Session 4
3 minute presentations

CF2020

Coastal Typologies

Dr Tim Stojanovic, Leader *Marine and Coastal Environment Research Team,* University of St Andrews

- Coastal typologies= classify settlements based on their socio-demographic characteristics
  - e.g. age, household composition, employment status, deprivation, health, car ownership, diversity.
- This helps us understand the needs of coastal populations and places.
- How this could be used in practice:
  - Planner- are we involving a range of communities in consultations?
  - Developer- where can this development bring social benefits?
  - Marine policy- what are the social impacts of policies on adjacent communities?

Duffy, P. D., and T. A. Stojanovic (2018) The Potential for Assemblage Thinking in Population Geography: Assembling Population, Space and Place. *Population, Space and Place* 24(3). http://dx.doi.org/10.1002/psp.2097 See sections 4-5 of this paper for details and maps of the typology. The rest of the paper is a rather more theoretical discussion which might interest academic geographers or demographers.

Marine Management Organisation (MMO) (2011) Coastal typologies: detailed method and outputs. A report by Roger Tym and partners, & OCSI. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/312722/se_typologies.pdf

Oxford Consultants for Social Inclusion (OCSI) Ltd Development (2015) Development of a Coastal Community Typology for Wales. https://gov.wales/development-coastal-community-typology

