

# Aquaculture & Blue Growth The Crown Estate Perspective

Aquaculture for a Thriving Future

November 2023





# THE CROWN ESTATE



Dating back more than 260 years, The Crown Estate is a unique business with a diverse portfolio that stretches across the country



Established by The Crown Estate Act of 1961

As an independent commercial business with accountability to Parliament.



Return our net revenue profit to the Treasury

>£3 bn generated in the last 10 years for public spending



Active owners and managers of land and seabed

We seek to leverage our scale and convening power to make a meaningful difference.



With a new purpose

To create lasting and shared prosperity for the nation









And an ambitious approach

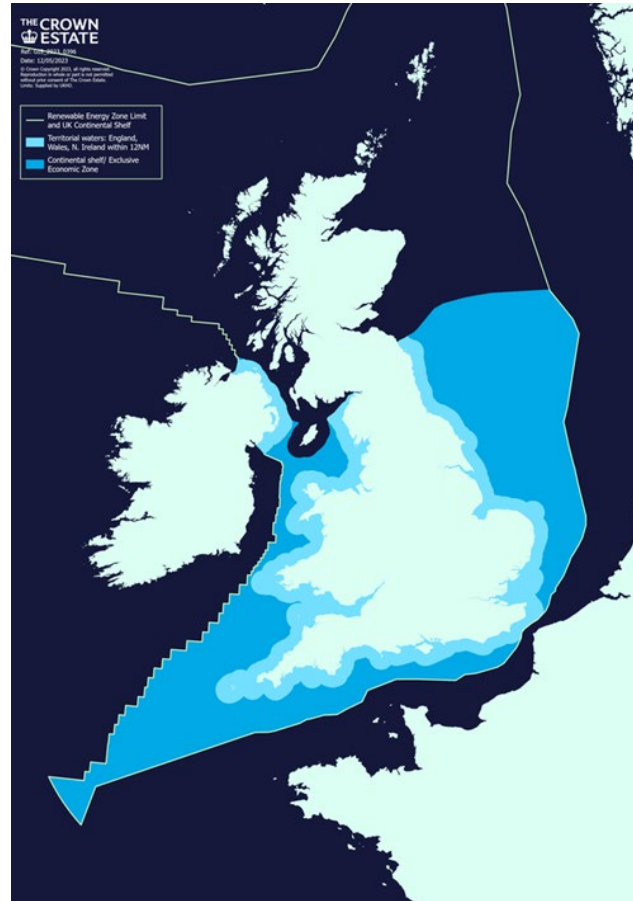
Guided by our purpose and informed by major trends impacting our business, we seek to create broad financial, environmental and social value for our stakeholders, customers and the nation.

# About TCE Marine: As custodian of the marine environment TCE leads the sustainable development of the seabed to deliver value for the nation

## OUR PAN-SECTORAL VIEW

 <b>Energy</b> Offshore wind Energy conversion Marine energy	 <b>Storage</b> CCUS Hydrogen Natural gas
 <b>Infrastructure</b> Power & Telco Cables Pipelines	 <b>Minerals</b> Reclamation Aggregate dredging Marine mining
 <b>Coastal</b> Ports and harbours Aquaculture Leisure	 <b>Habitats</b> Habitat creation Biodiversity Nature recovery

