



Coastal **Futures** 2025

Delivered by OCF

# Coastal Futures conference 2025 The path to 2030

Programme and abstracts

Tickets on sale here

29 & 30 January 2025













Coastal **Futures** 2025

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## Coastal Futures 2025: The path to 2030



2030: The date is etched across international goals, government policies, and legal targets. The UK has a new government, and this parliamentary term will take the country to the brink of 2030.

Politicians, NGOs, industry, and government agencies, all have 2030 fixed firmly in their sights as the year when the world should have achieved many of the most important aims and ambitions of our time.

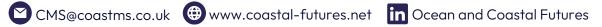
What are these targets, why do they matter and whose responsibility are they?

- We are now halfway through the 'UN Decade of Ocean Science' and 'UN Decade of Ecosystem Restoration'.
- The 2030 Agenda for Sustainable Development, adopted by all United Nations members in 2015, created 17 world Sustainable Development Goals to be achieved by 2030.
- OSPAR's 16 contracting parties have signed up to the North-East Atlantic Environment Strategy 2030. It sets out the objectives to tackle the challenges facing the ocean: biodiversity loss, pollution, and climate change.
- The UK government wants clean power by 2030 and has a target to reach 50GW of offshore wind capacity by this date, a step towards achieving net-zero.
- The Kunming-Montreal Global Biodiversity Framework commits 196 countries to halting and reversing nature loss by 2030. The agreement's 23 targets include a global target to conserve at least 30% of the world's ocean by 2030 ("30x30").
- Under the Paris climate agreement, the UK needs to reduce its emissions by 68% by 2030 compared with 1990 levels.
- The EU has adopted a new 'Nature Restoration Law'. Member States will put in place restoration measures in at least 20% of the EU's sea areas by 2030.

There are just five years until 2030. Is the UK and the world on track to reach these ambitions? How can we achieve the transition to a low-carbon, nature-positive and sustainable world in a fair and just way?

Coastal Futures 2025 sets out to answer these questions and cover the major themes in the estuarine, coastal and marine sectors. Across six sessions over two days, the conference aims to challenge thinking and move debate forward in an informative and collaborative way.

29 & 30 January 2025













## **Programme #CoastalFutures25**

Programme details and timings may be subject to change

## Day 1 - Wednesday 29th January 2025: Session 1

10:00	Welcome	A welcome from the Ocean and Coastal Futures team
10:20	Opening Address	Emma Hardy MP, Minister for Water and Flooding
10:30	Keynote	Michelle Willis, Acting CEO, Marine Management Organisation

### LAND-SEA INTERACTIONS

How do we improve the quality of place-based decision-making? Speakers will consider how to embed systems thinking and a holistic approach in local governance, to achieve stronger and more integrated outcomes.

Chair: **Aisling Lannin**, Head of Evidence, Marine Management Organisation

- Rhona Fairgrieve, AtkinsRéalis: IC(Z)M What's the Story: Back to the Future?
- Diana Pound, Dialogue Matters: The pathway to transformative change
- 10:45
  - Jo Bayes, Environment Agency: Applying a Natural Capital Approach from Source to Sea
  - Brendan Bromwich, Mott MacDonald: Systems thinking in practice Use of participatory system mapping in stakeholder engagement to better understand land-sea interactions
  - Sidonie Kenward, Marine Management Organisation: Exploring the challenges, opportunities and barriers to local decision-making in the context of marine planning

### Panel Debate with

- Ness Smith, Howell Marine Consulting
- **Amy Pryor**, Coastal Partnerships Network

12:20 Refreshments

29 & 30 January 2025













## **Programme** #CoastalFutures25

Programme details and timings may be subject to change

Day 1 - Wednesday 29th January 2025: Session 2

### **SUSTAINABLE SEAS**

Can we meet the 2030 targets whilst growing a sustainable blue economy? Speakers will illustrate complex interactions within the marine space and provide examples of collaborative and innovative solutions to achieve a sustainable blue economy, amid the nature and climate crises.

Chair: **Rachel Solomon Williams**, Executive Director, Aldersgate Group

- Jamie Moore, The Crown Estate: Marine Delivery Routemap: Integrating nature, clean power, and industry for a thriving marine economy and communities
- Lucy Greenhill, Howell Marine Consulting: What is a Sustainable Blue Economy and how do we make progress towards it?
- Siobhan Browne, Marine Management Organisation: Can we really build a windfarm in two years?

### Panel Debate with

- Samuel Wrobel, Senior Marine Policy Officer, RSPB
- Jennifer Godwin, CEO, Seabed User and Developer Group
- Chris Ranford, CEO, Cornish Fish Producers Organisation
- Tom Ash, Senior Policy Officer, Wildlife and Countryside Link

15:00 Refreshments

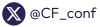
13:30

29 & 30 January 2025













## **Programme** #CoastalFutures25

Programme details and timings may be subject to change

Day 1 - Wednesday 29th January 2025: Session 3

### **ACROSS THE WATER**

What insights can we gain from international best practice to help us reach 2030 targets? Speakers will bring their experience from across the world to tackle this year's key questions on land-sea interactions, sustainable seas, ocean stewardship, future fishing and restoring nature.

Chair: **Louise Heaps**, Head of Sustainable Blue Economy, WWF

• Samantha Blampied, Government of Jersey: Marine Spatial Planning on an island scale

16:00

- Helen Elphick, RWE Offshore Wind: Ecological mitigation and restoration in the European offshore wind sector: Synergies and opportunities for the UK
- Wietse van der Werf, Founder, CEO, Sea Ranger Service: How social impact can accelerate coastal restoration capacity
- Sarah Davie, MRAG: Applying learnings in development of Fisheries Management **Plans**
- John Hornig, Stantec: Prime Hook National Wildlife Refuge Coastal Protection, Habitat Creation, Carbon Sequestration – lessons learned from the United States

### Panel debate with

• **Professor Mike Elliott**, IECS Ltd and the University of Hull

17:25	Keynote	Nick Hounsfield, Founder, The Wave: Building Blutopia
17:45	Bob Earll Award	Early career impact on ocean and coastal management

18:00 Wine Reception

> The Royal Geographical Society, London & online 29 & 30 January 2025













## **Programme** #CoastalFutures25

Programme details and timings may be subject to change

Day 2 - Thursday 30th January 2025: Session 4

09:00 Keynote

**Melanie Austen**, Professor of Ocean and Society, University of Plymouth: Systems thinking: seeing and making the connections for sustainable use of our ocean

### **OCEAN STEWARDSHIP**

Are we doing enough to understand and promote the value of our seas? Speakers will demonstrate innovative approaches to support coastal communities, understand their diverse values and empower transformative change from the local level.

Chair: Sian Rees, University of Plymouth

- Giles Bristow, CEO, Surfers Against Sewage: From the beach front to the front benches: transforming water quality – engaging, empowering, mobilisation
- Jack Brett, Office of Environmental Protection: Holding Government to account in freshwater and marine environments

09:20

- Jenni Balmer, Environment Agency: Nature recovery for all from catchment to coast
- Emma McKinley, Cardiff University: Ocean Literacy Strategies for Engaging Communities in England and Wales
- Ffion Mitchell-Langford, Marine Conservation Society: Hiraeth Yn Y Môr Equitably connecting underserved coastal communities to our ocean
- Antony Firth, Historic England: Coastal Pasts for Coastal Futures: investing in our maritime inheritance

### Panel Debate with

- Tim Adey, Office of Environmental Protection
- Indy Kiemel Greene, RSPB Youth Council

Refreshments 11:00

The Royal Geographical Society, London & online



29 & 30 January 2025











## **Programme** #CoastalFutures25

Programme details and timings may be subject to change

Day 2 - Thursday 30th January 2025: Session 5

### **FUTURE FISHING**

How will future fishing be balanced with restoration efforts & space for renewable energy?

Speakers will illustrate the impacts of energy, climate, and nature recovery targets on fisheries and how the transition to new fisheries management measures will help or hinder a sustainable future.

Chair: **Daniel Owen**. Fenners Chambers

- Mike Cohen, CEO, National Federation of Fishermen's Organisations: Fail to plan / plan to fail: the need for a strategic approach to managing fisheries and the marine
- 12:15 • Joe Richards, Blue Marine Foundation: An assessment framework for a just transition for mobile gear fisheries
  - Alistair Bally Philp, Scottish Creel Fishermen's Federation: The case for spatial management in Scotlands inshore fisheries'
  - Rob Clark, CEO, Association of Inshore Fisheries and Conservation Authorities: Recognising and harnessing the national benefit of sustainable fisheries across the UK: You don't know what you've got 'til it's gone'
  - Claire L. Szostek, Plymouth Marine Lab: Co-existence of fisheries and offshore wind farms: opportunities, challenges, and perspectives

### Panel Debate with

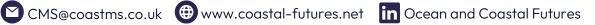
• **Ashley Mullenger**, Independant Small Scale Fisherman

Refreshments 14:00

29 & 30 January 2025













## **Programme** #CoastalFutures25

Programme details and timings may be subject to change

Day 2 - Thursday 30th January 2025: Session 6

### **RESTORING NATURE**

Can we achieve well-managed and restored marine and coastal seascapes by 2030? Speakers will highlight nature positive progress and consider if true headway is being made on reversing the loss of nature and restoring the natural world to health.

Chair: Professor Dickon Howell, Howell Marine Consulting

• Jasmine Isa Qureshi, Ecologist and Writer: Queering as a Regenerative Pathway in **Nature** 

15:00

- Laura Seddon, Marine Management Organisation: Reflections on why we are not achieving our environmental goals
- Ruth Williams, The Wildlife Trusts: UK Blue Carbon Mapping Project
- Robert Walsh, Northern Ireland Marine Task Force: Towards Northern Ireland's Ocean Recovery – From Policy to Practical Marine Conservation
- Sarah Fowler, Chief Executive, Wildfowl and Wetlands Trust: Unlocking saltmarsh superpowers

Panel Debate with

• Jo Ratcliffe, Environment Agency

Conference Close 16:30

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Ocean and Coastal **Futures** 

29 & 30 January 2025













## **Posters** #CoastalFutures25

## Posters can be viewed in the Sunley Room during the breaks and evening reception

- John Aitchison, Chair of Friends of the Sound of Jura, a Scottish Charitable Incorporated Organisation which is a member of the Coastal Communities Network Scotland: Scottish Salmon Farming in Crisis - A Coastal Community Perspective
- Amelia Araujo, AtkinsRéalis: A Methodology to Predict the Impact of a Marine Structure on Longshore Dynamics and Shoreline Evolution
- Flossy Barraud, The Manta Trust and University of Plymouth: Promoting gender equity for wider ocean stewardship
- Dr Lissa Batey, NatureBureau Ltd: Conservation, Fisheries, Trade and Management Status of CITES-Listed Sharks
- **Kizzy Beaumont**, University of Plymouth: Mechanisms for Transformative Ocean Governance
- Prof Nicola J. Beaumont, Plymouth Marine Laboratory: Sea the Value: Marine Biodiversity Benefits for a Sustainable Society
- Dr Daryl Burdon, Daryl Burdon Ltd Marine Research, Teaching and Consultancy: Supporting coastal communities 'Sea the Value' of marine restoration initiatives using Participatory Mapping approaches
- Steve Colclough, Institute of Fisheries Management: Fish Related Biodiversity Net Gain in Intertidal Transitional Waters
- Abigail Crosby, Cornwall Wildlife Trust: Building Ocean Stewardship Through Collaboration: The Cornwall and Isles of Scilly Marine and Coastal Partnership
- Dan Cutler, Marine Management Organisation: Managing Fishing in England's Offshore Marine Protected Areas
- Michela De Dominicis, National Oceanography Centre: Assessing The Effects of Offshore Windfarms & Climate Change in the North Sea

29 & 30 January 2025













## **Posters #CoastalFutures25**

## Posters can be viewed in the Sunley Room during the breaks and evening reception

- Marie Hanin, Cefas: A Coastal Health framework to support sustainable coastal ecosystems and resilient coastal communities
- William Ross Hunter, Agri-Food and Bioscience Institute Northern Ireland, Fisheries and Aquatic Ecosystems Branch: Mapping seabed carbon storage and fishing pressure to support Northern Ireland's Blue Carbon Action Plan
- Kate Jury, National Trails UK: Coastal Wildbelt: Seizing a once in a generation opportunity for people and nature along our dynamic coast
- Prof. Briony McDonagh, University of Hull: Coast-R Network+ and the Resilience Coastal Communities and Seas Programme
- Aisling McGarrigle, Blue Marine Foundation: Unlocking Investment A Roadmap for High-Integrity Marine Natural Capital Markets in the UK
- Marta Meschini, University of Liverpool: Co-Creation for strengthening locally led coastal management: advancing equitable solutions to coastal risks
- Martha Pybus, Finance Earth: Supporting gear and tech to improve the sustainability of UK fisheries through the Fisheries Improvement Fund
- Toni Scarr, PhD student, Birkbeck University and Head of Ecology and Geomorphology, Environment Agency: Is Estuarine Environmental Management Fit for Purpose? A Case Study of the English System
- Gemma Smith, University of Hull: The Interconnectedness of Marine Management Challenges and the Effectiveness of Social-Ecological System Management **Practices**
- Michael Barry Thompson, Mott MacDonald Limited: Applying marine spatial planning to the Red Sea Southern Islands
- Evangeline Wilby, Marine Management Organisation: Climate and nature: sustainable offshore wind deployment for 2030 targets