149 Scottish Coastal ‘localities’ within 2km shoreline.

Peripheral Fishing and Port Towns

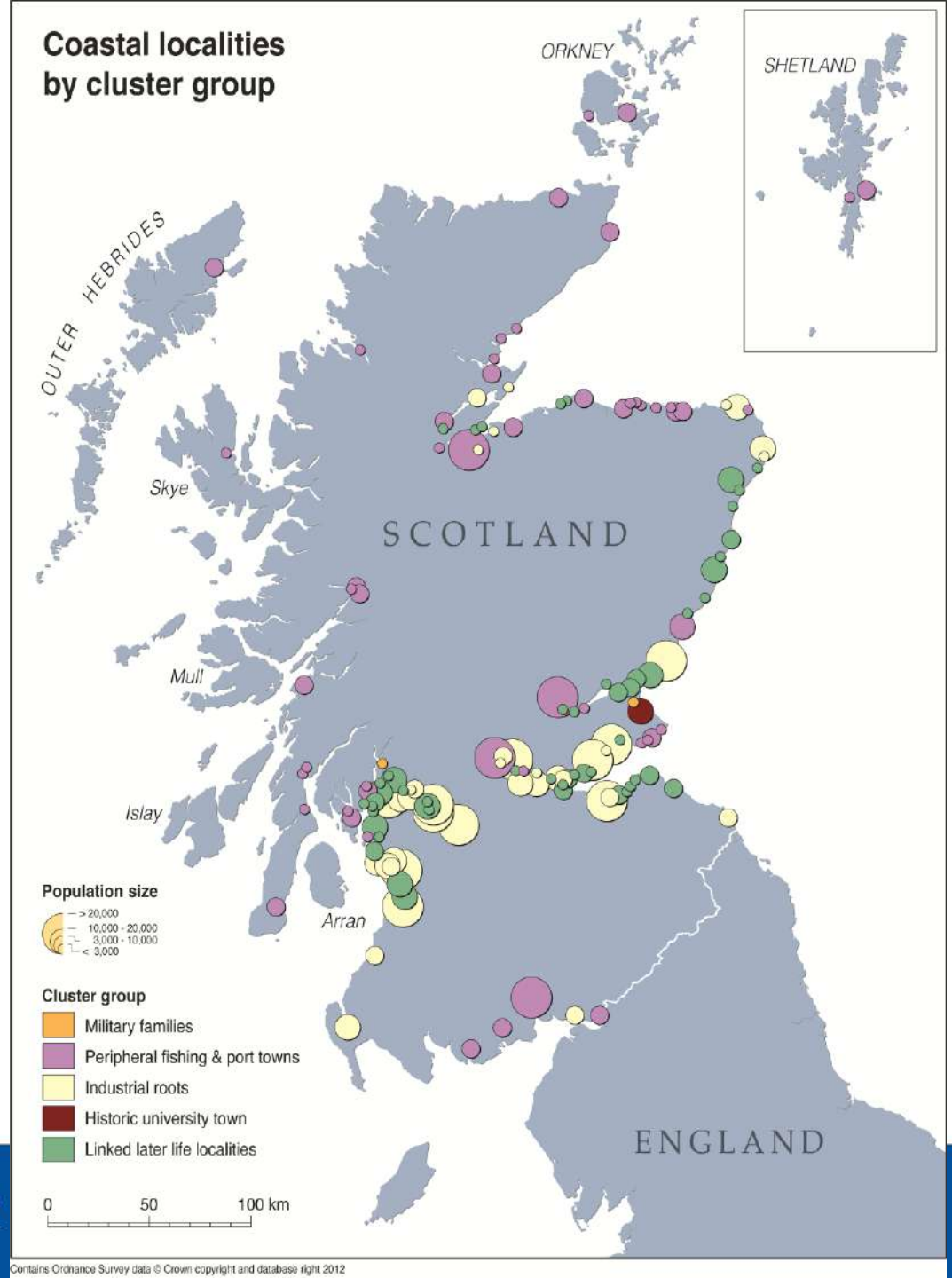
e.g. Pittenweem, Oban, Lerwick

Industrial Roots

e.g. East Wemyss, Rosyth, Invergordon