## OUR OFFSHORE AND ONSHORE FOOTPRINT

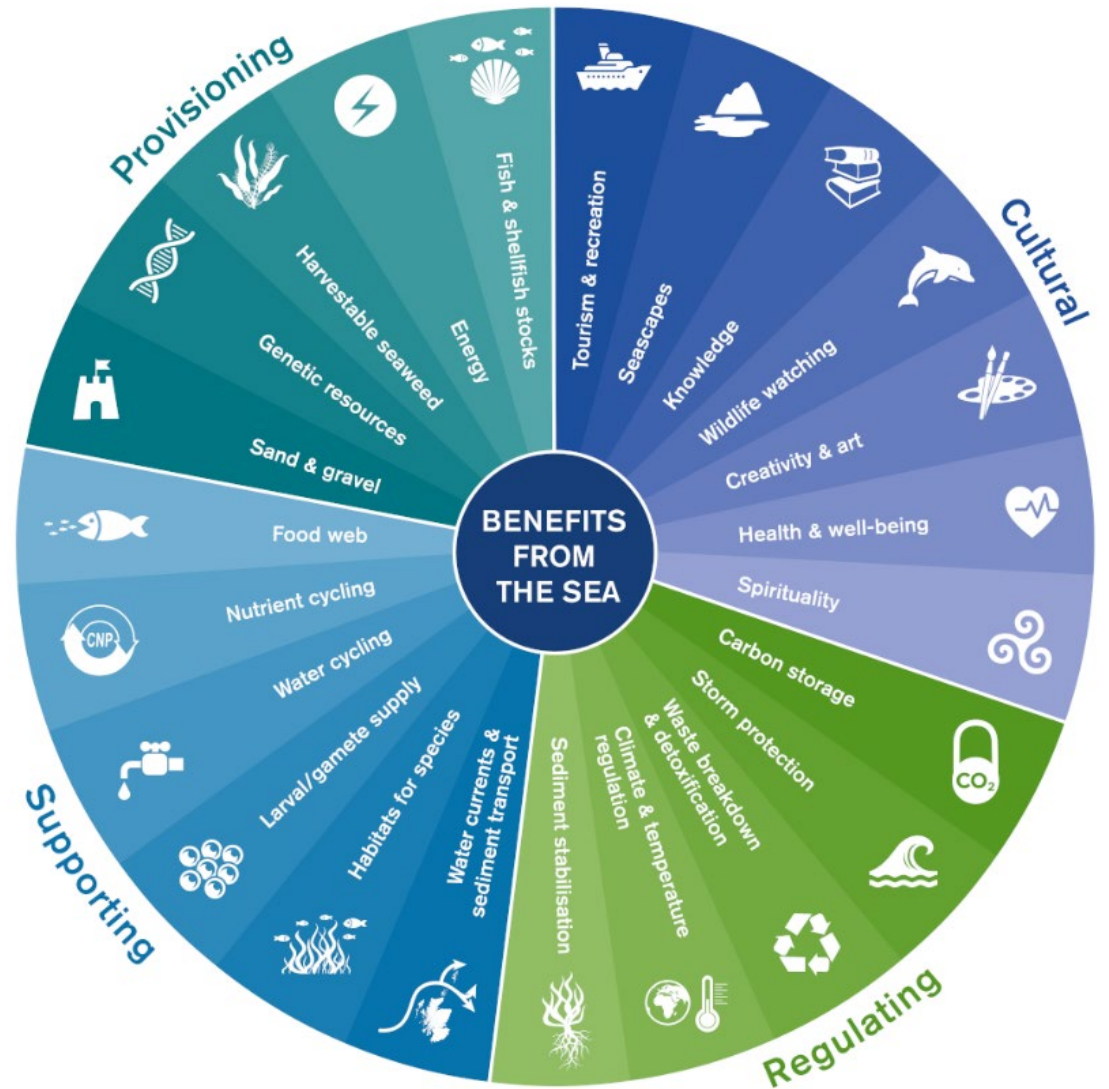


## OUR CAPABILITIES

- ✓ Our deep **expertise and experience** (incl. multi-sector knowledge, data & spatial insight)
- ✓ Our **ability to look across sectors** (e.g. energy, minerals, nature) balancing competing and complementary demands
- ✓ Requirement and purpose to **deliver greatest value for the nation**
- ✓ **Statutory independence** and our ability to take an objective **long-term view**
- ✓ Our **power to convene** and partner with others to bring the marine vision to life

