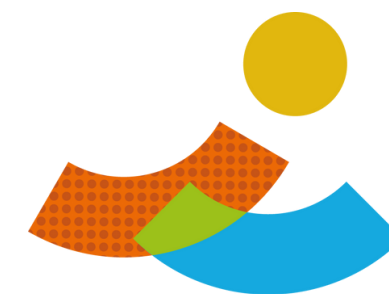




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Session six

Restoring Nature

Can we achieve well-managed and
restored marine and coastal
seascapes by 2030?

Chair

Professor Dickon Howell,
Howell Marine Consulting



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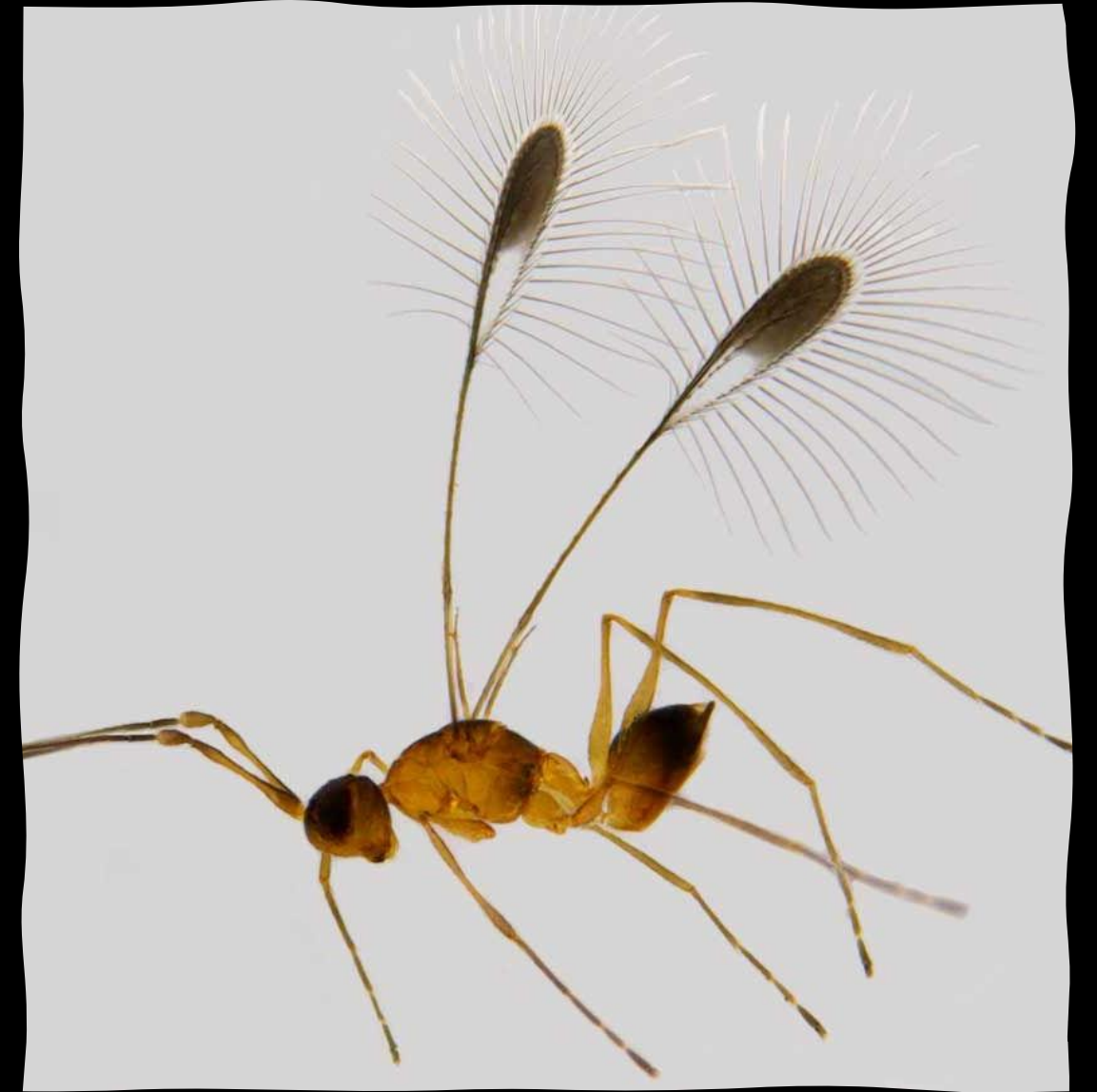
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Session six Restoring Nature

Queering as a Regenerative Pathway in Nature

Jasmine Isa Qureshi,
Ecologist and Writer



Queering as a Regenerative Pathway in Nature

Jasmine Isa Qureshi (they/she)

REGENERATIVE?

RESTORATIVE?

SYSTEM CHANGE?

SYSTEMIC
TOXCITIES?

FLUIDITY?

WHY?

INDIGENOUS?

DECOLONISATION?

INCLUSION?

CONSERVATION?

WHY?

WHY?

DISMANTLING?

QUEERING...

MECHANISM?

WHAT?

INTERACTION?

CONTINUATION OF QUESTIONING? REIMAGINATION? RESTRUCTURING?



Binaries...Dualisms...the Beginning of The 2 Absolutes.

- Indigenous communities
- Rebellion
- Liberation
- Erased handprints...
- Blueprints for a better future...

- Break those assumptions
- **Deconstruction**
- **Decolonisation**
- Human vs Nature.
- Science vs Religion
- Becoming aware of the limits

**Now let's plug all of
that into ocean
conservation, coastal
restoration and marine
ecology...**

Jasmine (They/Them)

@wildheartwithacamera **INSTAGRAM**

@jazzywildheart.bsky.social **BLUESKY**

@GoWildForBees **TWITTER (x)**

Jasmineswildheart.com **WEBSITE**

WORKSHOPS

SEMINARS

SPOKEN WORD

WRITER

BOOK (on the way)

CONSULTANT





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Reflections on why we are not
achieving our environmental goals

Laura Seddon,
Marine Management Organisation

An analysis of how we make decisions that affect the marine environment

Reflections on why we are not achieving our environmental goals



Natural Capital
and Ecosystem
Assessment



Dr. Laura Seddon (she/her)

Marine Management Organisation

laura.seddon@marinemanagement.org.uk

2030

- Action to combat climate change and its effects
- Improved food security
- Clean water
- Responsible and sustainable consumption and production
- Sustainable and inclusive economic growth
- Resilient communities
- Biologically diverse seas
- Clean and renewable energy
- Greater social justice and equality

international, national and local scales



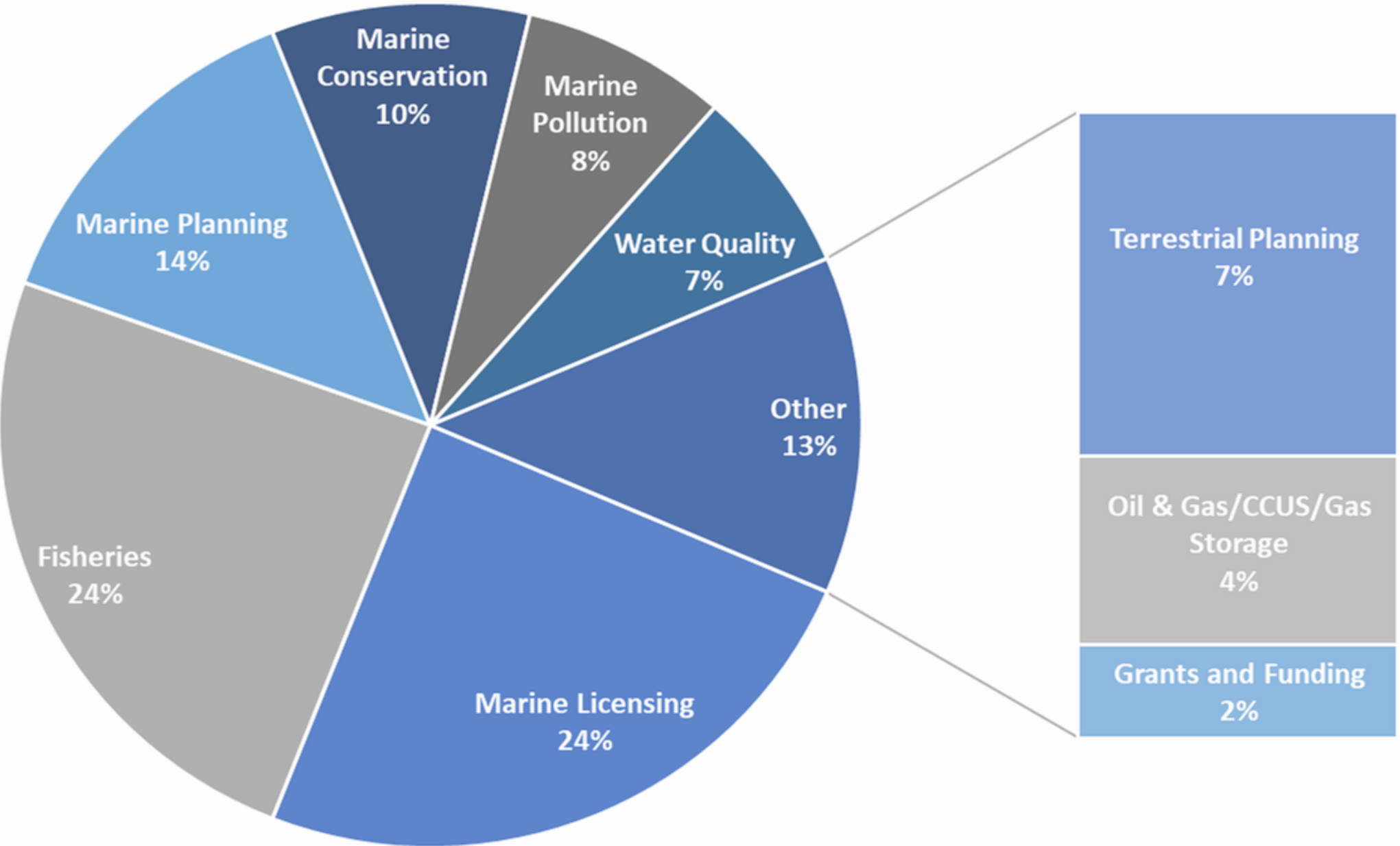
THE SUSTAINABLE DEVELOPMENT GOALS REPORT 2023: SPECIAL EDITION- [UNSTATS.UN.ORG/SDGS/REPORT/2023/](https://unstats.un.org/sdgs/report/2023/)

Why consider decision-making?