Linked Later Life Localities

e.g. St Cyrus, Gourock, North Queensferry



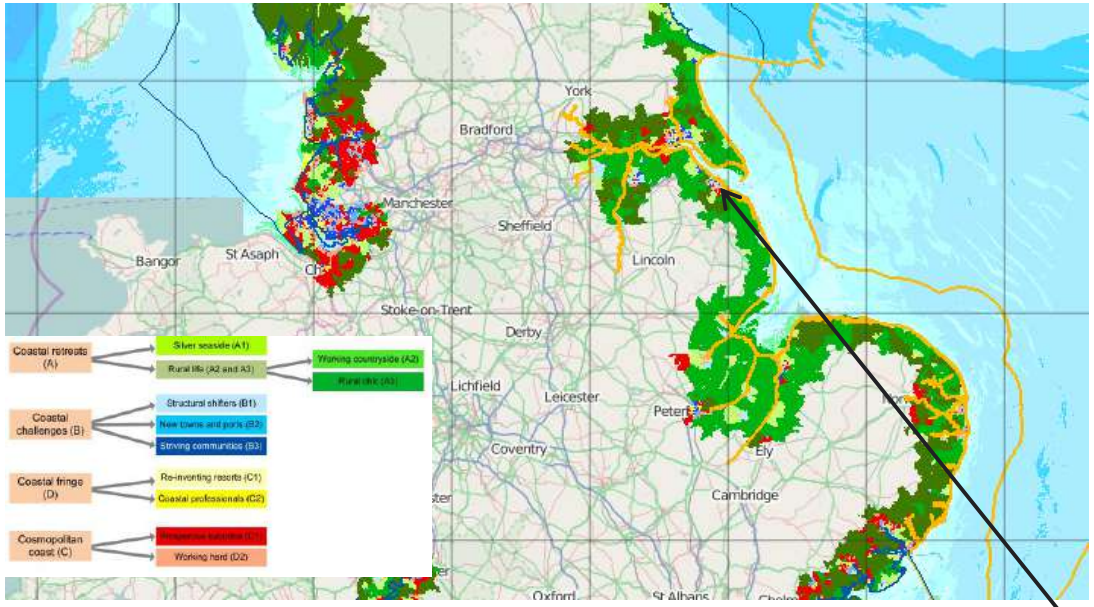
View the data at: Marine Scotland MAPs NMPi https://marinescotland.atkinsgeospatial.com/nmpi/