29 & 30 January 2025













## Coastal **Futures** 2025

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## **Delegate Rates**

<u>Tickets</u>	on sale here	In-Person	Livestream (two days)
	Full	£295 +VAT	£95 +VAT
2-day	Retired	£215 +VAT	£75 +VAT
rate	Concession*	£145 +VAT	£60 +VAT
	Student**	£125 +VAT	£50 +VAT
	Full	£210 +VAT	
1-day	Retired	£145 +VAT	
rate	Concession*	£115 +VAT	
	Student**	£100 +VAT	

- Rates include refreshments, food and conference reception
- · Concession rates only apply to these categories: the unemployed; benefit recipients; registered disabled; those working in small charitable organisations with gross annual income of less than £1 million
- Student tickets only for those in full-time education; limited numbers available
- 10% group discount rates are available for full rate, in-person tickets of five or more delegates when booked simultaneously - contact <u>diana.hunt@coastms.co.uk</u> for more information

29 & 30 January 2025











## **Speaker and Poster Abstracts**

## **Contents**

Welcome Address: Emma Hardy MP	
Keynote speaker: Michelle Willis	
Session One: Land-Sea Interactions	
Session Two: Sustainable Seas	
Session Three: Across the Water	
Keynote speaker: Nick Hounsfield	
Keynote speaker: Mel Austen	
Session Four: Ocean Stewardship	16
Session Five: Future Fishing	21
Session Six: Restoring Nature	20
Photo Exhibition in the Drayson Room	30
Poster Display Layout	31
Poster Abstracts	33





## **Speaker Abstracts**

## Wednesday 29<sup>th</sup> January

## Welcome Address: Emma Hardy MP

**Emma Hardy MP**, Minister for Water and Flooding (including domestic and international marine)

Emma Hardy is the Labour Member of Parliament for Kingston upon Hull West and Haltemprice, a position she has held since June 2017. In July 2024, she was appointed Parliamentary Under-Secretary of State for Water and Flooding at the Department for Environment, Food and Rural Affairs. As the Parliamentary Under-Secretary of State for Water and Flooding, Emma Hardy is responsible for domestic and international marine matters.

Prior to her parliamentary career, Emma was a primary school teacher and an organiser for the National Union of Teachers. She has been actively involved in campaigns related to education, women's health, and infrastructure development in her constituency.





## Keynote speaker: Michelle Willis

Michelle Willis, Acting CEO, Marine Management Organisation

## **Session One: Land-Sea Interactions**

## How do we improve the quality of place-based decision-making?

Speakers will consider how to embed systems thinking and a holistic approach in local governance, to achieve stronger and more integrated outcomes.

Chair: Aisling Lannin, Head of Evidence, Marine Management Organisation

## IC(Z)M - What's the Story: Back to the Future?

Rhona Fairgrieve, Atkins Réalis

rhona.fairgrieve@atkinsrealis.com

The EU's Maritime Spatial Planning Directive (2014) famously focused on MSP at the expense of Integrated Coastal (Zone) Management. However, in the decade since it was agreed and as marine planning has been implanted across the UK and the European Union, it has been recognised that planning for offshore zones is impossible without considering what happens in nearshore and intertidal areas. To that end, the phrase "Land/Sea Interactions", introduced in the Directive as the euphemism for Integrated Coastal Management, has taken on a life of its own.

We increasingly look to our offshore environments as sources of food, jobs, ecosystem services and benefits, renewable energy, recreation and well-being. We are attempting to plan for multiple different, and sometimes conflicting, activities to have access to the space and resources they need to be successful. Can we incorporate effective place-based decision making in a broader context? Can we revisit the old approach of Coastal Zone Management and learn from what was pioneered in the 1990s to develop a more integrated route that will deliver for marine planning, climate change adaptation and sustainable use of coastal and marine resources?

As a veteran of the first generation ICM projects supported by what was then English Nature, the development of national and European marine planning legislation and now a consultant working across multiple consenting regimes, Rhona Fairgrieve reflects on whether the answers we seek to current problems are already available and sitting on our shelves (definitely/maybe).



## **The Pathway to Transformative Change**

### Diana Pound CEnv FCIEEM, Dialogue Matters

diana.pound@dialoguematters.co.uk

Marine managers want to do 'evidence based' decision making but are largely unaware of the evidence about decision making itself including around stakeholder participation, psychology and power. Understanding and applying this evidence leads to better outcomes for biodiversity, social justice and sustainable marine use and done well can lead to transformative change. This presentation will draw on up to date research evidence around the benefits of participation and what works, why and how. It will touch on individual and group psychology, power, regenerative governance, procedural justice, ingredients for success in participation, and systems thinking. It will also look at the difference between engagement and participation and why the former is far less effective at delivering the benefits of involving others. This talk is grounded in research Dialogue Matters and academic researchers carried out for: the Scottish Government and environmental agencies (on engagement and empowerment), current research for Natural England (on governance and justice) and current international research on power dimensions related to biodiversity outcomes (published in May 2024).

## Applying a Natural Capital Approach from Source to Sea: Blackwater and Colne Case Study

Jo Bayes, Environment Agency

jo.bayes@environment-agency.gov.uk

Within our coastal communities - a third of the UK population – we see some of the highest levels of socio-economic deprivation. They are on the frontline of climate change, with sea level rise and extreme weather events posing serious challenges for land and marine management. This is further complicated by the fragmented and siloed governance across the land-sea interface, which hampers effective decision making.

A consistent natural capital approach supported by a strong evidence base applied across a source to sea (S-2-S) scale provides the opportunity to change this; by integrating the requirements of policy drivers and regulations, and incorporating environmental, social and economic data we can break down the current siloed approach. This will allow us to raise awareness of trade-offs and better inform decision making for our whole water environment.

Working in collaboration with the University of Essex, Plymouth Marine Laboratory, EA area team colleagues, local partnerships, Natural England, Cefas and JNCC we have been focussing efforts on bringing together existing and new data to test how a natural capital system based approach can be applied across a S-2-S scale with the Blackwater & Colne catchment, and coastal and inshore marine area (Figure 1) to result in greater social, economic and environmental benefits.



We will present our work to date including outputs from the Systems Mapping and Integrated Appraisals that we have been developing.



Figure 1. The Blackwater & Colne Source-to-Sea area

#### **Acknowledgements**

This project is led by the Environment Agency as part of Defra's Marine Natural Capital and Ecosystem Assessment (mNCEA) programme.

#### **Additional Authors**

Chris Graham, Laura Hayton

## Systems thinking in practice: Use of participatory system mapping in stakeholder engagement to better understand land-sea interactions

### Brendan Bromwich, Mott MacDonald

brendan.bromwich@mottmac.com

The adoption of a systems approach has been advocated across government as a means of creating integrated, transformative sustainable change at the landscape level. While the proposition is plausible, what has been less clear is what the approach means in tangible terms. This article reviews four case studies that have taken systems methods and identifies transferable lessons for future work on catchments and coasts.

We review four case studies in which participatory system mapping (PSM) has been used to investigate landscapes comprising rivers and coasts. The case studies show an evolution of a method for system mapping as an element of collaborative planning relevant to land-sea interactions.

 The Changing Coast East Riding project used PSM to support management planning for coastal erosion adaptation including the validation of metrics for the Monitoring, Evaluation and Learning element of the plan.



- The Lockyer Valley PSM project investigated trade-offs in landscape and water utility management relating to eutrophication in Moreton Bay, Australia.
- The Ouse Washes Water Level Management Plan used PSM to identify trade-offs in setting water levels relating to biodiversity, flood management, agriculture and water quality including sediment management in the tidal interface of the Great Ouse.
- Understanding the Wye is a project for the Wye catchment partnership that used PSM to gather stakeholder insights to support the creation of a new catchment plan.

The presentation will summarise lessons learned across these case studies with a focus on enhancing collaborative planning and management of land-sea interactions.

#### **Acknowledgements**

The projects were funded by the Environment Agency, East Riding of Yorkshire Council, and Urban Utilities. The preparation of this presentation is funded by Mott MacDonald.

### **Additional Authors**

Victoria Deakin, Justin Brassett, Xanthe Polaine, Kate Rice

## Exploring the challenges, opportunities and barriers to local decision-making in the context of marine planning

Sidonie Kenward, Marine Management Organisation

sidonie.kenward@marinemanagement.org.uk

The need for localised, integrated planning has been an ambition of the Marine Management Organisation (MMO) for many years and is embedded in organisational objectives for marine planning. The aim of this project was to scope out the challenges, opportunities and barriers to local decision-making within a marine planning context.

The project took a learning-based approach to understanding existing governance structures in a marine and coastal context to consider how these processes could be enhanced to support and deliver marine planning. The project engaged with the MMO's marine planning team, as well as academics and practitioners with a specialism in local decision-making, to collectively consider what localised marine planning could look like, how it could be delivered and the benefits of this approach.

Through a literature review, workshop and other meetings, a consensus emerged regarding what to further explore, this included a roadmap of future work with potential pilot options.

The key conclusions were that developing a local approach to management is an increasingly strong ambition across many policy areas and jurisdictions, recognising the critical role of effective engagement and collaboration in the delivery of equitable outcomes. However, it is not a



straightforward process and there are many aspects to be considered during the development of new approaches and to be reflected upon as they're implemented.

While there is much work to be done and the delivery of a local pilot project is someway off, this project has started the conversation and provided momentum to develop this work in 2024/25.

#### **Additional information**

MMO (2024). Exploring the challenges, opportunities and barriers to local decision making in the context of marine planning. A report produced for the Marine Management Organisation, MMO Project No: 1375, May 2024, 71pp

Exploring the challenges, opportunities and barriers to local decision making in the context of marine planning {MMO1375}

#### **Additional Authors**

Elizabeth Brett, Marine Management Organisation; Ness Smith, Howell Marine Consulting; Lucy Greenhill, Howell Marine Consulting.



## Session Two: Sustainable Seas

## Can we meet the 2030 targets whilst growing a sustainable blue economy?

Speakers will illustrate complex interactions within the marine space and provide examples of collaborative and innovative solutions to achieve a sustainable blue economy, amid the nature and climate crises.

Chair: Rachel Solomon Williams, Executive Director, Aldersgate Group

## What is a Sustainable Blue Economy (SBE) and how do we make progress towards it?

**Lucy Greenhill**, Associate Director – Blue Economy, Howell Marine Consulting <a href="https://linearine.co.uk">https://linearine.co.uk</a>

The blue economy has many interpretations and a lack of shared understanding among stakeholders can limit progress towards sustainable outcomes. High level definitions also do not reflect the complicated and messy process of system change, and real progress requires defining tangible, measurable outcomes and practical actions to achieve them.

Around the world, many initiatives seek to advance the Blue Economy and support equitable and sustainable development. This includes guidance such as UNEP's SBE Transition Framework and national policy development to drive the 'whole of government' co-ordination to deliver SBE outcomes. These are underpinned by systems approaches to understand BE policy delivery systems and how they can function more effectively and inform the design of international funding programmes to support country level BE efforts. Alongside, effective monitoring and evaluation is essential to understand progress towards sustainable Blue Economy goals.

This talk reflects on experience and learning in taking forward a BE approach for UNEP, the World Bank and in countries across the global south to understand what really matters in delivering a SBE, including:

- 1. Defining the SBE is important to promote political buy in but is less important in driving practical change.
- 2. Evaluation really matters evaluation frameworks drive the actions of policy teams, investment decisions and defining indicators which reflect an SBE is important for steering progress.
- 3. Taking forward an SBE is a continuous process of negotiation between people with different motivations and incentives. Tools which support dialogue and working across boundaries are essential.



4. There is no blueprint for implementing an SBE, approaches will be different everywhere and a robust, learning-based approach is essential to continue to adapt to new understanding.

## Marine Delivery Routemap: Integrating nature, clean power, and industry for a thriving marine economy and communities

**Jamie Moore**, Marine Delivery Route map Director, The Crown Estate Jamie.moore@thecrownestate.co.uk

The seabed and coastline are critical for the UK's economy, nature restoration and the delivery of net zero commitments. They support a huge range of activities and industries on which we all depend. As these demands continue to grow, so does the need for a long-term, holistic approach to managing this critical resource. This means that sectors cannot be viewed in isolation but need to be seen as part of a bigger, interconnected network of interests, alongside the need to tackle biodiversity loss and nature recovery.