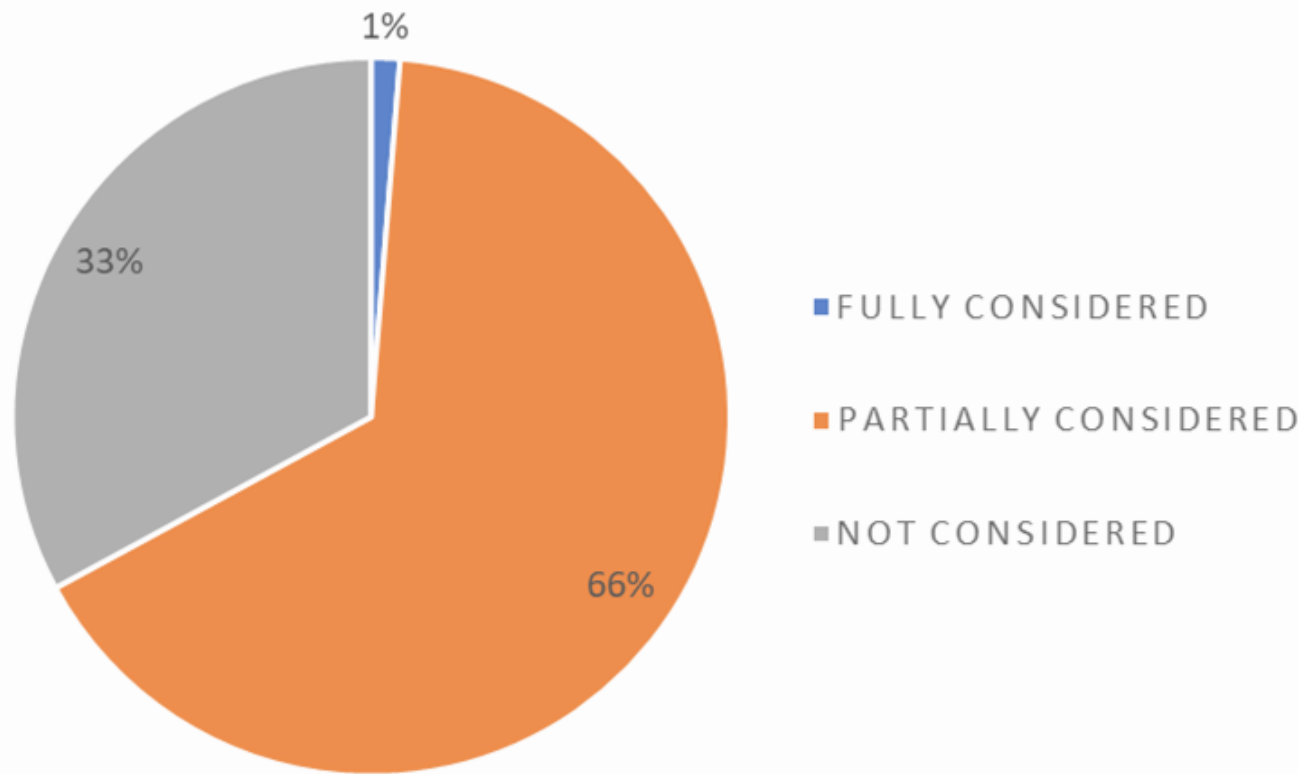


Understanding the Marine Decision-Making Landscape

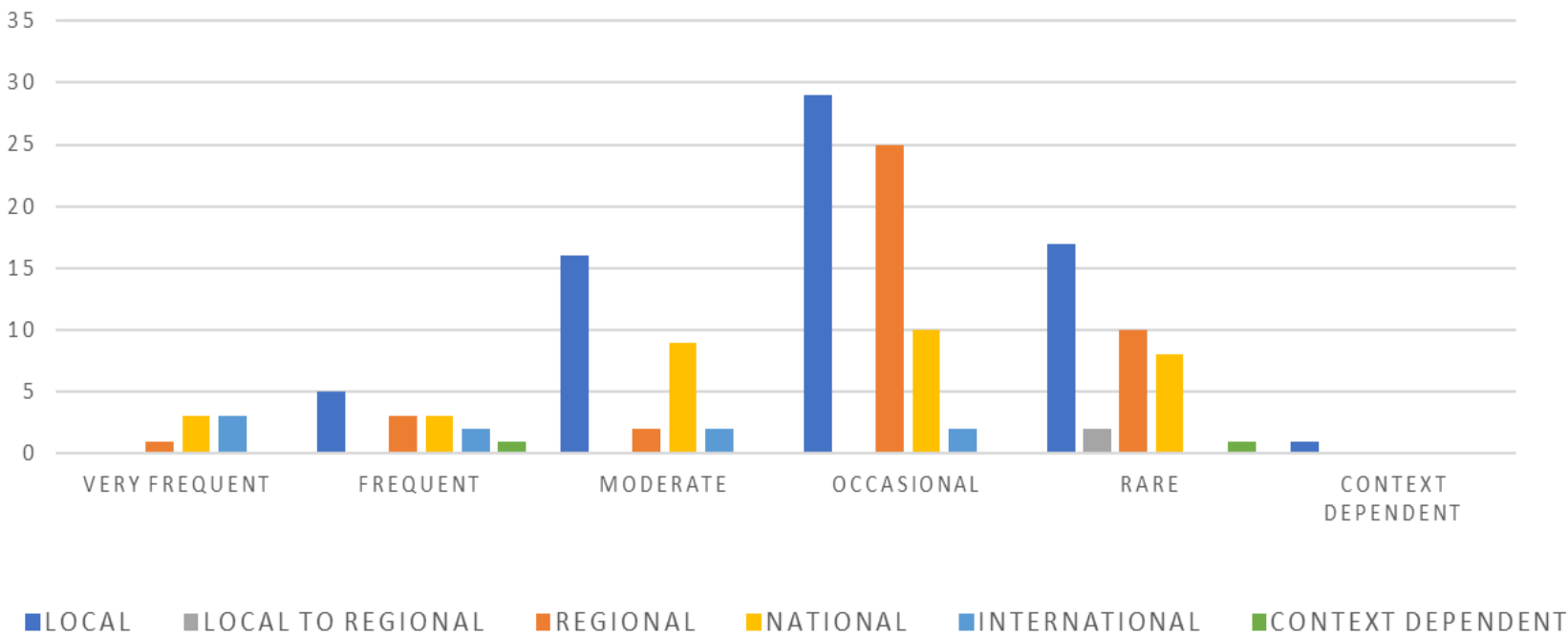
DECISION AREAS



SOCIAL IMPACTS OF DECISION



FREQUENCY AND SPATIAL SCALE



What to consider?

Ecological, social and economic parameters

Spatial and temporal scale

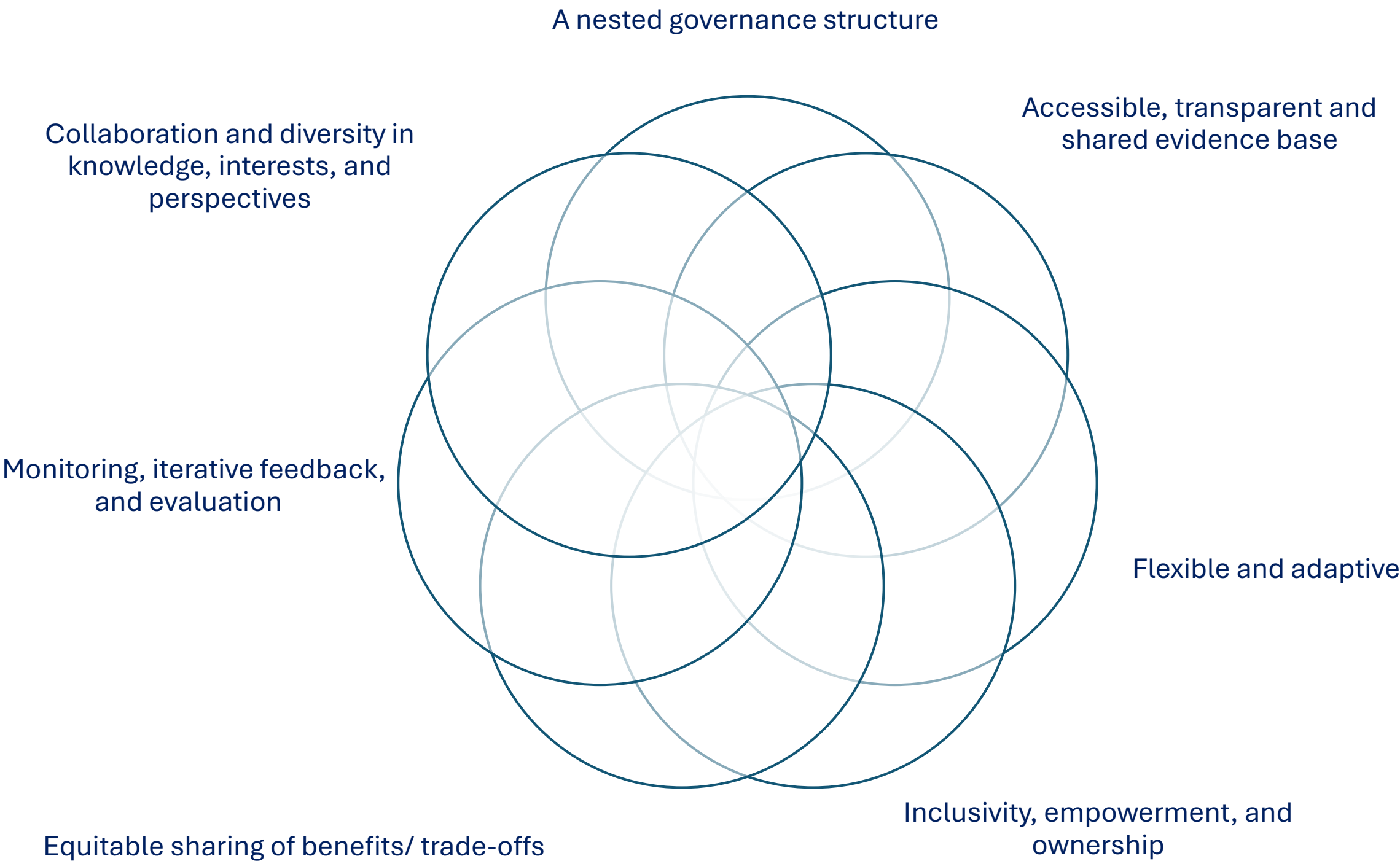
Protection/ conservation of biodiversity and associated benefits

National objectives and local priorities

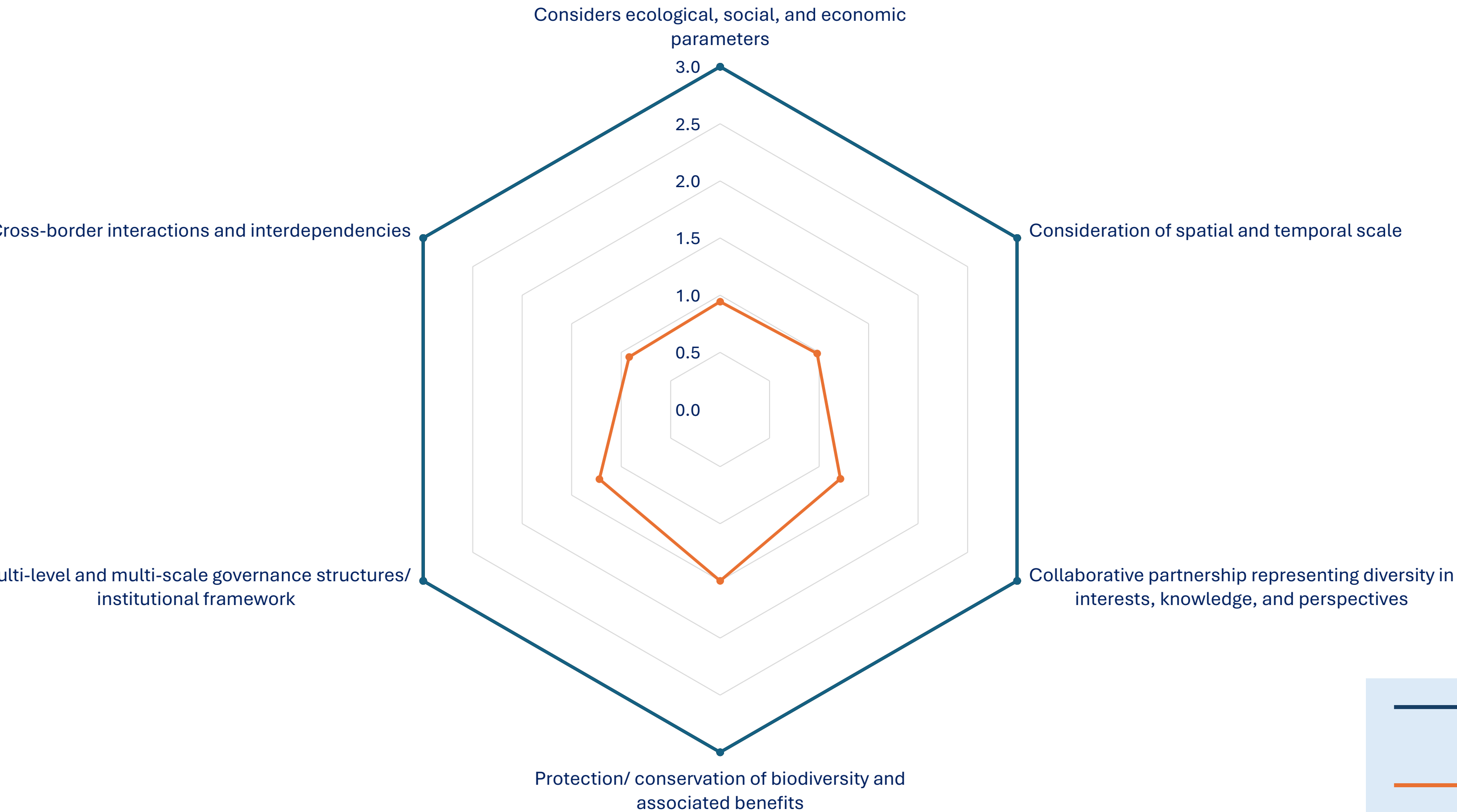
Cross-border interactions and interdependencies

Legal and institutional frameworks and structures

How are decisions made?



