.

speaking-with can be practiced without reinstating mastery – through accountable mediation that acknowledges distributed agency and material co-implication, and remains answerable to place and to the harms that traverse it.

The collective's work remains deliberately situated within this unresolved tension. Rather than claiming to give voice to hydro bodies, the Charter foregrounds the problem of representation itself, acknowledging the risk of betrayal inherent in any act of advocacy. By betrayal we mean the small violence of mediation: the passage through which an unstable relation becomes a legal article, an image, a recording, a sentence. The term marks the cuts that make relations shareable, and at the same time governable. At the same time the Charter serves as a familiar tool – as said – to politically engage people with the ontologies and epistemologies of Genoa waters and the law.

In this sense, the project also takes into account Michel Serres' idea of a *Natural Contract*: a reciprocal, symbiotic pact that treats the Earth as a partner in law, framing environmental relations through reciprocity and co-dependence rather than ownership and extraction (Serres 1995). A similar question emerged through references to activist practices centred on territorial occupation and commoning. The recurring refrain “we are nature defending itself”, circulating in some activist and artistic contexts – including gatherings of European river representatives at the Confluence of European Water Bodies – shifts the question from representation understood as spokespersonship toward situated forms of inhabitation and collective responsibility. representation understood as spokespersonship toward situated forms of inhabitation and collective responsibility. From this perspective, practices of territorial occupation and commoning – such as the *Zone à Défendre* (ZAD) (Fremaux 2021) mobilizations against large-scale infrastructural projects – matter not because activists position themselves as spokespersons for “nature”, but because they enact alternative ecologies grounded in commons rather than property. By embedding themselves in place – materially, legally, and politically – participants become part of the ecological assemblage they defend through presence, inhabitation, and territorial attachment.

Taken together, these examples bring the discussion back to the question that animates this article: whether environmental protection must pass through legal subjectivity and representation, or whether it can also be practised through interdependence, collective use, territorial bounding, and shared vulnerability.

Drawing on Spanò's work, the Charter resonates with approaches that shift attention from subjects to relations, from ownership to use, and from individual rights to shared responsibilities. Ecosystems can be understood as sites where relations converge without requiring

full juridical subjectivity, opening space for ‘trans-subjective’ forms of protection oriented toward collective interests rather than individual entitlements. In this sense, hydro bodies are approached not as autonomous entities seeking recognition, but as assemblages in which human and non-human actors, temporalities, and vulnerabilities intersect. A river divided into sections produces effects upstream and downstream; ecological damage cannot be confined to individual interests without obscuring its systemic nature. This relational understanding challenges legal compartmentalization and invites alternative modes of governance grounded in care, responsibility, and long-term coexistence.

By situating legal imagination within embodied practices, affective cartographies, and collective explorations, Corpi Idrici foregrounds a fundamental question: not only whether water bodies should become legal subjects, but how legal techniques might be reconfigured to respond to ecological entanglements without reproducing the exclusions they seek to overcome. The *Charter of the Rights of Hydro Bodies* thus remains intentionally open-ended, inhabiting the tension between law and care, representation and relation, protection and reduction – as a site of ongoing inquiry rather than resolution.

3 Epistemic Shift: From Commons to Commoning

Within Corpi Idrici’s artistic research with Genoa’s hydro bodies, the juridical tensions outlined in the previous section also become questions of perception, attention, and posture. Water enters the work through situated encounters shaped by urban infrastructures, prohibitions, distances, and uneven conditions of access. Representation therefore emerges as a practical condition of the research: a matter of *how* bodies, practices, and languages place themselves in relation to a material field that is processual, reactive, and resistant to full capture. Questions of definition, protection, and recognition remain present; the discussion follows the unstable conditions through which relations with water are made, interrupted, and renegotiated. The passage from water understood as a commons, an object to be preserved or safeguarded, towards processes of commoning foregrounds relations rather than entities, practices rather than properties, and conflict rather than harmony.

From this perspective, the question at stake is how relations with water are practically enacted and thus what water became, how it is defined, recognised, and finally protected and what is interrupted and denied within this framework.

Commons cannot be reduced to ideals of reciprocity or shared ownership. They are not natural states, nor expressions of an original or unified community. Commons are historical, situated, and

contested processes, shaped through concrete struggles, exclusions, negotiations, and material constraints. They emerge and persist only insofar as they are actively practiced, defended, and reworked in relation to broader regimes of governance, economy, and law.

Seen in this light, legal and artistic representation operate as forms of governance. They are not neutral tools that merely reflect or translate existing relations, but active interventions that participate in shaping how commons are produced, stabilised, or neutralised. To represent water legally or artistically is already to prioritise certain uses, voices, temporalities, and scales over others; to render some forms of relation legible while obscuring or marginalising others.

Naming water as a commons can make a relation legible, and sometimes politically usable; it can also smooth over the conflicts, exclusions, and forms of maintenance through which that relation is kept open. Following curator Massimiliano Mollona, commoning comes into view through uneven practices of use, access, refusal, care, and negotiation (Mollona 2021). Friction belongs to its texture. Struggles over access, governance, value, and material support continually shape whether commoning endures, is constrained, or is absorbed elsewhere. Without these frictions, water-as-commons risks becoming a moral vocabulary, detached from the conditions that make it possible.

In this sense, this work aligns with critical approaches to the commons that foreground use, relation, and situated conflict over ownership or abstraction. In *Art/Commons: Anthropology beyond Capitalism* (2021), Mollona does not treat commons as ethical ideals or harmonious forms of shared belonging, but as historically embedded processes traversed by labour, extraction, and governance. His analysis situates commoning within a broader field of political ecology and infrastructural struggle, where material flows – such as water, electricity, housing, and urban space – become sites of enclosure, privatisation, and control.

Mollona traces how commons are continuously produced and eroded through flows of matter, movement, and animacy. These flows are never neutral: they are channelled, interrupted, and re-coded by institutions, markets, and cultural dispositifs. Commons thus function as what Mollona describes as “enclosures that remain open”: formations sustained through use, struggle, and care, yet permanently exposed to capture, institutionalisation, and re-valorisation.

This framework has concrete implications for artistic research operating within situated and infrastructural fields. When commoning is rendered visible, narratable, or fundable, it can be converted into symbolic value, alienated labour, or urban rent – particularly within cultural economies that reward legibility and circulation. Read through Mollona, representation acts on the very conditions under which commoning persists, stabilises, or is neutralised. With water,

this discussion becomes especially acute: enclosure and governance operate through the direction, interruption, and valorisation of material flows, making movement itself a site of capture.

4 **Situated Practices Before Representation**

The passage from commons to commoning returned representation to a more fragile terrain: the perceptual conditions through which relations with water become perceptible before they enter legal language or artistic form. In Corpi Idrici's research, questions of damage, access, and care first appeared through the body's orientation in space. They emerged in front of blocked paths, in the presence of sounds coming from behind walls, and in the repeated difficulty of reaching waters that were formally public yet materially withdrawn. Legal and artistic forms entered a field already organised by perception, where water could appear sometimes as risk, sometimes as companion, and often as infrastructural absence that still demanded attention.

Seen from this position, representation becomes part of the conditions through which commoning is sustained, interrupted, or redirected. It shapes what can be carried forward into evidentiary, legal, visual, sonic, or performative form. This complicates both juridical and place-based artistic practices, shifting attention toward the ways perception itself prepares what later becomes representable.

The juridical risk identified in the discussion also operates at an epistemic level, where relational and cosmological principles are recoded within liberal legal frameworks. Before water is named in law, it has already been sensed, missed, feared, approached, or kept at a distance. What can be recognised as a relation to water is therefore shaped prior to juridical recognition. David Abram's vision offers a phenomenological frame for this methodological posture. In *The Spell of the Sensuous* (1996), perception is understood as a participatory relation between bodies and environments. His reflections on *animacy* also help describe a field of responsiveness without attributing intention or voice to water. For Corpi Idrici, this became relevant in practices where listening, walking, drawing, and carrying water reorganised attention before interpretation.

4.1 Sensing, Handling, Withholding

Slow collective walks – often reduced to an almost impractical pace – were used to recalibrate attention toward interruptions and thresholds in the urban waterscape. In some activities, participants walked with eyes closed while carrying a vessel filled with water, relying on others for orientation and care.

Listening practices in wooded areas above buried waterways further developed this approach.¹⁴ Participants attended to muffled sound, resonance, and small atmospheric shifts, often with eyes closed. In some sessions, this auditory field was extended through the playback of soundscapes and recorded fragments from the collective's hydro bodies archive. Drawing with closed eyes while listening to these sonic traces became a way of registering movement and interruption before visual form. The drawings register sensorial residues of an encounter: marks produced by the body while following sound, rhythm, and discontinuity [fig. 2].

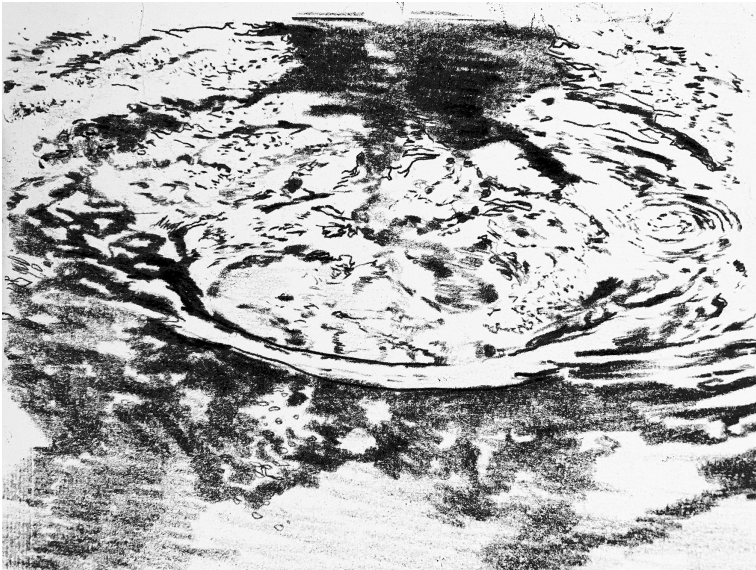


Figure 2 Nuvola Ravera, *Blind Automatic Drawing While Listening to Watercourses*. 2021.
Carbon paper on found paper, A4 (21 × 29.7 cm). Genoa, Italy.
Image courtesy of the artist.

14 In the sense of Pauline Oliveros' deep listening as an expanded practice of attention and Brandon LaBelle's sonic agency as a situated relational force (Oliveros 2005; LaBelle 2018).

During several sessions, participants worked with clay while discussing inaccessible or buried waterways in Genoa. The clay offered a tactile situation rather than an image of the river: distance, damage, and possible care could be handled through pressure, support, compression, or hesitation. Some attendees touched the clay cautiously; others tried to hold, seal, represent, straighten, or repair it. The material registered these differences before they could be fully named. Care appeared with its double edge: attention and intervention, support and correction, repair and containment.¹⁵

Across these perceptual and material experiments, questions of translation and betrayal took on a performative force. The practices attempted to carry these conceptual problems beyond the need for advance resolution, allowing them to be recited, embodied, displaced, or held in suspension. This methodological use of hesitation resonates with Abram's insistence that participatory perception entails responsibility: an attentiveness to how perception, action, and language shape relations.

"Staying with waters" involved cultivating different forms of perception open to response without forcing articulation: a mode of being-with in which humans participate in the sensing field of the world, rather than observing it from outside.

For Corpi Idrici, this had practical consequences. Engaging water required more than conceptual clarity; it demanded a re-situation of language within perceptual experience, while remaining attentive to the risk of projection or myth.

This epistemic shift was also informed by processual and materialist perspectives that challenge mechanistic visions of nature. Matter entered the research as an active condition of encounter: vibrations travelling through concrete, electrical interference, sediment, and acoustic distortion shaped how bodies moved, listened, recorded, and hesitated. These were material responses, not symbolic effects. They selected what could be perceived, amplified, or lost. This resonates with Karen Barad's account of matter as active in the production of intelligibility and with Stacy Alaimo's notion of trans-corporeality, where material processes traverse bodies and environments, unsettling clear divisions between subject and world (Barad 2007; Alaimo 2010).

So, representation emerged as a necessary yet unstable operation. Legal, artistic, and documentary forms make hydro-social relations communicable by interrupting ongoing processes and giving them a legible shape. A recording, a drawing, a legal clause, or a score

15 On care as a situated and ambivalent practice, see Puig de la Bellacasa, *Matters of Care* (2017). In this article, this ambivalence also anticipates the later discussion of 'orthopedics of water', where care and correction become difficult to separate.

assignment carries something forward while filtering, framing, and redirecting the relation it claims to transmit. This is where the notion of betrayal gains force. In this article, betrayal names the transformation produced whenever relation becomes shareable: the passage through which a situated encounter enters circulation, becomes perceptible, and becomes exposed to interpretation, stabilisation, and capture.

The displacement of representation into bodies appears clearly in activist and artistic contexts where ecosystems are embodied under slogans such as “we are nature defending itself”. In such cases, representation moves through presence, cohabitation, exposure, and collective responsibility. This displacement opens possibilities and ambiguities at once. Commons-based ecologies, grounded in use, co-presence, and conflict rather than property, offer one horizon for thinking about this displacement without resolving it. They foreground responsibility as a practice rather than a claim.

This matters for the problem of betrayal as it unfolds in Corpi Idrici. If perception is already mediated, if matter is processual and reactive, and if language works through abstraction, then better intentions or more inclusive vocabularies only relocate the problem. To speak about water, for water, or with water is to perform a translation that changes what it touches. This did not lead to silence. It asked for another form of attentiveness: one able to remain accountable to what representation stabilises, excludes, and makes governable.

4.2 Infrastructural Frictions: Low Frequencies and Waterways as ‘Companions’

What on certain maps appeared as a continuous watercourse, on the ground was encountered as a fragmented sequence of absences, detours, and technical barriers. In Genoa, as in other similarly anthropised and densely urbanised contexts, water is not encountered primarily as an entity, a landscape, or a commons, but as infrastructure: pipes, drains, containment systems, flood-control devices – hidden, noisy, omnipresent.

Walking along the presumed trajectories of buried rivers produced misalignment and discontinuity with an imagined intact nature.

Sound emerged before visibility; vibration preceded orientation. The body followed traces that did not coincide with official routes or cartographies. In several sites, this fluvial-lymphatic system could only be perceived through shifts in temperature, echoes beneath asphalt, the persistent humidity of shaded spaces, or the involuntary concerts of taps, drains, and flows. These encounters did not reveal water as an ‘entity’; they exposed the conditions through which water has been rendered inaccessible, managed, corrected.

Within this field, sensory attention exceeded the register of care as metaphor. Listening and placing the body near water opened a problem at once affective, technical, and political. Microphones placed near drainage systems amplified mechanical rhythms while flattening others. Low frequencies travelled through concrete; higher ones dissipated. What was recorded was never neutral. Each act of listening foregrounded certain relations while cancelling others. One question, among many, emerged insistently: not how to make water speak, but how listening, seeing, sensing, and directing attention toward hydro bodies already participate in processes of relational selection and exclusion.

Practices of exploration, *dérive*, and attention unfolded in parallel with the drafting of the Charter, not as preparatory phases nor as their synthesis, but as parallel and often dissonant processes. Reading aloud a juridical language that was itself contested, collectively rewriting articles, lingering on terms such as *access*, *relation*, and *integrity*, repeatedly activated the same uncertainty: what does it mean to stabilise relations that are materially unstable?

Several assemblies, titled *Hydro Bodies Assembly* and centred on the collective reading and revision of the Charter, produced moments of disagreement and hesitation around terms such as access, integrity, care, and relation. One of these situations emerged during the performative assembly organised in Genoa in 2025 involving students from the Accademia Ligustica di Belle Arti, members of the activist collective *Con i piedi per terra*, and artists and researchers working on water-related practices.

During the assembly, participants collectively read and discussed selected articles of the Charter. Different understandings of the document immediately surfaced. Some activists approached the Charter primarily as a possible juridical instrument connected to ongoing territorial struggles around the Lagaccio area, where large infrastructural projects continue to reshape the neighbourhood and affect densely inhabited urban zones. At the same time, several participants remarked that they had rarely considered water itself as a juridical or political subject. Water had mainly appeared as a danger, hydraulic emergency, or infrastructural problem.

The discussion around the articles of the Charter became particularly significant. Participants connected the notion of relation not only to environmental care, but also to the possibility of recognising buried waterways as ‘companions’ within broader struggles around territory, infrastructure, and urban transformation. The assembly did not produce consensus. It exposed different expectations regarding law, activism, artistic practice, and environmental responsibility, while turning the Charter into a site of negotiation rather than affirmation. In this context, the Charter operated less as a stable

declaration than as a device capable of shifting how infrastructural waters could be collectively perceived and politically addressed.

The process also encountered limits linked to resources, time, and uneven forms of involvement.¹⁶ Some members could sustain long-term fieldwork and organisational labour more than others; others entered through specific workshops, performances, or writing sessions. Activist priorities, artistic timelines, institutional deadlines, and personal thresholds of endurance did not always coincide. These frictions shaped what could be researched, recorded, shared, or left aside.

Considering the long-term process, the research did not primarily confront contamination in a chemical or toxic sense, although the city itself is also affected in this way. The frictions encountered were philosophical, ethical, internal, and structural: the limits of collective resistance, the difficulty of sustaining long-term research without stable resources, uncertainty around the very object of inquiry – or, more precisely, of encounter – and the risk of transforming a place into a site of symbolic, cultural, or aesthetic extraction. Working with urban waters revealed how easily attention itself can become extractive: looking, listening, and documenting may appropriate what they intend to care for.

Languages of porosity, transcorporeality, and shared vulnerability became useful only when held against asymmetry. In practice, continuity repeatedly collided with restricted access, infrastructural harm, and uneven exposure. A fluid relation between bodies and waters could open responsibility; it could also dissolve conflict into metaphor. The question returned through the work itself: when does relational language make responsibility possible, and when does it smooth over the conditions that make relation unequal?

This critical point emerged whenever images, drawings, field recordings, or descriptions of inaccessible waters began to circulate as ‘good material’, detached from the constraints that shaped their production. The more such violence became legible as aesthetic material, the easier it became to absorb without confronting its persistence.

Certain practices were therefore renegotiated in order to mark limits. Assemblies incorporated silences, interruptions, and disagreement; some recordings remained unedited or partially unusable; certain visual materials were withdrawn from circulation.

16 This unevenness concerned different positions within and around the project, as well as divergent expectations about what the process should enable, produce, or make visible. Unequal access to time, mobility, funding, technical skills, and organisational responsibility shaped the duration of fieldwork, the distribution of labour, the possibility of speaking in assemblies, and decisions around which materials could circulate, remain partial, or be withheld.

These gestures did not solve the problem of aestheticisation, but they interrupted the smooth conversion of infrastructural violence into cultural material. What mattered, within this research with hydro bodies, was not to avoid form, but to keep form accountable to the conditions that continued to produce and determine it.

Through these practices, questions accumulated without resolution: Where does a hydro body begin when it is fragmented into pipes, channels, and juridical zones? What is translated when water enters legal language, and what is lost in that passage? When does care become correction? How can responsibility be sustained without claiming a voice? These questions shaped decisions, hesitations, and withdrawals throughout the process: when to publish a recording, when to leave a drawing unreadable, when to suspend a claim, when to keep an article of the Charter open to revision.

5 Orthopedics of Water: Correction, Care, and Hydro-Infrastructural Bodies

The notion of *orthopedics* of water first emerged through a poetic and performative text developed within Corpi Idrici and later activated during assemblies, performances, and exchanges with groups working in other hydro-social territories. The expression came to name the material and symbolic violence exercised on waterways through infrastructures of correction, containment, and safety.

Orthopedics, in the medical sense, promises care through alignment. It works by stabilising a body that is perceived as vulnerable or dangerous, for itself, for others. The parallel with hydraulic management is not metaphorical. Flood-control systems, canalizations, diversions, culverts, buried streams, reinforced banks, and emergency bypasses are corrective infrastructures: they aim to make water legible within a regime of predictability. They operationalise a promise: security, order, prevention, while reconfiguring hydro bodies into governable channels.

These interventions reshape not only environments, but also subjectivities. They reorganise the social (access, property, zoning, institutional responsibility) and the mental (fear, anticipation, habituation to control, prevision). The ‘problem’ water is expected to solve, safety, produces new problems: restricted relation, invisibilised flows, a landscape where water is always present and yet structurally out of reach.

Orthopedics are enacted through language as much as through concrete. Terms like *risk*, *safety*, *resilience*, *functionality*, *maintenance* carry an affective charge: they justify correction as care. They also pre-empt alternative relations by defining what counts as legitimate interaction with a riverbank, a canal, a mouth, a tunnel. In this sense,

orthopedics operate as governance: they distribute permissions and prohibitions, they shape whose bodies can approach water and under what conditions, they naturalise distance as necessity.

The Corpi Idrici earlier practices of walking, listening, and tracing made these orthopedics sensible. Not in the sense of ‘revealing a hidden truth’, but in the sense of exposing how correction becomes the default interface. What is encountered is often water as a managed remainder: a sound behind a wall, a humidity in shadowed space, a flow that can be heard without being reached. The hydro body appears as a lymphatic system of the city – capillary, venous, subterranean – whose circulation is governed by constraints that are simultaneously physical and legal.

At this point, the question is not whether orthopedics are ‘good’ or ‘bad’. Infrastructural correction responds to real catastrophes, to historic floods, to material vulnerabilities. The problem is what orthopedics make impossible to imagine: forms of relation that do not begin from containment, a sensibility that does not reduce the world to hazard management, a politics that does not treat water as an object of perpetual intervention.

To remember oneself as part of a universe of cascades, cataclysms, earthquakes, and tidal forces is not an aesthetic sentiment, it is an epistemic repositioning. It attempts to unsettle the fantasy that stability is the natural baseline and that correction is always care. It also reframes the question of “being nature” (Staid 2022) away from identity and toward process: not only “we are water”, but in particular “we are already within the same unstable field”.

If matter transmits signals, intensities, and reactions beyond our intention, as materialist and processual perspectives insist, then orthopedics are never simply imposed on passive substrates.

They trigger responses, unintended consequences, upstream/downstream effects, new vulnerabilities. In this sense, the hydro body is not an object corrected once, but a field continually reconfigured through interventions, sediments, weather patterns, political decisions, and economies of extraction.

Orthopedics therefore become a key site where betrayal, as previously discussed, gains concrete form. The betrayal is not only representational, it is infrastructural: the conversion of an ecological relation into a technical function, the translation of a living assemblage into a controllable channel, the reduction of a commons-in-the-making into a managed risk. The work of Corpi Idrici does not claim to escape this regime. It tries to make it legible while remaining accountable to the fact that legibility itself can reproduce governance.

From here, the project’s methodological question re-emerges: what kinds of practices, juridical, artistic, curatorial, can accompany hydro bodies without reinforcing orthopedic logics as the only available

language of care? What grammars of relation can be rehearsed in the cracks between safety, access, and the right to relation?

6 A Lingua Franca of Hesitation

It is not about understanding.
It is not about making speak.
It is about being there, in the surrounding,
attentive to what traces itself without intention.
There are gestures that mean nothing,
and yet they are there,
like a map of a world
that does not pass through speech.
That world is not mute.
It simply has no need for our language.
(Fernand Deligny)¹⁷

After the juridical, embodied, and infrastructural passages traced in the previous sections, representation can no longer be treated as a stable ground from which to engage hydro bodies. To speak for water, to write its relations into law, or to make it perceptible through artistic and documentary forms always involves a cut. Translation carries something across, but never intact: it filters, displaces, and reshapes the relation it claims to transmit. Legal language, artistic formats, documentation, and testimony make hydro-social relations available to collective attention; at the same time, they expose them to stabilisation, substitution, and capture.

Lingua franca begins from this fracture.¹⁸ Historically, the term referred to a mixed contact language used across Mediterranean ports among speakers without a shared tongue. Here, it emerges as a fabulative name for a missing grammar: a way of holding open the interval between response and meaning, signal and statement, process and form. Both as a methodological notion and posture for the difficulty of remaining in relation when translation itself becomes risky. This difficulty appeared throughout the research in what preceded communication: pauses in assemblies, failed recordings, blind drawings, delayed responses, moments of silence, gestures of withholding, and the repeated hesitation around terms such as access, care, relation, and integrity. For Corpi Idrici, these gestures altered the conditions of attention: they made perceptible that the

17 The epigraph is the Author's adaptation from Deligny's reflections on *lignes d'erre*, the refusal to "faire parler", and the practice of "voir" rather than understanding. See Deligny 2007; 2013.

18 For a related reflection on watery glossolalia, opacity, and more-than-human forms of address, see Ravera 2026.

question was not simply whether water can speak, but how relations become addressable before they are stabilised as speech.

The question “can water speak?” gradually gives way to another concern: how variations circulate through hydro bodies and infrastructures. Across the research, water registered through rhythm, vibration, conductivity, resistance, humidity, obstruction, and drift. These registrations marked thresholds and transformations within a field of material exchange that exceeds intentional communication. The task became the cultivation of forms of attention able to register response while resisting immediate appropriation.

Translation therefore remained bound to risk. Isabelle Stengers’ insistence on slowing down, and on resisting forced translation, clarifies this difficulty (Stengers 2015). Slowness, in this context, became a practical condition: a way of delaying the conversion of encounters into outputs or artworks, of allowing vibration, silence, opacity, and interruption to retain their force before being organised as data, evidence, or meaning. Practices of partial documentation, withdrawal, suspended translation, and silence emerged throughout the process as methodological necessities.

At the same time, translation also appeared as an already active institutional operation. Water is continuously translated into risk, data, heritage, image, policy object, cultural asset, or infrastructural problem. Anselm Franke’s work on animism helps describe this dynamic by showing how institutional formats operate as machines of translation, converting mute or resistant presences into authorised narratives. In this sense, a dominant lingua franca already structures the field: a grammar through which water becomes legible, manageable, fundable, protected, exhibited, and governed. The interesting critical task and challenge for an artistic group working inside this interstice concerns the interruption of this existing grammar and the invention of procedures that slow down its automatic effects.

What remains is a set of provisional practices able to work with partial intelligibility and uneven addressability. Maria Lind’s.¹⁹ Understanding of the curatorial helps articulate this shift because it moves curation away from the production of discrete works and toward the arrangement of conditions: temporal, spatial, social, editorial, and infrastructural. In this sense, the curatorial operates

19 Lind’s long-term project *Tensta Museum: Reports from New Sweden* offers a useful precedent. Rather than treating Tensta as a subject to be represented from the outside, the project assembled a framework in which local histories, memories, residents, artists, associations, and institutional resources could enter into relation over time. The curatorial task lay in sustaining the conditions for these relations: gathering materials, hosting encounters, producing publications, enabling collaborations, and allowing the project to remain porous to the place from which it emerged.

as a form of conduction. It does not simply present relations after they have taken shape; it holds open the circumstances through which relations can pass, hesitate, conflict, and become shareable.

For Corpi Idrici, curation has operated in a comparable but hydro-social register. It has meant arranging the conditions through which hydro bodies, activists, residents, students, researchers, sounds, documents, and legal fictions could encounter one another without being immediately resolved into a single output. Assemblies, listening sessions, collective readings of the Charter, unfinished archives, shared silences, and careful forms of circulation became a curatorial position: ways of conducting relations while slowing down its conversion into artwork, evidence, policy language, or institutional format.

For these *placed-based art research* betrayal becomes an ethical condition of communication. It names the inevitable transformation produced whenever a relation is made shareable. Proximity requires attention to difference; relation requires care for asymmetry; responsiveness requires vigilance toward the pressures of forced intelligibility. More-than-human dialogue appears here as partial, unstable, and situated. The work therefore turns toward practices capable of remaining accountable to the costs of articulation.

The Charter returns within this discussion as a device through which these costs become perceptible. Its legal-poetic form exposes the betrayal of representation by staging it as a collective problem open to revision. Each reading, rewriting, assembly, workshop, listening session, or act of translation shows how legal, artistic, and documentary forms shape hydro-social relations while transforming them. The Charter becomes an unfinished interface through which the limits of environmental representation can be negotiated.

A lingua franca of hesitation names this practice of negotiation. It concerns forms of attention, translation, and response capable of remaining accountable to what exceeds stabilisation, capture, and complete intelligibility. It asks how we might remain reachable by a field that does not depend on us in order to act, while refusing the languages that render that field governable the moment it becomes legible.

The underground commoning traced through this article emerges through the patient construction of conditions in which different bodies – human, infrastructural, legal, aqueous – remain in relation while retaining their differences of language, agency, and force. To write with water teaches staying close to the cut that writing opens: making that cut public, revisable, and collectively accountable.

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Meeting a River Artistic Methods for Practicing River Relations

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Abstract *Hydroformations* investigates the Rhine as an entity in their own right through artistic methods that seek to enable the river to voice themselves. Emerging from prior engagement with the BíoBío River, the project is grounded in embodied encounters. This paper weaves ecological and political histories of both rivers, reflects on practices of meeting, listening, and sensing, and explores sedimentation as a material-discursive concept for confronting injustice and fostering riverine relations.

Keywords Embodied knowledges. Artistic research. River justice. Co-creation. Sedimenting.

Summary 1 Introduction. – 2 Meeting a River, Grieving a River: Memories and Reflections Offered by Xandra van der Eijk. – 2.1 River Teachings. – 2.2 “There is a Sickness to the River”. – 3 On Listening and Sensing (as a Practice). – 4 Rhine River Lab: Meeting a River. – 4.1 Addressing the Premise. – 4.2 On Listening and Sensing (in the Rhine River Lab). – 4.3 Sediment as Materiality. – 4.4 Sedimentation, Knowledge, and World-Making. – 5 In Conclusion. – 6 Flowing Together.



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1 Introduction

On a remarkably sunny day in October 2025, a group of 18 artists, researchers, and scientists are standing on a sandy beach of the Rhine River at Arnhem, just past the Dutch-German border. After spending the full day in the floodplains together, we are gathered here to do an embodiment exercise, thinking with the sediment of the river. Some of us have been calling for a swim, others approach the water with an air of suspicion. Artist Maud van den Beuken, present to guide the activity, invites the group to step into the water. Some do so with childlike enthusiasm, taking away any barriers for others and, in the process, unintentionally restoring something; it is an invitation, permission perhaps, to follow the intuitive human bond with water, a need to be in contact and relation with the river.

Our tentative attempts at relation are part of a 5-day intensive programme called *Rhine River Lab: Meeting A River*, which is one of the final activities in the year-long *Hydroformations* project, initiated and undertaken by artist Xandra van der Eijk. In this project, the artist set out to ‘voice’ the Rhine through individual and collective artistic research and engagement with the river’s actants. The project was an effort to come to know the river at their own terms. It emerged from a deeply personal experience of the artist in the heavily exploited and industrialised BíoBío River region in Chile, fuelling thoughts about river and social justice, belonging, and ongoing settler colonialism. The project arose within a broader context of hydrofeminist practices and the exploration of ideas underpinning the rights of nature movement. Each of us were there at the riverside because the questions posed by the open call for the lab had resonated with us: How do you meet a river on their own terms? How can you sense a rivers’ nature, their being, beyond control, measurement and extraction? How to know a river?

This paper aims to present a collection of learnings and thinkings along the process of meeting the Rhine and BíoBío River, carrying our experiences to the pages of this journal. As such, our method of enquiry is grounded in embodied encounters. The paper weaves together these encounters with a selection of specific ecological and political histories of these rivers. These histories give urgency to our desire to meet the river differently. We speak with multiple voices, offering our embodied experiences as well as the knowledge we have learnt from others. Through this storytelling, we offer reflections on practices of meeting, listening, and sensing. We describe how we have opened space for the voice of the river and their relations. We also pay attention to the eclectic materiality of the Rhine, and think with sedimentation as both a material process and a concept that names how embodied knowledge and practice can confront injustices and build better relations with the Rhine.

2 Meeting a River, Grieving a River: Memories and Reflections Offered by Xandra van der Eijk

The *Hydroformations* project arose,¹ after years of meandering, from time spent in Chile during an artist-in-residency programme called Valley of the Possible. It was the pilot programme, organised in the Cañon del Blanco: “a remote and secluded valley in Wallmapu (La Araucanía Andina), Chile, surrounded by ancient volcanic landscapes with a high level of biodiversity and a strong Indigenous presence”.² During the month-long stay, the group undertook many outdoor excursions, engaged in collective exercises, and endeavoured to understand the local context, including meeting members of the First Nations Mapuche communities [fig. 1].



Figure 1 Encountering graffiti in support of activist organisation Plataforma Política Mapuche (PPM) in Temuco, after an initial meeting with members of the Mapuche community. 2019. Temuco, Chile. Photo by Xandra van der Eijk. Please note that the community members that were affiliated with the Valley of the Possible programme were not necessarily also involved or aligned with Plataforma Política Mapuche

1 The first three sections of this article draw on the experiences and memories of Xandra van der Eijk preceding the *Hydroformations* project and *Rhine River Lab: Meeting A River*, and are therefore written from their point of view. From section four onwards, the text draws on the collective experiences and memories by all three writers of this article (Xandra van der Eijk, Martine van Lubeek and Elliot Hurst).

2 Valley of the Possible (2026). *VALLEY OF THE POSSIBLE | About*. <https://valleyofthepossible.com/about>.

The residency participants shared a lodge; cooking, eating, reading, and talking together, with barely any mobile phone reach or internet access, truly submerged in the valley. Recognising and departing from the troubling position of being a white, western organisation and team, and running from settler lands, the programme was an honest attempt at finding out if and how a residency like this could run here, building bridges over perpetuating harmful practices. Rather than reflecting on whether or not the residency programme succeeded in this, this paper focusses on first-person accounts and personal experiences.

A short walk from the lodge runs the Río Blanco, straight from the nearby Sierra Nevada mountain range. The broad riverbed consists of small rocks, and there are no fences, no signs, no directions. Every day the river is changed. Crossing into the countryside means crossing the river, which can sometimes be done by walking through, sometimes by wading, and sometimes it is simply impassable. One day it had been raining, quite consistently, and we walked in wetness, far upstream. Upon return, the river had swollen to many times its earlier size. Carefully crossing a first section, helping each other, we reached an island that gave us a good view of the river. Water was thundering around us as it became clear that the river had changed course entirely, dragging along with it rocks and branches, hastening to flow downstream. We were not safe, had no option but to go on, and could not linger for long. I remember a silent nervousness, grey, green, rocky, wet, cold, slippery, the intensely clean air, and a soaking, drowning presence of the river. There was no gentleness, no softness. Just force, overwhelming, and unpredictable. A collapsed tree, a proper, large, adult tree trunk, that was washed away and became stuck between rocks in a way that it formed a bridge, was our salvation.³

The timing of this immersive research period aligned, contrary to our group's experience, with an enduring mega-drought in Chile (still ongoing today), bringing watery topics to the headlines continuously. This prompted a deep dive into the causes and effects of local water-related issues, quickly making clear that the country was, in many ways, representing a possible global future in terms of the effects of climate change and neoliberal capitalism. Famous for its 1981 free-market Water Code, the Chilean approach to reducing water to its economic value has led the country to become the world's leading example for the commodification of water. Though there are aspects to the Water Code that may be considered successful

3 Recollection of an experience of Xandra van der Eijk during Valley of the Possible.

(depending on context, priorities and political views entirely), it is by now clear that the code has had a profound negative impact on social equity and environmental protection, leading to problems with river basin management, coordination of multiple water uses and that it is lacking in finding resolves to water conflicts (Bauer 2014).

Being submerged in Wallmapu territory and exchanging with local Mapuche communities made obvious the particular effect the Water Code has had (and is having) on First Nation peoples. Their communities faced difficulties obtaining and managing water rights when the code was being implemented and lacked the legal personhood that was needed to hold water rights as a community or collective (Macpherson et al. 2023). The effect of this becomes painfully clear in the case of the Río BíoBío, the second largest river of Chile, flowing into life from Lago Gualleteu on Mapuche-Pehuenche land just east of the Cañón del Blanco.

During the 1980s, when Chile was under the Pinochet dictatorship, state-owned companies were being privatised. This included power generation operations. Following long-term strategic acquisitions, the company Enersis S.A. gained a firm grip on Chilean energy, as well as on other South American energy markets. Meanwhile, Spanish company Endesa Spain was targeting the Latin American market for expansion. In 1997, the company started bidding for a controlling stake in Enersis, succeeding by first acquiring a 32% stake in Enersis in 1997, followed by another 32% in the subsidiary Endesa Chile in 1999, leading to a total control of 64% of the company (Trillas 2001). With the takeover, approximately 80% of Chile's non-consumptive water rights were transferred to Endesa Spain and its partners.

As early as 1965, Endesa Chile had plans to build a series of six hydro dams in the Río BíoBío (Nelson 2013). By the 1990s, the company had gotten so influential that it was able to secure a loan through the International Finance Corporation (IFC), a member of the World Bank Group, to build the first dam, Pangue, as a stand-alone project (World Bank 2006). It was clear however, that the Pangue dam would only function in conjunction with a second dam further upstream, the Ralco dam, and the proposal was therefore commonly known as the Pangue-Ralco project (Barrera-Hernández 2005).

The Mapuche-Pehuenche peoples of the BíoBío region, together with the government agency in charge of indigenous affairs (CONADI-National Corporation for Indigenous Development), supported by environmentalists and NGO's, raised concern over the plans. Emphasising that giving permission for the Pangue dam would, by definition, result in the construction of the Ralco dam, they made clear there would be a cumulative impact on the communities upstream and downstream, endangering the environment and water quality in the process. The dispute was taken to court, gaining major public attention. The case was built around "the right of Endesa

to alter the Bío-Bío river's flow in a manner that could potentially injure other water rights holders" (Barrera-Hernández 2005, 14). In addition to the Mapuche viewpoints, it was argued that reduced and uneven water flows would affect agriculture and the livelihood of downstream farmers. Chile's Supreme Court, setting a dangerous precedent, decided to prioritise non-consumptive water rights over consumptive water rights, effectively clearing the path for the Panguel-Ralco project.

In 2022, after eleven years of negotiating, a major amendment was made to the Water Code. It is now stated that water will be considered a "national property for public use" (Proyecto de Ley que Reforma el Código de Aguas [Water Code Amendment Bill] (Chile) art 5.). Further changes included that access to drinking water and sanitation is a human right, that it would not be possible to create water use rights in glaciers, and that the state will promote the protection of existing waters for the benefit of First Nation communities. For most of these new laws to have the intended effect, changes to the Chile's constitution would have to be made. In a historic attempt to do so, voters eventually rejected both a progressive and a conservative draft, leaving the 1980 version of the constitution in place. Existing water rights, given in perpetuity, are therefore still valid. Struggles around ownership, exploitation, and social justice persist. In addition, Chile's rivers are still not protected through any meaningful legal protection framework (Weber et al. 2023). Today, the Río Bío-Bío has four mega dams on their main trajectory⁴ and 9 smaller dams on their tributaries. A fifth one, regardless of major opposition, is currently under construction by Rucalhue Energía SpA and is controlled by China International Water and Electric (CWE), a subsidiary of the state-owned China Communications Construction Company (CCCC).

I remember a sun, bright red, setting. A reservoir lake. Wetlands with birds. A water surface is still as a mirror, reflecting hues of the softest pink and purple [fig. 2]. A visitor centre, newly constructed, abandoned. There was a viewing platform overlooking the lake. View on both sides was obstructed by trees, not yet full-grown. Through the branches, bright orange buoys. And a straight, hard edge – barely visible. The Angostura dam [fig. 3], third after Panguel-Ralco.

⁴ For an impression of three of the four mega dams and their reservoirs, see Figures 2-7.



Figure 2 *Angostura Reservoir*. 2019. Los Junquillos, Chile. Photo by Xandra van der Eijk



Figure 3 *Angostura Dam*. 2019. Los Junquillos, Chile. Photo by Xandra van der Eijk

Deeper into the area in the early morning air. A small beach on another reservoir lake. It feels off, eerie. There is no sound. No birds, no movement. Pangué reservoir [fig. 4]. We reach Alto BíoBío, find our guide, and tour the town. There is poverty. A monument. Shared moments in broken Spanish, considered the language of

the oppressor. Spoken and unspoken pain of injustices beyond imagination. Centuries of fighting for the right to exist. That single question that lingers and lingers: *¿Por qué estás aquí?* And the only answer I have is that water is life, and we are bound through water.



Figure 4 *Pangue Reservoir*, 2019. Alto BíoBío, Chile. Photo by Xandra van der Eijk

A dam so big it seems impossible to hide, yet it is hidden [fig. 5]. No doubt this is a strategy, as every major hydroelectric infrastructure on the route so far has been obstructed from view. Finally, it opens up. Ralco basin [figs 6-7]. “There is a sickness to the river”, echoes the rough translation of a conversation with our Mapuche-Pehuenche guide through my head. A damaged bond between waterbody and watery body, a physical ache that is gestured more than explained in words.

We are so deep into the area now that there is no need for pretence. No outsider ever travels here anymore. Violence is everywhere. We are met with total suspicion and total curiosity. Are we here to get something? Bring something? *¿Por qué estás aquí?* Not asked in a demanding way; rather, in a legitimate-question way. I carry the question forward.



Figure 5 *Pangue Dam*. 2019. Alto BíoBío, Chile. Photo by Xandra van der Eijk



Figure 6 *Ralco Reservoir and Dam*. 2019. Alto BíoBío, Chile.
Photo by Xandra van der Eijk



Figure 7 *Ralco Reservoir*. 2019. Alto BíoBío, Chile. Photo by Xandra van der Eijk

The return offers another perspective, of even more destruction, and a glimpse into a revenue model. Big monoculture eucalyptus forests and trucks loaded with tree trunks drive on and off over a dam. The light turns soft once more, as if the atmosphere is trying to soften everything the river has had to suffer. I realise: I have lost and found my faith in people, all between two sunsets.⁵

2.1 River Teachings

The encounters with the two rivers left a deep and lasting impression that, for a long time, needed to settle. It did not seem right to develop artistic work from the fieldwork. What initially started as artistic research, concerned another's ancestral history and cosmology, multi-generational, enduring pain, and lived reality. It would not be right to speak to that, nor to benefit from it in any way. As much as there was a deep sense of injustice and love for the river and their people, there was no honourable way forward that included working with the gathered materials.

Instead, I carried the rivers within me. And they kept asking me:

5 Recollection of a two-day experience following the BíoBío River from Angostura basin to Ralco Dam reservoir. An independent fieldtrip undertaken during the Valley of the Possible residency.

Who is your water?

Who are your ancestors?

Where do you belong?

How are you paying our teachings forward?

What is your role in our harm?

If we are a part of you,
How are you a part of us?

What is your story?

One question lingered. I was born on the banks of the Rhine. And I did not care for them.

How was it possible that two Chilean rivers felt closer than my home river? Rather than trying to resolve it, I simply acknowledged it was there. And that by giving it attention, by giving the river attention, I created a space for the river to voice itself to me. All I had to do was listen.

2.2 “There is a Sickness to the River”

I am following a small social trail down to the otherwise fenced-off Rhine riverbank, across from an infamous industrial site in Basel, Switzerland. A tire is hung from a tree, clearly meant to swing and then jump into the water.

On the first day of November in 1986, 1,200 tonnes of pesticides, solvents, and other toxic chemicals washed into the river here. Another 10,000-20,000 m³ of firefighting water, containing 30 tonnes of pesticides and insecticides, and 200 kg of mercury compounds follow (ICPR 2016). The emerald green waters of the Rhine turned a deep red, as if pierced through their heart and bleeding. On the shores, fishes started to wash up by the thousands. The disaster is the result of a fire at a storage site of Sandoz, a producer of medicine and other chemicals. On day 3, Sandoz issued the first information about the toxic discharge, directed at the waterworks along the Rhine. By day 5, an estimated 150,000 eels had been found dead (ICPR 2016); an extinction-level event for the species.

It is hard to imagine children playing in this highly industrialised part of the river. Not yet a lifetime has passed, and the generational memory has already sedimented into the unconscious. Some of the

trees on the banks have been cleared, leaving their year markings uncovered. A quick count proves they have witnessed what happened, and have, almost certainly, metabolised part of the contamination.

Only a day earlier, I drove up to Basel from Karlsruhe, where the Rhine underwent their very first “course correction” in the early 1800’s (Cioc 2002, 48-54). The Tulla Project, after its inventor Johann Gottfried Tulla, went through three main stages. In this section of the Rhine, the river was heavily meandering, effectively creating big swaths of marshlands that were regularly overflowing and that sustained a rich biodiversity. Both posed problems for surrounding villages, as there were regular floods and the people were plagued by mosquito-borne diseases, such as malaria. By digging ditches in crucial places in the curves, the force of water would follow that route, thus effectively forging a new path, cutting off the curves, and creating a canal-like flow that would become the new riverbed. It was an enormous amount of manual labour: “On average, four thousand workers participated in the digging of the ditch. Each one of these ditches was eighteen to twenty-four meters wide and about six kilometres long” (52).

A road now directly adjoins the straightened river, leading along the French-German border. Hardly a picture of Rhine Romanticism, the far-reaching consequences of the industrialisation of the river that was effectively set in motion by the Tulla Project now come into view. In the only Rhine section where the river is considered territory of France, just over 100 km long, eight hydrodams have been built since 1933. Quite accurately, each a 15-minute drive apart. At the Rhine Gorge on the Vorderrhijn, a ranger shares that there are no fish in the Alpen Rhine. Like at Pangue reservoir, it is silent here, in a way beyond words.

The Sandoz disaster was described as a wake-up call, fuelling international cooperation among the countries that share the river catchment. The International Commission for the Protection of the Rhine (ICPR) started a comprehensive restoration scheme, the Rhine Action Programme (ICPR 1987). In Switzerland, rules for the regulation and management of the storage and handling of chemicals were implemented. 2700 tons of contaminated materials were cleaned up on the site, after which it was sealed in concrete. Sandoz paid millions in damages and contributed to a fund dedicated to ecological restoration. The production of high-risk chemicals was stopped on location and moved to non-European countries in a blatant act of colonialism. Two firefighters were charged with negligent pollution for the disaster; the Sandoz management goes unscathed (ICPR 2016). In 2002, the ICPR declared the Rhine a “living water body” once more (ICPR 2002).

Yet, recent reports on the water quality of the Rhine River literally trouble the water. In 2023, Bund für Umwelt und Naturschutz

Deutschland (BUND), one of the biggest and most influential environmental agencies of Germany, reported that exceptionally high discharges of Per- and Polyfluoroalkyl Substances (PFAS; also known as ‘forever chemicals’) have been measured in the Rhine at Leverkusen. Since there are no legal frameworks to limit the emissions of PFAS substances in Germany, the German government condones the continuation of PFAS discharge. And the latest report of the Vereniging van Rivierwaterbedrijven (RIWA-Rijn) signals the emerging threat of lithium pollution in the Rhine River basin due to the industrial growth of lithium extraction, refining, and recycling along the Rhine and Main in Germany (Riwa 2025, 32).

“This is why others and I have said that if you want to know what is not yet, look to where it has long already been”, Elizabeth Povinelli writes (2021, 37). In the juxtaposition of BíoBío and Rhine, it is not so easy to distinguish who represents the “not yet”. She adds a warning:

And as you look, remember that unless you contribute real effort toward changing these ancestral dynamics, the new rounds of ruinous action will not simply level the playing field, nor merely place those who have long benefitted from toxic liberal capitalism and its newer illiberal versions – it will lash more forcefully those who have already borne the toxic and climatic burden of racial and colonial capitalism. (37-8)

Having truly met and seen the Rhine now, those words are taken to heart.

3 On Listening and Sensing (as a Practice)

Spending time at the edges, walking the floodplains, and returning in different seasons and weather conditions brought me into sustained proximity of the river. Being-with meant mostly listening in the form of practicing sensitivity in the field. Gradually, that changed into an embodied orientation towards the river’s state of being that day in that specific location. All senses aided in the action of listening, as an openness towards a kind of sensory relationality. Eventually, I broadened my attention and awareness towards the materiality of place. I understand it as a way of being, guided by material processes: tracing how sediment settles and is mobilised, how infrastructures redirect flow, how contaminants circulate and accumulate. It becomes a relational practice of attending to what materials do.

Using artistic methods as a mediator to approach the river, they remain a living, material, historical presence whose matter is storied and agentic. When I kneel at the riverbank and handle sediment, the encounter is epistemic: the granular differences between sand and

clay, the immediate re-settling of disturbed particles, the persistent dampness that clings to skin; all foreground the river as an active process rather than a static object. It is a living archive to be reckoned with and listened to. The river's matter does not illustrate a pre-existing thesis; it constrains, redirects, and sometimes resists the research trajectory itself. I view the Rhine as an active collaborator that participates in the production of knowledge and in the reconfiguration of how that knowledge takes form. I describe this as working with the 'materiality of place' (Van der Eijk 2022), where the value of this practice lies in creating space for unearthing narratives and accepting them as they emerge from the field.

Within the *Hydroformations* project, my curiosity grew towards all the different ways a river might express themselves, and how to design methods, tools, and protocols that might offer some sort of dialogue between us. The act of being-with the river, somatic and embodiment exercises and protocols, exercises in expanding perception, finding tools that might support or enable that, doing more materially mediated exercises in responsive chemistry, using sound recording, applying methods for mapping and modelling, or even the simple act of letting the presence of something in the field guide the way to a narrative, all contributed to an expanding archive of methods. A toolkit for voicing, while acknowledging that the voicing is always a mediation between the practitioner and the river, and that, in turn for whatever is voiced, other potential voicings are silenced. It is a practice that only works with continuity and commitment, offering plurality through time. This may offer a way of mattering the river, bringing their presence to the forefront so that their complex nature is acknowledged.

From believing I was living in the 'not-yet' towards understanding the Rhine being in some ways 'ground zero', made clear to me that the real work is in dismantling the existing imaginaries around the river. Current existing imaginaries confirm a (false) sense of safety, of superiority, of control. To achieve such a shift in thinking requires that, whatever method is used, the process of engagement with the river is centralised and that part of the praxis becomes organising for collective transformation.

In advocating for collective working structures, Artist Jeanne van Heeswijk underscores that transformative imagination emerges through sustained dialogue, mutual accountability, and the co-production of social space, thereby redefining artistic practice as a civic and political undertaking grounded in shared responsibility (Van Heeswijk 2021, 11). I think of the way the Mapuche-Pehuenche continue to mobilise for change, and how this is only possible because of the existing life-giving, ancestral bond with the river. In the context of the Rhine, this bond has to be forged before the urgencies are felt (with a note that this, like in Chile, does not apply to those who are

impacted by the systemic issues, such as communities living near highly industrialised zones). From this insight and need, the Rhine River Lab emerged.

4 Rhine River Lab: Meeting a River

Rhine River Lab: Meeting A River took place as a 5-day pressure cooker programme in the floodplains of Arnhem.

The initial concept of a lab and its basic structure was developed shortly after returning from Chile, when I co-founded and developed the programme *Cartographies of the Vanishing Now* (2019) for FIBER festival as one of many acts in ‘paying it forward’. Taking my praxis’ general methodology as a blueprint, the lab offered a context programme, collective fieldwork, and workshops centered around a single troubled and storied place. The concept was refined for a second lab, *Sound Ecologies* (2021), and later evolved into a co-creation programme for the Municipality of Utrecht (Gemene Grond), in the Rhine-related lab *Water Is What We Make It* (2022).

Working with a familiar concept allowed space to alter it towards the needs of the *Hydroformations* project. Rather than a one-time inspirational programme, *Rhine River Lab: Meeting A River* was directed towards fuelling further collective action. As one outcome, this paper is co-written by project-initiator Xandra van der Eijk and two lab-participants: Martine van Lubeek and Elliot Hurst. From here on out, this article switches from prior experiences leading up to the Rhine River Lab, to our collective experience of the lab. Part of this is a joint attempt to describe a first surfacing of learnings, thinking through the idea of ‘sedimentation’.

4.1 Addressing the Premise

In the open call, the lab is framed as a response to the underlying coloniality of Dutch water governance history, rooted in control and domination of the inherent ‘sogginess’ of these lands: “Centuries of engineering, regulation, and extraction have shaped not only the river’s course, but also the tools and languages through which it is understood”.⁶ The lab purposefully aims to move away from modern hydrological practices that reproduce narratives of anthropocentrism, despite their sometimes good intentions. Instead, its central question of inquiry is: “How do you meet a river on their own terms?”.

⁶ Hydroformations (2026). *Rhine River Lab: OPEN CALL*. <https://hydroformations.com/rhine-river-lab-open-call/>.

The very asking of this question already partly unsettles the precipice of modern hydrological cycles based on anthropocentrism, because it indicates that a river *has* their own terms. The act of asking makes the river already thought of as an entity in its own right: a living, material, historical, and political presence. The question gestures towards a decentering of the (modern) human in favour of the self-determination of the river and their kin. Yet, asking the question also poses a grounded, ethical challenge: Can the river even be met on their own terms while they are still being forced into shape in ‘our’ anthropocentric terms? How might we navigate the difficulty of decentering ourselves from the centre of modern hydrology?

The choice of the word ‘meeting’ reflects a gesture towards decentrality, since the process of meeting something or someone happens *in relation to* that something or someone. To meet the Rhine River then, does not only entail engaging in an encounter between the one that meets (the participants in the lab) and the one that is met (the river), but to actively search for ways to be in relation. To meet the Rhine River as a sentient presence can mean: to come into the presence of the Rhine, to come together (un)intentionally, to experience something, or to join something.⁷ Each of these definitions of the word implies a specific orientation towards relationality and interdependence.

Here, we are reminded of the Nishnaabeg intelligence of sintering as explained in the book *Theory of Water* by Michi Saagiig Nishnaabeg scholar Leanne Betasamosake Simpson, which was part of our reading list for the lab. Simpson, departing from her experience in competitive skiing and the place Jackson Creek, tells a story about the process of sintering as a joining, based on the idea that “the first thing a snowflake does when it lands from the skyworld is to join bonds, actual physical bonds, with its neighbours” (2025,18). Sintering is a process of snowflake world-weaving without destroying its neighbours: a joining of bonds in a nonextractive, nondominating way; a way in which Michi Saagiig Nishnaabeg make worlds (18).

A couple of pages along, she shares a story about the *Conjuncture* podcast episode “Against Pessimism” featuring Robin D.G. Kelley. Reflecting on the present moment whilst listening, Simpson wrote down: “This is where we are. We don’t need to be defensive about anti-fascism, but active, engaged and on the offensive” (20). She continues to reflect on the ease of becoming disengaged (if one has the privilege). The ‘present moment’ happened to be the day she saw Mark Rutte, then Prime Minister of the Netherlands, performing an apology for the Netherlands’ “historic role in the slave trade”. The

⁷ See the entry “meeting” in the *Cambridge Dictionary*. <https://dictionary.cambridge.org/dictionary/english/meeting>.