The Crown Estate's Marine Delivery Routemap is a collaborative vision for sustainable seabed use by 2050, balancing nature, clean power and industry, optimising marine space, and driving economic growth through strategic planning and investment. The Routemap will create forward visibility and increased certainty of future development, accelerating delivery of clean power projects and aid streamlined consenting of projects, aligned with investment decisions to build supply chains.

This presentation will provide further insight into The Crown Estate's work with partners to develop the Routemap and set out how we intend to work with stakeholders to refine our understanding and develop a world-class whole system approach that creates lasting and shared prosperity for the nation.

### **Additional Information**

Marine Delivery Route map website: Marine Delivery Routemap | The Crown Estate

### Can we really build a windfarm in two years?

**Siobhan Browne**, Marine Management Organisation siobhan.browne@marinemanagement.org.uk

The Strategic Renewables Unit was established in the Marine Management Organisation (MMO) to identify and help address challenges to offshore wind deployment. Siobhan Browne, head of the Strategic Renewables Unit (SRU), will provide an overview of the team and their role in the MMO before discussing recent analysis work they have carried out.



We will all be familiar with the drive to reduce consenting times to speed up offshore wind deployment but is this the area we should be focussing on? In order to support making the most effective interventions to enable rapid offshore wind deployment and protect the marine environment, it is essential that the 'problem' is properly defined. The facts about perceived delays in the planning/consenting stage of offshore wind farm deployment need to be set in the context of the time taken for all stages, how and why those have changed over time, and therefore where there is most potential for reducing delay.

The SRU have recently done analysis of the offshore wind sector to identify where the 'problem' really is. Siobhan will discuss the work recently completed by the team which shows where there is potential to reduce deployment times the most whilst protecting the marine environment.

Siobhan will discuss recent work undertaken by the MMO with partners to address these identified problem areas.



## **Session Three: Across the Water**

## What insights can we gain from international best practice to help us reach 2030 targets?

Speakers will bring their experience from across the world to tackle this year's key questions on land-sea interactions, sustainable seas, ocean stewardship, future fishing and restoring nature.

Chair: Louise Heaps, Head of Sustainable Blue Economy, WWF

## Marine Spatial Planning on an island scale

Samantha Blampied, Government of Jersey

s.blampied2@gov.je

The Jersey Marine Spatial Plan (JMSP): An exemplar of collaborative and innovate marine planning by a small island state.

Open sea and offshore reefs cover 95% of Jersey's territory, and are fundamental to the Island's identity, economy and connectivity. The coast and sea are used for work, transport and leisure, forming an ever-changing backdrop to islanders' lives. Below the surface is a hidden world of underwater habitats supporting a wealth of marine life, a rich archaeological legacy, and a network of vital submarine cables. The vitality of Jersey is intrinsically linked to the health of its seas, but this is under pressure from climate change and human activities.

The vision of the JMSP is for a thriving marine environment providing environmental, economic, cultural and social benefits. It presents a strategic framework for managing Jersey's coasts and seas in a coordinated manner which enables them to thrive. This includes expansion of Marine Protected Areas towards 2030 targets.

Preparation of the JMSP has involved close collaboration with a diverse range of local marine experts including fishers, recreational users, archaeologists, engineers, business owners, port authorities and conservation bodies, as well as extensive consultation with Jersey's wider public. Through the JMSP, the Government of Jersey and its external specialist consultants have put into practice the principle that, despite people's different priorities and points of view, ultimately everyone wants to see Jersey's seas thriving and delivering benefits for people and for nature. The result is an innovative and engaging Plan which gives a voice to the wide-ranging concerns and aspirations of the local community, and addresses complex issues in a collaborative way.

### **Additional information**

**Draft Jersey Marine Spatial Plan** 



#### **Additional Authors**

Francis Binney, Fiona Fyfe, Alex Plaster, Jonathan Porter, Karin Taylor

## **Ecological mitigation and restoration in the European offshore wind sector: Synergies and opportunities for the UK**

Helen Elphick, RWE Offshore Wind

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Balancing the development of new offshore renewables infrastructure, with the protection and recovery of marine species and habitats, is just as much of a priority for our neighbours in Europe as it is here in the UK. However, legislative frameworks, research models and priority topics vary considerably between countries, even when the species and habitats are similar. As interest in environmental topics grows we are seeing a rich, but at times confusing, landscape of research programmes developing!

RWE operates and develops offshore windfarms in many coastal nations within Europe and beyond, and has been supporting research programmes and pilot projects across our portfolio for several years. At Coastal Futures we will share our insights into offshore wind research priorities across Europe, and our perspectives on the contradictions and potential synergies between approaches in the UK and overseas. We will also provide case studies of offshore wind monitoring, mitigation and restoration projects that we are supporting around the world.

### How social impact can accelerate coastal restoration capacity

Wietse van der Werf, Founder, CEO, Sea Ranger Service

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As the number of UK coastal restoration projects have increased in recent years, an acute human capacity shortage is hampering this work to be carried out at the large scale required for transformative change. With many projects reliant solely on volunteers or students, how can restoration efforts be accelerated beyond pilot scale?

The Sea Ranger Service is a social enterprise that trains and employs young people as full-time Sea Rangers to carry out restoration work - all whilst being trained towards a maritime career. Recruiting directly from some of the most deprived coastal communities in Britain, the organisation creates unique training and employment opportunities that are boosting ecological coastal revival. Now active in six countries around Europe, founder of the Sea Ranger Service will discuss how the model works and how it is being replicated across the UK.



### Applying learnings in development of Fisheries Management Plans

Sarah Davie, MRAG Ltd.

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When the UK exited Europe, it reaffirmed its commitment to international obligations, including achieving Good Environmental Health and Sustainable Development Goals. This prompted a reform of the management and national legislation governing the fisheries sector. Central to these reforms is the sustainable exploitation of fish stocks. The Joint Fisheries Statement emphasises the importance of developing and implementing Fisheries Management Plans (FMPs) to achieve this goal. Since then, a number of FMPs have been developed. Over the last 12 months, we have been involved in the pre-development process of gathering insights on existing fisheries measures implemented beyond the UK, to determine if they are appropriate within UK waters, with a focus predominantly on English waters for skates and rays, the wrasse species complex, and sea bream.

These species groups do not fit into the more traditional targeted management system of stock assessments and total allowable catches. Therefore, we have drawn on experiences from other areas with comparable ecological and management contexts, evaluating the effectiveness of management in these areas and determining how applicable and transferable they could be within English waters based on the current legal framework. For example, looking at skate and ray management in Australia, New Zealand, the USA, and Canada, and closer to home for sea bream in France and Spain, and wrasse management in Norway. Two key learnings consistent across all systems is the importance of stakeholder involvement and need for monitoring and reporting to understand the species and wider ecosystem.

### **Acknowledgements**

This work encompasses two separate projects commissioned by Natural England and the MMO (under framework lead of Risk & Policy Analysts Limited) respectively.

#### **Additional Authors**

Catherine Whitley; Will Peat; Rupert Stacy; Emily Vella; Isabella Mele; and John Pearce, MRAG Ltd.

## <u>Prime Hook National Wildlife Refuge: Coastal Protection, Habitat Creation, Carbon Sequestration – lessons learned from the United States</u>

John Hornig, Stantec

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At Stantec, we blend global insights with local expertise to solve complex environmental challenges. We will present insights from the Prime Hook National Wildlife Refuge restoration in Delaware, USA, a site devastated by Hurricane Sandy in 2012, and with relevance to storm recovery globally.



This project employed nature-based solutions, integrating the island's complex geomorphology and ecological dynamics to design a resilient dune system.

The design aimed to mitigate coastal erosion, enhance storm surge protection, and restore tidal flow and natural sediment deposition processes.

The project's ecological benefits were maximized by reestablishing native vegetation and increasing biodiversity, while engineering solutions focused on long-term physical resilience. By restoring over 1,550 acres of vegetated marshland, we enhanced the site's natural ability to buffer storm impacts and protect adjacent coastal communities.

We also evaluated the site's enhanced carbon sequestration capacity, calculating an additional 22,732 metric tons of CO2 equivalents captured over 30 years due to increased marsh vegetation. The integration of hydrodynamic modelling and geotechnical analysis further informed adaptive management strategies, ensuring sustainability in the face of future climate impacts.

In our presentation, we will discuss how these innovative, interdisciplinary techniques can be transferred to coastal restoration projects in the UK and Ireland to help us meet our 2030 environmental targets.

This session will highlight the application of international best practices, such as ecosystem-based management and climate adaptation strategies, to strengthen local coastal resilience. An inperson presenter will lead, with an online presenter fielding questions on the project's technical aspects and real-time global experience.

### **Additional information**

Prime Hook National Wildlife Refuge Restoration (stantec.com),
Restoration and resilience post disaster (stantec.com)
Living shorelines: Recovery, restoration, and resiliency after Hurricane Sandy (stantec.com)

### **Additional Authors**

Jeff Tabar, Stantec



## Keynote speaker: Nick Hounsfield

## **Building Blutopia**

Founder, The Wave

From streams to oceans, blue spaces have an enduring fascination and draw for so many of us. Places of calm, rejuvenation and awe. Now increasing evidence for 'blue health' is supporting what many of us anecdotally feel - being in or near water really is good for us. There is a growing body of scientific research showing that water environments have a direct impact on our physical, and particularly mental, wellbeing.

As more people turn to blue spaces to help them stay healthy, what could this mean for coastal conservation? Is there a correlation between human health and planetary health? By finding our own wellbeing in blue, can we be inspired to protect what we love? And how can we better inspire non-coastal communities to become ocean advocates?

The Founder of The Wave will examine these questions, from the perspective of having brought a 'slice of the ocean' inland to audiences who are geographically removed from the coast. Highlighting the work the business has done to engage more diverse communities in water and waves, Nick will examine the opportunity to build new communities of ocean advocates and activists, by first nurturing a personal love for blue spaces based on health and wellbeing. He will also propose that increasing people's connection to water, and putting it at the heart of new developments, will make a dramatic difference to the health of both people and the planet.



## **Speaker Abstracts**

## Thursday 30<sup>th</sup> January

## Keynote speaker: Mel Austen

Systems thinking: seeing and making the connections for sustainable use of our ocean

Professor of Ocean and Society, University of Plymouth

## **Session Four: Ocean Stewardship**

Are we doing enough to understand and promote the value of our seas?

Speakers will demonstrate innovative approaches to support coastal communities, understand their diverse values and empower transformative change from the local level.

Chair: Sian Rees, University of Plymouth

From the beach front to the front benches: transforming water quality - engaging, empowering, mobilisation

**Giles Bristow,** CEO, Surfers Against Sewage giles@sas.org.uk

### Holding Government to Account in Freshwater and Marine Environments

**Jack Brett,** Office for Environmental Protection Jack.Brett@theOEP.org.uk

With a mission to protect and improve the environment by holding government and other public authorities to account on their compliance with environmental law, we, the Office for Environmental Protection (OEP) are a non-departmental public body, established after the UK's exit



from the EU. We use the powers and duties provided to us through the Environment Act 2021 to scrutinise progress in improving the natural environment in England and Northern Ireland, and to advise on, and enforce against failures to comply with, environmental law.

Healthy rivers, lakes, and seas are essential to restoring nature, and supporting society and the economy. The OEP is increasingly focused on commitments and regulatory frameworks for freshwater and marine environments. We have found actions to improve freshwater and marine environments need to better stack up, and speed up, and be scaled up. For example, whilst we have found existing legal frameworks to be broadly sound, implementation is falling far short of what is required for them to deliver the outcomes intended.

Through this presentation we will explore how we hold government to account. This will include key findings from a range of our projects, the recommendations that we have made, and provide a forward look of work we are currently, or soon to undertake. It will cover our reviews into the implementation of laws related to Bathing Waters and the Water Framework Directive in England and Northern Ireland, and ongoing work on the achievement and deliverability of Good Environmental Status (GES) across the UK.

#### **Additional information**

Report: A review of the implementation of River Basin Management Planning in England

### Nature recovery for all - from catchment to coast

**Jenni Balmer**, Deputy Director for Nature Recovery, Environment Agency jenni.balmer@environment-agency.gov.uk

Nature it vital to human existence, providing food, water, fuel and supporting wellbeing through blue and green spaces. Yet the sobering reality is that the UK is one of the most nature depleted countries in the world. The good news is that nature recovery has finally claimed its spot as one of the Government's top five priorities, marking a crucial turning point in our environmental journey.

The Environment Agency with our partners stands at the forefront of this restoration agenda, wearing multiple hats as regulator, advisor, and operator. We're not just participating in nature's recovery – we're weaving it into the very fabric of our work with partners, businesses, and communities. Our journey has revealed some positive insights:

Our Restoring Meadows Marsh and Reef (ReMeMaRe) programme taught us that a shared vision with our partners, together with having the right tools is essential for restoration to succeed. We've learned that partnering with like-minded organisations isn't just helpful – it's essential for creating lasting change.

