

# REPORT OF REWILDING DOGGER BANK WORKSHOP

13 - 14 NOVEMBER 2024



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Organised by Doggerland Foundation together with *Rewilding Bank Coalition*:



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## Introduction

On 13 and 14 November 2024, about 35 North Sea experts gathered in Wijk aan Zee, the Netherlands for the *Workshop Rewilding Dogger Bank*. The participants have diverse backgrounds, from ecologists and marine biologists to historians, archaeologists, artists, filmmakers, to designers, data scientists, geographers and policymakers. Together, they worked on enriching the vision for Rewilding the Dogger Bank that was presented by Doggerland Foundation and partners, as well as designing the first steps of an action plan to implement this vision: discussing strategies for passive and active protection, nature restoration, stakeholder engagement and community building. The insights and reflections are listed below. The next step is to translate the outcomes of the workshop into a concrete plan to start resuscitating the Dogger Bank as the beating heart of the North Sea.

## The Dogger Bank Rewilding Vision

Director of Doggerland Foundation, Emilie Reuchlin, presents the vision for the Dogger Bank on behalf of the Rewilding Dogger Bank coalition: “Dogger Bank inhabitants and migrants lead their lives undisturbed and naturally in a healthy, robust and spacious environment.

### Vision presented by Rewilding Dogger Bank coalition

- Joint premise: Why has our society come to accept that the North Sea should be industrialised and degraded?
- The Dogger Bank, covering 25000 km<sup>2</sup> can deliver real benefits and 4% of the international North Sea towards the 30x30 target.
- Our mission is to rewild the Dogger Bank and transform it into a flagship Marine Protected Area that is effectively protected: *To maximise benefits for nature and help fix the biodiversity and climate crisis.*
- Through active and passive restoration and representation of nature, we strive to resuscitate the North Sea's beating heart: the Dogger Bank and set ambitious standards for other EU MPAs.
- The Dogger Bank will become:
  - A sanctuary, where we restore natural conditions: space and quiet and time for recovery
  - Abundant and full of life
  - Diverse, resilient and wild
  - Where degradation and pollution are stopped
  - Where industry is phased out asap
  - Effectively protected against harmful activities
  - Where natural ecological processes and the important functions of the Dogger Bank as a breeding area, a nursery, rich foraging ground are restored
  - We welcome back the decimated and hunted species
  - We restore the seabed, the reefs, the climate buffers

- We will create an international network and collective of people supports Dogger Bank inhabitants and migrants
- We will ensure representation of nature in decision making; Our vision for this seascape is that life is of itself
- North Sea nature is effectively represented: Nature with intrinsic value, with rights
- The North Sea with the Dogger Bank as its powerful beating heart has the right to restore itself
- It can be done, because the key ingredients for restoration are still available! Frontal areas, high and year-round primary and secondary production, high habitat diversity, PET species still present in some locations, like wrecks, active restoration potential is present. It is recognised as a key area from the tiniest shrimp and shellfish to large seabirds and whales
- With our research and data collected during several expeditions to the Dogger Bank. We see the destruction in vast areas, but also pockets of hope and the potential for restoration!

### Key ingredients for Rewilding Dogger Bank

- Create space for nature to recover, restore and rewild and effective protection of the Dogger Bank.
- Ban destructive practices.
- To ensure Danish part of the Dogger Bank gets designated.
- To actively restore reefs, starting with horse mussel reefs.
- To ensure we protect cultural and archaeological heritage that is in this area.
- To enable the return of sharks, rays, marine mammals, seabirds, fish, seaweeds, reefs, crustaceans; Dogger Bank inhabitants and migrants.
- Maximise natural carbon storage in seabed and fixation of GHG emissions: nitrogen, methane, carbon.
- Create underwater minimal or low sound/silent areas.
- Human no-go areas.
- Scientific reference areas.