A comparison of key characteristics of sustainable and equitable decision-making between catalogued decisions and an idealised approach



— Idealised decision

— Current decisions (average)

Thanks for listening!

Acknowledgements

The MMO Evidence and Evaluation team, in particular Leonie Robinson, Meg Stafford, Emma Martin, Alice Walpole, Rachel Day, Roanna Goater, and Amy Flude.

All the decision makers and advisors who have taken the time to engage with us and been open to discussing how decisions are being made and what might be possible in terms of change.





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Restoring Nature

UK Blue Carbon Mapping Project

Ruth Williams,
The Wildlife Trusts

BLUE CARBON

The need to protect essential
stores of carbon in our seas

Ruth Williams – The Wildlife Trusts

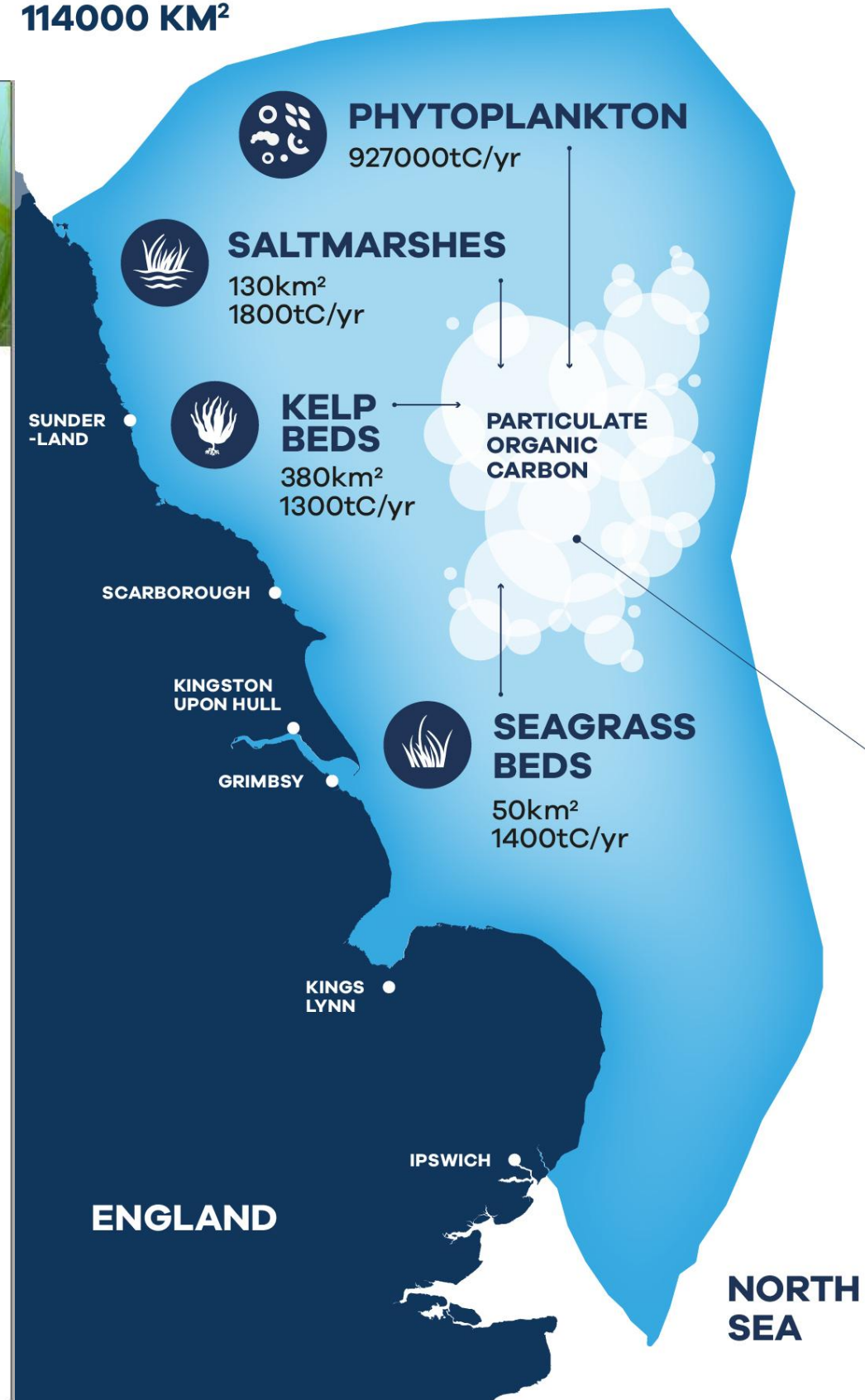


Blue carbon is simply the term for **carbon captured and stored by marine plants, animals and habitats.**





PROJECT AREA
114000 KM²



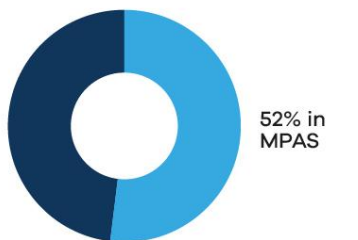
KEY

tC/yr
Organic carbon accumulation (tonnes per year)

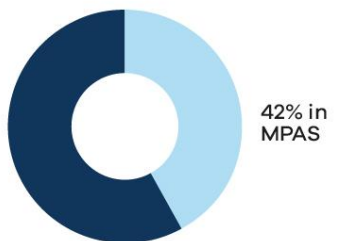
MtC
Million tonnes carbon

CARBON STORES

ORGANIC CARBON
37 MtC



INORGANIC CARBON
63 MtC



THE CARBON STORED IN THE TOP 10CM OF MARINE SEDIMENTS = 20% OF ALL FORESTS IN THE UK

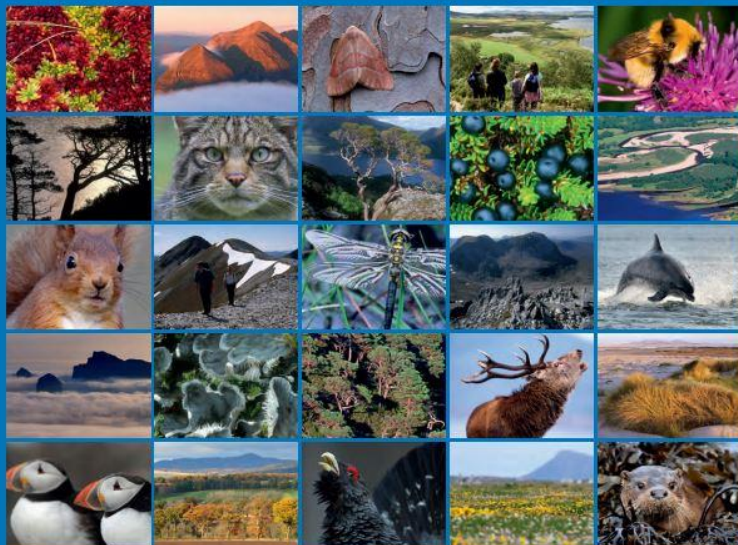
Scottish Natural Heritage
Commissioned Report No. 761

Assessment of carbon budgets and potential blue carbon stores in Scotland's coastal and marine environment



Scottish Natural Heritage
Commissioned Report No. 957

Assessment of Blue Carbon Resources in Scotland's Inshore Marine Protected Area Network



ASSESSMENT OF CARBON CAPTURE AND STORAGE IN NATURAL SYSTEMS WITHIN THE ENGLISH NORTH SEA

(INCLUDING WITHIN MARINE PROTECTED AREAS)

This report was written by



This research was co-funded by



Consultants Professor Dan Laffoley and Professor John M Baxter guided this process and provided their expertise.

INTRODUCTION

Three quarters of the UK is in the sea. Among the diversity of marine wildlife found within UK seas lies a reservoir of carbon stored in natural habitats like sand, mud, saltmarsh and seagrass. Unlike land-based sources of carbon such as forests and peatlands, marine carbon stores are less well understood. This report begins to fill in the gaps in our knowledge of where carbon can be found within the English North Sea, how much carbon is being stored and the capacity to lock carbon away in the future. This research paves the way for better understanding and protection of marine carbon and in doing so tackling the dual climate and biodiversity crises.

BACKGROUND

The world is facing a combined climate and biodiversity emergency, the result of the ongoing destruction of the environment, including natural carbon stores. Years of exploitation and over-consumption of natural resources coupled with undervaluing the roles and contributions of marine ecosystems has left our seas degraded. Specifically, when we damage or degrade carbon stores we impair their ability to absorb carbon and we release locked-away carbon back into the sea and atmosphere. These same actions are also damaging and destroying the very biodiversity that enables carbon to be locked away in natural systems in the first place, thus further compromising effective capture and storage in the future.

Marine ecosystems, including saltmarsh, seagrass, kelp, seaweeds, biogenic reef and seabed sediments, capture carbon and lock it away. Saltmarsh and seagrass beds both capture and store carbon whereas seaweeds and kelp forests capture carbon, a proportion of which is then eroded and transported elsewhere as detritus and subsequently buried in seabed sediments and stored. Biogenic reefs act principally as depositories for carbon from other sources. These natural carbon stores are vulnerable to a variety of human pressures which can cause them to be disturbed, damaged or removed entirely, which then hinders or eliminates their ability to store and/or capture carbon.

Working with nature and implementing 'nature-based solutions' (NBS) is an essential component of tackling both crises. They also make both environmental and socio-economic sense. Protection, restoration and enhancement of marine habitats represent long-term, cost-effective strategies for carbon storage and provide a multitude of additional benefits such as nursery grounds for fish and providing protection to our coastal towns and cities. Long term carbon storage in the sea depends on protecting key habitats from disturbance and damage. The first step is understanding the scale and distribution of carbon stores and capture rates within our seas. Our report identifies carbon stores and sequestration potential in the English North Sea region, and highlights where these stores can be found within an existing network of Marine Protected Areas (MPA), as well as key areas falling outside of this network.

KEY REPORT FINDINGS

- Carbon stocks in the English North Sea amount to nearly 20% of that held in UK forests and woodlands. The top 10cm of English North Sea seabed sediments is estimated to store 100.4Mt carbon. To put this into context, UK forests are estimated to store 529Mt carbon. Yet these sediments are likely to be tens to hundreds of metres in depth so these figures should be considered an underestimate of the total organic carbon stored in the seabed sediments including the significant buried peat deposits in some areas.
- 98% of the total organic carbon is stored in seabed sediments like sand and mud. Seabed sediments are thus by far the most important habitat for carbon storage in the region. We have no mechanism for 'restoring' these habitats – their protection relies on spatially managing activities so as not to disturb these sediments.
- The current English North Sea MPA network contains 51.9% of the total organic carbon stores in the English North Sea and 42.1% of total inorganic carbon stores in the English North Sea. Almost all of these MPAs are still subjected to broadscale disturbance.