Through our Championing Coastal Coordination (3Cs) Programme, we've witnessed what positive outcomes for people and wildlife happen when local communities get involved. By providing



funding and support, we've empowered coastal partnerships to think big and act local, turning passionate communities into dedicated coastal champions.

The Natural Capital Ecosystem Assessment Programme has shown us the power of robust data in driving change. Think of it as nature's report card – helping investors feel confident and guiding our restoration efforts in our estuaries and coastal seas. This scientific backbone helps us create the perfect conditions for both active restoration and natural recovery.

Looking ahead, our mission is clear: we must embed nature recovery into everything we do. But this isn't just about protecting habitats and species – it's about creating a thriving future where nature and economy work in harmony, delivering benefits that extend far beyond ecological restoration to touch every aspect of our society.

## Ocean Literacy Strategies for Engaging Communities in England and Wales

### Emma McKinley, Cardiff University

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Once a concept firmly grounded in formal education, ocean literacy has undergone a rapid evolution. Most simply defined as 'having an understanding of your influence on the ocean and the ocean's influence on you', the term 'ocean literacy' has been expanded to include multiple aspects of human-ocean relationships. Crucially, since 2020 and in part due its position as a mechanism for restoration within the UN Ocean Decade (Challenge 10), the importance of understanding ocean literacy at various scales and contexts is increasingly highlighted, including through our own national assessments. This talk presents work carried out in Wales and England to build on this and develop strategic thinking for supporting ocean literacy across the UK.

In 2022, the Wales Coasts and Seas Partnership (CaSP Cymru) identified the need to enhance and foster ocean literacy across Wales as one of three key priorities. During 2022, workshops bringing together over 200 marine and coastal practitioners from across Wales co-identified steps needed to build ocean literacy and develop a vision and strategy for Wales. The Ocean Literacy Strategy for Wales (Y Mor a Ni) was officially launched in January 2024 – the first of its kind in the UK and Europe, and only the second national ocean literacy strategy globally.

Using the work in Wales as a foundation, Diverse Marine Values is undertaking a similar co-design process to develop an Ocean Literacy Strategy for England. Following a series of workshops in the coming months, the strategy is expected in late 2025 – we invite your contributions!

### **Acknowledgements**

The authors would like to acknowledge the contributions of the Wales Ocean Literacy Coalition and the wider community in the co-development of the Wales Ocean Literacy Strategy. We would also like to acknowledge the funding to support the development of the Ocean Literacy Strategy for England from the UKRI Sustainable Management of UK Marine Resources (SMMR) Diverse Marine Values project.



#### **Additional Authors**

Kirsty Lindenbaum, the Wales Coast and Seas Partnership Ocean Literacy Steering Committee, Nicola Bridge and Mark Atkinson.

## Hiraeth Yn Y Môr: Equitably connecting underserved coastal communities to our ocean

Ffion Mitchell-Langford, Marine Conservation Society

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With just 5 years left until 2030, it has never been a more crucial time to understand and promote the value of our seas. Ocean literacy is increasingly recognized as a growing global movement (EMSEA, 2021) that seeks to contextualize the different value systems people hold when connecting with the marine environment. It continues to emerge as an area of prioritization for decision-makers, evidenced by Welsh Government's current development of a national Ocean Literacy Strategy, and the UK's investment in conducting national ocean literacy assessments (Ocean Conservation Trust, 2022) and furthering the development of an Ocean Literacy Strategy for England.

Despite its growing popularity, the relationship between people and sea – particularly at a community-scale, amongst groups who have historically been under-represented in ocean literacy discourse – is still very poorly understood (McKinley, Burdon & Shellock, 2023). Little work has been conducted to explore growth in community-scale ocean literacy as a tool in aiding sustainable management of our MPA network and broader decision-making.

Hiraeth Yn Y Môr, a North-East Wales-based project, seeks to trial novel transdisciplinary approaches in growing ocean literacy as a means to support the sustainable management of Liverpool Bay SPA and community-scale health & well-being. The project deploys social science techniques and community-led approaches in exploring how diverse community groups value their marine environment and might develop ocean stewardship at a local scale. This talk will provide an overview of the project's approaches, learning to-date, and its application in wider sustainable marine management and decision-making in Wales.

#### **Acknowledgements**

Hiraeth Yn Y Môr Project is funded through the Nature Networks 2 Fund, administered by the National Lottery Heritage Fund on behalf of Welsh Government.

#### **Additional Authors**

The Hiraeth Yn Y Môr Project Team would like to kindly thank the coastal communities of Towyn, Kinmel Bay, Rhyl & Prestatyn, and our Project Evaluator Emma McKinley, for their involvement and support in this project.



## Coastal Pasts for Coastal Futures: investing our maritime inheritance

**Dr Antony Firth, MCIfA**, Head of Marine & Coastal Heritage, Historic England <a href="mailto:antony.firth@historicengland.org.uk">antony.firth@historicengland.org.uk</a>

What would our coasts and seas be like if we ignored their history? What sense of place or identity might there be for people who live by, work with, or visit the sea? How would we have any sense of change or trends, deterioration or improvement? How much would we lose if we drew nothing from the rich tangible and intangible fabric that our predecessors passed on?

Historic England is the government's statutory advisor on heritage: put simply, we help people to look after their history, to enjoy this legacy, and to better understand what it means today and for the future. We are working hard to make sure that people's marine and coastal heritage is making at least as big a contribution to environment, economy and society as it does inland.

We are bringing fresh perspectives to the importance of heritage in realising – and increasing – the value of our seas. This presentation will outline the steps we are taking with partners to:

- Accelerate heritage stewardship within marine planning and licensing.
- Improve community engagement with transformation of their shorelines and economies.
- Evaluate and expand ecosystem services from marine heritage assets.
- Enhance the cultural value of habitat restoration.
- Ensure heritage delivers a globally inspiring and engaging ocean.

Our marine and coastal heritage is a unique and valuable asset to pass on to our successors; but for the moment it is ours to look after and use as best we can. With your help, we can do more.



## **Session Five: Future Fishing**

## How will future fishing be balanced with restoration efforts & space for renewable energy?

Speakers will illustrate the impacts of energy, climate, and nature recovery targets on fisheries and how the transition to new fisheries management measures will help or hinder a sustainable future.

Chair: Daniel Owen, Fenners Chambers

## Fail to plan / plan to fail: the need for a strategic approach to managing fisheries and the marine space

**Mike Cohen**, CEO, National Federation of Fishermen's Organisations Mike.Cohen@nffo.org.uk

Once, the sea carried goods and people and provided food. Now, it produces electricity; supplies building materials; and carries electronic communications. Fossil fuels are extracted from beneath the sea, while carbon dioxide and nuclear waste are buried in their place. Parts of it are conserved for nature. Some of it is a playground.

Fishing today is part of a rich variety of human maritime activity and so sits within a complex public policy landscape.

The management and regulation of fishing, however, is fragmented and fails to account for the contemporary context. Multiple government agencies develop policies and enforce rules which frequently overlap or conflict. With no overarching conception of what a successful and sustainable fishing industry could be, its needs are often overlooked in favour of sectors and priorities for which there is a more clearly articulated policy vision. Meanwhile, public discourse too often caricatures fishing as a declining heritage activity; or dismisses it as a conservation problem.

All of this is constraining the development of a modern socially, economically and environmentally sustainable fishing industry. To counter this, the NFFO proposes the development of a National Fishing Strategy that will:

- Protect core fishing grounds.
- Develop evidence-based, long-term, sustainable harvesting strategies.



- Improve fishers' safety and welfare and ensure they receive fair recompense for their labour.
- Support job creation and the recruitment and training of more British crew.
- Strengthen domestic supply chains and support development of new domestic and export market opportunities.
- Promote fishing as a core part of coastal economies.

## An assessment framework for a just transition for mobile gear fisheries

**Joe Richards**, Scotland Projects Manager, Blue Marine Foundation Joe@bluemarinefoundation.com

The concept of "just transition" arose from the US trade union movements in the 1980s and has since gained significant traction in economic and policy circles. Over time it has become associated with planning for and investing in a transition to environmentally and socially sustainable jobs, sectors and economies, while ensuring that the whole of society – communities, workers and social groups – is brought along in the process.

Blue Marine Foundation advocates for a transition from higher to lower impact fishing practices which fully engages the fishing and seafood supply chain and considers options to transition to other fishing activities or emerging sectors of the blue economy (e.g. marine energy), while avoiding unintended consequences on the environment, or an unjust impact on existing small-scale fishing communities and fisheries.

Although the concept of just transition is adopted widely in policy there is still no universally accepted definition. The practicalities of a 'just transition' in fisheries, such as who, where and how it is undertaken, are ill-defined. To progress understanding of a just transition within UK fisheries, Blue Marine commissioned environmental economic consultants Eftec, to develop and test a framework that aims to assess transition scenarios.

A proposed Fisheries Transition Analysis Framework has been developed to assess environmental, social and economic impacts of a transition away from bottom-towed fishing practices to lower-impact marine activities and tested through a number of hypothetical case studies.

### **Additional Authors**

The study was undertaken by Economics for the Environment Consultancy Ltd (Efrec) with input from Joe Richards, Kaija Barisa, Emily Bulled and Sam Fanshawe from Blue Marine Foundation.



## The case for spatial management in Scotland's inshore fisheries

Alistair Bally Philp, Scottish Creel Fishermen's Federation, Ballycroft@btinternet.com

Historically commercial fisheries and marine conservation have been viewed as opposing endeavours, pitched against one another and portrayed as mutually exclusive. However there are examples particularly in inshore waters, where effective fisheries management can help achieve set conservation objectives and vice versa. For example in the Lyme bay marine reserve in England. With correct fisheries management, we demonstrate how Scotland can protect and create jobs in inshore fisheries, whilst simultaneously making substantial gains in marine conservation. By exploring a historic case study of fisheries management; the 3-mile limit. We show how Scotland and arguably the whole UK inshore area can be managed to successfully deliver on our 30:30 commitments, achieve our sustainable development goals, and contribute to achieving Good Environmental Status (GES).

The case for spatial management in Scotland's inshore fisheries is a journey through our social, economic and environmental landscape. When considered in light of our national and international legislative and policy commitments, the case for introducing spatial management is not just compelling, but essential to being able to deliver on those commitments.

## Recognising and harnessing the national benefit of sustainable fisheries across the UK: You don't know what you've got 'til it's gone'

**Rob Clark,** Association of Inshore Fisheries and Conservation Authorities (AIFCA) Robert.clark@association-ifca.org.uk

Sustainable commercial fishing makes valuable contributions to coastal regions and broader national benefits which, if proactively harnessed, can bolster the meeting of multiple sustainability goals nationally and globally. This paper promotes three key arguments in relation to what such a 'proactive harnessing' of benefits should entail and debates each in the context of UK fisheries. First, there is a need to raise the profile of the societal benefits of sustainable fisheries across public and policy domains. In the context of UK fisheries realising 'National Benefits' are now central to the delivery of legislation enshrined in the UK Fisheries Act and we present a new framing of eight 'national benefits' that all sustainable fisheries should seek to deliver. Second, better acknowledgement of what society gains from fisheries must be paralleled with recognition of what society is simultaneously at risk of losing through the decline of the fishing fleet, both loss of boats and numbers employed as fishers; we detail this decline in a new analysis of long-term data from across the UK. The data evidence widespread decline across the whole UK fleet, but show that the decline is unequally felt, with some regions of the UK, and small-scale fishing sectors, experiencing loss more acutely. This reality leads us to argue a third point, that if society is to retain and truly harness the benefits which flow from sustainable fisheries, governors must act quickly to ensure



sustainable fisheries are diverse, inclusive and fair, addressing inequalities where they exist, and pursuing fisheries that 'leave no one behind'. This will require concrete efforts to understand the drivers underpinning the loss of boats and differential sensitivities to growing pressures across the fleet. The exit of the UK from the European Union and current re-framing of national fisheries policy presents a window of opportunity to protect publicly accessible and widely distributed societal benefits that a diverse, inclusive and fair sustainable fleet can deliver.

#### **Additional Authors**

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<sup>1</sup> Newcastle University, UK, <sup>2</sup>National Federation of Fishermen's Organisations, UK, <sup>3</sup>Association of Inshore Fisheries and Conservation Authorities (AIFCA), UK, <sup>4</sup>University of East Anglia, UK, <sup>5</sup>Countryside & Community Research Institute, University of Gloucestershire, UK, <sup>6</sup> Marine Biological Association and the University of Plymouth Click here to enter text. , <sup>7</sup> National Under 10s Fishermen's Association (NUTFA), <sup>8</sup>Exeter University, UK, <sup>9</sup>Orkney Fisheries Association, UK, <sup>10</sup> Blue Marine Foundation, UK <sup>11</sup>Isles of Scilly, Inshore Fisheries and Conservation Authority, UK, <sup>12</sup> Seafish.