### Outcomes the Rewilding Dogger Bank coalition will work towards

- European governments and stakeholders are working together to deliver transboundary management for rewilding the Dogger Bank, facilitating long term recovery.
- The Dogger Bank is protected from the most damaging activities through legal actions, catalysing the natural recovery of the seascape.
- Horse mussel reefs have been restored, and these and other biogenic reefs survive, grow and reproduce, and drive biodiversity recovery.
- The Dogger Bank will serve as a blueprint model for other European countries, guiding efforts to prioritise space for nature restoration.

The Rewilding Dogger Bank coalition asked participants in the workshop to share their feedback, ideas, and to add elements and ingredients for rewilding.

# Reflections and Insights on the Dogger Bank Rewilding Vision

## Overarching Support and Optimism

### 1. Ambition and Scale:

- Participants strongly appreciate the large-scale, multi-country ambition of the vision, recognising the Dogger Bank as an inspiring symbol of ecological hope.
- The vision is seen as a unique opportunity for transformative ecological restoration, offering a blueprint for similar projects globally.
- Participants expressed support for maximising ambition for nature in the Dogger Bank Marine Protected Area. 'Don't get into zonation, don't draw back, go!'

### 2. Cautious Optimism:

- While many express enthusiasm, they also highlight the need for realism and practical, step-by-step approaches to achieve the vision's goals.
- Some noted that the scale is both an opportunity and a challenge, particularly given logistical and political hurdles.

## Key Themes Identified

### 1. Balancing the Practical and the Ideal:

- Several participants emphasised the importance of aligning bold goals with realistic actions, advocating for pragmatic yet visionary planning.
- Suggestions included starting with smaller, concrete steps (e.g., restoring rocky reefs that have been fished up or cleared, addressing spawning grounds) to build momentum.

### 2. Ecosystem-Based Approach:

- Widespread support for an ecosystem-level restoration focus, rather than species-specific efforts.
- Highlighted the need to rebuild food webs, restore habitat connectivity, and ensure that interventions promote ecosystem resilience.

### 3. Inclusion and Collaboration:

- Encouragement for interdisciplinary and cross-border collaboration involving scientists, policymakers, and local communities.

- Calls for the involvement of governments and industries, particularly through joint EU conservation initiatives structured as work packages.
4. Dynamic Management and Adaptation:
- Emphasis on the need for adaptive management in light of climate change and shifting ecological baselines.
  - Recognition that rewilding success will require flexible strategies to respond to evolving challenges and opportunities.
5. Scientific Foundations:
- Participants stressed the importance of using robust scientific research to inform interventions and monitor progress.
  - And also: don't wait for proof to get started!
  - Suggestions included:
    1. Establishing baseline biodiversity data and understanding species' spatial use (e.g., marine mammal patterns, biodiversity hotspots).
    2. Tracking long-term ecosystem health through dynamic monitoring frameworks.

## Reflections on Implementation Challenges

1. Lack of Concreteness:
- Some participants expressed concern about the abstractness of the vision's implementation strategy.
  - They called for clearer articulation of "how" goals will be achieved, along with better-defined roles for stakeholders.
2. Industrial Challenges:
- Concerns were raised about reconciling rewilding efforts with ongoing industrial activities, such as wind farm developments.
  - Some participants encouraged integrating these industrial realities into management plans to ensure long-term success. Several participants rejected such approach and supported highest ambition for nature, to focus on phasing out industry instead of 'greening industry'. Wind parks not considered nature areas nor peaceful areas for nature, but industrial sites with large-scale ecosystem impacts.

### 3. Knowledge Gaps:

- Identified gaps in understanding key ecological processes, such as marine mammal usage, biodiversity hotspots, and habitat connectivity.
- Suggestions to focus on targeted research and monitoring systems to fill these gaps.

### 4. Social Dimensions:

- Recognition of the need to complement ecological restoration with “societal rewilding,” fostering public awareness and community engagement.
- Some highlighted the importance of including local communities in decision-making processes to ensure long-term buy-in.
- Include nature: What sounds of nature are we not hearing? What are the sounds we drown out? The voices? Need to represent these voices in our rewilding vision and plan
- “The past is a foreign country”, submerged landscape is our shared natural and cultural heritage. No protection of the Dogger Bank is also affecting archaeology and exploration of terra incognita.