Partnership Project

Project Partners: The Wildlife Trust, WWF & RSPB

Management: Bex Lynam and Dani Clifford TWT

Research: SAMS (with MBA and Uni of St Andrews)

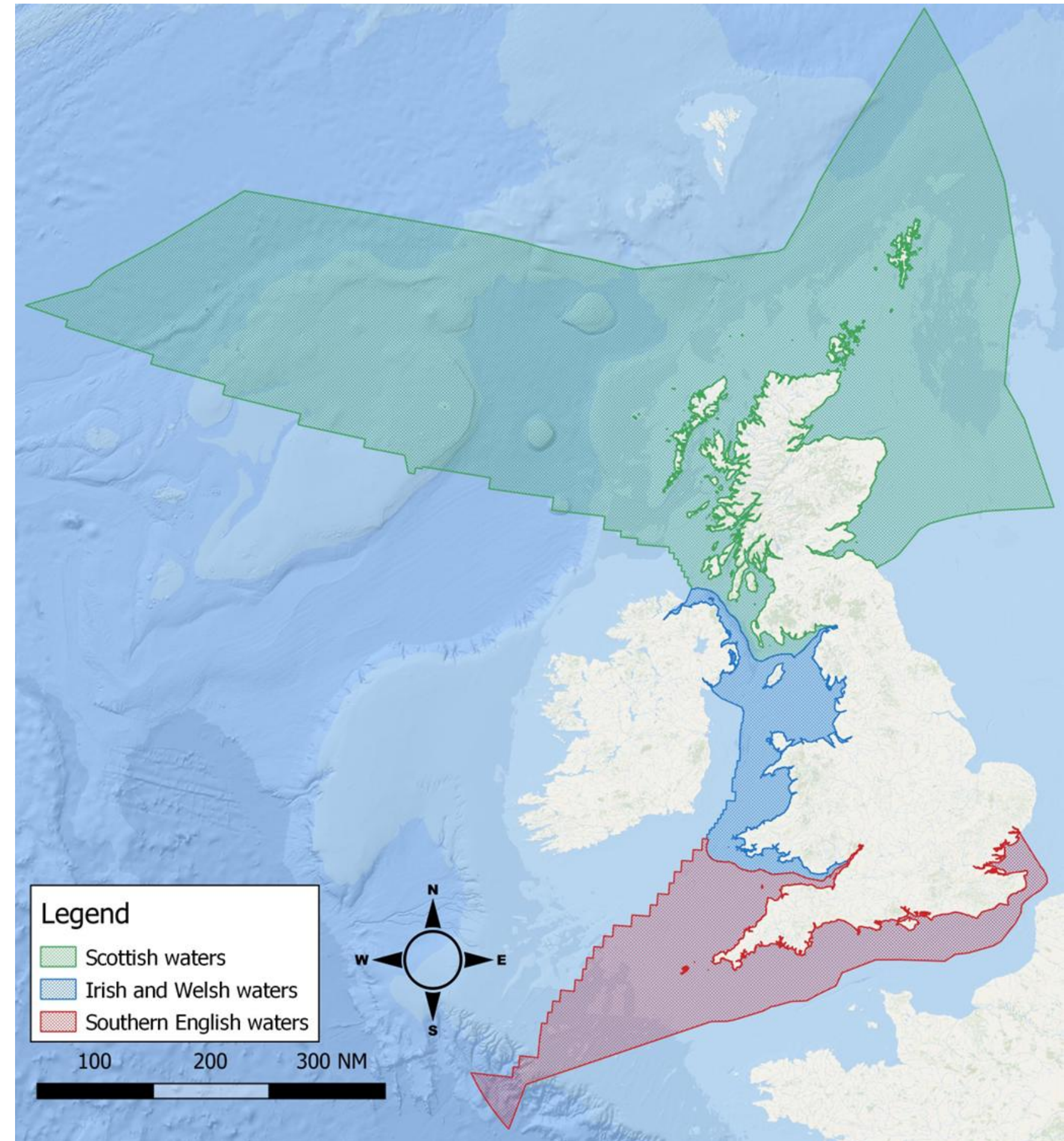
Expert Advisors: Prof. Dan Laffoley & Prof. John Baxter

Advisory Group: Independent advisors, Environment Agency, MMO, Natural England, JNCC, Country representatives (from Welsh Government, IoM Government, DAERA, NatureScot, Marine Scotland), TCE & TCE Scotland



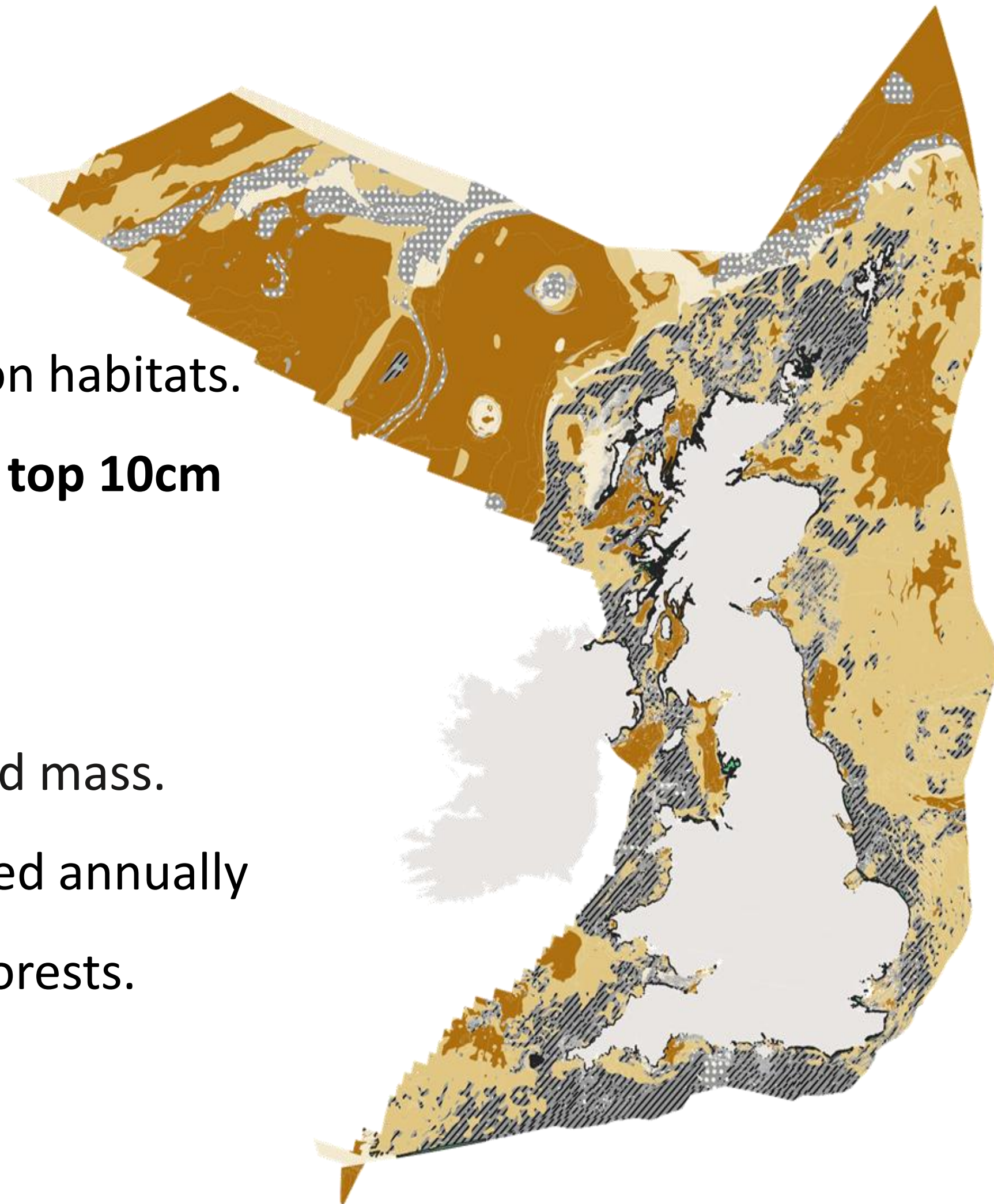
How did we do it?

- Comprehensive inventory of all blue carbon habitats across UK's and Isle of Man EEZ.
- Mapped the extent and distribution of all blue carbon habitats.
- Assessed the quantity of C stored in each.
- Assessed the average sequestration rate / year in each.



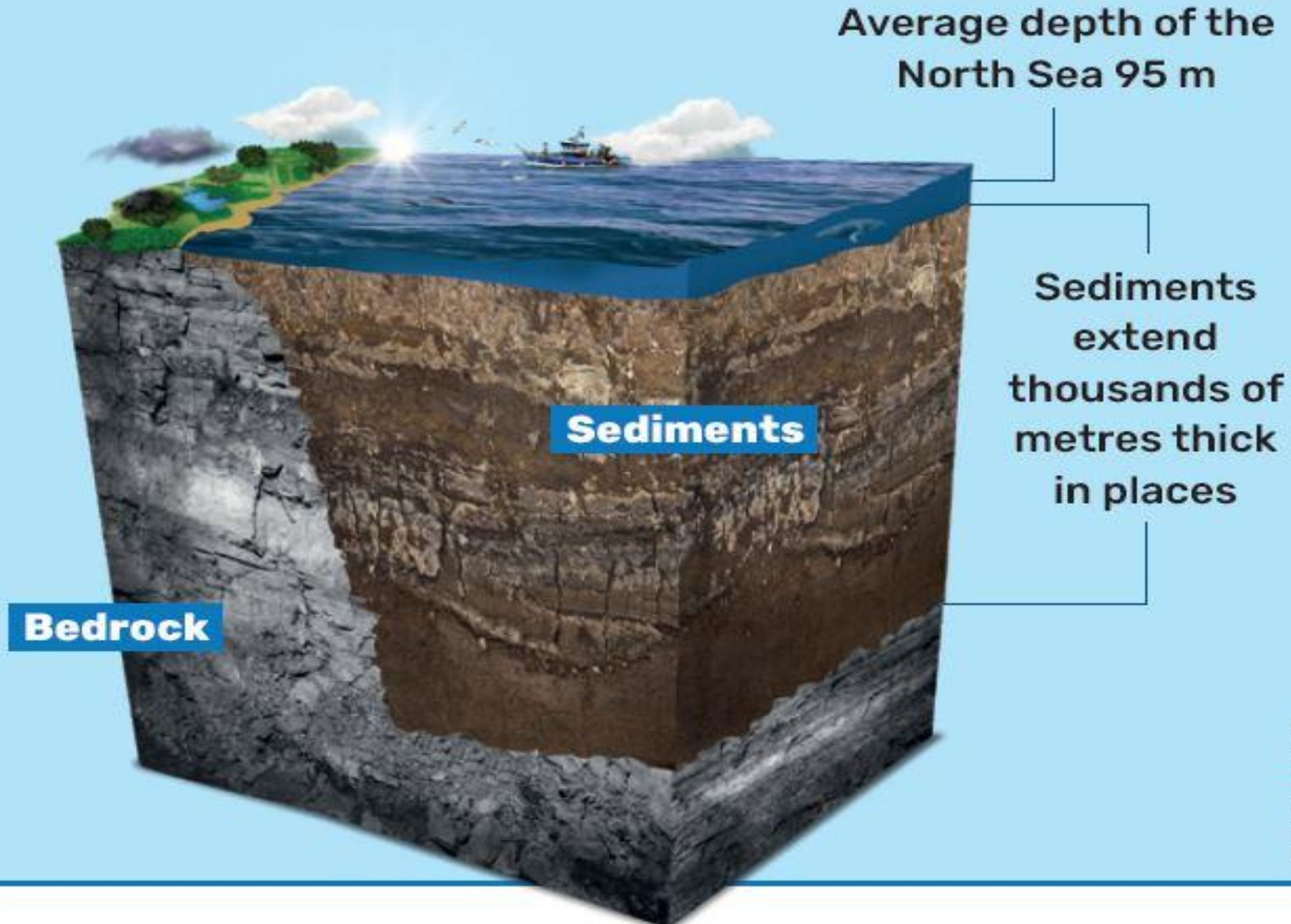
How much is down there?