# <u>Co-existence of fisheries and offshore wind farms: opportunities, challenges, and perspectives</u>

Claire L. Szostek, Plymouth Marine Laboratory, csz@pml.ac.uk

Investing in renewable energy is key to decarbonising and achieving global sustainability goals. To meet these targets offshore wind energy (OWE) is expanding rapidly, with capacity in UK waters expected to grow five-fold by 2030, and potentially ten-fold by 2050. Many ecosystem services are provided by our seas, including aggregates, transport, offshore wind energy, commercial fisheries and aquaculture. Where multiple pressures overlap in space there are environmental and socioeconomic trade-offs. Both fixed-base and floating offshore wind farms can conflict with prime fishing areas, affecting different fleet sectors.

Socio-economic outcomes of offshore wind farms were investigated with an online survey open to commercial fishers operating in UK waters, regarding their experiences with offshore wind farm interactions. Over 50 respondents represented 11 gear types and 26 target species. Follow-up interviews revealed further concerns and proposed mitigations. Although commercial fishermen retain the right to fish within constructed UK wind farms, they are often effectively excluded due to safety, logistical or financial issues associated with the location and layout of a wind farm and subsea cables. A range of direct and indirect impacts are experienced across fleet sectors, including small and large vessels, mobile and static gears. Mixed experiences around compensation



payments highlight inequity and the lack of a regulatory framework, and many cited specific ecological impacts from OWE developments.

Multiple trade-offs need to be evaluated by OWF regulators, and best practice guidelines should be embedded into policy to support an environmentally and socially just transition to reliance on offshore energy as our primary source.

#### **Additional information**

Article: UK fishing community shares its views on offshore wind

#### **Acknowledgements**

This research was funded by UKERC4, EcoWind (Pelagio), EcoNex and The Garfield Weston Foundation.

#### **Additional Authors**

Stephen Watson, Andrew Edwards-Jones, Nicola Beaumont (Plymouth Marine Laboratory) and Beth Scott, Neda Trifonova (University of Aberdeen)



### **Session Six: Restoring Nature**

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

Speakers will highlight nature positive progress and consider if true headway is being made on reversing the loss of nature and restoring the natural world to health.

Chair: Dickon Howell, Howell Marine Consulting

### **Queering as a Regenerative Pathway in Nature**

Jasmine Isa Qureshi, Ecologist and writer

### **UK Blue Carbon Mapping Project**

**Ruth Williams**, Head of Marine Conservation, The Wildlife Trusts <a href="mailto:rwilliams@wildlifetrusts.org">rwilliams@wildlifetrusts.org</a>

The Blue Carbon Mapping Project, led by the Scottish Association for Marine Science (SAMS) on behalf of WWF, The Wildlife Trusts and the RSPB, provides a detailed estimate of the amount of carbon captured and stored in UK seas, including within Marine Protected Areas (MPAs). The series of reports uses the best available data on coastal and marine habitats that capture and/or store carbon (known as 'blue carbon'). It estimates that 244 million tonnes of organic carbon are stored in just the top 10 centimetres of seabed sediments and vegetated habitats, with over 98% of it stored in seabed sediments such as mud. The UK's seabed habitats could also capture up to 13 million tonnes of organic carbon every year – almost three times the amount sequestered by the UK's forests.

The Blue Carbon Mapping Project highlights how physical disturbances to the seabed, including from human activity such as bottom trawling, as well as moorings and offshore developments, pose threats to blue carbon stores. Disturbing seabed habitats can release large amounts of carbon into the atmosphere, worsening climate change.

WWF, The Wildlife Trusts, and the RSPB are calling on governments across the UK to strengthen protections for valuable blue carbon stores – including in MPAs – by minimising the impacts of human activities on the seabed. Most MPAs were not designated to protect blue carbon, and failing to protect these areas from disturbance could threaten climate and biodiversity goals – including net-zero and protecting 30% of seas by 2030.



#### **Additional information**

Summary report (English)
Summary report (Welsh)
All of the reports, including summaries and technical documents, can be found here

#### **Acknowledgements**

This report was commissioned by WWF, The Wildlife Trusts, and RSPB. We acknowledge the contributions of members of the Advisory Group to the development of this report, including Laura Pettit (Joint Nature Conservation Committee), Roger Proudfoot (Environment Agency), Colin Moffat (individual), Simon Brockington (individual), Paul Gilliland (Marine Management Organisation), Karen Robinson, Kirsten Ramsay (Welsh Government), Helen Elphink, Jack Price, Caroline Price, Marco Meloni (Crown Estate), Adele Shaw, Annie Breaden (Crown Estate Scotland), Colin Armstrong (Department of Agriculture, Environment and Rural Affairs), Jacqui Keenan, Rowan Henthorn (Isle of Man Government), Maija Marsh (Natural England) and Corallie Hunt (NatureScot). Professor Dan Laffoley and Professor John M Baxter acted as project advisers for the production of this report. Jo Hargreaves copy edited and proofread the technical reports.

#### **Additional Authors**

Burrows, M.T., O'Dell, A., Tillin, H., Grundy, S., Sugden, H., Moore, P., Fitzsimmons, C., Austin, W., Smeaton, C. 2024. The United Kingdom's Blue Carbon Inventory: Assessment of Marine Carbon Storage and Sequestration Potential in UK Seas (Including Within Marine Protected Areas). A Report to The Wildlife Trusts, WWF and the RSPB. Scottish Association for Marine Science, Oban.

# An analysis of how we make decisions that affect the marine environment: reflections on why we are not achieving our environmental goals

**Laura Seddon**, Marine Management Organisation laura.seddon@marinemanagement.org.uk

As part of our work under Defra's marine Natural Capital and Ecosystem Assessment programme, we have compiled a database of around 200 decisions that can impact the marine environment. These include decisions related to fisheries management, conservation, licensing and more. A natural capital approach to decision making is one where the interactions of humans and nature are understood when decisions are made, so that humans can continue to benefit from nature, but not at the cost of the sustainability of natural resources.

Following an extensive review of environmental governance approaches, we identified key principles of governance that are needed to follow a natural capital approach in decision making. These include principles related to what is considered (such as, consideration of social, economic and environmental parameters together, and protection and conservation of biodiversity and associated benefits); as well as how the decisions are made (e.g. through a multi-level and multi-sectoral governance structure). We analysed the extent to which these principles are followed across decision making affecting our marine ecosystems. There were no cases where these principles were fully realised, and few cases where there was more than a limited consideration of



the principles. We reflect on why this means it will be challenging to achieve nature recovery without some serious transformation in both what we consider (evidence) in decision making, and how we do it (the process).

#### **Acknowledgements**

This work was funded by Defra's marine Natural Capital and Ecosystem Assessment programme. We would like to acknowledge the contributions of all the decision makers and advisors across government and beyond, who helped us to compile the rich resource included in our decision-mapping database underlying this work.

#### **Additional Authors**

Leonie Robinson, Rachel Holtby, Megan Stafford, Emma Martin, Alice Walpole, Rachel Day, Amy Flude, Eleanor Holford, Roanna Goater, Verity Nye.

# <u>Achieving Northern Ireland's Ocean Recovery – From Policy to Practical Marine Conservation</u>

Robert K. Walsh, Northern Ireland Marine Task Force (NIMTF)

Robert.walsh@nimtf.org and robert.walsh@ulsterwildlife.org

Since the return of the NI Executive in February 2024, several policies and strategies have been or will soon be released for consultation. These include but are not limited to the NI Environmental Plan (EIP), Climate Action Plans (CAPs) (as required under the Climate Change (Northern Ireland) Act 2022, a Blue Carbon Action Plan (BCAP), MPA Strategy Review, Fisheries Management Plans (FMPs), Offshore Renewable Energy Action Plan (OREAP), Seabird and Elasmobranch Conservation Strategies (SCS and ECS) and the NI Marine Plan. However, all these need proper implementation and funding if we are to reverse declines in species and habitats, whilst alleviating existing and potential threats to our marine environment.

NIMTF represents a coalition of environmental NGOs collaborating on marine environmental policy to ensure healthy, productive and resilient seas for NI. We seek to achieve this through policy development focusing on the themes of recovering marine biodiversity, ensuring sustainable fisheries and sustainable developments at sea, and raising community voices whilst working to guarantee our seas are recognised as a tool to mitigate against climate change. Our presentation will also highlight case studies of practical marine conservation linked to policy development, demonstrating how policy asks can be achieved. We will show how we are working with elected representatives to maintain and increase political support for improving the quality of our marine environment. Examples of case studies include Ulster Wildlife's Native oyster restoration programme, National Trust's Coastal Adaptation, RSPB's LIFE Raft programme, and citizen science programmes encouraging community involvement (Shark Trust, KNIB, MCS).

### Additional information

NIMTF website



#### NIMTF Twitter/X

#### **Acknowledgements**

NIMTF is funded by Esmée Fairbairn Foundation.

#### **Additional Authors**

Erin McKeown, RSPB – Senior Seabird and Marine Policy Officer; Mathieu Lundy, Ulster Wildlife – Head of Marine Recovery; Malachy Campbell, Northern Ireland Environment Link – Senior Policy Officer

### **Unlocking saltmarsh superpowers**

Sarah Fowler, Chief Executive of WWT

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Saltmarshes are the ultimate weapons of mass creation. Clinging to existence between the land and sea, they burst with life every year then bury plant matter and sediment at incredible rates. They might be our most overlooked and under-rated wetland type but WWT, the charity for wetlands and wildlife, is on a mission to restore them and unlock their benefits for people and nature.

We know that these super-habitats are quietly locking away carbon, boosting biodiversity and protecting coastal communities from flooding all around the UK even as they are squeezed by rising sea levels and unmoving coastal defences. Despite the staggering loss of 85% of England's saltmarshes since the 1860s there is hope for this habitat to bounce back in a big way, and at speed.

Sarah will open with a brief tour of saltmarsh science, their potential benefits and then discuss where we think the first 25,000 hectares of new saltmarsh could go. In the second half she will talk about how WWT are kicking off this restoration, what happens when spades go into the ground, and what challenges saltmarsh restoration is facing around the UK.



## **Photo Exhibition**

### Pride in our seas II - The English coast: in the Drayson Room

**Sarah Coulthard** (Newcastle University), Phoebe Lewis and Ainsley Hatt sarah.coulthard@ncl.ac.uk

This national photography exhibition invites you to reflect on our commercial fishing industry, the many contributions our fishing families make to society and the quality of life that fishermen\* are able to achieve, or are sometimes being denied, as they navigate the many challenges now facing the sector. Featuring fishermen and others who work in the pursuit of sustainable fisheries, from Berwick upon Tweed to Plymouth, this exhibition captures the faces of fishing through visual case studies. Originally launched in early 2024 by the Scottish Fishermen's Federation (SFF) in partnership with renowned photographer lan Georgeson, this powerful showcase now expands its reach to the English coast, thanks to funding from Newcastle University.

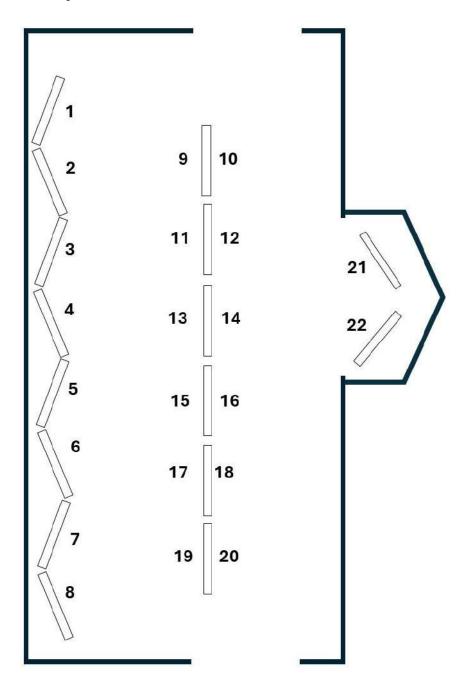


<sup>\*</sup> We use the term 'fishermen' in recognition that the women who commercially fish and participated in this work preferred the term fishermen over a gender-neutral term such as fishers.