Prime Minister's shameful performance revealed the deep, persistent coloniality that leaks into all aspects of Dutch life: state structures, logistical infrastructures, practices of governance, education systems, and modern Dutch identity. It is crucial to explicitly state here that Nishnaabeg life and Dutch life exist alongside one another in completely different worlds. Where Nishnaabeg life is "the unapologetic, place-based Indigenous alternative to the destructive logics of the settler colonial state" (Simpson 2017, back cover), the Dutch state represents and continues to enforce settler colonialism through a logic of coloniality.

As inhabitants of colonial worlds, we should take up our responsibilities of practicing solidarity across bodies of water, alongside those who suffer from the violence of settler colonialism that our world co-produces. We must not disengage from the realities that our world produces. Instead, we should take action by joining the struggle, as well as practice the world we want to inhabit. In this sense, the question 'how do you meet a river on their own terms?' could propose an entryway into critiquing the persistence of European modernity and Dutch settler colonialism. At the same time, through the premise of practice, it might open space for nondominant, nonextractive relationalities through practices of listening, sensing and encountering.

4.2 On Listening and Sensing (in the Rhine River Lab)

Over the course of the lab, we turned to different tools to understand what was underneath the surface of the river. Sitting on one of the rock groynes that fix the river's course, we lowered hydrophones into the river to listen to underwater sounds [fig. 8]. As we turned up the volume on the recorder, an unexpected noise came filtering through our headphones. Alongside the slap and rustle of waves against the rocks was the faint sound of music. We listened and discussed, and decided this was probably from the next groyne over, where several people were fishing, reclining on camping chairs. The water carried the sound more strongly than the air. This was a practice of listening as collective, experimental, and surprising. Later in the lab, Elliot drew on experience of hydraulic modelling to find an online dataset of bathymetric data. This data mapped the most recent survey of the riverbed, collected using sonar, a form of listening to sounds reflected from the sediment. The bathymetry data were visualised using colour gradients developed from photos taken during the lab. These images showed the sediment of the river as a varying topography, patterned by dredging. They also revealed the interaction of river flow with groynes and other structures, leaving deeper holes where eddying water had eroded sediment. The tools we used for this submerged

listening bring a certain irony. These are techniques through which we seek to know the river differently, to become more attuned to other voices. Yet these are also listening methods relying on technologies developed or typically used for alternate purposes. The hydrophone was developed during the First World War, a military technology required for detecting submarines. The sonar bathymetry data that reveals the shaping of sediment on the riverbed is collected and made available at regular intervals because this is essential information for shipping along the Rhine. Listening to how sound travels through the water makes it possible for boats to do the same.



Figure 8 *Collectively listening underwater. 2025. Rhine, Arnhem. Photo by Xandra van der Eijk*

Listening and voicing are practices that need to be approached with care. These practices also lead us to consider how our practices during the lab might align with political campaigns related to rights for nature, expressed through the legal personhood of rivers or other water bodies. These campaigns have often been associated with struggles for Indigenous ownership or custodianship of lands and waters, representing a rejection of ontologies imposed through colonisation (Parsons, Fisher 2020). In Europe, the Confluence of European Water Bodies, established in 2023, has brought together a growing number of “waterbody representatives” aiming to “function as a support system, a campaign and an interdisciplinary research group”, “advocating for the recognition of water ecosystems as legal, cultural and political players in our democracy” (Confluence of European Waterbodies 2024). Through Xandra van der Eijk’s persona, the Rhine has been a member since 2024.

The implementation of RoN approaches in practice has often relied upon institutions or human representatives who act on behalf of and speak for the water body (Cribb, Macpherson, Borchgrevink 2024). There is much to unpack here about what it means to speak for someone, especially a nonhuman being. As Elizabeth Povinelli (2016) argues, in the context of ongoing settler colonialism, capitalism, ubiquitous though unevenly distributed toxicity, and other forms of hydrosocial violence, nonhuman voices must be allowed to disrupt or disturb, rather than be expected to integrate smoothly into existing forms of governance. *Hydroformations* emerged from the idea that before assuming to speak *for* the Rhine, it is necessary to *know* the river better, especially through methods different from those that are used to know the river instrumentally. This is an ongoing process, and this paper offers only our initial attempts.

4.3 Sediment as Materiality

On the second day of the lab, we took an antique ferry across the Rhine. In doing so, we were leaving behind the city of Arnhem and the hills of the Veluwe, a glacial moraine pushed up by rivers of ice. On the other side, we stepped onto Meinerswijk, the floodplain of the Rhine. Here, our ways of thinking and sensing the river would shift. The tidy separation of water and land that we had come to trouble the day before would further dissolve into an assemblage of sand, trees, pond water, puddles, fish, clay, bridges, boats, birds, beavers, houses, algae, plants, and wild horses. In the midst of this wild mixture of bodies and materials, an intervention by artist Maud van den Beuken drew our attention towards sediment as a foundational material for knowing the Rhine.

Standing in the sandy shallows of the river, on a small beach between two groynes, Maud began by reminding us that the word ‘sediment’ comes from the Latin verb ‘sedere’, which means ‘to sit’. Thinking of the settling of sediment to form the riverbed, we were invited to see how this river movement and stillness could map to the motions of our own bodies. We were asked to explore the sediment at our feet, to think about the specificity of this sediment – “Look at it in different places. Is the sediment everywhere the same?” – and its role as an archive: “Which knowledge has this sediment all carried from its previous places? And what has it been witnessing?” These questions suggest that the sediment also has a voice that we can learn to listen to. We were then each handed a plastic bucket to be filled to the brim with sediment from the river.

As we spread out across the beach, our bucket filling was occasionally interrupted by the waves thrown up by barges travelling down the river, waves that seemed to surge onto the beach once the

ship was past. These barges provided a reminder of why thinking about sediment was so crucial to understanding this river [figs 9-10].



Figure 9 *Stepping into the river.* 2025. Rhine, Arnhem. Photo by Xandra van der Eijk



Figure 10 *Gathering sediment.* 2025. Rhine, Arnhem. Photo by Xandra van der Eijk

The Rhine is a significant logistical infrastructure and has been for centuries. The Central Commission for the Navigation of the Rhine, established in 1815, describes itself as the world's oldest international organisation. Today, the Port of Rotterdam is the 11th largest in the world by cargo volume, the largest in Europe. To keep the Port open for container ships, millions of cubic metres of sediment must be dredged from the lower reaches of the Rhine each year. This sediment is carried downstream from the Rhine catchment, or drifts in from the North Sea. At the same time, emergency engineering works have been required elsewhere within the river delta, where deep holes in the riverbed, carved out by floodwaters, have threatened to erode the dikes keeping polders dry (Mosselman 2022).

These stories highlight what Giacomo Parrinello and Mathias Kondolf have termed 'the social life of sediment' (2021). Such a perspective is also taken up by Flore Lafaye de Micheaux, Jenia Mukherjee, and Christian Kull (2018), who draw attention to chars: sedimentary islands that are elements of the hydrosocial territory of the lower Ganges River. The sediment flux of the Rhine has a long social history. The Rhine, like many other European streams and rivers, was drastically transformed several thousand years ago, as sediment from land newly cleared for agriculture filled in braided river valleys, creating the channel and floodplain morphology now viewed as 'natural' (Brown et. al. 2018). Channel straightening through the early modern period increased the velocity of the river, encouraging sediment erosion. Then, in the past century or so, more and more sediment was trapped behind dams, leading to further lowering of the channel downstream. All of these changes ripple through the web of relations around the river, altering the lives of humans and other creatures.

We saw the social life of sediment for ourselves, as we walked through the floodplain along the perimeter of ponds formed not through the sinuous meandering of the river, but through the digging of mining pits for clay extraction. We also watched mechanical diggers piling up sand to create what the planners call a 'river dune', reshaping the sediment of the floodplain to create dry land for housing development. And we collected sand in our buckets on a beach created between two of the many groynes that needle the riverbank, placed there to keep the sediment sedimented, to prevent the water from mobilising, from changing course.

Once we had filled our buckets with sand, we took turns to performatively dump them onto a sheet. We then took hold of the fabric and attempted to carry the weight we had accumulated. As we strained to keep the accumulated sediment suspended, our bodies pulled closer by the mass, Maud explained how this represented the equivalent of a single second of the ongoing dredging required to maintain operations at the port of Rotterdam [fig. 11].



Figure 11 *Returning sediment to the river. 2025. Rhine, Arnhem. Photo by Xandra van der Eijk*

Unlike the Port, which dumps sediments in designated offshore dumping sites (or, if it is contaminated, into a waste dump called ‘The Slufter’, within the port area), we returned our sediment to the river in the same location we had collected it. This exercise was an invitation to join the hydrosocial sedimenting and desedimenting that creates the riverscape. It asked us to be responsive to, and perhaps troubled by, the massive mobilisation of sediment occurring along the river. And this troubling is not because of some unreflexive hostility to modern infrastructure. The day after we walked through the floodplain, 800 people carried out a mass action to blockade the port. Their motivation was to confront and disrupt the port’s role as an “artery of the logistics empire, a system that enables and supports the arms trade, genocide, and colonial oppression”.⁸

4.4 Sedimentation, Knowledge, and World-Making

The geological concept of sedimentation made its way to the Western philosophical realm of phenomenology through the writing of Edmund Husserl a century ago. He worked with the metaphorical meaning of sedimentation in order to grasp the way through which impressions of the present lifeworld become layers of meaning in one’s sedimented

⁸ See the Instagram post by Geef Tegengas (2025). <https://www.instagram.com/p/DPqgP9lDfid>.

past, and theorised how these layers of sediment simultaneously constitute one's being in the present.

Accompanying us during the lab was cultural practitioner and artist Anna Bierler, who was there as our 'gatherer'. Drawing inspiration from Ursula K. Le Guin's *Carrier Bag Theory of Fiction*, Anna approached gathering not as taking, but as making containers capable of holding multiplicity, contradiction, and play. Each day, we were welcomed with a prompt to think with the river. 'What disappears when the river floods?', 'How does your breathing change besides moving water?', 'What forms of labour, technology, or observation are directed toward the Rhine today?'. She helped us gather memories, notes, thoughts, pictures, and threads from our riverine dwellings. We were building collective layers of encounters in the shape of small, thermal-printed notes [figs 12-13]. Traces of our collective dwelling.

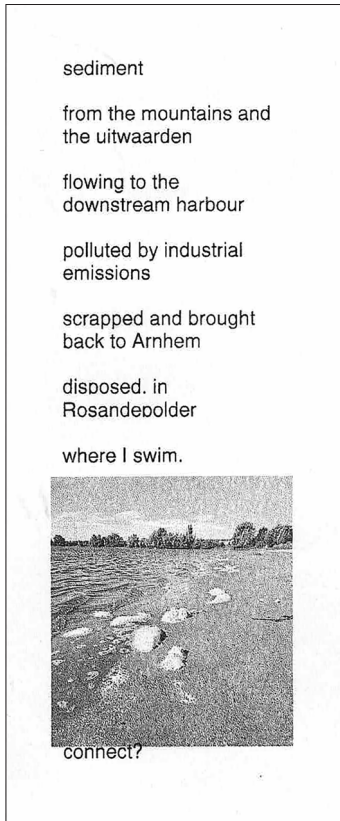


Figure 12
Receipt of prompt response. 2025.
POST, Arnhem

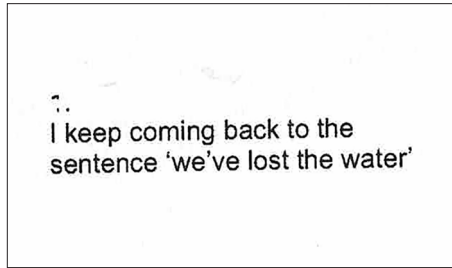


Figure 13
Receipt of prompt response. 2025.
POST, Arnhem

Philosopher Chung Yan Wun describes the two-folded nature of the metaphorical meaning of sedimentation as follows:

on the one hand, things that fade out or disappear over time do always leave a trace that contributes to the birth of something else discernible in or even essential for the present and the future, just as the disappearance of wind and air leaves particles that form the rocks and stones of our earth; one the other hand, just as rocks and stones do not come into existence all of a sudden and out of pure nothingness, things in general always have undergone a historical process of formation that invites a retrospective gaze. (Wun 2025, 6)

This description grounds the metaphor in place-based processes of sedimentation that unfold over time.

The geological process of sedimentation illuminates the forgetfulness that is produced by sedimentation itself: layers of sedimented matter become invisible as soon as new matter settles down on the same grounds. In the same manner, past impressions of the lifeworld become sedimented layers of meaning. They might lie deep down in the bottom layers of sediment, away from a conscious mind, but still “shape the contours of our experience, knowledge and understanding” (Geniusas 2023, 1028).

Crucial for our thinking with sedimentation as a possible emergent practice of meeting the Rhine River is the premise that sedimentation and its produced forgetfulness does not only pertain to individual experience. Phenomenologist Johan Blomberg explains that “similar to how individual experience becomes sedimented into habitualized patterns, there is a culturally inherited constitution of historical sedimentations in the life world” (Blomberg 2020, 81) and continues with Husserl’s gradual acceptance of our inevitable situatedness within a specific history. What ethics, practices, or ways of being, then, have been turned into sediment, and which did not make their way down to the grounded layers of memory?

On day 4, we gathered all our reflections and layered them all together according to yet another set of prompts. We gathered methods of listening, walking, filtering, weathering, attuning, photography, zine-making and writing. We found overlaps in themes such as circularity, voicing, reciprocity, commoning, solidarities, and becoming. And based on our sedimented experiences, we took the time to slowly come together before diverging into the groups with which we would prepare for the public moment on the last day.

5 In Conclusion

If sedimentation refers to the way that knowledge and actions consolidate over time, creating fixed types or traditions, then it also has another side that can be disturbed. The river shows us that with enough effort, sedimentation can also be unsettled, or desedimented. In contrast to the violent (de)sedimentations of the Rhine in the Port of Rotterdam and the ASM-harbour in Arnhem, the lab itself facilitated the space to let our own experiences of the river settle and to find new ways of meeting the Rhine.

After four days of wandering, making, thinking, talking, eating, and dwelling together, we came together on Sunday to prepare for our public gathering. We worked with the traces of the skill shares, our memories, the harvested prints, and our own bodies to collectively give an offering to the river and invite others to participate with us. We kicked off the public moment with an exhibition containing all our gathered traces, so everyone who participated in the programme would be present – even if their physical bodies were not. We gifted everyone a photographic print with instructions for a silent walk before making our way over the bridge, crossing the distance between POST and the floodplains to be with the river one last time as a collective. We listened in a circle to the river's stream before sharing our gift with the river: a wish. One that we could whisper, cry, or call to the river, for they might speak back.

There is a certain poetics to be found within the wish, because it circles right back to the wish that preceded the lab: the wish to come to know a river on their own terms. The intimate reality of living with the Bíobío River informed the emergence of the lab in the artist's local, Dutch context. They started the *Hydroformations* project with a journey along the stream of the river to be with the river. This being-with the river opened up a process from embodied orientation to a sensory relationality to ultimately an awareness towards the materiality of place: a place-based orientation of artistic practice within which the Rhine takes on an active, participatory role in the production of knowledge and the ways in which that knowledge takes shape.

The real work was found in the necessity of dismantling the existing imaginaries of the river. Not only because they confirm a (false) sense of safety, superiority, or control, but because they reproduce specific colonial logics. Therefore, the lab's opening question was a tactical way of propelling the thinking already towards an alternative, before the lab even began. The premise of meeting a river on their own terms already sparked imaginations about ethics, practicalities, and solidarity with communities of struggle.

One way of meeting the river that circled back throughout the lab was meeting through listening, where listening was also understood beyond the ears. Listening and voicing were taken up as political practices that flowed into the Rights of Nature movement before moving back again to the river, where we continued our listening to the sounds under the surface.

Just like the layers of the earth go through a deep process of sedimentation, our experiences do so as well. They move through time and metaphorical space, they sediment, they become layered textures of being. Even though they might turn into oblivion, they still co-constitute the groundedness of our being. This groundedness is therefore based on certain assumptions that can be unsettled through the idea of deconstruction or desedimentation. They are still present, but rendered forgotten. Yet, these sedimentations still co-constitute our being in the world. The gathering practice within the lab enabled a thinking practice of sedimentation, which was made explicit through the materiality of the thermal paper.

6 Flowing Together

From the Rhine River Lab, a clear desire emerged to keep engaging with each other and the river. Today, we are slowly braiding an alliance, possibly a collective, though the course still needs to find its way. For now, there are monthly online get-togethers to keep each other updated, to share and discuss new ideas and possibilities for future in-person meetings and collective undertakings. A few important efforts have already been made that are worth mentioning here: the launch of the *Hydroformations* online publication, that gives insight into all the research activities and that holds contributions by multiple group members; a bi-monthly 'embodied reading group', where each of us spends time with the river alone, synchronised with the others, and following the same prompt. The week after, we meet online to discuss our experience in the field and reflect on selected reading materials; and of course, the co-writing of this article.

We continue our collective artistic inquiry into what it means to think of the Rhine River as an entity in and of itself. We continue

to practice meeting the Rhine and other kindred rivers on our own terms. And we continue to come together as bodies of water.

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The River Next Door

Valerie Coffin Price

Artist

Abstract This is a tale of the river Taff, in south Wales, as seen and experienced by an artist and a poet. Through the use of sketchbooks and poetic journals as a form of research in the field, the artist Valerie Coffin Price and poet Philip Gross produced work which lead to the publication *A Fold in the River* (2015). In this visual essay the artist will shine a light on the collaborative processes of working with a poet, the river and the language of place. The book is therefore not only a collaboration between poet and artist, but between the artist, the poet and the river.

Keywords Drawing. Walking. Poetry. Landscape. Sketchbooks. Literature. Wales. River Taff.



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Figure 1 V.C. Price, *A River Next Doors* sketchbook. 2013. Mixed media.
Artists own collection, © V.C. Price

This is not a visual description of the eco-health of a river, nor is it to do with resilience or vulnerability, although it may reflect aspects of all of these. It is the story of one artist and one poet responding to one river in Wales, the river Taff, and to each other's work and ways of working. This creative focus brings a distinctive viewpoint, sensitive to the changing life and presence of the river itself.

Through the artistic use of sketchbooks as a form of research in the field the artist Valerie Coffin Price and poet Philip Gross produced work which led to the publication of *A Fold in the River* in 2015. In this visual essay the artist will shine a light on the collaborative processes of working with a poet, the river and the language of place.

The choice of the river Taff was based on the lived experience of both artist and poet, a river that is central to the book and our lives. Philip Gross used to live on the banks of the river Taff, in the heart of the South Wales Valleys, while Valerie Coffin Price works within sight of the river in Cardiff Bay. It is a source of inspiration to both.

The river Taff, running through one of the South Wales mining valleys, is emblematic of the area, both in its brief historical importance and its damage. As in many industrial areas a river would have been of central importance to the development of industry, just as the South Wales Valleys and the river Taff, for a period, became a driver of the industrial revolution in Britain. Cardiff, now the capital of Wales, was built on the fortunes of the Valleys and its coal and iron industries. The river therefore changed from a rural river, to industrial artery, to

a polluted and unappealing watercourse in the post-industrial period and, more recently, to a clean and rejuvenated resource inhabited by trout, salmon, otters and dippers.

The opening sequence in the book, *The River Next Door*, speaks from a direct, close-up experience of the river in its multiple forms: the “ever changing water music” coexisting with the “plastic tidewrack” of detritus. In the image transfer technique of the visual work, as in the poems, the creative process itself offers a metaphor of the river’s history, with something of beauty emerging out of damage. This should not so much reassure us as alert us to the inadequacy of human judgements in the face of this complexity (Gross, Price 2015, 16).

Using walking and drawing as a research method, the artist walked the length of the river Taff, from sea to source during 2013, travelling from Cardiff, where the river Taff meets the Severn Estuary, to its source in the Brecon Beacons. These episodic walks took place over a period of a year allowing time for reflection and production in-between times. The artist’s use of folding concertina sketchbooks as part of the research highlights her “process of being in conversation with the river, the journey, the landscape and the poetry”, layering elements of imagination, language, image and place. Jeremy Hooker describes this process as “a three-way collaboration, between a poet, a painter and a river” (Hooker 2015).

Both artist and poet are naturally drawn to rivers but use the fluid, marginal riverine spaces to explore subtly different aspects of their work. Bodies of water – rivers, seas, wetlands and estuaries – have been active presences in Gross’ poetic work since the prize-winning collection *The Water Table* (2009), inspired by the Severn Estuary, of which the river Taff is a tributary. In this case, Philip Gross was searching for a sense of his place in the South Wales Valleys, something he did through writing about the exact place where he was. In the process he was also positioning himself within the culture and history of the Taff valley, as reflected in the river, while Valerie Coffin Price, as well as occupying a studio near the confluence of the river Taff and the Severn Estuary, has a more physical relationship to the river, as a sculler of more than 20 years. The project therefore allowed her to explore the changing faces of the river over its entire length of 42 miles.

Both have a history of collaboration, from Gross’ work with Simon Denison on *Eye Spy Pinhole Eye* (2009), a book length examination of the concrete footings of pylons located in the Taff valley to my own work with artist Mary Husted from 2000 to 2006, this project grew out of a joint engagement with wetlands, *Thinking Like a Wetland* (2013). Both *Thinking Like a Wetland* and *A Fold in the River* involved a creative conversation: the give and take, not of two different but equal works, made in parallel, but the kind of collaboration whereby two artforms, not unlike two waters, flowed into each other forming a new, independent entity.

of river and words. The fact that the river Taff has been damaged, transformed and partly healed was what made it a compelling subject for both artists, its ambiguity and sense of having its own distinctive and powerful life behind our understanding of it. There is nothing which is unspoilt about the river, giving it its distinctive and extraordinary qualities: the writing and the 'spoiled' image of the artwork reflect the damage and the mercurial nature of the river.



Figure 2 V.C. Price, *Voices of the River*. 2015. Mixed media. Gross, Price 2015, 22-3.
Poetry by P. Gross, © V.C. Price

The Water Table

All summer it lazed
 on its stone-bed - half
the autumn too. Rain barely stirs it. Only

up, under the hills,
 in the dark long (centuries-
long) hall weight shifts, the water table

being laid: the not-
 yet-woken guests'
cups fill, are filled, are running over. Then

the day. A meadhall
 clamour. Rain sheets
off the fields, the glistening flanks. It spills

into present-time, smells
 sour, knows no bounds,
remembers too much and will not be stilled.
(Gross, Price 2015, 7)

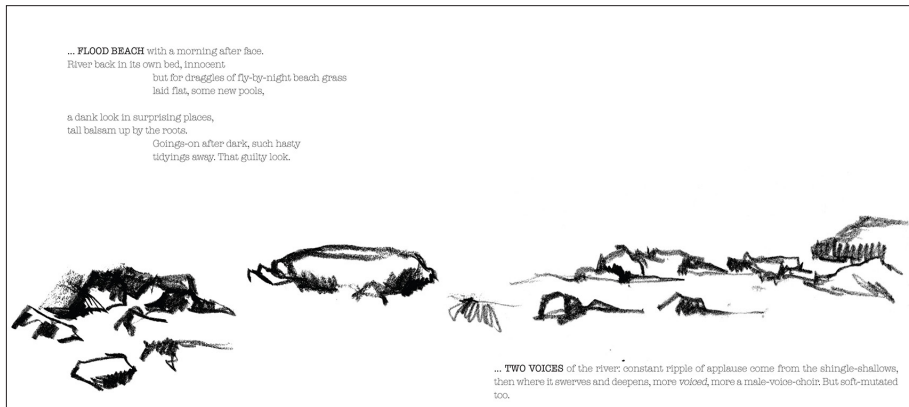


Figure 3 V.C. Price, *Flood Beach*. 2015. Charcoal. Gross, Price 2015, 24-5.
Poetry by P. Gross, © V.C. Price

There is no simple transformation or translation between art forms and their differences. There is, however, space: the space between one body of work and the other, where the creative shift happens. It is this shift, in perspective, in ways of working that comes from seeing 'physical artists at work' or poets sifting words, which leads to the open door through which one steps into new ventures and future collaborations.

WHY SHOULD YOU EXPECT it to smile for you, this river? Grow up. New rains, a half-metre rise, the Taff is murky, greenish-grey and tetchy – a sour smell too, slightly chemical, slightly tinged with mould. It's an unlovely river today, the last leaves falling, everything as naked as you've seen it. That's naked, not nude – there's nothing posed about it, or alluring, in its least-best angle, with its uncleared rubbish too. Unlovely, it doesn't say Love me. Yet you do. (Gross, Price 2015, 94)



Figure 4 V.C. Price, *Two Flows*. 2015. Mixed media. Gross, Price 2015, 50-3.
Poetry by P. Gross, © V.C. Price

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Water as a Biopolitical Actant

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Abstract Drawing from the hydrofeminist perspective proposed by Astrida Neimanis this contribution assumes the Po River as the subject of its practice of care and calls for a recognition of its ecological rights as body of water. To do so, the reflection questions the persistence of policies that reduce water to a mere resource – measurable, scalable, thus controllable and productive – thereby translating ecological risk into a renewed form of capital expansion. The great renaturation plan of the Po River will be the paradigmatic case and object of this critique.

Keywords River as a subject. Biopolitics. Hydrofeminism. Po River. Water bodies.

Summary 1 Introduction. – 2 Towards a Hydro-Critique. – 3 Scales of Power: The River as a Biopolitical Production. – 3.1 The Po River as Techno-Nature. – 3.2 Po River as a Biopolitical Subject. – 3.3 Po River as a More-Than-Wet Body of Water.



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1 Introduction

Situated at the intersection of a biopolitical methodology for landscape studies, hydrofeminist perspective, and in dialogue with the Rights of Nature framework, this contribution investigates how bodies of water may be understood not merely as resources to be managed, but as more-than-human subjects of ecological, political, and juridical concern, focusing on one of Italy's most exploited rivers: the Po River.

Throughout history, water functioned as the fundamental element that has systematically structured, organised, and rationalized the landscape of the Po Valley along with its political, social, and ecological processes (Swyngedouw 2004), portraying the story of a pervasive process of exploitation of resources, with the definition of a Palimpsest of Appropriation (Cavalieri et al. 2020). By examining this complex body of water, it appears clear that the water apparatus has significantly contributed to both physically shape a specific landscape and at the same time act against it, due to an ever-growing process of commodification of the hydraulic resource.

To better understand this double and opposite dynamic of production of both landscape and risk, it is necessary to consider the geographical dimension of the Po River at the scale of its hydrological basin.

A first key feature of the Po basin is the asymmetry between its northern and southern part. The Po receives water from the Alpine arc and from the Apennines, but these two systems contribute in profoundly different ways. On the Alpine side, waters are accumulated in large lakes and in glacial systems, and they tend to reach the Po with a relatively regular and abundant summer flow, following snowmelt and seasonal release patterns (Fiocca, Lamberini, Maffioli 2003). This regularity has historically supported stable irrigation regimes and helped orient agriculture toward water-dependent forms of production.

On the Apennine side, by contrast, the tributaries are typically shorter, often with irregular and violent discharges, and they carry significant sediment loads. Their waters are rich in alluvial transport - fine materials such as marls, clays, and silts - that accumulate across the lower plain and produce a fragmented micro-topography: ridges and depressions, stagnation areas, wetlands, and *valli* with difficult drainage. This condition explains why the Po basin has historically been governed through a double imperative and shaped through two distinct modalities of landscape-making (Fiocca, Lamberini, Maffioli 2003): in some areas, water must be brought, distributed, and made productive through the construction of a diffuse network of canals; in others, it must be evacuated, drained, and contained by developing a set of drainage infrastructure and dams.

From the second half of the fifteenth century until the advent of steam-powered pumps, the excess water that rendered vast areas of the lower plain agriculturally unproductive was addressed through practices that [...] should more generally be understood as forms of water governance. (Fiocca, Lamberini, Maffioli 2003, 17)

This dual condition is a geographic reason – before any political argument – for why the Po has become a landscape of both irrigation and reclamation, of both distribution and exclusion, of both water as resource and water as threat.

Across the Po Plain, water governance did not begin as an abstract science. It began as a situated intelligence: a repertoire of collective tactics developed to live with floods, to reclaim saturated ground, and to make drainage possible in a territory where water tends to linger. At the core of this practical knowledge was a simple but powerful recognition: the most reliable way to move water at scale is not to fight it head-on, but to work through its basic driver: ‘gravity’ (Fiocca, Lamberini, Maffioli 2003). Channels, diversions, settling basins, and protective works were mastering water through redirecting its forces, steering erosion away from vulnerable edges, and guiding deposition toward places where it could be tolerated or made useful.

The stratification of the complex hydraulic works across the centuries mentioned above, served as an active catalyst for a series of extreme environmental events that have radically affected the stability of the hydrological network. In light of the mounting risks produced by the crisis of water, a range of overlapping and sometimes conflicting visions has been mobilized. In particular, the Po River restoration program – framed within the National Recovery and Resilience Plan (NRRP) – constitutes a paradigmatic case for interrogating the complex nexus between space, life, and politics.

As the processes of ecosystem alteration defined by centuries of human-induced modification are clearly shaping the uncertain boundaries of a new climatic regime (Latour 2018), we witness a complex saturation where strategic plans, agendas, and aspirations – thus a multiplicity of perspectives and political positions – structure the contemporary debate on climate resilience and environmental policies. Within the wider framework of the European Green Deal (2019) and the Nature Restoration Regulation (EU) 2024/1991, the Plan for the Renaturation of the River Area (2022) delineates one of the most extensive processes of environmental restoration, declaring an

ambitious goal of drawing up a plan of restoration of nature in order to improve the state of health of the existing protected zones and bring back a variegated and resilient nature across all typologies of landscape and ecosystems: to do so [...] it is also

necessary to support the rehabilitation of nature. (AdbPo 2022, 25)¹

By dwelling onto this statement, the perception of an opaque entity approximately defined as nature begins to emerge, unravelling the limits underlying the renaturation paradigm. By a further examination, the set of design actions displayed by the project appears to foresee a constellation of interventions where nature is envisaged as a subject detached from human stratifications; as if “‘nature’ is merely the uncoded category that modernists oppose to ‘culture’” (Latour 1998, 238).

The complex conditions we are living, marked by the intensification of extreme environmental phenomena and by the growing inadequacy of western binary thought, claim the necessity of a new theoretical and design framework able to overcome the outdated dualistic language that defines concepts in binary such as nature-culture (Descola 2005). In this sense, the land-water distinction can be framed as another binary underpinning river discourse. Far from being a neutral geographical distinction, this binary may be understood as a culturally produced construct of Western thought, through which water is rendered extractable and subordinated to terrestrial regimes of use, planning, and infrastructure. Yet, as landscape architect Dilip da Cunha argues, this division did not exist in the first place (da Cunha 2018). Rather, it is a conceptual and cartographic fiction through which Western spatial rationalities have imposed planning systems, developed infrastructures, and determined where water is allowed to be. Such a logic operates against the hybrid status of landscapes and against their continuous processes of hybridization.

Through this position, the investigation utilizes the hypothesis of reframing the Renaturation Plan as a counter-project to deploy the possibility of “Water as a body [...]. Entity, medium, transformative and gestational milieu” (Neimanis 2012, 87), able to erode the binarism which structured the western system of thought. Water as living entity/extension (Peters, Steinberg 2019) capable of conveying a specific hydro-logic (Neimanis 2012, 86), a precise operational rationality, to be deployed within the design of space. Designing through Water implies the acceptance of leaks, porosity, and wetness as spatial concepts functional to operate an epistemological shift in the action of conceiving, designing, and shaping both the physical and normative space. Within this context, how to exit from the notion of nature as an entity that exists a priori and start a process of decolonization of water itself (Da Cunha 2018)? Can we explore the possibility of watery transition as a theoretical and active position working with complex water rationalities and bodies of water that

¹ Unless otherwise stated, all translations are by the Author.

overlay the biological, technological, and social layers (Escobar 2008) and generate spatial concepts that embrace the hybrid subjects, constantly intertwined with human and technological stratifications? Can the hypothesis of a watery transition of the Po River build a theoretical and operative framework able to shape an affirmative biopolitical action able to reposition the design practice from the perspective of water, thinking through and from the water's liquid materiality and exceedance (Peters, Steinberg 2019)? How might such a watery transition be articulated as a Rights of Nature claim, namely as a political and representational grammar capable of reconfiguring who and what can be protected, made visible, and made to count within river governance? To answer these research questions and highlight a trajectory of study, the article proceeds to open multiple trajectories of investigation, which configure themselves as small provocative notes composed by a textual form and accompanied by operational drawings that aim to complete what words cannot describe. The original drawings produced by the author are assembled as a small *carnet de dessin* of the Po River. They function as a counter-cartographic device, interrogating multiple episodes and dimensions of the river, from the institutional geography of the consortia to the ecological, infrastructural, and spatial practices generated along the basin.

Rather than functioning as mere collections of drawings, the *carnet* represents a form of artistic approach to research that aims to construct situated knowledge through the simultaneous use of writing, cartography, and figuration. As such, the *carnet* constitutes an initial step toward a counter-project for the Po River. To think as a body of water – by intersecting hydrofeminist perspectives with landscape studies – requires recognizing the river not as a bounded object defined by its visible or drawable margins, but as a relational and generative body; it means indulge and act with leaks and spills. The river must therefore be traced in what exceeds its apparent form: in the spatial practices it enables, in the infrastructures that capture and redirect it, in the territories it irrigates and floods, in the institutions that govern it, and in the more-than-human assemblages it continuously produces.

2 Towards a Hydro-Critique

By assuming the Restoration of the Po River as an opportunity to delve into the notion of counter-project, the contribution explores its statute through a critical reading of its ontological foundations as well as the design actions generated from the latter. Counter-project can assume many forms and outcome, and the counter-project this article aims to look at is the one related to a practice of counter-cartography

through drawings able to interrogate or make visible aspects for which water has been treated just as a mere resource [figs 1-3] or other type of representation where the weak subjects takes the first place [figs 4-5].

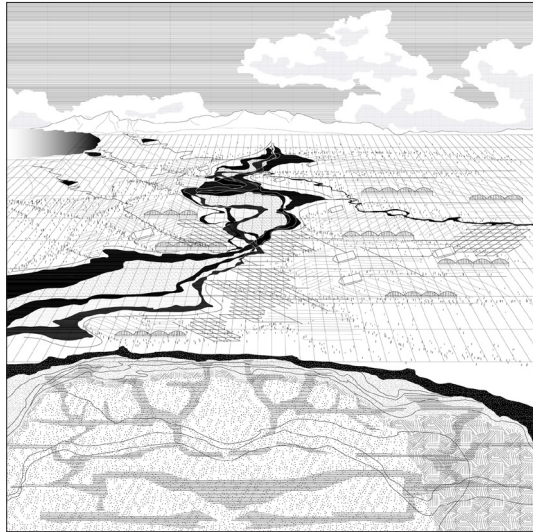


Figure 1
Davide Montanari,
Watery Fresco. 2024.
Digital drawing,
2479 px × 2479 px.
© Davide Montanari

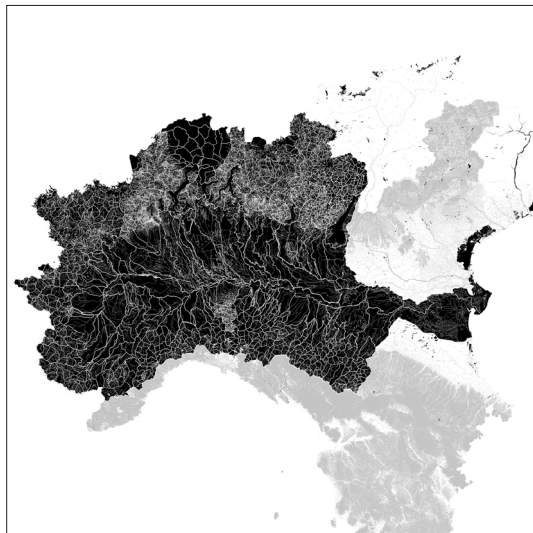


Figure 2
Davide Montanari,
Discipline and Produce. 2024.
Digital map,
2479 px × 2479 px.
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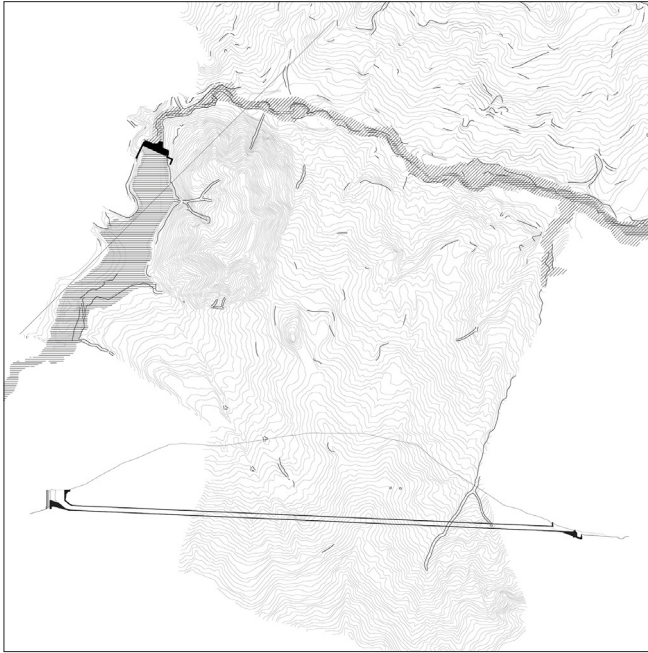


Figure 3 Davide Montanari, *Theatres of Hydraulic Exploitation*. 2024. Digital drawing, 2479 px × 2479 px.
© Davide Montanari. The title evokes the theatrical nature and aesthetic of hydraulic machines, well represented in the book *Le diverse et artificiose machine* by Agostino Ramelli. The exact date of publication remains uncertain; some sources suggest it may have been around 1588. More information and the complete publication with drawings can be found at https://archive.org/details/gri_33125009356607

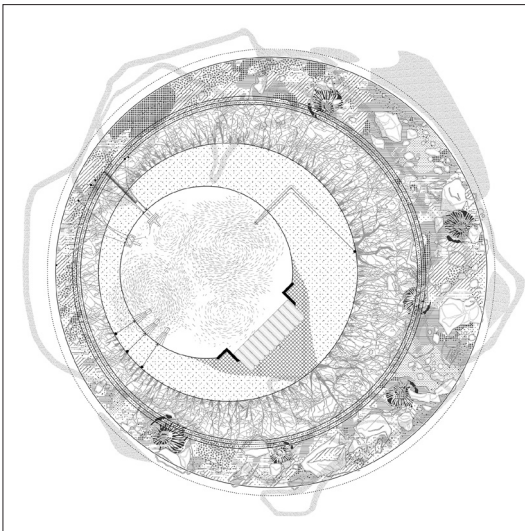


Figure 4
Davide Montanari,
As Above, So Below.
2023. Mixed-media
drawing, hand-drawn
and digitally processed,
2479 px × 2479 px.
© Davide Montanari



Figure 5 Davide Montanari, *Po River as Living Subject*. 2023. Mixed-media drawing, hand-drawn and digitally processed, 300 cm x 59,4 cm (for publication purposes, the drawing is presented here through two selected portions of the original artwork).
© Davide Montanari

Drawing on the objectives expressed by the project, it is possible to perceive the potentiality of a radical approach. Through hydro-morphological interventions paired with forestation and renaturation actions, and precisely: by targeting the reactivation of abandoned riverbanks and former branches, mitigating the artificiality of the watercourse, and implementing an extensive reforestation process, the project of renaturation of the Po River configures itself as a potential radical policy where the objective is to “reactivate natural processes and facilitate the recovery of biodiversity, while ensuring the restoration of the river” (AdbPo 2022, 25). By turning of the consolidated hierarchies – which locate the human life over other forms of existence, together with the proposal of a reduction of human privileges over other forms of life, the aspirations of the project have the power to question the status-quo and stretch the consolidated norms of designing space. This alone could be recognized as a first attempt toward an affirmative biopolitical action (Esposito 2004; Cavalletti 2005): the preoccupation for life (Foucault 2004) extends its boundaries to the non-human (Morton 2017; Bennett 2010). Yet, the biopolitical question is relentlessly controversial and opaque.

To put this provocatively in another way: one could argue that the primary actions of interventions are oriented toward restoring the ecological state of the river by conserving the more-than-human forms of life that have been long-term erased by a consolidated process of

river exploitation. But to what extent are these interventions truly oriented toward ecological restoration? And more importantly: what do they restore? More precisely, it is a matter of extracting protection (Cavalletti 2005): the restoration paradigm, which shapes its epistemological foundation, is still deeply tainted by a modern paradigm where nature exists and functions according to a specific utility. Water and its surrounding environment, in this sense, have always worked as innocent extractive resources. Moving from this perspective shift, appears clear that the interest for what is more-than-human is still deeply “tainted by an anthropocentric and often white supremacy” (Viganò 2023, 12), where the action of restoration could be interpreted as the desire of producing new economic values derived from the ability of restoring and increasing the ecological performance of the space. The desire of potentiating the ecological performance of the space through non-human life “is because for us it would be better” (13) to act on an extractive paradigm where landscape is supported to perform. This is why it seems that this plan is still embedded in a modern paradigm which promotes “a separation between the world of humans and the world of nature” (58) where ecology becomes a new frontier of capitalist production.

It appears clear, from these trajectories, that the theoretical foundation of this apparently radical project draws a moralistic trajectory: by analysing the objectives expressed by the project, and the strict limitation of interventions, it seems to rest on a traditional paradigm which aims at ‘saving nature’. The increase of ecological performance thus occurs by restoring the nature condition, creating a norm. I propose to read the Po River Valley without avoiding its intrinsic complexity but rather accepting the overlapping of multiple, intertwining and sometimes contradictory conditions.

3 Scales of Power: The River as a Biopolitical Production

We drew the waters from the deep beds of rivers and from marshy hollows, and dispersed them over the arid plains. Following the ancient conduit, [...] we are met with this spectacle: where water passed, grass stretches out; where it comes to a halt, the dark, scorched land begins. (Cattaneo 1844, 28)

The words of Carlo Cattaneo describing the construction of the Po River Plain in the nineteenth century seems tracing a condition not distant from the present. Contemporary practices of water abstraction continue to shape the water landscape of the Po River, revealing the persistence of a spatial rationality that still considers space as mute, a mere “support” (Viganò 2023, 111), whereas space

is a “collective product” (111) that encompasses relations between multiple forms of life. But it also collects a constellation of power relations and should be interpreted as “a political construction” (111), with a strong normative body. At a time when survival on a contaminated planet has become a central condition of the present (Haraway 2016), an exclusively human-centred perspective is no longer sufficient. Theoretical discourse must therefore be situated within a more-than-human framework, capable of accounting for the entanglements among human bodies, nonhuman beings, technologies, and ecological processes. Thus, we need to overcome the binarism which structured modern epistemologies and explore the body of the river as a compound mixture (Latour 1998) where the human and the more-than-human overlap and generate new and unknown forms of life.

I introduce at this point the terms *Sympoiesis* and *Holobiont* to sustain the argumentation. Starting from the first term, utilized by Donna Haraway in her book *Staying with the Trouble: Making Kin in the Chthulucene* (2016) – sympoiesis describes “complex dynamic systems” (Haraway 2016, 61) in which “symbiogenesis is an irreversible feature” (61), and where “nothing makes itself” (61). Within this vision, the Po River is configured as a unique and never-ending sympoietic process where “each organism changes in response to ecological interactions, thereby reshaping its environment” (Brown 2016). In this sense, the river should be seen through its ability to act as an active socio-techno-natural system built from more-than-human interrelations.

Second, the concept of the holobiont further unsettles the idea of the organism as an autonomous and self-contained entity. It describes living beings as contingent and dynamic symbiotic assemblages, composed through relations among multiple organisms and environmental agencies (Tsing 2015, 37; cf. Haraway 2016). In this sense, the holobiont foregrounds life as a process of co-constitution and co-evolution, rather than as the expression of isolated individual bodies. The Po River should be seen as a “dynamic combination and combination of combination” (37). These two terms together, can drive the possibility of conceptualizing the Po River as a socio-techno-natural body of water, where the more-than-human is a fundamental and active part of the river itself.

3.1 The Po River as Techno-Nature

Space is made by opaque stratifications and assemblages (Tsing 2015) of ecological, technological, social, and cultural layers. These entangled processes shape a techno-nature (Escobar 1999): a hybrid and contaminated form of nature intertwined with human stratifications. In this sense, the river is also a cyborg, a region of space with liquid and porous borders – an area of continuous resistance and transformation – capable of leading to a “political and epistemological retake” (Braidotti 2011, 17), the ability to reveal the saturated and relative meaning of categorical epistemologies. Cyborg and techno-nature are both operative theoretical devices and design figures which activated cause a generative change to “think through the boundaries” (Haraway 2016, 12) and their porosity, and thus to perceive landscapes beyond dualities.

3.2 Po River as a Biopolitical Subject

“Water is...inherently political [...] because of its material imbrication in the socio-technical formations through which we produce, reproduce and live socionatural natures” (Bakker 2012, 618). This massive normative body has control over the myriad of “interrelationship[s] between water technologies, [...] processes of social power and the construction of identities and subjectivities” (Swyngedouw 2004, 25). Water is the medium that entangles together “individual bodies to the collective body politic” (25). The different age of humans and their varying socio-technical formations are embedded within the body of the river, where water acts as “the basis for the origin of power and meaning” (25). The body of the river is thus a biopolitical subject “in the Foucaultian sense: modern governments seek to optimize both the reproductive and productive capacities of populations and individuals” (Bakker 2012, 619). The river as a biopolitical body means that the spatial and water’s biopolitical apparatus becomes an active and crucial part of this process. Its infrastructure has always aimed to increase the well-being of the population and to render its bodies productive.

The Restoration Plan is in this sense a paradigmatic case of the biopolitical dimension of the Po River, and of water as a medium for power relations and capitalist extractive processes. It portrays a new water and ecological era in which the objectives aim to define a new paradigm of restoration and water governance. In the plan, the protection of human life is extended to more-than-human forms of life, while at the same time producing new forms of capital production. Throughout the different phases of its development, the project has drowned into an abstract normative space built by the study of

feasibility and flexibility of interventions, focusing on the cost and possible performances of each operation. The landscape of the river is thus entirely framed within this body of economic knowledge. It is in this realm of power-play that the river is encoded as a mere blue surface (Peters, Steinberg 2019) without looking at the existing techno-socio-natural process, and its agency as a holobiont. It is the space in which risk and vulnerability are absorbed by the capitalist production and become a new frontier for future capital production.

The arguments outlined draw a site-specific cartography that calls for a reset in the methods with which landscape is read, practiced and designed, thus a call for a counter-project. Any future desire of transformation of space must accept the world as a big sympoietic process, as a collective process of becoming with the other (Haraway 2016), by acknowledging the non-human as an active life-form.

3.3 Po River as a More-Than-Wet Body of Water

Drawing from the positions previously outlined, framing the landscape as a subject (Corboz 1983) opens the possibility of envisioning the Po River as a laboratory for affirmative biopolitical action and, potentially, for Rights-of-Nature imaginaries. As this written contribution is an opportunity to test a set of concepts developed within the author's ongoing doctoral research, with malleable borders that will evolve taking other forms, instead of formulating a conclusion, aware of the impossibility to delineate a fixed answer, I want to open a trajectory.

This perspective seeks to advocate for the possibility of conducting an affirmative biopolitical action; thus, conducting landscape-making practices, by moving from the feminist provocation expressed by Astrida Neimanis of hydro-feminism, using the hypothesis of becoming bodies of water, to realize a watery transition. The body of water is a figuration (Braidotti 2011) that drives the comprehension of the river as a nomadic subject (Braidotti 2011) resistant to power relations and able to transcend its physical boundaries. Not inscribed in the administrative limits of human rationality, but rather a shape-shifting holobiont that continuously produces situated and site-specific cartographies (Braidotti 2011). The hypothesis of hydrofeminism is a practice that facilitates the vision of the Po River beyond its tangible materiality: a body that "spill and leak [...] a materiality that exists beyond the liquid, blue spaces on the map that are marked as 'water'" (Peters, Steinberg 2019, 295) a category of space reframed through a more-than-wet ontology (Peters, Steinberg 2019).

In a present increasingly shaped by extreme environmental phenomena, conceiving water as an active spatial subject enables the articulation of site-specific hydro-logics. Such an approach

shifts attention from water as a resource to water as a relational force that participates in the formation of bodies, communities, and landscapes, thereby opening “new ontological understandings of body and community” (Neimanis 2017). Like water, the notion of counterproject – with its generative power – stretches and questions the current status quo, and its application is instrumental in order to redefine the restoration process of the Po River as an affirmative biopolitical action (Esposito 2004; Cavalletti 2005; Viganò 2023) and as a practice of political representation capable of shaping the mesh occurring between life and the spaces of water of the twenty-first century.

The counterproject I want to propose is on the one hand a more-than-wet transfiguration of the existing liquid materiality of the Po River, and on the other a watery transition where “in acknowledging this corporeally connected aqueous community, distinction between human and nonhuman start to blur” (Neimanis 2012, 92), disclosing our essential state of bodies of water. The artworks contained in this essay constitute an initial effort to develop a broader counter-mapping project. This approach advances a rhizomatic cartographic practice designed to produce situated knowledge, repositioning the river not as a resource to be extracted but as a living subject.

The counter-project proposed here therefore begins as an exercise in counter-cartography. Its aim is not simply to represent the Po River differently, but to produce another level of hydrological consciousness by assuming water as the standpoint of inquiry. From this perspective, mapping becomes a critical practice through which the river is no longer framed as a resource to be extracted, regulated, or restored from the outside, but as a living and relational subject with its own material agencies and rights. This position intersects hydrofeminist thought, which understands bodies, waters, and communities as mutually constituted, with the Rights of Nature framework, which offers a juridic-political grammar for recognizing rivers and ecosystems as subjects of protection and representation. The drawings included in this essay constitute a first attempt to develop such a cartography. As a small *carnet de dessin*, they collect and connect heterogeneous episodes of the Po River – its infrastructures, institutional geographies, ecological disturbances, hydraulic practices, and more-than-human relations – In order to trace the river beyond its margins. In doing so, they establish the preliminary ground for a broader counter-project: one that begins from the rights of water and uses drawing as a situated method to make the river visible as a subject, rather than as an object of management.

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Lake



Lake. 2026. Acryl on canvas, stainless steel frame, 40 × 60 cm. Berlin. © Jakob Kukula

(Holding) the Thin Layer **Tears and Goosebumps** **as Pedagogical Companions** **in Un/Learning**

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Abstract In this essay we unfold the textile artefact *(Holding) the Thin Layer* which was piloted in the second Confluence of European Water Bodies, in Venice 2024. A month later, it was part of a ceremony with environmental defenders from various advocacy groups around Lake Vättern in Sweden. The essay presents the origin story of the textile and the ceremony's setup, reflecting on its realisation in conversation with concepts such as un/learning, the overview effect, decolonisation, and affects as pedagogical companions. We believe that pedagogical objects and practices like this can bring values and criticality to the Rights of Nature movement.

Keywords Unlearning. Affective pedagogy. Decolonisation. Overview effect. Representation. Textile. Making. Ceremony. Subjectification. Lake Vättern.

Summary 1 *(Holding) the Thin Layer* in Venice. – 2 Decolonisation of Lake Vättern. – 3 'The Overview Effect'. – 4 Experimenting with Different Forms of Representation. – 5 Affected by Thinness. – 6 The Lake Taking Shape. – 7 *(Holding) the Thin Layer* in Håstholmen and Beyond. – 8 Conclusion: Art-I-Facts in the Rights of Nature Movement.



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1 (Holding) the Thin Layer in Venice

4 October 2024: a dozen people stand in a circle in the *piano nobile* of Ca' Bottacin, in Venice. Many more stand around, watching curiously. We all belong to the Confluence family and have come together on this day to share our experiences and learn from each other, with a particular focus on how many of us use ceremonies in our various projects and activist endeavours. Those of us who are there for Lake Vättern want to take the opportunity to try out a ceremony that will be performed in earnest a month later for a group of local environmentalists around the lake. A long, narrow piece of fabric is passed around the circle. The participants hold it in their arms, treating it with respect and solemnity. They have been told that it represents Lake Vättern but otherwise know nothing about the context of the fabric or the future ceremony [fig. 1].



Figure 1 The ceremony (Holding) the Thin Layer is being tested at the Confluence of European Water Bodies in Venice. October 2024. Video stills by Kennet Öhlund

After the round, we talk about the precarious conditions of Lake Vättern, how Vättern, despite the status as a Natura 2000 site, is being bombarded by the Swedish military, what consequences a planned mine next to the lake could have, and how the water on which around 300,000 people are completely dependent for drinking water has alarmingly high levels of PFAS. We also explain why the textile is designed the way it is and that for us it is an attempt to un/learn, especially regarding long-established notions about the enormous depth of the lake. We believe that un/learning in relation to this powerful narrative can be significant. When we explain that the fabric is true to scale not only in terms of length and width, but also in terms of depth, the participants are surprised and it feels like

the penny drops; after all, they have just felt and carried the thin fabric in their arms. We conclude by asking everyone what kind of un/learning might be significant in relation to their own water bodies.

Afterwards, Daria Testo, one of the participants, approaches us, clearly moved. She tells us how the ceremony reminded her of a special shawl, *khadak*, which is often used in rituals in the Buryat-Mongolian Indigenous culture to which she belongs, and that she had therefore intuitively understood what we were trying to achieve with our ceremony even before we explained it to her. In these rituals, which are about empathy and care, a shawl is held up in the same way as we had done in our ceremony. The ‘affect’ that had just taken hold of her, travels further into our bodies, transforms, and when we sit down a moment later, one of us begins to cry (Massumi 1995):

All of me collapsed in relief, gratitude, and a feeling of rebirth. I was shivering in my chair in the first row in an amazing room at Ca’ Foscari University, crying, and my mind blank. Thomas put his arm around my shoulder after he had folded the textile representation of Lake Vättern into its case, and I looked into the eyes of Swedish-Māori Erena Rhöse – sitting to my right nodding. My years in solidarity with Sámi land defenders and the knowledge I received from Indigenous scholarship at Várdduo was screened as a movie in my head. For a moment also, I felt that nothing is stopping the coming of Indigenous resurgence.¹

2 Decolonisation of Lake Vättern

Like many countries in Europe, Sweden has a complicated and troubling history as a colonial power. In this country, the colonial apparatus is not just part of the past, but it also represents to a very large extent an ongoing conflict. The majority of the Swedish society live their lives in ignorance or have no interest in addressing these abuses and heal this wound. These people probably do not think about the fact that they use, for example, electricity and toilet paper that are exploited from rivers and forests in Sápmi, and that this extractivism is changing the Sámi people’s living environments beyond recognition.