- First country in the world to map its blue carbon habitats.
- **244 million tonnes** of organic carbon stored in **top 10cm** of seabed.
- Over **98% in seabed sediments**.
- **885,000 kms²** – over 3x the size of the UK's land mass.
- *Up to 13 million tonnes* of organic carbon added annually to sediment stores – about 3x as much as UK forests.

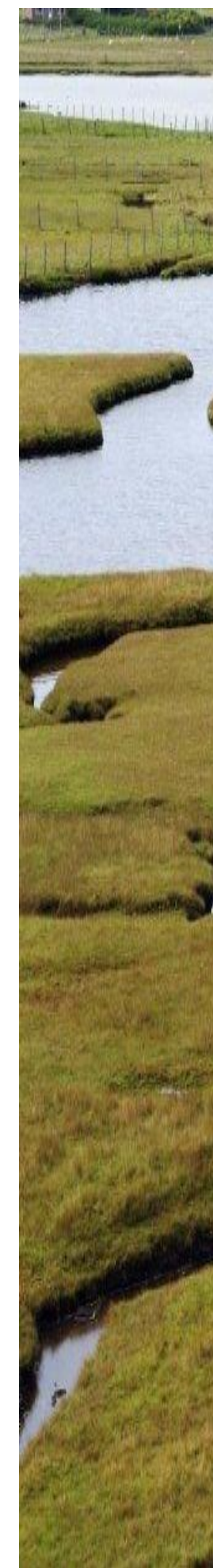
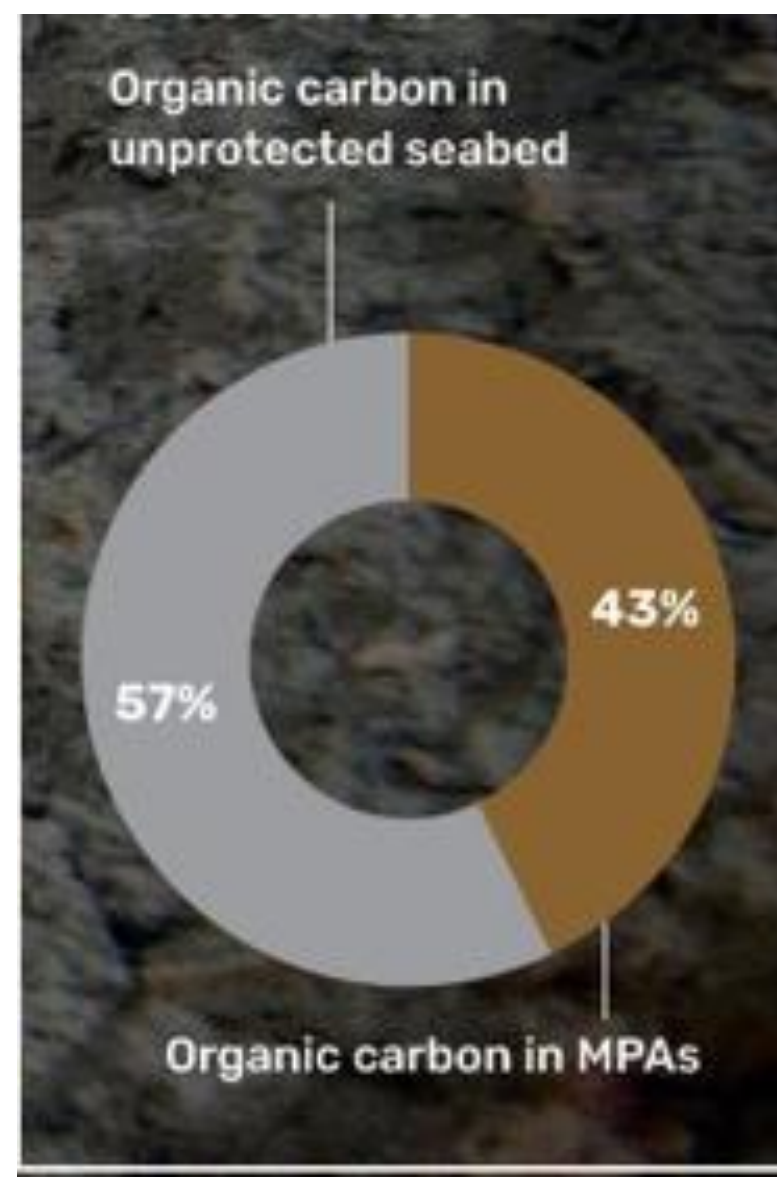


We have estimated the tip of the iceberg

Seabed sediments in UK waters are thousands of metres thick in some places. It is the top layers that are the most at risk from the impacts of human activities.



- Coastal vegetated habitats (kelp, seagrass beds and saltmarshes) **cover just 1% of UK seas but contain 1.7% of organic carbon.**
- 286 000 tC/yr particulate organic carbon. **60%** of this is in saltmarsh.
- Marine Protected Areas (**MPAs**) **contain 43% of the organic carbon.**



Broken down into long-term stores:

 **Seabed sediments**
240 million tonnes

Saltmarsh habitats 
2.4 million tonnes

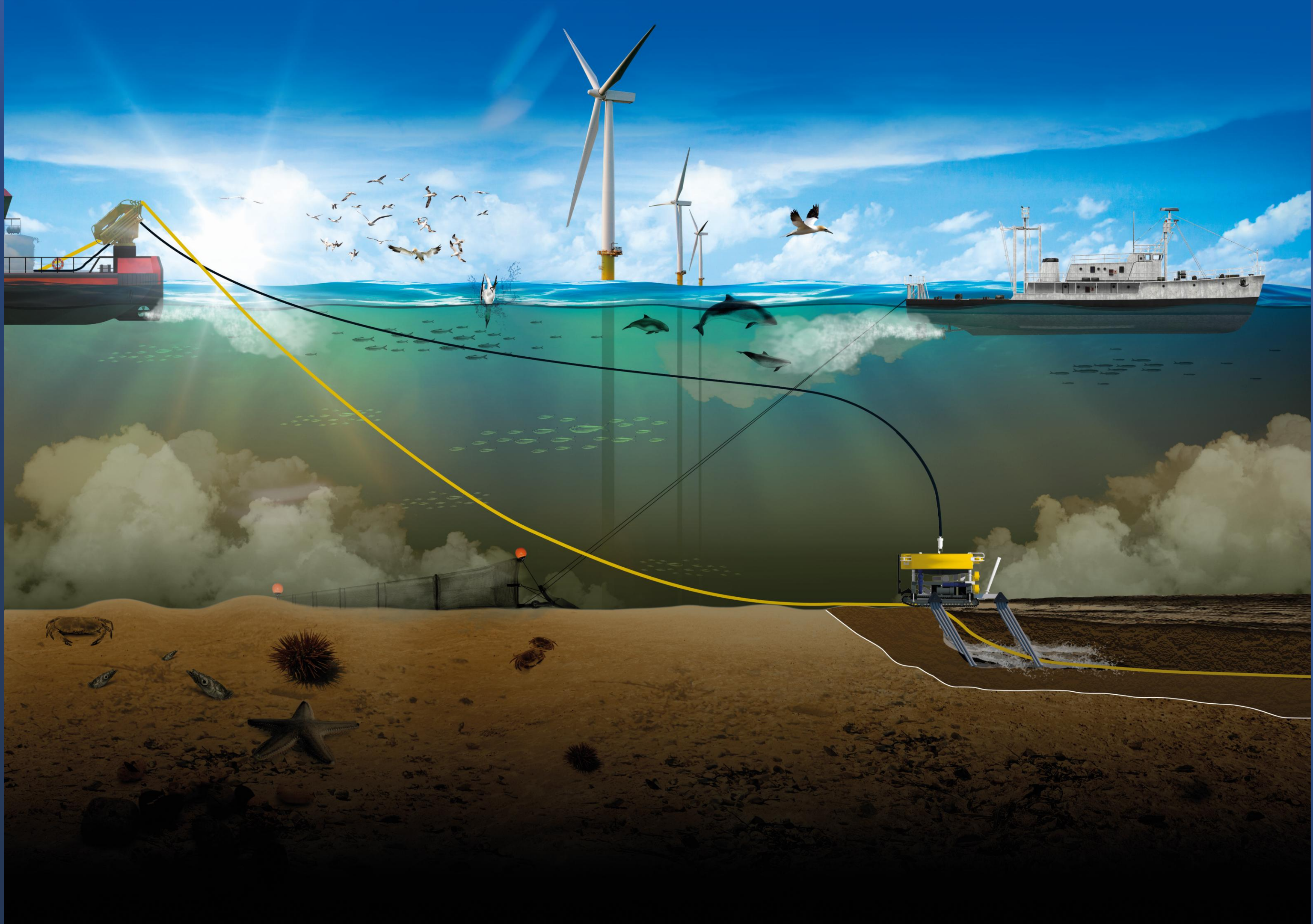
 **Seagrass meadows**
139,000 tonnes

Short-term stocks:

Kelp forests 
1.4 million tonnes

 **Intertidal seaweeds**
67,000 tonnes





What needs to change?

Better management of Marine Protected Areas

- All MPAs are protected from destructive activities that damage blue carbon.
- Account for both carbon and biodiversity in designating new protected areas.



© Paul Naylor

Improved strategic planning of activities in UK seas

- Consider blue carbon in UK marine plans.
- Minimise the impacts of fishing and developments by undertaking blue carbon impact assessments.
- Transition fishing industries away from activities that damage the seabed.



More investment and research on protecting blue carbon

- Allocate funding to restore habitats including seagrass beds and saltmarshes.
- Support research and monitoring of blue carbon dynamics.
- Add seagrass and saltmarsh to the Greenhouse Gas Registry.



Take homes....

- Read and share reports - on our [blue carbon web page](#).
- Mud is GREAT and a huge carbon store.
- MPAs contain 43% of the organic carbon but most is unprotected as not a feature.
- MPAs need to protect carbon as well as biodiversity.
- Include blue carbon in marine planning to avoid or minimise impacts.
- Learn more to fill in the gaps in knowledge.



Can we achieve well-
managed and restored
marine and coastal
seascapes by 2030?

OCEAN ACTION IS
CLIMATE ACTION!