## Proposed Actions and Recommendations

### 1. Define Feasible Goals:

- Translate the vision into a set of incremental, achievable targets.
- Start with pilot projects such as shellfish and rocky reef restorations and/or habitat mapping to build momentum and showcase early successes.

### 2. Enhance Monitoring and Data Collection:

- Set up long-term monitoring systems to track biodiversity and ecosystem functions both inside and outside the Dogger Bank, e.g. more knowledge about cetacean calving areas, animal movements.
- Use this data to adapt management strategies as needed and demonstrate measurable progress.

### 3. Policy Integration:

- Position the Dogger Bank as a flagship EU conservation initiative, leveraging multi-country collaboration and funding.
- Incorporate the vision into broader marine spatial planning efforts to align conservation goals with industrial and societal needs.

#### 4. Strengthen Enforcement:

- Prioritise enforcement of protection zones while simultaneously planning and executing active restoration efforts.

#### 5. Promote Public Awareness and Engagement:

- Develop communication campaigns to emphasise the ecological and societal importance of the Dogger Bank.
- Use ambassador species and success stories to engage the public and foster a sense of collective ownership.

#### 6. Immediate Restoration Efforts:

- Begin with easily actionable steps like restoring rocky reefs, establishing “no-go zones,” and supporting spawning grounds for critical species. ‘Let’s go!’
- Ensure restoration activities are grounded in scientific evidence and designed to achieve measurable ecological outcomes.

## Vision of a Successful Rewilding in 2045

In 2045, the vision of successful rewilding has become a tangible reality, exemplifying the harmonious coexistence of humans and nature. Through interdisciplinary efforts, inclusive governance, and dedicated restoration work, the Dogger Bank and similar ecosystems worldwide now thrive, showcasing the power of collective action and long-term environmental commitment.

### 1. Paradigm Shift and Community Awareness

#### 1. **Human = Nature:**

A global shift in perspective has occurred, recognising humans as integral to, not separate from, nature. This shift has redefined how societies engage with ecosystems, fostering a culture of care and respect for the environment.

#### 2. **Ocean Literacy:**

Everyone now knows where the Dogger Bank is and understands its ecological importance. Basic knowledge about seascapes and ecosystems is a core part of education, ensuring broad awareness and support for marine conservation.

#### 3. **Dogger Bank as a Beacon:**

The Dogger Bank has become a "Lighthouse MPA of Europe," symbolising leadership in marine protection and sustainable practices worldwide. It is celebrated as an "Island of Hope," inspiring other regions to replicate its success.



## 2. Ecological Restoration and Thriving Biodiversity

1. **Complete Trophic Chains:**  
Ecosystems have been fully restored, with trophic chains now functioning naturally. Predators, prey, and habitats exist in balance, resulting in thriving biodiversity.
2. **Reef and Habitat Restoration:**  
Restored biogenic and geogenic reefs support a mosaic of habitats and diverse faunal communities. Species like horse mussels are flourishing with active recruitment, creating self-sustaining populations in areas of high environmental suitability.
3. **Return of Iconic Species:**  
Species such as gray whales, flapper skates, bluefin tuna, sharks and halibut in large numbers and other marine life have returned to the area, thriving in restored ecosystems. Predator species like flapper and common skate reintroduce the *landscape of fear*, minimising crab and starfish populations to maintain healthy reefs. Feeding frenzies—birds from above and predator fish from below—are now a common sight, signalling ecological health.
4. **Surprises in Nature:**  
Unexpected species and interactions have emerged, demonstrating the resilience and adaptive capacity of restored ecosystems.