Most people living around Lake Vättern today probably think they live very far from Sápmi, a conception that can be understood as both right and wrong. Right, because it is about 350 km as the crow flies to the southernmost point of the Swedish part of Sápmi (Söderhamn)

¹ Author Martin Hultman recollects what happened directly after the try-out in Venice.

and about 1,200 km to its northernmost point (Karesuando). Wrong, because it has been in the interests of the colonial powers to make the majority population perceive the Sámi as ‘distant Others’ only living very far to the north (Nordin 2022, 484). New archaeological and historical research shows, on the contrary, that the Sámi lived and moved through the land considerably farther south than previously thought (Nordin 2022). Perhaps the Sámi people also had close ties to Lake Vättern long ago? Regardless, the need for decolonisation is applicable and necessary around Lake Vättern as well – not least because Sweden as a nation needs to come to terms with this history across its entire territory. So let us start from the understanding that decolonisation is a necessary process for repairing historical mistakes as well as for addressing intertwined injustices in our present.

Indigenous thinkers have for decades emphasised the importance of a broader understanding of decolonisation. These ideas have since become cornerstones of theoretical fields such as critical posthumanism and radical ecofeminism. What do we who have been socialised into extractivist ways of thinking and living need to un/learn? What could decolonisation of Lake Vättern entail, and what does it mean for the people who live by the lake and are completely dependent on the lake’s well-being? We need to ask a fundamental question that may provide answers to many other questions: Who is Lake Vättern really, and how can we protect their rights? The very first word in this question expresses a changed view of the lake, from merely an object and resource to a subject. It can be that simple to begin decolonisation – in theory, at least. Furthermore, to stop using the colonial tool of designating land and water as empty, wild and uninhabited, or if inhabited, ‘only by savages’; Lake Vättern is not *aqua nullius* – nor is it a giant tub of H₂O whose primary purpose is to be drinking water for humans – but a body of water that has lived, and has been a living environment, since time immemorial.

For centuries, seafarers around Vättern have perceived the lake as having a temperament: moody and wild. The explanation is said to be the lake’s elongated shape combined with its depth, which can quickly create very dangerous conditions for people in boats. With its royal castle on the island of Visingsö, for hundreds of years it was also a source of power and the water that needed to be conquered to make it easier for people to travel between the influential regions of Östergötland and Västergötland. The temperament and depth of Lake Vättern are key components of what Donna Haraway would call a strong story.²

2 See Fabrizio Terranova’s film *Donna Haraway: Story Telling for Earthly Survival* (Icarus Films, 2016).

The story of Lake Vättern's impressive depth³ is well established and is found not only among ordinary people but also in more official contexts, such as in the marketing of the municipalities around the lake. But this story is not insignificant or innocuously picturesque; it influences how people today understand the threats and challenges facing the lake. If we view Lake Vättern as an immensely large wild beast, co-created with royal power, this probably also influences us to believe that this beast can withstand a great deal of abuse. It does not help that ecologists try to point out that Lake Vättern is a very fragile ecosystem; the powerful narrative about the lake tends to take over. What happens if, in relation to Lake Vättern, we try to follow Haraway's call to "make the strong stories weaker and the weak stories stronger"?⁴

3 'The Overview Effect'

A counter-image to Lake Vättern as a wild giant is Vättern on a scale that we can relate to with our own human bodies, perhaps even hold and embrace. Lake Vättern needs to be made smaller. This is common practice when humans make maps to scale. We shrink the world and make it manageable and comprehensible, which, of course, with the coloniser's intention, can instil a sense of control and power. We shrink the world into flat images (maps) or three-dimensional models (globes) that we can hold in our hands. But if diminishment is part of the coloniser's toolbox, can it also be part of a decolonisation process?

It is said that the first astronauts, when viewing the Earth from a distance, alone and fragile in the vastness of space, experienced a profound sense of love and gratitude for our small planet. This experience is now known as 'the overview effect'. What would happen if we used this effect for educational purposes, if we made Europe's sixth largest lake fit in one's embrace, not as a conventional map but as a 'body'? And what would happen if this representation formed the basis for a ceremony for people who are certainly familiar and intimate with the lake, but who might gain new insights and perspectives through this ceremony? Could this experience weaken the powerful narrative? Can this 'body', this representation, be understood in terms of an 'aquatic doppelgänger', a doubled form of

³ The depth of Lake Vättern is 128 m. By way of comparison, here are a few other European lakes: Hornindalsvatnet (Norway) 514 m; Lake Como (Italy) ~410 m; Lake Ohrid (North Macedonia/Albania) ~287 m. The world's deepest lake is Lake Baikal with a maximum depth of 1,642 m.

⁴ Fabrizio Terranova's film *Donna Haraway: Story Telling for Earthly Survival* (Icarus Films, 2016).

Lake Vättern that unsettles what the lake is allowed to be?⁵ For two years now, we have been exploring these questions in a process of design, creation, experimentation, evaluation and reflection [fig. 2].



Figure 2 Members of the research project *Whose Body of Water?* prototyping with a piece of placeholder fabric. April 2024. Video still by Thomas Laurien

4 Experimenting with Different Forms of Representation

Since the start of our subjectification process with Lake Vättern, many different forms of representation have been tested, both in theory and in practice. For example, we considered creating a full-body suit representing the lake, which could be used in everyday situations, perhaps in grocery stores, to start conversations about Lake Vättern. Here, we mainly wanted to reach people who live very far away from the lake but still get their drinking water from there via an extensive system of pipes and pumping stations. Could such a costume spark conversation that challenges the ‘modern water’ paradigm: the disconnection between the source of the drinking water and the kitchen tap where the so-called modern human being consumes the water (Linton 2010)? We never pursued the idea because we thought there was a risk that we would feel silly in the costume. At a seminar on the ‘relational turn’ a little later, we held a prefigurative workshop on how Lake Vättern is represented on the websites of the

5 The concept of the ‘aquatic doppelgänger’ is developed by Marie Widengård in the text “Mar Menor and Vättern as Aquatic Doppelgängers” in this special issue of *Lagoonscapes*.

surrounding municipalities today (most often as a resource and a beautiful backdrop), and how it could be represented instead if Lake Vättern were subjectified. For this workshop, we attached strips of blue shimmering fabric to our jacket sleeves to make it look as if water was flowing out of us – all to make Lake Vättern and water present in a perhaps new, surprising and thought-provoking way. We finally decided to create a scale representation of the lake, around which we also wanted to build a ceremony.

5 Affected by Thinness

Thomas leads the work, searching for suitable materials and thinking carefully about how the depth of the lake will affect the construction of the representation:

I lay awake at night thinking about what might work. It felt increasingly difficult to bring to life what I saw within myself. I visited a fabric shop a few times to look through all the different filling materials they sold. Nothing felt quite right. I took the bull by the horns and decided to work out how much material was needed to create the ‘depth’. I calculated and calculated, but it kept coming out wrong. After several recalculations, I was suddenly struck by a realisation. It wasn’t that I had calculated wrong, but that I had an incorrect idea of the depth of the lake. It is no exaggeration to write ‘struck’ here, because it really was a physical experience. Goosebumps. Dizziness. Like I lost my footing a little. I grew up by Lake Vättern and had heard since childhood about its incredible depth, about the crack that opened in the bedrock millions of years ago, where water collected and which eventually became the lake we know today. But the figures from the calculations revealed something completely different.⁶

The figures show that all concerns regarding the filling material have been unfounded. Nothing more is needed than the two different fabrics to be used for the top and bottom layers. These two layers measure a total of 1 mm, which corresponds to the lake’s scale-model depth. Surprisingly, what is to be held in the arms is merely a thin, two-layer piece of fabric. Despite its enormous volume of water, Lake Vättern is merely a thin film on the Earth’s crust. Once this has been realised, the production of the textile representation can begin.

⁶ Author Thomas Laurien recollects a pivotal moment during the process of making the textile.

6 The Lake Taking Shape

From the outset, the ambition is to include the entire catchment area in the representation, not only the rapid river that links the lake to the sea, but also the streams that flow directly into the lake, and all the smaller lakes that feed the streams that enter Lake Vättern, and in turn their up-stream waters, and their branches of tiny watercourses, and so on [fig. 3]. What we envision is a tangle of water, which is also part of un/learning. A lake is never just a lake. However, this ambition proves too difficult and time-consuming to implement, at least this time around.



Figure 3 An image of the catchment area of Lake Vättern projected on a wall during the process of the making of the artefact. April 2024. Photo by Thomas Laurien

The shape of the lake is simplified and projected in full scale onto a wall so that the lines can be traced onto the sand-coloured velvet-like fabric that will be the bottom fabric of the representation [fig. 4]. Then the shape needs to be cut out. This is a time-consuming task that requires full concentration and a sharp pair of scissors. Perhaps it would have been possible to laser cut the shape, or perhaps not? This is never an option, as there is value in spending a long time with the representation; through the slow but decisive movements of the scissors along the drawn line, the person cutting becomes familiar with unfamiliar parts of the lake [fig. 5].

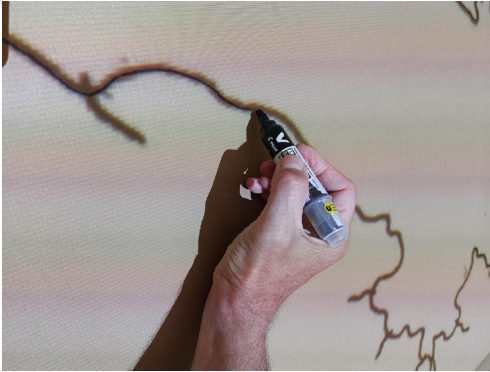


Figure 4
The outline of Lake Vättern
is drawn onto the fabric,
which is intended to represent
the lakebed. August 2024.
Photo by Thomas Laurien



Figure 5 The shape is cut out by hand. August 2024. Photo by Thomas Laurien

It is then time to attach the top fabric to the bottom fabric. The two fabrics have completely different characteristics and thus behave in different ways, which always presents a challenge when joining two layers together. After a few unsuccessful attempts using a sewing machine, a regular sewing needle and embroidery thread are used by hand [fig. 6]. It takes a long time to attach the two layers by hand, but this is also valuable time [fig. 7]. We are convinced that it matters for the experience of the representation that it is 'well made' and that it has artistic merit. It is laborious work, but after a few weeks, the islands and some of the many waterways can finally be stitched

together [fig. 8]. Lake Vättern is ready to be united with the Venice lagoon, and the essay began by describing how the meeting went. A month later, we repeated the ceremony in Sweden.



Figure 6
The two layers of fabric are sewn
together by hand. August 2024.
Photo by Thomas Laurien



Figure 7 After joining the layers together, the shape is also cut out from the shimmering top fabric. August 2024. Photo by Thomas Laurien



Figure 8
Finally, the islands and tributary
streams are placed
in their correct positions.
September 2024.
Photo by Åsa Sörman

7 (Holding) the Thin Layer in Hästholmen and Beyond

8 November 2024: after the experience of the ceremony in Venice, it is now time to put the textile to work with a group of environmental defenders who have been invited to a *Vättern*⁷ – a meeting where we want to get to know local environmental defenders to understand what they are fighting for/against, and where we also want to present the idea of Rights of Nature. Several of the invitees already know each other and are skilled at talking about Lake Vättern based on what is primarily their group's focus: the threat from a new mine, aerial bombing, or alarms regarding PFAS and other toxic subjects.

We want to open a different kind of conversation that may complement or even challenge their habitual and mainly human-centred way of talking about Lake Vättern. After a brief introduction, we therefore begin the meeting with the ceremony. Stones from the lake have been laid out in a circle on the floor, where the participants now stand. We lift the fabric from a table where it lies and then let it be passed quietly from one person to another. Unlike the rehearsal ceremony earlier in Venice, on this occasion all participants immediately understand that it is Lake Vättern that is

⁷ As method within the six-year research programme *Whose Body of Water?*, on situated water and the Rights of Nature, we arrange meetings, known as *Vättern*. The tradition of meeting at a thing has deep roots in Nordic history and served as the fundamental political and legal institution of society.

being represented. Everyone knows the shape of the lake, and with that knowledge, each person adds their own thoughts, feelings, and ideas about this body of water. When the circle is complete, we place the textile representation of the lake on a chair in the middle. We have now made Lake Vättern present in the room in an affective way that may contribute to un/learning.

It is difficult to know during or immediately after the ceremony how it has affected the participants. A little later, two of them lay the fabric on the floor and want to have their photo taken next to it; it has obviously aroused some kind of desire in them at least, but otherwise it is difficult to know. Some time after the meeting, we receive evaluations. One person thinks the ceremony was completely unnecessary, one even thinks it was embarrassing, but several say it made an impression:

It was new for me to feel tenderness for Lake Vättern. The lake is large and impressive, beautiful and dangerous. The proportions were telling. // The model of Lake Vättern fascinated me. // I had an eye-opening experience. // It was both emotionally and visually powerful and gave me a new understanding of what we are trying to protect and that we are all part of Lake Vättern. That we all literally carry Lake Vättern and are responsible for the lake's well-being. // The image gives a strong impression that the water in Lake Vättern is very vulnerable.⁸

Since our first *Vättern*ing, we have activated *(Holding) the Thin Layer* on several other occasions, which has given us new experiences. For example, it is not surprising that there is a difference depending on whether the group performing the ceremony has a connection to the lake or not. We have also learned what is required of us as facilitators for the ceremony to be successful, for example, that the first person to receive the textile from the ceremony leader must understand how the handover is supposed to take place; that person sets the example for how the others will then act. We have also been invited to participate in a curated exhibition at an art institution, where we have had the opportunity to test what the textile representation can convey, without the ceremony - an opportunity that would probably not have arisen if the artefact itself had not been of high artistic quality.⁹

⁸ Voices of several different participants.

⁹ In the exhibition *Vattenbalans*, at Rian designmuseum in Falkenberg, Sweden, 13 September-28 December 2025.

8 Conclusion: Art-I-Facts in the Rights of Nature Movement

How does an idea emerge, and in which ways are the history of an artefact shaped and always relationally designed? In this essay we have tried to write the history of a process of becoming with a textile representation of a lake. We propose understanding this representation as an Art-I-Fact: a piece that brings together issues of subjects and subjectification, facts and the potential of artistic approaches. We suggest that our concept of Art-I-Facts, and the realisation of them, can bring values and criticality to pedagogical artefacts involved in the Rights of Nature movement.

In *Confluence of European Water Bodies*, we have encountered many artistic practices, pedagogical experiments, ceremonies, and overwhelming learning experiences. We have come to understand them as part of the core need for an ontological shift when transforming our juridical systems to recognise Rights of Nature (Knauss, Lindau 2025). The laws, and how laws are practised across the Globe, are today intertwined in a planetary ecocidal trajectory. In line with scholarship from Aotearoa/New Zealand we argue that making sure pedagogies are developed that can enlighten another path is incremental to the changes needed (Hay 2025).

(Holding) the Thin Layer was created with a particular water body and process of un/learning in mind, with tears and goosebumps as companions, and in the context of Rights of Nature. We end here by repeating but also expanding the question we asked to our friends in Venice: What kind of un/learning could be meaningful and important regarding 'your' water body, and might the agency of an Art-I-Fact be helpful in this endeavour?

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Articulating Rights of Nature and Degrowth: Proposals Around Mar Menor

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Abstract This article calls for deepening the articulation between Rights of Nature (RoN) and degrowth. First, a historical overview identifies ecofeminism, *Buen Vivir*, and Green Legal Theory as areas of already existing connection. Despite tensions, we propose four promising intersections: multispecies conviviality; commoning; temporalisation of limits; and more-than-human care. Finally, we explore this articulation thinking with our fieldwork around Mar Menor, Europe's first ecosystem with subjective rights. Specifically, RoN could enable to situate degrowth within ecosystems, while degrowth may inspire institutional design to materialise RoN.

Keywords Rights of Nature. Degrowth. Mar Menor. Social-ecological transformation. Ecofeminism. Buen Vivir. Conviviality. Commons. Limits. Temporalities. Care. Legal personhood. Institutional design. Green Legal Theory. Multispecies.

Summary 1 Introduction. – 2 Historical and Conceptual Proximities. – 2.1 Close Roots, Different Directions. – 2.2 Confluent Streams. – 3 Tensions, Gradually Overcome. – 4 Between RoN and Degrowth: Bridging Concepts. – 4.1 Multispecies Conviviality. – 4.2 More-Than-Human Commons & Commoning. – 4.3 Temporalisation of Limits. – 4.4 Care in More-Than-Human Worlds. – 5 Articulating RoN and Degrowth in the Field: The Case of Mar Menor. – 5.1 Degrowth and the Mar Menor Law. – 5.2 Situating Degrowth Through RoN: The Mar Menor Law and the Temporalisation of Limits. – 5.3 Mar Menor Law, Care and Multi-Species Conviviality. – 5.4 Mar Menor Law and More-Than-Human Commons: Degrowth as Guidance for the Design of Economic RoN Institutions? – 6 Conclusion.



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1 Introduction

Both Rights of Nature (RoN) and degrowth are attempts to bring about radical socio-ecological transformations which, in recent years, have gained steam and prominence in academia, in civil society (Putzer, Cook, Pollock 2025) and even in national and international policy circles such as the UN Harmony with Nature programme (UN 2022). On the one hand, there have been major national implementations of RoN such as the Constitution of Ecuador (2008) or the recognition of legal personhood of the Te Urewera Forest, Whanganui River (2017) and Taranaki Maunga Mountain in New Zealand and the saltwater lagoon Mar Menor in Spain (2022). On the other hand, also degrowth has been taken up as a serious policy option as reports by the Intergovernmental Panel on Climate Change (IPCC) discuss degrowth policies and pathways as ways to tackle the climate crisis (e.g. IPCC 2022). Furthermore, the governments of New Zealand and Scotland and cities such as Amsterdam, while not embracing degrowth, have decentred growth as the goal of economic policy-making and instead adopted concepts such as ‘wellbeing economy’ and ‘doughnut economy’.

Besides calls for engagement (e.g., Escobar 2015; Tănăsescu 2022), there are only some rather short common discussions, such as by Parrique (2024; 2025) or Richter (2017; 2025). Ecofeminist thinkers have discussed both already in 1993 (Mies, Shiva 2014). Later, a number of scholars have brought degrowth in conversation with RoN, insofar as both are part of *Buen Vivir* and post-development thought from *Abya Yala* (Latin America) (e.g. Acosta, Brand 2017). In post-development discourses, both feature prominently as parts of discussions about a pluriverse of alternatives to the euro-modern one-world-world (Kothari et al. 2019). Yet, these conversations remain rather limited, and the core of the respective discourses separated. For example, in two recent handbooks containing articles by many key degrowth thinkers, RoN were mentioned once (Easton, Hebron 2024) and twice (Nelson 2024) respectively, without substantial engagement. Reciprocally, in two recently edited volumes on RoN, degrowth is not mentioned at all (Ruales et al. 2024; Rodríguez-Garavito 2024).

This article attempts to prepare the ground and offer first steps to close this gap by bringing these two movements into closer conversation. We first give a short introduction to degrowth and RoN and review the limited literature that discusses both. In the main part of the paper, we flesh out the proximities and tensions that already exist between RoN and degrowth, while acknowledging that we cannot fully account for the plurality of these two rich discourses. We then introduce four concepts that we think are fertile meeting ground for RoN and degrowth. Finally, we show the relevance of

thinking degrowth and RoN together through the case of Mar Menor and point to future research directions.

2 Historical and Conceptual Proximities

2.1 Close Roots, Different Directions

While RoN and degrowth originated independently from one another, they were both first explicitly formulated in the 1970s as critiques and alternatives to a capitalist model deemed deeply unsustainable. However, these critiques were organised along different lines. Originating in close relation to ecological economics, degrowth emerged as primarily economic and materialist, focusing on the impossibility of infinite growth and therefore on the necessity of a shrinkage of productive activity (Gorz 1972; Meadows et al. 1972). RoN appeared initially as a primarily ethical critique of the reduction of natural entities to mere resources for human use without intrinsic value, and called for their recognition as subjects of rights. Nevertheless, both movements and discourses pluralised into sprawling networks that showcased convergences.

The degrowth discourse quickly extended beyond quantitative arguments towards a more qualitative critique aiming at emancipating the social imaginary from the supposed necessity of growth. Specifically, critiques of alienation engendered by an instrumental relationship to the world have brought it closer to critiques emanating from RoN (Amar 1973). In this wake, the degrowth movement, originating at the heart of Western modernity, increasingly sought alternatives in non-Western thought. In particular, it explored decolonial perspectives, both in the sense of liberating (neo-)colonised countries from the material control exerted by ‘developed’ countries through unequal exchange as well as in decolonising the modern Western imaginary (Latouche 2003). It also increasingly engaged with feminist thought and the commons (see § 4.2 and § 4.4). Timothée Parrique, to mention just one of the many definitions proposed today, attests to the inclusive and open nature of the concept: “the downscaling of production and consumption to reduce ecological footprints, planned democratically in a way that is equitable while securing well-being” (2025, 12).

RoN traces to the 1970s, with American jurist Christopher Stone (2010) arguing for natural entities to be represented in court as damaged parties that can receive reparations. Around the same time, German-Chilean lawyer Godofredo Stutzin developed the idea to recognise RoN in the Latin American discourse (1976). Aiming at transforming legal and political institutions, RoN has

developed in relation to other movements seeking to move beyond anthropocentrism, such as environmental ethics or deep ecology. In academia and through organisations like the Community Environmental Legal Defense Fund (CELDF) and Pachamama Foundation, RoN spread internationally. Since the 2000s, in conversation with Latin American decolonial and post-extractivist perspectives, RoN hybridised with indigenous cosmovisions. After several U.S. municipal ordinances recognised them in the 2000s, RoN and *Pacha Mama* gained constitutional recognition in Ecuador (2008), followed by a universal civil-society led declaration of RoN in Cochabamba, Bolivia (2010). As of January 2026, the EcoJurisprudence Monitor reported 649 RoN initiatives across 58 countries (Putzer, Cook, Pollock 2025). Yet, until recently, RoN had remained relatively marginal in Europe. However, in September 2022, Spain's Mar Menor lagoon became Europe's first natural entity recognised as a rights-bearing subject (Vicente Giménez 2023). Like degrowth, RoN form a diverse movement with sometimes contradictory currents. For example, Sólón (2018) distinguishes four streams: indigenous, scientific, ethical, and juridical, while Tănăsescu (2022) contrasts an eco-theological current (concerned with sacralised Nature as a whole, as in Ecuador) and a pragmatic current (attached to specific socio-ecosystems, as in New Zealand).

As both movements diversified and matured, particularly three confluent streams became apparent in the literature: Ecofeminism, *Buen Vivir*, and Green Legal Theory.

2.2 Confluent Streams

2.2.1 Ecofeminism

Emerging in the 1970s, ecofeminists criticised unlimited growth, the systematic domination of women within patriarchal capitalism, and the destruction of ecological cycles as interwoven phenomena. Although it echoes many older, non-Western ideas, the term 'ecofeminism' was introduced in 1974 by Françoise d'Eaubonne. While it does not invoke the discourse of RoN, it links the capitalist appropriation of the fertility of soils and of women as two forms of violence against the reproductive sphere. Two decades later, the book *Ecofeminism*, published by Vandana Shiva and Maria Mies, clearly expresses the necessary relation between the critique of growth and RoN:

For humans to protect life on Earth and their own future we need to become deeply conscious of the rights of Mother Earth [...]. Our world has been structured by capitalist patriarchy around fictions

and abstractions like ‘capital’, ‘corporations’ and ‘growth’[...]. We need to get grounded again – in the Earth, her diversity, and her living processes [...]. (Mies, Shiva 2014, 21)

As evidence of a continuing convergence, Laure Pérez Prieto and Mónica Domínguez-Serrano (2014) proposed to articulate feminism, degrowth and *Buen Vivir*, including RoN. They call to develop a ‘Feminist Ecological Economy’ that respects human physicality as well as the reproductive capacities of ecosystems.

2.2.2 *Buen Vivir*

In the 2010s, degrowth and RoN discourses have intersected around *Buen Vivir*. Originating from Latin American indigenous movements in the 1920s, *sumak kawsay* (translated as *Buen Vivir* or ‘Good Life’) offered an alternative to the ongoing coloniality of the postcolonial state and Western growth-based ideas of development. It gained prominence in the 1990s-2000s, in social movements as well as in Ecuador’s constitution of 2008. Indigenous actors, allied with transnational organisations (Global Alliance for the Rights of Nature (GARN), CELDF), were instrumental in incorporating RoN into the constitution. In *Abya Yala*, *Buen Vivir* and RoN both form part of intercultural post-development and post-extractivism discourses that promote plural indigenous onto-epistemologies, common property regimes, and non-extractive relations to nature against capitalism and productivism (Acosta, Brand 2017).

Several authors have directly connected degrowth and RoN through *Buen Vivir*. Gudynas (2015) notes *Buen Vivir* rejects the predetermined historical linearity enshrined in progress and growth. Instead, it defends community-based and non-materialist ideas of welfare while promoting nondualist ecological relations. For that reason, Escobar (2015) argues *Buen Vivir* and RoN are less anthropocentric than degrowth, despite the latter’s ecological roots, while Gudynas (2015) thinks of *Buen Vivir*’s as more ambitious in aiming towards a change in cosmovisions with regard to the relation of society and nature. In a similar vein, Brand (2015) argues that post-extractivism’s critique of Western, rationalistic, binary understandings of nature can provide an important impulse for the degrowth debate. Richter (2025) notes degrowth’s anthropocentrism has led to its rejection by some Global South environmental justice activists, arguing degrowth has inadequately engaged with the nature/culture constructions inherent in ecological economics. By recognising non-human agency and interests, she argues, RoN can help degrowth overcome such nature-culture binaries rooted in

modernity and coloniality in favour of embracing plural, relational ontologies.

Parrique considered RoN and the concept of *Buen Vivir* to be part of the “societal project toward a post-growth economy” to live “in harmony with nature” (2025, 164). In particular, RoN appear to be a way of politicising natural entities rather than reducing them to mere economic resources. It thus allows degrowth to move away from a reductionist and quantitative view of life and instead consider other-than-humans as partners in a natural contract within a terrestrial community.

2.2.3 Green Legal Theory

Green Legal Theory outlines another possible bridge between the two fields. According to this school of thought, traditional environmental law, while aiming to stop the detrimental consequences of economic activity, ended up legitimising capitalism through sustainable development and ‘green growth’ that fails to address the core tension between growth and ecosystem conservation. Some advocate for post-growth law take inspiration from RoN and indigenous rights (Dufour, Hiez, Vanhonnaeker 2024). For example, Alexander (2010) argues that the modern property regimes prioritise economic efficiency and growth, making them ecologically predatory. Their reform, he proposes, could unite degrowth and Earth Jurisprudence, though he doesn’t address RoN, a key component of Earth Jurisprudence. Similarly, Garver argues RoN need to include degrowth to be effective:

if RoN or similar rights are adopted within the dominant global paradigm of growth insistence, [...] the risk is high that the growth-insistent paradigm will overwhelm or at least dilute those rights. (Garver 2020, 105)

Without degrowth, just as was the case with environmental law previously, RoN risks remaining largely unenforced.

Nevertheless, preliminary discussions in Ecofeminism, *Buen Vivir* and Green Legal Theory have not led to a systematic integration of the two fields. While the majority of works and initiatives on RoN include a critique of growth, degrowth is rarely mentioned, and degrowth authors are rarely cited. Conversely, while the majority of works on degrowth call for a transformation of our relationship with nature, relatively few call for the recognition of RoN.

3 Tensions, Gradually Overcome

RoN and degrowth did not emerge without tensions between their core concepts and have sometimes diverged. Yet it seems that these tensions have weakened over time, paving the way for a more systematic synthesis.

The scarcity of references to RoN in degrowth handbooks reflects a more general trend in mainstream degrowth literature, which rarely explores the theme of RoN. Neither Tim Jackson (2011), nor Kallis (2017) and Saitō (2024) discuss it. In recent years, with RoN becoming more prominent, some authors started mentioning it (Hickel 2022; Taibo 2022), but most often on an *ad hoc* basis and without in-depth analysis. And while most work on the concept of RoN includes criticism of growth, we didn't find any of it explicitly engaging with degrowth. To explain this lack of reciprocal articulation, we discuss three tensions.

The first tension is simply that the two fields of research, although they have converged over time, emerged within distinct core disciplines: economics, and in particular ecological economics for degrowth; law and legal philosophy for RoN. However, the diversity of degrowth and RoN movements quickly transcended these disciplinary barriers, touching on philosophy, ethics, and plural indigenous and decolonial thought. Even though both fields of research have grown in importance and expanded their disciplinary reach, it still appears that RoN remain relatively unexplored from an economic perspective and, to a lesser extent, degrowth from a legal perspective.

A second tension derives from the discourses' different geographical origins: degrowth primarily concerns Global North countries whose economies exceed ecological limits, while RoN developed more intensely in post-colonial Global South contexts, in dialogue with indigenous worldviews. These different geographic anchors have fostered ontological divergences. RoN, sometimes referred to as 'legal animism' (Hermitte and de Toledo 2021), often criticise a Western ontology that sets apart free human beings from a mechanical nature (O'Donell et al. 2020). By recognising the rights of ecosystems, RoN stand in opposition to a purely instrumental and economic view. In contrast, degrowth first arose in relation to quantitative ecological analysis – the Club of Rome's call to halt growth, based on advanced computer modelling, exemplifies this. Yet, this ontological divergence has weakened, particularly since degrowth transcended quantitative critiques of growth to embrace cultural critique, aiming at new social imaginaries (Amar 1973; Latouche 2003). Moreover, the geographical divergence weakens as RoN have spread across all five continents, and degrowth is articulating with post-development discourses and movements in the Global South.

A third tension concerns differing political strategies. Degrowth emerged as a critical field that targeted the hegemony of growth, with the term itself serving as a direct challenge to the ideology it seeks to deconstruct. By contrast, RoN are framed positively: they aim to recognise new legal subjects and integrate other-than-human entities as partners. into political and legal life. While degrowth has since expanded to include constructive proposals and RoN imply curbing extractive and excessive property rights, the two discourses still tend to point in somewhat opposing directions. To some, RoN can appear naive, advocating for new rights without addressing the capitalist economic infrastructure that underpins extractive practices. For eco-Marxist degrowth thinkers, RoN risk remaining at a mere superstructural level as they focus on culture and law rather than on the transformation of society's metabolic relations with nature. Foster (2021), who adopts degrowth with reservations, argues RoN repeat human rights' mistake by referencing vast, abstract communities rather than concrete political ones and neglect the concrete material relations underpinning political structures. However, this criticism has to be qualified considering that many RoN initiatives are situated in specific socio-ecological systems as in Whanganui (2017) or Mar Menor (2022), rather than enacting transcendent Nature.

Overall, the historical, geographical, ontological, and strategic tensions that may have distanced RoN and degrowth no longer seem substantial to us.

4 Between RoN and Degrowth: Bridging Concepts

Building on the explored existing connections (see § 2) and the discussion on seeming tension between the discourses (see § 3), we now move to proposing four bridging concepts that may facilitate denser articulations in the future.

4.1 Multispecies Conviviality

Conviviality as a concept has long been at the core of the degrowth debate (see Vetter, Festerer 2024) and is based on the idea of "individual freedom realised in personal interdependence" (Illich 1973, 11). This notion of interdependence, as well as conviviality's anti-utilitarian resistance to the reduction of the world to mere objects for human use, makes it a fruitful meeting point for RoN and degrowth - especially when extended towards "multispecies conviviality" (van Dooren, Rose 2012). Some authors already make that connection: Parrique (2025) associates the politicisation of natural entities through RoN

with the prospect of multispecies conviviality, while Adloff (2023) views RoN as an already existing way of recognising multispecies convivialities. However, neither of them developed these ideas in detail. Conviviality also lies at the heart of Büscher and Fletcher's (2020) proposal for a post-capitalist and non-dualist conservation.

Multispecies conviviality could help to clarify the ambiguous notion of nature implied by RoN. As an alternative to the universalist notion of nature that has dominated Western modernity, it posits a multitude of living forms in complex interaction. It appears to be a useful complement to ecological justice, an important concept for both RoN and degrowth. On the one hand, multispecies conviviality could thus enable an interpretation of RoN not through 'mononaturalism' – nature conceived as a single, immutable natural order that can inspire reactionary appropriations – but through 'multi-naturalism' (Lorimer 2012): a search for dynamic equilibriums that allow the interests of many forces and species, including humans, to be aligned. On the other hand, multispecies conviviality could enable degrowth thinking to more consistently include the more-than-human as an active participant in its thinking about political alternatives and environmental justice.

4.2 More-Than-Human Commons & Commoning

Commoning and the commons has similarly been crucial in degrowth (Dengler, Lang 2022; Vetterer, Festerer 2024), while recently, there have also been attempts to combine them with RoN (Degens 2022). The connection between these discourses and the concept of the commons is not surprising, given that both have developed critiques of private property rights, which are considered excessive and too unrestricted in capitalist societies. Here again, the idea of extending the commons to the more-than-human prepares the ground for a fertile meeting of degrowth and RoN.

There are broadly two major ways to understand the commons. Institutional economics views the commons as common-pool resources maintained and managed by complex community-based systems that guarantee their sustainable use. As such, commons offer an alternative to both the state and the market (Ostrom 2015). They call for the deconstruction of the bundle of rights crystallised in property rights (in particular *usus*, *abusus*, and *fructus*) in order to distribute them more equitably. Yet, in this view, natural entities remain resources and not subjects of rights.

Alternatively, commons can be conceived not primarily as goods and rules but as a social practice: commoning (Bollier, Helfrich 2019). Such a perspective allows for recognising non-human actors as necessary partners that are always already involved in the

interdependent and relational practices of commoning (Weber 2016). With regard to RoN, Degens argues that recognising RoN may change the rules and claims in commons arrangements by facilitating the recognition of non-human nature as an active stakeholder in the commons (Degens 2022). Natural entities are not anymore objects but subjects of rights in the commons through legal relationships that are more subtle and reciprocal than those in modern property law. Kahui and Cullinane (2019) even interpret the law that recognises the legal personhood of the Whanganui river as recognising an ecosystem commons.

Beyond these limited first encounters, there is significant potential for further mutual learning: the rich literature on the commons and the many already existing practical experiences could serve as a valuable reservoir for the institutional design of RoN, while degrowth's strong engagement with the commons can be extended to deeper more-than-human perspectives via RoN. Conversely, the commons question and frequently decentre the role of the state, while the state is considered pivotal in promoting economic transformation in some degrowth approaches and appears as the guarantor of RoN by exercising its monopoly to violence. A deeper engagement with the commons may help to develop RoN proposals that are less dependent on the state in enforcing and enabling the realization of rights.

4.3 Temporalisation of Limits

Ecofeminist thinking has identified another bridge between RoN and degrowth that deserves to be explored further: their relationships with time. As early as 1993, Maria Mies and Vandana Shiva (2014) suggested a significant convergence between degrowth and RoN regarding temporality: RoN are systematically denied because the infinite growth assumed by capitalism disrupts the regeneration cycles of ecosystems. In contrast, non-capitalist communities and women in caregiving roles take greater responsibility for the often slow rhythms of regeneration. This relationship to time is also a relationship to limits: the natural, regenerative rhythms of humans and non-humans appear as limits that are denied by capitalism.

The relationship to time and limits is obvious when it comes to degrowth. Early formulations called for an urgent slow-down of the productive metabolism to avoid an otherwise inevitable catastrophe (Gorz 1972; Georgescu-Roegen 1995). Proposals for degrowth have thus often been intertwined with calls for deceleration (Saitō 2024; Parrique 2025). Similarly, many authors writing about RoN mention the structural incompatibilities between the linear acceleration of societies and the cycles of nature, and the rhythmical

incompatibilities between the short timeframes of the economy and the deep timeframes of nature (Acosta, Brand 2017).

Rosa (2019) argues capitalist society's technical, social, and existential acceleration creates a mismatch between economic demands and natural rhythms. This acceleration converts resonant human-nature relationships, where both are mutually transformed in interaction, into alienating ones. Though Rosa doesn't address RoN and might critique their potential 'bureaucratisation of nature', they could translate particular natural rhythms and limits into a politically understandable language. As human rights enable non-instrumental human relationships, RoN could foster new resonant relationships with nature, freed from growth and acceleration imperatives.

RoN declarations often mention the obligation to respect ecological cycles in order to allow them to sustain and regenerate themselves. These rhythms appear as the temporal dimension of ecological limits to be respected, mostly by restricting certain human activities. Thus the rights of humans are limited by certain rights that are more-than-human. This is what prompts Parrique to recognise RoN as a way of limiting property rights for a degrowth transformation (2024). In a different vein, Richter (2025) argues that by complementing ecological limits and social limits to growth, RoN could help degrowth recognise relational limits to growth emerging from worldviews that see humans as part of and dependent on the more-than-human world, thus inhibiting extractivism and destruction.

Degrowth and RoN ultimately raise complementary questions regarding time and limits. RoN could help to clarify and situate the global and abstract limits of degrowth, which are sometimes perceived as arbitrary and top-down, by replacing them with localised and living limits. In other words, it could help to situate and temporalise limits as rhythms and cycles which maintain the regenerative capacities that of the living world.

4.4 Care in More-Than-Human Worlds

Care is one of the key concepts of feminist thought and has become crucial to the degrowth discourse through ecofeminism (Paulson, Saave, Mookerjee 2024). Famously defined by Tronto and Fisher as "everything that we do to maintain, continue and repair <our world> so that we can live in it as well as possible" (1990, 40), care has been increasingly thought in a posthumanist fashion to extend to more-than-human worlds (Puig de la Bellacasa 2017). Earlier, Mies and Shiva (2014) pointed to the responsibility of the growth-oriented capitalist system in the devaluation of care work necessary for social and ecological reproduction. Their ecofeminist thinking calls for a theory of care that goes beyond simple relationships between humans

to include the more-than-human. Based on this tradition, degrowth scholars envision a society where care work towards both human and more-than-human nature is revalued and recentred to the core of economic activity, often in relation to commoning (Dengler, Lang 2022).

The debate on the relation of care and RoN is more ambiguous. Ghijssels (2023) proposes relational values that concern meaningful human-nature relationships and argues they are expressed in care and respect for nature. Just as Magallanes (2018), she analyses that values such as care can be coded into RoN laws, e.g., in New Zealand. Similarly, Bezerra Guimarães (2023) presents RoN as both based on and encouraging care for life and nature. In contrast, Marshall (2019) presents RoN as an environmental ideology that cannot meaningfully capture indigenous relations of care to the country and may even impede their practice.

Crucially, this last point shows that care is never innocent but always entails the question of who cares, what to care for and in what ways. Despite these words of caution, we argue that RoN innovations may foster relations of care in our more-than-human worlds and that this deserves further research and experimentation. From this perspective, RoN can be interesting for degrowth scholars working on institutions that promote a care-full economy and society. Reversely, RoN scholars may learn from degrowth's materialist analysis of care relations in growth-based economies.

5 Articulating RoN and Degrowth in the Field: The Case of Mar Menor

We are writing this article next to Mar Menor, as part of a series of fieldwork carried out since January 2024. Ethnographically following the institutionalisation of the rights of Mar Menor we found this field to be the ideal place in which to illustrate our argument and the bridging concepts we proposed. These reflections have greatly benefited from multiple conversations with a variety of people of Mar Menor basin – lawyers, activists, farmers, hydrogeologists, etc. Drawing on the philosophy of fieldwork (Vollaire 2017) and multi-sited ethnography (Marcus 1995), our approach is to engage with the field not as an object of study, but as a living, inhabited place with which to think [fig. 1].

Mar Menor, the largest saltwater lagoon in the Western Mediterranean, has faced an ecological catastrophe in recent decades. When the eutrophication crisis of the lagoon culminated in two mass die-offs of lagoon life (in 2019 and 2021) a historic citizen movement collected 640,000 signatures for a successful popular legislative initiative (ILP) that declared Mar Menor a subject of rights

in 2022 (Ley 19/2022¹ below referred to as ‘the Law’): the lagoon became the first ecosystem in Europe with subjective rights and legal personhood (Vicente Giménez 2023).

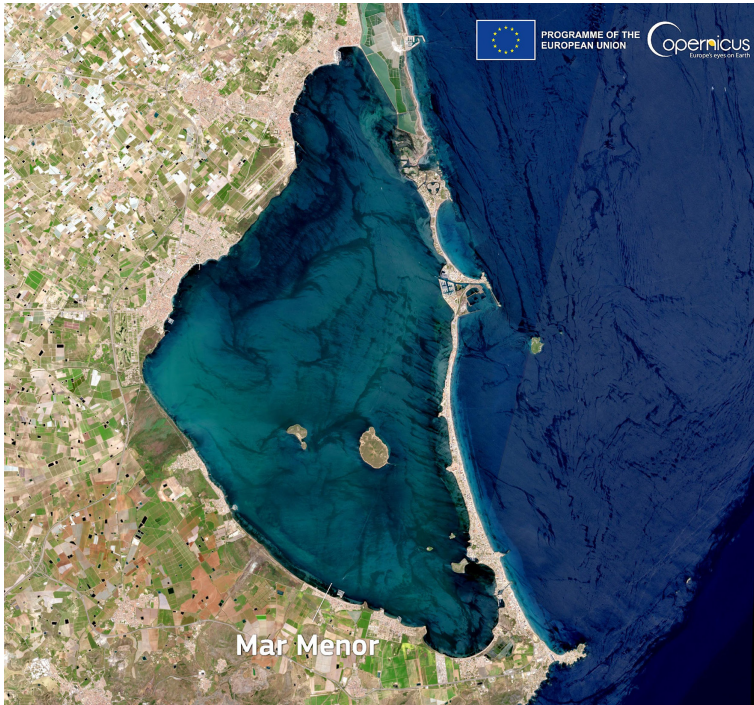


Figure 1 European Union, Copernicus Sentinel-2 imagery of the Mar Menor. 2024. Satellite imagery, 4280 × 4060. Mar Menor, Copernicus, Spain. <https://www.copernicus.eu/en/media/image-day-gallery/mar-menor-risk-oxygen-depletion>, open data

The law recognises the rights to existence and natural evolution, protection, conservation and restoration (Article 2, also other references to the Law below). It furthermore establishes a tutelage that is to represent the lagoon (Article 3). Lastly, it allows anyone to take legal action on behalf of the lagoon (Article 6). Following a challenge to the law by the far-right party Vox before the Constitutional Court, the law was finally upheld in November 2024

1 Ley 19/2022, de 30 de septiembre, para el reconocimiento de personalidad jurídica a la laguna del Mar Menor y su cuenca, Pub. L. No. Ley 19/2022, BOE-A-2022-16019 135131.

with the court recognizing a paradigm shift in environmental law from “antropocentrismo” to “ecocentrismo moderado”.²

5.1 Degrowth and the Mar Menor Law

Even if the Law does not explicitly mention degrowth, some of its main proponents recognise a link between degrowth and RoN. For example, in an interview, legal philosopher Teresa Vicente, one of the faces of the struggle for the lagoon’s rights argued,

I believe that Western society, which dominates the world, is not prepared for the distribution of resources and degrowth and, ultimately, for respecting the limits of the ecosystem that have been exceeded with the current model of development.³

The law itself opens up potential prospects for degrowth. Article 2 details the right to protection as follows: “the right to protection implies limiting, stopping and not authorising activities that pose a risk or harm to the ecosystem”.⁴ This is reinforced by Article 7, describing the obligations of public administrations to “prohibit or limit the introduction of organisms and organic and inorganic material that could permanently alter the biological heritage of Mar Menor”.⁵ This prohibitive force of the law is not unique to RoN, but the law is notable for its emphasis on limits and prohibition based on the interpretation of fundamental rights in the lagoon.

Around Mar Menor, the harmful activities to be limited are primarily related to industrial agriculture, responsible for the main problem of the lagoon: nitrogen saturated run-off from industrial fertilisers, while other sources of pollution such as phosphates, heavy metals or pesticides play a smaller but not negligible role (Mas Hernández 2025). Even though the proposal for degrowth is certainly not unanimously supported by the many signatories of the Mar Menor ILP, several activists argue that RoN require degrowth. For example, one activist told us: “Now with the paradigm shift, [...] we

2 Corte Constitucional de España (20 de noviembre de 2024). Sentencia 142/2024. BOE no. 311, de 26 de diciembre de 2024, 14.

3 “La sociedad occidental que domina el mundo creo que no está preparada para la distribución de los recursos y el decrecimiento y, en definitiva, para respetar los límites del ecosistema que han sido sobrepasados con el actual modelo de desarrollo” (Vicente 2020; Unless otherwise stated all translations are by the Authors).

4 “El derecho a la protección implica limitar, detener y no autorizar aquellas actividades que supongan un riesgo o perjuicio para el ecosistema”.

5 “Prohibir o limitar la introducción de organismos y material orgánico e inorgánico que puedan alterar de manera definitiva el patrimonio biológico del Mar Menor”.

need to look at a third phase, which would be a bit more complicated, involving a pullback. [...] We need to make an economic pullback. (Q: a degrowth? – Yes” (Interview 18/02/2025).⁶ Also, Alianza Mar Menor (AMARME), one of the main organisations fighting for the rights of the lagoon, has signed a Spanish degrowth declaration that in turn makes a reference to RoN (Más Allá del Crecimiento 2025).

5.2 Situating Degrowth Through RoN: The Mar Menor Law and the Temporalisation of Limits

Another conversation with local activists allowed us to consider Mar Menor’s rights with regard to the temporalisation of limits. While his friend Sergio argued that degrowth is fundamental, Manuel, a retired chemistry teacher and biology enthusiast, preferred the concept of deceleration: “It is not the problem that humans affect nature”, he argues, “but the rate of change, the sheer speed of predation and extraction”. “The Mar Menor”, he follows, “has a right to slowness, to deceleration” (22/01/2026).⁷ This reflection inspires a finer, place-based interpretation of degrowth as the challenge facing Mar Menor go beyond reducing material flows in absolute terms and include the deceleration of their rates and rhythm.

Indeed, the Mar Menor disaster has disrupted its rhythms and timelines. Mar Menor, like every ecosystem, is dynamic and always changing. In fact, the origins of the lagoon date ‘only’ 18,000 years back when La Manga, the strip of land separating the lagoon from the Mediterranean, was formed (Mas Hernández 2025). For a long time, human transformations – such as salt works, traditional fishing or terraced dry-land agriculture – remained slow, with limited or sometimes even positive impacts on the ecosystem. Changes accelerated radically in the second half of the twentieth century. Coastal construction boom, open-pit mining, and particularly export-oriented industrial agriculture violently transformed the landscape and its metabolism. While terraced dry-land agriculture favoured infiltration, water now rushes down towards the lagoon. Because of these conditions, DANAs (episodes of torrential rainfall) have triggered eutrophication and algae blooms that led to mass die-offs in Mar Menor.

⁶ “Ahora, con este cambio de paradigma, [...] tenemos que considerar una tercera fase, que sería un poco más complicada y que implicaría un retroceso. [...] Tenemos que llevar a cabo un retroceso económico. (P: ¿un decrecimiento?) – Sí”.

⁷ “El problema no es que los seres humanos afecten a la naturaleza sino el ritmo del cambio, la velocidad vertiginosa de la depredación y la explotación. El Mar Menor tiene derecho a la lentitud, a la desaceleración”.

Recognising Mar Menor's rights could enable localised, temporally-specific justification for sectoral degrowth, targeting specific harmful material flows rather than general economic contraction. It adapts degrowth to particular socio-ecological communities, focusing on respecting specific ecological limits rather than only planetary boundaries, making it more relatable to local inhabitants. This intersection suggests ecosystem-focused degrowth that frees ecological capacities from harmful economic pressures, while offering a strategic advantage as it enables a positive framing: not as restricting economic activity but as liberating ecosystem activity and enhancing the lagoon's living power and flourishing potential (Parrique 2025).

5.3 Mar Menor Law, Care and Multi-Species Conviviality

The case of Mar Menor shows the difficulty of any reference to any stable 'natural order', although the concept is mentioned in Article 2. It has been so thoroughly transformed that it cannot go back to a former state, as both activists and scientists readily admit. According to more recent ecological theories, this 'natural order' can only be interpreted as a meta-stable order, driven by the intermingling of a wide variety of species with diverse interests.

An analysis which focuses on the speed and quality of change rather than change itself, allows for a more flexible understanding of the rights of Mar Menor. It avoids the criticism levelled at RoN for postulating a stable 'natural order' that never existed, and which is increasingly at odds with rapidly changing ecosystems. In this sense, RoN would not aim to preserve a petrified order, impossible in any case in the Anthropocene/Capitalocene, but rather to promote a politics of time and deceleration that is sensitive to the variety of species and rhythms of regeneration coexisting to constitute Mar Menor. In fact, since the recognition of the rights of Mar Menor, the concrete reality of discussions on the watershed has not been oriented towards eliminating human activities, but rather towards controlling the most negative flows and attempting to regulate these flows over time: not only reducing illegal irrigation, but also building storm reservoirs to limit water inflows in the event of cold drops. What the right to regeneration in the law means in practice is thus not only a scientific question of returning to a conservation baseline, but also a political question of enabling and caring for multispecies flourishing in a changing world. One particularly striking example is the *Pinna nobilis*, a giant clam threatened with extinction. It only entered the lagoon in 1983 after the construction of a large channel to the Mediterranean, which significantly changed the physio-biological conditions of Mar Menor, to the detriment of many other species.

A multispecies interpretation of conviviality and care may offer conceptual tools to negotiate what has to degrow, and for whom, and what needs to be cared for, in more-than-human constellations.

5.4 Mar Menor Law and More-Than-Human Commons: Degrowth as Guidance for the Design of Economic RoN Institutions?

Interpreting and applying the rights of Mar Menor brings us to the institutional set-up proposed in the law. This Tutelage is composed of three institutions: a Committee of Representatives (Comité de Representantes, made up of citizens and members of the administration), a Monitoring Commission (Comisión de Seguimiento, made up of representatives of civil society, economic organisations, unions and the municipalities of the basin) and a Scientific Committee (Comité Científico). Compared to other ecological institutions, the Tutelage stands out for the preponderance of citizen voices (the majority in two committees) and the strength of the Scientific Committee (one of the three voices of the Tutelage). While this political design appears to be one proposal among many others, it could represent an original institution for democratic ecological planning, as advocated by degrowth (Parrique 2025).

However, the creation of this legal personality raises unanticipated questions that require ongoing innovation. In this respect, the field of degrowth and the commons could provide guidance. The Tutelage, as a private law entity, needs an economic structure, yet it has no precedent in Europe. Since the publication of the implementing decree of the Mar Menor Law in January 2025, the Mar Menor has obtained a tax identification number, a bank account and, therefore, financial capacity. Mar Menor activists are still wondering about the sources of funding and how it will be used – to finance legal proceedings or, ultimately, ecological regeneration measures? At the beginning of 2026, the Spanish government is considering allocating several thousand euros to the Tutelage for its internal organisation, a public funding which activists see threatened in the case of a change in government. Yet, through its Tutelage, Mar Menor has the potential to become an economic agent in its own right, with the means to take economic action in favour of the regeneration of the water-basin. Here, the institutional thread of degrowth, and more-than-human commoning in particular, could contribute to activists' thinking and, in other contexts, help to construct new designs for these new ecological institutions.

Degrowth related ecological economics, including its quantitative aspect, may also support institutional innovation. Admittedly, RoN aim to bring about a shift towards relations between societies and

the more-than-human that are not reducible to quantitative terms. Yet, quantitative indicators, through scientific analysis, may still play a role as can be observed in the case of Mar Menor. Article 3 of the Law, which sets out the protection of Mar Menor, emphasises the role of the Scientific Committee in identifying “indicators [to monitor] the ecological status of the ecosystem, its risks and appropriate restoration measures”.⁸ This use of quantitative and technical approaches, not with a view to growth but rather to reducing the impact of the economic metabolism on the ecosystem, is in line with the perspectives of degrowth.

Partially related to the field of degrowth and commoning, scholars have developed alternative methods to growth-oriented accounting. These approaches, like the ‘CARE model’ (Rambaud, Richard 2022) or ecosystem-centred accounting (Feger, Levrel, Rambaud 2021), propose ecological accounting, more adapted to degrowth objectives. They could equip new RoN institutions such as the Mar Menor Tutelage. Camille de Toledo explores the perspective of RoN institutions becoming agents of degrowth:

For the first time, degrowth actors – rivers, lakes, forests... – would pay taxes on their incomes, collected in return for human use, and thus contribute, in the same movement, to the needs of our societies and the financing of our public services (Toledo 2026, 66)⁹

He envisages these institutions as being more independent of the state, yet not market-based: a third path that could be related to commoning.

However, this path could lead to the kind of problem that the Mar Menor case suggests: the state administration and its contradictory interests sometimes seem to impede the enforcement of RoN: On the one hand, the protection of the lagoon is at odds with the region’s dependence on agro-industrial activity and the more general structural dependence of the state on economic growth to finance its budget. On the other hand, governmental and administrative actors might be unwilling to share power. For that reason, in December 2025, Teresa Vicente left the Committee of Representatives, claiming that the administrations of state and region were hindering action

8 “El Comité científico tendrá entre sus funciones la de asesoramiento al Comité de Representantes y la Comisión de Seguimiento, e identificación de indicadores sobre el estado ecológico del ecosistema, sus riesgos y las medidas adecuadas de restauración, que comunicará a la Comisión de Seguimiento”.

9 “Pour la première fois, des acteurs décroissants – des rivières, des lacs, des forêts... – paieraient des impôts sur leurs revenus, perçus en contrepartie des usages humains, et donc contribueraient, dans le même mouvement, aux besoins de nos sociétés, aux financements de nos services publics”.

for Mar Menor. But if not the state, who will enforce the law against reluctant capitalist actors? What might common-based RoN enforcement look like? Reflections on commoning at the bioregional scale in a perspective of degrowth (Waldenberger, Savini 2025) could help imagine RoNs that are less dependent on the nation state. This may well substantiate Parrique's argument that "giving rights to nature is a veritable revolution that will forever change the way that we view – and do – economics" (2024, 280).

6 Conclusion

RoN and degrowth share a historical origin as diverse responses to the ecological awareness of the 1970s. Both have developed into vast transnational and transdisciplinary movements that have fostered spaces for dialogue and encounter, particularly ecofeminism, *Buen Vivir* and Green Legal Theory. As their systematic articulation has been little explored to date, we propose to deepen four bridging ideas, already outlined in the literature, to better reinforce these movements: multispecies conviviality, more-than-human commoning, the temporalisation of limits, and a more-than-human theory of care.