# Valuing our Natural Assets

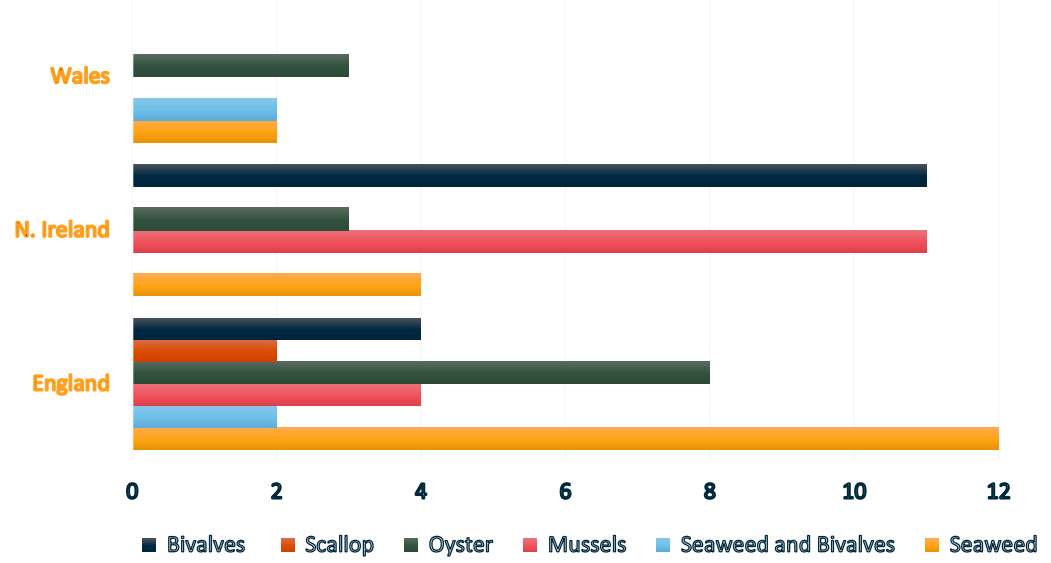
- Work is underway (by ourselves and others) to map and assess the natural capital value of the different areas of The Crown Estate seabed and foreshore
- Huge variety of habitat types delivering associated ecosystem services
- Linked to separate work on understanding Whole Life Carbon and other social and environmental impacts associated with marine sectors
- Supporting the definition and scope of a roadmap to guide a whole-systems approach to sustainable marine management, including delivery of the nation's net zero and nature recovery goals
- Underpinned by robust and trusted data and evidence to improve strategic decision making
- Creating better balance for competing demands on the seabed and space for blue growth