Military Families

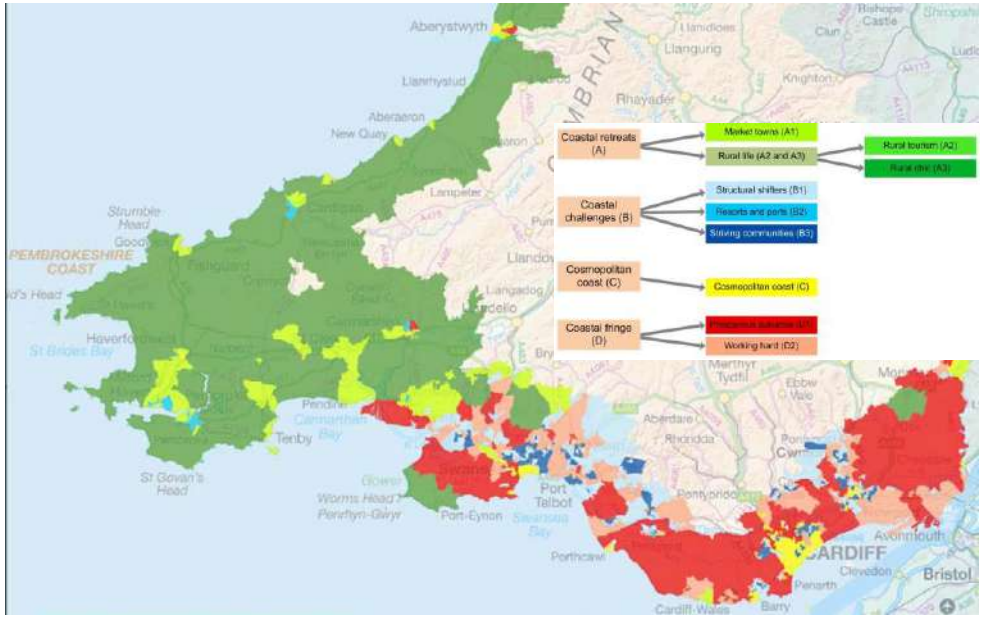
e.g. Garelochhead, Leuchars

Historic University Town

e.g. St Andrews



MMO 2011 by Tym



Welsh Government 2015 by OCSI

Marine Scotland 2019 by Duffy & Stojanovic

Race Bank 573MW Windfarm, commitment to East Coast Hub, Grimsby

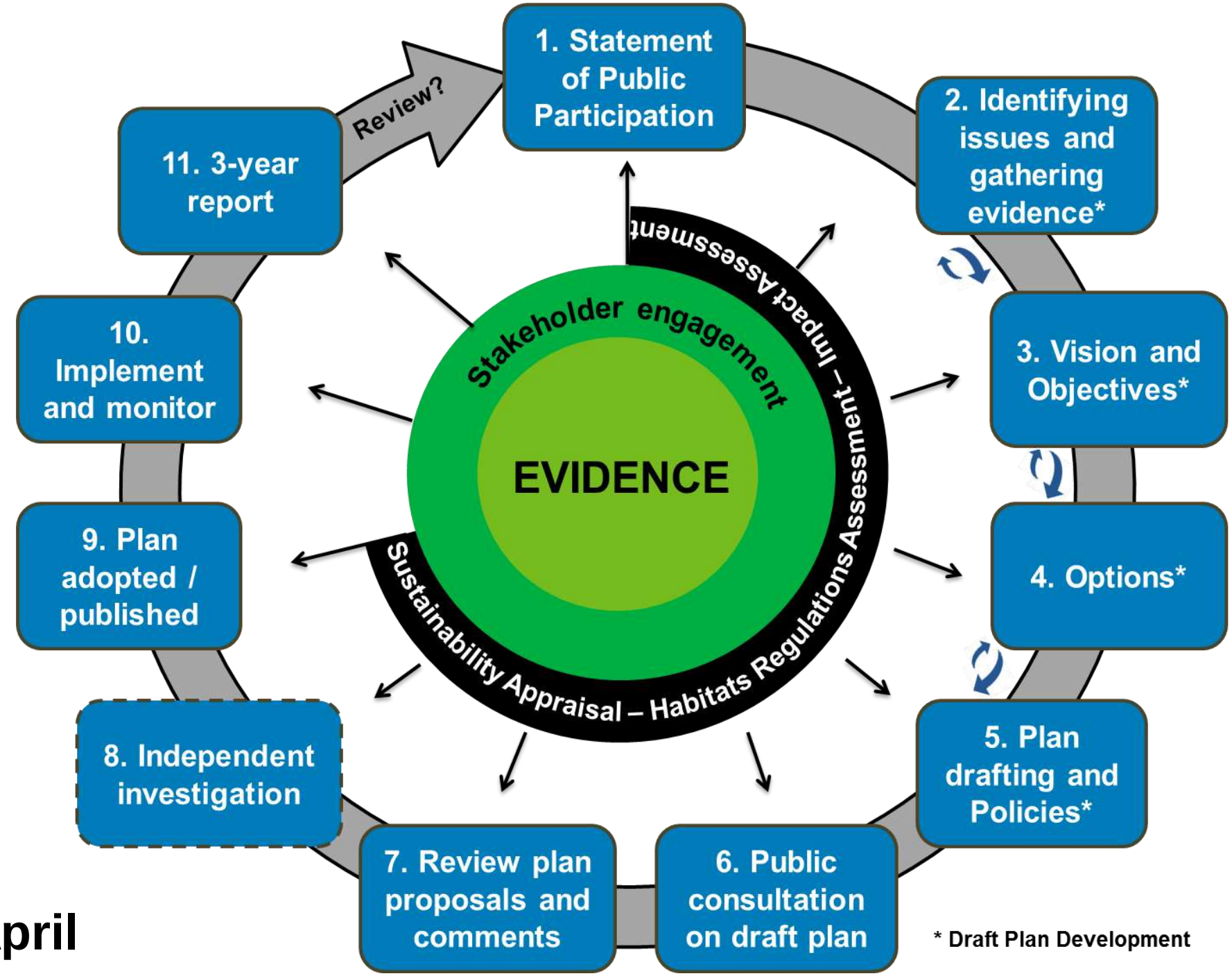
Dynamic typology draws on census data from 2001-2011 to understand change.

Marine Management Organisation

Consultation on the Draft North East, North West, South East and South West Marine Plans