The recognition of the rights of Mar Menor in Europe, on a continent where the need for degrowth is increasingly recognised, enables an initial experiment in this crossover. As such, it may well be understood as a non-reformist reform (Richter 2025) and thus part of a plurality of ruptural, interstitial, and symbiotic strategies towards a degrowth society (Schmelzer, Vetter, Vansintjan 2022). Non-reformist reforms, while working within the current system, make space for and point towards a more radically different society. The new Mar Menor personhood, more than a mere legal instrument, could emerge as a landing of degrowth at the scale of a lagoon basin.

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Hydrosensory Autoethnography Sensing Belonging and Governance in Anthropogenic Waters of Limburg, Belgium

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Abstract Is it possible to bodily sense how water is governed? By framing belonging as a practice that is intimate, situated, and ethically attuned to the More-than-Human, I reflect on how institutional constraints on waters essentially reduce the possibilities for belonging to the water's edge. This paper introduces hydrosensory autoethnography as a method for sensing such constraints from within. Through encounters with three post-extractive lakes in Limburg, Belgium, where proximity to water is controlled, heavily restricted, or even prohibited, I trace forms of intimacy that remain available in the fractures of what governance leaves open.

Keywords Sensory ethnography. Belonging. Water. Water governance. Hydrofeminism. Posthumanism. More-than-human.

Summary 1 Introduction: On Belonging and 'Mining' Waters. – 2 Theoretical Grounding: Possibilities of Belonging in the Anthropocene. – 3 Governing the Senses. – 4 Methodology: Hydrosensory Autoethnography. – 4.1 *-sensory -ethnography*. – 4.2 *Auto-*. – 4.3 *Hydro-*. – 4.4 Hydrosensory Autoethnography. – 5 Empirical Encounters: On Surveilling Senses. – 5.1 Paalse Plas. – 5.2 Lommelse Sahara. – 5.3 Kikbeekbron. – 6 Discussion: Sensing from the Edge. – 7 Conclusion: Possibilities of Belonging to Anthropogenic Waters.



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1 Introduction: On Belonging and ‘Mining’ Waters

Water is a recent subject in my life. At least, from a research stance. I moved to Belgium from Italy, where I spent a decade studying design and working in the sociocultural sector. I had just completed my studies with a thesis on diasporas, their linguistic openness, and a futile sense of belonging in border regions. This was in part a tribute to my nomadic condition. Then I was offered the opportunity to do research on the intersection of design and democracy, specifically in the domain of water governance. I have never really worked on environmental topics, and bluntly speaking, I sincerely thought it was too late to start.

I remember scoping European projects on water, and the Confluence of European Water Bodies was one of them. This was last year, and I was eager to attend their gathering in Amsterdam. After a brief email exchange on whether it was possible to participate in their activities, I received a respectful ‘no’ (with an exception for a couple of open events, one of which I managed to attend). In my mind, the way to participate would be to find a waterbody I could represent, I could confluence with. Which waterbody do I relate to? Often, people who work with water are invited to speak for and with oceans, seas, rivers, lagoons, or lakes. Participation assumes that such a relation can be clearly named. For me, this was not self-evident. Still, I began searching for one, for a waterbody I could call ‘mine’.

Here, the question of belonging felt relevant again: this time not to the nation-state, but to Nature. My understanding of this belonging indeed fell into a rather Western duality: Nature as something pristine, somewhere out there, that I need to search for, to dig deeper into (Marris 2013; Morton 2007). I found myself nostalgically reminiscing about the waterbodies that surrounded me throughout life. The Баренцево море (Barents Sea), where I was born: its waters fed by the Gulf Stream, never freezing through the northern winter. The Волга (Volga), where I swam as a child, not in the river itself but in a small lake formed in its meanders, surrounded by the fields covered in white clover [fig. 1]. Later, I inhaled the waters of Нева (Neva) through the humid, saturated air. Many other waterbodies: the Milanese Navigli, the Atlantic Ocean, the rivers Tejo, Po, Talfer and Eisack, Senne. All of them contributed to my belonging, all of them held me (Bates, Moles 2023).



Figure 1 The small lake formed in the meanders of Волга. 1997.
Федоровка (Fyodorovka village, Tolyatti, Russia).
Photo by the Author's father. Family archive,
© Kseniia Obukhova

These thoughts left me without a clear answer to the question of ‘my’ waterbody. Instead, they made me ask whether belonging is, at all, a matter of proximity. Perhaps it lies elsewhere? Even if most of the waterbodies I described above are distant today, I remember what it felt like to sense the cold breeze on my skin, to taste the fruits growing on their banks, to walk barefoot on the shore and feel the wet ground beneath my feet, to smell stagnant and salty waters, to submerge in them. I remember it all, my body remembers it all.

Today, my research takes place in Limburg, Northern Belgium, a province marked by post-mining ecologies. The mining industries are long gone, but they shaped these landscapes as we perceive them today (Tsing 2017). Old mining pits left in disuse were filled with groundwater, forming a number of sporadic, relatively small lakes that characterise the region. One can hardly notice them on the map, and many have become recreational sites with restricted access. Are they big enough to be represented? Do they matter? And if so, why haven’t others already chosen them to confluence with?

I was genuinely intrigued by these lakes. They represented to me possibilities of nurturing a relationship with what is altered, damaged (Shotwell 2016; Tsing et al. 2017). Their waters opened to me forms of belonging that I could identify with, intentionally exploring connection to sites that we humans have broken and given rise to at the same time (Evers 2021; see also Lora-Wainwright 2017). And, most interestingly, today these waterbodies have become sites

for strictly regulated governance exercises in environmental and water management, which I return to later in this work.

In this paper, I introduce my first – and rather humble – encounters with these troubled, Anthropocene waters (Neimanis 2017; see also Linton 2010). They led to an experimental method I call ‘hydrosensory autoethnography’. In landscapes where intimacy with water is physically enclosed, it becomes a way of staying with water, sensing constraints from the attuned and situated position, and cultivating intimate relationships with More-than-Human (MTH) worlds where still possible. In principle, this approach asks what ethnography can do when relations with water are mediated by regimes of water governance.

The paper unfolds in several steps. I first position my work within a broader theory on belonging and intimacy in the Anthropocene, to then reflect on the proposed method as a way of sensing waters from a personal, situated position, informed by sensory and posthumanist approaches. I then elaborate hydrosensory autoethnography as a methodological response to sense MTH relations under conditions of constraint. This is followed by an empirical section where I describe my encounters with three anthropogenic waterbodies in Limburg, Belgium – Paalse Plas, Lommelse Sahara, and the Kikbeekbron. To close, I critically reflect on my own experience and open a discussion on how to govern waters in the Anthropocene more ethically and intimately.

2 Theoretical Grounding: Possibilities of Belonging in the Anthropocene

I am not alone in a troubling desire for belonging. At the same time, I realise that questioning one’s belonging to Nature and feeling an urge to search for natural elements that one could relate to is, in itself, a largely Western concern. In the Anthropocene, the age of an unprecedented human impact on the Earth, we are made to believe that our separation from Nature is, paradoxically, ‘natural’. This is often justified through dominant narratives that claim we have reached a “mastery of nature” – of a supposedly passive, voiceless, and obedient surrounding that gains value primarily through extraction and human survival (Plumwood 1993). Hence, our interactions with all ‘natural’ are controlled and, most of the time, highly extractive. What types of relations might emerge from such a conviction? If connections with Nature, with the MTH, with water are structured primarily around domination, what does this mean for the possibilities of belonging that remain?

My understanding of belonging here is closely related to the work of Gibson-Graham (2011, 5), who argue that politics of belonging

remain profoundly human-centered, with Nature still framed as a resource and valued mainly through functional and economic logics. In their critique of this separateness, and of humanity's limited capacity to empathise with those who share the Earth with them, they reflect on alternative avenues for connection that involve both "sensory and intellectual receptivity". They specifically layer two intertwined ethical projects: one that calls for "actively connecting with the MTH", and another that recognises human-MTH relations as 'material configurations' (see also Bennett 2010). Both suggest a new idea of belonging, nurtured by the ethics of love, care, and attunement to the MTH, rather than ownership or control. The latter, in particular, builds on Bennet's vision of connection as a shared, material identity, where a singular 'me' dissolves into a complex web of relations. Hence, identity and belonging are no longer constrained to the human individual.

This understanding of belonging as a practice of care and responsibility resonates with the work of Robin Wall Kimmerer (2013), who reflects on whether one can "become indigenous" to a place where one is not native, where one remains a stranger, a foreigner, an immigrant. She asks, "What happens when we truly become native to a place, when we finally make a home?" (2013, 207). Drawing on the lessons of Nanabozho, a half-human, half-spirit figure from Anishinaabe storytelling, Kimmerer reflects on how relationships with land might be restored in contemporary Western societies, where spiritual connections to place have largely been lost. Crucially, she insists that "No amount of time or caring changes history or substitutes for soul-deep fusion with the land" (2013, 213). Yet she also suggests that a stranger may still "enter into the deep reciprocity that renews the world", cultivating care and responsibility for the land and waters, for those who were there before, who share it today, and who will come after. And while Kimmerer's work insists on the impossibility of replacing Indigenous relations to land, it does not deny the possibility of practising this belonging otherwise.

In my understanding, this relationship of care and responsibility is inseparable from a sense of intimacy with the MTH, and particularly with water. Kath Weston writes: "When most people think about intimacy, ecology is not the first thing that comes to mind" (2017, 7). In the Anthropocene, however, building connections through intimacy - or 'new intimacies' in the words of Weston - becomes especially important precisely because such connections are increasingly obstructed. Feminist scholars have argued that intimacy with landscapes can emerge through deep, sensuous engagement: by moving beyond admiration from an outsider's perspective and recognising, instead, its complexity, noticing the small things, and imagining oneself as an integral part of a shared world. Dare and Fletcher (2021, 3), for example, focus on the concept of intimacy as

essential for “earthly survival”. They argue that thinking with intimacy not only offers ground for reflecting on the “interconnectedness of human-nonhuman relations”, but also helps to center care “for each other and the earth” as the pillar of these relationships. Similarly, Boon, Butler, and Jefferies (2018, 54) write that “Intimacy with the land – through touch, spirituality, and emotion – helps individuals connect not only to nature, but to themselves and their communities” (see also Simpson 2013, 7; Million 2009).

If intimacy is understood as a form of deep connection with oneself and with the MTH, it aligns closely with the possibilities for belonging proposed by Gibson-Graham (2011). Importantly, this intimacy is not abstract. When extended to the ‘wet’ dimension, belonging and intimacy become explicitly material, since we are ourselves bodies of water. As such, we are dependent on what Astrida Neimanis (2017) calls the ‘hydrocommons of wet relations’, where connections between human and MTH bodies move beyond bounded entities and flow across and through them. Water, in this sense, is not simply ‘out there’ as an external object of relation, but something that composes us and binds us together among ourselves and the Earth through shared material processes.

At the same time, intimacy in Anthropocene waters cannot be taken for granted and should be addressed delicately. These waters have long been obedient to humans. Till this day, they suffer extraction and pollution,¹ and are made to be confined and feared. Boundless closeness or an obsessive pursuit of knowing (Neimanis 2023) can easily turn into an unethical, once again extractive relationship that disturbs the worlds that are not made for us humans to feel intimate with. After all, I discuss intimacy with waterbodies that were not meant to exist (at least, in the present form). Intimacy should not become a fantasy (Tsing 2017; Neimanis, Phillips 2019). Here, I resonate with what Neimanis (2023, 30) calls ‘estrangement’, a practice of ‘otherwise knowing’ that resists the desire, the fantasy to know more. If we know – we assume mastery. Instead, we should be guided by forms of intimacy that explicitly refuse mastery and intentionally “keep some things strange”, unknown, unseen. Estrangement carries two more orientations: acknowledging the presence and value of other worlds and a recognition of the situated

1 I do not extensively discuss pollution in this paper. As made reflect by a reviewer, my understanding of pollution, contamination and impurity reads negative – something I indeed absorbed throughout life. At the same time, Indigenous scholars such as Liboiron (2021) critique pollution as a form of colonization, inseparable from the extractive logics that this paper also traces. I am still entering this conversation. For now, I see pollution as a troubling condition (Haraway 2016) that, nevertheless, I commit to co-living with every day (hence, the rationale behind this work) (for more discussion see Shotwell 2016; Tsing 2017).

nature of this practice – “what is strange for one body is an intimate and proximal knowledge for another” (Neimanis 2023, 32).

Neimanis discusses estrangement on terms of Nature. As this paper shows, however, the estrangement can also be experienced on terms of institutionalised practices and policies that preclude forms of intimacy and belonging, where both themselves become governed from above. With an ambition to master, to control, waters become objects of governance of the institutions that themselves struggle to belong and, instead, regulate how (if at all) intimacy can be experienced by others.

3 Governing the Senses

This paper is situated within broader doctoral research on the intersection of design and MTH governance, conducted in the specific context of water governance in the region of Flanders, Northern Belgium. Water has long occupied a central position in the region's political imagination, mainly as a problem to be managed. Centuries of human-led landscape transformations in the service of agricultural productivity and urban expansion have severely affected the region's capacity to 'deal' with water. In response to the miraculously avoided catastrophic flooding of 2021 (that hit the neighbouring region of Wallonia), Flemish regional governance started rethinking the institutional and infrastructural logics on which water management has long relied (*Weerbaar Waterland* 2022).

Most recently, the Flemish government launched a strategic water policy plan formalised as the New Blue Deal (*Blue Deal 2025-2029* 2025) – a roadmap for making Flanders more resilient to the water-related effects of the climate crisis. Beyond the technical water goals, the document emphasises the importance of coordinated action across multiple agencies and scales: from the European Union to watershed-based local coalitions of farmers, municipalities, environmental organisations, and civil society actors. MTH actors also have a role in the most recent articulation of the New Blue Deal. Water is positioned not as a problem to be solved but as a collaborator in decision-making – a discursive shift that, if genuine, would represent a meaningful reorientation of governance logics.

The Blue Deal is a serious attempt at ecological reform, yet in its current form, as most institutionally-led water management initiatives, it remains largely 'dry' – affectively disconnected, techno-managerial in its reasoning, and structured around the administration of risk rather than the cultivation of MTH relations (Obukhova, Boon, Huybrechts 2026). In line with Weberian tradition, many still believe that governance should remain apolitical and value-neutral, and should merely engage in a meticulous search for

the ‘optimal’ solution to a given problem (see Du Gay 2000). There is a deep irony here: the control-based techno-managerial rationality that the water governance deploys to repair ecological damage is itself a product of the same mechanistic worldview that, as Merchant (1989) traced, first reduced Nature to a problem awaiting a solution. Even if we observe a rising interest in MTH actors being formally considered as policy collaborators (see also the Rights of Nature movement), the institutional structures remain distant from these mostly symbolic decisions (Van Bommel 2024; Immoivilli et al. 2022). MTH actors are still largely reduced to maps and plans, flattening the living complexity of their ecologies (Huybrechts, Obukhova, Boon, forthcoming).

What this governance cannot (by design) accommodate is the question of belonging. Not belonging in the administrative sense, but in the sense explored in the previous section: the possibility of cultivating ethical, embodied relations with the MTH worlds it inhabits. Intimate governance seems hard to imagine, but if water is already recognised as a decisive actor in policy decisions, perhaps it is not entirely out of reach (Fernández de Córdoba Farini 2025)? At the same time, water governance is not yet estranged by the waters themselves, as it still falls into a mastery mentality, expressed in instructive prohibitions and limitations that I describe in the empirical section. They limit possibilities for belonging. Hence, the practice of estrangement falls into a bureaucratic trap, as it is no longer guided by the MTH, but by institutions that prioritise knowledge rather than ‘otherwise knowing’.

My call is not to reject institutions or their technocratic logics, but to experiment with practices that expose their limits and cultivate what they currently lack. The good intentions are already there, but what is missing are affective capacities, without which such intentions remain futile and, in fact, dangerous, risking falling into extractive patterns. This calls for a rethinking of water governance as a practice that should include forms of sensory learning and reflexivity (Harris 2021). One in which policymakers could learn to relate to the MTH more intimately and ethically: not only manage water from above but learn to sense it from within, bodily experiencing the outcomes of their decisions. Can intimacy, in this sense, become the next institutional practice?

In the next section, I introduce hydrosensory autoethnography as a form of ‘sensing with’ waters, sensing the consequences of dry governance. Intimacy – as an attentive, embodied, and ethical orientation towards the MTH – could be a mode through which belonging may still be practised in the Anthropocene. Yet the challenge remains of how such intimacy can be enacted under conditions of limitation. And how can it eventually transform into a solid pillar of ‘wet’ regional policies (Obukhova, Boon, Huybrechts 2026)?

4 Methodology: Hydrosensory Autoethnography

Hydrosensory autoethnography is grounded in sensory ethnography (Pink 2015; Vannini 2024), autoethnography, particularly posthumanist autoethnography (Brisini, Simmons 2022; Adams, Holman Jones, Ellis 2022), and hydrofeminism (Neimanis 2017). In this section, I will place the method within existing scholarship and anticipate how it can address the need to explore how intimacy, belonging, and access to water are experienced and governed in the Anthropocene.

4.1 *-sensory -ethnography*

Originating in Paul Stoller's (1997) work on 'sensuous scholarship', sensory ethnography as a research strategy was outlined by Sarah Pink (2009; 2015). It follows a phenomenological approach to senses (see also Merleau-Ponty 2005), centralising the researcher's own positioning, bodily reflexivity, and sensory subjectivity as sites (or mediums) of knowledge. Building on Pink's work, hydrosensory autoethnography views the senses as interconnected and relational, grounded in embodied and situated ways of knowing. This framework understands experience through the "relationships between bodies, minds, and the materiality and sensoriality of the environment" (Pink 2015, 28). Importantly, every researcher should be aware of their own sensory subjectivity (one's own sensory culture, background, etc.), and critically reflect on how sensory experiences unfold in intersubjective encounters with other bodies and environments.

At the same time, it is important to remain open to new, unexpected forms of knowing that the sensory interactions can provide. This is in part because the researcher's identity, as of Pink, is itself continually shaped through sensorial encounters, emphasising its contingency and its inextricable relation to the environments we inhabit. As we enter new ways of knowing and engaging with our surroundings, "our notions of self are continuously negotiated and reconstituted through our intersubjective encounters with others" (Pink 2015, 63). Vannini (2024, 6) comments on Pink's work, highlighting how an ethnographer attuned to their senses becomes a sensory apprentice, open to learning to "sense and make sense of the lifeworlds they are investigating". This take makes sensory ethnography a tangible form of 'experimental orientation', as described by Gibson-Graham (2011) in relation to belonging. This orients towards an enhanced receptiveness, willingness to see the world as a teacher and oneself as a learner – an understanding clearly inspired by Indigenous ethics.

4.2 *Auto-*

Sensory ethnography explicitly aligns with autoethnographic approaches, in which the researcher's own experiences are taken seriously. As Adams, Holman, and Ellis (2022, 3) note, autoethnography refuses the fiction of an objective “view from nowhere” and recognises that research is always shaped by the ethnographer's perspective, biography, and social position, and that the personal and the political are inseparable. The ‘auto’ in autoethnography implies a rigorous practice of reflexivity, but also vulnerability, as it exposes intimate life experiences with an aim to “make sense of life, disrupt unnecessary silences about uncomfortable issues, and reveal stories that haven't been told before (or told well)”.

Recently, in the wake of the new materialist and posthumanist wave, both sensory ethnography and autoethnography have begun to explore what it means to position oneself as a researcher within the entrenched network of existing MTH connections (Vannini 2024; Brisini, Simmons 2022; Fijn, Kavesh 2021). This is a relatively recent turn in anthropology and ethnography, emerging initially from multispecies scholarship, which began questioning the disciplines' inherent anthropocentric tendencies by studying how relationships with other species are connected to human social worlds (Kirksey, Helmreich 2010; Hamilton, Taylor 2017; Tsing 2015; Locke 2018; Haraway 2007). The posthumanist wave takes this further. Doing posthumanist ethnographic research means recognising “humans as sensory beings-in-the-world” (Fijn, Kavesh 2021, 18), broadening the understanding of the self as relational, expanding the boundaries of the body beyond the human, and shifting attention away from social conventions alone toward the interactions between humans and MTH beings, processes, materials, and environments (Brisini, Simmons 2022; see also Descola 2014).

4.3 *Hydro-*

‘Hydro’ in hydrosensory autoethnography, in fact, refers to the MTH actor that undoubtedly carries diverse sensory meanings – water. Veronica Strang (2005, 102) writes that the materiality of water “offers a range of compelling sensory stimuli, and that these produce powerful aesthetic and affective responses”. From a hydrofeminist perspective, Neimanis (2017) argues that human and MTH bodies are materially and sensorially connected through shared watery processes, making encounters with water part of an ongoing relational condition. Water, hence, attracts sensory and bodily engagement, and it often allows so through submerging. My own work looks at swimming as an embodied, affectively rich act of relating to the MTH

and as an inquiry into ‘wet’ governance (Obukhova, Boon, Huybrechts 2026). Maggipinto et al. (2026) discuss submersion as a form of bodily attunement and ecological care. Bates and Moles (2023, 218) compare entering a waterbody to moving across an imaginary threshold: “The closer we get to the boundary, the more ambiguity emerges, and the norms and regulations that govern how we act become more slippery”. It is about how surrendering to these waters challenges the norms of belonging through trust and intimacy.

Nonetheless, as estrangement teaches us, not all thresholds should be crossed. Waters can be out of human reach – because subterranean, contaminated, or occupied by other species – yet no less in need of care (Neimanis, Phillips 2019; Evers 2021). Swimming in this sense can be seen as an act of ecological sensibility, a way of thinking and learning about and from our relationships with water, even when physically distant. Rebecca Olive (2023) believes that choosing not to swim can be just as relational, immersed and entangled, particularly when it comes from a position of knowing not to know. The implications of entering a waterbody can be ethical as well as physical, for example, if we choose to intimately engage with sacred waters in the example of Olive, or with waters that carry histories of extraction and industrial toxicity, in my. lisahunter (2019) demonstrates how relations with water are formed not only through moments of active immersion and contact but also through seemingly mundane acts of waiting, drifting, or being near water. A “MTH watery connections”, as described by the author, becomes a significant sensory experience that might remain incomplete, but still affectively attuned and embodied.

4.4 Hydrosensory Autoethnography

My interest lies in exploring how governance, from a mastery mindset, moderates these relationships by limiting access to waters, by stretching the threshold, leaving the boundary as the only possible area for intimacy. Olive (2023, 245) compares contemporary politics of ownership and privatisation of waterbodies to the colonial mindset that treats Nature (and human beings) as a resource. I also trace similarities with the work of decolonial scholars: is it also here that one should act from the margins (hooks 1989)? If, as discussed before, belonging is understood as a relational process of sensing others and being sensed in return, then restrictions on sensory engagement also shape how belonging is lived and imagined. In such sensorially governed waterscapes, there are limited opportunities for intimacy, for forming relations with water, and for rethinking the self in relation to MTH worlds. Belonging is once again pushed to the edges, cultivated in the fractures of what governance leaves open.

Rather than seeking to overcome the boundary, hydrosensory autethnography works from within it, treating the edge – here, literally the water edge – as a site of knowledge. Despite being forced into, hooks (1989) understood the margin as a space of radical possibility: a site from which alternative ways of being can be imagined. Hydrosensory autoethnography, as a result, responds to this condition by using the researcher’s own sensory experience in relation to the MTH as an encounter through which to feel the existing constraints on waterscapes, and, through them, on belonging itself. As a method, it is simultaneously sensory, relational, reflexive, and politically attuned to the governance regimes that shape what can be felt at all. In practice, this research involved site visits to three anthropogenic waterbodies, which are described in more detail in the next section. I engaged these sites through slow, situated practices such as walking, leisurely cycling, listening, observing, and, where permitted, entering the water (still, within the limits). I paid close attention to how my movements were guided or redirected by infrastructure, signage, fences, and how these arrangements shaped what could be sensed and how. Audio field recordings were made during and immediately after visits, focusing on sensory impressions, bodily responses, moments of frustration or desire, and unexpected forms of attunement. Photographs, sketches, and sample collections helped me recall the sensorial qualities of each encounter during later stages of analysis. The translation from experience to insight was guided by movement, observation, documentation, and recursive reflexivity of these encounters.

5 Empirical Encounters: On Surveilling Senses

The region of Limburg was (and still is) famous for its extremely dry heathlands formed from sand that has been largely extracted in the twentieth century, a period of active industrialisation. In the photo archive of the botanist Jean Massart from 1911, one can find an image of the dune landscape in Lommel, near one of the sites I visited, depicting the vastness of the heathland [fig. 2]. These communal lands were once treasured by local inhabitants, while the government saw nothing but wastelands to be reclaimed for economic purposes such as forestry, mining, and agriculture, marking a shift from their use as lived commons to managed production landscapes.²

² *Recollecting Landscapes. Lommel* 53 (s.d.). <https://www.recollectinglandscapes.be/en-1904-massart-lommel-53>.

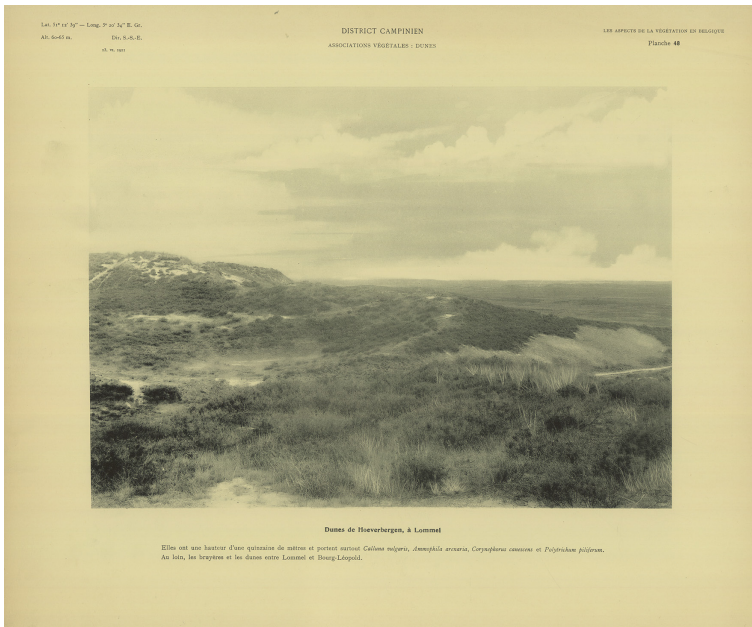


Figure 2 Jean Massart, *Dunes of Hoevebergen in Lommel*. 1911. Photography.
Lommel, Belgium. Recollecting Landscapes

Between August 2025 and January 2026, I encountered three anthropogenic waterbodies that emerged from underground in the heathlands of Limburg: Paalse Plas, Lommelse Sahara, and the Kikbeekbron. All three are post-extractive landscapes that underwent more than a century of exploitation and ecological abuse. After industrial production ceased (and after years of abandonment), the government began searching for alternative uses for these lands. Today, they represent distinct configurations of the same governance logic: post-extractive landscapes repurposed for managed recreation, ecological protection and restoration, respectively. They are promoted as “fascinating worlds where nature is in control”,³ suitable for family-friendly outdoor recreation.

From sites of industrial extraction to places of leisure and tourist attraction, these waterscapes are now governed by a different kind of control. Entry is possible, but only through designated thresholds; movement is guided along prescribed paths. Water may be seen and admired from afar, but almost never entered or touched. When

3 ANB, Agentschap Natuur & Bos (Agency for Nature and Forests) (s.d.). “Kikbeekbron”. <https://natuurenbos.be/natuurgebieden/kikbeekbron>.

contact is allowed, it is spatially confined. Stepping off the trail and walking too close to the water's edge becomes a transgression. In certain areas, even proximity itself is forbidden. And if one fails to respect the rules, surveillance cameras register deviations, relay them to authorities, and translate the disturbance into a penalty. Three hundred fifty euros for getting too close to Nature, for sensing too much [fig. 3].



Figure 3 An information panel at Lommelse Sahara, claiming that entering water might be life-threatening. 2025. Lommel, Belgium. © Kseniia Obukhova

The vignettes that follow unfold across three sites, each marked by a distinct sensory regime experimented through hydrosensory autoethnography. While all senses are inevitably interconnected (Pink 2015), certain ones dominate the sensory experience. At Paalse Plas, I primarily attend to sound: how anthropogenic noise from the numerous recreational activities drowns out the lake's own silent presence. At Lommelse Sahara – a landscape of dunes, conifer forests, and an inaccessible lake – tactility comes to the fore, nurturing a feeling of desire sparked by the impossibility of interacting with water. In the Kikbeek Valley, I focus on vision and distance, tracing how water is visible yet unreachable amid ongoing restoration works on the site. By experiencing this through my own body, I understand how the anthropogenic waters are governed through the senses. And even if formally prohibited, I practice intimacy through the senses available to me, exploring ways to foster belonging from the edge.

5.1 Paalse Plas

I arrived at Paalse Plas on a warm summer day in late August. It was my first site visit, and I was curious to see what kinds of sensory interactions might emerge. I began my walk near a small bicycle café by the lake, where I encountered my first point of contact with the site: a seven-page document listing prohibited activities [fig. 4]. Among them were instructions to “remain at least 10 meters from the shore”, and to “enter the water and go ashore only in the surfing and/or sailing club’s water sports zone. All other areas are prohibited except in emergency situations”.⁴

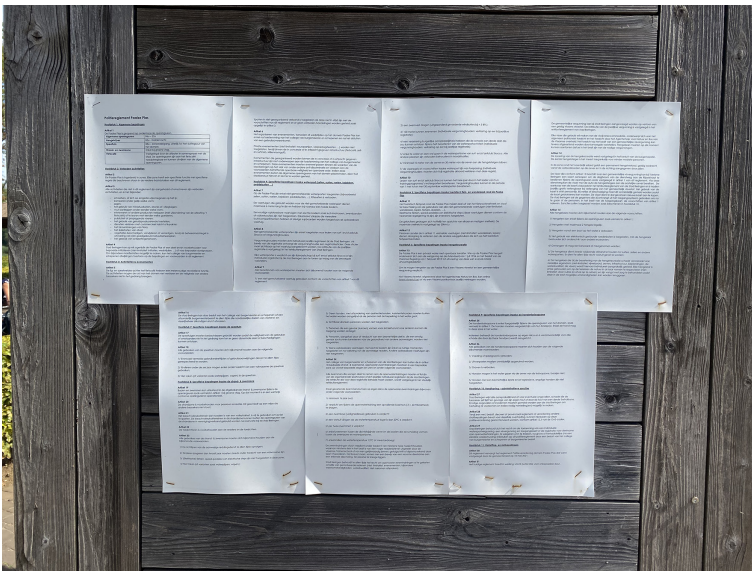


Figure 4 List of rules at the entrance of the Paalse Plas site. 2025. Beringen, Belgium. © Kseniia Obukhova

Behind the café, there is a small beach – the only area where bathing is permitted. According to the rules, open-water swimming elsewhere is allowed exclusively on special occasions, for members of registered sports clubs or individuals officially authorised by the city of Beringen. The document contains many more conditions regulating interaction with water, which I will not list here. Their accumulation was already sufficient to mark the tone of the encounter.

⁴ Visit Beringen (s.d.). “Paalse Plas”. <https://www.visitberingen.be/paalseplas>.

Paalse Plas is described in the same document as a “private waterway with a public character”. In the 1960s, the pit was created as part of the Tessenderlo-Paal industrial site; the extracted sand was used, among other purposes, for the construction of the nearby highway. When extraction ceased, the pit gradually filled with water and remained largely undisturbed for years (Vandebosch 2014). Today, the forty-hectare lake is framed by a golf club, manicured lawns, a seasonal bathing area, a volleyball court, and a playground [figs 5-6]. This was the landscape I encountered – arriving with the *naïve* expectation of pristine Nature, only to find myself within a carefully produced, human-made environment.



Figures 5-6 Volleyball court (on the left) and a golf course (on the right). 2025. Beringen, Belgium. © Kseniia Obukhova

I followed the shoreline, unaware that I was trespassing on the private golf course. A few instances later, a man in a golf cart approached me, saying that “it’s dangerous” to walk here because I could “get hit by a golf ball”. Accompanied by him to an asphalted road, I was instructed to continue my walk here, now ‘in order’. It was then that I became aware of how limited my movement was – how my body was immediately redirected away from the water. I could no longer feel the presence of the lake, overtaken instead by the shifted soundscape: people chatting, bicycles passing by, the motors of the electric golf carts humming, and, further along, the constant noise of the nearby highway, which grew impossible to ignore. At moments, I tried to listen to Nature, forcing myself to catch the crickets song in the grass, but these sounds were fragile, easily overtaken by human activity.

Despite having walked around the lake for hours, I had barely gotten in contact with it, and my attention slowly drifted away from the water. Most of my sensory engagement had been with the anthropogenic ecologies rather than with the lake itself. I noted in my recordings: “It’s just so unpleasant to walk next to the road while acknowledging that this place is only possible because of the

road". When I finally completed the round and returned to the small beach, I hoped that this relationship might change – that I could at last become intimate with the water. Yet the area was packed with people who, like me, had come to cool off on this warm day [figs 7-8].



Figures 7-8 View of the lake and the beach area from afar (on the left) and the designated swimming area (on the right). 2025. Beringen, Belgium. © Kseniia Obukhova

Even the moment of immersion was carefully supervised by several lifeguards. Despite this, I entered the cold water, crowded with bodies and noise. I could feel the sandy bottom beneath my feet, the sharpness of mussels, the softness of algae against my skin. Floating on my back, I placed my head under the water, and it felt like relief. All surface sounds disappeared, replaced by a deep hum of the lake. In this brief silence, the waters allowed me to relax. It was then that I felt a moment of connection, despite the overwhelming human soundscape above.

5.2 Lommelse Sahara

It was late November, and after a long train and bus ride, I arrived at Lommelse Sahara [fig. 9]. The bare, almost surreal landscape of this site emerged from intense sand extraction and industrial pollution in the early twentieth century. In 1900, more than 300 hectares of heathland were sold to establish a zinc and sulfuric acid factory; emissions of heavy metals soon caused the vegetation to disappear. In the decades that followed, pollution, wind, and sand transformed the area into a sand plain – today celebrated as “one of the most beautiful spots in the Lage Kempen!”⁵ Its extractive past is largely folded into a dominant narrative of ecological recovery and protection.

5 Visit Lommel (s.d.). “Sahara”. <https://www.visitlommel.be/zien-en-doen/natuur/sahara>.



Figure 9 Signage for Lommelse Sahara. 2025. Lommel, Belgium.
© Kseniia Obukhova

The journey toward the dunes and the lake began in the forest [fig. 10]. Conifer trees are among the few that thrive in this sandy soil, many of them planted in the years following the end of industrial activity to stabilise the terrain and prevent further sand drift. As I left the forest and stepped onto the open sand, this layered history faded into the background of my awareness, replaced by the immediacy of the ground beneath my feet [fig. 11]. The surface was soft, still damp from recent rain, yielding with each step. The walk felt very tactile, unlike the rigid, asphalted paths I had followed at Paalse Plas. The softness of the ground slowed my pace and made me feel more present, more attuned to the landscape around me.



Figures 10-11 Conifer forest (on the left) and the Sahara's sandy ground (on the right). 2025. Lommel, Belgium. © Kseniia Obukhova

This meditative experience of sensing Nature was interrupted by a series of unexpected constructions along the path [fig. 12]. I learned that this area had once served as a site for ammunition testing and detonation. “It’s not exactly what you would expect in a place like this”, I noted. The abandoned structures, though long unused, continued to interfere with my sense of connection. As I passed them, I imagined the sounds that once filled this space, the smells that once filled the air. Once again, the sensations that surfaced were anthropogenic, foreign to the calm I had begun to feel, yet impossible to separate from the ground on which I walked.



Figure 12 The demolition pit, where various explosives were tested and detonated (from the information panel on the site). 2025. Lommel, Belgium.
© Kseniia Obukhova

After a while, the lake came into view. I approached it slowly, noting each prohibition sign that forbade not only swimming but any contact with water, explaining this restriction with the presence of cyanobacteria [fig. 13]. I sat down on the sand and watched the lake for several minutes. In that moment, I recorded: “The only thing you want to do is to take off your shoes and place your feet in the water. Or, at the least, touch it with your hand”. When contact with water was prohibited, my hands instinctively turned toward the ground. Fingers pressed into the sand, lifted it, let it fall again. This tactile engagement felt almost compensatory – as if the need to feel through touch sought another surface to complete the gesture. And somehow, it felt like the lake could be sensed through the humid sand soaked with its waters.



Figure 13 Sign prohibiting swimming and interacting with water in front of the main lake. 2025. Lommel, Belgium. © Kseniia Obukhova

5.3 Kikbeekbron

It was a sunny winter day in January. Because the site was difficult to reach by public transport, I rode my bike from the train station in Genk to the Kikbeek Valley. The valley surrounding the Kikbeekbron lies within the Hoge Kempen National Park, near Maasmechelen. Like other landscapes in the region, it was once an extensive heathland. The sand mining ceased entirely at the beginning of the new millennium. Gradually, springwater filled the former quarry, forming the Kikbeek lake, while the steep sand walls were reshaped as part of an ongoing effort to restore the area as a nature reserve.

At the time of my visit, the valley was officially inaccessible on foot due to restoration works under the Flemish Blue Deal project, which aims to reestablish the valley's original ecosystem and increase its water retention capacity (ANB 2024). Although these works were expected to be completed by the end of 2025, my attempts to obtain information from the park administration remained unanswered.⁶ In

6 While finalising the paper, an official announcement by the ANB has been published, stating that the Valley remained closed to recreational visitors due to a landslide on one of the quarry walls. The administration specified that the landslide has not been caused by the restoration works. <https://anb.prezly.com/vallei-van-de-kikbeekbron-blijft-afgesloten-voor-recreatie-na-grondverschuiving>.

the absence of clarity, I decided to go anyway – to approach, if not fully enter, my last waterbody for now.

It took me about one and a half hours to reach the park by bike. Cycling alongside the road for much of the way made me think again about how sand extraction had enabled the construction of the very infrastructures I was now moving through. Even when I approached the valley, I could still hear the road clearly. Like at Paalse Plas, this sound traveled across the landscape, reminding me of how these anthropogenic waters are inseparable from what once gave them life.



Figure 14 Former entrance to the site, currently blocked due to the restoration works. 2026. Maasmechelen, Belgium. © Kseniia Obukhova

When I finally reached the point where access to the valley itself might have been possible, I was stopped: the entrance was closed. Signs announced ongoing works and warned of potential dangers from machinery [fig. 14]. I already knew that the area was officially inaccessible, but standing there, with my own body barred from entering, made the closure feel more real than I anticipated. I continued cycling along the panoramic route that circled the valley at a distance. From there, I could finally see the Kikbeekbron from above [fig. 15]. Parts of the landscape bore visible traces of recent intervention, yet no workers or machines were in sight. The lake itself was visible only from afar. From this perspective, sensing became almost entirely visual. I tried to imagine what it might feel like to stand closer, to listen to the water and its ecologies as I had attempted at Paalse Plas, or to feel the damp ground near its edge, as at Lommelse Sahara. And even if access was prohibited at every

gate I found along the way, with as much as an electric wire keeping trespassers out, I remained in relation through sight. Observing Kikbeekbron from a distance became a way of staying with the waterbody rather than turning away from it.



Figure 15 Kikbeek Valley seen from a panoramic cycling road. 2026. Maasmechelen, Belgium. © Kseniia Obukhova

6 Discussion: Sensing from the Edge

It might seem that the encounters described in these vignettes are failures, incomplete forms of relation: I was redirected from water, even blocked by an electric fence from getting close to its edge. I was threatened with a fine if I touched its surface. I cycled for hours just to see a glimpse of a lake from afar. Getting intimate with anthropogenic waters is a challenge. And yet, as discussed earlier in this paper, intimacy with waters does not always require physical proximity.

At Paalse Plas, intimacy was shaped primarily through sound. The site was dominated by anthropogenic noise coming mostly from loud recreational activities and traffic. Amidst its intensity, the lake itself remained silent, almost obedient. Here, sensing water required effort, and I found myself constantly forcing my attention despite the distracting, controlling human presence. Yet, the moment I let go of this sensing exercise, the moment I allowed my body to release into the cold waters of the lake, a connection suddenly emerged. It was

subtle – accompanied by a deep hum of the water – nothing like what I expected.

Lommelse Sahara offered a different form of intimacy. Here, connection unfolded through denial, producing a condition in which a desire for touch became the dominant affective mode of relation. Although the landscape is visibly haunted by its extractive past, it allowed me to engage my senses almost immediately, particularly through the tactility of the ground. Unlike at Paalse Plas, I was not forcefully redirected or instructed on how close was too close. This illusion of openness of interaction and somewhat freedom of movement made the encounter at the water's edge more unsettling, as if my body had already been invited into relation with the landscape, only to be stopped at the threshold. For a moment, watching without interacting further reinforced the separateness between me and this waterbody. But suddenly, with a small, almost intuitive gesture of pressing my hand into the humid sand, I enacted another subtle yet powerful resistance to this limitation.

The Kikbeek Valley marked the culmination of this hydrosensory endeavour. Here, the restoration of the original ecosystem of the landscape once again depended on significant transformations led by human intervention and machinery. The resulting restrictions were harsh, raising a sense of danger associated with these anthropogenic sites. In the name of safety, any form of access to the valley was denied, as well as most forms of sensorial engagement. This is when I attuned to the only sense that remained available to me: sight. If I am being honest, I was not expecting to see the lake at all, and was genuinely surprised when it appeared from the saddle of my bike, even at a distance. I noticed the traces of machine work in the pressed sand, the irregular, shapeless patches of water that did not fit the original banks, and carefully designed sand pyramids that served as barriers. Observing the valley undergoing yet another human-led change helped me establish a temporary connection with Kikbeekbron.

These failures to sense are forms of 'otherwise knowing', definitely strange and unexpected, but integral to hydrosensory autoethnography. At Lommelse Sahara, for example, the prohibition on contact with water was reasoned by the proliferation of cyanobacteria in the lake – a MTH actor whose abundance made the water unsafe for human bodies. I could only respect remaining at the edge. Such failures (or conscious practices of estrangement) actually help read on whose terms belonging happens: on the terms of MTH or of the institutions that act on their behalf? At Lommelse Sahara, the answer felt closer to the former. At Paalse Plas, to the latter. At Kikbeekbron, it was somewhere in between.

I have to admit that promises to meet places where “nature is in control” complicated my relationship with these sites and set a certain

tone to these encounters. First, I did not fully trust them, knowing the history of the sites. Second, these ‘proxy stories’, (Neimanis 2017), as well as my upbringing in urban European environments, shaped an understanding of Nature as something ‘wild’ – an inherited conviction I immediately faced and still have to unlearn. At Paalse Plas, I remember consciously trying to ‘listen to’ Nature. And I failed. This failure raised an honest question: what had I been expecting Nature to sound like, and where did this expectation come from? If I were to return to these sites, I would not obsessively look for Nature, but stay with these small, attentive intimacies that were revealed to me in the thresholds that I temporarily occupied. I would open myself to what is already there, realising that this is already a form of belonging offered to me.

At the same time, sensing from the edge made the consequences of dry, detached governance easy to notice. The burden of attunement should not fall on those subject to governance (individuals, visitors, researchers, waters), who are left to find intimacy in the fractures. The question I have not yet found an answer to is what would happen if governance let itself be estranged by the waters, what if it got ‘wet’? In the first place, it would mean admitting the limits of what one should know. Hydrosensory autoethnography, as a situated, ethical, and intimate practice, might help challenge the mastery, become a student again (Tarkhanian 2025). However, these same characteristics hardly align with the bureaucratic traditions discussed earlier and might be a source of friction (Tsing 2005). Whether these frictions can be held within governance is where I see the next direction of this research.

7 Conclusion: Possibilities of Belonging to Anthropogenic Waters

In a search for my waterbody, I found three, and none of them would I dare call mine. The very gesture of claiming a waterbody – of ‘mining’ it, in both senses of the word – is extractive in the same logic that gave origin to the waterbodies I encountered. It originates in the conviction that Nature is something that can be owned. Could it be, instead, that I belong to all three, and to many more that I am yet to meet? Belonging, again, as practised bodily, through attentiveness and ethical relation with the MTH, with waters that might withhold themselves. Belonging, for as much as possible, on their terms.

This paper proposed hydrosensory autoethnography as one way of practising such relations under conditions of institutional constraint. By using my own experience as a site of inquiry, this method makes legible how intimacy and belonging are governed in the Anthropocene. The three encounters I described are partial and

unfinished; they do not resolve the question of what belonging to anthropogenic waters might mean. Instead, they open a space for doubting our current relationships with these waters. We can keep exploring intimacies at the water's edge, on the thresholds we often cannot cross. However, the real potential of this method lies in what it might offer to those who currently govern these waters from a chosen distance. Intimate governance is not yet a practice, but it could become one.

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Mar Menor and Vättern as Aquatic Doppelgängers

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Abstract Lake Vättern in Sweden and Mar Menor in Spain are different waters, yet each has come to be lived and governed in a doubled form: a familiar waterbody and an estranged counterpart. This paper develops the concept of aquatic doppelgängers to track how such splits are produced through civic, legal, and political practices that shape what counts as harm, who can speak, and what futures become plausible. The concept shows how doubling turns crisis into a dispute over what the waterbody is, opening a struggle over how it can be protected, defended, and acted for.

Keywords Aquatic doppelgängers. Ontological politics. Waterbodies. Legal personhood. Rights of Nature.

Summary 1 Introduction. – 2 Theoretical Anchor: Aquatic Doppelgängers. – 3 Methodology: Researching Aquatic Doppelgängers. – 4 The Uncanny Double of Mar Menor. – 4.1 Temporal Doubling: Past, Present, Future. – 4.2 The Vital Lagoon and Its Mortuary Shadow. – 4.3. – Juridical Double and Political Mirror-World: Law 19/2022. – 5 Vättern as Aquatic Doppelgänger. – 5.1 Vättern's Contaminated Double: PFAS and the Security Exception. – 5.2 The Mirror World of Defence. – 5.3 The Juridical Doppelgänger in the Making: Vättern-as-Subject. – 6 Conclusion.



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1 Introduction

Lake Vättern in Sweden and Mar Menor in Spain are very different waters: one a deep, cold lake, and the other is a shallow, warm coastal lagoon. Yet each has come to be lived and governed in a doubled form. Vättern is widely cherished as a stable source of drinking water, known for its clear water and ecological distinctiveness. At the same time, it is increasingly treated as something else: a waterbody entangled with militarised activities, PFAS (per- and polyfluoroalkyl substances) contamination, and a widening sense that environmental protection can be negotiated, weakened, or made conditional. Mar Menor, long known as a beloved place of bathing, fishing, and memory, has come to appear in a more estranging guise: a lagoon marked by algal blooms, recurring ecological collapse, and shoreline scenes of marine life suffocation. In both cases, the crisis is not only that the waterbody deteriorates. It is that it becomes two coexisting versions that do not easily reconcile.

This paper develops the concept of aquatic doppelgängers to name a condition in which waters come to appear in doubled form. A doppelgänger is a double that is recognisable as something familiar, but which returns in an altered and unsettling form. The figure has a long history in literature, where it often marks a split, haunting, or troubling resemblance (Dorfman 2020). In Freud's (2003) account of the uncanny, the double is associated with mirror images, shadows, repetition, and the return of what was once familiar but has become strange or threatening. As Cixous (1976) notes, Freud's analysis moves across unstable registers; between certainty and hypothesis, science and fiction, and material objects and their symbolic meanings.

I draw on this genealogy, but relocate the doppelgänger within environmental social science. In this context, uncanny doubles are not only literary or psychoanalytic figures. They also offer a way to understand how environmental change unsettles the categories through which nature is made familiar. Familiar environments can begin to feel strange, unstable, and haunted by the possibility that ordinary ecological events are also signs of wider climate and planetary breakdown (Bubandt 2018; Klein 2023).

By speaking of aquatic doppelgängers, I extend this insight to contested waters. The concept names situations in which waters remain attached to familiar meanings, as drinking-water sources, bathing places, ecological refuges, or sites of collective memory, while also appearing as contaminated, collapsing, militarised, or legally unstable versions of themselves. The uncanny lies in this doubling: the water is still recognisable, but it no longer appears fully at home with itself.

This paper therefore uses the doppelgänger not as a decorative metaphor, but as an analytical figure for environmental social

sciences. It helps track a specific empirical dynamic: situations in which multiple ways of knowing and enacting a waterbody harden into a split that becomes difficult to hold together. Here Annemarie Mol's (2002) notion of ontological politics is helpful, because what is at stake is not only competing interpretations but which version of the waterbody is allowed to count as real in practice.

By placing Mar Menor and Vättern side by side, this paper traces how aquatic doubling works across temporal, cultural, political, juridical, and affective registers. The question that follows is not only whether these waters are healthy or degraded, but which version of each waterbody is made actionable: which facts hold, which harms count, who is allowed to speak, and what forms of defence become possible. Mar Menor's legal personhood sharpens this analysis. With Law 19/2022, the lagoon is recognised as a subject with rights to exist, evolve, and be restored, offering a new public and legal persona through which harms can be named and obligations argued over. Vättern's current struggles unfold in a different legal setting, yet they are increasingly threaded into a related repertoire of rights-of-nature organising, tribunals, and collective gestures such as the *Abrazo al Agua*, a public embrace for the water. The waters are different, yet these civic and legal experiments show how aquatic doppelgängers appear not as copies, but as recurring forms through which familiar waters return, across sites, as altered and politically charged versions of themselves.

2 Theoretical Anchor: Aquatic Doppelgängers

The introduction defined aquatic doppelgängers as familiar waters that return in altered and unsettling form. This section develops the concept further by asking what kind of double is at stake, why water lends itself to such doubling, and how these doubles become politically and legally consequential. The doppelgänger is useful here not because waterbodies become fictional characters, but because environmental crises often produce a split between different versions of the same water: the remembered water, the measured water, the polluted water, the legally protected water, the dying water, and the water imagined as capable of return.

In Freud's (2003) account, the double is ambivalent. It may appear as mirror-image, shadow, guardian figure, but it also comes to signal threat, loss, and the fear of death. This ambivalence matters for environmental crisis because doubles can promise continuity while also registering that continuity has already been disturbed. Bubandt's (2018) account of the Anthropocene uncanny makes this visible in relation to weather, species, and ecological processes that remain familiar while becoming newly strange. A warm day,

a storm, or a proliferating species may still be encountered as part of ordinary nature, yet it can also appear as a sign of climate disruption or ecological imbalance. The double therefore does not simply reproduce the familiar. It returns the familiar in a changed form, allowing something to be recognised while also suggesting that it no longer fully coincides with itself.

Water intensifies this dynamic. Seas, lakes, lagoons, and rivers have long been figured as life-giving and life-taking, alluring and threatening, ordered and chaotic. Aquatic figures such as mermaids and serpents condense this doubleness, foregrounding watery environments as simultaneously familiar and alien, cherished and feared, and imagined as pure and toxic. Thinking with water in this sense draws attention to the sea's capacity to appear in paired forms: waves come in sets, surfaces mirror and distort, and what is submerged may return altered (Casavecchia 2023; Strang 2023). Waters also have what blue humanities scholars describe as a twofold condition. They are at once material and storied: ecological and chemical realities, but also shaped through memory, attachment, image, law, and narrative (Oppermann 2019). This twofold condition is central to the aquatic doppelgänger. The double emerges where material transformation and symbolic attachment no longer hold together easily.

Naomi Klein's (2023) exploration of the doppelgänger extends this logic through the notion of the 'mirror world': doubles can refract reality in distorted yet persuasive ways, producing parallel versions of the familiar. As Klein writes, "For centuries, doubles have been understood as warnings or harbingers. When reality starts doubling [...] it often means that something important is being ignored or denied" (Klein 2023, x). Here the doppelgänger functions less as metaphor than as symptom: a disturbance in which multiple versions of the same thing compete to become the real.

Science and technology studies offer a further way to understand how such doubles are made and stabilised. In technoscientific settings, data doubles and digital twins stand in for bodies, infrastructures, and environments, translating heterogeneous relations into a proxy that can be monitored, compared, and acted upon (Leonardi, Leavell 2024; Amoore 2025). Such doubles are not faithful mirrors. They are selective constructions, stitched together from measurements, models, and assumptions. In Annemarie Mol's (2002) terms, they produce 'multiples', where different enactments become more or less authoritative depending on the practices that sustain them. Doubling is therefore not only a way of multiplying realities. It is also a way of making realities manageable, because it foregrounds some relations while obscuring others, with consequences for how harm, responsibility, and action are organised.

Recent work on watery death and loss helps sharpen what is distinctively aquatic about this process. Peterson, Bezan and Falconer (2024) argue that death studies carry a terrestrial bias, treating death and loss as sedimentary and place-fixed. Watery worlds complicate this assumption because bodies and traces drift, disperse, dissolve, submerge, surface, or become preserved under particular conditions such as freezing. Jesse Peterson's (2024) provocation on whether a sea can die pushes this insight beyond the corpse to the waterbody itself. Public controversies often turn on competing enactments of the water's status: whether it is still living, already dying, or capable of recovery. A dying sea is therefore not a neutral description but one stabilised version among others, each privileging particular qualities as the conditions of life. This shifts the analytic from asking whether a waterbody is dying to for whom it dies: who gains and loses when specific attributes are made decisive, and when that diagnosis becomes the basis for action (Peterson 2024).

Doubling is also lived. When a waterbody changes, people may remain in place while the place no longer feels like itself. Albrecht's (2006) concept of solastalgia describes this distress of staying while a home environment changes around those who inhabit it. In such situations, the earlier water does not simply vanish. It remains present as a felt reference point: an earlier abundance, an earlier sense of safety or trust, against which the present is continually measured (Farrelly et al. 2014). Traces of what has been undone may press into the present, making the new normal feel unstable (Tsing et al. 2017). Water can be haunted not only by memory and loss, but also by residues that are difficult to see, contain, or narrate. Contaminated water becomes an archive of invisible presences, carrying traces of past decisions, accidents, and struggles.¹ This produces a haunting situation in which the present water is shadowed by what it used to be, what remains materially present within it, and what it is feared to be becoming.

The aquatic doppelgänger therefore brings together three analytical registers. First, it names an uncanny register, in which familiar waters return as strange. Second, it names an ontological-political register, in which different enactments of the same waterbody compete to count as real. Third, it names an affective and juridical register, in which damaged waters become objects of grief, responsibility, protection, and possible repair. This makes the concept useful for analysing how ecological crisis is not only detected or narrated, but organised into actionable versions of reality.

1 See Nonhuman Nonsense and Cacciatori, C. (2024). "Haunted Waters". <https://nonhuman-nonsense.com/hauntedwatersproject>.