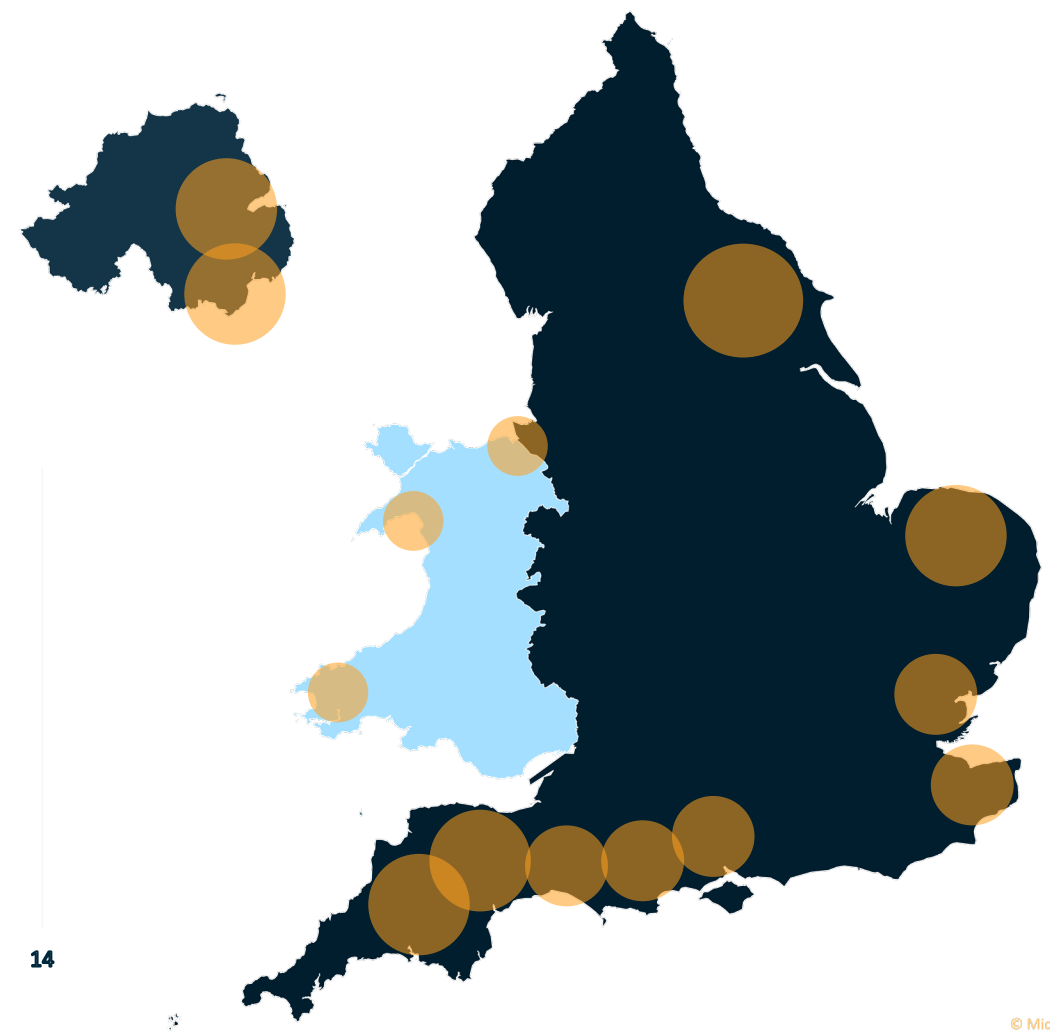
Source: Nature Scot

# Aquaculture Activity Update

- Aquaculture activity in England, Northern Ireland and Wales has been on a steady growth trajectory for some years.
- The majority of projects are located in near/inshore waters around England; loughs in Northern Ireland and growing number around the coast of Wales
- Growing interest in deeper water/offshore options



Current Aquaculture leases (seaweed, shellfish, multi-tropic) in England, Northern Ireland and Wales



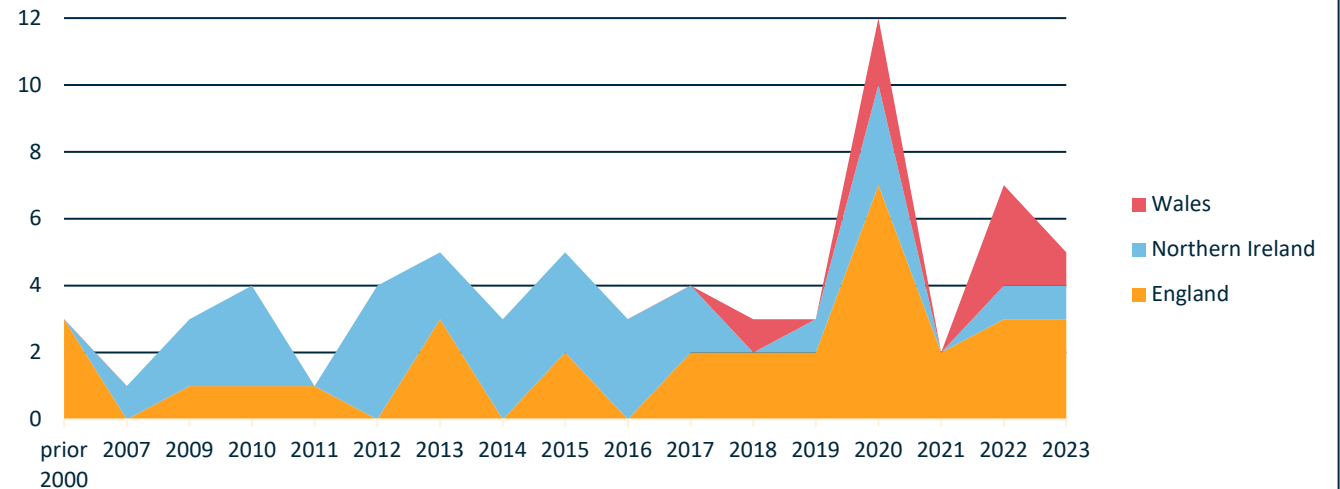
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# Aquaculture Activity Update

- Mix of shellfish and seaweed aquaculture – no finfish operations
- Increasing enquiries and applications for seabed access for aquaculture activities – growing demand from industry
- High interest in seaweed – range of approaches
- Changing nature of activities – looking towards multi trophic aquaculture, blending in ecosystems services revenue potential and natural capital market opportunities