## 3. Governance and Sustainable Practices

1. **Boundaries:**  
A joint management plan is recommended to include the area to the north, the slopes of the Dogger Bank, Silver Pit and potentially Cleaver Bank; ensure connectivity.
2. **Unified and Inclusive Management:**  
A joint management plan ensures coordinated efforts across regions and stakeholders, reducing nationalistic barriers and fostering collaboration. Coastal communities actively participate in decision-making processes, ensuring inclusive governance.
3. **Sustainable Fisheries:**  
Fishing practices have evolved to become fully sustainable, protecting marine biodiversity while supporting local economies.
4. **Decommissioning of Infrastructure:**  
Outdated and harmful infrastructure has been scaled to less impactful (floating solar / wind), and phased out and decommissioned, reducing environmental impact and supporting long-term ecological balance.

## 4. Resilience to Climate Change

1. **Adaptive Ecosystems:**  
Restored ecosystems are resilient to climate change, with seabed effectively sequestering GHG emissions, with phytoplankton CO<sub>2</sub> pumps actively contributing to carbon sequestration. Primary and secondary productivity are maintained, ensuring the stability of food webs.
2. **Dynamic Management:**  
Climate-responsive spatial management adjusts boundaries and strategies to accommodate changing conditions, ensuring the long-term viability of marine protected areas.

## 5. Social and Cultural Impact

1. **Community Ambassadors:**  
Fishermen and local communities act as ambassadors for marine conservation, demonstrating the benefits of sustainable practices and fostering a sense of stewardship.
2. **From Paper to Reality:**  
Management plans, once abstract ideas, are now tangible outcomes. Design can imagine the unimaginable. Fish populations are thriving, whales and seabirds find safe havens, and the Dogger Bank stands as a living testament to the power of rewilding.

## 6. Legal Frameworks

Legal framework and policy opportunities exist and enable Rewilding Dogger Bank:

1. Bird and Habitats Directives: EU protection and recovery of species and habitats.
2. Obligation to protect 30% by 2030 (EU-Biodiversity strategy: 30% protection 10% strict protection by 2030).
3. Convention on Biological Diversity (CBD): 30% effectively protected by 2030.
4. EU-action plan to phase out trawling by 2030.
5. EU-Nature Restoration Law. Is directly transposed in national law. At least 20% of the EU's land and sea areas by 2030, and ultimately all ecosystems in need of restoration by 2050. Soft sediment seabed by 2040. Member State Nature Restoration Plans need to be submitted to European Commission by September 2026.
6. MSP Ecosystem Approach: keep pressure of human activities within levels compatible with achievement of GES; ensure capacity of marine ecosystems to respond to human-

induced changes is not compromised, while contributing to the sustainable use of marine goods and services by present and future generations.

## 7. Inspiration and Legacy

### 1. **Hope for the Future:**

The Dogger Bank is more than an ecological success—it is an emotional and cultural symbol. It is a place of quietness and hope, a legacy of what is possible when humans commit to living in harmony with nature.

### 2. **Interdisciplinary Progress:**

The journey to 2045 has been driven by collaborative and interdisciplinary efforts, bridging science, policy, and community engagement to achieve sustainable outcomes.