3 Methodology: Researching Aquatic Doppelgängers

I now turn to Mar Menor in Spain and Lake Vättern in Sweden as aquatic doppelgängers. Rather than comparing them as parallel cases, I ask how particular versions of each waterbody are produced, stabilised, contested, and made actionable across public, scientific, activist, and legal settings, and how these versions begin to resonate across sites. The comparison is therefore also attentive to how Mar Menor and Vättern become partially entangled: how legal concepts, activist practices, public performances, and imaginaries of damaged but defensible water travel between them, allowing one waterbody to help shape how the other is seen, addressed, and cared for.

The analysis draws on two overlapping bodies of material. First, it is grounded in field engagement with both cases in 2024-25, including participation in and observation of civic events and knowledge-making practices through which the water bodies were publicly staged (for example demonstrations, the Vättern court hearing in 2024, three Vättern workshops, and Mar Menor's *Abrazo al Agua* in 2024 and 2025). Second, I undertake document and media analysis to follow how the cases are narrated, evidenced, and disputed in public and legal arenas. Where translations from Swedish or Spanish are used, they are my own, supported by AI-assisted translation and checked against the original text.

A further premise is that doubling is not only something I study, but also something my research can participate in. Analysing aquatic doppelgängers requires attention to how observation, translation, and forms of public circulation shape what becomes visible and persuasive. My positionality differed across the two cases. In Spain, I was primarily an observer of public and legal performances through which Mar Menor's personhood was enacted and contested. In Sweden, Vättern is my primary research field. In that setting, my exposure to Mar Menor became part of the work: I drew on the Mar Menor experience in Vättern workshops and blogposts, and these interventions helped stimulate local discussion and experimentation, as a way of rehearsing the lake as something that can be addressed, defended, and cared for. The study therefore treats research as situated and refractive, following how doubles are enacted without presuming a view from nowhere (Haraway 1988; Mol 2002). Analytically, it proceeds through close, iterative reading across materials, guided by the doppelgänger perspective. The analysis proceeds in two steps: it first examines Mar Menor, then turns to Lake Vättern.

4 The Uncanny Double of Mar Menor

I surrender myself to your sea; I let myself become yours,
as one must give oneself, to be yours.
If I were to close my eyes, I would remain-
made into one being and one voice: drowned alive.
(Carmen Conde)²

Mar Menor is a shallow coastal lagoon in south-eastern Spain that has long been lived as a place of bathing, fishing, and seasonal dwelling. Carmen Conde wrote *Los poemas de Mar Menor* in the mid-twentieth century as a meditation on this intimate, everyday sea. In her writing, Mar Menor is not simply described; it is addressed. The lagoon appears as a counterpart with whom one can make a pact: a place where livelihoods and ecological rhythms are imagined as mutually sustaining.

Conde's poems are used here as an archive through which the lagoon's earlier public persona remains active in the present. That matters because contemporary struggles do not begin from a blank slate. They draw on older ways of relating to Mar Menor even as the lagoon is forced into new and incompatible public forms. The sections that follow trace how Mar Menor is doubled across time, the shoreline, and institutions and law.

4.1 Temporal Doubling: Past, Present, Future

The 2016 green soup event is often recalled as the moment Mar Menor's degradation became difficult to ignore. The lagoon did not simply deteriorate; it appeared in an altered guise – opaque, thick, and light-blocking – as nutrient-fuelled algal growth turned the water murky green. In everyday terms, green soup names estrangement: a lagoon that is still there but no longer behaves like the lagoon people thought they knew. The fish-kill episodes of 2019 and 2021 then punctuated this altered time. They became dates people return to, reference points that organise memory and make crisis feel recurring rather than exceptional (Cabello, Brugnach 2023).

People living with the lagoon routinely narrate this change as a temporal doubling: the present is experienced through comparison with an earlier Mar Menor that remains accessible through memory, language, and cultural archives. One example is María Encarnación Carrillo's (2024) reflection, which turns to Conde's poems as a way of returning to the Mar Menor of 1959 and imagining the lagoon

² “Me abandono en tu mar, me dejo tuya | como darse hay que hacerlo para serte. | Si cerrara los ojos quedaría | hecha un ser y una voz: ahogada viva” (Conde 1959).

as the “natural paradise” it once was. In Carrillo’s account, the verses become “a lyrical record of a place that no longer exists”. That record does not sit safely in the past. It sharpens the present by making today’s lagoon feel both recognisable and harder to inhabit as before. Carrillo’s point also shows how this temporal mirror is built: not through vague nostalgia, but through concrete reference points that can be pictured, named, and missed. Conde’s Mar Menor is a calm sea surrounded by palms and almond trees, salt mills and traditional fishing traps, with “the moon reflected in its waters”. Such details allow people to hold two versions of the lagoon together – then and now – without needing to generalise. The lagoon’s signature seahorse has come to work in a similar way. Once abundant, it has become a symbol of decline through its disappearance, and efforts at reintroduction complicate that story by producing a returned seahorse that is both familiar and changed. The seahorse becomes a living marker of what has vanished and what might return, folding decline and fragile renewal into a single figure.

A more recent archive of this everyday temporal comparison appears in the short film *Mar Moribundo* (2025), which follows local residents whose lives are bound up with the lagoon. Their testimony holds two Mar Menors together: the childhood lagoon of blue water and abundant life, and the present dying sea marked by decay and recurring crisis: gilthead bream, mullets, prawns, king prawns dying en masse, and abandoned beaches. One speaker captures this as dispossession: “The beach of my childhood has been stolen. They’ve stolen it from me”. Another describes talking with her son about seahorses as the moment she realised how much had already disappeared. These accounts show how the lagoon’s past does not vanish when conditions change. Loss returns as an absent presence that remains tangible because people can still name it, describe it, and measure the distance from what once was. *Mar Moribundo* also opens a future tense – hesitant but insistent. Alongside mourning, residents voice the belief that recovery is still possible: “Nature has the ability to regenerate itself”, one insists, recalling other seas that have recovered when pressures eased.

Across the last few years, film has become one of the key media through which Mar Menor is staged as recurring crisis – a place where ordinary life is forced to live with long disruption and to struggle for viable futures. *Sofía volverá* (2022) pushes this temporal double furthest by shifting the story into a future that feels faintly unreal. As a docu-fiction that plays with the figure of the climate refugee, it follows Sofía, a fisher’s daughter, who leaves when a fish-kill breaks the conditions for staying. The label is usually reserved for distant others; here it returns nearby, making dystopia feel local and intimate (Cano 2022). Decades later, Sofía returns in 2056 to a Mar Menor described as recovered through joint work by neighbours and

institutions. Yet the return is still marked by quiet estrangement: even with a healed lagoon, displacement has rewritten belonging, memory, and continuity. Conde's poems thread through the narrative like a ghost archive, holding up an earlier Mar Menor as both guide and accusation. In this sense, the film turns temporal doubling into a political question about futures: not only what is lost, but how a recoverable lagoon is made thinkable, and what kinds of return it can (and cannot) repair.

4.2 The Vital Lagoon and Its Mortuary Shadow

The fish-kill episodes of 2019 and 2021 did not only mark time; it surfaced something unsettling: a shoreline mortuary where tonnes of underwater life were washed up into public view as corpses. Local activists insisted on naming the scene as 'suffocation' or 'ecocide', not 'hypoxia' or 'anoxia', to prevent technical language from dulling what was happening (Sánchez 2024). What disturbed people was not only the scale of death but where it appeared. Fish and other marine beings – creatures expected to live out of sight – ended up on beaches and promenades. Spaces of swimming and leisure became spaces of decay. This is what Maddrell and Sidaway (2010) call 'death in the wrong place'. Peterson et al. (2024) also help explain why these scenes carry such force in aquatic settings. Public attention is often triggered when death becomes visible; when it surfaces and strands. The fish kills become more than tragic signs: they become material traces that demands explanation and a response from authorities.

This is sharpened by an institutional contradiction. Mar Menor is one of the most decorated ecosystems in Europe: for example, it is a Ramsar Wetland of International Importance, and part of the EU's Natura 2000 Network (Vicente Giménez, Salazar Ortuño 2022). On paper, the lagoon appears exceptionally protected. Yet in practice, decades of nutrient runoff from intensive agriculture, unregulated urbanisation, and untreated sewage have left it in chronic eutrophication, repeatedly tipping into collapse. This produces an unsettling double. Mar Menor appears twice: once as a protected jewel, and again as a degraded basin of neglect. This doubleness is made explicit in civil society's slogans and banners: against "Mar Menor Muerto" (dead Mar Menor) they demand "Mar Menor Vivo" (living Mar Menor) (Avilés Conesa 2023, 75).

4.3 Juridical Double and Political Mirror-World: Law 19/2022

It is this split – Mar Menor as a living waterbody that can be imagined as a rights-bearing being, and its threatened shadow treated as an object – that moves into law and politics, as rights-of-nature proponents and their opponents struggle to define what the lagoon is, what counts as harm, and who can speak for it. For proponents, legal personhood became a way to shift the terms of that struggle after decades of being protected on paper while repeatedly returning as crisis in practice.

The route to personhood was not merely symbolic; it was procedural and labour-intensive. Law 19/2022 was propelled through a Popular Legislative Initiative (ILP), which required activists to reach a formal threshold of 500,000 signatures. They ultimately gathered 639,824 valid signatures under difficult Covid-19 conditions (Vicente Giménez, Salazar Ortuño 2022). Each signature was part of the labour through which the lagoon was made legible to the state as a rights-bearing subject: Mar Menor became a ‘person by law’ through paperwork, verification, and procedural thresholds. Out of that civic work, Law 19/2022 now confers legal personhood on Mar Menor and its basin. The legal innovation is stark in its simplicity: alongside the familiar waterbody – ecosystem, place, livelihood, and landscape – Spanish law produces a second figure, a rights-bearing subject with the capacity to act in legal proceedings. The law recognises the lagoon’s right to exist and to evolve naturally, and rights to protection, conservation, and restoration. Damage to Mar Menor is no longer only a regulatory problem to be managed; it becomes legible as injury to a plaintiff. In this sense, Law 19/2022 produces a juridical double: Mar Menor as ecosystem and place, and Mar Menor as legal person.

Yet this legal innovation carries a Freudian uncanniness. The uncanny is not simply the strange; it is the familiar returned in altered form. Here, the lagoon becomes ‘like humans’ in the narrow sense that it is granted a recognisable legal voice – rights, representation, a capacity to act – while remaining decisively not-us: a body of water. Activist formulations such as ‘Mar Menor has now a voice; we are Mar Menor’s voice’ register the practical arrangement this creates. Humans must still speak on behalf of the lagoon, but in doing so they also enact it as a subject, forming what Youatt (2016) describes as collective personhood. The juridical double is therefore an unsettling reconfiguration of the ‘we’ that law assumes when it speaks of Mar Menor as a legal person.

Once the juridical double was made, it was immediately contested. Klein’s (2023) ‘mirror world’ is useful here because the struggle is not only over stronger protection, but over which version of Mar Menor can be made to stand as legally and socially real. In one version, the lagoon is a legitimate rights-bearing subject; in the other, it is

quickly denounced as an illegitimate duplication of ‘persons’. This clash sharpened when the far-right party Vox challenged the law’s constitutionality, arguing (as the judgment summarises it)³ that by granting legal personality (art. 1), recognising rights (art. 2), and extending standing widely (art. 6), the law equates a natural entity with human beings and confers a status and dignity that, they argued, belongs only to humans. Vox stressed that the Constitution is an essentially anthropocentric doctrine which treats the environment not as a rights-holder but as an object of public policy. Another concern was that the law invites legal uncertainty and arbitrariness because it sets out rights with “vague, diffuse, and undefined” content.⁴ The Constitutional Court rejected these complaints and confirmed the law, explicitly naming legal personality a legal fiction that the legislature may confer in pursuit of the public interest. The Court acknowledged that earlier jurisprudence had framed the environment as an “essentially anthropocentric concept”, but underlined the legislature’s broad margin to moderate law towards a more ecocentric approach because of the “undeniable connection” between ecosystem life and human life.⁵ On that basis, the Court reframed personhood as a reinforcement of dignity, since “a dignified life is only possible in suitable natural environments”, and dignity is preserved in “symbiosis” with an environment humans may transform but “must not destroy”.⁶

This debate over what Mar Menor is and needs is not confined to the courtroom. It also takes shape in struggles over what ‘restoration’ is allowed to mean: which drivers are named, which evidence is treated as credible, which actors are blamed or absolved, and which futures are presented as feasible (Cabello, Brugnach 2023). In July 2024, for example, the Regional Assembly of Murcia debated reforms to the lagoon’s restoration framework. Outside, activists held banners targeting Fundación Ingenio – an organisation criticised for shifting attention away from intensive agriculture (Avilés Conesa 2023). In the hearing, its director argued that wastewater was the lagoon’s principal problem, bolstering the claim through selective citations of scientists that opponents described as pseudoscience and misinformation (Sánchez 2024). The eerie effect is that governance still looks like governance, yet its centre of gravity shifts when agroindustrial organisations and exporters are able to steer what restoration is made to mean (Vidal Coy 2026).

³ STC 142/204, 180840, in the Official State Gazette, 31. 26 December 2024. <https://www.boe.es/boe/dias/2024/12/26/pdfs/BOE-A-2024-27140.pdf>.

⁴ STC 142/204, 180840.

⁵ STC 142/204, 180850.

⁶ STC 142/204, 180851.

What matters here is less any single episode than the recurring effect: Mar Menor is made to appear in competing versions: either a rights-bearing subject that demands restoration, or an overstated problem whose causes lie elsewhere. Legal personhood sits at the centre of that struggle – not as a settled solution, but as a contested point of reference for what protection should mean and who may insist on it. One such question is whether Mar Menor can be treated as a victim, a question that has been taken to the European Court of Human Rights (Levy 2025). The point is not only procedural. It forces a harder test of what it would mean to speak of injury and protection when the claimant is a lagoon, and how far European rights frameworks can stretch their categories of harm without snapping back to the human as the default subject. In this sense, personhood is not an endpoint but a legal form that keeps opening new sites where the lagoon can be made to count or refused.

Legal personhood, then, does not settle the lagoon's status once and for all. It has to be repeated, defended, and made present in public life. A prominent example is the annual *Abrazo al Agua* (Embrace the Water) demonstrations. Each August, people form human chains along the shoreline, symbolically encircling the lagoon in a collective act of embrace. The gesture is simple, but it does consequential work. It turns bodies into a temporary boundary that mirrors the lagoon's perimeter, and it stages the lagoon as a being that can be held and accompanied. In this sense, the embrace rehearses personhood in public: it makes Mar Menor-as-subject feel real by repeatedly assembling a collective around it. Versions of this embrace have travelled, including to Lake Vättern, to which we turn next.

5 Vättern as Aquatic Doppelgänger

a tiny tiny butterfly's wingbeat
can increase in wind strength
accelerate
explode
as a hurricane
on the other side of the earth
(Camilla Linusson)⁷

Lake Vättern is Sweden's second-largest lake in the south-central part of the country. It is often described as a deep, cold, crystal-clear inland sea and widely treated as a dependable, life-supporting waterbody. Yet deep, clear-water lakes can look stable from the shore, while their long residence times allow harms to accumulate out of sight and become difficult to reverse. Something like this is now at stake in Vättern. The lake is increasingly entangled with military activity and with extractive and industrial pressures: effluents from paper mills, leakage risks from active and proposed mines, and PFAS contamination linked to the air force base at Karlsborg.

The image of purity is also complicated by official dietary advice. The Swedish Food Agency (2025a; 2025b) recommends that children and young people, and those who are pregnant, breastfeeding, or planning pregnancy, eat certain fish from Vättern only two-three times per year because they can carry elevated burdens of persistent pollutants, including PFAS, and high levels of dioxins and PCBs. For others, the advice is to limit intake to at most once a week. This is how the lake's double takes shape in everyday terms: contamination is translated into limits, frequencies, and vulnerable groups, into guidance about what can be safely eaten and, by extension, what the lake can be trusted to provide as drinking water. The lake doubles as a life-supporting waterbody and as a site of exposure.

Drawing on Mar Menor's *Abrazo al Agua*, Vättern's supposed sturdiness has also been re-staged as something that requires care; something that must be held. Leading up to, and on 9 August 2025, people encircled parts of the lake, joining hands to symbolise unity with its waters. The embrace reached roughly one per cent of the shoreline – modest in length but expansive in affect, producing ripples of media attention and new membership for environmental groups. Organisers counted each person as one metre and set 300,000 metres as the symbolic target: the length required to encircle the lake and, at the same time, the approximate number of people who depend on Vättern for drinking water. Counted this way, the chain reached about

⁷ “en liten liten fjärils vingslag | kan öka i vindstyrka | accelerera | explodera | som en orkan | på andra sidan jorden” (Linusson 2025).

3,000 metres – one per cent of the goal. The gesture also performed a characteristic doubling: bodies became shoreline metres, the shoreline became a countable total, and that total doubled as a public made visible through its dependence on water – care multiplying like a butterfly's wingbeat, as the organiser-poet put it (Linusson 2025).

5.1 Vättern's Contaminated Double: PFAS and the Security Exception

A particularly uncanny concern is the expansion of military activity and the presence of PFAS, a collective term for 'forever chemicals' used since the mid-twentieth century that persist in bodies and environments and are difficult to remove once released. In Vättern, a central source has been firefighting foam, used repeatedly in the Swedish Armed Forces' firefighting exercises at Karlsborg. The military frames this as unavoidable: preparedness requires regular training, and in a worsening security situation marked by rearmament and NATO membership, the Karlsborg base must expand. These claims become consequential through formal decisions. In that context, the government granted permission to increase shooting from 1,000 to 69,000 shots, to drain large volumes of water from a waterlogged runway – water described as containing PFAS – towards the lake, and to stockpile contaminated materials in a long embankment by the shore (KN2023/01033). This is one place where the lake's shadow is made official: not as rumour or suspicion, but as a managed consequence built into an authorised plan.

Environmental defenders took the government's decision to court. They contested the permission that enables intensified air force training and shooting at Karlsborg, alongside measures that allow PFAS-contaminated water linked to the air base to be drained towards Vättern. The case was handled primarily in writing, with an oral hearing in 2024. There, activists from Aktion Rädda Vättern (ARV) presented their case, including witness testimony from a farmer living near the airport, and screened a film showing rusting ammunition along the shoreline. They described children encountering dangerous munitions while bathing, including fears of swimming into undetonated material in the lake (Perkins 2024). In other words, the controversy did not stay inside the permit file: it travelled through testimony, images, and scenes staged at the shoreline as evidence.

The Supreme Administrative Court of Sweden's verdict (HFD-4941-23) held that the decision shall remain in force. The Court conducted a limited legality review and framed the government's room for manoeuvre as a margin of discretion the decision must not exceed. Even on the core water-law question, the Court accepted a

framing in which the permitted activity cannot be said to 'jeopardise' meeting the relevant environmental quality standards. The Court even glossed over the term in unusually vivid terms, associating it with chance, hazardous play, gambling, and risk-taking, only to conclude that the threshold is not crossed here. In this way, a key threshold is not only set in policy; it is reiterated in jurisprudence, and then re-enters public conflict as something activists must argue against.

Read through aquatic doppelgängers, this is Freudian uncanniness in an everyday register: not the completely unfamiliar, but a bathing place interrupted by what should never have been there – militarised residue, the possibility of detonation, and slow toxicity. The shoreline becomes the place where submerged training grounds and chemical persistence cross into ordinary perception. Numbers intensify this shadow version because they make it harder to dismiss as rumour or exaggeration. PFAS appears not only as a diffuse background worry but as concentrated 'hotspots': at one firefighting training site, the Armed Forces measured 2,300,000 nanograms per litre in groundwater (Perkins 2024, 15). As a baseline reference point, the environmental quality standard for PFAS in Swedish lakes is 0.65 nanograms PFOS per litre (PFOS being a PFAS substance banned in 2008). Environmental defenders point to water tests showing PFAS levels in the range of 2-5 nanograms per litre. Meanwhile, what counts as 'safe' exposure is a moving target. In 2020, the European Food Safety Authority lowered the tolerable intake – how much PFAS a person can be exposed to without expected harm. In Sweden, this has been translated into a drinking-water limit of 4 nanograms per litre, which the Swedish Food Agency has decided to apply from 2026 (Perkins 2024, 12).

The numbers do more than indicate contamination; they expose a split in how the lake is defined. Vättern is framed as a protected drinking-water source, yet the same decision system can authorise practices that add to its toxic load because they are tied to defence training and established routines. This coexistence – protection as principle, permission as practice – makes 'defence' unstable: it names both safeguarding and authorised exposure.

5.2 The Mirror World of Defence

Here, 'defence' does not point to one object of protection but two. In one version, Vättern is a strategic drinking-water reserve that must be shielded from contamination. In the other, Vättern is a defence landscape that can be asked to receive contamination in the name of preparedness. The split becomes readable in how defence is spoken about. Government rhetoric about 'clean nature and a toxin-free everyday life' sits alongside decisions that, in activists' view, move PFAS-contaminated water towards a major drinking-water source (Lennartsson 2025). Vättern's defenders therefore reverse the direction of protection. In their account, the lake is not safeguarded by the military; it is placed at risk by the very institutions charged with safeguarding the nation. Roadside signs make this reversal blunt: "Here the Defence Forces poison the drinking water" (Perkins 2024, 15). I retain the literal translation Defence Forces (*Försvarsmakten*) here because the accusation depends on the word defence being turned back against itself, otherwise officially translated as Armed Forces. The same inversion is made by the chair of Swedish Water: "We cannot defend Sweden if we poison our inhabitants", paired with the insistence that "military and civilian defence must go hand in hand" (Dalhielm 2025). In doppelgänger terms, the Armed Forces take on a doubled role: familiar as the institution of protection, yet returning in an altered guise as a source of harm. The same actor appears twice - guardian and contaminator - so that defence becomes unsettling rather than reassuring.

This doubling is not only rhetorical. It is built into territorial designations and legal procedure. The area around the air base is a military *riksintresse* (national interest), and the dispute also turns on who can contest decisions when national security is invoked. The climate and environment minister is cited in Perkins (2024) as arguing that the standing rights environmental organisations otherwise have under the Aarhus Convention do not apply where national defence may be affected. In other words, defence narrows who can speak and what can be weighed. What unsettles, then, is not only that an exception exists, but how easily it can become a template - a new normal that some actors can inhabit as reality, while others experience it as an omen of a breakdown of the justice system.

In the 2024 hearing, the state-of-exception logic was not only argued in doctrine; it was also voiced in vernacular terms, as witnesses translate 'protection' into ordinary comparisons of whose bodies are treated as worth shielding. The farmer witness recounted that cows should not be exposed above 65 decibels, and that the Armed Forces offered to rebuild the farmhouse, while for humans living in the house the exposure was treated as acceptable (Perkins 2024). That comparison - cows versus humans - is a small,

sharp device for asking who counts as the protected subject. That is precisely what the rights-of-nature repertoire tries to rework by staging Vättern itself as the subject to be defended.

5.3 The Juridical Doppelgänger in the Making: Vättern-as-Subject

Alongside the familiar Vättern, another version of the lake is taking shape. Rights-of-nature organising tries to bring a different Vättern into public view: Vättern as a subject that can be addressed, defended, and spoken for. This does not begin in state law. It begins in civic staging.

A key moment came in 2019, when the International Rights of Nature Tribunal held a mock trial in Sigtuna on the premise that the lake has rights.⁸ In preparation, Swedish Earth Rights Lawyers, with assistance from the Community Environmental Legal Defense Fund, drafted a Declaration of the Rights of Lake Vättern. Adopted at the Earth Rights Conference in 2019, the declaration sets out what it would mean to treat the lake as a living ecosystem rather than an object of management. It defines Vättern as an interconnected system of aquatic and terrestrial life; it proclaims rights to exist, flourish, regenerate, and perform natural functions; and it articulates human duties to remedy violations and restore the lake's integrity.

Two years later, in 2021, this work continued in a digital format.⁹ Vättern was raised again at the Tribunal's European hearing, where civil society groups argued that the lake's rights were being violated through military activities, PFAS pollution, and mining threats, despite its status as a drinking-water source and Natura 2000 area. They called for legal recognition of Vättern's rights, restoration measures, stricter pollution controls, and an Ombudsman for Nature. These tribunals lack legal force, but they do not lack consequence. They help establish Vättern-as-subject as a public persona that can be invoked when harms are disputed and responsibilities contested.

What matters here is that the lake does not need to appear in court as a formal litigant for this juridical double to do work. The work lies in making Vättern-as-subject socially credible and politically usable: a way of naming harms, allocating responsibility, and arguing for protection as care for a harmed being, not only as resource management. In that sense, rights-of-nature organising

⁸ GARN (2019). *Rights of Nature Tribunal 2019. The Vättern Case*. <https://www.rightsofnaturetribunal.org/cases/vattern-case/>.

⁹ See "Lake Vattern case: European Tribunal in Defense of Aquatic Ecosystems (English)". <https://www.youtube.com/watch?v=wtoFkI0xa4g>.

does not invent a split from nowhere; it gives a recognisable form to an already lived doubleness: Vättern as living waterbody, and Vättern perceived as a legal person. This emerging subject is not produced through legal language alone; it also depends on practices that make the lake's vulnerability perceptible.

One such practice comes from the research project *Whose Body of Water?* (of which I am part): the scaled textile replica of Vättern produced by Thomas Laurien (see this special issue). The replica counters an ingrained image of the lake as an unfathomable depth capable of swallowing waste, pollutants, and bullets. By making the lake's relative shallowness tactile and visible, the artefact brings a different Vättern into view: not an imagined abyss, but a fragile and penetrable body. Used in workshops with practitioners and activists, the textile lake invites participants to encounter this shallow double, to grasp vulnerability differently, and to orient responsibility through touch, proximity, and care. Passed hand to hand, it does not merely reflect the lake's shape; it helps make Vättern's competing versions speakable and harder to ignore when protection is decided.

6 Conclusion

Read through aquatic doppelgängers, the Vättern case – like Mar Menor – turns on which version of the waterbody can insist. In both sites, the waterbody is repeatedly made present in two coexisting forms, each supported by distinct practices and authorised voices. One is the familiar waterbody: Vättern as a deep, potable lake; Mar Menor as a cherished lagoon of everyday life and memory. The other is the unsettling counterpart: Vättern as a recipient for forever chemicals, an archive of militarised residue, and a lake handled through procedural exception; Mar Menor as green soup and an ecosystem made publicly knowable through shoreline scenes of fish suffocation and abandonment. The stakes of this split are governance. Which version holds determines what counts as harm, what must be repaired, and who is authorised to insist.

If the doppelgänger is often framed as a harbinger, these cases suggest something more specific: when waters begin to appear twice, it becomes harder to hold on to a single settled account of what they are, and that disturbance can become the condition for insisting, for dispute, and for demanding repair and possible return. The aquatic doppelgänger, then, is not an omen from elsewhere. It is the waterbody itself, made to appear as both itself and not-itself at once, so that what it is and what can be done about it can no longer be taken for granted.

Who is it that comes walking,
barely touching the waves...?
Who multiplies the catch and carries off the multitude?
Are you the sea – or that lake the sun of wrath dried up?
Are you the sea, or a mirror that has fallen from the sky
so that we, who are yours, may dream the sea?
(Conde 1959)¹⁰

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10 “¿Quién es el que viene andando, que apenas pisa las olas...? ¿Quién multiplica la pesca y arrebatada muchedumbres? ¿Eres un mar, o aquel lago que secó el sol de la ira? ¿Eres el mar, o un espejo que del cielo ha descendido para que nosotros, tuyos, queramos soñar el mar?”.

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Lagoon/Wetland



Lagoon. 2026. Acryl on canvas, stainless steel frame, 40 × 60 cm. Berlin. © Jakob Kukula

Looking for Rights of Nature in the Lagoon of Venice A Cultural-Historical Argument to Welcome Nature in European Politics

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Abstract This essay examines the historical perception of the Venice Lagoon as a political agent, its cultural resonance, and the recent Declaration of the Rights of the Venice Lagoon (2025). The essay takes its first steps from the recent campaign for the Rights of the Lagoon, challenging the dominant narrative that sees Rights of Nature (RoN) as incompatible with European legal and cultural traditions. Drawing on four pillars (ecosystem services, historical tradition, cultural relevance and sentimental connection) this work aims to reconcile RoN with Europe's diverse heritage, using the Lagoon's long-standing agency and recognition as a case study.

Keywords Rights of Nature. Ecological justice. Environmental humanities. Ecocentrism. Deep ecology. Local ecological knowledge. More-than-human rights. Venice. Venice Lagoon.

Summary 1 Introduction: Reclaiming Nature's Agency in Europe. – 2 Rights of Nature in Theory: A Matter of Spirit? – 2.1 The Roots of Rights of Nature Thought and Its Problems in the West Through Law and Culture. – 2.2 Still Talking About Religion? Christianity, Philosophy and the Rights of Nature. – 2.3 Priests or Businessmen: Where are the Roots of Our Ecologic Crisis? – 3 Rights of Nature in Practice: A Truly Global Movement? – 3.1 From Indigenous Knowledge to Global Jurisprudence. – 3.2 Rights of Nature, Europe, Mar Menor: Eco-Emotions as an Argument. – 4 The Venice Lagoon: A Long-Time Political Agent. – 4.1 The Sixteenth Century, Water vs. Land: A Lagoon's Coming of Age and Her Choices. – 4.2 The Lagoon's Long Memory, Practices and Rituals. – 4.3 Timeless Lagoon: New Tools, Old Principles. – 5 The Declaration of the Rights of the Venice Lagoon. – 6 Conclusion: A European Path Towards Rights of Nature? – 6.1 A Matter of Deep Ecology.



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1 Introduction: Reclaiming Nature's Agency in Europe

The idea of granting legal rights to natural elements – i.e. Rights of Nature (RoN): the recognition that ecosystems have rights and can be endowed of their own legal personhood – is often dismissed in Europe as incompatible with the continent's legal and cultural traditions. Critics argue that European societies, shaped by Christianity and Enlightenment, are inherently anthropocentric, framing human dominion over nature as an innate and immutable element of their culture. This narrative, however, is not only simplistic but selective: it denies the existence of several relational strands of thought and upholds a particular reading of Christianity to justify extraction and privatization, while ignoring alternative traditions within the same faith that emphasise care, interdependence, and ecological integrity. These traditions offer a cultural foundation for reimagining Europe's relationship with nature.

Europe's hesitation towards RoN also stems from another perceived obstacle: the absence of clearly defined widespread indigenous traditions akin to those in Latin America or New Zealand, where RoN have flourished. This assumption ignores the presence of indigenous people in some areas of the continent, most prominently the Sámi,¹ and overlooks two critical points.

First: Europe is full of place-based ecological knowledge; from medieval commons to customary water laws, local communities have long recognised the agency of rivers, forests, and wetlands. Second: Europe possesses progressive legal tools that can bridge tradition and innovation. The 2022 amendments to Articles 9 and 41 of the Italian Constitution, as a localised example, enshrined the protection of ecosystems as a fundamental principle and placed it above freedom of economic entrepreneurship, signaling a shift toward recognizing nature's intrinsic value. These amendments, alongside groundbreaking cases like Spain's Mar Menor and structural continental efforts like the Water Framework Directive and the Nature Restoration Law, demonstrate that RoN is not only culturally coherent but legally feasible in Europe.

This essay, after broadly introducing the RoN's problems in the West, specifically Europe, and their entanglement with Christianity,

¹ The Sámi Parliament recognised the Declaration of Rights of Mother Earth in 2018 (Rights of Nature Sweden 2018), and discussions around the idea of RoN within the community are lively. See "A Sami Perspective on the Rights of Nature: Indigenous Wisdom in European Environmental Discourse", an episode of the podcast *The Rights of Nature: A European Journey* with Stefan Mikaelsson (3 June 2025) at <https://site.unibo.it/lumen/en/news/a-sami-perspective-on-the-rights-of-nature-indigenous-wisdom-in-european-environmental-discourse>. For a deeper theoretical analysis, see Berg, Berg, Hultman 2019.

reaches its core in § 4. It argues that the Venice Lagoon, a hybrid ecosystem shaped by centuries of human-nature entanglements, can represent a blueprint for European RoN. By examining the Lagoon's historical perception as a political actor, its cultural resonance, and the recent Dichiarazione dei Diritti della Laguna di Venezia (2025),² I challenge the commonplace assumption that RoN is intrinsically alien to European traditions. The Lagoon is an ecosystem that co-evolved with humans, inspiring rituals borrowed by Christianity (such as the Marriage of the Sea) and working with institutions explicitly dedicated to her (such as the Magistrato alle Acque – water magistrate).

Inspired by the Declaration process, I propose an experimental four-pillar framework shaped by ecosystem services, historical tradition, cultural relevance and sentimental connection to demonstrate how RoN can be rooted in local knowledge, legal innovation, and ecological justice.

Through this lens, the Lagoon emerges as a living entity with its own rights: a model for reimagining humanity's relationship with nature across Europe.

2 Rights of Nature in Theory: A Matter of Spirit?

This section analyses the theory behind the RoN in Europe, mainly answering to the most common criticism according to which the very idea would be incompatible with the local culture, and therefore impossible to implement in legal orders.

2.1 The Roots of Rights of Nature Thought and Its Problems in the West Through Law and Culture

Despite decades of ecological movements, intellectual production and international efforts, a certain layer of Western population still sees itself as inherently extractivist, capitalist, and somehow not part of nature – at least not as equals. This was evident for example when a representative of the UK Government at the UN Environment Assembly in Nairobi stated that:

The UK's firm position is that rights can only be held by legal entities with a legal personality. We do not accept that rights can

² The Declaration of the Rights of the Venice Lagoon (2025) is accessible at <https://ecojurisprudence.org/wp-content/uploads/2026/01/Testo-completo-Dichiarazione-dei-Diritti-della-Laguna-di-Venezia.pdf>.

be applied to nature or Mother Earth. While we recognise that others do, it is a fundamental principle for the UK and one from which we cannot deviate. (Dent 2024)

The RoN movement emerged decades before this statement as a response to the same problem: the failures of modern European environmental law, which treats nature as property rather than a rights-bearing entity. Canonically, the first example in Western legal debate is identified as Christopher Stone's essay "Should Trees Have Standing?" (1972), in which a thought-experiment to give a legal personhood to clearly natural beings – trees – was carried out. The doctrine was immediately quoted in the historical *Sierra Club v. Morton* (1972)³ case by Justice William O. Douglas who argued for the right of "environmental objects to sue for their own preservation". Despite this, the argument was mostly welcomed with distance, and often and shallowly ridiculed, for example in a public article confronting Stone's elaborate thesis by asking questions such as "Have you ever been sued by a tree? Or enjoined by a squirrel? Or subpoenaed by a swamp? All of these perils, and more, may await us if USC law professor Christopher Stone has his way" (Keeler 1975).

In his rather pragmatic argument, Stone (1972, 452) points unambiguously to the fact that granting rights to natural elements would not be that radical after all, as

The world of the lawyer is peopled with inanimate right-holders: trusts, corporations, [...] and nation-states, to mention just a few. Ships, still referred to by courts in the feminine gender [...]. We have become so accustomed to the idea of a corporation having 'its' own rights, and being a 'person' and 'citizen' [...] that we forget how jarring the notion was to early jurists.

Stone, often quoted as the father of RoN in the West, was part of a generation striving to re-conceptualise humanity's relationship with nature in the time of the Great Acceleration. In the 70s and 80s a lively intellectual environment produced theories by the likes of lawyer Godofredo Stutzin, cultural historian Thomas Berry, later applied to law by Cormac Cullinan's *Wild Law* (2011), and theologists such as Roderick Nash, following a genealogy excellently outlined by Minhea Tănăsescu (2022, 24-31). Such thinkers focused on rooting a legal and political claim in a cultural argument, and interestingly enough first and foremost in a theological one, underlining how "[John Muir], the mythical father of US national parks, was explicit

3 For a full overview of the case, consult <https://supreme.justia.com/cases/federal/us/405/727>.

in deriving the values that he saw as inhering in the natural world from the ‘fact’ of creation” (Tănăsescu 2022, 31).

Such hunger to bridge the gap between humans and nature in the post-war West is evident in much of the cultural production of those decades, as it is in the strong interest for Buddhism in the West that fueled, for example, the Beat Generation. Jack Kerouac’s novel *The Dharma Bums* (1958) represents a strong account of this cultural shift, prominently featuring the character of Gary Snyder, disguised as Japhy Ryder – a hero of mountaineering and profound scholar of Buddhism and Asian knowledge.

Snyder is responsible for some of the most sensitive and culturally aware attempts to connect Western worldviews with Buddhist concepts, such as the principle of interdependence central for the understanding of human embeddedness in nature. He spent many years practicing Zen Buddhism in Kyoto’s Daitokuji temple and in his essay collection *The Practice of the Wild* (1990), references thirteenth century monk Dōgen extensively. Snyder is captivated by the monk’s poetic expression according to which “blue mountains are constantly walking”: Dōgen himself is walking, but in his words the mountains become the agent. This becomes evident in the following quote: “If you doubt mountains walking you do not know your own walking”. For Snyder, an avid walker himself, this was the most simple and natural of realisations: “they [the mountains and waters] are what we are, we are what they are” (1990, 103).

2.2 Still Talking About Religion? Christianity, Philosophy and the Rights of Nature

The simple feeling of awe and connection to nature felt through centuries by Dōgen and Snyder becomes a very intuitive way for any Western citizen to understand complex Buddhist theories such as interdependence, and a natural translation that spans seemingly faraway cultures. This essay wants to argue that this distance is only apparent, and that connection to nature responds to an innate human feeling, a sentimental connection to the natural world.

After all, Judeo-Christian traditions are full of elements that seem to point to humans as stewards of the Earth, entangled with the planet, from Genesis: “The Lord God took the man and put him in the Garden of Eden to work it and take care of it” (Gen 2,15, NIV 2011); to Apocalypse: “The time has come for judging the dead [...] and for destroying those who destroy the earth” (Rev 11,18, NIV 2011).

These examples, despite not challenging the anthropocentric vision of humans as exceptional children of God, and thus Earth’s stewards, show a complexity that is often sidelined when rendering RoN as fundamentally incompatible with the supposed founding values of any

Western community. This chapter argues that the theory according to which 'Western' culture is inherently incompatible with ecocentric thought because of its Christian roots is simplistic and selective; and that it deliberately omits certain elements and upholds others, in order to render neoliberal modalities of ownership and exploitation of nature as unquestionable and irrevocable elements of European culture.

In other words, this reasoning rests upon a particular reading of 'Western' values, while completely dismissing others. While it's true that Christianity functioned as the ideological bastion for the development of anthropocentrism, extractivism and resource accumulation, such concepts were also questioned, resisted and contradicted from within the same religion and by extension culture.

One key passage quoted in this regard is the famous encouragement from God to humans to "Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground" (Gen 1,28, NIV 2011). Carolyn Merchant analysed how John Locke explicitly quoted this passage as a justification to appropriate what "Nature, the common mother of all", had given, noting how Locke explicitly aims to argue in favor of the enclosure of commons and against the concept of an organic community, very much alive at his time, which "a market economy based on [...] the domination of the earth would thus undercut" (Merchant 1989, 78). Merchant goes on to analyse different strands of organic, holistic or vitalist utopias - interestingly coming from originally Christian, albeit often heretic, thinkers like Telesio, Campanella and Bruno - highlighting their contrast to intellectuals like Francis Bacon who, during the Scientific Revolution, "can be identified with the interests of the clothier capitalists, merchants, mine owners, and the state" (Merchant 1989, 177). She argues that during this time there is a cultural shift: one in which the idea of Earth as a nurturing mother does not disappear, but morphs into a new vision in which "*Natura* no longer complains that her garments of modesty are being torn by the wrongful thrusts of man", paving the way for a new order which "would mandate the death of nature" (Merchant 1989, 190).

Essayist and novelist Amitav Ghosh has also analysed this in his book *Gun Island*, assigning to a fictional historian an intervention that discusses thinkers and popular belief of the Little Ice Age (seventeenth century), a time of climate turmoil which coincided with the beginning of human dependance on fossil fuels, specifically in London. Ghosh's character argues along Merchant's lines: while intellectuals organic to the blossoming capitalist class rushed to argue in favor of extraction and enclosures, popular traditions as the Jacobean playwrights instinctively felt that "an angry beast, which had long lain dormant within the earth, as coming to life"

(Ghosh 2019, 137). This reading suggests that, precisely because of their culture and connection with the planet itself

ordinary people appear to have sensed [...] that a process had been launched that could lead ultimately to catastrophe: what they didn't allow for was that the story might take a few hundred years to play out. It has fallen to us, centuries later, to bear witness to the last turn of the wheel. (137)

Jumping to us, centuries later, the relational view does not seem quite buried yet, even in Catholicism. The late Pope Francis, explicitly inspired by his namesake Saint, publicly expressed very advanced ecological views, always underlining how his commitment followed that of his predecessors. In *Laudato Si': On Care for Our Common Home* he advocated for the planetary development of an *ecologia integrale*, stating very clearly that "Nature cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of nature, included in it and thus in constant interaction with it" (Pope Francis 2015, IV. I. 139). He went on to say that the ecological and social crisis represent a single challenge, introducing the concept of cultural ecology, pointing to how a consumerist human society ultimately consumes its very culture (Pope Francis 2015, IV. III. 144-5).

Francis continued analyzing these topics in *Laudate Deum*, stating that

the world that surrounds us is not an object of exploitation, unbridled use and unlimited ambition. [...] For we are part of nature. [...] Human beings must be recognised as a part of nature. Human life, intelligence and freedom are elements of the nature that enriches our planet, part of its internal workings and its equilibrium. (Pope Francis 2023, 2. 25-7)

These words unquestionably point at the need to shift the perception of nature not as an object, but as a 'subject' in which humans are included, rather than an object ruled by them. This is not without shortcomings: Francis' standpoint is still one of stewardship, which upholds humans' exceptionality rather than adopting a holistic view, needed to fully realise the RoN. Despite this, his work of reinstating Franciscan values seems to suggest that even within an unequivocally Christian worldview, humans must reconsider their approach to nature, moving beyond the severance inflicted by the rise of capitalism from the sixteenth century onwards: they must regulate themselves in order not to destroy her.

The religious argument has been raised in multiple discussions within theory and fiction. Olga Tokarczuk (2009, 237) for example

drew on the myth of St. Hubert in her acclaimed *Drive Your Plough Over the Bones of the Dead*, showing how the Saint's story – a former hunter who stopped his activities after seeing a crucifix between the antlers of the deer he was chasing, later popularised by the Jägermeister liqueur label – has been appropriated by hunters themselves to justify killing animals. Again, a complex message that has been interpreted in a specific way.

A specific reading of religion and philosophy thus seems to be at the core of Europe's delay in developing its own approach to RoN. In a recent essay Cat Haas, Laura Burgers and Alex Putzer (2023) also highlight the heavy influence of philosophers and theories who strongly advocate for a separation between humans and nature such as the Enlightenment, quoting as an example Descartes "who prominently regarded animals as mere machines". Despite all this, ideas that strongly refuse such views were never quite eradicated, and the RoN movement is strongly gaining momentum in Europe as well. After all, for each Descartes there was a Spinoza, for each Locke or Bacon a Campanella, and the path of European thought(s) is far from unilinear.

In a recent article, Jeremie Gilbert and his colleagues depart from a similar standpoint to look for a European approach to the concept of 'stewardship'. In their research, they trace a very convincing genealogy of thoughts and traditions, suggesting the coexistence of a kaleidoscope of framings of nature and its interaction with humans, some more anthropocentric than others, in a constant melting pot of worldviews. This analysis includes different pre- or non-Christian elements that often influenced Christianity itself. Rather than a steady march towards neoliberal modernity, the journey of Europe is a meandering river with complexly intertwining streams of thought, in constant exchange and clash. From this chaotic process, different legal orders emerged in Europe as systems for humans to relate to each other, but it seems like only a fraction of such views has been reflected in lawmaking, as

a full implementation of the concept of stewardship in Europe requires questioning (to a degree yet to be defined) the materialist, rationalistic and deterministic presuppositions that still underpin much of positivist legal thought in Europe. (Gilbert et al. 2024, 59)

2.3 Priests or Businessmen: Where are the Roots of Our Ecologic Crisis?

The widespread, simplistic and one-sided reading of a set of values depicted as ‘Western’ instrumentally ignores many underlying philosophical currents that were never quite buried under a dominant productivist reading of Christian values. Lynn White, in his seminal “The Historical Roots of Our Ecologic Crisis”, tried to understand whether Western science was genuinely fueled by Christian values, as “it is often hard for the historian to judge, when men explain why they are doing what they want to do, whether they are offering real reasons or merely culturally acceptable reasons” (White 1967, 1206).

In this light, one specific interpretation of Christianity might indeed have been favored to justify a progress that ended up directly harming the planet. Lynn White is right in stating that “modern Western science was cast in a matrix of Christian theology” (White 1967, 1206), but perhaps this matrix was a “culturally acceptable” reason rather than a real one.

Calling for a resurgence of a philosophical drive able to disrupt the full-steam run of the West towards a global ecological catastrophe, White proposes St. Francis as a patron saint for ecologists. He argues in favour of his “unique sort of pan-psychism of all things animate and inanimate” (White 1967, 1207) in which the human is not the ruler but one of its elements, just as Brother Ant, Sister Fire, and indeed “Our Sister Mother Earth, who sustains and governs us” (Francis of Assisi 1999, 113).

It is important to stress this connection with Mother Earth to go back to RoN, as the already mentioned ridiculing of this idea backed by the ‘Western values’ narrative appeared timely as a response to the Bolivian proposal of the “Rights of Mother Nature” bill discussed in the next chapter. In a time in which European societies are perceived as post-religious, or at least post-Christian (Woodhead 2016), the ecological problem is still discussed through the same lens in this continent, whether consciously or not.

A counter-argument to support RoN could also be purely utilitarian: pointing to the self-evident value of a planet that is still living, functioning and able to support life. Such an argument, albeit effective in the short run, has the fallacy of diminishing the problem and failing to address the overarching anthropocentric principles, becoming “a rule of enlightened self-interest to be junked if feared results cannot be shown to occur” (White 1973, 63).

Whether the materialist view is correct, or the cultural one is dominant, it doesn’t really matter. Both coexist in a reality where holy and mundane, religious and secular, coexist.

The key point is that, in order to go beyond a worldview that is damaging the planet to the point of endangering future human

survival upon it, a biocentric turn that is legal, productive and spiritual at once is needed:

Since the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it that or not. We must rethink and refeel our nature and destiny. The profoundly religious, but heretical, sense of the primitive Franciscans for the spiritual autonomy of all parts of nature may point a direction. (White 1974, 6)

Without exhausting the theological argument, for which I do not possess the expertise or competence, this chapter wants to suggest that the roots of the problem seem to be broadly cultural, as Western societies crafted the current nature-devouring productive model, with the justifying use of culture and religion. The chapter has briefly suggested that relational ways of looking at the world have been sidelined, delegitimated and excluded, at least from contexts of policy making and law. The next part of this essay, focusing on the Venice case, wants to suggest how RoN movements can retrieve such relational and ecocentric worldviews and help them re-surface, to include them once more in our societies.

The unique developments of Venice as a millenary Republic, in which water had a central role in all fields of human life – for example economic, military, legal, spiritual – can help in tracing a convincing argument that shows how ecosystemic voices were never silenced, and that despite the capitalist, extractivist attempt to render them as mere resources, they still act, speak and interact with humans.

3 Rights of Nature in Practice: A Truly Global Movement?

This section considers the implementation of a number of pioneering RoN cases around the world, focusing eventually on the only operational case in Europe, that of Mar Menor (Spain).⁴

3.1 From Indigenous Knowledge to Global Jurisprudence

Moving forward from the early RoN thinkers and all-too-European religious matters, a practical application of RoN arrived a few decades after the theories described in the previous chapters, and this did not occur in the West or the global North at first. After

⁴ The title of § 3 is freely inspired by Isaac Goeckeritz's documentary: <https://www.youtube.com/watch?v=kuFNmH7lVTA>.

the pioneering cases analysed in this chapter, the movement has expanded exponentially, reaching almost 700 initiatives at the time of writing.⁵

Ecuador was the first country to enshrine the RoN in its Constitution (2008), marking a historic shift towards an ecocentric paradigm. The Ecuadorian Constitution recognises that nature “has the right to exist, persist, maintain, and regenerate its vital cycles, structure, functions, and its processes in evolution” (Art. 71). This groundbreaking provision was not just a legal innovation but a direct translation of indigenous cosmologies, particularly the Andean concept of *Pachamama* (Mother Earth), into constitutional law. This norm also empowers any person or community to defend such rights, enshrining a key element of local indigenous knowledge within jurisprudence and suggesting that this tool is for any human being to use, beyond national jurisdiction.⁶

Bolivia followed in 2010 with the Law of the Rights of Mother Earth,⁷ which further institutionalised RoN. This law builds upon Ecuador’s constitutional provisions by recognizing *Pachamama* as a “collective subject of public interest” and establishes a legal framework for her protection, restoration, and integral development. The law is also deeply rooted in indigenous philosophies, particularly the Aymara and Quechua traditions, which view the Earth as a living, sacred entity. By embedding these principles into national law, Bolivia posed a further question to the legal tradition of anthropocentrism and personified nature at collective level, explicitly including humans within it.⁸

In New Zealand, the 2017 Te Awa Tupua Act was the first major case in which RoN were granted to a river – the Whanganui – acknowledging it as an “indivisible and living whole” with its own rights, responsibilities, and voice. This landmark legislation was the culmination of a multi-century Māori struggle to have their ancestral and spiritual relationship with the river recognised following the formula of *Ko au te awa, ko te awa ko au*: I am the river, the river is me. The Act establishes the river as a legal entity, represented by two guardians: one appointed by the Māori *iwi* (tribe) and the other by the Crown. This dual governance model reflects the Māori worldview of the river as *Te Awa Tupua*: an ancestor

5 For a complete overview of global cases see <https://ecojurisprudence.org>.

6 Consult the Constitution at <https://ecojurisprudence.org/initiatives/ecuador-constitution/>.

7 Ley de Derechos de la Madre Tierra [Law of the Rights of Mother Earth], Law No. 071, 21 December 2010 (Bolivia).

8 Consult the Law at <https://ecojurisprudence.org/initiatives/law-of-the-rights-of-mother-earth/>.

and a living being, demonstrating how RoN can be specific at both a cultural and ecosystemic level while also operating within a Western legal framework such as New Zealand. The Whanganui case is particularly significant for Europe, as it shows how legal personhood for nature deriving from indigenous knowledge can be adapted to non-indigenous jurisprudence through collaborative governance and the integration of local ecological knowledge at different levels.⁹

These examples show how RoN are not at all new jurisprudence, despite having formally entered the books of law only in recent years. Rather, they enshrine ancestral knowledges into law, recognizing their validity and amending the error of disregarding them while building the State's foundation in the first place. This is an act of translation between languages, recognizing ancient cultural elements in legal terms, granting them a central space within the legal system without reducing them to mere norms. After all, as noted by K.M. Abe while analyzing the case of Japan, "the idea that only humans and entities with legal personhood can be subjects of rights was imported from Western jurisdictions [...] in the 1860s" (Abe 2023, 44), juxtaposing, or rather "transplanting", over indigenous traditions and customary laws.

3.2 Rights of Nature, Europe, Mar Menor: Eco-Emotions as an Argument

In Europe, the native continent of the same Western legal tradition that historically kept the gates of legal personhood shut to ecosystems, the Mar Menor and its basin made history in 2022 by becoming the first rights-bearing ecosystem.¹⁰ The Mar Menor, a large saltwater lagoon on the Mediterranean, demonstrated that RoN can transcend cultural and legal boundaries, offering a model for Europe's diverse ecosystems.

Unlike the cases discussed, where indigenous cosmologies fundamentally underpin RoN, Europe's legal traditions are deeply rooted in Enlightenment-era notions of property and sovereignty. This raises an array of critical questions: can RoN be adapted to European ecosystems without relying on indigenous knowledge? Can historical and cultural narratives be retrieved to support their

⁹ Consult the Act at <https://ecojurisprudence.org/initiatives/te-awa-tupua-act-2017/>.

¹⁰ Consult the Law at <https://ecojurisprudence.org/initiatives/proposed-law-for-recognition-of-legal-personality-to-the-laguna-del-mar-menor-and-its-basin/>.

critical implementation? What should the role of culture and history be when developing new legal tools?

The Mar Menor seems to offer a positive answer to these questions. Here, the local community's approach wasn't that of a historical or cultural argument, nor the appeal to long-standing indigenous knowledge and traditions. The campaign, spearheaded by Professor Teresa Vicente Giménez alongside thousands of activists of diverse extractions, was rather fueled by an immensely strong emotional reaction to the apparent death of their beloved ecosystem. The Mar Menor had been hit by the so-called 'green soup' (*sopa verde*), a dead zone triggered by agricultural discharge in the lagoon and worsened by the effects of global warming. The algae grew hypertrophically, the water's surface became green and foamy, all life washed ashore.

The population felt overwhelmed by eco-grief: "the grief felt in relation to experienced or anticipated ecological losses, including the loss of species, ecosystems, and meaningful landscapes due to acute or chronic environmental change" (Cunsolo, Ellis 2018, 275).

This response goes beyond culture, traditions and history, pointing to something even more primal: a feeling of attachment and empathy, a sentimental connection akin to love, rooted in the recognition of the suffering state of another equal entity – another *person* perhaps. The shock was so strong that the Mar Menor, through a wide network of notaries in Spain and abroad, managed to obtain over 600,000 signatures (Jones 2022), becoming a successful popular legislative initiative in 2022. The Mar Menor thus became the first European water body breakthrough case, blending the two main models for RoN – Nature's Rights (NR) and Legal Personhood (LP) – with a remarkable experimental spirit. The success of this approach is still to be determined, as it is currently involved in several trials as accusation, but early studies suggest how, especially in a Western context, "the best strategy is [...] to combine elements of both (NR and LP) based on the socio-cultural context in which rights of Nature are to be implemented" (Kramm 2025).

A recent paper highlighted the fundamental importance of the Mar Menor's eco-emotional approach through interviews, quoting how many of the residents "described ecological disasters as wounds suffered 'as if to a brother', while others expressed relief that personhood allowed them to articulate sentiments they had long felt but could not name" (Pérez-Crespo Vinader et al. 2026, 9). This is not without shortcomings, as the quick process that brought the Mar Menor's legal personhood also raise questions and remains to be tested: while support for the initiative is at 77% among responders, only 42% think it will have practical effects. Doubts raised by the authors and respondents lie precisely in the cultural sphere previously highlighted (§ 2): elsewhere in the world, RoN rest upon solid ground provided by indigenous knowledge and epistemologies

from the Global South, while Europe seems to lack such consensus on ecocentric matters, thus imperiling its own legal tools.