Thank you





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Restoring Nature

Towards Northern Ireland's Ocean
Recovery – From Policy to Practical
Marine Conservation

Robert Walsh,
Northern Ireland Marine Task Force

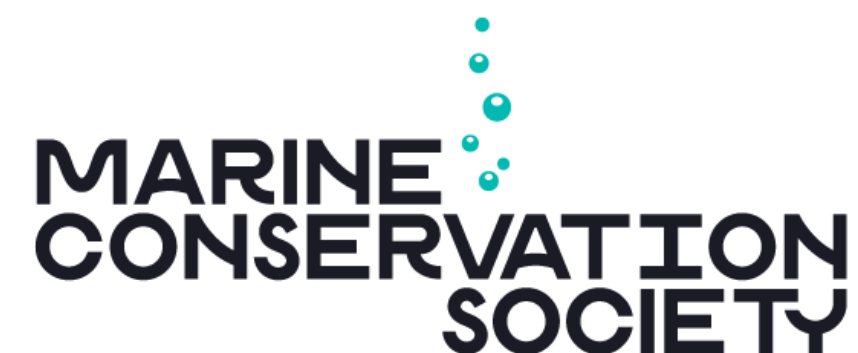
Towards Northern Ireland's Ocean Recovery

From Policy to Practical Marine Conservation

30th January 2025

Robert Walsh – NIMTF Officer

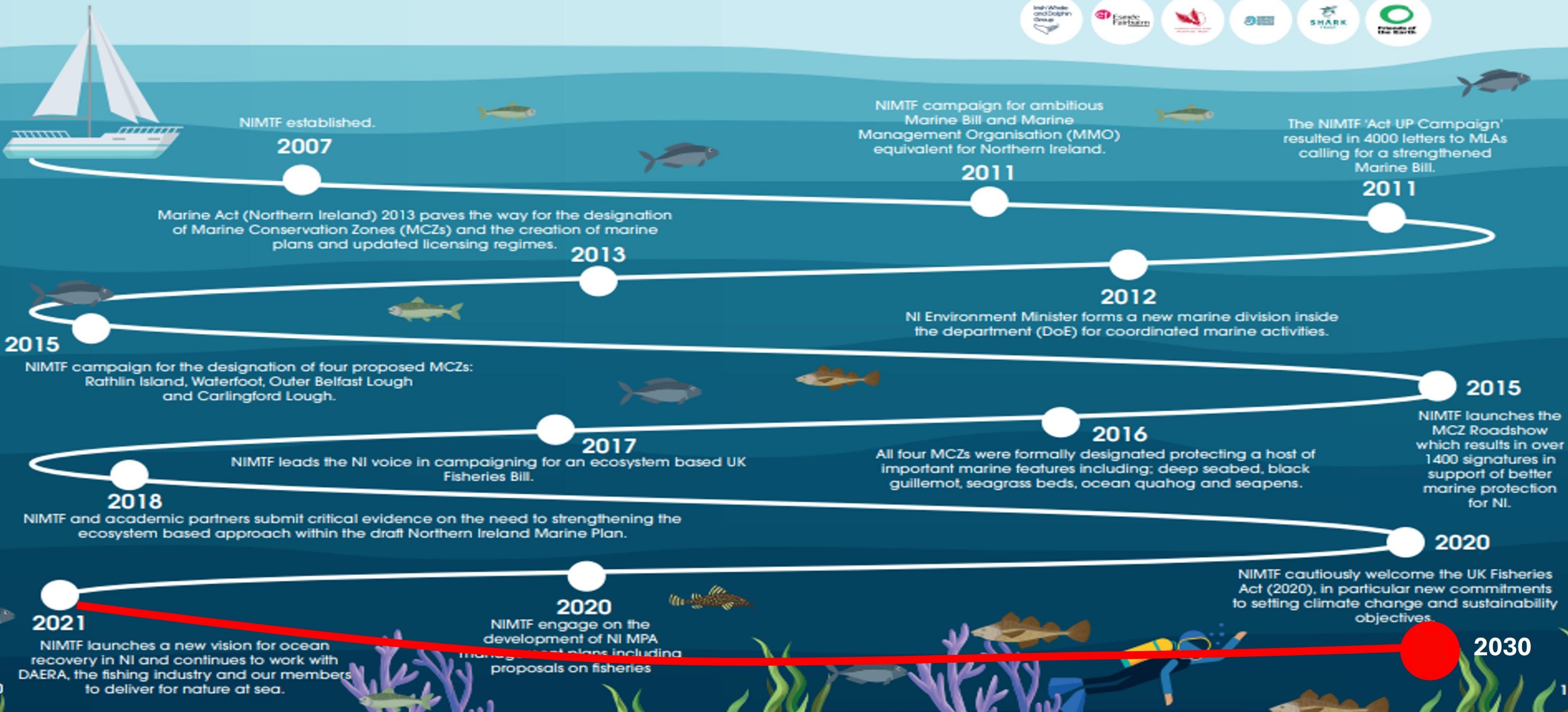
Coastal Futures 2025



Northern Ireland Marine Task Force

Our journey towards healthy seas and ocean recovery

The Northern Ireland Marine Task Force is a coalition of non-governmental organisations working together towards, healthy productive and resilient seas and is funded by Esmeé Fairbairn Foundation.



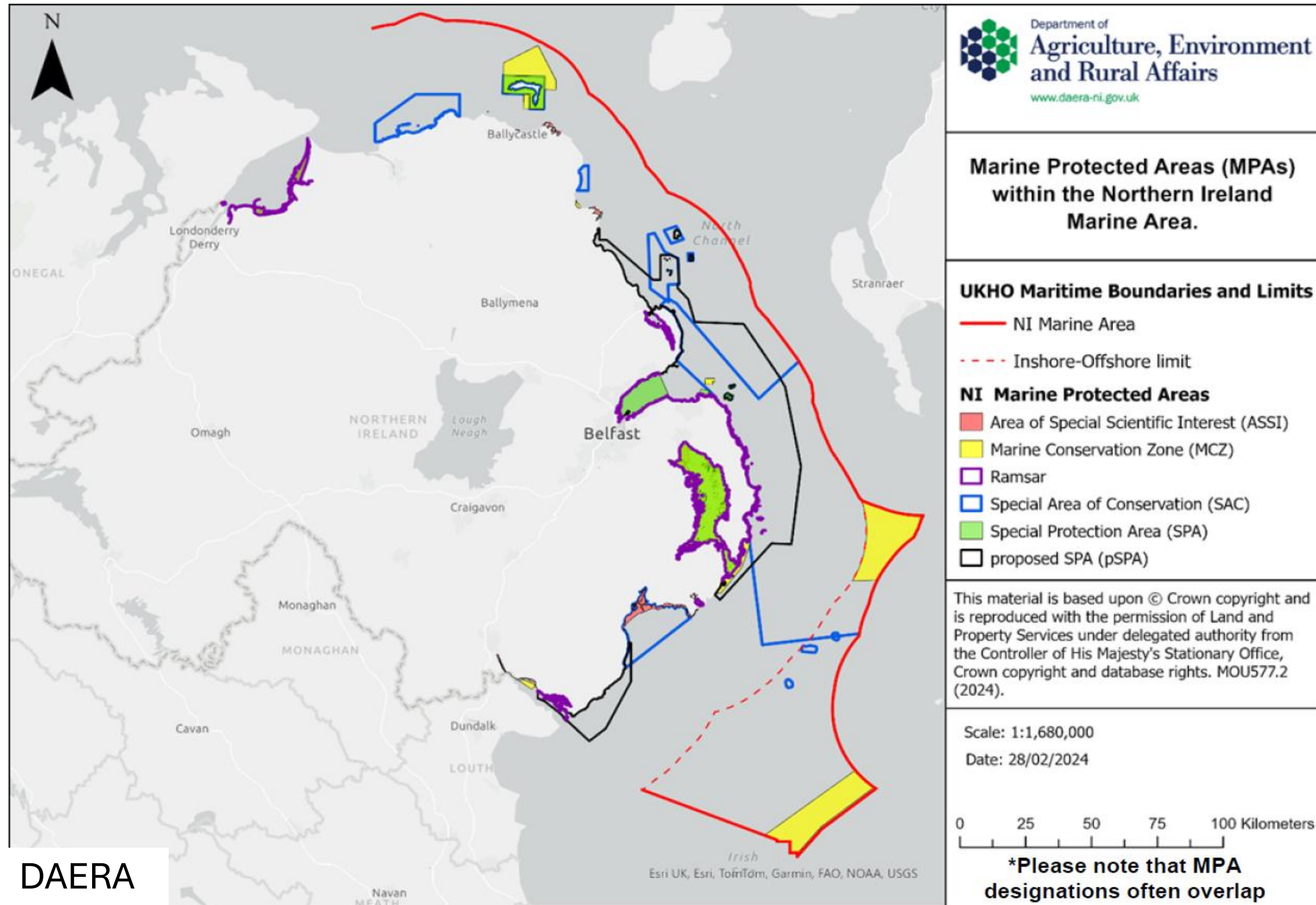
Current Status of marine environment in NI

- 12th worst out of 240 regions for biodiversity loss
- 38% designated -> <10% actively managed*
- History of political instability
- NIMTF has a 'Marine Vision' for Ocean Recovery

*NISRA NI Environmental Statistics Report 2023



Vision: Recovering Biodiversity



- Management Plans
- Transparent assessment
- Finalise proposed SPAs
- Enforcement

**Relevant Policy: MPA
Strategy Review (2024)**

**Relevant Policy:
Elasmobranch
Conservation
Strategy (2024)**



**Relevant Policy:
Seabird Conservation
Strategy and Action
Plan (2024)**

The Northern Ireland Marine Taskforce (NIMTF) is a coalition of non-government environmental organisations – it includes RSPB, Ulster Wildlife, Wildfowl and Wetlands Trust, National Trust, Friends of the Earth, Marine Conservation Society, Keep Northern Ireland Beautiful, Irish Whale and Dolphin Group, Surfers Against Sewage, Shark Trust, Causeway Coast & Glens Heritage Trust and Northern Ireland Environment Link. The NIMTF has the support of approximately 100,000 local people. We are working towards healthy, productive and resilient seas for Northern Ireland.

Northern Ireland Marine Task Force response to: [Elasmobranch Conservation Strategy 2024](#)

Submitted: 16th December 2024

The Northern Ireland Marine Taskforce (NIMTF) is a coalition of non-government environmental organisations – it includes RSPB, Ulster Wildlife, Wildfowl and Wetlands Trust, National Trust, Friends of the Earth, Marine Conservation Society, Keep Northern Ireland Beautiful, Irish Whale and Dolphin Group, Surfers Against Sewage, Shark Trust, Causeway Coast & Glens Heritage Trust and Northern Ireland Environment Link. The NIMTF has the support of approximately 100,000 local people. We are working towards healthy, productive and resilient seas for Northern Ireland.

Northern Ireland Marine Task Force response to: [Seabird Conservation Strategy and Action Plan 2024](#)

Submitted: 16th December 2024

Vision: Sustainable Fisheries

DEFINING A UK GOVERNMENT STRATEGY TO END OVERFISHING

PART THREE: ESTABLISHING THE ENABLING CONDITIONS – DOING THINGS DIFFERENTLY

“ The longer it takes for a strategy to come out that aids sustainability or restoration, the potential more impact is going to take place in the meantime, which means you’re going to have to double your efforts to return back to the original state. ”

ROBERT WALSH

“ There has to be short term goals but also ensuring that there’s continual review towards those goals. ” DR MATHIEU LUNDY



WE NEED A
STRATEGY TO END
OVERFISHING AND
GIVE LIFE BACK
TO OUR SEAS

Relevant Policy: Fisheries
Management Plans

Oceana

"Partnership working will be key"

A joint response to the consultation on the draft Joint Fisheries Statement (April 2022) by:

The Northern Ireland Fishermen's Federation

and,

The Northern Ireland Marine Task Force.