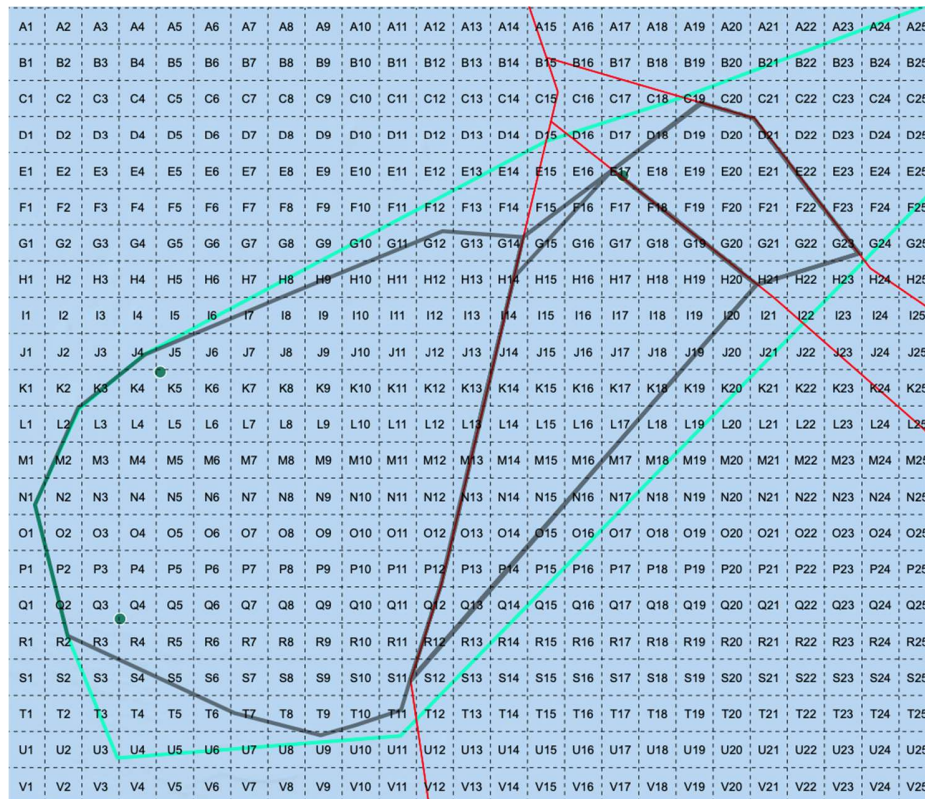
## The key insights by major themes (7 working groups)

### Horse Mussel Reef Restoration

- Key requirements for successful restoration:
  1. Need presence data and historical mapping
  2. Temperature considerations (deeper areas might serve as refuge)
  3. Substrate requirements: They need some foothold, even in muddy/sandy areas
  4. Food availability (good in sandeel habitat areas)
  5. Current requirements: Need current but not too much (0.4 m/s ideal, up to 1 m/s in some cases)
  6. Depth considerations in mixed sediment areas
  
- Population considerations:
  1. Clumping is important (30-70% cover, 5-9 individuals/m<sup>2</sup>)
  2. Sex ratio matters (more males than females)
  3. Local settlement tends to occur (negatively buoyant eggs)
  4. Better to have one area with 50 mussels than 5 areas with 10
  5. Pioneer population establishment is challenging
  6. 4 cm. size takes about 5 years to achieve

- Location considerations:

1. UK location Blue Half Moon considered promising (Q3-Q4)
2. More information needed for UK location K4-K5
3. More information needed for German-Dutch border location E17



## Other Restoration Options

- Moorlog (peat) and substrate restoration:

1. Existing and introduced Moorlogs (peat), wood, rocks as a substrate for egg attachment for fish (and shark) population. Target species: thornback ray, cuttle fish, squid, herring.
2. Target species include thornback ray, cuttlefish, squid, herring.
3. Need to monitor existing moorlog locations from 1883 Olsen map: Dogger Bank map N14/M15.
4. Consider introducing new moorlog with anti-trawling measures.
5. Compare and replicate multiple locations with different habitat types: existing moorlog, new moorlog, pear trees, boulders.

- Atlantic surf clam (*Spisula solidissima*)
- Sand mason worm (*Sabella* spp)
- Soft coral
- Ocean quahog
- Red whelk
- Flat oyster (not present historically?)
- Sand and mud habitats important; mosaic of habitats
- Benthic diatom investigation:
  1. Potential importance as "solar panels" of the North Sea
  2. May be crucial for food web support
  3. Need to investigate their role through food web analysis

## Scientific Reference Areas

- Key considerations:
  1. Should have similar habitat, bathymetry, and sediment composition
  2. UK part above 30 m. depth line could serve as reference for Dutch part
  3. Size depends on research question
  4. Border effects are relevant
  5. Need to consider different uses (trawled vs non-trawled, wind farm presence)