Nonetheless, the Mar Menor “is not only a lagoon with rights, but also a test of Europe’s willingness to imagine new legal and political relationships with nature” (Pérez-Crespo Vinader et al. 2026, 10). Its legal recognition sent waves of enthusiasm through Europe, with myriad cases gathering strength, releasing declarations, collecting signatures and writing laws for their local water bodies. Some notable cases are the UK Rights of Rivers network, which following the pioneering case of the River Ouse today counts 43 rivers,¹¹ and the Confluence of European Water Bodies¹² movement, which in just three years gathered more than 35 ecosystems working through arts and culture to obtain water representation. In this wake, the Polish River Odra¹³ gathered 100,000 signatures and is currently fighting for its recognition in the Parliament, and a European Citizen Initiative has just been launched.¹⁴

In this highly dynamic context, the Declaration of the Rights of the Venice Lagoon can play a key role in the continental effort to build new, successful arguments and inspire other water bodies in a joint struggle.

4 The Venice Lagoon: A Long-Time Political Agent

The Venice Lagoon is a cultural and historical icon, a dynamic ecosystem that has shaped (and been shaped by) human activity for over a thousand years. She is hard to define: her boundaries are soft and muddy, with arteries of water that replenish her from the neighbouring rivers; her life changes constantly; and her response time can be sudden or extremely slow. Her essence is, as defined by Paolo Barbaro (1992), that of a ‘shifting landscape’.

Despite being elusive, the Lagoon is an undeniably charismatic ecosystem, not only due to her touristic popularity. She has recently been the poster child for the struggle against climate change, with images of its catastrophic 2019 flood circling the globe, swiftly followed by the hopeful photographs of its crystal-clear canals during the COVID days and the global sensation of 2025 when a dolphin decided to become a resident of the San Marco basin.

11 Consult the UK River Rights network’s website at www.riverrights.org.

12 Consult the Confluence of European Water Bodies’ website at www.water-bodies.eu.

13 Consult the draft bill <https://ecojurisprudence.org/initiatives/poland-citizen-draft-bill-on-the-rights-of-the-oder-river/>.

14 Consult the European Citizen Initiative’s website at <https://rightsfornature.eu/>.

With the historical city as a flashy and noisy backdrop, the Lagoon is stuck in a twilight zone that makes it hard to perceive, manage and protect her. Neglected and exploited equally by the millions of tourists who crowd Venice every year and policy makers for the last couple of centuries, the Lagoon is not doing too well. Her average depth increased from 50 cm to 1.5 m because of land reclamation, dredging and erosion; her fauna is changing swiftly; while her saltmarshes – poetically described by Lorenzo Bonometto (2014) as the lungs that allow “the breath of the Lagoon” – declined from 170 km² to 47 km² during the twentieth century (D’Alpaos 2010a, 232).

Interestingly, the Lagoon has recently been the main subject of a flurry of projects coming from the arts and culture sector: a wide alliance ranging from grassroots cultural agitators (Baldacci 2023) to large international institutions. Such forces claim the importance of working in a site-specific way, some focusing on the communitarian aspects of life in Venice, some on its international relevance, others explicitly seeking a collaboration *with* the Lagoon as a cultural and political agent.

One of the many outcomes produced by such a deep, specific and shared approach is the Declaration of the Rights of the Venice Lagoon, launched during the traditional Festa della Salute in 2025.

4.1 The Sixteenth Century, Water vs. Land: A Lagoon’s Coming of Age and Her Choices

Governance of the Lagoon was characterised by an appalling disregard in modern times, but it hasn’t always been so. For centuries this ecosystem, central for the survival of Venice and its Republic, was held in high regard. For example, Giulio Savorgnan, Venice’s most ingenious military engineer of the sixteenth century, described her as the highest of goods – the *principalissimo bene*. Just a few years earlier Cristoforo Sabbadino, the main hydraulic engineer responsible for deviating some of the rivers around the rivers flowing into the Lagoon to prevent shoaling, spoke about the Lagoon as

a ‘delicate organism’ that breathes and draws nourishment from the tide, which has Venice as its heart, the areas of Torcello and Burano as lungs, the lagoon canals as veins that penetrate and innervate it, carrying in its depths purifying sea water. (Bonometto 2014)¹⁵

15 Unless otherwise indicated, all translations from Italian are by the Author.

Both Savorgnan and Sabbadino were members of the ‘reason of water’ party – which promoted interventions to artificially maintain the Lagoon’s balance – and was opposed by the ‘reason of the land’ faction – arguing for land reclamation. The motivations driving these two sides were philosophical and economic at once, representing respectively the interests of seafaring merchants and military who saw the Lagoon as a natural fortress, and the burgeoning agricultural producers who would have profited from the expansion of land in the proximity of the capital.

The arguments of the two factions were multifaceted, alternating strategies based on safety and wealth to passionate calls on the basis of culture, religion and mythologies. Sabbadino himself summarises his reasoning in favour of the river diversion in a sonnet (Omodeo 2025, 70):

Oh Venice! Remove the rivers and put a brake
To the greedy lusts of men. The sea
Will always obey you once its waters remain the only ones in the
[lagoon.

On the other side of the barricade, leading the ‘reason of the land’ was Alvise Cornaro, an aristocrat who opposed the water arguments with his own mythologised version of agricultural interests, closely resembling the idealised pastoral life of arcadian poems. In 1558 he came up with the concept of *Santa Agricoltura* (holy agriculture) in his treaty *De la vita sobria* (On sober life): a society that lives in harmony with nature, guided by wise men who know how to manage it and grow wealth out of it. This was also an attempt to foment aristocratic investments in the agricultural field, as the Republic had just two years earlier created a body to develop the wild lands around the lagoon: the *Provveditorato ai Beni Inculti* (department of uncultivated goods) (Shai 2025, 21).

Eventually, the ‘waterists’ won: fluvial deviations were completed and shoaling halted, shaping the Lagoon more or less as we know it today. As Professor Pietro Omodeo (2025, 69) puts it:

Venice’s environment looks now very much as a cultural-natural cyborg. The path dependencies that made it reach its present form reflect ways of experiencing, representing and living the territory, as well as in economic interests, and political motivations.

The presence of economic interests behind the decisions is not as central as commonly believed, as Cornaro’s insistence on agricultural investments offers an equally if not more lucrative outlook. The argument that won the political debate and pushed the Republic towards preserving the Lagoon was at the same time economic,

philosophical, historical and sentimental: a complex conceptual cluster that cannot be simplified to one of its elements (Omodeo 2025).

4.2 The Lagoon's Long Memory, Practices and Rituals

This argument had a very long stratification, coming all the way from the first Venetian settlers and further away from the Paleoveneti, pre-roman populations who developed their architectures adapting to the wetlands of Northeastern Italy (Aspes 1984, 678). This stratification of knowledges influenced the ongoing decisions by the Republic to artificially preserve the unique ecosystem with equally specific techniques and regulations and ways of co-designing with the Lagoon.

An example of this has been recently analysed by landscape architect Amina Chouairi and local expert Michele Zanetti (2025), with the vernacular development of the *valli da pesca* (fishing valleys), showing how the inspiration to model their structure led to building *with* the Lagoon controlled environments that mimicked her functions and behavioural patterns. Such paludal technology spanned millennia – dating back to the twelfth century BC and even saving St. Mark during a storm – and unified productivity with preservation of the wetland's ecosystem, thus fighting coastal erosion and ensuring carbon sequestration. Yet, the *valli* are nowadays mostly abandoned, with few of them surviving due to their cultural value and dedicated to bird hunting. Many of them, as their productive capacity was progressively overtaken by industrial fishing, have been lost to the same land reclamation advocated by the 'reason of the land' which was strongly revamped under the Fascist regime.

In 1502 the attention of the Republic towards land reclamation grew strongly, in accordance with the growing attention to matters of water and land, and with the unmistakable certainty that humans could modify the ecosystem for better or for worse. According to historian Paola Pavanini (1986, 489), in this process "a concern for the well-being of the Lagoon is certainly the main factor". The Republic thus decided to strongly control private initiatives that could affect the lagoon even retroactively, forcing all those who reclaimed land independently in the previous years to declare their actions and pay a fine. For those who committed such a crime past this date the penalties would be different: minor infractions would be fined, while major ones would be punished with exile, a punishment usually reserved for blood crimes against humans. Therefore, it is perhaps arguable that the Lagoon was seen not merely as a part of the Venetian patrimony, but as a living ecosystem entitled to be protected as such.

The personification of the Lagoon and the Adriatic Sea is also quite evident in a particular ritual, still practiced to this day: the Festa della Sensa. The Doge (today replaced by the Mayor) would sail from the San Marco basin to the sea where he would throw a golden ring in a ritual to renew the marriage between Venice and the sea “in sign of perpetual dominion”. The ritual has recently been reimagined by a number of artists, mostly inspired by eco-feminism to address its problematic aspects: River Sisters’ leader Cecylia Malik, Norwegian artist Jessica Ullevålseter and Maori elder Erena Rangimarie Rhose concerted a wedding between the Lagoon and the Adriatic themselves, choosing local elder activist Tito Pamio as officiator during the Confluence of European Water Bodies in Venice;¹⁶ Sonia Levy¹⁷ took it as departure point to inquire different questions relating to modernisation and harmful environmental practices; while Benedetta Panisson¹⁸ interpreted it as a queer happening in which human bodies dissolved in the environment.

What is interesting for the purposes of this essay is the irony of wanting to install dominion over an ecosystem through marriage, technically a contract between ‘two equal legal persons’.

Rituals related to water have far from vanished: they vastly populate the region, with the *Sensa* still being practiced and participated to these days, and folklore figures such as the river sirens *anguane*¹⁹ still lingering along the different arteries of the watershed.

4.3 Timeless Lagoon: New Tools, Old Principles

Jumping to our days, modern Lagoon’s governance is often criticised for its fragmentation and the overlap of contemporary tools (Consolandi, Favaretto, Lazzarin 2026), just to name a few: UNESCO lists her as cultural world heritage, only a small fraction (Valle Avertò) is part of the Ramsar convention on wetlands, and the Authority for the Lagoon, established in 2020, is progressively acquiring most of the competences that used to belong to the Magistrato delle Acque (Water Magistrate). Her water basin includes 28 municipalities, and

16 Part of the ritual is documented in a video accessible at <https://water-bodies.eu/out-now-video-confluence-of-european-water-bodies-venice-2024/>.

17 More information on the project is accessible on the artist’s website <https://sonialevy.net/wmyos>.

18 More information on the project is accessible on the artist’s website <https://www.benedettapanisson.com/queer-sea-marriage-2024>.

19 See on this topic Giovanni Pellegrini’s *La via delle Anguane* (2026). <https://www.ginkofilm.it/film/la-via-delle-anguane/>.

her surface is regulated by a national special law drafted in 1973, updated in 1991, 1992 and 2020 and integrated countless times.

The 1982 integration is particularly interesting, as it lists among its principles that of reversibility, whenever undertaking major engineering works, to give time to the Lagoon to react and adapt or reverse them (Camera dei Deputati 2019, 9). This closely resembles the historical Venetian principle known as *scomenzèra*, which seems to derive from the Venetian verb *scomenzàr* (to begin). This principle, especially applied when digging new canals, required any intervention on the Lagoon's morphology to allow for adjustments based on her response. It implicitly recognised that the Lagoon, a living entity, could not be forced into submission and required dialogue and consent (Testa 2021, 45; Turner 2025).

Protection of fish population was also extremely important in the Venetian Republic, as is found in the fishermen corporation *mariegola* (written rules) regarding bans on fishing fry and specifically the goby fish (*gò*). This charismatic fish, today threatened by the erosion of the *zostera* seagrass that hosts its nest,²⁰ was protected by the harmful practice of the *pesca a brasso* (fishing with the arm) technique, that consisted in stepping on the lagoonbed *zostera* prairies to use one's own hand to fish the male fish protecting its nest during reproductive season, as the fish would literally bite the finger of the fisherman. This was banned by the Republic as it was both damaging the soil and endangering the fry at the same time, given the direct violence on fish families and their habitat (Scarpa 1996, 35).

The application of such principles was monitored by the Magistrato delle Acque through figures such as the *proti ingegneri* (hydrological engineers) and *savi sopra le acque* (water scholars), who often relied on localised knowledge and consultation with the inhabitants of specific areas of the Lagoon (D'Alpaos 2010b, 13). Today, grassroots communities and institutions alike are demanding participation and representation in a similar way through participatory governance models of organizations like the Contratto di Area Umida²¹ (Wetland Contract) and the Contratti di Fiume (River Contracts). These initiatives, much like their historical predecessors, rely on the involvement of local communities and actors, advocating for a decision-making process not imposed from above but emerging from a shared understanding of the Lagoon's needs among those who live with her.

20 See the Museo di Zoologia Adriatica Giuseppe Olivi's page "Il Ghiozzo Gò" at <https://olivi.musei.unipd.it/il-mare-e-il-territorio/il-ghiozzo-go/>.

21 Consult the website of the Wetland Contract at <https://www.contrattolaguavenezia.it/>.

Such principles are today ignored by local governance, and this disregard is pushing grassroots organizations to demand legal change, most strikingly through the Declaration described in the next chapter. Important steps in Italian jurisprudence were the recent changes in the Constitution (2022), which amended Art. 9 (one of the ‘basic principles’) and 41 (regulating freedom of economic enterprise), from the original versions in the Italian Constitution written in 1948 after the liberation from fascism.²²

The new Art. 9 builds upon the protection of landscape adding the environment, biodiversity and ecosystems and the well-being of future generations, while the new Art. 41 articulates beyond the protection of human freedom, dignity and safety to add that economic activity must not harm health and the environment.

Both these changes are simple but extremely powerful. Art. 9’s protection of “landscape” contained in the 1948 Constitution seemed to suggest that the important aspect of the Earth’s surface was human enjoyment and cultural relevance: the addition of “environment, biodiversity and ecosystems” and the reference to the interest of future generations points at these elements in a much more precise way, suggesting that they hold intrinsic value and must be protected with a long-term view. Art. 41 explicitly points out that the freedom of human economic activity is subordinated not only to humans’ own safety, freedom and dignity, but critically to the health and to “the environment”, suggesting implicitly the planet’s and its ecosystems’ right to thrive and support life, which is predominant over the right of individual humans to develop potentially harmful economic activity.

Both these new articles could very simply be reconducted to principles adopted by the “reason of water” faction: isn’t Art. 9 very close to the concept of *principalissimo bene*, and Art. 41 answering to the call in Sabbadino’s sonnet to “put a brake to the greedy lusts of men”?

The shift indicated by the Constitution clearly goes in an ecocentric direction, and these new elements are crucial to the development of ecosystemic rights within Italy.

22 For a full overview of the changes, consult Senato della Repubblica and Camera dei Deputati, Servizio Studi (2022). *Modifiche agli articoli 9 e 41 della Costituzione in materia di tutela dell’ambiente* A.C. 3156-B, Dossier n. 405/3, 7 febbraio. <https://www.senato.it/service/PDF/PDFServer/BGT/01331845.pdf>.

5 The Declaration of the Rights of the Venice Lagoon

In November 2025, a coalition of 16 associations and citizen groups published the Declaration of the Rights of the Venice Lagoon:²³ a heartfelt document that follows in the footsteps of the RoN tradition, from Ecuador and New Zealand to the closer Mar Menor, by articulating a set of eight rights:

1. Right to be Recognized and Represented as a Legal Person before the Law
2. Right to Ecological and Sociocultural Integrity
3. Right to Co-Exist, Co-Evolve, and Co-Create
4. Right to Diversity of Cohabitation
5. Right to Flow and Maintenance of Healthy Water Cycles
6. Right to an Ecologically and Socially Just and Sustainable Economy
7. Right to Participatory Co-Governance
8. Right to Adaptation, Restoration, Reparation, and Repair

The Declaration is first and foremost a cultural and moral argument, rooted in the Lagoon's history and the recognition of its agency, and only consequently a legal proposal. It is strongly place-based, emerging from the brackish waters and the muddy lagoon bed. It calls for the Lagoon's recognition as a legal entity, with rights to ecological integrity, sustainable management, and participation in governance. The process that led to the Declaration was unique and complex, as thoroughly analysed by Putzer and Schechthner (2026): it was drafted collaboratively, uniting individuals and associations, disciplines and ideas, into a complex text that builds upon existing RoN examples and looks deeply into local knowledge to inspire tangible change from a cultural, legal and policy perspective.

This aligns with global RoN precedents but is uniquely European in its emphasis on historical continuity and community involvement, seeking an ecological knowledge strongly embedded within the ecosystem that serves as the cultural basis for normative change.

It represents a complete paradigm shift: the central principle guiding governance changes, and thus norms and laws shall follow. Hans Kelsen (1967) would have described this process as a change of *Grundnorm*: the founding principle at the basis of an entire legal system.

Professor Silvia Bagni argues that there is a need to create a new branch of jurisprudence that recognises not only human relations, but ecosystemic ones, and this area “must have as *Grundnorm* the

23 Consult the Declaration at <https://ecojurisprudence.org/initiatives/venice-italy-citizen-declaration-rights-of-the-venice-lagoon/>.

protection of the Planet's ecological integrity" (Bagni 2025, 7). Interestingly, the very semantics of *Grundnorm* come from *Grund*, the term for 'ground' that could as well mean 'Earth': a norm on which all other norms stand. Could the foundation of a new normative system be Mother Earth herself?

Without changing the ground on which norms stand, it will be impossible to change consequent principles of property over nature, protection of corporate interest above ecosystemic health and ultimately legitimization of ecological destruction. The Declaration's significance lies in the coexistence of legal innovation, cultural heritage and inclusion of sentimental values and moral principles into law making. This synthesis provides the grounding for ecosystemic personhood.

The Lagoon's Declaration is also unique as it argues for the rights of an entity that cannot be described as a pristine and untouched natural ecosystem, as without the intervention of humans she would have morphed drastically into an extension of the great Po Valley flatland. The community has acknowledged this, arguing from the very first line for the rights of a unique ecosystem co-created by nature and humans. While building an argument for RoN in Europe, it is fundamental to underline the inextricable connection of ecosystems and humans, including them in a set of rights through which they recognise one another.

6 Conclusion: A European Path Towards Rights of Nature?

In the wake of the citizen movement that brought the Lagoon to declare her inherent rights within human law, this essay argues that the Venice case is a microcosm of broader European challenges and can represent a blueprint to shape a continental argument for RoN. Its own dynamic and entangled history is a reminder that RoN cannot be just about law: they incorporate culture, identity, and the relationships between humans and the natural world. This is not only a normative change, but an existential one.

In this discussion I wish to present some preliminary ideas that emerged from the three years process of collaboratively drafting the Declaration, as well as teaching from the Mar Menor's experience and the participant observation in many other movements around Europe. The argument is a very early proposal, that I hope will contribute to the complex European path towards nature's recognition, which is being simultaneously explored by dozens of ecosystems, communities, artists and scholars in a continent-wide struggle.

By foregrounding the Lagoon's historical and cultural significance and bringing it into the depressing context of modern governance

structures built around her, the Venetian community tried to bridge the gap between legal theory, historical tradition, lived experience and emotional life, showing how RoN can be rooted in local knowledge in a European context, helping to push back against a nature-devouring culture.

The tentative argument set forward in this paper is a proposal on *why* European communities should consider including natural elements in their legal systems, rather than a more complex argument on *how* these rights can go beyond the anthropocentric paradigm of human laws. The argument stands on four pillars, diving from the shallow waters of ecosystemic services to the deeper ones that increasingly show the interconnection between humans and nature.

Ecosystem Services: What Nature Does for Me/Us

This pillar is still anthropocentric, as it sees humans as profiteers from nature: she makes our life easier, provides us with goods and services. Nature does things for us, and these can be directly assessed: clean air brings healthcare costs down, a functioning ocean provides more fish, and so on. At the same time, deeper readings of this concept include services that are not material at all, such as recreational or spiritual ecosystem services. Nakadai (2023, 208) argued in his analysis of the relationship between humans and giant trees that “giant trees provide various spiritual ecosystem services that benefit the spiritual well-being of human societies worldwide”. In the RoN argument this further gains relevance as such trees are often personified and given names: they adopt specific roles within their human communities, closely resembling the role of the Lagoon in Venetian culture, occasionally becoming objects of faith because of the sense of awe they evoke in humans.

Historical Tradition: What Nature Did to Bring Me/Us Here, Now

This second layer builds upon the first one, starting to frame natural elements as entities with their own agency. It analyses the role of an ecosystem within the community’s historical evolution. In the case of the Lagoon, her role is clear in hosting and supporting the Venetian community throughout its history, from facilitating early settlements to requiring the development of place-specific building techniques, progressing to the arguments around water management analysed above (§ 4).

Cultural Relevance: How Nature Influences the Way I/We Perceive the World

Diving deeper, the third pillar complements the second one and specifically looks into how the ecosystem not only influenced the historical evolution of a community, but specifically how it shaped its culture. For example, the Lagoon is present in many site-specific Venetian words describing her waters and how they affect human vision and condition; she appears in sayings and metaphors, is an essential part of venetian identity, features in countless cultural elements and influences the very ways in which venetians perceive themselves (§ 4).

Sentimental Connection: I/We Feel with Nature

Getting to the foundation of this structure, inspired by the grieving reaction of the Mar Menor community, and seen in many other cases from the Amazon to Antarctica and from the Great Barrier Reef to Iceland's Snæfellsjökull and Okjökull glaciers, this argument suggests that a sentimental connection between humans and ecosystems not only exists, but must be considered when developing ecological policy. This component is particularly relevant in Europe, showing that eco-grief survives centuries of de-personalization of nature in politics and economy, clinging to something deeper: a primal sense of sentimental connection with Nature. This fourth pillar is the most essential: building a sentimental connection means for a human to fundamentally recognise a non-human element (e.g. the Lagoon). One does not love the Lagoon because it makes me feel good, it provides me services, or has a role in my community. One loves the Lagoon because of the reciprocal recognition "of each other [...] as living emotionally needy beings" (Honneth 1995, 18). As Ted Fleming (2014, 319) brilliantly puts it: "One's private relationships of love and attachment are a precondition for participation in public life and political will formation".

This essay argues that it is time for the European communities to formally recognise these relationships of love and attachment to ecosystems and grant them an appropriate role in their legal systems.

This eco-emotional approach is particularly evident in European communities that have activated themselves through artistic means, who have recently joined forces under the Confluence of European Water Bodies banner. Notable examples from the 35+ water bodies

are Cecylia Malik's early work,²⁴ which saw her climbing one living tree a day in *365 Trees* (2017) and posing with a movement of Polish mothers on tree stumps to protest against 'Szyszko's law' which removed the obligation for private landowners to apply for permission to cut down trees, pay compensation or plant new trees, or even to inform local authorities that trees have been or will be removed; Snæfellsjökull's surprising presidential campaign to develop new policies that might save her from melting;²⁵ or the long-term work of Natural Contract Lab with the Szenne river through which grief evolves in a sense of shared care.²⁶

Following this reasoning, an argument for the Rights of the Venice Lagoon could be, and has loosely been through the Declaration process, built as proposed in Table 1.

Table 1 Four-pillar framework for Rights of Nature

Pillar	Historical example	Contemporary legal tool
Ecosystem Services or 'what Nature does for me/us'	The Lagoon as a fortress (Giulio Savorgnan, sixteenth century): A natural barrier protecting Venice from invasions and storms, treated as a strategic and ecological asset.	The Lagoon as a carbon sequestration sink (2020s): Recognised for its role in mitigating climate change through blue carbon storage and flood protection.
Historical Tradition or 'what Nature did to bring me/us here, now'	Diversion of rivers (Cristoforo Sabbadino, sixteenth century): Geoengineering projects to prevent sedimentation, reflecting a governance model that treated the Lagoon as a living system requiring active stewardship.	UNESCO Cultural Heritage Site (1987-present): Recognises the Lagoon's historical and ecological value but lacks enforcement mechanisms for its rights as a living entity.

²⁴ Accounts of this artwork and its context can be found at <https://www.theguardian.com/environment/2017/apr/07/polish-law-change-unleashes-massacre-of-trees> and <https://culture.pl/en/work/365-trees-cecylia-malik> Cecylia Malik is the founder of River Sisters movement, who have been mobilizing against dam constructions on the Vistula and involved in the recent movement to support Odra river's legal personhood.

²⁵ An account of this project can be found at <https://www.bbc.co.uk/programmes/p0hq54wh>.

²⁶ Consult Natural Contract Lab's website at <https://naturalcontractlab.com/szenne-river/>.

Pillar	Historical example	Contemporary legal tool
Cultural Relevance or 'how nature influences the way I/we perceive the world'	<i>Scomenzèra</i> and Magistrato delle Acque (Venetian Republic): Rituals and institutions that governed the Lagoon as a commons, with reversible interventions and community participation.	Autorità per la Laguna (2020-present): Modern governance body that fails to represent the Lagoon's agency, often prioritizing economic interests over ecological integrity.
Sentimental Connection or 'I/we feel with Nature'	<i>Principalissimo bene</i> (Giulio Savorgnan, sixteenth century): The Lagoon described as the 'highest good' central to Venetian identity, survival, and political life.	Articles 9 and 41 of the Italian Constitution (2022 amendments): Legal recognition of ecosystems as constitutional values, providing a foundation for Rights of Nature frameworks.

It is important to stress that these four pillars still rest largely on an anthropocentric framework: it is not an overarching argument on the intrinsic value of ecosystems, but rather a political argument on why humans should welcome natural elements in their, inevitably anthropocentric, at least for now, legal systems.

6.1 A Matter of Deep Ecology

This layered structure for the argument does not follow an order of value, as all four elements are essential to achieve a complex and successful vision of the issue – i.e. bridging the gap between humans and nature and framing ecosystemic rights – and its possible solution. It is a system that incorporates different layers of human existence, both at an individual and collective level, from the things we clearly see over the surface (ecosystem services or “what Nature does for me/us”) to the depth of our emotions (sentimental connection or “I/we feel with Nature”).

Norwegian philosopher Arne Næss, in his lifelong quest to envision the meaning of a ‘deep ecology’, argues for a similar multi-layered approach to ecology in which both ‘shallow environmentalism’ and ‘deep ecology’ coexist. Different individuals can put different emphasis on the different layers, but all of them are equally necessary. In other words, Næss’ distinction between ‘shallow’ and ‘deep’ is not a moral nor an axiological judgment but a conceptual framework: just as shallow and deep waters, neither makes sense without the other. Shallow environmentalism refers to reformist, human-centric approaches focused on managing environmental harm within existing systems and addressing the symptoms of the problem, while deep

ecology advocates for systemic change rooted in the intrinsic value of all life, addressing the source. Both perspectives have their place, but deep ecology challenges us to question the foundations of our relationship with nature, a position that Næss and George Sessions summarise in the first of their proposed eight ‘basic principles’: “The well-being and flourishing of human and nonhuman life on Earth have value in themselves (synonyms: intrinsic value, inherent value). These values are independent of the usefulness of the nonhuman world for human purposes” (Næss, Sessions 1986, 14).

Inspired by this line of thinking, the four pillars proposed in this argument suggest that any community can follow a similar inquiry to build their argument to demand ecosystemic rights. The Venice Lagoon’s story is not self-referential: it shows how any ecosystem in Europe can reclaim their ecological heritage. By centering these four pillars, any European community can craft a site-specific argument for Rights of Nature, one that honors local identity while addressing global challenges. The Lagoon’s Declaration, alongside so many others sprouting around Europe, shows that even in this continent, so often depicted as legally and culturally allergic to RoN, an ecocentric paradigm shift is possible.

Yet this is only the beginning. As the Lagoon faces multifaceted anthropic threats, whether directly through greenwashed, unfazed touristic and maritime extractivism or indirectly through global warming and pollution, its rights must be more than symbolic. Through legal personhood, ecosystemic rights must be enforceable, participatory, and adaptive. Such a shift must integrate cultural elements and scientific expertise at the same time, freeing both from a hierarchy of values that systematically subdues them to profit and employing them towards a more balanced coexistence of humans and ecosystems.

The same is true for any river and sea, lake and swamp, forest and glacier in Europe. The question is no longer whether nature has rights, but how we will recognise and defend them.

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Siphonophorae Society

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Abstract Framed as a speculative essay, the text introduces the ‘Siphonophorae Society’ as a metaphor for the interdependence of human communities and water across porous land–water boundaries. Inspired by the biology of siphonophore colonies, it proposes ‘hundred-eye seeing’ as a multiperspectival epistemology that integrates human, more-than-human, and amphibious futures. It reframes ocean citizenship as water citizenship, articulating a relational mode of belonging grounded in hydrosocial interdependence. Through the Venice Lagoon, it contrasts technocratic planning with amphibious living and imagines adaptive collective futures in the Hydrocene.

Keywords More-than-human design. Water bodies. Civic design. Siphonophorae Society. Amphibious living.

Summary 1 Introduction. – 1.1 Relational and Wet Ontologies, Hydrofeminism, and Amphibious Thinking. – 2 Toward Siphonophorae Societies: A Speculative Ecology of Collective Adaptation. – 2.1 Siphonophorae. – 2.2 Siphonophorae Societies: Floating Through Uncertainty and Vulnerability with Hundred-Eye Seeing. – 3 The Venice Lagoon: A Siphonophorae Society? – 3.1 Venice and Its Amphibious Risks: A Loss of Co-Existence. – 3.2 Planning Regulation and Lagoon’s Rights. – 4 Conclusion.



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1 Introduction

Water is the matrix that has shaped human and ecological life since its beginning, forming our landscapes, sustaining ecosystems and bodies, transcending scales from our flesh to the rivers/veins that run across lands, connecting seas to the ocean. Nevertheless, for decades the human-built environment has approached water primarily as a resource or obstacle to be controlled, treating it as an inert technical variable rather than engaging with it as a dynamic, living ecosystem and entity. As the boundaries of coastal territories shift under accelerating climatic and socio-ecological pressures, the frontier between land and water has become increasingly porous, escalating ecological distress, deepening vulnerabilities across species, and intensifying socio-ecological imbalance. Thinking through the porous landscape at the forefront of climate change reminds us of the “mutual vulnerability of both planet and people”; neither can evade a “sense of precarious, corporeal openness to the material world” (Alaimo 2009 quoted in Neimanis 2014, 23).

The re-orientation and the paradigm shift of design with/within/as water, advocating for practices that align with hydrological processes rather than oppose them, is urgent: by 2050, half of the global population is projected to inhabit water-stressed regions (UNESCO, UN-WWDR 2024; OECD 2016), while already 90% of natural disasters are water-related, with climate-driven extremes (UNDRR 2020; IPCC 2022) having risen by more than 50% since the 2010s with intensifying heavy precipitation, coastal flooding, and compound events documented across multiple regions (IPCC AR6 WGII 2022; WMO 2023). These hydrological disruptions rarely occur in isolation; instead, they intersect and cascade across infrastructural, economic, and public health systems, underscoring the need for integrative, adaptive, and ecologically attuned design methodologies that cross layers of society. In this essay, the metaphor of Siphonophorae Society is a lens for conceptualising the adaptation of human structures to uncertainty and their entangled relationship with water (Neimanis, 2018; Giaccardi 2024).

Through the figure of the Siphonophorae, the essay advances a speculative yet logically valid metaphor for reimagining social-ecological relations in the Hydrocene. Siphonophores, marine colonies composed of differentiated yet interdependent zooids, offer a potent image for relational sociality: an organism that is many and one simultaneously, adaptive, fluid, and collective.

Within the Hydrocene, a term denoting the disruptive epoch in which water assumes a central role in understanding and addressing the global climate crisis (Bailey-Charteris 2024), the water cycle emerges as more than a closed physical system: it becomes a deeply entangled process that mirrors the life cycle of matter itself. Water is

not simply 'centric' but fundamentally cyclic, pervasive, and dynamic. This shift in perspective operates across multiple temporal and spatial scales, dissolving conventional boundaries between disciplines and between society and nature. Contemporary citizens inhabit a liquid society (Bauman 2007), immersed in 'thick time' (Neimanis 2014), where stability yields to adaptability. In this context, water serves both as a literal material force and as a symbolic register of fluidity, embodying the uncertainties and interdependencies of climate change, globalization, and social inequality. The movement of water through ecological and social infrastructures parallels the current cracks of modern life, reinforcing the profound human-ocean nexus that underpins survival.

The hydrosphere constitutes one of the planet's most expansive relational layers, a dynamic medium in which multispecies sustainability unfolds through patterns of interdependence. Within this watery domain, no entity exists in isolation: species, materials, infrastructures, and environments are co-shaped by the flows that circulate among them (Rupprecht et al. 2020). Amphibious futures, wherein novel geographies emerge at the shifting boundaries between land and water in response to climate change and environmental upheaval, cannot be conceived solely through human-centred lenses; they must instead attend to the entangled livelihoods, vulnerabilities, and agencies of the many beings who share and co-create ecological systems. Such futures do not just require resistance to water but invite us, "terrestrial beings" (Mentz 2021), to imagine new urban forms, strategies, and governance models fundamentally shaped by its presence (De Martino et al. 2026). The hydrosphere exemplifies this condition; it is both shaped by the bodies, sediments, and metabolic processes it contains, and simultaneously constrains, nourishes, and transforms those bodies in return. Water and its multiplicity and multitude of bodies is a coextensive field of life where human and more-than-human futures are inseparably intertwined.

This invites us to view seas, rivers, lakes, and oceans as dynamic, relational entities, intimately intertwined with both human and more-than-human histories. The hydrological cycle is a relational system that interconnects and organises human infra-structures: cities, societies, cultures. We are bodies of water and water bodies (Neimanis 2017). We are part of a larger aqueous system that dissolves the illusion of isolation and binds us to the planet and to other bodies, at molecular and relational scales. This perspective encourages us to see water in multiple meanings: a nexus of ecological, social, and cultural relations through which life becomes entangled, sustained, and flows incessantly. Adopting a water-centered perspective requires a radical shift in how we design, but even more fundamentally in how we perceive our role as individuals and as a society within the porous boundaries of water territories. It calls for recognising that

we are part of, rather than apart from, the very systems we have long attempted to control, shape, and define. Instead of positioning water as an external challenge to be managed, this view situates human agency within a larger hydrological constellation, demanding forms of planning and governance grounded in reciprocity, interdependence, and coexistence within water bodies.

1.1 Relational and Wet Ontologies, Hydrofeminism, and Amphibious Thinking

This broader reorientation invites a shift in perception: seas, rivers, lagoons, fjords, glaciers, lakes, and aquifers must be understood as dynamic relational entities, co-created by human and non-human histories. Relational legal scholarship echoes this turn; in Chile, for example, ongoing water law reform highlights the need for governance frameworks grounded in reciprocity, responsibility, and Indigenous authority rather than exclusive property rights (Macpherson et al. 2023).

Hydrofeminism (Neimanis 2012) deepens this argument by emphasising that humans are themselves bodies of water: permeable, interconnected, and entangled. Hydrofeminist thinking destabilises notions of individualism and autonomy, replacing them with an ontology of circulation and relationality. It calls on us to see water not simply as a resource but as a nexus of ecological, social, and cultural relations: a medium through which bodies, ecosystems, infrastructures, and emotions flow together. Through this lens, water becomes an active agent that links past and present, the local and the planetary, the human and the more-than-human.

This hydrosocietal approach, recently approached through a hydrofeminism perspective, aligns with and expands into a broader conceptual terrain that includes amphibious thinking and wet ontologies. The philosophical roots of amphibiousness lie in wider shifts within posthumanist and new materialist thought, where scholars emphasise the inherent porosity of human and non-human bodies and the constitutive role of water in shaping these bodies. Authors such as Astrida Neimanis (2017) and Karin Bolender (2015) illuminate how watery interconnections define embodiment: humans are not merely surrounded by water but metabolically, materially, and ethically made of it. In *Bodies of Water*, Neimanis (2017) reframes embodiment as a hydrological condition, underscoring that bodily boundaries are not fixed but in constant exchange with fluid environments.

Similarly, Steinberg and Peters (2015; 2019) develop the concept of a “wet ontology”, which challenges the territorial, hierarchical, and epistemological fixities of modern thought. The sea, in their account,

is not an empty surface for navigation or extraction but a dynamic medium that dissolves categories and unsettles the certainties of terrestrial worldview. To think amphibiously is thus to think from within liquid environments, to embrace motion, uncertainty, and ongoing transformation as fundamental conditions of being, rather than anomalies to be controlled or stabilised.

Anthropological engagements with amphibiousness further ground these ideas in empirical contexts. Scholars such as Tetsu Morita (2016) and Franz Krause (2017; 2019) explore how deltaic and riverine communities cultivate ways of living that attune to rhythms of flooding, sedimentation, and retreat. Krause (2019), in his study of the lower Rhine, describes amphibious living as “dwelling in flux” – a mode of life in which settlements, infrastructures, and social practices adjust to hydrological variability rather than resisting it. This orientation shifts attention from control to cohabitation, from fixed infrastructures to flexible, relational arrangements that move with water rather than against it.

Within this broader landscape, hydrofeminism becomes a vital bridge. As a theoretical framework merging feminist thought with environmental studies, hydrofeminism foregrounds water’s pivotal role in ecological and human systems (Neimanis 2012; 2017; Neimanis, Walker 2014; Engelman et al. 2022; Zylinska 2014). It underscores interconnectedness and challenges entrenched dualisms – nature/culture, human/non-human, subject/object – while promoting a more inclusive and holistic understanding of ecological relationships. Applied to water, hydrofeminism positions rivers, lakes, oceans, and groundwater not as passive reservoirs but as dynamic, relational bodies embedded in cultural, social, and ecological narratives. It invites deeper reflection on how water shapes and is shaped by interactions across species, infrastructures, and scales.

Through this essay, the aim is to contribute to unsettling the entrenched dualisms that have long governed territorial and epistemic imaginaries, chief among them the binaries of land/water and nature/culture. The change that is needed to reach amphibious futures aligns as part of the needed changes in the realm of the symbolic and systems of meaning to open new collective horizons for action (Rupprecht et al. 2020; Leventon et al. 2021). The idea of Siphonophorae Society invites a dissolution of these divides, revealing instead the fluid continuities and relational entanglements that shape amphibious worlds. The reconfiguration of collective imaginaries is essential for opening new horizons of action, enabling societies to envision and enact toward amphibious futures in which interdependence, reciprocity, and watery relationality guide both governance and everyday life (Yanquiling et al. 2024; Global Alliance

on the Rights of Nature 2021).¹ Having let sediment the theoretical foundations of wet ontologies, the essay now turns to the central metaphor: the floating siphonophores. The following section develops the concept of a Siphonophorae Society as a speculative framework for collective adaptation, before Section 3 examines these ideas through the concrete case of the Venice Lagoon: an illustrative site that reveals the tensions between technocratic water management and relational amphibious living.

2 Toward Siphonophorae Societies: A Speculative Ecology of Collective Adaptation

2.1 Siphonophorae

Siphonophores are complex, polymorphic marine organisms whose colonies consist of multiple polypoid and medusoid zooids. While each zooid maintains a degree of individuality, the colony functions physiologically as a single organism. (Mackie et al. 1988)

Siphonophores (lat. order *Siphonophorae*) are complex marine beings whose colonies, composed of multiple polypoid and medusoid units (zooids), embody a striking duality: while each unit retains a degree of morphological individuality, the colony operates physiologically as a single organism [fig. 1]. This enigmatic dual condition has long captivated scientific curiosity. In the latter half of the nineteenth century in particular, naturalists devoted meticulous attention to these organisms, collecting intact specimens from ocean surfaces and producing detailed anatomical descriptions. Their efforts sought to decipher the hybrid architecture of siphonophores, interpreting the origins and functions of their differentiated “entities” (Mackie et al. 1988). Siphonophores are therefore chosen as they embody an existing ‘paradox’-organisms that defy and float overcoming conventional dualities. The siphonophore becomes a metaphor for collective social and ecological organization through its distributed, interdependent architecture. At the same time, its very physiology invites us to rethink entrenched dichotomies. Composed largely of water, its organs appear fragile, almost ephemeral, yet the colony endures the crushing pressures of the deep sea, an environment that is simultaneously its surroundings and its constitutive medium.

¹ Global Alliance for the Rights of Nature (s.d.). *What Are the Rights of Nature?* <https://www.garn.org/rights-of-nature/>.



Figure 1 Ernst Haeckel, *Siphonophorae*. 1904. Illustration. Jena, Verlag des Bibliographischen Instituts, Germany. Image from *Kunstformen der Natur*, Plate 77, public domain

An unusual feature of siphonophores lies in the extraordinary range of possible configurations (or “body plans”) they can assume (Mapstone 2014). Their colonies unfold in multiple architectures, from elongated filamentous forms [figs 1-2] stretching tens of meters through the water column to compact, intricately organized aggregates [fig. 3], each arrangement expressing a different mode of collective life. Despite this morphological diversity, siphonophores

share a remarkable material composition: more than 85% of their bodies are water (Mackie et al. 1988). Their gelatinous appearance suggests fragility, yet this impression is deceptive. Many species inhabit deep-sea environments where hydrostatic pressures are immense, far exceeding what most terrestrial or shallow-water organisms could withstand. Siphonophores thrive in deep-sea zones by maintaining buoyancy through low-density tissues, minimising metabolic costs, and relying on structural simplicity that resists compression at depth. In this way, siphonophores exemplify a paradoxical robustness: organisms that are at once delicate in substance yet capable of flourishing under some of the ocean's most extreme physical conditions (Mapstone 2014; Mackie et al. 1988).



Figure 2
Ernst Haeckel, *Siphonophorae*.
1904. Illustration. Jena,
Verlag des Bibliographischen
Instituts, Germany. Image from
Kunstformen der Natur, Plate 59,
public domain

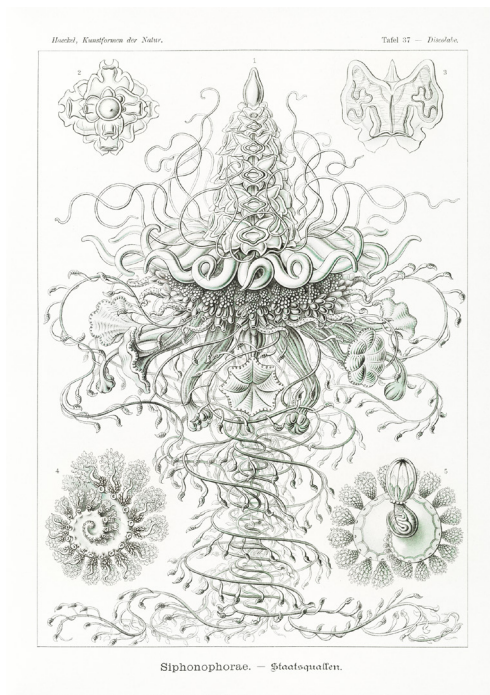


Figure 3
Ernst Haeckel, *Siphonophorae*.
1904. Illustration. Jena,
Verlag des Bibliographischen
Instituts, Germany. Image from
Kunstformen der Natur, Plate 37,
public domain

As Alaimo argues, abyssal and deep-sea creatures' aesthetics might initially appear unusual, flimsy, fragile, or inadequate when measured against the grave scale of anthropogenic harm to oceanic life (Alaimo 2024). If oceanic aesthetics have traditionally been framed through the sublime, anchored in sweeping views across the sea's surface, such perspective framing proves insufficient for the deep. In an era marked by extinction, what is needed instead is a creaturely aesthetic, grounded in highly mediated, situated encounters with particular beings of the depths, a "submersive" perspective (Whittaker et al. 2025) that resists abstracting the ocean into sheer immensity. Such an aesthetic does not abstract the ocean into immensity, but attends carefully to the singular lives and vulnerabilities that compose its more-than-human communities (Alaimo 2024). The organism thus provides a productive metaphor for collective forms of social and ecological organization, bridging the individual and the societal scale.

Water, in this organism, is both inside and outside, both substance and milieu, both what the body is made of and what the body inhabits. Such a configuration unsettles familiar categories and challenges the view of water as merely a connector, environment, or resource. Instead, the siphonophore reveals water as relation,

as ecology (Mentz 2021), as living entity (Neimanis 2017), as media and medium (Jue 2020) an element that dissolves boundaries even as it sustains differentiated forms within a shared, fluid existence. Such a perspective urges us to reflect more deeply on how water epistemologically shapes, and is in turn shaped by, its interactions with living worlds and with complex networks, intertwining social and ecological dimensions (Barad 2007; Jue 2020).

Drawing on the metaphor of the siphonophores, human structures, such as societies and cities, can be understood as similarly distributed and interdependent organisms, whose physical and social configurations mirror the porous and adaptive logics of siphonophores colonies. Like these marine assemblages, several parallel watery characteristics emerge:

- i. Porosity and permeability: Cities are shaped by continuous exchanges of water, matter, and energy, functioning as permeable systems governed by hydrological fluxes rather than fixed boundaries. Venice offers a paradigmatic example: its canals operate as liquid arteries that nourish, regulate, and sustain urban life, revealing how water circulates through the city as both infrastructure and living medium.
- ii. Water as constituent: Water is not merely present within settlements but is a fundamental element of their constitution; material, ecological, and symbolic. It shapes patterns of habitation, mobility, metabolism, knowledge making and social meaning.
- iii. Individual-collective interplay: The siphonophore's dynamic relationship between specialized units and the collective whole resonates with the human structures such as urban agglomerates, where buildings, neighborhoods, and actors acquire meaning and function only through their relation to broader socio-ecological systems. In this framing, the city emerges as a composite organism, a fluid assemblage in which individual and collective forms are co-constituted through shared dependence on dynamic, watery environments.

2.2 Siphonophorae Societies: Floating Through Uncertainty and Vulnerability with Hundred-Eye Seeing

2.2.1 Floating Through and Within Uncertainty and Vulnerability

The metaphor of a Siphonophorae Society offers a generative lens for conceptualizing social adaptation under conditions of vulnerability and uncertainty (Neimanis 2018; Giaccardi 2025). Just as siphonophores are composed of differentiated yet interdependent zooids that function simultaneously as individual units and as a single collective organism, human societies too are assemblages of interconnected individuals, communities, and institutions whose actions unfold across multiple scales at once. Recognising these interdependencies demands a reorientation of our narratives, practices, and imaginaries, treating uncertainty as an inherent condition of life within the Hydrocene. In this view, vulnerability becomes a shared medium, an ecological and social connective tissue that binds human and more-than-human worlds within the fluid dynamics of planetary ecologies.

Cultivating the epistemological and practical capacities to navigate such “uncharted waters” requires interdisciplinary and inter-ontological forms of collaboration (Jue 2020), spaces where diverse knowledge systems, design approaches, and situated perspectives can converge to imagine and shape future scenarios (Overbeek, Bessembinder 2013). Within this framing, the redistribution of vulnerability becomes central: a shift from individualized notions of risk toward collective responsibility and ocean/marine citizenship (Squarcina, Pecorelli 2017; Buchan et al. 2023), where agency is exercised not in isolation but through relational entanglement.

Engaging uncertainty, then, is not merely a technical challenge but a generative force. Uncertainty is intrinsic to the very act of designing, particularly when design seeks to intervene intentionally within complex, dynamic, and evolving worlds (Giaccardi 2024). It shapes the iterative, experimental nature of prototyping physically as much as epistemologies, and fosters deeper attunement to the reciprocal relations and flows between intention and emergence, as intra-action (Barad 2007). In Siphonophorae Societies, uncertainty becomes a condition of possibility through which adaptive, amphibious, and collectively imagined futures may take shape and flow.

2.2.2 Hundred-Eye Seeing Perspective

The idea of a Siphonophorae Society draws on this metaphor to conceptualise modes of symbiotic living appropriate to an age defined by hydrological instability and planetary entanglement. It envisions society as amphibious, distributed, and intrinsically collective, capable of navigating liquid futures by embracing uncertainty rather than resisting it. In such a framework, vulnerability becomes shared, knowledge becomes multi-perspectival ('hundred-eye seeing'), and adaptation emerges from relational rather than extractive logics.

Such complexity necessitates multiperspectival frameworks, such as the "two-eyed seeing" approach in Ocean Literacy frameworks (Glithero et al. 2024), which brings Indigenous and Western epistemologies into dialogue to expand Ocean Literacy (Jefferson et al. 2021). To extend this principle, a 'hundred-eye seeing' perspective (modeled on the distributed sensory capacities of siphonophores) foregrounds the integration of diverse human and more-than-human ways of knowing into environmental imaginaries and governance. Fostering sustainable practices and ethical human-ocean relationships (Buchan et al. 2023), this collective epistemology resonates with the reconceptualization of marine citizenship (Buchan et al. 2023), which shifts attention from individual behavioral change to socially embedded and politically collective practices through "restoring society's relationship with the ocean" (UN Ocean Decade Goal n. 10, Glithero et al. 2024). Hundred-eye seeing extends the framework by calling for integrative knowledge that crosses disciplinary, cultural, and experiential boundaries to foster informed stewardship (emphasising the need for societies to understand the human-water nexus) drawing inspiration from the siphonophore's distributed sensory capacities.

Rather than a dual perspective (as the "two-eyed seeing" suggests, based on human ways of seeing), hundred-eye seeing suggests an expanded epistemic field, one in which knowledge is gathered and interpreted through many simultaneous view points: multiple scales (bodily, urban, planetary, climatic, hydrological); multiple more-than-human perspectives and ecologies (marine mammals, plankton, sediments, currents, infrastructures); multiple modalities of sensing (embodied, technological, emotional, ancestral, experiential). Enabling access across disciplines, communities, and media, this approach fosters horizontal knowledge-sharing that empowers non-specialists to participate meaningfully in decision-making (Artioli et al. 2025), broadening knowledge systems by integrating diverse forms of data and experience, embedding Indigenous and often overlooked epistemologies, and opening towards more-than-human perspectives. Such horizontal access becomes foundational for building trust across scales, weaving together knowledge,

experience, and relational accountability. Recognising the distinct languages and mediums through which human and more-than-human worlds articulate meaning, this approach emphasises inclusive, multimodal, and multispecies ways of knowing (Tsing et al. 2021; Jue 2020; Giaccardi 2018; Haraway 2004), deepening our collective understanding of hydrosocial environments (McFarlane 2025).

Water itself, in this vision, is a co-author of social futures. A Siphonophorae Society calls for infrastructures, institutions, and imaginaries that move with water rather than against it: floating squares, amphibious public spaces, permeable boundaries, and collective forms of stewardship that acknowledge the hydrosocial entanglements of the Hydrocene. A Siphonophorae Society is, in this, a society that recognises itself as an organism intrinsically embedded within the water cycle, that becomes capable of hundred-eye seeing and oriented toward an expanded form of ocean citizenship.

The notion of a Siphonophorae Society establishes a parallel between the collective floating of siphonophore colonies, their distributed sensing, buoyancy, and interdependence, and the forms of shared responsibility and vulnerability required for regenerative socio-ecological practices. In these marine assemblages, survival depends on the coordination of multiple differentiated parts, each contributing to the vitality of the whole. Similarly, human societies must cultivate modes of perception and action that exceed individual viewpoints, embracing collective attunement as a condition for navigating hydrological uncertainty.

2.2.3 Water Citizenship

This expanded seeing reconfigures how epistemic authority is distributed. It proposes that understanding the hydrological cycle, and living responsibly within the hydrosphere, requires an interplay of situated knowledge (Haraway 1988), relational ontologies, and multispecies attunements (Jue 2020). In this sense, hundred-eye seeing becomes a collective epistemology (Tsing et al. 2021), where perception is not the task of a single actor but the emergent outcome of diverse forms of sensing and interpreting. By foregrounding imagination (Rupprecht et al. 2020), empathy, and multispecies storytelling (Vervoort et al. 2024) as vital ways of perceiving the complexity of water bodies, hundred-eye seeing invites a mode of attention attuned to the submerged (Whittaker et al. 2025), the invisible, the speculative, and the more-than-human (Giaccardi 2024; Jue 2020), much like the siphonophore colony perceives its environment through the aggregation of many distributed sensors.

Ocean citizenship (Buchan et al. 2023) builds on this epistemic foundation by proposing a mode of belonging and responsibility

that recognises the ocean as a socio-ecological community to which humans are intrinsically connected. Rather than limiting citizenship to legal or territorial definitions, ocean citizenship reframes it as an ethical-political relationship grounded in interdependence.

Within a Siphonophorae Society, ocean citizenship can be broadened by drawing directly from the individual-collective interconnectedness that defines siphonophore colonies, becoming what is termed here “water Citizenship”, a relational mode of belonging and responsibility that extends ocean citizenship beyond the marine domain to encompass the full spectrum of hydrosocial relations, including rivers, lagoons, groundwater, and the hydrological cycle as a whole.

This broader approach is intended to offer a stronger interconnection with the water element, with the aim to fully acknowledge land-sea interactions and the general relationship that all citizens, in all part of the world, have with water. Just as each zooid participates in the vitality of the whole organism, civic engagement emerges through reciprocal, distributed forms of action that must acknowledge the role of water in our lives. This resonates with the dimensions of civic design (Fagnoni 2022) and the principles of ocean-cycle-centric design (Artioli et al. 2025), which highlight practices aimed at expanding civic participation and embedding citizens more deeply in decision-making processes. Participation is fundamental to what counts as civic, and involves fostering high levels of interaction (Di Salvo, Le Dantec, quoted in Fagnoni 2022) between people, between people and material or digital artifacts, and within the everyday bureaucratic and relational infrastructures that shape collective life. In this sense, design becomes not a neutral tool but a situated ethics and innovation philosophy for working with change (Bason in Fagnoni 2022), opening speculative and alternative trajectories for amphibious futures.

Within a broader hydrosocial register, design can activate emotional, embodied, and imaginative engagements with water bodies, creating inclusive spaces, narrative platforms, and participatory experiences that encourage empathy, shared responsibility, and co-creation. Through physical or virtual encounters with water bodies, accessible across gender, geography, physical ability, and cultural background, design reduces social and economic barriers while deepening affective connections to aquatic environments. In such contexts, ocean citizenship is enacted through multi-stakeholder participation, where citizens and communities co-shape policies, scenarios, and practices alongside institutional actors (Berkowitz et al. 2020; Weiland et al. 2021; Haas et al. 2022; Boteler, Durussel 2022; Tompkins et al. 2008). Crucially, this participatory field also extends to more-than-human communities, recognising non-human beings

and ecosystems as rights-bearing participants whose needs must be represented at the decision-making table. The emerging indicators for this expanded practice emphasise the importance of connecting communities to ocean citizenship, aligning human action with the collective, interdependent logics that sustain a Siphonophorae Society.

The metaphor of the siphonophores reinforces this interconnectedness perspective, fostering a deep ecology (Naess 1973) shift: in a colony where each zooid has a specific role, no part can survive independently, and collective survival relies on coordinated contributions, actions become not isolated efforts but interconnected strands of a single socio-ecological organism that spans over dimensions, from the micro to the macro planetary scale (Lovelock, Margulis 1974; Naess 1973).