Co-Fish Aims:

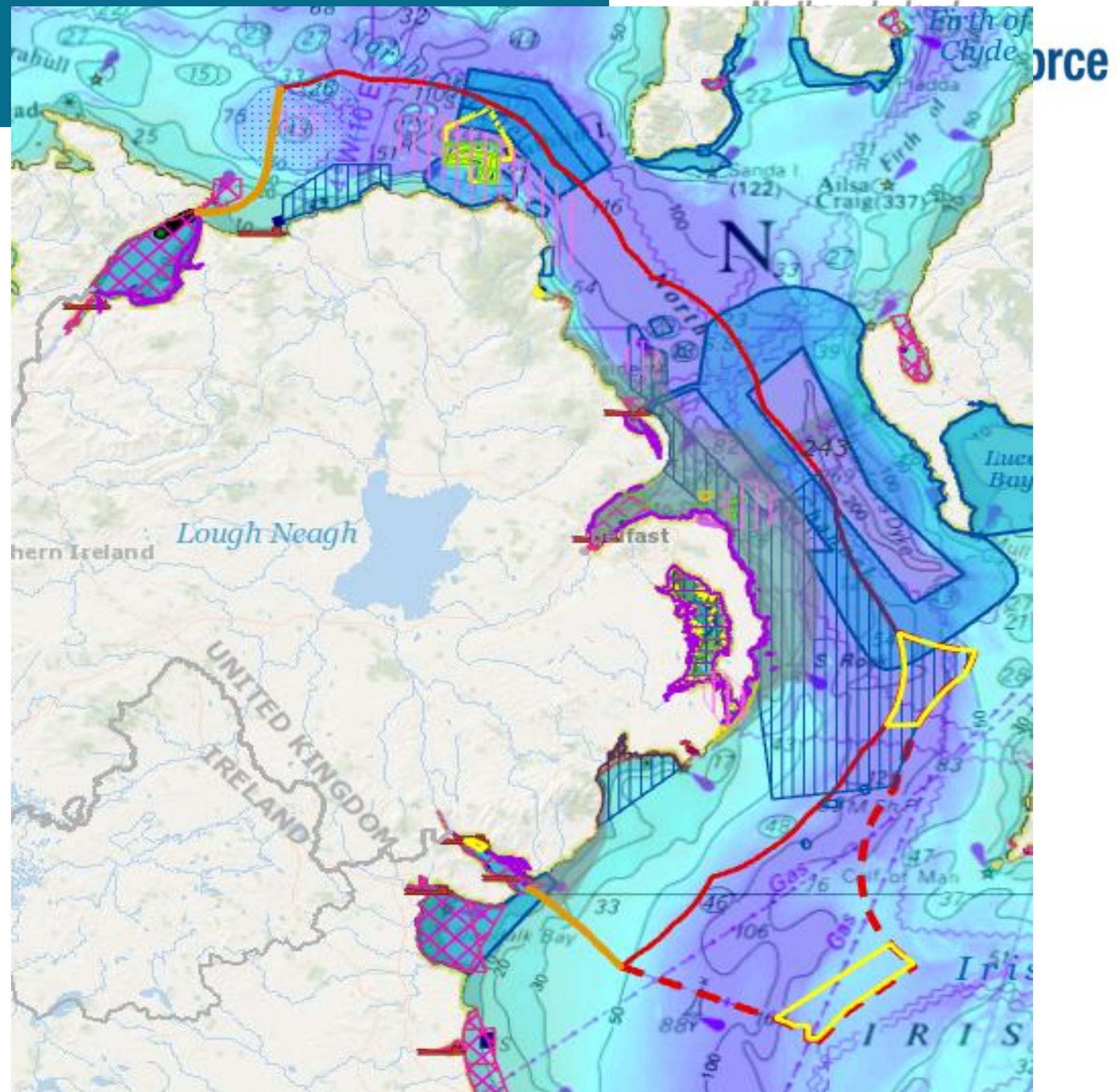
- (1) Coordinate knowledge sharing between government departments and stakeholders to improve the efficacy of the MPA network.
- (2) ensure regulations are delivering benefits for the marine environment through habitat & species protection and restoration.
- 3) Ensure the livelihoods of the NI fishing industry is not hindered by such designations.



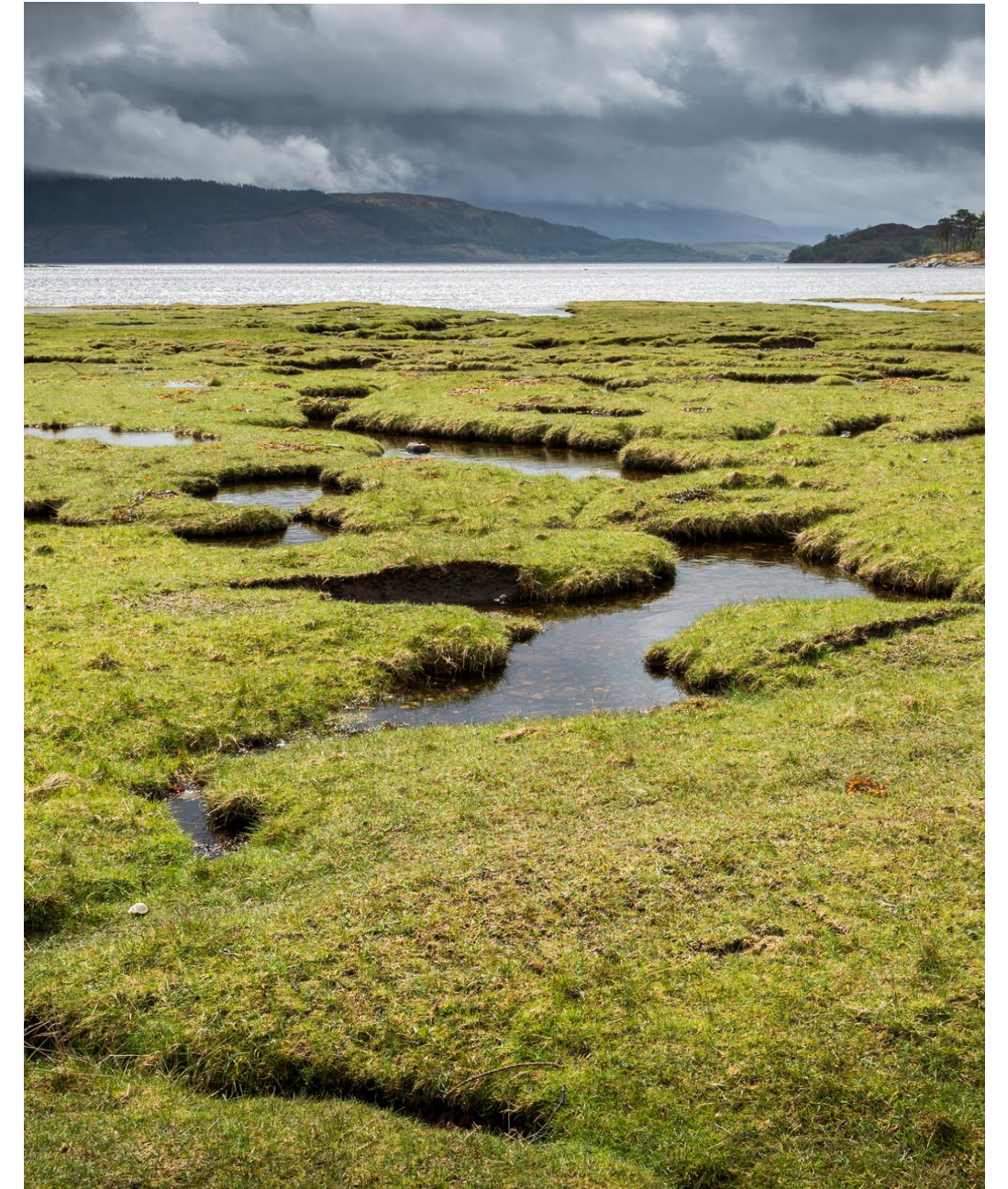
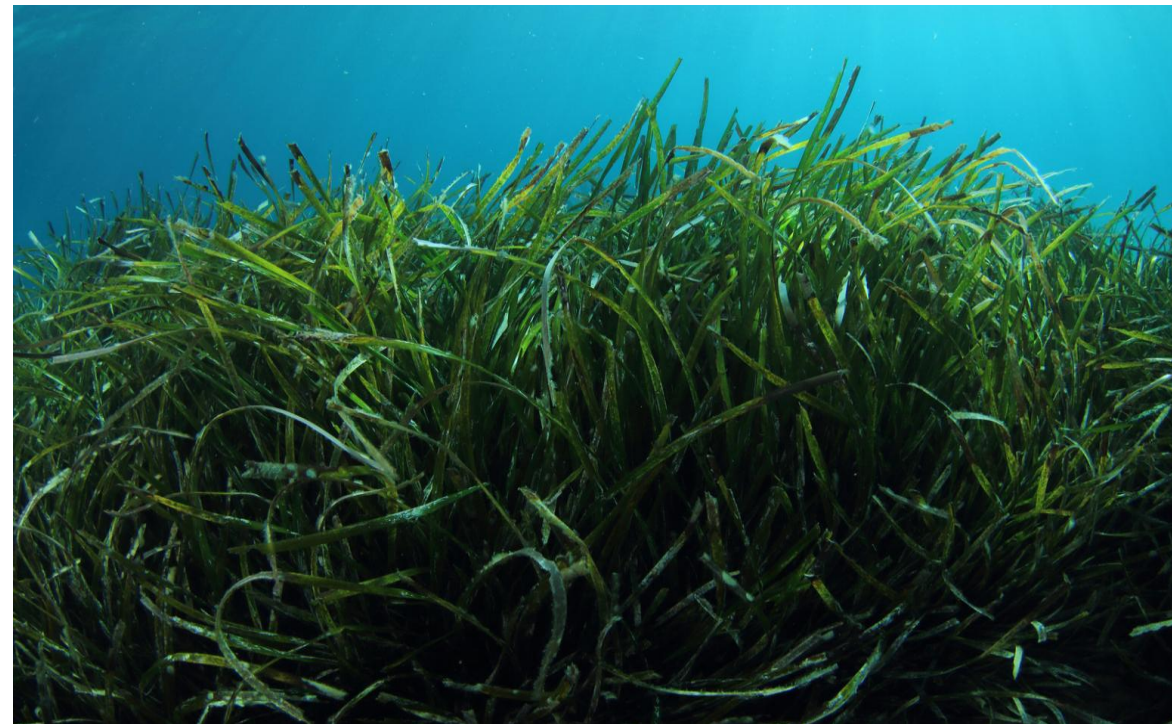
Vision: Sustainable Development at Sea

Relevant Policy:
Draft NI Marine Plan

Relevant Policy: Draft
Offshore Renewable
Energy Action Plan



Vision: Climate Action



Relevant Policy: Blue Carbon
Action Plan (2024)

Relevant Policy: Climate
Change (NI) Act 2022

Relevant Policy: NI Climate
Change Adaptation Programme –
Round 3 (2024)

Vision: Raising Voices



Local People



Local Voices



Local Action

Vision: Raising Voices



Achieving Impact

Engagement



Awareness



Questions put to Minister

| | | | | | |
|------------------------|--|---|------------|---------------------------------------|--|
| AQW 18601/22- 27 | Mr Mark Durkan (SDLP - Foyle) | To ask the Minister of Agriculture, Environment and Rural Affairs whether his Department has assessed aquaculture activity at Foyle Lough to ensure that it is being managed sustainably. + Display Answer | 21/11/2024 | Answered on 28/11/2024 | Foyle; Fish farming; Sustainable development; Seas and oceans; Borders |
| AQW 18600/22- 27 | Mr Mark Durkan (SDLP - Foyle) | To ask the Minister of Agriculture, Environment and Rural Affairs whether his Department has assessed the current levels of (i) inter-tidal hand-gathering of shellfish species; and (ii) bait-digging within Foyle Lough. | 21/11/2024 | To be answered by 06/12/2024 | Shellfish; Fisheries; Foyle |
| AQW 18599/22- 27 | Mr Mark Durkan (SDLP - Foyle) | To ask the Minister of Agriculture, Environment and Rural Affairs to detail (i) any action he is taking to ensure the cessation of all unlicensed aquaculture activities; and (ii) any engagement he has had with the Loughs Agency in relation to delivering effective enforcement, particularly in relation to Foyle Lough. + Display Answer | 21/11/2024 | Answered on 28/11/2024 | Fish farming; Licensing; Loughs Agency; Foyle; Reserved matters |