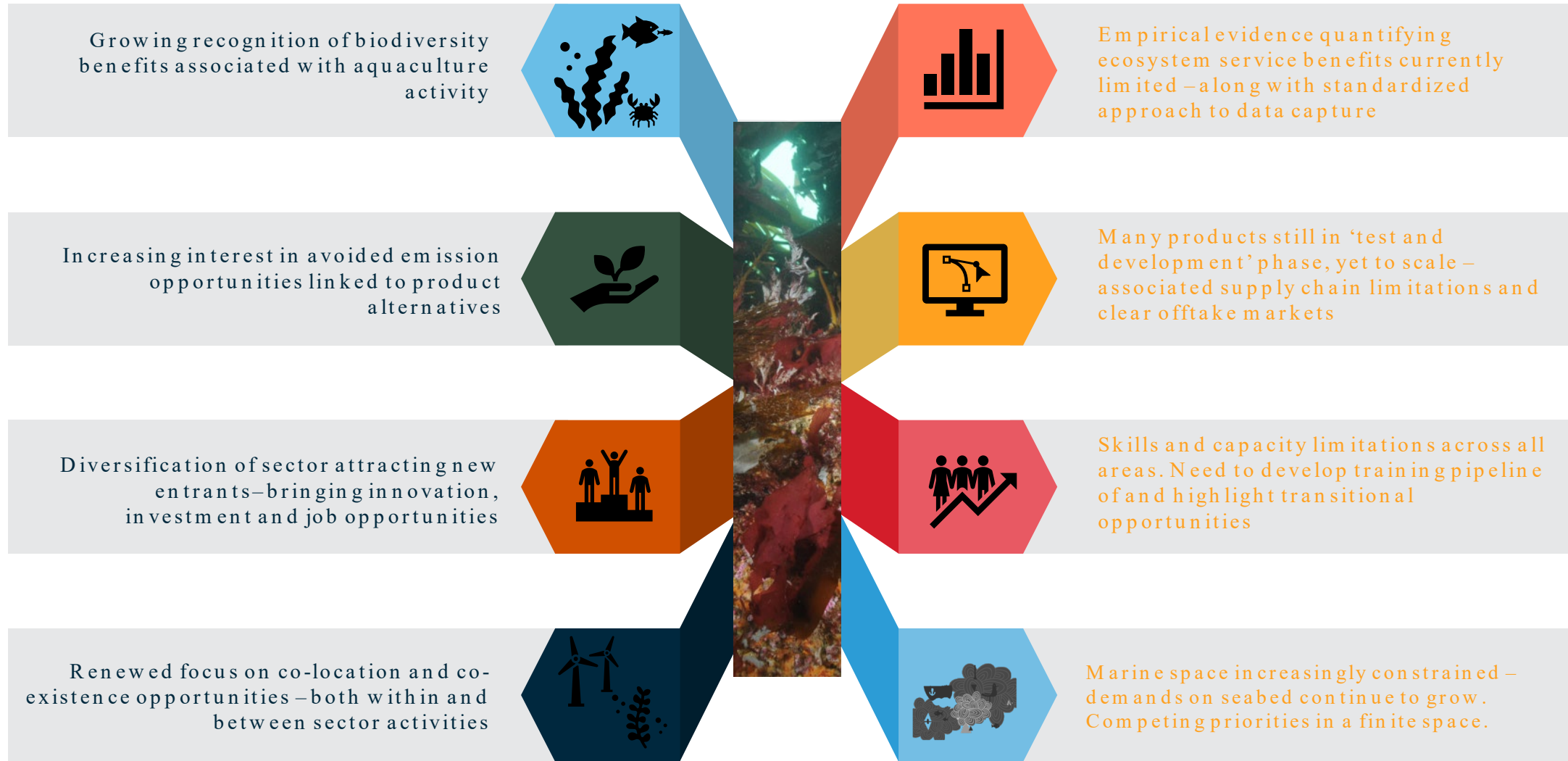


Increase of Aquaculture leases over time



**Expanding and diversifying sector, delivering multi-value outcomes**

# Challenges & Opportunities





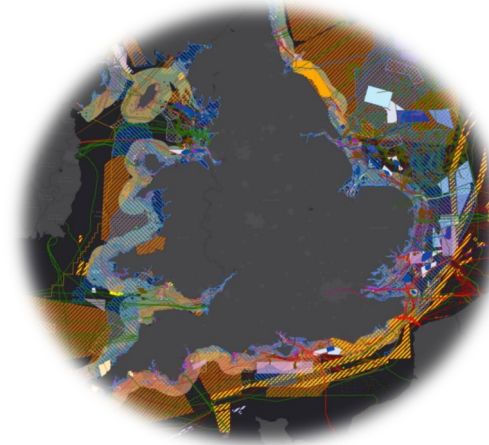
# Unlocking Potential For Blue Growth

- TCE is working to help address barriers and accelerate progress
- Understanding what can be achieved where – and what this looks like within the context of other maritime activities
- Building data and evidence to understand how best to accelerate progress, adapt approaches and monitor outcomes
- Addressing barriers to growth – mapping, skills, finance, supply chain, etc.
- Evolving TCE policy to prioritise the right activities in the right locations, in the right way
- Creating space for ‘learning through doing’ and building consensus around an adaptive approach (i.e. not letting perfect be the enemy of the good)



# Addressing Barriers - Projects & Process

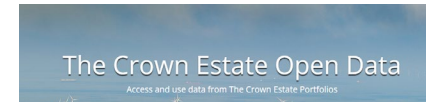
- Improving mapping to better understand key resource areas for aquaculture activity – help focus opportunities
- Supporting research to improve data around ecosystem services and environmental benefits e.g. SuMMeR CDT PhD seaweed farming and ecosystems services
- Developing new licence/lease products to support evolving/emerging sector activities e.g. trial licence, multi-revenue stream licence
- Testing new concept approaches to explore routes to market e.g. AEZ
- Engaging with policy and statutory bodies to simplify and streamline where possible



Marine Biological Association



UNIVERSITY OF PLYMOUTH



Foreshore and estuary ownership map