# **Poster Display Layout**

### **Located in the Sunley Room**





- 1. John Aitchison, Chair of Friends of the Sound of Jura, a Scottish Charitable Incorporated Organisation which is a member of the Coastal Communities Network Scotland: Scottish Salmon Farming in Crisis A Coastal Community Perspective
- **2. Amelia Araujo**, AtkinsRéalis: A Methodology to Predict the Impact of a Marine Structure on Longshore Dynamics and Shoreline Evolution
- **3. Flossy Barraud**, The Manta Trust and University of Plymouth: Promoting gender equity for wider ocean stewardship
- **4. Dr Lissa Batey**, NatureBureau Ltd: Conservation, Fisheries, Trade and Management Status of CITES-Listed Sharks
- **5. Kizzy Beaumont**, University of Plymouth: Mechanisms for Transformative Ocean Governance
- **6. Prof Nicola J. Beaumont**, Plymouth Marine Laboratory: Sea the Value: Marine Biodiversity Benefits for a Sustainable Society
- 7. **Dr Daryl Burdon**, Daryl Burdon Ltd Marine Research, Teaching and Consultancy: Supporting coastal communities 'Sea the Value' of marine restoration initiatives using Participatory Mapping approaches
- **8. Steve Colclough**, Institute of Fisheries Management: Fish Related Biodiversity Net Gain in Intertidal Transitional Waters
- **9. Abigail Crosby**, Cornwall Wildlife Trust: Building Ocean Stewardship Through Collaboration: The Cornwall and Isles of Scilly Marine and Coastal Partnership
- **10.Dan Cutler**, Marine Management Organisation: Managing Fishing in England's Offshore Marine Protected Areas
- **11. Michela De Dominicis**, National Oceanography Centre: Assessing the Effects of Offshore Windfarms & Climate Change in the North Sea
- **12. Marie Hanin**, Cefas: A Coastal Health framework to support sustainable coastal ecosystems and resilient coastal communities
- **13. William Ross Hunter**, Agri-Food and Bioscience Institute Northern Ireland, Fisheries and Aquatic Ecosystems Branch: Mapping seabed carbon storage and fishing pressure to support Northern Ireland's Blue Carbon Action Plan
- **14. Kate Jury**, National Trails UK: Coastal Wildbelt: Seizing a once in a generation opportunity for people and nature along our dynamic coast
- **15. Prof. Briony McDonagh**, University of Hull: Coast-R Network+ and the Resilience Coastal Communities and Seas Programme
- **16. Aisling McGarrigle**, Blue Marine Foundation: Unlocking Investment A Roadmap for High-Integrity Marine Natural Capital Markets in the UK
- **17. Marta Meschini**, University of Liverpool: Co-Creation for strengthening locally led coastal management: advancing equitable solutions to coastal risks



- **18. Martha Pybus**, Finance Earth: Supporting gear and tech to improve the sustainability of UK fisheries through the Fisheries Improvement Fund
- **19. Toni Scarr**, PhD student Birkbeck University and Head of Ecology and Geomorphology, Environment Agency: Is Estuarine Environmental Management Fit for Purpose? A Case Study of the English System
- **20.Gemma Smith**, University of Hull: The Interconnectedness of Marine Management Challenges and the Effectiveness of Social-Ecological System Management Practices
- **21. Michael Barry Thompson**, Mott MacDonald Limited: Applying marine spatial planning to the Red Sea Southern Islands
- **22. Evangeline Wilby**, Marine Management Organisation: Climate and nature: sustainable offshore wind deployment for 2030 targets

## **Poster Abstracts**

### 1 - Scottish Salmon Farming in Crisis - A Coastal Community Perspective

**John Aitchison**, Chair of Friends of the Sound of Jura, a Scottish Charitable Incorporated Organisation which is a member of the Coastal Communities Network Scotland <a href="mailto:john@friendsofthesoundofjura.org.uk">john@friendsofthesoundofjura.org.uk</a>

The FAO recommends that more food should be farmed in the sea. Scotland has 210 active salmon farms, run almost exclusively by multinational companies. The Scottish Government strongly supports expansion but the communities alongside the farms are increasingly concerned by the impacts they are having on marine life, jobs that depend on the sea and about the farmed fish themselves.

Many of these farms are struggling, with total production having fallen for two years running, despite record number of young fish put to sea. More than 16m fish died in 2022, and again in 2023, a 400% increase since 2018 and a sign that animal welfare standards are very poor in many farms.

What is driving this? Salmon are prone to diseases and parasites that thrive in warmer water, and Scotland's seas are becoming warmer. Scottish Government analysis shows that >80% of the variation in farmed salmon mortality can be explained by the winter minimum temperature and by the number of fish being farmed in an area. In recent years, death rates have been higher in salmon farms in the south and west, than in the Northern Isles, where the water is cooler.

Before expanding further, the industry should prove that it can reduce mortality to acceptable levels, in Scotland's future, warmer seas.

Otherwise, many coastal communities fear that the industry's boom will swiftly be followed by bust, with the salmon farmers moving north and leaving Scotland with nothing but their legacy of harm.



### 2 - A Methodology to Predict the Impact of a Marine Structure on Longshore Dynamics and Shoreline Evolution

Amelia Araujo, AtkinsRéalis (previously Stantec)

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Globally, due to climate change and increased rates of coastal erosion, along with the need to protect sensitive habitats, there is an increasing requirement for a sustainable approach which considers both the effect of the marine environment on critical infrastructure and the impact of that infrastructure on the local environment. This paper presents a methodology for assessing the impact of a marine structure on longshore dynamics and shoreline evolution by using an external coupling of the phase-resolving ARTEMIS wave model and the shoreline evolution model, UNIBEST. The methodology can be applied at any coastal location but, for this study, it was applied to Sizewell Bay on the east coast of England to assess the impact of a shore-normal jetty on a gently curving stretch of shoreline with relatively complex offshore geomorphology. Results from simulating 22 years of shoreline evolution have shown that, at the jetty location, the shoreline at Sizewell will migrate seaward up to 45 m compared with the no-jetty case. Immediately south of the jetty, the shoreline was predicted to retreat landward by about 15 m. This behaviour is similar to observed changes at other locations, and the predicted longshore transport rates are in agreement with findings from previous studies, validating the methodology.

#### **Additional Authors**

Steven Wallbridge and Liam Fernand

### 3 - Promoting gender equity for wider ocean stewardship

**Flossy Barraud,** The Manta Trust and University of Plymouth Florence.barraud@plymouth.ac.uk

Histories of sexism, racism and colonialism determine who can use coastal blue spaces, rendering the seas un-inclusive for many. Vast gender inequalities restrict women and girls' access to coastal and ocean spaces. Worldwide, 68% women cannot swim, compared to 43% men. In the island nation of the Maldives, some women and girls are five times more likely than males to be unable to swim, and ten times as likely to have never snorkelled or experienced local marine life.

In many coastal communities, women are important stewards of highly biodiverse yet vulnerable environments that people rely upon for food, coastal protection, livelihoods and culture. Being able to swim is imperative for enabling access to the dominant environment and a core recreational, educational, and economic space. Marine experiences are key for developing local environmental leadership and marine citizenship - personal, emotional connections to places can impact pro-



environmental behaviours. Expanding marine citizenship and stewardship is key for progression towards 2030 targets.

This research draws from a survey with 700 Maldivian people, and interviews/consultations with 210 Maldivian people and 15 local experts from West Papua, São Tomé and Príncipe, St. Lucia, Mozambique, and a Māori community in Aotearoa New Zealand. Findings were used to develop a locally-led, sustained programme of change - training Maldivian women as swim and snorkel instructors and supporting them to develop businesses positively impacting their islands. Wider knowledge will be shared via an *Ocean Connection Strategy*, equipping communities with tools to develop local ocean connection programmes, expanding global ocean stewardship.

#### **Additional information**

This research is part of the international Ocean Women project

#### **Acknowledgements**

Principal supporters: COMO Foundation, Enjoolata Foundation, Coles-Medlock Foundation, The Manta Trust

#### **Additional Authors**

Aminath Zuna, Salted Ventures Swimmers (Ocean Women Maldives Co-Leader). PhD supervisory team: Dr Alun Morgan, Dr Sian Rees, Professor Martin Attrill (University of Plymouth) & Dr Guy Stevens (The Manta Trust).

# 4 - Conservation, Fisheries, Trade and Management Status of CITES-Listed Sharks

#### Dr Lissa Batey, NatureBureau Ltd

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What can we learn from CITES listing of endangered sharks? More than a decade ago, the IUCN Shark Specialist Group completed the first global Red List assessment of the relative risk of extinction faced by all sharks, rays and chimaeras. One-quarter of all species were found to be threatened due to overfishing (targeted and incidental). The analysis concluded that improved management of fisheries and trade was urgently needed to avoid extinctions and promote population recovery (Dulvy et al. 2014).

Ten years on and a global reassessment programme is almost complete. About 27% of all sharks which have been assessed are, however, threatened. Yet by 2019, the impact of these listings on the protection of sharks in general and through the regional fishery management organisations (RFMOs) remained unchanged. In response, the German government proposed a project aimed at securing agreement for action.

The project carried out a series of online webinars and interviews during the Covid pandemic and identified that there was a need to improve communication and cooperation at national and 35 of 52



regional levels. Given that challenges in these areas are as much political as practical it seems that significant progress will most likely come from the agreement and support of a group of countries, rather than any individual party.

While potentially challenging this wider ecosystem-based approach to species management is required to set the course for recovery. Marine species do not recognise political or geographical boundaries, and so action by an individual party will only achieve so much.

#### **Additional information**

DULVY NK, FOWLER SL, MUSICK JA, CAVANAGH RD, KYNE PM, HARRISON LR, ... & WHITE WT (2014): Extinction risk and conservation of the world's sharks and rays. eLIFE 2014;3:e00590. doi: 10.7554/eLife.00590

#### **Acknowledgements**

This work was supported by the German Federal Agency for Nature Conservation with funds of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (no. FKZ: 3519 53 2052)

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#### 5 - Mechanisms for Transformative Ocean Governance

Kizzy Beaumont, University of Plymouth

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Transformative ocean governance is an approach to managing the world's oceans that aims to balance economic development with environmental sustainability, social equity, and cultural values. It involves a shift from the traditional top-down management style to a more inclusive and participatory approach. Novel mechanisms are being developed within the framework of transformative ocean governance to drive change along our coastlines. Two such mechanisms are in place and under development within the Southwest of the UK, they include the North Devon World Surfing Reserve and the Plymouth Sound National Marine Park, both along the Devon coastline (North and South Devon respectively). These two mechanisms, although different in their approach both have the environment, the people and the economy at the heart of their goals and objectives.

Using a pluralistic approach via focus groups and semi structured interviews of individuals and groups, which support and manage the governance within the ND WSR and the PS NMP, identification of areas of good practice, along with barriers to received benefits is being undertaken. Establishing the barriers and enablers to transformation can aid decision makers in choosing strategies that lead to more sustainable outcomes. This research provides essential insights into the difficulties and facilitators associated with implementing these mechanisms as other counties and districts in the UK consider adopting similar approaches. Contributing to a more significant



national trend towards transformative ocean governance, this research will assist these regions in negotiating the governance challenges of developing inclusive and adaptive marine parks.

#### Additional information

For further details on the case studies discussed here please see the following websites: North Devon World Surfing Reserve and Plymouth Sound National Marine Park

#### **Acknowledgements**

Thank you to all who participated in this research from the North Devon World Surfing Reserve and the Plymouth Sound National Marine Park. With a specific thanks to Adam Hall from the ND WSR and Elaine Hayes and Amelia Bridges from PS NMP.

#### **Additional Authors**

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### 6 - Sea the Value: Marine Biodiversity Benefits for a Sustainable Society

### Prof Nicola J. Beaumont, Plymouth Marine Laboratory

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Despite increasing attempts at biodiversity valuation, values are still only sporadically integrated into public and private decision making, with the result of continuing biodiversity loss. Key barriers to the utilization of values include i. nascent understanding of how biodiversity provides benefits; ii. hesitance to apply values due to low confidence and understanding; iii. uncertainty regarding green investment routes.

To overcome these challenges the 3-year, interdisciplinary, multi-partner, Sea the Value project has determined a range of novel and pluralistic values for marine biodiversity, focused on coastal habitats, and co-developed options for their application in green investment. We share key findings, including:

- Quantification of the interlinkages between marine biodiversity, natural capital, and ecosystem services (focused on carbon, bioremediation and biodiversity), taking extent, location, and quality/condition into consideration; including novel field data and the development of application of natural capital asset risk registers.
- Robust economic valuations of carbon sequestration, bioremediation and biodiversity recovery, tailored to specific sites, and application of values in natural capital accounting and appraisal frameworks.
- Exploration of wider social values through engagement of coastal communities using participatory mapping and logic chain approaches, including mapping the natural capital features, their benefits, and the beneficiaries.



- Scenario development with coastal communities on the impacts of managed realignment and native oyster restoration including who the winners and losers may be.
- The application of site specific ecological, economic, and social values and scenarios in the co-design of locally relevant green investment mechanisms, to finance actions that maintain and enhance biodiversity.