## Government and Policy Aspects

- Legal obligations:
  1. Nature Restoration Law targets: 90% restoration by 2050, 60% by 2040, 20% by 2030
  2. Need to define "good condition" across different frameworks
  3. Early international coordination needed for shipping and fishing
- Strategic approaches:
  1. Build trust between nature organisations and government
  2. Create broader public support through education and communication
  3. Need for positive messaging rather than just restrictions
  4. Consider timing - 2050 seems far but complex measures need early planning

## Public Engagement and Communication

- Key strategies:
  1. Need for multidisciplinary approach involving designers, creators, storytellers
  2. Use new media platforms (YouTube, Instagram, TikTok)
  3. Create relatable connections (e.g., naming neighbourhoods after the DB)
  4. Focus on positive messaging and wonder rather than restrictions
  5. Consider involving unexpected ambassadors ("Lewis Hamilton of the Dogger Bank")

## Funding and Risk Management

- Funding opportunities:
  1. Nature Restoration Law
  2. Convention on Biological Diversity (CBD)
  3. Program North Sea Nature Enhancement (€150M available)
  4. Arcadia endangered landscapes program
  5. Scientific calls (NWO, KPI)
- Risk management:
  1. Balance vision vs. reality
  2. Handle competing interests in North Sea
  3. Build broad coalitions
  4. Ensure sufficient impact from legal cases
  5. Coordinate funding between different NGOs and projects

## Stakeholder Engagement

- Key stakeholders to involve:
  1. Universities (Groningen, Nijmegen, Utrecht, Amsterdam, Wageningen)
  2. Museums and cultural centres
  3. Debate centres
  4. Archaeological interests
  5. Public education sector
  6. Media and communication experts