# Collaboration & Partnership

- Contributing to industry led projects e.g. Seaweed in East Anglia, Sea the Value
- Co-funding WWF, Hatch, MEP study on The Future Value of Seaweed Farming in the UK
- High-Integrity Marine Natural Capital Markets Roadmap work (Finance Earth, Pollination, Blue Marine Foundation, Crown Estate Scotland, Esmée Fairburn)
- Supporting funding bids for innovative and exploratory co-location projects
- Engaging with projects linking habitat restoration supply chain opportunities to aquaculture infrastructure e.g. nursery facilities

**Seaweed in East Anglia**

The project brings together local businesses, investors and local authorities to understand how to develop a sustainable and viable seaweed industry in the East of England.

The project focuses on 3 key areas:

- Identifying farming methods, species and co-location opportunities for seaweed aquaculture.
- Understanding Norfolk's capability to produce seaweed-based products.
- Developing a roadmap for a thriving industry and supply chain.

**THE SEAWEED INDUSTRY**

Seaweeds could be an important future feedstock for the UK with wider applications in food, fertilisers, animal feed, biofuels, bioplastics and more!

This project aims to identify which pathways will be the best for Norfolk.

**THE BIGGER PICTURE**

The seaweed industry has the potential to support:

- Businesses and employment (£)
- Net-zero targets (CO<sub>2</sub>)
- Ecosystem services
- Food security

Partners: Hethel Innovation, UEA, Cefas

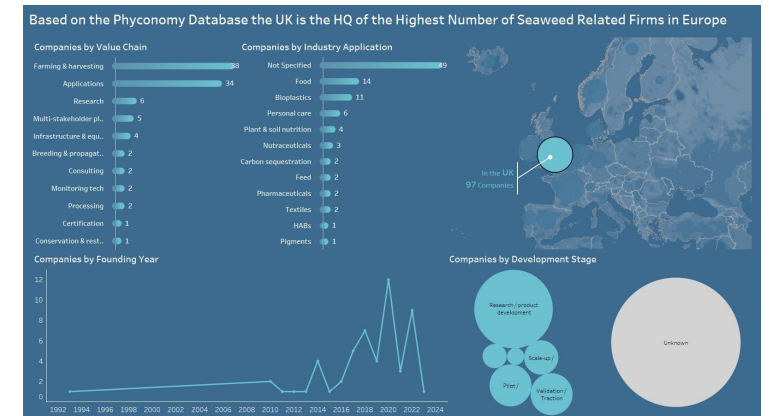


**OffshoreWind  
IndustryCouncil**

Pathways to Growth  
(P2G)