#### **Additional information**

Sea the Value Project page

#### **Acknowledgements**

This research was supported by the UK Research Councils under Natural Environment Research Council award NE/X002357/1 Title: Sea the Value

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# 7 - Supporting coastal communities 'Sea the Value' of marine restoration initiatives using Participatory Mapping approaches

**Dr Daryl Burdon**, Daryl Burdon Ltd Marine Research, Teaching and Consultancy <a href="mailto:darylburdon@gmail.com">darylburdon@gmail.com</a>

Global marine habitats and biodiversity have been under increasing threat from the impacts of human activities, and this has been further exacerbated by impacts of a changing climate. Marine restoration initiatives, such as the restoration of saltmarshes, seagrass meadows and biogenic reefs, aim to address these threats by restoring key marine habitats which deliver a wide range of benefits for society. However, the siting of marine restoration initiatives can often be a sensitive topic. Participatory mapping is a stakeholder-driven approach which aims to capture local knowledge and empower place-based discussions around socio-cultural values. This poster presents the outputs of a series of three participatory mapping workshops, undertaken in collaboration with coastal partnerships and communities in the Cromarty Firth and the Solent. Workshops were designed and applied at both coastal sites to identify the relationships between the natural (capital) features, the benefits which these features provide for society, and the beneficiaries who are reliant or dependent on these benefits. Future restoration scenarios of managed realignment and native oyster restoration were explored at each location to investigate the potential impacts of such management interventions on the delivery of benefits and the beneficiaries who may be impacted (positively or negatively) under these future scenarios. This



paper supports the application of participatory research methods for collaborating with coastal communities. Such participatory engagement results in a shared common language around natural capital approaches and actively captures local knowledge and understanding which can support all phases of future place-based marine restoration initiatives.

#### **Acknowledgements**

This research was supported by the UK Research Councils under Natural Environment Research Council award NE/X002357/1 Title: Sea the Value.

#### **Additional Authors**

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### 8 - Fish Related Biodiversity Net Gain in Intertidal Transitional Waters

**Steve Colclough,** Institute of Fisheries Management

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80% of UK transitional waters are heavily modified (habitat loss). 80% of historic seagrass and saltmarsh habitats have gone. Intertidal invertebrate production is double that in the subtidal. The optimal nursery habitat for early life stages of some species is high marsh. Intertidal habitat losses may have seen loss of 66% of fish production over the past 200 yrs (Forth estuary).

Intertidal terraces and realignments have been constructed across England since the 1990's (coastal squeeze, FRM and encroachment) before the concept of BNG became a reality.

Early Thames work was developed as design guidance (Estuary Edges) to resist encroachment and promote creation of intertidal habitats. Studies on fish utilisation began in the early 00's. Advice is now available to improve future designs and associated fish utilisation. The Natural Capital Approach has helped to stimulate interest.



39 of 52



This paper reviews some of these created habitats, describing how citizen scientists have assisted in data gathering, and provides some of the lessons learnt about site design. There is increasing evidence that interventions can meet the basic requirements of BNG in intertidal transitional waters. Significant uptake though BNG could lead to large increases in marine fish production, given the critical importance of estuarine nurseries. Juvenile fish using saltmarshes retreat to adjacent subtidal habitats such as seagrass and macroalgae beds by low water. It is vital that intertidal BNG and Marine Net Gain initiatives are linked. Essential Fish Habitat and an element of GES are other relevant descriptors of these habitats and their value to society.

#### **Additional Authors**

Wanda Bodnar Thames Estuary Partnership.

# 9 - Building Ocean Stewardship Through Collaboration: The Cornwall and Isles of Scilly Marine and Coastal Partnership

Abigail Crosby, Cornwall Wildlife Trust

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In early 2024, the Cornwall and Isles of Scilly Marine and Coastal Partnership (MCP) was established to address the growing need for integrated marine and coastal management and planning. Bringing together 47 organisations, the MCP unites conservation groups, statutory authorities, industry, and academia with a shared commitment to protecting and enhancing our marine and coastal communities and environments. Through collaboration, resource-sharing, and joint problem-solving, the partnership tackles complex coastal challenges.

This poster will explore the MCP's journey from conception to implementation, highlighting key achievements that underscore our commitment to ocean stewardship. We will discuss collaborative projects, including the development of our strategic themes and objectives, as well as tangible outputs, such as community engagement programmes; conservation initiatives; online data-sharing resources (e.g. the Cornwall Coastal Data Hub) and strategic publications (e.g. the Cornwall Marine Nature Recovery Framework).

The poster will also address our plans for continued partnership growth, emphasising the role of collective action in fostering resilience in our marine and coastal ecosystems. By sharing our progress and insights, we hope to inspire other regions to adopt a cooperative and collaborative approach to marine stewardship, contributing to a sustainable future for our ocean.

#### **Additional information**

<u>Cornwall Coastal Data Hub</u> <u>Cornwall and Isles of Scilly Marine and Coastal Partnership</u>



### 10 - Managing Fishing in England's Offshore Marine Protected Areas

Dan Cutler, Marine Management Organisation

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England's seas have 178 marine protected areas (MPAs) covering 51% of territorial waters (0-12 nautical miles) and 37% of the exclusive economic zone (12-200 nm). Since 2020, MMO has been assessing and managing fishing in our MPAs beyond 6 nautical miles to ensure that they are properly protected.

Stage 1 of this work put in place the first fisheries measures for England's offshore MPAs, including protecting the UK portion of the Dogger Bank, the largest sandbank habitat in the North Sea, and protecting deep sea coral reefs in The Canyons MPA in the far South West of UK waters.

In March 2024, we introduced significant new measures as part of Stage 2, prohibiting bottom-towed fishing gear in 13 offshore MPAs — protecting almost 4,000 square kilometres of critical marine habitats. In one stroke this brought the total area protected by MMO byelaws to nearly 18,000 square kilometres, an area larger than Yorkshire and Norfolk combined.

This work is hugely significant and protecting the MPAs within our remit will play an essential role in preserving marine biodiversity, supporting the recovery of vital ecosystems and ensuring a sustainable future for our seas.

At Coastal Futures Conference 2025 we will mark the significant progress we've made towards protecting vital marine ecosystems, habitats and species, ensuring they contribute towards sustainable fisheries and biodiversity for generations to come. We will also outline our upcoming initiatives and explore the important role that stakeholders play in shaping and informing management measures.

### **Additional information**

Find out more about MPAs here

# 11 - Assessing The Effects of Offshore Windfarms & Climate Change in the North Sea

Michela De Dominicis, National Oceanography Centre

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The UK is committed to delivering up to 50GW of offshore wind by 2030. There are still gaps in our knowledge of the cumulative effects on marine life of a massive expansion of offshore wind farms



(OWFs)— especially in combination with factors, such as climate change and other human activities.

The presence of turbines' underwater structures and the extraction of wind energy will perturb the natural physical environment, and this can have cascading effects on the marine ecosystem. However, it is important understanding how big these perturbations are and to define acceptable and unacceptable levels of change.

The expansion of OWFs is moving into deeper waters, where there is the potential for OWFs to perturb the natural ocean mixing, and as a result alter the timing and magnitude of seasonal stratification that underpin the seasonal cycle of primary production. This potential impact has not previously been a concern for OWFs installed in coastal waters, which are typically tidally mixed, but it represents an additional stressor to ecosystems in deeper offshore environments.

In the PELAgIO project, we are building an ocean and biogeochemical modelling system (FVCOM-GOTM-ERSEM) of the UK shelf to simulate how OWFs could perturb the physical environment in the whole North Sea, and the consequent changes in nutrients, oxygen and plankton distribution. Present/future scenarios will be run to assess bio-physical changes induced by large-scale expansion of OWFs and compared with climate change effects.

#### **Acknowledgements**

This work is part of the PELAgIO project, funded by the ECOWind program (NE/X00872X/1).

#### **Additional Authors**

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(1) National Oceanography Centre, (2) Scottish Government Marine Directorate, (3) Plymouth Marine Laboratory, (4) University of Aberdeen

# <u>12 - A Coastal Health framework to support sustainable coastal ecosystems</u> and resilient coastal communities

### Marie Hanin, Cefas

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Coastal health encompasses the overall condition and functionality of coastal ecosystems, emphasising environmental sustainability and human well-being. Marine ecosystems are crucial for human populations, providing food, livelihoods, coastal resilience, recreational opportunities, and biodiversity conservation. Recent aquatic animal mortality events around our coasts highlight the need for coordinated, multi-disciplinary investigations to identify causal factors and mitigate future events. Coastal ecosystems are influenced by environmental, social, and economic factors,



with stressors such as climate change, pollution, diseases, and overfishing leading to declines in marine species and habitat degradation, negatively impacting human livelihoods and wellbeing. Various countries, particularly in Europe, are implementing strategies to monitor, research, and protect coastal environments, emphasising marine conservation, public engagement, and education. The interdependence between environmental and human health is increasingly recognised, with research indicating that coastal ecosystem degradation poses significant risks to human well-being.

In this poster, we review existing initiatives implemented nationally and internationally to define and characterise a coastal health framework, for which there is yet no universally accepted definition. Proposed definitions thus far emphasize the importance of maintaining natural processes and optimal ecosystem efficiency. We argue that advances in technology and data collection offer opportunities for improved cross-disciplinary collaboration, multi-factorial monitoring programmes and coordinated responses across local and national actors. We discuss the challenges of defining healthy ecosystems in a rapidly changing environment and propose that assessing coastal health involves evaluating a range of ecological, social, and economic indicators to define "normal" conditions and identify stressors that disrupt ecosystem balance.

#### **Additional Authors**

Craig Baker-Austin (Cefas), David Bass (Cefas)

# 13 - Mapping seabed carbon storage and fishing pressure to support Northern Ireland's Blue Carbon Action Plan

**William Ross Hunter**, Agri-Food and Bioscience Institute Northern Ireland, Fisheries and Aquatic Ecosystems Branch

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Globally, coastal and shelf sea sediments account for between 7 and 9 % the seafloor, and store between 250 and 300 Pg carbon. However, carbon stocks held within shelf sea sediments are spatially heterogeneous and sensitive to anthropogenic pressures, including commercial fishing. Currently, we lack sufficient empirical data on seabed carbon stocks and turnover rates, to allow seabed carbon sequestration to be considered in marine spatial planning decisions. Northern Ireland is currently in the process of developing a blue carbon action plan to protect and enhance carbon storage in marine sediments. Northern Ireland has jurisdiction over 6000 km² of coastal and shelf seas in the Irish and Malin Sea regions of the Northeast European continental shelf. We will present the results of a three-year program to quantify and map sediment carbon storage in Northern Ireland's marine sediments, estimate carbon turnover rates using sediment community oxygen consumption as a proxy and assess the sensitivity of seabed carbon stocks to disturbance from commercial fishing. This provides a unique dataset to interrogate how seabed carbon storage



is influenced by interacting environmental factors and human disturbance. We discuss how these data can be used to support the development of effective blue carbon management plans

#### **Acknowledgements**

Project was funded by the Northern Ireland Department of Agriculture, the Environment and Rural Affairs.

#### **Additional Authors**

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# 14 - Coastal Wildbelt: Seizing a once in a generation opportunity for people and nature along our dynamic coast

**Kate Jury,** National Trails UK kate@nationaltrails.uk

At 2,700 miles, when complete, the King Charles III England Coast Path will be the longest managed coastal path in the world.

Alongside the coastal path, the Marine and Coastal Access Act 2009 created the coastal margin – an area generally described as the strip of land between the path and mean low water.

943 square miles in size, our coastal margin is larger than the Lake District National Park. Providing the key connectivity to and through our protected landscapes and across coastal priority habitats; 86.5% of our coastal margin has the potential to contribute to 30x30 (1.6% of England's land area).

Taken together, the creation of the coastal path and margin offer a once in a generation landscapescale opportunity for people and nature along our dynamic coast.

Across the globe, trails have been traditionally managed to keep people and nature separate. But times are changing, and an international movement are pushing forward the idea that trails can be a positive driver for connecting people with nature. Coastal Wildbelt is our chapter of that story.

We're on a journey to explore the art of the possible. Working collaboratively across sectors, we're discovering how Coastal Wildbelt not only champions the potential in our coastal path and margin for nature recovery but creates the vision and framework for a new national initiative to deliver for people and nature, together.

Help us unlock the potential of the Coastal Wildbelt and create a future where anyone can benefit from our thriving nature-rich coast.



#### **Acknowledgements**

This scoping work has been made possible with thanks to the Protected Landscapes Partnership, funded by Defra.

#### **Additional Authors**

Julian Gray – Director of South West Coast Path Association, Co-Chair of World Trails Network.

# <u>15 - Coast-R Network+ and the Resilience Coastal Communities and Seas</u> <u>Programme</u>

Prof. Briony McDonagh, University of Hull

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The Resilient UK Coastal Communities and Seas (ReCCS) programme is a £14.8M UKRI/DEFRA investment consisting of the Coast-R Network Plus (led by the University of Hull) and four research projects situated around the UK. Coast-R's role is to draw the programme together, championing the outcomes, benefits and opportunities, assisting with finding commonalities across projects and looking at specific cross-programme challenges such as stakeholder engagement.