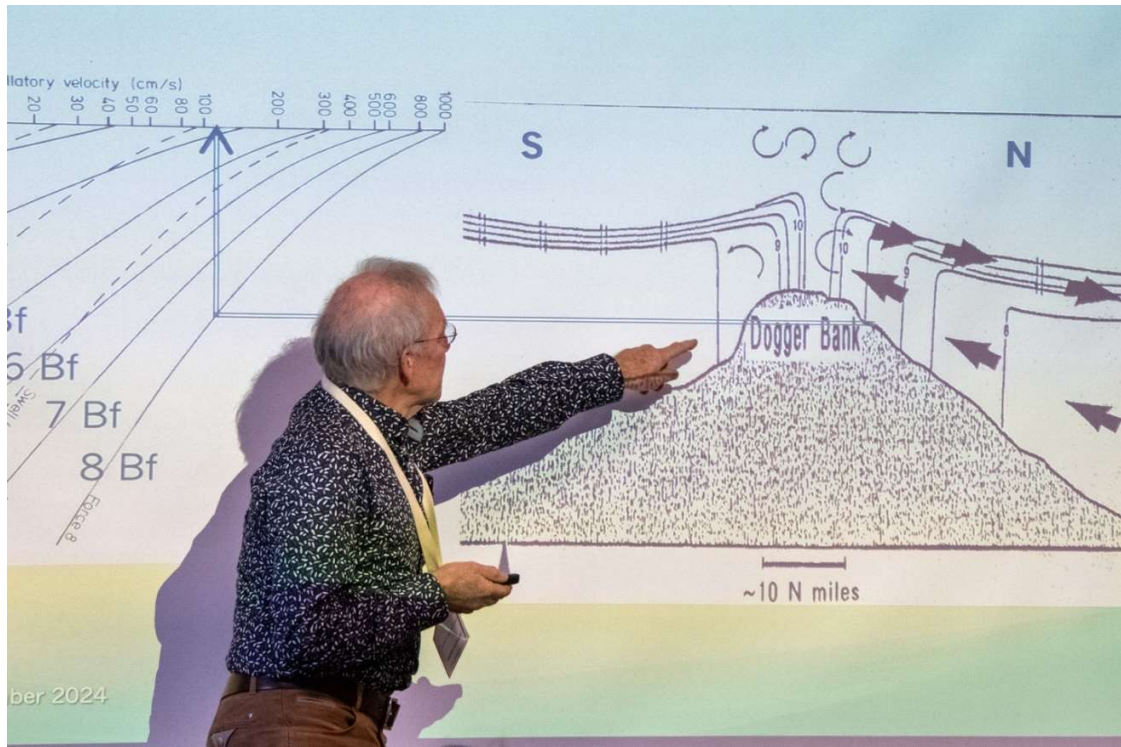


## Eight main insights

1. Rewilding the Dogger Bank at seascape scale is welcomed and applauded. Horse mussel reef restoration is complex but promising, requiring specific conditions (current, substrate, depth) and careful population management, with better outcomes from concentrated populations rather than dispersed ones.
2. The Dogger Bank may be more ecologically significant than its barren present status suggests, potentially serving as the "solar panels" of the North Sea through benthic diatom production.
3. Legal frameworks are driving restoration, with clear targets (90% by 2050) but require better definition of "good condition" across different regulatory systems.
4. Public engagement needs modernisation through social media, unexpected ambassadors, and positive messaging rather than focusing on restrictions.
5. Restoration efforts must be evidence-based, with carefully selected reference areas matching habitat characteristics and considering multiple variables (e.g. trawling, wind farms).
6. Alternative restoration approaches like moorlog (peat) reintroduction could provide important habitat for various species, particularly as egg attachment sites.
7. Success requires broad stakeholder collaboration, from universities to cultural institutions, and sustainable funding through diverse sources including government programs, scientific grants, private funding.
8. A map tool was developed by Doggerland Foundation with Lynn Nijsten and now exists to further develop our Rewilding Dogger Bank action plan.