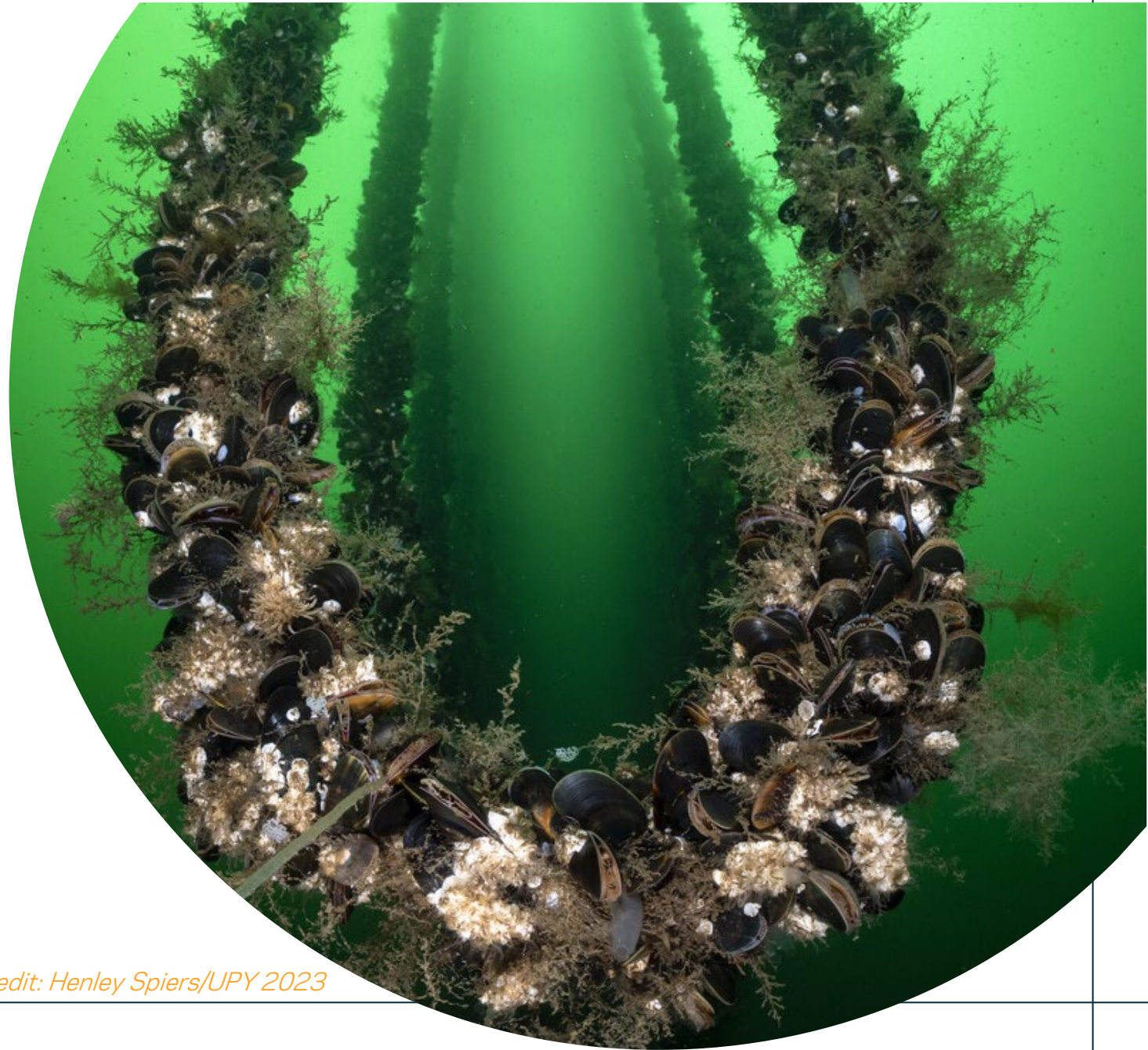


**SEA THE VALUE**  
MARINE BIODIVERSITY BENEFITS  
FOR A SUSTAINABLE SOCIETY



# Next Steps - Blue Futures

- Industry engagement and representation – better data, more access and information
- Continue making space for aquaculture – TCE WoS programme & engagement with statutory marine planning process
- Further development of seabed access options
- Additional research areas
  - Skills & transitional opportunities
  - Circularity
  - Deployment infrastructure review
- Support co-location opportunities – seabed optimisation etc
- Convene, catalyse & champion!



*Credit: Henley Spiers/UPY 2023*

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