Water citizenship emphasises this relational responsibility: acknowledging how individual and collective actions reverberate through water cycles and ecosystems. Water citizenship therefore becomes not only a set of actions but a mode of inhabiting, one that recognises water as a living entity rather than a commodity. It invites people to see themselves as actors within a broader hydrosocial system, where duties and capacities emerge through shared vulnerability. Such civic participation becomes possible through informed engagement in governance and stewardship, through cross-scalar action that links personal practices with community initiatives and institutional or transnational policies, and through a more-than-human recognition that acknowledges the rights, vulnerabilities, and agencies of non-human beings within the governance of water bodies.

This extends beyond stewardship to encompass affective, cultural, and imaginative dimensions (Amphibious Futures), to delve into how people emotionally relate to aquatic environments, how stories shape their understanding, and how cultural practices contribute to ecological care. Aligned with hydrofeminist thinking (Neimanis 2012; 2017), this perspective positions water bodies as relational entities and situates citizenship within shared vulnerability and co-constitutive embodiment. Ultimately, water citizenship becomes a practice of collective becoming, in which societies learn to live with the volatile dynamics of the hydrosphere. It is a political ecology of reciprocity, grounded in the same principles that sustain siphonophore colonies.

In sum, the Siphonophorae Society, integrating the notions of hundred-eye seeing and water citizenship developed above, proposes a mode of collective inhabitation as amphibious, distributed, and intrinsically collective, capable of navigating amphibious futures by embracing uncertainty rather than resisting it. Knowledge becomes multiperspectival (and multi-spectral), and adaptation proceeds through relational rather than extractive logics. It

calls for infrastructures, institutions, and imaginaries that move with(in) water rather than against it, navigating together shared vulnerability, distributed sensing, and collective buoyancy that sustain siphonophore colonies. The following section examines how these principles fare when confronted with the concrete realities of the Venice Lagoon.

3 The Venice Lagoon: A Siphonophorae Society?

Writing this essay from the lagoon, Venice, a city that could float, sense, and adapt like a siphonophore, one can nonetheless observe a series of countercurrents that unsettle this potential. Starting from its urban shape, resembling a fishy-sea entity ‘floating’ in the lagoon [fig. 4], the city represents one of the historically and widely known cases of “living with water” (Fabian, Centis 2022) and, as such, it could be expected that its current urban planning strategy and its legal status development reflect this aspect. Historically, the planning of Venice emerged from the aggregation of insulae, small, self-contained island units that were incrementally connected through bridges, canals, and shared infrastructures (Spurr 2016). This insular structure produced a city conceived not as a continuous landmass but as a networked amphibious archipelago, where urban form and governance evolved through relational linkages across water.



Figure 4 Joseph Heintz the Younger, *Bird's-Eye View of Venice*. Painting, oil on canvas. Fondazione Musei Civici di Venezia, Museo Correr, Venice, Italy. Image from Wikimedia Commons, public domain

Cities are shaped by continuous exchanges of water, matter, and energy, functioning as permeable systems governed by hydrological fluxes rather than fixed boundaries. Venice offers a paradigmatic example: at the same time city and breathing lagoon ecosystem, its canals operate as liquid arteries that nourish, regulate, and sustain urban and tidal life, revealing how water circulates through the city as both infrastructure and living medium. The proposed framework is explored in the case of the Venice Lagoon. Hence, to investigate this assumption, the principal planning instruments are reviewed, including the Regulatory Plan for the Lagoon and the Islands, and a series of ongoing initiatives are analysed to compare and seek the presence of principles of a Siphonophorae Society.

3.1 Venice and Its Amphibious Risks: A Loss of Co-Existence

Venice functions in this essay as a critical case study that renders visible the tensions between technocratic water management and relational amphibious living, tensions that the Siphonophorae framework is designed to address. Where the Siphonophorae Society posits a distributed, relational, and adaptive logic of cohabitation with water, Venice today presents a paradoxical counter-image: a city historically constituted through amphibious coexistence that is progressively relinquishing that condition in favor of technological stabilization. This section traces that trajectory: from Venice's historically amphibious condition, through the technological intervention of MOSE, to a planning critique and an account of emerging civic responses, in order to illuminate what is at stake when the distributed, responsive logic of a Siphonophorae Society gives way to the centralised management of risk.

In Venice, the lagoon is more than a water landscape: it is a living relational ecosystem made of water, sediments, salt marshes, canals, biodiversity, and long-established practices that for centuries have shaped a way of inhabiting that is intrinsically amphibious. For this reason, the city is an emblematic case when thinking about how to live with water. Here, the relationship between communities and the environment has always been a process of co-creation, of reciprocal adaptation, of deep coexistence: a mode of life that resonates closely with the hundred-eye seeing of the Siphonophorae Society, where knowledge is gathered from multiple situated perspectives and governance proceeds through relational rather than extractive logics. For centuries, Venetians have lived in continuous negotiation with water, developing cultural practices, infrastructures, and forms of inhabitation that are inseparable from the rhythms and dynamics of the lagoon. This historically amphibious condition embodies precisely the kind of distributed, interdependent resilience that the

Siphonophorae metaphor seeks to theorise: a city as a collective organism, each insulae a zooid, each canal a connective filament sustaining the vitality of the whole.

However, these long-standing rhythms and dynamics of living with water have been fundamentally interrupted by the MOSE system. MOSE is an acronym for 'Modulo Sperimentale Elettromeccanico', a large-scale mobile barrier system designed to protect Venice and its lagoon from *acqua alta*, the increasingly frequent and severe high-tide flooding events. Since becoming operational in 2020, the MOSE has reconfigured the city's relationship to tidal cycles and transformed a historically adaptive mode of inhabitation into a technologically mediated one. Read through the Siphonophorae framework, MOSE represents a paradigm of centralized technocratic stabilization: a single, integrated control system that replaces the distributed, responsive, and relational logic historically embedded in Venetian life with a binary hydraulic switch. Rather than adapting with the lagoon, sensing its shifts, moving with its rhythms, cultivating cohabitation across species and scales, the MOSE apparatus seeks to hold water at bay, imposing a territorial fixity that the siphonophore colony, in its fluid and adaptive architecture, would never permit.

The presence of the MOSE system thus marks a profound turning point that significantly alters the way people have historically related to water. Flood protection, though necessary in the short term, radically transforms the perception and governance of risk, turning a cyclical natural phenomenon into a complex amphibious risk that intertwines ecology, culture, and technology while opening up unpredictable future scenarios. In this process, Venice seems to be relinquishing its amphibious condition in search of more stable, land-anchored ways of living.

A paradox emerges here that we do not see in other lagoon or coastal contexts. The MOSE system, designed to safeguard the city, is simultaneously putting the ecological balance of the lagoon under strain (Cibic et al. 2025). The mobile barriers hinder the natural sedimentation processes that nourish the salt marshes, reducing the supply of materials needed for their vertical growth. Recent studies show that these closures are already significantly decreasing the availability of sediments, accelerating the erosion of the salt marshes and threatening the biodiversity they support. Thus, the infrastructure that protects Venice today contributes to weakening the resilience of the lagoon's saltmarshes (*barene*) tomorrow (Tognin et al. 2021; 2022). In this respect, MOSE crystallizes the foundational tension the Siphonophorae Society seeks to overcome: the conflict between the illusion of control and the necessity of cohabiting with a living environment. The siphonophore colony does not attempt to arrest the ocean; it learns to float within it.

Additional pressures compound this situation: rising temperatures, morphological transformations, the fragility of a compact and historic urban fabric, conflicts between port, tourism, residential, and ecological uses, and a fragmented governance system spread across multiple scales that often fail to communicate. This fragmentation is itself symptomatic of an absence of the hundred-eye seeing the Siphonophorae Society calls for: a failure of multi-scalar, multi-perspectival attunement in which human, ecological, and institutional actors might co-navigate uncertainty together. Venice thus becomes a critical laboratory where tensions emerge between defensive technologies and ecological processes, between immediate safety and long-term sustainability, between the illusion of control and the necessity of cohabiting with a living environment.

The dolphin nicknamed Mimmo, sighted in the Venice Lagoon in the summer of 2025 and rapidly turned into a touristic spectacle, offers a telling illustration of this condition. Rather than being recognised as a fellow inhabitant of the lagoon, a participant in its multispecies community and an expression of its ecological vitality, the dolphin was folded into the logics of spectacle and consumption that increasingly govern the lagoon's social life. From a Siphonophorae Society perspective, such a moment could be read otherwise: as an instance of multispecies citizenship, evidence that the lagoon remains a shared territory of interdependent lives and ecosystemic interconnectedness, a reminder that governance must reckon with more-than-human belonging. That this recognition was largely absent from public discourse speaks to the depth of the anthropocentric logic the Siphonophorae framework challenges.

In this scenario, “water risk” cannot be addressed through traditional models: it requires a way of thinking capable of embracing uncertainty, reciprocity, and the fluidity of an amphibious world. And it is precisely here, at the heart of these contradictions, that Venice reveals its full paradigmatic power: not only as a city to be protected, but as a place that forces us to radically rethink what it means to live with water in the twenty-first century. Risk becomes a complex condition in which the Lagoon is engaged in a continuous negotiation between land and water. Amphibious risk thus signifies not only exposure to environmental change, but also the fear of losing a long-standing historical condition of co-existence: the loss, in other words, of the very relational, distributed, and adaptive vitality that the Siphonophorae Society seeks to recover and reimagine.

3.2 Planning Regulation and Lagoon's Rights

Recent scholarship in environmental and blue humanities, critical geography, and socio-ecological planning has increasingly highlighted the need to move beyond anthropocentric governance models and adopt frameworks such as more-than-human planning (Houston et al. 2018), rights of nature (Kauffman, Martin 2017; GARN 2021), and hydrosocial understandings of human-water relations (Budds 2008; Linton, Budds 2014). These approaches reconceptualise nature not merely as a resource to be exploited by human activity, but as an active agent with ecological, cultural, and legal significance. In the context of coastal and deltaic environments, where climate change, subsidence, and ecological degradation challenge traditional management systems, scholars increasingly call for planning paradigms grounded in co-existence, multispecies entanglements, and relational ontologies of water (Bailey-Charteris 2024; Tsing et al. 2021; Giaccardi, 2020; Neimanis 2017).

Against this backdrop, the Piano Regolatore Generale - Variante per la Laguna e le Isole Minori (General Regulatory Plan - Lagoon and Minor Islands), hereafter 'the Piano', approved in 2010² and subsequently amended, provides a revealing case for assessing the extent to which legacy planning instruments incorporate, or fail to incorporate, these emerging paradigms. This part examines the Piano and its amendments to determine whether it engages with concepts such as more-than-human approaches, rights-of-nature frameworks, living-with-nature paradigms, or socio-ecological understandings of human-water relationships.

The analysis draws on a review of the Piano and its official annexes, including the Valutazione Tecnica Regionale (Regional Technical Evaluation) and accompanying normative and cartographic materials approved by the Regione Veneto in 2010,³ as well as subsequent administrative updates summarised in the amendment register. It shall be noted that the Piano was developed between 2004 and 2010, years before the normalisation of posthumanism, and at an early stage of integrated planning discourse in related disciplines. Given the scope and word limits of the present essay, the analysis offered here is necessarily preliminary and partial; it focuses on the conceptual orientations of the Piano rather than providing an

2 Comune di Venezia (2010). *Varianti al Piano - Schede e aggiornamenti*. https://www.comune.venezia.it/sites/default/files/cartanet/VPRG_Laguna_isole_minori/Elenco_VPRG_PUA_aggiornati.pdf.

3 Regione del Veneto (2010). *Deliberazione della Giunta Regionale n. 2555 del 2 novembre 2010: Variante al Piano Regolatore Generale per la Laguna e le Isole Minori in adeguamento al PALAV*. https://www.comune.venezia.it/sites/comune.venezia.it/files/page/files/DGRV-2555-02-11-2010%20_0.pdf.

exhaustive assessment of all its provisions and implementation outcomes. A more detailed and comprehensive evaluation would require dedicated study.

3.2.1 Conceptual Orientations of the Piano

Anthropocentric Framing and Technical Environmentalism

The Piano is grounded in the long-standing Italian tradition of urban and territorial regulation, which emphasises zoning, heritage preservation, and functional environmental protection (Vignozzi 1994). Across its normative and descriptive sections, the lagoon and its ecological components are framed primarily as objects of technical management, heritage assets, or constraints on development, rather than as relational or agential entities.

For example, the Piano identifies as its primary environmental objectives the “arresto e inversione del degrado del bacino lagunare” (pp. 5-6), translated as “the halt and reversal of the degradation of the lagoon basin”, articulated through sediment control, morphological stabilisation, and constraints on wave-inducing traffic. These aims, while environmentally beneficial, are operationalised through mechanistic and infrastructural interventions rather than through relational engagement with lagoonal processes. The underlying logic follows what Head (2016) describes as technical environmentalism, in which ecological systems are managed to maintain human uses, cultural landscapes, or regulatory compliance.

The classification of the lagoon into four ‘systems’ (*laguna aperta, isole e motte, valli da pesca, gronda lagunare*) and the detailed cataloguing of each island’s morphological, historical, and ecological features reinforce a managerial ontology where nature is segmented, stabilised, and rendered legible for the purposes of control (Scott 1998). Even ecological surveys, often extensive, as in the case of island-specific studies (Piano Regolatore, p. 12), serve primarily to delimit permissible human uses rather than to articulate a shared or co-constitutive human-nonhuman relationship.

Absence of More-Than-Human or Multispecies Approaches

Contemporary more-than-human frameworks emphasise multispecies co-agency, ecological interdependence, and the ethical and political implications of human-non-human entanglements (Whatmore 2006; Haraway 2016). None of these orientations are present in the Piano. Neither its normative language nor its conceptual foundations recognise nonhuman entities as participants in planning, nor do they engage with relational ontologies that understand islands, waters, sediments, or species as co-shaping the socio-ecological landscape.

Instead, ecological components are consistently instrumentalised as constraints or values to be safeguarded for their contribution to landscape character, heritage, or environmental stability. No section of the Piano attributes agency, voice, or relational consideration to non-human actors, nor does it invoke ethics of cohabitation typical of the more-than-human planning literature.

Rights of Nature: Complete Absence of Legal Ecocentrism

The rights-of-nature movement, formalised in jurisdictions such as Ecuador (2008), Bolivia (2010), and New Zealand's Whanganui River settlement (2017), posits ecosystems as legal subjects. The Piano contains no reference to such frameworks. Its legal basis rests entirely on established Italian and regional planning statutes, notably L.R. 61/1985 and L.R. 11/2004, and on European directives (e.g., Habitat Directive 92/43/EEC) which, while environmentally protective, remain resolutely anthropocentric. The Piano therefore does not conceptualise the lagoon or its ecosystems as rights-bearing entities, nor does it articulate governance structures that grant nature procedural or substantive standing.

“Living with Nature” as Functional, Not Relational

Although the Piano includes measures that ostensibly resemble “living with nature”, such as restrictions on motorboat traffic, protection of sedimentary processes, and recovery of historical ecological forms, these measures are justified primarily in terms of risk mitigation, heritage conservation, and maintenance of lagoonal usability. As such, they align with practical resilience measures rather than with relational or eco-philosophical approaches advocating coexistence with dynamic natural systems (Adger 2000; Neimanis 2017).

For instance, the plan's provisions to reduce wave motion and regulate navigation (pp. 10-11) are designed to protect island margins and historical buildings, not to foster an ethic of shared

agency with lagoon hydrodynamics. Similarly, the valorisation of traditional activities (such as voga veneta – Venetian rowing and Squeri – Traditional shipbuilders) is framed as preservation of cultural heritage rather than as recognition of long-standing socio-ecological interdependencies.

The Human-Water Relationship: Hydraulic, Not Hydrosocial

Water in the Piano is conceptualised through a hydraulic-technical lens, consistent with the historical Venetian tradition of water engineering. References to water dynamics concern sediment flows, erosion, navigability, and the physical morphology of the lagoon. Absent are the conceptualisations of water typical of hydrosocial literature, which view water as co-produced through social, cultural, political, and ecological processes (Linton, Budds 2014).

Even when water is discussed in relation to human activity, the framing is strictly functional: the lagoon is an infrastructural space for transport, fishing, ecological conservation, and cultural heritage. There is no articulation of water as a relational medium, cultural signifier, or partner in governance. The result is a unidirectional conception of the human-water relationship, where humans act upon water systems rather than within them.

Structural and Historical Reasons for the Absence of Relational Approaches

The absence of more-than-human, rights-of-nature, and relational water ontologies in the Piano must be situated in its historical and regulatory context. The document was developed between 2004 and 2010, preceding the widespread diffusion of posthumanist and relational frameworks in European planning discourse. Moreover, Italian spatial planning has traditionally emphasised in such as: anthropocentric land-use regulation, heritage preservation, technical environmental management, and juridical compartmentalisation of responsibilities.

Within this paradigm, nature is valued for its ecological function, scenic quality, or cultural significance, but not positioned as a co-governor or rights-bearing subject. The Piano's foundational texts and implementation tools reflect these conventions, privileging morphology, zoning, and normative prescriptions over relational or participatory ecological thinking.

Absence of Scenario Thinking and Anticipatory Approaches

A further limitation of the Piano concerns its lack of engagement with scenario-based or anticipatory planning methodologies. Despite operating in a context characterised by pronounced ecological variability, socio-economic pressures, and accelerating climate-related risks, the Piano does not reference scenarios, uncertain futures, or forward-looking assessments in any part of its normative or descriptive corpus. Neither the main text nor the amendments introduce projections of lagoonal evolution, climate-driven transformations, or alternative trajectories for sediment dynamics, ecological change, or human uses. This omission positions the instrument within a static, deterministic tradition of spatial regulation, consistent with the rational-comprehensive model prevalent in Italian planning during the early 2000s, but increasingly misaligned with contemporary approaches that emphasise uncertainty, adaptive capacity, and long-term socio-ecological resilience (Haasnoot et al. 2013; Pérez-Soba, Maas 2015). From a scientific standpoint, the absence of anticipatory tools prevents the plan from grappling with the multiple, plausible futures inherent to lagoon systems, thereby limiting its capacity to guide transformative or climate-resilient decision-making. The result is a governance framework oriented toward the preservation of existing conditions and the mitigation of present pressures, rather than an instrument capable of preparing for, or strategically shaping, the complex and uncertain futures of the Venetian lagoon.

3.2.2 Outcome of the Analysis

The analysis highlights that the Piano per la Laguna e le Isole Minori does not incorporate more-than-human approaches, rights-of-nature principles, or relational socio-ecological frameworks. Its conceptual orientation remains anthropocentric, managerial, and oriented toward safeguarding environmental conditions primarily to maintain human uses, cultural landscapes, and heritage structures. While the plan contains measures that align superficially with contemporary notions of “living with nature”, these remain functional and instrumental rather than relational or ecocentric.

This assessment underscores the conceptual distance between legacy planning instruments and emerging frameworks in environmental humanities and ecological governance. It further suggests the need for renewed planning paradigms capable of engaging with socio-ecological entanglements and the complex, dynamic nature of the lagoonal system, including uncertain futures. Incorporating more-than-human perspectives, hydrosocial understandings of

water, and ecocentric legal principles could enhance future planning revisions, aligning them with contemporary scientific, cultural, and ethical debates on environmental governance and planetary futures. Given the rapid ecological and socio-environmental shifts affecting the lagoon, it is essential that the plan be regularly updated to incorporate new scientific knowledge, emerging risks, and evolving governance needs.

The analysis demonstrates that the Piano remains firmly rooted in an anthropocentric and managerial planning paradigm, treating the lagoon as an object of regulation rather than a relational socio-ecological partner. It lacks the conceptual, legal, and methodological orientations, more-than-human perspectives, rights-of-nature principles, hydrosocial understandings, and anticipatory scenario thinking that contemporary scholarship identifies as essential for governing dynamic coastal environments. As a result, the plan is structurally limited in its capacity to engage with the multispecies interdependencies, ecological uncertainties, and future transformations that define the Venetian lagoon in the twenty-first century.

Institutional planning measures remain constrained by outdated and often inconsistent approaches that prove rigid and ill-suited to the amphibious futures (Part 1), although planning tools are increasingly considering scenarios to map and plan uncertainty. However, new civic, bottom-up initiatives are beginning to articulate more relational and forward-looking frameworks. Notably, in October 2025, the Carta dei Diritti della Laguna (Charter of Rights for the Venice Lagoon, IDRA 2025)⁴ made its first public appearance as part of Ecological Rights and ecosystemic approach for the construction of a new transcultural Eco-Legal Paradigm (Bagni, D'Andrea 2025). The initiative poses a provocative and necessary question: "Can a body of water hold rights?" Inspired by the pioneering example of the Mar Menor in Spain, the first European ecosystem to be granted legal rights, a broad network of associations and citizens has begun drafting a rights charter for the Venice Lagoon. The document was presented and discussed at the event *Verso una Carta dei Diritti per la Laguna di Venezia*, where scholars, activists, and practitioners, including representatives from wetlands, engaged critically with its preliminary formulation. Co-organized with the scientific support of THE NEW INSTITUTE Center for Environmental Humanities (NICHE, Ca' Foscari University of Venice) and the UNESCO Chair on Water, Heritage, and Sustainable Development, this effort signals an important shift: a move toward recognizing the lagoon not merely

⁴ "WATERSCAPES | Verso una Carta dei Diritti per la Laguna di Venezia". *CaFoscariNews*. <https://www.unive.it/data/16437/26/105631>.

as an environment to be managed but as a living entity embedded within social, cultural, and ecological rights frameworks.

The Charter for the Rights of the Lagoon, is an example of bottom up movement and is a civic initiative that embodies emerging forms of water citizenship, the moving dendrites of a Siphonophorae Society. As a collective effort bringing together different layers of society in a transgenerational and transdisciplinary way, it assembles a hundred-eyed perspective, much like the compound vision of siphonophores attuned to its viscous environment from multiple angles at once. In fact this is a broad yet situated approach, recognising interdependency and connectivity of land and water and asking citizens to take responsibility for land-sea interactions. It is important to note that this does not represent a complete shift from the concept of Ocean Citizenship, but rather an expansion that may favour citizen engagement by allowing them to recognise their participation in a large fluid dynamic, as the lagoon extends and meshes land and sea, salt and sweet waters.

4 Conclusion

The Lagoon, with its hundreds of beautiful, fragile, and porous depths, appears now like a Siphonophora holding its breath, its colonial body suspended between the capacity to adapt and the inability to do so.

Current planning instruments remain tethered and grounded to terrestrial paradigms, lacking the liquid, relational, and more-than-human vision required to navigate amphibious futures. Second, through the MOSE system, Venice relinquishes part of its amphibious condition, stepping back from centuries of embracing waters; here technological protection becomes a technocratic force, manoeuvred from above, that paradoxically alters and constrains the very hydrosocial system it seeks to defend. These tensions materialize ecologically as well: while the lagoon's biodiversity and fragile salt marshes face increasing pressure from disrupted sedimentation, tursiops (such as 'Mimmo') are rapidly transformed into touristic spectacles rather than recognized as fellow inhabitants, citizens of the lagoon's multispecies community.

Moreover, the lagoon's planning regulations remain anchored in an anthropocentric and extractivist logic, offering neither the relational, more-than-human, nor forward-looking frameworks needed to govern a dynamic and uncertain amphibious environment. In the same breath, alongside these contradictions, citizens and local groups continue to mobilise and fight for the lagoon's rights (Carta dei Diritti della Laguna 2025), advocating for governance frameworks that acknowledge its agency and vulnerability, making waves of change across civic dimensions of water citizenship and rights of nature.

Thus, in a lagoon perhaps predisposed to becoming a Siphonophorae Society: interconnected, distributed, interdependent, adaptive, we write toward watery futures that refuse separation and embrace reciprocity. In this sense, society is no longer defined by building against or on top of water, but by learning to live with(in) it. New forms of collective adaptation and amphibious public spaces emerge through strategies that expand public life and shared territories: floating squares, habitable piers, temporary platforms, submersible walkways, accessible floodplain forests, and navigable canals as new routes of connection. These amphibious devices are not just technical infrastructures, but social tools that foster accessibility, interaction, and new forms of community, creating spaces where people can gather, collaborate, and reimagine their relationship with water.

As citizens of the lagoon, as zooids within a larger collective organism, we are called to work toward the vitality of the collective organism and system: floating through amphibious territories and futures, cultivating ways of living that move with water, protect the integrity of amphibious ecologies, and sustain the relational vitality of the Hydrocene.

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Designing with Rights Translating the Rights of Nature into Spatial Practice in the Venice Lagoon

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Abstract The Venice Lagoon faces growing environmental degradation and socio-cultural erosion, while existing protection frameworks remain insufficient. This article examines the recognition of the Lagoon as a rights-bearing subject and explores how this recognition can be translated into spatial practice. Through a design-led methodology, existing practices and the Lagoon's key elements are assessed using a socio-ecological compatibility matrix informed by the rights of nature. Three territorial use modes are then addressed through the design principles of expand, transform and replace, testing how spatial practice can link legal recognition and territorial change.

Keywords Venice Lagoon. Rights of Nature. Legal personhood. Spatial design. Socio-ecological systems.

Summary 1 Introduction. – 2 Rights of Nature: Research Context & Gap. – 3 Theoretical Framework. – 4 Objectives, Research Question & Hypothesis. – 5 Methodology: Translating Rights of Nature into Spatial Practice. – 5.1 Framing the Lagoon as a Rights-Bearing Composite Entity. – 5.2 Mapping Existing Functions. – 5.3 Identifying the Constitutive Elements of the Lagoon. – 5.4 Constructing the Compatibility Matrix. – 5.5 From Evaluation to Design Principles. – 6 Design Strategies: Illustrating a Rights-Based Spatial Method. – 6.1 Fishing and Aquaculture (Expand). – 6.2 Fishing Tourism (Transform). – 6.3 Processing and Markets Strategy at Porto Marghera (Replace). – 6.4 Design Strategies and Methodological Scope. – 7 Discussion & Conclusions.



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1 Introduction

The Venice Lagoon is currently affected by processes of environmental degradation and socio-cultural erosion (Baldacci et al. 2022; D'Alpaos 2010b; Settis 2014).¹ Despite its profound ecological, historical, and cultural significance – and the pivotal role it historically played in sustaining the city economically, socially, and productively (Calabi, Galeazzo 2015) – the Lagoon and its islands are now increasingly neglected and devalued by both institutions and local communities. This neglect is evident in processes of abandonment, the marginalisation of residents amid mass tourism, and the growing exposure to extractive dynamics associated with navigation, port expansion and tourism-led economies, all of which increasingly challenge the Lagoon's fundamental role as a living, evolving and productive territory (Pedrocco 2013). Recent scholarship has interpreted the contemporary transformation of Venice through the lens of urban extractivism and touristification, describing the Lagoon and the city as progressively subjected to processes of commodification, dispossession and socio-ecological erosion linked to mass tourism, infrastructural expansion and the increasing dominance of monocultural tourist economies (Salerno 2018; 2022; Guaraldo 2021). A key consequence of these dynamics is the progressive weakening of the Lagoon's socio-ecological resilience, increasing the vulnerability of areas deprived of their historical, economic and social functions to abandonment, exploitation and ecological deterioration (Palmer 2022).

The dynamics of exploitation affecting the Lagoon primarily take the form of indirect pressures. Rather than being exploited as resources in themselves – although this occurs in specific cases, such as the commodification and sale of islands – the Lagoon and its islands are mainly impacted by external activities rooted in broader economic systems. These include industrial navigation, port expansion and mass tourism, which instrumentalise the Lagoon while generating cumulative environmental and socio-spatial pressures as a secondary effect.

At the forefront of these challenges is widespread pollution from human activities, including the discharge of industrial, civil, and

¹ This article builds on a one-year master's thesis (2024-25) developed by Eleonora Anghileri at TU Delft, Faculty of Architecture and the Built Environment, entitled *Lagoon, Islands. The Countryside of Venice – An Interdisciplinary Exploration of the Rights of Nature as a Spatial Practice*. The thesis was developed within the master studio Transitional Territories and was grounded in a theoretical and methodological framework elaborated with Elena Longhin, who served as first mentor, and Luisa Calabrese as second mentor. The thesis is openly accessible at: <https://repository.tudelft.nl/record/uuid:f5cb2fe9-375e-4470-9862-374d99c534a7>.

agricultural effluents from mainland and island settlements – most notably the industrial area of Porto Marghera – shipping traffic, and the dispersion of contaminated sediments from dredging activities (Sfriso et al. 1992; Molinaroli et al. 2013; Zonta et al. 2007). Hydrogeomorphological alterations exacerbate the issue, driven by factors such as the excavation of industrial canals (Longhin 2022). A particularly problematic intervention is the MOSE (Modulo Sperimentale Elettromeccanico – Experimental Electromechanical Module) system, built to protect Venice from high tides, but with little regard for the Lagoon’s ecological health, thereby threatening its vitality (D’Alpaos 2010a; Vianello 2021). Compounding these environmental concerns is the sale of public heritage, including the islands and their architectural and cultural assets (Cavallo, Visentin 2021).

On top of these pressures, mass tourism accelerates resource depletion, resident marginalisation (Settis 2014), and the exploitation of ecosystems. Meanwhile, climate change poses an often invisible yet grave threat, with constant risks of flooding from higher tides, sea-level rise, and subsidence (Tagliapietra, Umgieser 2023), endangering the Lagoon’s survival.² The limitations of traditional environmental protection measures further exacerbate these critical conditions. While numerous and formally well-established, such instruments often fail to address the systemic vulnerabilities of this complex and unique water body (Mencini 2021). Conventional urban planning tools prove fragmented, technocratic, and insufficient – rigid and disconnected from the socio-ecological complexity of the places they serve. This is especially evident in the Venice Lagoon, where the local and supralocal governance landscape is highly fragmented and often ineffective. Territorial and sectoral plans exist at various scales, from international protections such as UNESCO World Heritage and Ramsar wetland designations to regional and local schemes. Yet, they frequently overlap, conflict, or prove political incoherence, under-resourced governance, and bureaucratic inertia. The result is a state of semi-permanent neglect: formally protected, yet functionally exposed to extractive pressures, infrastructural overreach, and socio-cultural erosion. This condition highlights the need for more interdisciplinary approaches to natural-cultural sustainability, capable of addressing the ecological, social, cultural and spatial dimensions of the Lagoon as deeply interconnected rather than separately managed domains.

2 See the *Nowtilus* podcast (hosted by Enrico Bettinello and Alice Ongaro Sartori), episode “Macro-maree e micro-plastiche con Luigi Cavalieri (ISMAR) e Fabiana Corami (CNR-ISP)” (1.4), 4 June 2020. <https://open.spotify.com/episode/4FhQN8xSdADWJ2W7gE51VX?si=71b13e8be5134abc>.

2 Rights of Nature: Research Context & Gap

It is within this critical context that this paper examines how emerging legal frameworks recognising the rights of nature might be translated into spatial practice, moving beyond a purely conceptual proposition towards a situated and performative act of spatial and ecological justice. The Venice Lagoon is then used as a crucial case study to do so (Omodeo, Consolandi 2025): rather than approaching it as an object of management or restoration, the paper explores the implications of treating it as a legal subject, and asks what such a shift entails for urban, territorial and design practices. Framing the Lagoon as a subject of rights re-politicises environmental protection by relocating it from technocratic regulation toward questions of civic intentionality, territorial agency and collective responsibility (Anscombe 1957; Ostrom 1990; Leopold 1949). However, while the rights of nature have gained increasing traction in legal, artistic and symbolic domains, their spatial implications remain largely underexplored. Although the legal recognition of ecosystems has advanced significantly, with numerous global initiatives and various forms of implementation (Talbot 2024), far less attention has been paid to the spatial consequences of such recognition (Jon 2020), constituting a significant research gap. Once ecosystems are recognised as rights-bearing subjects, it becomes necessary to ask how those rights are to be made legible, actionable, and enforceable within the material and spatial organisation of territories. Addressing this gap, this paper examines how the legal recognition of the Venice Lagoon can inform spatial decision-making, moving toward a relational form of regulation that accounts for non-human agencies and multispecies justice through design.

3 Theoretical Framework

Within this critical context, and in contrast to traditional forms of environmental protection, a framework grounded in the rights of nature offers a radical shift: it moves from understanding nature as a resource to be managed or restored to recognising it as a living and evolving entity whose ecological and cultural significance demands acknowledgement. Rather than framing the Lagoon as a fixed ecological object to be preserved, this research approaches it as a historically evolving socio-ecological system whose integrity depends on its capacity for transformation – and by extension, other water bodies like lagoons – as arenas of “material, social and symbolic co-production among humans and nature” through “socationature entanglements” (Boelens et al. 2022, 1148). This framework allows for an understanding of water bodies not merely as legal subjects,

but as dynamic socio-ecological collectives where “socio-nature river commons – intertwined social and ecological collectives – claim voice and rights as agents and subjects” (Boelens et al. 2022, 1141). Consequently, extending legal personhood to rivers, rocks and ecosystems means disrupting the human monopoly on rights. The “river-as-subject ontology” thus calls for scrutinising how, why, and with which effects rivers are approached as subjects (Boelens et al. 2022, 1139). This shift is possible because legal subjectivity is not an ontological truth, but a historical and cultural construction. From this perspective, the rights of nature operate as a conceptual and legal tool for rethinking dominant ontologies grounded in extractive and anthropocentric relations, opening space for more relational and interspecies understanding of the world (Luisetti 2023). Such a vision views humans as part of larger ecological systems, prioritising the well-being of all species in urban and natural areas and reflecting a commitment to multispecies justice. Scholars advocate for moving beyond traditional human-centred frameworks to acknowledge the inherent rights of the Earth Community to exist, thrive, and fulfil their ecological roles, fostering mutual enhancement and resilience.

Christopher Stone’s *Should Trees Have Standing?* (1972) is widely regarded as a foundational text for the rights of nature, arguing that natural entities could be recognised as legal subjects and represented through forms of guardianship. Since the early 2000s, this proposition has been tested through a growing number of legal experiments, particularly in relation to rivers and lagoons. Ecuador’s 2008 Constitution constitutionalised the rights of nature; Colombia’s 2016 Atrato River decision introduced the notion of biocultural rights and mixed forms of representation; Aotearoa/New Zealand’s 2017 recognition of the Whanganui River established a co-governance model grounded in Māori claims and relational ontology; and Indian courts’ short-lived 2017 recognition of the Ganges and Yamuna revealed the institutional and political fragilities of implementation (Burgers, den Outer 2021).³ Rather than forming a unified doctrine, these cases demonstrate legal personhood as a situated and flexible juridical device, capable of reconfiguring responsibility, representation and care in human-more-than-human relations.

In the European context, the Mar Menor lagoon in Spain represents a pivotal and unprecedented development in the institutionalisation of the rights of nature (Omodeo, Consolandi 2025; Pecharroman,

3 Kauffman, C.; Haas C.; Putzer A.; Bajpai S.; Leonard K.; Macpherson E.; Martin P.; Pelizzon A.; Sheehan L. (2025). *Eco Jurisprudence Monitor*. V2. Distributed by the Eco Jurisprudence Monitor. <https://ecojurisprudence.org/initiatives/te-awa-tupua-act-2017/>; <https://ecojurisprudence.org/initiatives/principle-of-environmental-precaution-and-its-application-to-protect-peoples-right-to-health/>.

O'Donnell 2024). Following decades of severe ecological degradation and sustained civic mobilisation, Ley 19/2022 officially recognised the lagoon as a legal subject (Giménez 2023; Ortuño, Giménez 2022; Pecharroman, O'Donnell 2024), marking the first case in Europe in which a complex aquatic ecosystem was endowed with legal personhood. The Mar Menor law explicitly frames legal recognition as a response to systemic ecological crisis, calling for an expansion of responsibility toward natural entities and for new forms of stewardship capable of addressing the limits of existing environmental governance (Epstein et al. 2023). Crucially, the case foregrounds the question of implementation. While legal subjectivity establishes a new normative status for the lagoon, it leaves largely open how such rights are to be interpreted, operationalised and enacted in territorial and spatial terms. In Venice, related initiatives are currently emerging through a broad alliance of citizen groups and interdisciplinary initiatives coordinated through the IDRA network,⁴ which are working toward the development of a Declaration of the Rights of the Venice Lagoon.⁵ The process frames the Lagoon as a socio-ecological entity entitled to legal recognition and explores the legal, institutional and territorial implications of ecological stewardship and more-than-human forms of governance.⁶ More broadly, the growing body of rights-of-nature experiments demonstrates that each recognition is shaped by the specific ecological conditions, political cultures and social struggles in which it emerges, underscoring both the situated nature of legal personhood and the unresolved challenge of translating human legal instruments into effective modes of care for more-than-human entities. This unresolved question of implementation is particularly relevant for spatial and territorial practices, which remain largely underexplored within rights-of-nature debates despite their central role in shaping ecological relations, patterns of inhabitation and long-term territorial transformation.

4 IDRA (Iniziativa per i Diritti delle Reti d'Acqua) is an activist coalition of citizen groups, researchers and cultural initiatives engaged in the protection and legal recognition of the Venice Lagoon – aimed at developing legal, institutional and territorial frameworks for recognising the Lagoon as a subject of rights.

5 The Declaration of the Rights of the Venice Lagoon was first publicly presented at Bocciofila San Sebastiano in Venice in November 2025 as part of an ongoing interdisciplinary and civic process coordinated through the IDRA network.

6 See, for example, the public programme *GENS – Public Programme Workshops* organised during the 2025 Venice Biennale, which debated several of the core principles informing the ongoing Declaration of the Rights of the Venice Lagoon process, including legal recognition, ecological stewardship, socio-ecological justice and the territorial implications of recognising the Lagoon as a rights-bearing entity.

4 Objectives, Research Question & Hypothesis

This contribution investigates the implications of designing with rights of nature as an operative framework, moving beyond legal or symbolic recognition to examine their spatial and territorial consequences. In particular, it examines how the conferral of legal rights on the Venice Lagoon could be operationalised through spatial practice, guided by the central research question: ‘If the Lagoon is recognised as a legal subject, how might its rights manifest in space?’

Anchored in this question, the study advances the hypothesis that recognising the Lagoon as a subject of rights could enable the reactivation and reconfiguration of ‘new-old’ social and productive functions within the Lagoon and its islands – operational forms that are compatible with the Lagoon’s socio-ecological integrity and capable of generating non-extractive forms of value over time. Through a design-led inquiry, the paper tests whether spatial design can support, embody and materialise the Lagoon’s rights by experimenting with the reconfiguration of selected territorial practices across the Lagoon. Grounded in a relational understanding of the Lagoon as a shared socio-ecological system shaped by heterogeneous human and more-than-human relations, the research assesses whether design can operate as a mediating practice between legal recognition and territorial transformation, contributing to new legal, spatial and cultural grounds for reconciling existing uses with ecocentric values.

5 Methodology: Translating Rights of Nature into Spatial Practice

Building on the theoretical framework outlined above, the methodology investigates how the legal recognition of the Venice Lagoon as a subject of rights might be operationalised through spatial practice. As outlined earlier, the aim is to transform the legal language of laws into spatial signs, imagining the Lagoon no longer as a passive landscape but as a living entity entitled to exist, nourish, and regenerate. Therefore, its spatial, ecological, and social arrangements must reflect and respect this new status. In this context, the prospective granting of legal rights to the Venice Lagoon is treated not as a prediction but as a working hypothesis. Rather than prescribing definitive solutions, the aim is to test a method for understanding how such a legal transformation might be translated into design practice.

5.1 Framing the Lagoon as a Rights-Bearing Composite Entity

To operationalise this framing, the methodology proceeds through two parallel analytical moves. The aim is to develop an interpretive framework, rather than a set of fixed spatial prescriptions, capable of comparatively assessing how existing territorial practices relate to the Lagoon's socio-ecological integrity and rights-oriented principles. First, it maps the functions currently operating within the Lagoon – including productive, social, extractive and commercial activities – to understand how the Lagoon is inhabited, used and instrumentalised today. This mapping raises key questions: are these functions compatible with a rights-of-nature framework? Can they be maintained, transformed, or should they be replaced?

Second, the methodology identifies and maps the constitutive elements of the Lagoon as a rights-bearing entity, including its morphologies, waters, flora, fauna and human communities. The Lagoon is thus conceptualised as a plural and relational body, whose legal personhood is embodied in both its components and the relations between them. Upholding the Lagoon's rights, therefore, entails ensuring that the practices it hosts do not undermine the integrity of these constituent elements.

These elements thus provide the basis for assessing spatial compatibility. A matrix of compatibility and incompatibility is constructed from the two sets, relating each function to the Lagoon's constituent elements through an interdisciplinary socio-ecological assessment informed by rights-of-nature principles, ecological sustainability criteria and considerations of long-term coexistence, resilience and non-extractive territorial relations. These two analytical sets – functions and constituent elements – translate the Lagoon's rights into evaluative criteria for examining existing uses. Compatibility is not understood here as fixed or absolute, but as relational and variable, depending on the intensity, spatial distribution, operational forms and long-term socio-ecological effects of specific modes of territorial use. This relational assessment does not rely on economic performance or political expediency, but on ecological and social compatibility with the Lagoon understood as a historically evolving and adaptive socio-ecological entity whose legal subjectivity is inseparable from its ongoing processes of transformation, inhabitation and ecological change. The matrix allows for a comparative and situated evaluation of the degree to which functions support, conflict with, or undermine the Lagoon's ecological resilience, biodiversity, hydro-morphological balance and capacity to sustain long-term socio-ecological relations. On this basis, three functions are selected for further exploration: one assessed as broadly compatible with the Lagoon's rights-based framework, one requiring substantial transformation, and one

considered structurally incompatible under its current operational conditions. The subsequent design phase is structured around these three cases and the spaces in which they operate, and is guided by three corresponding design principles: expand, transform and replace. This methodology is explicitly exploratory and does not claim completeness or neutrality. The three functions were selected as a situated methodological device through which to explore the implications of the proposed framework, drawing on field experience, research interests and the exploratory aims of the study. Other combinations and interpretations could be tested using the same framework. What matters most here is the method itself: an interpretive and relational tool for re-evaluating existing practices through different socio-ecological and rights-oriented perspectives.

5.2 Mapping Existing Functions

The methodological process begins with the identification and mapping of the functions currently operating within the Venice Lagoon and its islands. These practices describe how the Lagoon is inhabited, used, traversed and instrumentalised in the present, and provide a baseline for assessing its compatibility with a rights-of-nature framework.

To facilitate analysis, the identified socio-spatial functions are grouped into six broad functional domains [fig. 1], reflecting different modes of interaction between human activities and the Lagoon environment: Traditional & Productive Activities, Social & Cultural Activities, Industry & Energy, Tourism, Commerce & Trade, and Transport & Logistics. This classification is not intended to be exhaustive or definitive; rather, it serves as an analytical device for organising a heterogeneous set of practices into comparable categories. By abstracting functions from their specific locations and actors, the mapping enables a systematic evaluation of their spatial and ecological implications in subsequent analytical steps.

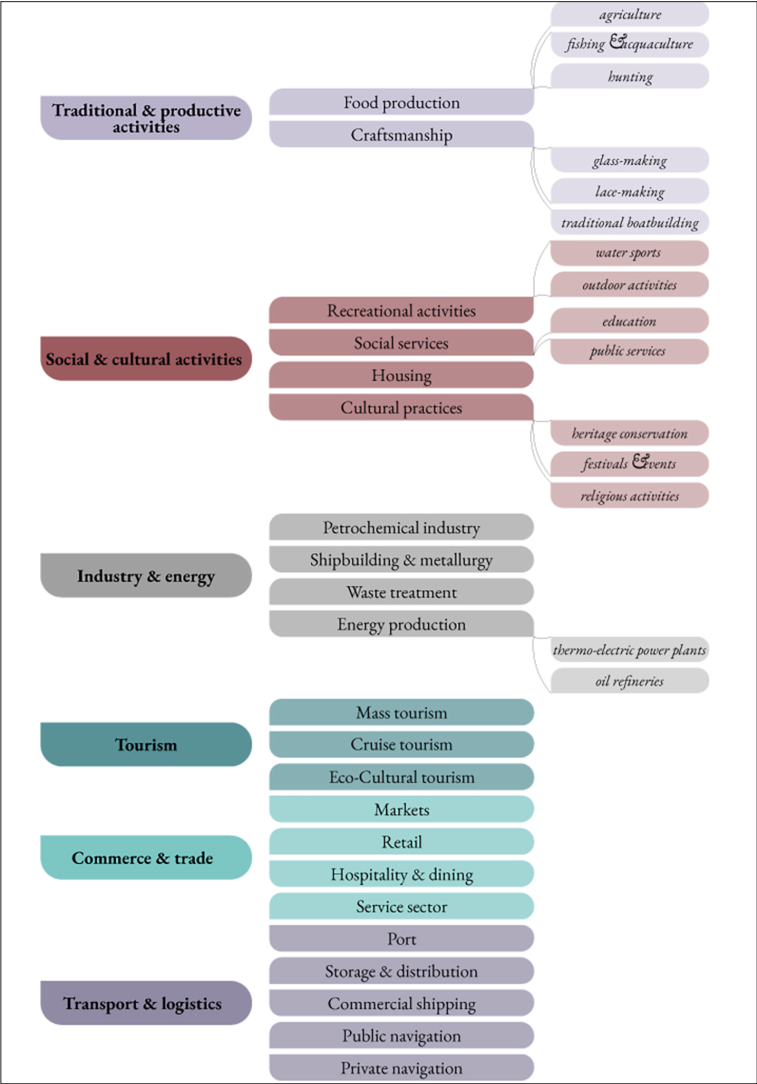


Figure 1 Classification of the existing functions in the Venice Lagoon. 2025.
Digital diagram created by Eleonora Anghileri

5.3 Identifying the Constitutive Elements of the Lagoon

To assess the compatibility of existing modes of use with the Lagoon’s ecological balance, the methodology proceeds by identifying the constitutive elements of the Venice Lagoon as a rights-bearing entity, drawing on both ecological and socio-cultural perspectives. Rather than treating the Lagoon as a homogeneous body, this step conceptualises it as a plural and relational assemblage, composed of interdependent human and more-than-human elements whose integrity underpins its legal subjectivity.

For the purposes of the analysis, five primary sets of elements are identified, representing the Lagoon’s diverse forms of life and material conditions [fig. 2]. These categories constitute an analytical framework developed to make the Lagoon’s socio-ecological interdependencies legible. While intended to provide a comprehensive basis for assessment, the framework remains open to refinement through further interdisciplinary research.

These include:

- Morphology, with particular attention to the hydrogeological features that structure the Lagoon’s spatial and ecological dynamics;
- Physical components, primarily water, understood as both material substrate and active ecological medium;
- Non-human lifeforms, divided into flora and fauna that sustain the Lagoon’s biological processes;
- Anthropic elements & human communities, encompassing practices, settlements and infrastructures embedded within the Lagoon system.

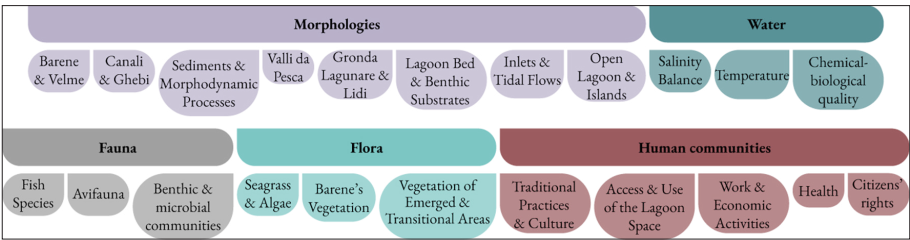


Figure 2 Classification of the Lagoon’s constitutive elements. 2025.
Digital diagram created by Eleonora Anghileri

These elements are not considered independently, but as mutually constitutive components of a shared socio-ecological system. Within this framework, the Lagoon’s legal personhood is embodied in its parts, and upholding its rights requires ensuring that the functions it hosts do not compromise the integrity of these constituent elements.

5.4 Constructing the Compatibility Matrix

The compatibility matrix [fig. 3] functions as the central analytical tool of the methodology, translating the rights of nature framework into an operational tool for spatial evaluation. It is used to assess the compatibility of existing functions with the Venice Lagoon, understood as a juridical, relational, and socio-ecological entity. Each function is evaluated against its constituent elements, not based on economic viability or political priority, but by asking whether it respects, sustains, or undermines the components that together constitute the Lagoon’s legal personality. In this sense, the matrix draws on concepts such as ecological care and long-term sustainability, using them as criteria to evaluate whether these functions contribute to the regeneration and ongoing stewardship of the Lagoon’s ecosystems and communities. The Lagoon is never understood as a fixed condition but as an evolving reality; the matrix therefore also considers the transformative potential of functions, assessing their capacity to support adaptive and future-oriented socio-ecological relations.

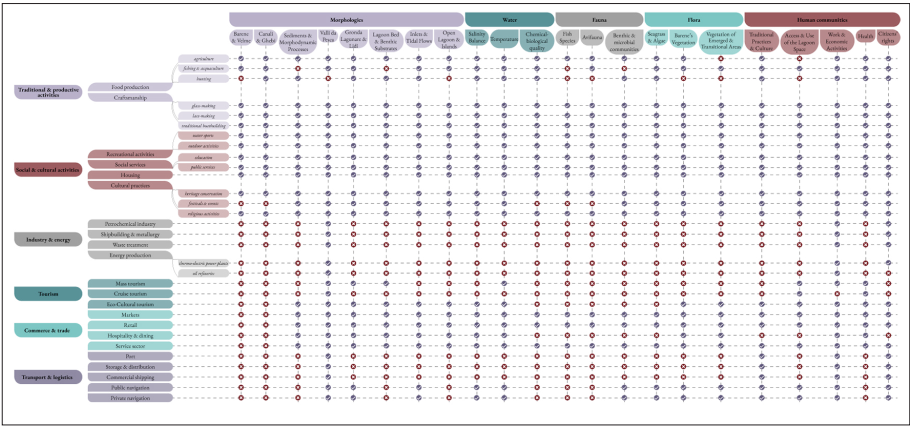


Figure 3 Matrix of compatibility and incompatibility, 2025.
Digital diagram created by Eleonora Anghileri

In this sense, this method operationalises the rights of nature by applying them as criteria for appraising and reconfiguring uses and activities. Functioning as a decision-support instrument, the matrix enables the classification of functions according to their degree of compatibility with the Lagoon’s constituent elements. By considering both the number and the nature of compatibilities and incompatibilities, functions can be differentiated into those that can persist, those requiring transformation, and those that are

incompatible with the Lagoon as a living legal subject and therefore subject to phase-out.

Each intersection within the matrix represents a qualitative judgement of compatibility, informed by a combination of literature review, field observations, interviews and insights drawn from local knowledge, including the perspectives of long-term residents and community elders. While these judgements are necessarily situated and interpretive, the matrix provides a transparent and systematic framework for articulating how rights of nature can guide spatial decision-making.

The matrix does not claim scientific neutrality or objective measurement, but operates as a situated interpretive framework through which ecological, social and spatial compatibilities are comparatively assessed.

5.5 From Evaluation to Design Principles

The compatibility assessment developed in the previous section serves not only as an evaluative tool but also as a basis for informing design decisions. Building on the results of the matrix, this phase explores how different levels of compatibility with the rights of nature framework can be translated into spatial interventions. The following sections outline the process through which design principles are derived, applied to selected functions and integrated into a broader systemic strategy for the Venice Lagoon.

5.5.1 Deriving Design Principles from the Compatibility Matrix

Building on the compatibility matrix, the methodology translates evaluation into action by deriving design principles directly from the rights-oriented assessment of existing functions, one compatible, one requiring transformation, and one incompatible with the rights of nature framework [fig. 4]. This selection is not intended to privilege specific functions or to propose exhaustive or prescriptive outcomes. Rather, it operates as a methodological device for testing how different degrees of compatibility generate differentiated spatial responses.

While alternative combinations could be explored, the decision to work across the three categories – compatible, transformable and incompatible – allows the experiment to examine how rights of nature can inform distinct modes of spatial intervention.

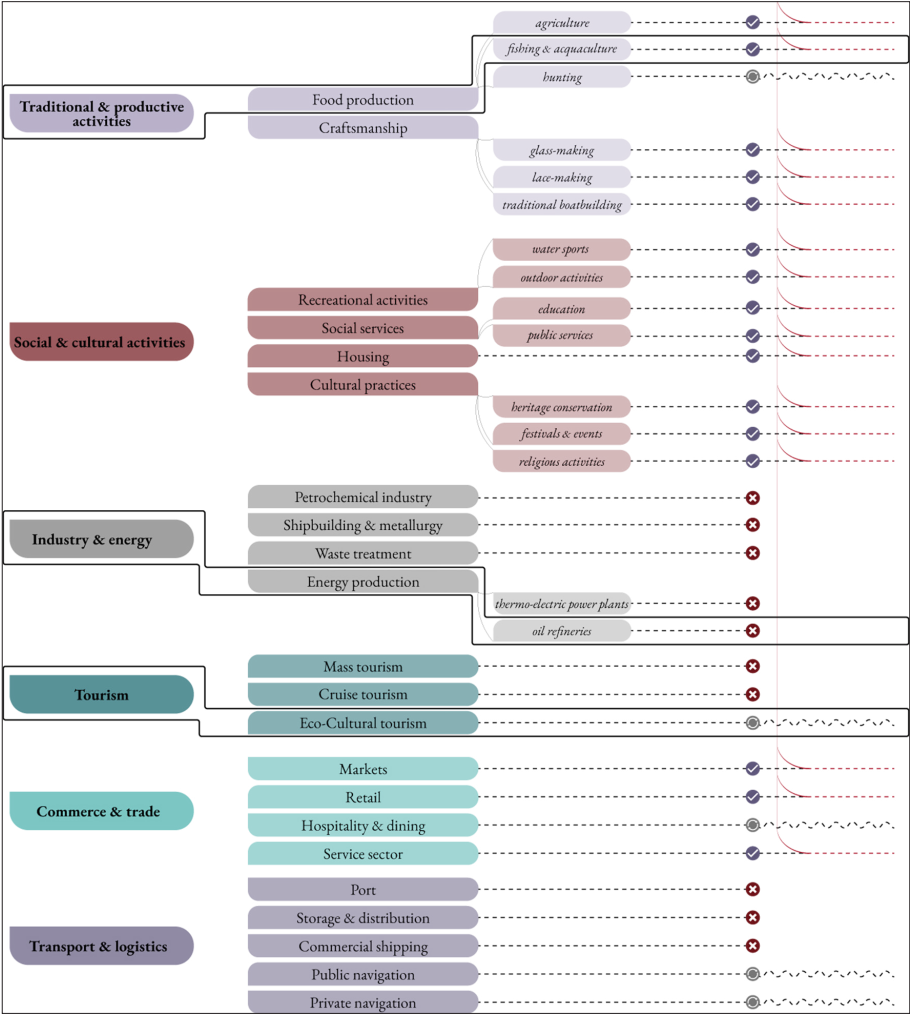


Figure 4 Matrix of compatibility and incompatibility: results and selection of the functions for the design experiment. 2025. Digital diagram created by Eleonora Anghileri

5.5.2 Design Principles

From this evaluation, three corresponding design principles are defined – expand, transform and replace – each articulating a specific relationship between function, space and rights, informed by an understanding of what the function is and where it could or should take place [fig. 5].