*Emilie Reuchlin looking at the results at the end of the workshop*

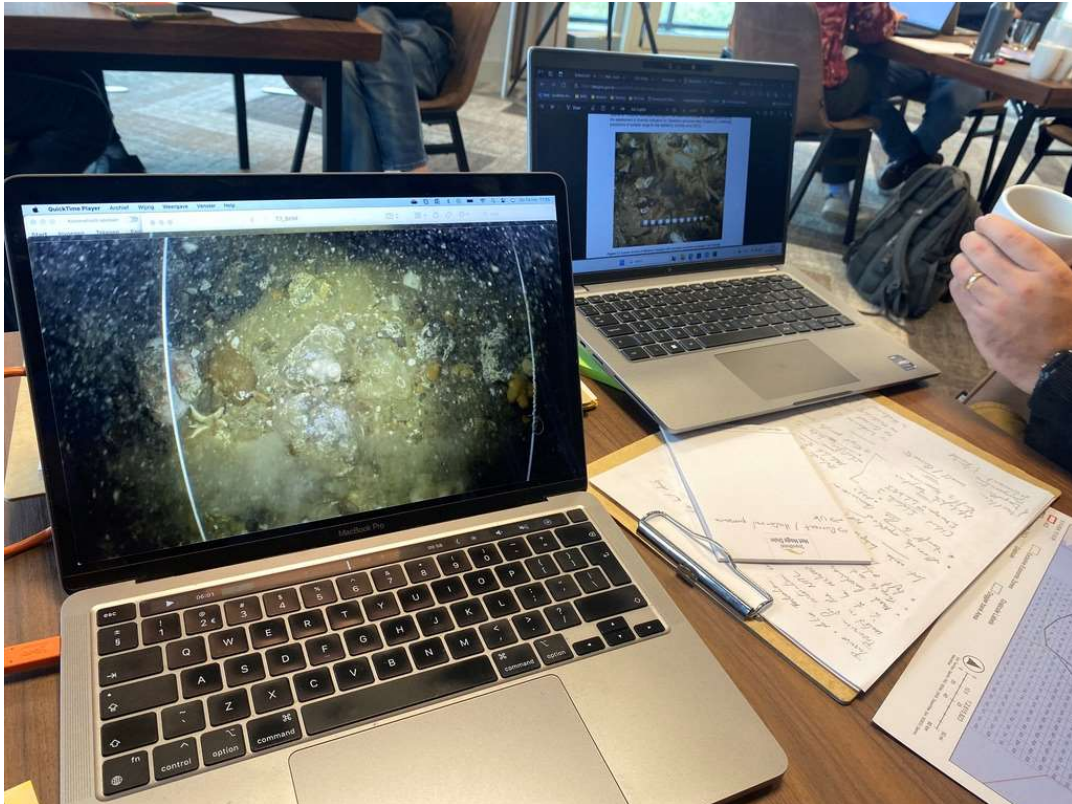


*Godfried van Moorsel presenting on the Dogger Bank*



*Participants of the Dogger Bank workshop*





*Footage of potential horse mussel reef restoration locations from Doggerland expedition in 2023 was researched and cross referenced with environmental conditions and other map layers*



*Thijs de Zeeuw (left) and Emilie Reuchlin (right) working on the beach of Wijk aan Zee*

## Workshop Programme

### Day 1 - Wednesday 13 November

#### 10:00 Arrivals and Registration

#### 11:00 Welcoming to the Rewilding Dogger Bank event

Introduction to the purpose and ambition of the **Rewilding Dogger bank Coalition** and set the scene for the next two days.

#### 12:00 Tour of the Dogger Bank

What does the Dogger Bank actually look like? Artist Talk - **Xandra Van der Eijk** talks about her project **Ghost Reef**.

#### 12:30 Mapping Dogger Bank's past

What did the Dogger Bank look like in the past? **Vincent Gaffney** and **Callum Roberts** explore the Dogger Bank from an archaeological and natural history perspective.

#### 12:50 Mapping Dogger Bank's present

What does the Dogger Bank look like now? What are the implications for rewilding? How will future developments affect the Dogger Bank? **Floris Bennema** and **Klaudie Bartelink** walk through the present moment.

#### 13:00 Lunch

#### 14:15 Presenting the collected data on the Dogger Bank

**Lynn Nijsten** has collected most available data sets and created an impressive overlay. Check with the group which data layers are missing to inform our vision to rewild the Dogger Bank

#### 15:15 Introducing Doggerland's vision and strategic directions

**Emilie Reuchlin** explains the ambitions of the **Rewilding Dogger Bank Coalition** and how they want to reach those. This initial framing will provide an understanding of the overarching goals and strategic approach, setting the stage for a deeper exploration on Day 2. **Godfried van Moorsel** speaks about the potential the Dogger Bank provides for active restoration actions.

#### 15:50 Break

#### 16:20 Reflecting on the vision

#### 17:00 END

## Day 2 - Thursday 14 November

### 09:00 Opening Speaker Dogger Bank and Landscape architecture

**Thijs De Zeeuw** talks about landscape architecture and expands our idea of what's possible in the Dogger Bank.

### 09:15 Introducing the inhabitants Rewilding Dogger Bank

What does a lifespan as a Dogger Bank local look like? What does a harbour porpoise or a northern horse mussel need to thrive? We do some perspective taking from the animals' point of view.

### 10:00 Mapping Opportunities for Dogger Bank (part 1)

**The Dogger bank Coalition** reintroduces its key objectives, along with several essential questions for discussion. **Harm Dotinga** speaks about how marine protection obligations like the EU Restoration Law can -and should- guide the realisation of the Dogger Bank Rewilding Plan, and the other way around: how the Rewilding Plan can help us to meet the biodiversity obligations of EU nature protection laws.

### 10:30 Break

### 11:00 Mapping Opportunities for Dogger Bank (part 2)

### 12:30 Lunch

### 13:30 Collected overview of opportunities

### 14:30 What's next for Rewilding Dogger Bank & Closing

### 15:00 END

## Rewilding Dogger Bank expert group

If you are a professional or an expert who is also involved in North Sea rewilding and you want to join the expert group, request access via LinkedIn, via [this link](#) or the QR code.