Coast-R will build an inclusive and collaborative community of practice working to develop and grow knowledge, action and resilience for UK coastal communities and seas. Our poster showcases the opportunities and activities that we will be undertaking over the next four years with our partner universities, demonstrating how our objectives and cross-cutting themes will help us to:

- Champion and coordinate research and knowledge exchange across and beyond the ReCCS Programme
- 2. Develop and support transdisciplinary research capacity around coastal and marine resilience, through the Flexible Fund
- 3. Scale and embed effective place-based interventions into policy, practice and knowledge mobilisation

We will also highlight opportunities for engaging with the network+ activities, including our flexible fund opportunities, and our ongoing programme of online workshops and webinars which are open to all members of the network+ - there will also be an opportunity to sign-up to the network if Coastal Futures delegates have not already done so.

#### **Additional information**

More information about the ReCCS projects can be found <a href="here">here</a>.

#### Acknowledgements



We are grateful for the support of our funders and partner HEIs: the University of Hull, the University of Glasgow, Aberystwyth University, the University of Southampton, the University of Liverpool, the University of Leeds, UKRI, the AHRC, the ESRC, NERC, DEFRA and the NCEA.

#### **Additional Authors**

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# <u>16 - Unlocking Investment - A Roadmap for High-Integrity Marine Natural</u> <u>Capital Markets in the UK</u>

Aisling McGarrigle, Blue Marine Foundation

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The funding gap for nature recovery in the UK is well documented and potentially underestimated for our marine environment. Public and philanthropic funding alone is unlikely to be enough. Private finance, deployed in the right way, has a critical role to play in enabling the restoration and recovery of habitats and species. Unlocking this investment however requires the development of mechanisms that enable equitable, transparent, high-integrity and standardised markets for marine natural capital.

In 2023 leaders spanning academia, industry, finance, government and not-for-profits across the nations of the UK came together to develop a roadmap that charts the actions needed to create this framework. The roadmap, published in May 2024, builds on the significant actions already underway across the devolved nations to protect and restore marine and coastal ecosystems.

In the context of devolution, market development must be tailored to the four nations of the UK. However, through meaningful collaboration, we can achieve shared but locally-appropriate approaches that uphold the highest standards of integrity to deliver scale and real impact.

This poster will provide an overview of how the roadmap came together, outline the key recommendations and actions identified for progress, update on phase 3 and earmark opportunities for OCF attendees to contribute.

#### **Acknowledgements**

The Roadmap for High-Integrity Marine Natural Capital Markets was developed with input from stakeholders across the UK. The work was led by Blue Marine Foundation, The Crown Estate and developed by Finance Earth and Pollination, with additional funding support from Crown Estate Scotland, Esmee Fairburn Foundation and the University of Portsmouth.

# <u>17 - Co-Creation for strengthening locally led coastal management: advancing equitable solutions to coastal risks</u>



#### Marta Meschini, University of Liverpool

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As climate change accelerates, coastal communities, particularly those with low coastlines, are at risk of flooding and erosion. With 40% of the global population living near coasts and over 10 million people in England in coastal communities, urgent coastal management strategies are essential.

Within the "Resilient Coasts: Optimising Co-Benefit Solutions" (CoOpt) project we adopted a social-ecological systems approach to capture the complexity of coastal decision-making processes and to better understand how stakeholders perceive the UK coastal system. Through a scoping workshop and subsequent activities, we worked with stakeholders to develop 11 cognitive maps to capture their views on a generic coastal system in relation to flood and erosion risk. The findings revealed differences in perceptions based on the stakeholders' professional roles.

To enhance our understanding, results from cognitive maps were integrated with outcomes of three additional methods used within the project: Soft Systems Methodology, Social Acceptance analysis, and a historical analysis. This synthesis led to the development of a revised DPSIR (Drivers, Pressures, State, Impact, Responses) framework, named DPSIR+.

This DPSIR+ framework was tested in Hesketh Out Marsh, a CoOpt case study, through a workshop involving EA, local authorities, farmers and landowners, RSPB, Our Future Coast project and representatives of the community. By the end of the workshop participants co-created a shared understanding of the current situation at Hesketh Out Marsh and outlined the next steps required to address existing challenges.

The framework provides a model for inclusive, locally-led coastal management that promotes more equitable responses to coastal risks.

#### **Additional information**

Read more about Co-Opt here

#### Acknowledgements

We acknowledge funding from UKRI via grants NE/V016423/1, NE/V015532/1, NE/V016245/1, NE/V016490/1. We sincerely thank the CoOpt team for their valuable feedback throughout the activities and extend our gratitude especially to Jenny Brown, Richard Dunning, Tim Stojanovic, Constantinos Matsoukis, Marta Payo Payo, Laurent Amoundry, Simon Jude, and Amani Becker for their exceptional support in facilitating the workshop. We also deeply thank all participants who took part into our activities.

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# 18 - Supporting gear and tech to improve the sustainability of UK fisheries through the Fisheries Improvement Fund



#### Martha Pybus, Finance Earth

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The UK has an opportunity to set the benchmark for managing its coastal and marine environment in a way which produces sustainable and ethical food. Fishing is one of the most critical sectors for coastal communities, both financially and culturally, and it is important that the industry can evolve to ensure viability over the long term. New gear and technology which address key sustainability challenges can be expensive for small and medium sized vessels and fishers to afford. The supply chain increasingly requires ever higher sustainability performance and associated reporting — as a result, corporate supply chain actors have a greater willingness to pay to achieve those targets.

Finance Earth, in partnership with WWF, designed and launched the Fisheries Improvement Fund (FIF) in April 2023. The FIF is an innovative funding solution for global Fishery Improvement Projects (FIPs) and in April 2024 we successfully launched the first FIF-funded FIP in Chile. FIPs are a proven model for transitioning fisheries worldwide towards improved fishing practices and management, benefitting people and nature.

With support from <u>Esmee Fairbairn Foundation</u>, Finance Earth is now exploring how the FIF's equitable and transparent volume-based fee model can be adapted to facilitate greater supply chain investment in gear and technology, aiming to improve sustainability in UK fisheries and the wider blue economy.

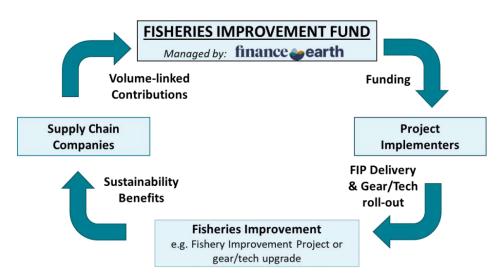
The FIF's underlying financing model is centred on a volume-based fee paid by companies that purchase marine products from FIPs. This new initiative seeks to establish a similar approach for companies to collaboratively facilitate the adoption of tech to support the regeneration of the UK's vital marine environment.

#### **Additional information**

Please find more information about the Fisheries Improvement Fund (FIF) here In addition, please find more information about the launch of the FIF's pilot Fishery Improvement Project (FIP) in Chile here

We would also like to include the following diagram which illustrates the funding structure of the FIF:





# <u>19 - Is Estuarine Environmental Management Fit for Purpose? A Case Study of the English System</u>

**Toni Scarr**, PhD student – Birkbeck University and Head of Ecology and Geomorphology, Environment Agency

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English estuaries are complex systems, providing essential habitats for wildlife, climate change resilience, and supply a wide range of regulating, cultural and ecosystem services. Estuaries have been subject to intense human activity, urbanisation, and industrialisation, leading to significant environmental degradation. This study has involved, interviewing experts, and commissioning a citizens' jury to analyse English environmental estuarine management.

While there is extensive research on historical environmental pressures, much of it focuses on marine or freshwater ecosystems, with fewer studies specific to estuaries. Expert interviewees discussed siloed and fragmented management approaches, compounded by global economic pressures and climate change, have exacerbated estuarine degradation. Interviewees emphasised the importance of collaboration, social accountability and integrated management to address these challenges effectively. Estuary Partnerships offer a framework, bringing together multiple partners with a material interest in maintaining a healthy environment collaborating to provide better decision making, drive investment and deliver multiple benefits including environmental recovery. This study found examples of effective management practices. The citizens' jury explored community concerns along the Thames Estuary. The deliberative process allowed participants to engage with complex evidence and offer recommendations for estuary management.



Conclusions were that estuarine habitats will continue to face intense human pressure, emphasising the need for systems thinking, strategic catchment planning, collaborative governance, adaptive management, and strong legislation to support the environmental recovery of England's estuaries. Transformative changes in governance are needed to manage estuaries and their catchments, as a system with clear objectives that transcend organisations, ensuring a balance between human use and nature recovery.

### 20 - The Interconnectedness of Marine Management Challenges and the Effectiveness of Social-Ecological System Management Practices

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With 2030 approaching, the deadline for numerous international ocean sustainability goals, the effective implementation of Ecosystem-Based Management (EBM) in marine and coastal environments is crucial. This research investigates how the interconnectedness of marine management challenges influences EBM effectiveness, aiming to enhance our ability to meet sustainable management targets while fostering an effective and efficient blue economy. Using a mixed-methods approach, the poster explains the construction of a 'Marine Management Impediments System' through conceptual mapping, analysing marine manager priorities via Q-Methodology, and validating findings using Delphi techniques. Additionally, a systematic literature review will identify best practices for solution co-production among diverse stakeholders in marine social-ecological systems. There are complex interdependencies between policy expectations and limitations, data availability, stakeholder engagement, and system uncertainties; thereby acknowledging these interconnections can lead to more holistic and effective management strategies. The poster detailing the methodological approach to this study provides an example as to how a deeper understanding of systemic approaches to marine management can help achieve sustainability goals. By identifying points of consensus and divergence among marine managers, we provide practical recommendations for policymakers and practitioners. This study focusses on new insights into the barriers and enablers of marine EBM implementation, co-produced through collaborative learning with participants. The impact will foster a deeper, shared understanding among practitioners and policymakers about the systemic challenges in EBM uptake. Potentially it will catalyse more effective, context-sensitive approaches to marine management that can enhance our collective ability required to achieve the necessary sustainability targets.

#### **Additional information**

This PhD is undertaken as part of the Marine SABRES Project

#### Acknowledgements

Marine SABRES is funded to IECS Ltd by UKRI (Grant Agreement 10048815) and to other partners by the European Union's Horizon Europe funding programme under Grant Agreement No. 101058956.



### 21 - Applying marine spatial planning to the Red Sea Southern Islands

Michael Barry Thompson, Mott MacDonald Limited

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Red Sea Global and Mott MacDonald have co-developed a Marine Spatial Plan (MSP) and Strategic Development Plan that sets out the zoning and development parameters for the Red Sea Southern Islands (RSSI). In line with UNESCO guidelines, zoning adopted an ecosystem-based approach reflecting the potential interactions between the ecosystem in the RSSI against current and potential future uses. Three scenarios were developed (do-nothing, conservation led, and development led) with criteria defined to understand their potential interactions in this unique MSP setting (Highly natural undeveloped region).

Critical habitat triggering species and habitats under IFC performance standard 6 identified at a strategic level were considered as a conservation priority. Predictive modelling of species use, connectivity of habitats and development potential were applied as weightings to a 1-hectare square cell grid across the RSSI, which was stratified by similar geomorphology. Zoning was applied from the weightings and scaled by each stratified area in order to ensure prioritising refuges in each geomorphological region. Weighting values and overlaps between use scenarios was used to determine the protection measures required. Four MSP zones were subsequently created (high priority, medium priority, optimised enhancement, and multiple use zones) with each applying specific management measures aligning with international and regional guidelines. A detailed map of zones and management measures was generated to support implementation.

Consequently, the MSP seeks to balance human activities with the environment's capacity to provide ecosystem services by including appropriate ecological, economic, social, and cultural measures at a coordinated ecosystem scale, whilst facilitating climate change adaption.

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### 22 - Climate and nature: sustainable offshore wind deployment for 2030 targets

Evangeline Wilby, Marine Management Organisation

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The Strategic Renewables Unit (SRU) was established in the Marine Management Organisation (MMO) to identify and help address challenges to offshore wind (OFW) deployment. With the theme of the conference being 'The Path to 2030', Evangeline Wilby, an Offshore Wind Advisor from the



SRU, will discuss how the team's work is contributing to achieving 2030 goals, both nationally and internationally.

Nationally, this includes government targets of reaching 50GW of OFW by 2030, an important goal given the climate crisis. Evangeline will demonstrate how the MMO is ensuring OFW deployment is sustainable whilst protecting the marine environment, vital given the ongoing nature crisis and targets such as '30x30'.

The SRU are leading work to help tackle this dual climate-nature crisis and achieve such 2030 goals. The SRU's work areas include collaboration on underwater noise, working with the fishing industry, and evidence projects looking at monitoring and cables. Evangeline will highlight these and other areas the SRU are working in.

Evangeline will also highlight the relevance of this work to wider international targets as well, for example, the United Nations Sustainable Development Goals and their 2030 deadline, such as goal 13 climate action and goal 14 life below water.



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29 & 30 January 2025

The Royal Geographical Society, London & online