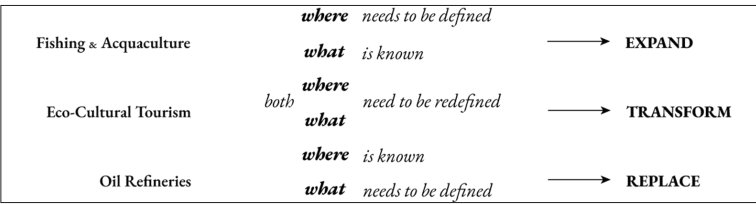


Figure 5 Logic diagram for the definition of design principle. 2025.
Digital diagram created by Eleonora Anghileri

These principles guided the design decisions related to the function itself and the spaces it occupies. The three functions are:

- Expand: Fishing and aquaculture, intended in their artisanal and sustainable forms, are identified as compatible with the Lagoon’s rights-based ontology. In this case, the function itself is not questioned; the design challenge lies in defining where and how it can be spatially expanded to regenerate the Lagoon’s ecology and economy, building upon existing practices.
- Transform: Eco-cultural tourism, recognised as a function with regenerative potential but currently characterised by extractive forms and uneven spatial concentration. Here, both the nature of the activity (what) and its spatial distribution (where) are reconfigured to foster relationships of care, reciprocity and long-term stewardship.
- Replace: Oil refineries, assessed as incompatible with the Lagoon, are understood as a living legal subject. While the spatial location is well defined, design operates through replacement, assuming the progressive phase-out of the original function and the reimagining of sites and infrastructures through non-extractive alternatives.

Across all three principles, the design phase is guided by a shared spatial question:

‘How can the reconfiguration of functions (*what*) and the spaces they occupy (*where*) contribute to restoring ecological, social and cultural value to the Lagoon, while countering processes of environmental degradation and socio-cultural erosion?’

5.5.3 Design Goal and Systemic Logic

Although developed through distinct principles, the three functions are treated as interconnected components of a systemic design experiment. As seen, each is treated according to a specific design principle; nevertheless, their development is not independent within the project's methodological framework. Among them, fishing and aquaculture – already aligned with the Lagoon's rights-based ontology – act as a generative reference, grounding the experiment in practices shaped by local knowledge, ecological reciprocity and non-extractive economies. It provides a valuable framework of practices, relationships and economies grounded in local knowledge, non-extractive models and ecological reciprocity. This logic informs both the transformation of eco-cultural tourism and the replacement of fossil-based industrial activities [fig. 6]. In this way, the experiment tests spatial scenarios and imagines a broader transition in which existing, compatible practices become seeds for systemic change. This systemic coherence is directed toward a shared design goal: integrating a new economic model that reinvests value in the Venice Lagoon by creating employment opportunities and fostering independence, offering a sustainable alternative to extractive economies that conflict with the idea of the Lagoon as an entity with rights, and ensuring the protection of the Lagoon's environment and socio-cultural dimension.

By aligning all interventions with this shared objective, the experiment assesses not only spatial feasibility but also the potential for long-term socio-ecological sustainability grounded in relational framework design principles.

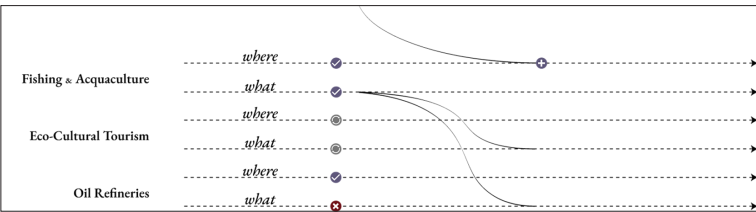


Figure 6 Systemic design logic of the project. 2025.
Digital diagram created by Eleonora Anghileri

6 Design Strategies: Illustrating a Rights-Based Spatial Method

The following strategies present a spatial articulation of the methodology described above [fig. 7]. They show how the principles derived from the compatibility matrix – expand, transform and replace – can be applied to different functional domains within the Venice Lagoon. The strategies are not intended as comprehensive project proposals, but as situated design tests that explore how a rights-of-nature perspective may inform spatial decisions across a complex socio-ecological system. While each strategy addresses a specific set of practices and spaces, they are conceived as interrelated and oriented toward a shared objective: reinvesting ecological, social and economic value within the Lagoon through non-extractive and locally grounded forms of territorial organisation, re-establishing socio-ecological reciprocity, creating local employment opportunities and encouraging new forms of inhabitation and stewardship.

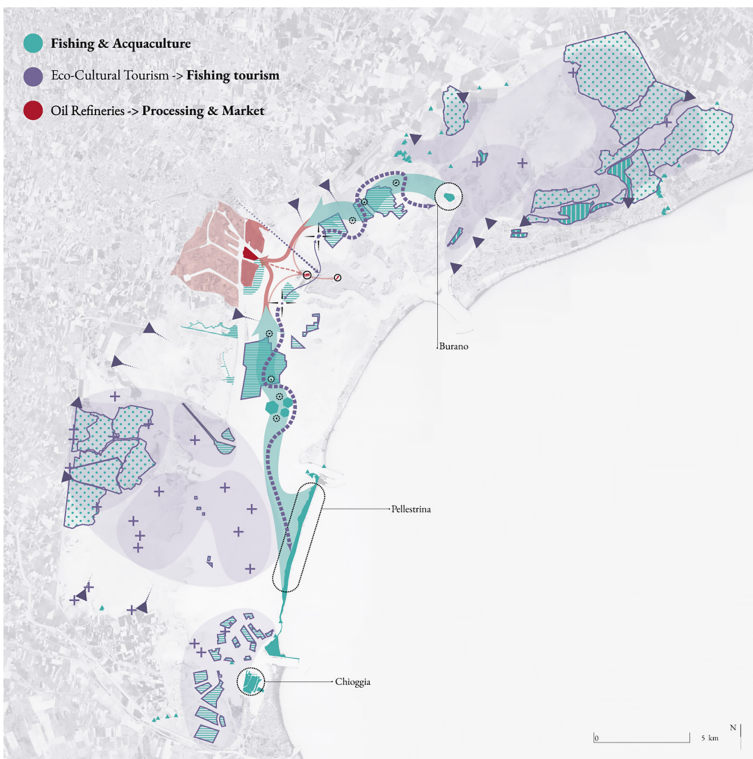
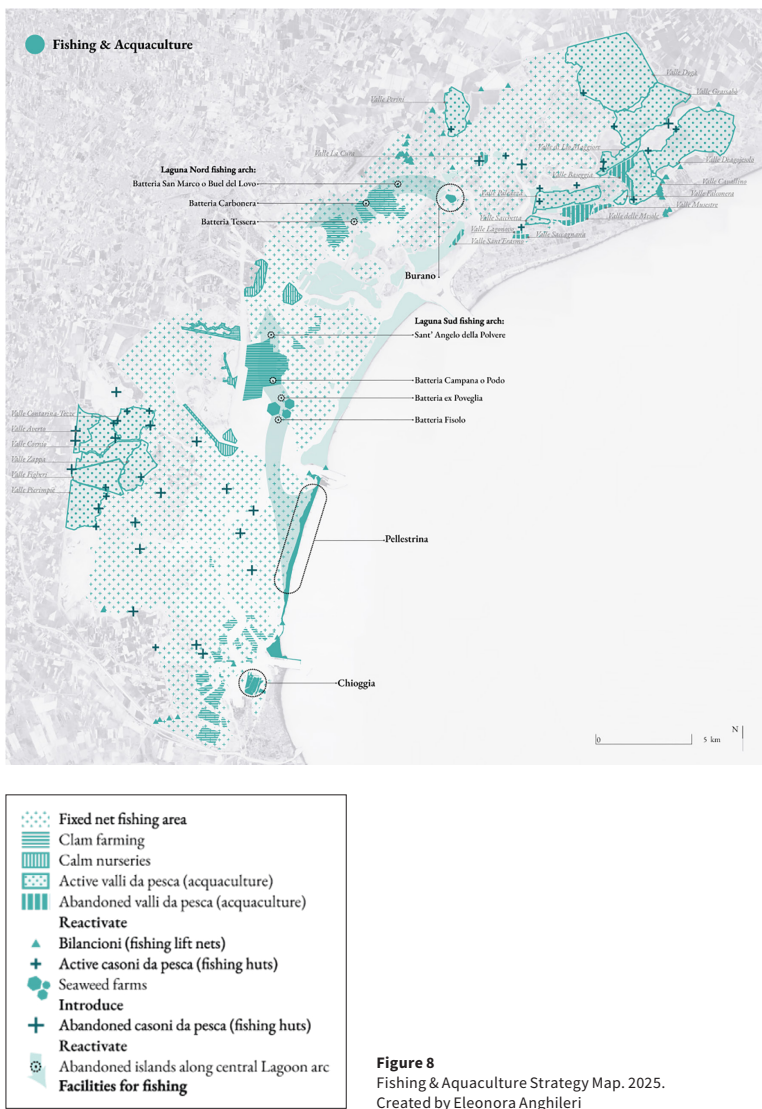


Figure 7 Strategy Map for the Venice Lagoon. 2025.
Created by Eleonora Anghileri

In order to reconstitute this value, the project deliberately focuses on the widespread system of abandonment that currently characterises large areas of the Lagoon, a phenomenon extensively examined throughout the research. This condition is visible in a constellation of abandoned islands, disused fishing huts, underutilised fish farms, and neglected Lagoon sectors. Rather than being regarded as marginal spaces, these voids are reinterpreted as potential infrastructures capable of supporting new forms of regeneration. The three strategies are woven around a central arc formed by a sequence of abandoned islands and former military batteries extending along a north-south axis, now envisioned as a new infrastructural backbone, intended to catalyse lagoon-wide regeneration processes.

6.1 Fishing and Aquaculture (Expand)

Fishing and aquaculture constitute the function most closely aligned with the Lagoon, understood as a rights-bearing entity. Deeply embedded in the Lagoon's socio-ecological history, these practices have long operated through forms of reciprocity between human activity and environmental conditions. They provide a reference for exploring how rights-compatible functions can be spatially supported rather than constrained. Applying the principle of expansion, the strategy focuses on reinforcing existing practices and their spatial conditions, rather than introducing new productive logics [fig. 8]. Expansion is understood as selective and context-dependent: it involves the reactivation of underused productive landscapes and infrastructures – such as abandoned fish farms, fishing huts and islands – together with the adaptation of practices to ongoing ecological change. This includes integrating activities such as algae cultivation or the harvesting of invasive species, interpreted as continuations of local knowledge rather than technological substitutions. Through this approach, fishing and aquaculture are treated as a stabilising and generative component of a rights-based territorial configuration.



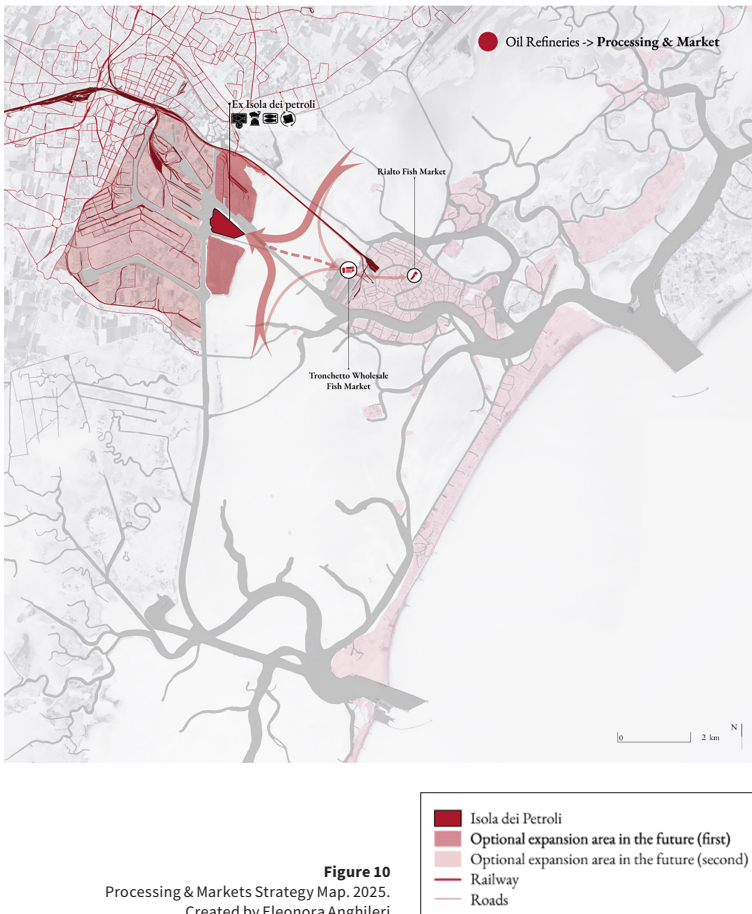
6.2 Fishing Tourism (Transform)

The second strategy addresses tourism, a function characterised by both economic relevance and significant spatial and ecological pressure [fig. 9]. Through the principle of transformation, the strategy reworks existing forms of eco-cultural tourism by embedding them more directly within the Lagoon's productive and social landscapes. Transformation operates on two levels. First, it redefines tourism activities by linking them to fishing and aquaculture practices, emphasising learning, participation and proximity to everyday work rather than consumption-oriented experiences. Second, it reconfigures the spatial distribution of tourism by shifting away from concentrated flows centred on Venice's historic core toward more dispersed, small-scale, water-based routes across the Lagoon. In this configuration, tourism is integrated as a complementary activity that supports local livelihoods, redistributes presence and helps maintain socio-ecological relations consistent with the Lagoon's rights.

6.3 Processing and Markets Strategy at Porto Marghera (Replace)

The third strategy applies the principle of replacement to structurally incompatible activities under current operational conditions with the Lagoon's legal and ecological integrity [fig. 10]. Focusing on the industrial area of Porto Marghera, historically associated with fossil-based production and logistics, the strategy explores how extractive infrastructures might be progressively decommissioned and reassigned to new roles.

Replacement is approached as a process of spatial and functional reprogramming rather than erasure. Former industrial sites are reimagined as facilities for processing, storing and distributing fish and aquaculture products originating within the Lagoon, supporting cooperative and regionally embedded economic models. This reorientation reconnects production, transformation and consumption, reinforcing material links between the Lagoon and the urban system it sustains. More broadly, the strategy tests whether areas shaped by industrial production can be repositioned within a post-extractive trajectory aligned with the recognition of the Lagoon as a subject of rights. In this sense, the strategy approaches post-extractive transition as a reconfiguration of territorial relations of production, value and ecological responsibility, rather than a simple geographical shift in industrial production and environmental burdens.



6.4 Design Strategies and Methodological Scope

Considered together, the three strategies demonstrate how a rights-based and sustainability-oriented evaluation can inform differentiated spatial responses without prescribing a fixed territorial outcome. By expanding compatible practices, transforming ambivalent ones and replacing incompatible activities, the design experiment examines the capacity of spatial practice to operate as a mediating field between legal recognition and territorial change. In this sense, design is used to make visible and negotiable the spatial implications that the rights of nature entail for sustainability and ecological resilience.

7 Discussion & Conclusions

This paper addressed a central concern: how to safeguard the Venice Lagoon and its islands from ongoing processes of environmental degradation and socio-cultural erosion. It approached this question through the lens of the rights of nature, considering the Lagoon as a potential subject of rights endowed with legal personhood.

Framing the Lagoon as a legal subject is explored here as an alternative mode of protection – one that shifts attention from sectoral regulation toward the spatial and institutional consequences of recognising ecological systems as rights-bearing entities.

Rather than proposing a definitive solution, this paper examined how such recognition could reconfigure the conditions under which space is used, governed and contested. If the rights of nature were to become legally binding, certain practices would no longer be legitimate, while others – often marginalised or in decline – could regain relevance. These ‘new-old’ socio-spatial functions generate value not in extractive terms, but as ecological, cultural and economic presence rooted in care and reciprocity. As these practices become embedded again in the Lagoon’s everyday life, they contribute to a form of collective protection: the Lagoon’s continued inhabitation and use becomes inseparable from its defence.

In this respect, the paper draws a parallel with earlier forms of coexistence between the Lagoon, its communities and governing institutions, in which mutual dependence sustained a fragile but persistent socio-ecological balance. The design experiment developed here suggests that similar dynamics could re-emerge under contemporary conditions, provided that spatial practices are aligned with the recognition of the Lagoon’s rights and material limits based on a community-based and interdisciplinary assessment of environmental conditions. The design strategies discussed – fishing and aquaculture, fishing tourism, and cooperative processing and markets – serve to test this proposition. They suggest that selected functions might be reintroduced or reconfigured to restore ecological and social value within the Lagoon.

However, the main contribution of this research is not in the strategies themselves, nor in their direct applicability, but in the methodological framework through which these strategies were developed. By translating legal recognition into spatial criteria and design principles, the study sought to bridge the language of law and the practices of urbanism. In doing so, it positions spatial practice as a means of rendering the rights of a non-human entity visible, debatable and operational within the territory. Design becomes a field for testing, negotiating and spatially articulating the implications of recognising rights. The strategies should therefore

be read as situated experiments within an evolving field,⁷ rather than as conclusive proposals. More broadly, the paper advances an interpretive methodology for translating rights of nature into spatial criteria, territorial evaluation and design practice.

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Ocean/Sea



Sea. 2026. Acryl on canvas, stainless steel frame, 40 × 60 cm. Berlin. © Jakob Kukula

The North Sea as a Living Marine Democracy

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Abstract By 2045, North Sea governance has shifted from sovereign control to bioregional, multispecies stewardship, recognising the sea as a political subject with agency and rights. This speculative yet plausible vision imagines governance rooted in ecological relationships, interspecies representation, and post-growth economies, informed by emerging legal, scientific, and civic practices. Tracing pathways from present-day initiatives to future institutions, it argues that changing imaginaries is a political tool capable of transforming law, culture, and governance, enabling more just, reciprocal, and regenerative relationships between humans and the living world.

Keywords Bioregional governance. Multi-species stewardship. North Sea. Imaginaries. Rights of Nature.

Summary 1 Imagining the North Sea in 2045. – 2 Bioregional Authority and Interspecies Representation. – 3 More-Than-Human Law and Civic Stewardship. – 4 Relational Geographies and Multispecies Time. – 5 Ecological Literacy as a Civic Learning. – 6 Post-Growth Economies and Interspecies Trusts. – 7 Cohabitation Replaces Ownership in Public Culture. – 8 A Sea of Care: How Reworlding Transformed Ecosystems, Health, and Livelihoods. – 9 Laying the Groundwork: Imagination as Political Tool.



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1 Imagining the North Sea in 2045

By 2045, the governance of the North Sea has been fundamentally reimagined.

Once treated as a transit zone and a commodity to be divided, the sea is now recognised as a living, relational system entangled with human and more-than-human communities. Governance has shifted from national sovereignty to bioregional cooperation, shaped by ecological continuities rather than borders or ownership claims. Technocratic control has given way to plural, biodiverse democracy: decision-making draws on situated knowledges, cultural memory, and multispecies relationships and representation. The sea is no longer an object of management, but a political subject with standing, agency, and voice. Governance follows ecological rhythms such as fish migrations and seabed restoration, guided by long-term responsibility shared across species and generations.

This isn't utopia. It's a vision grounded in many plausible futures.¹

It draws on real-world examples and emerges from the collective labour of artists, ecologists, lawyers, scientists, urbanists, fishers, and policymakers who treated imagination as a political act. It traces shifts in law, culture, and institutions and the new forms of care, belonging, and responsibility they enabled, transforming not only governance, but life itself for humans, species, and ecosystems.

It dares to ask: what could happen if we listened to the sea and governed with, not over it?

1 This piece develops speculative storytelling as a methodological and political practice for operationalising alternative biodiversity governance imaginaries (Haraway 2016; Milkoreit 2017). While existing scholarship has extensively critiqued anthropocentric and neoliberal governance frameworks (Büscher, Fletcher 2020; Celermajer et al. 2021), fewer approaches explore how alternative governance arrangements might become institutionally imaginable, culturally inhabitable, and politically actionable. Focusing on the North Sea and connected water bodies, the piece contributes a prefigurative approach to re-imagining governance by assembling existing governance experiments, legal innovations, ecological practices, and emerging political trajectories into a situated future-oriented account of a living marine democracy (Yates 2015). In doing so, it advances anticipatory governance and future-thinking by treating the future not as something to predict, but as something to inhabit, contest, and collectively reimagine (Hopkins 2019; Moore, Milkoreit 2020).

2 Bioregional Authority and Interspecies Representation

Political authority in the North Sea flows through the Interspecies North Sea Assembly,² a transboundary governance body with legal standing, composed of representatives from more-than-human communities [fig. 1]. The Assembly's composition is not fixed but evolves over time in response to changing ecological relationships and governance needs. Seats are held by coastal municipalities, marine cooperatives, indigenous assemblies, and youth forums, as well as migratory fish schools, kelp forests, acoustic zones, and sediment communities, and representatives connected to the rivers, estuaries, wetlands, and coastal catchments that continually shape and sustain the North Sea.³

Representation is not symbolic but material: fish representation is grounded in spawning data, migration patterns, fisher observations, hydroacoustic monitoring, and emerging interspecies communication research. Inspired in part by initiatives such as Project CETI, AI is used cautiously to detect multispecies rhythms and patterns of communication, not as a substitute for local and embodied knowledge, but alongside it. Authority is entrusted to those with the closest and most sustained relationships to each entity, and decisions are no longer made solely in distant courtrooms, but within the ecologies they concern. The Assembly draws on legal precedents from across the globe. Inspired by the Whanganui River in Aotearoa,⁴ where rulings are made on the riverbank, governance here unfolds in place:

2 This speculative element draws from the real-world work of the Embassy of the North Sea, an interdisciplinary initiative founded in The Hague in 2018. The Embassy serves as a platform for exploring how more-than-human life – such as herring, algae and porpoises – might be politically represented. Through collaborations with artists, scientists, and legal thinkers, the Embassy challenges anthropocentric governance and investigates the possibility of recognising the North Sea as an autonomous legal, cultural and political entity. The images included here reference the Embassy's use of diplomatic language and symbolism to reimagine civic and ecological relationships with the sea.

3 This speculative Interspecies North Sea Assembly draws inspiration from the Embassy of the North Sea's Whose Ocean? project, an experimental assembly developed with Utrecht University and Casco Art Institute to explore how the ocean might be meaningfully represented in international law, diplomacy, and policy. Held in January 2025, the assembly invited more than 230 participants to rewrite parts of the UN declaration *Our Ocean, Our Future, Our Responsibility* from the perspectives of seagulls, jellyfish, and polymetallic nodules, after scientific presentations on these entities. Rather than treating the ocean as an object of state or human stewardship, the project tested how oceanic life, materialities, and relations might enter political deliberation. More information on the assembly at: Embassy of the North Sea (s.d.). "Whose Ocean? Exploring Ocean Stewardship Through an International Assembly". <https://www.embassyofthenorthsea.com/projecten/whose-ocean/>.

4 On the Whanganui River/Te Awa Tupua as a legal person and its significance for relational, place-based river governance in Aotearoa New Zealand see Bosselmann, Williams 2025.

in fishing harbours, estuarine observatories, wetland shelters, river confluences, and reef monitoring stations linked across the North Sea and its connected waterways. The sea is a co-constituent of political life, and governance happens with it.



Figure 1 Foundation of the Embassy of the North Sea. 2018. The Hague.
Photograph by Cleo Campert, © Embassy of the North Sea

3 More-Than-Human Law and Civic Stewardship

Across the North Sea region, experimental legal and civic models are common. In Amsterdam, eel guardians⁵ manage aquatic passageways using smart infrastructure aligned with migratory patterns. In Helgoland, seabird advisors⁶ contribute nesting data to marine planning.

Judicial processes have evolved significantly. While the global movement to recognise the rights and agency of more-than-human entities had been gaining ground for decades, a turning point for the North Sea came on 6 October 2022, when coral soundscapes – one silent, one teeming with life – were heard as a legal testimony in a Moot Court in the Peace Palace in The Hague⁷ [figs 2-3]. This moment widened the legal imagination, opening new questions about who holds standing in environmental governance.⁸

5 This example draws on *A Voice for the Eel*, a project by the Embassy of the North Sea that brought together artists, scientists, and sociologists to explore the life of the European eel (*Anguilla anguilla*) in and around Amsterdam. The project investigates how infrastructure, policy, and human activity shape the eel's environment, with the aim of generating new forms of cohabitation and proposals for better representation of the eel in urban planning and governance. View full information on the project at: <https://www.embassyofthenorthsea.com/projecten/stem-voor-de-paling/>.

6 This example draws on the long-standing ornithological research conducted on Helgoland, where the Institute of Avian Research 'Vogelwarte Helgoland' operates a permanent island station. Researchers there have studied bird migration and seabird ecology for over a century, contributing extensive data on migratory patterns and the impacts of offshore wind energy development (Hüppop, Hüppop 2011). Website of the Institute of Avian Research: <https://ifv-vogelwarte.de/institut>.

7 The Embassy of the North Sea organised a Moot (or practice) Court on 6 October 2022 in the Peace Palace in The Hague. This legal exercise was an opportunity to examine how non-human voices can be heard in a courtroom. During the experiment, the North Sea requested the Dutch government to grant it a declaration of right. The North Sea no longer wishes to be treated as an object bound by the decisions of others, but rather wants to relate to the Dutch state as an independent entity. Human and non-human witnesses were called to speak on behalf of various facets of the North Sea. They argued that the North Sea is ineffectively represented within existing laws and regulations. This practice court is inspired by worldwide developments relating to the Rights of Nature, which now counts over four hundred legal and political cases around the globe. To learn about this movement, order the *Compendium Rights of Nature – Case Studies from Six Continents* here: <https://embassyofthenorthsea.com/product/dfdffd/#undefined>. The Spanish parliament, for example, passed a law in 2022 that made the highly polluted Spanish lagoon Mar Menor a legal entity: a first in Europe. See Embassy of the North Sea (s.d.). "Moot court in the Peace Palace". <https://www.embassyofthenorthsea.com/moot-court-in-the-peace-palace/>.

8 This shift also resonates with emerging work on hydrojustice, which reframes justice not as an exclusively human legal arrangement, but as something constituted through the relational and material entanglements of aquatic worlds (Philippopoulos-Mihalopoulos 2025).



Figure 2 Moot Court in the Peace Palace. 2022. Peace Palace, The Hague, Netherlands.
Photograph by Cleo Campert, © Embassy of the North Sea



Figure 3 Horse mussel reef (*Modiolus modiolus*). © Jose M. Marinas Franco

In the North Sea, this shift redefined the grounds of legal participation. Today, courts routinely consider ecological memory and nonhuman testimony. As I write on Wednesday, 3 May 2045, the Interspecies Assembly meets at the North Sea Pavilion in Scheveningen.⁹ Hydrophone archives echo alongside tide logs and oral histories. Councillors – eel stewards, seal guardians, coastal mayors – interpret live sonic data. Shrimp crackles suggest reef recovery. These soundscapes are not supporting data, but testimony. Ecosystems no longer speak only when humans are harmed. They speak with standing, and with continuous authority.

Over time, diverse approaches have emerged to engage more-than-human agency and representation – not by claiming to fully understand or speak for other species, but by creating space for their presence and signals to inform decisions. These practices recognise that we cannot fully know other ways of being, but by attempting to listen, we confront the epistemic boundaries of human governance and create space for new modes of attention, accountability, and relational knowledge to emerge.

4 Relational Geographies and Multispecies Time

The remapping of political authority is redrawing the geography of governance, from Exclusive Economic Zones (EEZs) to Relational Ecological Corridors (RECs),¹⁰ where jurisdiction follows the movement and rhythms of ecosystems. Geography is no longer mapped primarily through sovereign divisions, but through more-than-human patterns of movement, dependency, and relation, including eel migrations, herring spawning grounds, sediment drift, seasonal upwellings, migratory flyways, and acoustic territories. Rooted in bioregional thinking, governance is organised not around fixed territorial borders, but around the ecological continuities

9 This speculative institutional arrangement draws on emerging work in more-than-human democracy and ecological representation, including *Whose Ocean? Exploring Ocean Stewardship through an International Assembly* by the Embassy of the North Sea, Bruno Latour's notion of a 'Parliament of Things' (1993), Eva Meijer's work on multispecies assemblies and political voice (2025), and collaborative explorations of more-than-human democratic innovations developed by *Living Imaginaries*, University of Westminster, and the Centre for Deliberative Democracy at the University of Canberra.

10 This framing draws from established scholarship in human geography that conceptualises space not as a fixed container, but as relationally produced through socio-ecological interactions (see Massey 2005; Whatmore 2002).

linking rivers, estuaries, coastlines, currents, and seabeds across the North Sea basin¹¹ [fig. 4].

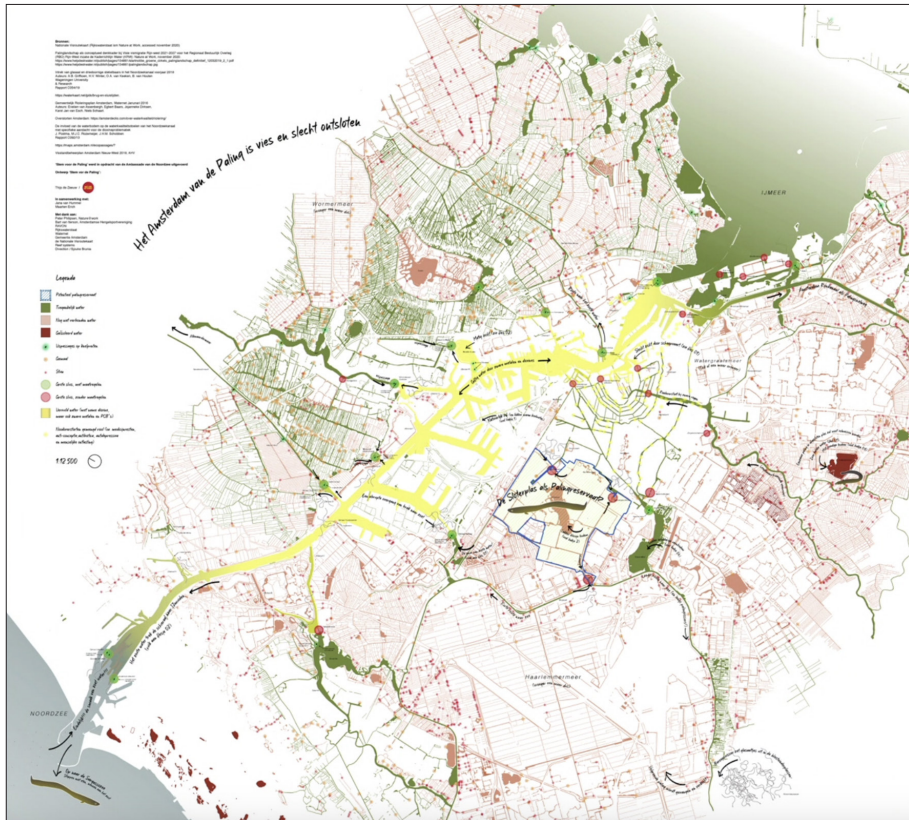


Figure 4 Thijs de Zeeuw, *The Eel's Perspective: An Ecological Cartography of Amsterdam's Waters*. 2021. Ecological cartography. Amsterdam, Netherlands. Map by Thijs de Zeeuw for A Voice for the Eel/Embassy of the North Sea, © Embassy of the North Sea.

This map reimagines Amsterdam's aquatic territory through the senses and movements of the European eel. It discards human-centric borders and utility zones in favour of eel-accessible corridors, blocked passages, substrate types, and pollution gradients – from the brackish stagnation of the Ouderkerkerplas to the flow patterns of urban sewers. Rather than marking ownership or economic value, the map visualises permeability, habitability, and harm. It offers a sensory and spatial grammar rooted in the eel's lifeworld – a political language not of control, but of cohabitation. See Embassy of the North Sea (2020). "A Voice for the Eel".

<https://www.embassyofthenorthsea.com/projecten/stem-voor-de-paling/>

11 Inspired by the contemporary re-emergence of bioregional thinking through initiatives such as Dark Matter Labs' Bioregions project and the Bioregional Learning Centre, which explore how governance, stewardship, and democratic participation might be reorganised around watersheds, foodsheds, ecosystems, and relationships of interdependence spanning human and more-than-human communities.

Offshore wind infrastructure, once driven by efficiency and scale, is now shaped through ecological cohabitation. Predictive models¹² integrate layered, site-specific data, including marine mammal presence, water conditions, and ecosystem dynamics to guide turbine placement, maintenance, and operation in response to more-than-human life. Planning no longer follows generic risk templates but begins with the lived, sensory, and temporal patterns of local species and the specificities of each ecosystem. Energy governance is no longer imposed on marine environments but emerges in dialogue with them.

Time has also shifted. Legal and planning frameworks no longer follow electoral calendars or fiscal quarters. Instead, they move with multispecies rhythms: cod spawning, kelp recovery, seabird nesting. Policy reviews include ecological memory – sonic, tactile, and migratory – documents carry interspecies consultation records¹³ and time scales: intertidal, generational, geological.

12 This future imaginary draws on emerging research at the intersection of data science, marine ecology, and energy systems – particularly models developed by Dr. Aziz Ezzat and colleagues that combine glider-detected whale acoustics, oceanographic data, and environmental forecasts to guide offshore wind siting and operation (Jiaxiang et al. 2024). This vision expands on that work, imagining how such tools could evolve beyond mitigation toward participatory, multispecies planning rooted in ecological rhythms and interdependence.

13 This speculation draws on real-world practices of interspecies governance. In 2023, Moral Imaginations and Policy Lab convened the UK government’s first Interspecies Council, an experimental deliberative forum along the River Roding, where participants spoke and reasoned from the perspective of local nonhuman species to inform freshwater decision-making. In 2025, Moral Imaginations further advanced this work by submitting the first interspecies consultation feedback to the UK Department for Environment, Food and Rural Affairs (DEFRA) in response to its Land Use Consultation. These initiatives highlight how more-than-human perspectives could be further integrated into policy processes, challenging anthropocentric norms and expanding the ethical scope of governance. See Tickell, P. (2023). “Imagination Activism with policy makers: The River Roding Interspecies Council”. <https://moralimaginations.substack.com/p/moral-imaginations-hosts-an-interspecies>.

5 Ecological Literacy as a Civic Learning

These transformations rest on institutions that cultivate the capacity to hold them. The Dogger Bank School,¹⁴ a network of civic and ecological campuses, trains both youth and elders alike in interspecies law, restorative ecological practice, and participatory governance [fig. 5]. Students work with hydrophone archives, and draft policy briefs with seaweed cooperatives. Governance here is an art of attention, practiced collectively, among barnacles and mayors alike.¹⁵

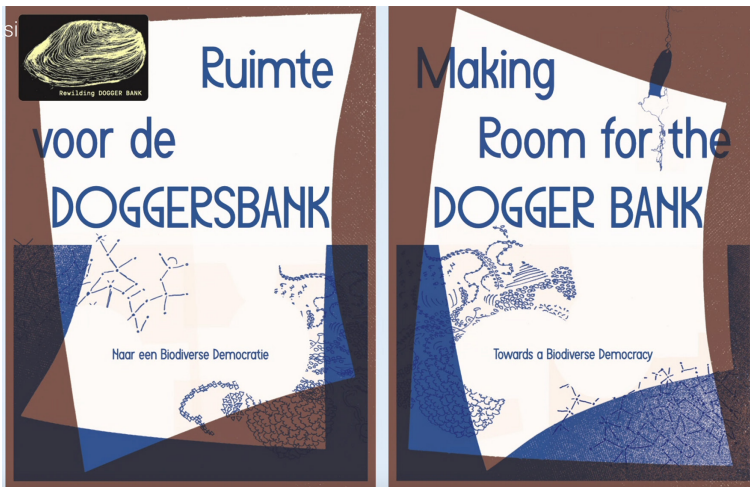


Figure 5 Cover manifest: *Making Room for the Dogger Bank* by Doggerland Foundation and the Embassy of the North Sea

14 The speculative Dogger Bank School draws inspiration from the real School of Dogger Bank, an interdisciplinary programme initiated by the Embassy of the North Sea and Doggerland Foundation. Centred on the ecologically significant but politically marginal Dogger Bank, the initiative brings together artists, scientists, legal scholars and civic institutions from four North Sea nations to explore legal, cultural and ecological approaches to restoring and representing the Dogger Bank. Organised into five working groups – worldview and mythology, North Sea politics, landscape design, reef restoration, and legal representation – it combines research, imagination and action toward recognising the Dogger Bank as a shared bioregional domain with political standing.

15 “Doggerland and the Embassy of the North Sea” refers to a 2025 collaborative initiative between Stichting Doggerland (Doggerland Foundation) and the Embassy of the North Sea. Published as a joint pamphlet titled *Ruimte voor de Doggersbank* (*Making Room for the Dogger Bank*), the project advocates for stronger legal, cultural, and ecological representation of the North Sea, particularly the Dogger Bank, a vital marine nursery and biodiversity hotspot. The initiative blends rewilding, legal activism, and public imagination, including a School of Dogger Bank to foster democratic dialogue and systemic restoration. See Embassy of the North Sea (s.d.). “‘Making Room for the Dogger Bank’ Manifesto”. <https://www.embassyofthenorthsea.com/publication-dogger-bank-manifest/>.

6 Post-Growth Economies and Interspecies Trusts

Financial systems in the North Sea bioregion no longer revolve around profit or GDP growth but interdependence and multispecies wellbeing.¹⁶ Funding is drawn from industries with ecological debts, multi-state allocations, and cooperative levies pooled into a shared treasury governed by the Interspecies Assembly. If the North Sea sustains us, sustaining it is a collective obligation.

The North Sea Treasury, housed in Rotterdam's repurposed Europort, operates as a semi-autonomous public institution: embedded in transnational agreements while empowered to act independently on socio-ecological terms. It manages post-growth instruments such as restoration bonds for former extraction zones, not tied to market returns but governed by ecological thresholds and interspecies commonwealth trusts. A devolved budget model allows local marine assemblies and more-than-human representatives to allocate resources based on ecological indicators and situated needs.

Last month, April 2045, reef monitoring networks flagged early coral bleaching off the Jutland coast. Within hours, the Treasury's adaptive relief mechanism released emergency funding to the local marine assembly, triggering temporary fishing restrictions and support for affected livelihoods. The redistributive bank also funds long-term public roles, from coastal pollinator stewards to intertidal acousticians, now recognised as essential to regional wellbeing.

Old tools like biodiversity offsets, ecosystem service monetisation, and natural capital accounting, built on the premise that nature's value lies in its utility to humans, have been discarded. By reducing ecosystems to services that can be priced, traded, or replaced, they justified harm and commodified life. In their place are frameworks rooted in reciprocity and interdependence, supporting both ecosystems and communities. The economy no longer trades away harm. It cultivates care.

16 This speculative imaginary draws on the present framework of wellbeing economics, which shifts the focus of economic systems from growth and output to the health of people, communities, and ecosystems. The approach has been adopted or explored by several countries, including but not limited to New Zealand, Iceland, Finland, and Scotland. Wales has institutionalised this through its Well-being of Future Generations (Wales) Act 2015, requiring public bodies to consider long-term impacts and integrate social, economic, environmental, and cultural well-being into decision-making. See Trebeck, Williams (2019) for a broader articulation of the Wellbeing Economy vision.

7 Cohabitation Replaces Ownership in Public Culture

These transformations are rooted in cultural change, but also in cultural remembering. Ocean literacy is now foundational – woven into art, education, media, and governance. Children grow up reading maps of kelp forests and migration corridors, not shipping lanes or national borders. In classrooms, textbooks speak of a longer arc – how, for a time, the sea was claimed and owned. Enclosed not just on maps, but through the erasure of lifeways, languages, and relations that once tethered communities to more-than-human worlds. As students read of the North Sea’s enclosure, many ask: “How could this way of being have ever been denied, and fall out of view for so many?”.

As our relationship with the sea has deepened, so too has our language. Terms like ‘natural resources’ now feel obsolete; in their place, words like ‘sea-kin’, ‘co-inhabitants’, and ‘commons’ have become part of everyday vocabulary.

Governance is also lived as a shared cultural practice, through schools, seasonal rituals, and daily maintenance. Each spring in Bergen, for example, children walk the shoreline with mollusc farmers and musicians to perform the Sea Greetings: a ritual of song and offerings that honours the seabed’s role in renewal. Rituals like the Sea Greetings in Bergen are often seen as new expressions of ecological awareness – but they echo practices long held by Indigenous communities, where seasonal rites affirmed not ownership, but belonging.

This shift isn’t only in what we value, but in how we value it. The sea is not ‘out there’. It is us, and once people stopped seeing it as separate, they stopped deferring harm.

8 A Sea of Care: How Reworlding Transformed Ecosystems, Health, and Livelihoods

Nowhere is the North Sea’s transformation more tangible than at the Dogger Bank. Once marred by seabed mining, oil extraction, and fragmented jurisdiction, it now flourishes as an interspecies commons – a living seascape shaped by mutual care across species.

Gravel reefs host returning communities of soft corals and tube worms, while sediment-stabilising vegetation supports nursery grounds for herring, cod, and rays.¹⁷ Seabird flyways trace the sky,

17 Efforts to restore seabed life on the Dogger Bank have included pilot projects such as those led by the Doggerland Foundation, which aim to reintroduce complex habitats like horse mussel beds and stimulate natural benthic recovery after trawling exclusion (Doggerland Foundation 2025).

their nesting supported by repurposed gas platforms now serving as roosting towers.¹⁸ Small cetaceans forage in quieter waters, aided by seasonal noise restrictions. Through careful protection and stewardship, the Dogger Bank has become a vital passage for seabed species, migratory fish, and seabirds, a keystone habitat in the North Sea's ecological renewal.

This ecological resurgence is inseparable from its social parallel. Public health has improved: with cleaner waters, thriving ecosystems, and access to biodiverse blue spaces, rates of respiratory illness have dropped, while mental wellbeing has risen.

These transformations have also strengthened social cohesion. Trust in public institutions has been rebuilt through participatory governance, while coastal communities, once divided by borders, now recognise shared fates. Migration is no longer weaponised.

Livelihoods have also been transformed. Youth are trained in restoration, marine monitoring, and interspecies stewardship. In Esbjerg, seaweed cooperatives operate as public trusts, distributing harvests among households, bioregional kitchens, and coastal regeneration projects. These efforts have enhanced nutrition, expanded food sovereignty, created dignified green jobs, and kept wealth circulating locally in communities.

The ripple effects reach every domain. Urban design, architecture, energy, food, and tourism are now grounded in ecological accountability. Bottom trawling is unthinkable. Instead, design integrates multispecies needs: hotels buffer shores with mussel reefs; construction uses biogenic materials; regional cuisines honour seasonal kelp and minimal bycatch in circular, respectful foodways.

Ultimately, recognising the sea's agency did not diminish human justice, it deepened it. As anthropocentric law was unsettled, so too were the imperial hierarchies and logics of othering it upheld. This was not a departure from human rights, but a return to the relational grounds – shared vulnerability, interdependence, and the refusal to divide liberation along lines of geography, race, class, gender, ability,

18 See emerging research and pilot initiatives in the North Sea and globally that explore the ecological potential of repurposing decommissioned oil and gas infrastructure to enhance marine biodiversity – including uses such as seabird nesting platforms and habitats for coral and planktonic life. Fowler et al. (2020) show that such structures, when left in situ or ecologically adapted, can act as artificial reefs, supporting fish, invertebrates, and seabirds by increasing habitat complexity and connectivity. This is not merely speculative: in the Gulf of Mexico, the *Rigs-to-Reefs* programme has already converted over 530 platforms into reef habitats. See Bureau of Safety and Environmental Enforcement (2018). “Rigs-to-Reefs”. <https://www.bsee.gov/what-we-do/environmental-focuses/rigs-to-reefs>. In the North Sea, the proposed repurposing of the Wenlock gas platform as a nesting site for black-legged kittiwakes shows how decommissioned infrastructure can be reimaged as habitat for seabird breeding and marine flyways (OEdigital 2022).

or species. By attuning governance to more-than-human worlds, societies uncovered more just and lasting ways to care for human life.

9 Laying the Groundwork: Imagination as Political Tool

The transformation of the North Sea began decades earlier, not through legal reform or top-down policy, but through civic assemblies, art spaces, and public rituals that seeded its reimagination.

The Embassy of the North Sea played a catalytic role. Emerging in the late 2010s, it acted as a prefigurative body, echoing the suffragette salons and republican clubs that historically incubated democratic change. Through initiatives like A Voice for the Eel, The Dogger Bank Manifesto, and The School of the Dogger Bank, they helped create the conditions in which new governance imaginaries could take root and evolve. It showed that rewilding ecosystems begins with rewilding our institutions.

These efforts were never solitary. They were held within a wider confluence of actors: architects, legal scholars, social enterprises, scientists, farmers, educators, elder and youth movements. Networks like *The Confluence of Water Bodies*¹⁹ and the GARN (Global Alliance for the Rights of Nature)²⁰ helped translate local practices into transboundary visions, offering mutual support as well as political scaffolding [fig. 6].

19 Confluence of European Water Bodies was created in response to the increasing water challenges and the need for water democracy around the world. It aims to deepen the understanding of 'Rights of Nature' in Europe from a cultural perspective. This initiative is made up of more than 50 grassroots communities consisting of artists, activists, lawyers, and ecologists representing seas, lakes, rivers, lagoons, and glaciers from across Europe. The community seeks to promote new dialogues and relationships with water, with the ultimate goal of developing new strategies to effectively represent water in European cultural, legal and political arenas. The Confluence of European Water Bodies is founded by the Embassy of the North Sea, ILP Mar Menor and TBA21-Academy and works in partnership with GARN (Global Alliance for the Rights of Nature).

20 GARN is an international network of organisations, communities, lawyers, and activists working to advance the universal adoption and implementation of legal systems that recognise, respect and enforce ecosystems and natural entities as rights-bearing beings.

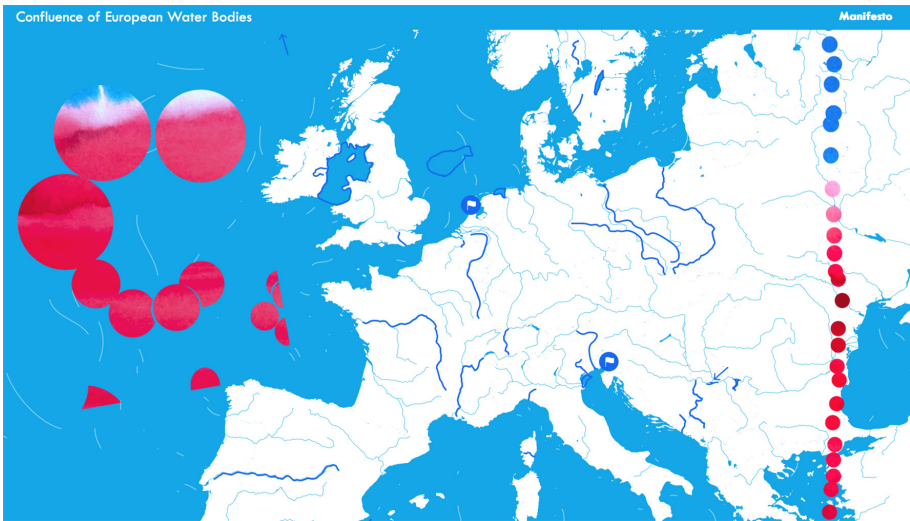


Figure 6 Confluence of European Water Bodies. Digital map. Source: Confluence of European Water Bodies, founded by Embassy of the North Sea, ILP Mar Menor and TBA21-Academy in partnership with GARN.
© Confluence of European Water Bodies 2025

The path was fiercely contested. Offshore drilling, industrial fishing, agribusiness, and shipping corporations pushed back. They invoked ‘economic stability’ and ‘energy security’ to defend extraction, weaponised disinformation, and pressured governments to criminalise dissent. Protesters were surveilled and attacked. In some places, violence followed.

Yet, resistance held.

As the post-Cold War order ruptured in the 2020s – with authoritarian resurgence, fractured multilateralism, and intensified competition over land, sea, and data – the façade of global progress collapsed. Rising inequality, democratic backsliding and environmental impacts exposed the failures of prevailing governance. Regardless, official responses leaned harder into market logic, techno-optimism, and securitised control. Borders hardened and militarisation escalated. Surveillance expanded. Climate change was reframed as a threat to be contained, not a justice issue to be addressed.

Amid this breakdown, a kind of clarity took hold. The backlash against environmental and social justice exposed their shared antagonists – extractivism, colonial capitalism, patriarchal sovereignty – and the deep-rooted systems of harm that connected them. In response, post-growth, abolitionist, Indigenous, feminist, food sovereignty, and climate justice movements began to organise to reimagine the very foundations of governance itself.

Yet, even within and between allied groups, tensions surfaced over legitimacy, representation, and translation. These arrangements remained sites of ongoing negotiation and contestation rather than settled institutional solutions. What did it mean to speak with the sea, rather than for it? Who could be entrusted to represent more-than-human interests? However, they did not break coalitions; they deepened them. What bound them was not a uniform strategy but an ethic: relational care across difference, rooted in the refusal to separate human and more-than-human liberation.

Change did not emerge surface-level reform, technocratic fixes or corporate partnerships. It required dismantling the economic and legal architectures that made harm profitable. Trade agreements were restructured around limits set by ecological relationships, not market demands; subsidies for destructive industries phased out; land and sea rights redistributed; monopolies broken up through commons-based governance.

The attention economy dominated by polarising algorithms was disarmed. Social media companies, once complicit in fuelling disinformation, commodifying outrage, and fragmenting collective action, were held accountable for their role in ecological and democratic breakdown. New digital commons emerged for deliberation, storytelling, and collective organising. Public imagination was reoriented toward civic, not commercial ends. This was not a greening of extraction, but a reorganisation of power and value at its roots.

Crucially, the work did not focus only on crises, but on alternatives. Visions such as Landback, Degrowth, Commons, energy democracy, and the Rights of Nature found resonance across regions. In many cases, transformation was framed not simply as innovation, but as the restoration and adaptation of older practices of shared use, reciprocity, common stewardship, and collective responsibility. Longstanding Indigenous custodial traditions that had been marginalised or suppressed were centred.²¹ Experimental governance initiatives also emerged from the ground up, some as isolated efforts, others as part of growing coalitions. For instance, coastal food cooperatives replaced export-oriented aquaculture, while multispecies climate mitigation plans began reshaping environmental governance.

Rights of Nature further evolved. While early efforts often invoked ‘legal personhood’ as a strategic bridge into human-centred systems, the movement shifted to further question the very foundations of

21 See, for example, Grafton et al. (2026) on “Living Rivers” governance in Australia, which foregrounds rivers as living ancestors and develops cross-cultural approaches to water governance grounded in Indigenous custodianship, relationality, and collective responsibility.

western legal systems. It challenged the premise that rights must be conferred by humans or that beings must resemble human subjects in order to be recognised politically or legally. Over time, alternative approaches began to reframe recognition and justice through relationships of reciprocity, interdependence, and situated responsibilities rather than ownership, representation, or control.²²

These initiatives collectively changed how the North Sea was seen, governed, and valued. They began to shift the broader political landscape, with political windows opening for democratic reform, environmental justice, and post-growth policy. What once felt naive or ridiculous became necessary and mainstream. What began in imagination catalysed structural transformation.

Imagination was not escapism. It was a lever. It invited people to dream of different futures and created the hope, agency and desire to act towards them.²³ By the time the North Sea became a political actor, the groundwork had already been laid. It had been dreamed into reality and fought into presence.

Acknowledgements

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22 This shift resonates with O'Donnell's framing of "speaking with" ecosystems, where governance emerges through ongoing relationships of listening, interpretation, negotiation, and situated responsibility rather than fixed forms of representation (Cano-Pecharroman, O'Donnell 2024).

23 This argument draws on the work of Rob Hopkins, whose books *From What Is to What If* (2019) and *How to Fall in Love with the Future* (2025) document how collective imagination can catalyse real-world transformation. Drawing on examples from around the world, Hopkins shows that acts of imaginative storytelling do more than diagnose crises – they invite communities to inhabit alternative futures and take steps toward them. These ideas have also been central to the Transition Network, a global movement Hopkins co-founded, which supports local, citizen-led responses to climate change and social disruption, grounded in community resilience, re-localisation, and shared visioning.

Information about the institutional partners:

- The Embassy of the North Sea, founded in The Hague in 2018, listens to and involves the voices of plants, animals, microbes, and people in and around the North Sea. Founded on the principle that the sea owns itself, the Embassy makes political space for sea-emancipation through connection, imagination and representation.
- Living Imaginaries is a social enterprise dedicated to re-imagining how we govern, relate, and live in a more-than-human world.

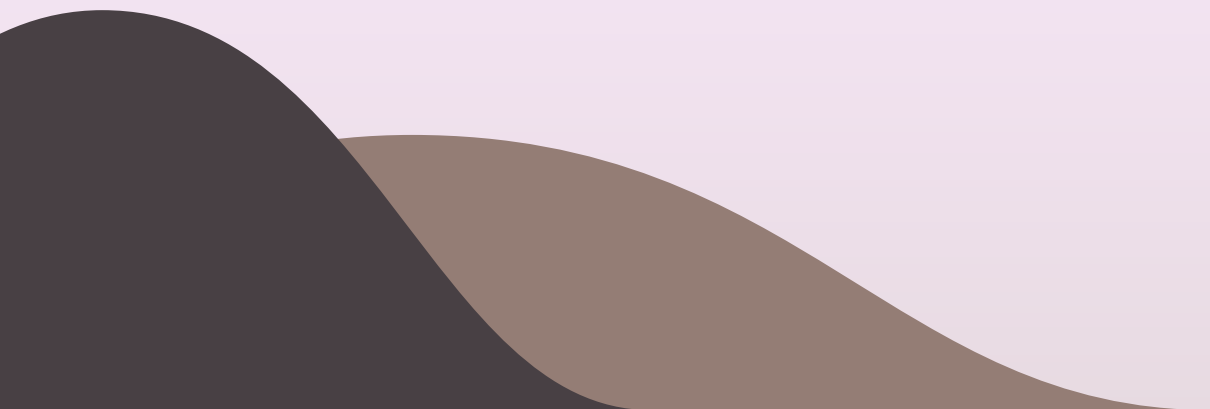
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