Member Action



LIFE Raft – Invasive Non-Native
Invasive Species Eradication



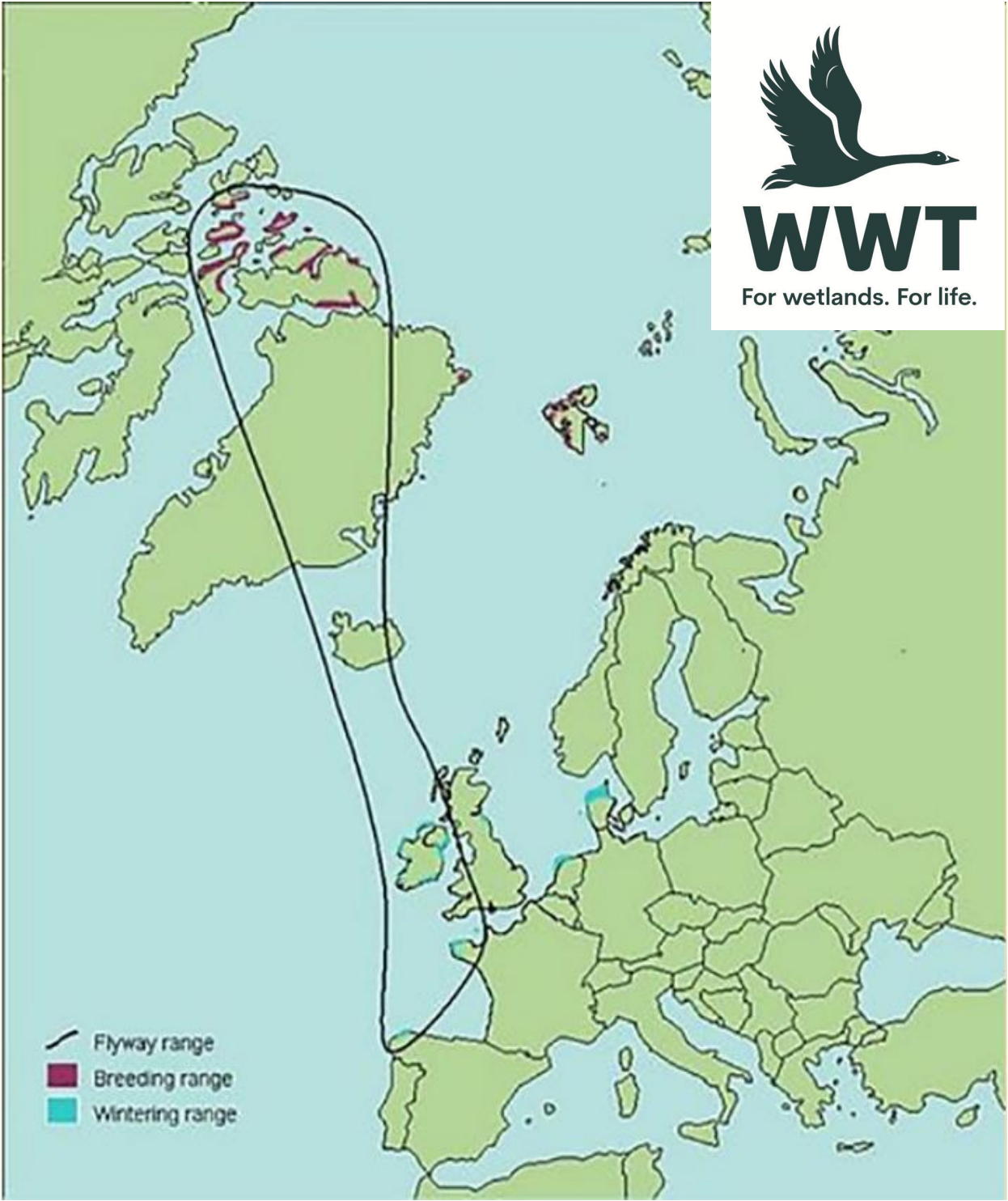
Native Oyster Nurseries Restoration



Health, Oceans and Communities



Coastal Adaptation and Management



Saltmarsh Restoration and the Big
Brent Weekend



Action

Politicians



Northern Ireland
Marine Task Force

Northern Ireland
Marine Task Force



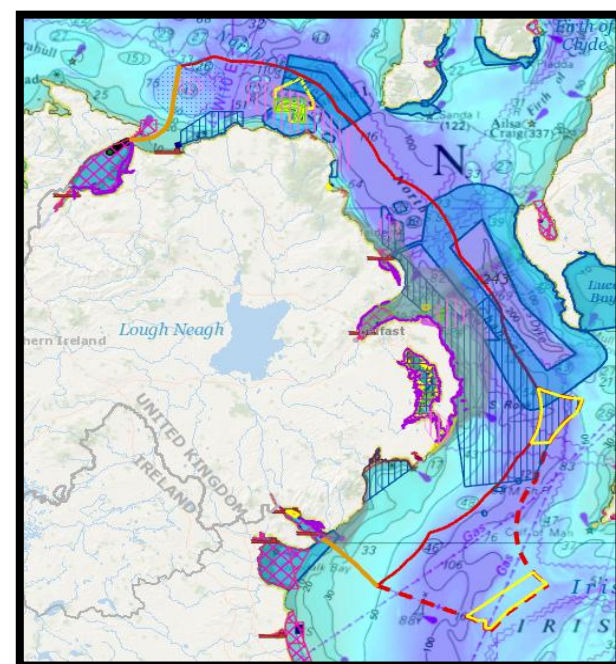
Departments



Communities



Industries



Members



What we need now



Urgent Action

Dedicated
Funding

Political
Leadership

Public
Ownership

Cross-Sector
Approach

Transboundary
Approach

Thank you!



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@NIMTF
www.nimtf.org





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Unlocking saltmarsh superpowers

Sarah Fowler,
Chief Executive, Wildfowl and
Wetlands Trust



UNLOCKING SALT MARSH SUPERPOWERS

**SARAH FOWLER
CHIEF EXECUTIVE, WWT**

WE ARE WWT



WWT

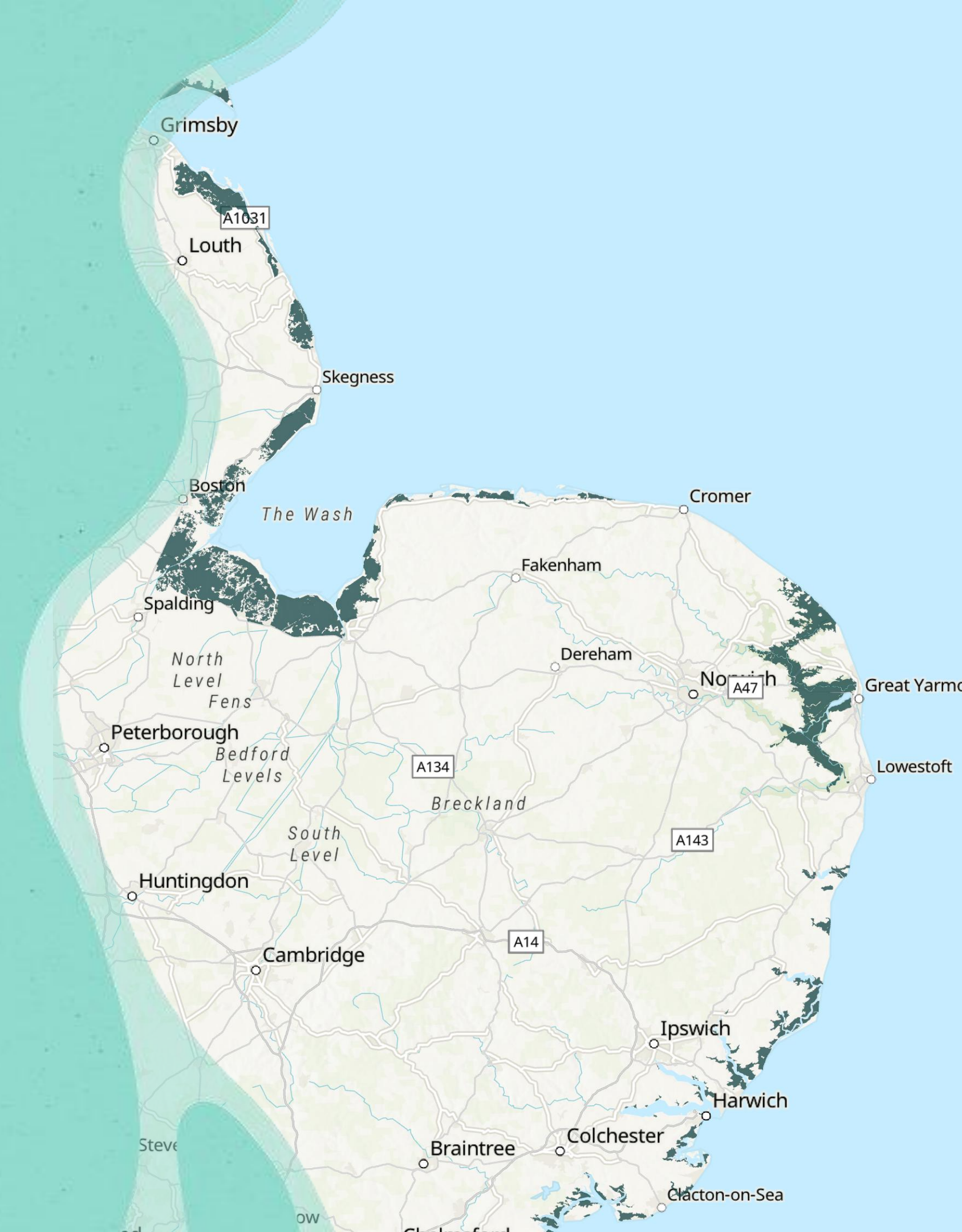
For wetlands. For life.





SPATIAL OPPORTUNITY

- WWT investigated the potential of restoring 100,000 hectares of wetlands around the UK and mapped saltmarsh potential
- We found 170,000 hectares of suitable land – our first goal is to restore 22,000
- This is the first step – and likely the easiest



CHALLENGES

- Land availability
- Infrastructure
- What's already there
- Awareness of SMPs
- Data and permissions
- Community perceptions



HOW DO WE FUND THIS?

- The Saltmarsh Carbon Code could signal a sea change in funding opportunities
- Make saltmarsh an investable proposition by valuing the full range of benefits it brings
- Investigate opportunities for bundling and stacking benefits





GOING FORWARD

- Keep testing, learning and sharing our findings together
- We need funding solutions and incentives for landowners
- We will talk about saltmarsh superpowers, and we need you to as well



WWT

For wetlands. For life.

saltmarshsolutions@wwt.org.uk



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Session Six Panel Debate

Restoring Nature

Can we achieve well-managed and restored marine and coastal seascapes by 2030?

Chair: Professor Dickon Howell, Howell Marine Consulting

Jasmine Isa Qureshi, Ecologist and Writer

Laura Seddon, Marine Management Organisation

Ruth Williams, The Wildlife Trusts

Robert Walsh, Northern Ireland Marine Task Force

Sarah Fowler, Chief Executive, Wildfowl and Wetlands Trust

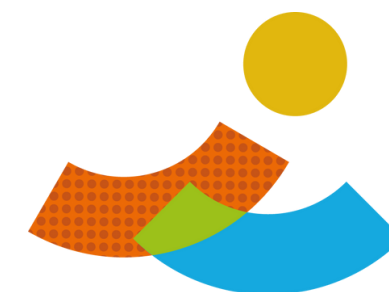
Jo Ratcliffe, Environment Agency

Samir Whitaker, Orsted



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