Ed WRIGHT

Deadline in early April



Marine Management Organisation

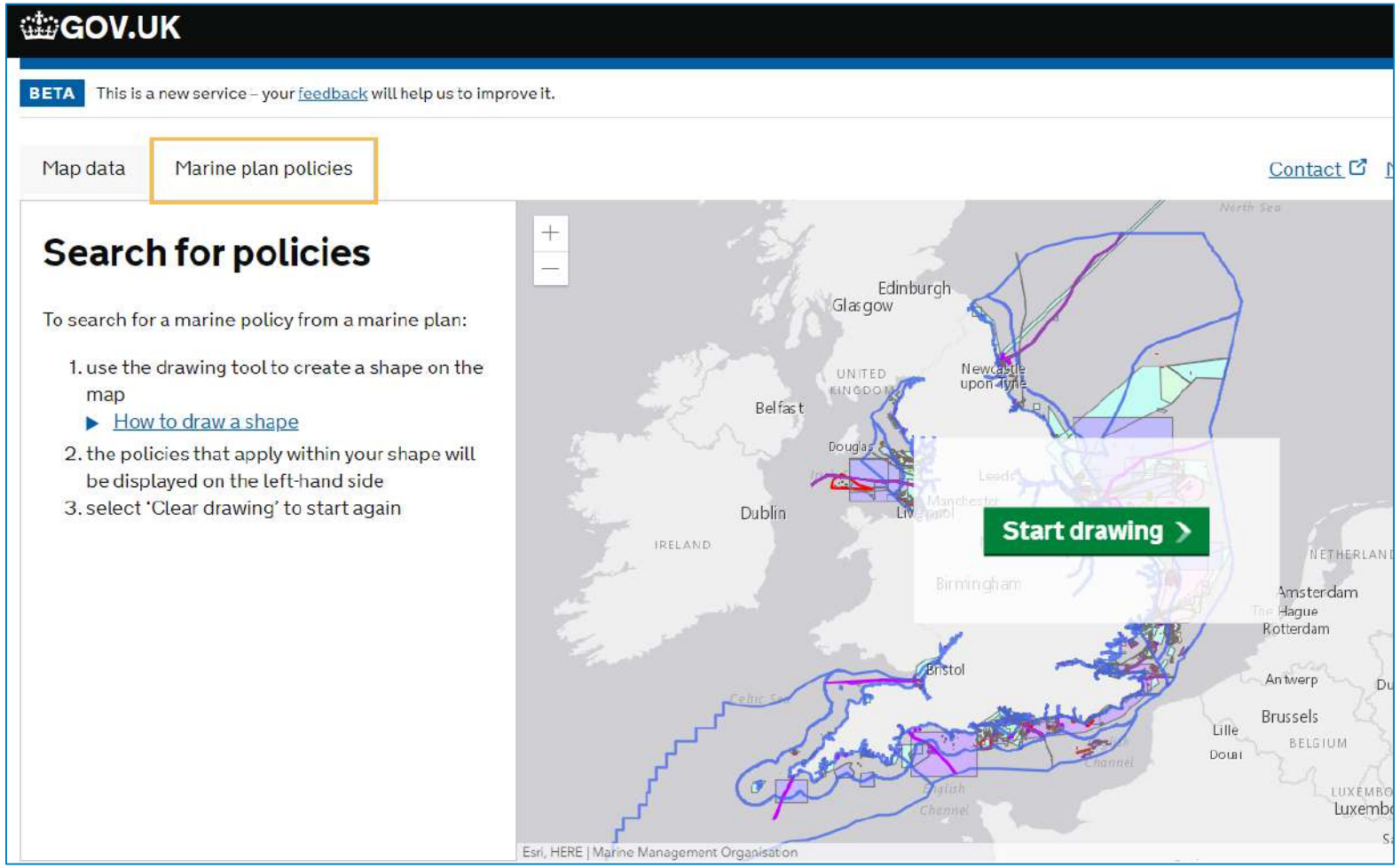
Implementation and Monitoring

- Implementation training underway
- Second 3 year report on the East Marine Plans – by April 2020
- Focus on:
  - Context
  - Process
  - Outcome
- Surveys in 2020
- First 3 year report on the South Marine Plans due in 2021

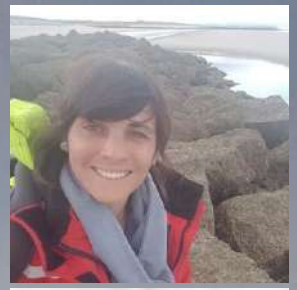
Marine Management Organisation

Explore Marine Plans

- Replaces ‘Marine Information System’
- Enables users to view and interact with English marine plan policies
- Allows users to spatially identify policies relevant to a search area



www.gov.uk/guidance/explore-marine-plans



EU Funds: Ireland Wales Programme 2014-2020

Tionól Réigiúnach an Deiscirt
Southern Regional Assembly

Ireland's European Structural and Investment Funds Programmes 2014-2020

Co-funded by the Irish Government and the European Union

UNDEB EWROPEAIDD
EUROPEAN UNION

Llywodraeth Cymru
Welsh Government

Cronfa Datblygu Rhanbarthol Ewrop
European Regional Development Fund

Promoting biodiversity on marine artificial structures

Building the evidence for marine planning

Ally J. Evans, Pippa J. Moore, Louise B. Firth, the Ecostructure Team & others

www.ecostructureproject.eu

@ecostructure_
@AllyAllyj

ECOSTRUCTURE
Climate Change Adaptation through Ecologically Sensitive Coastal Infrastructure

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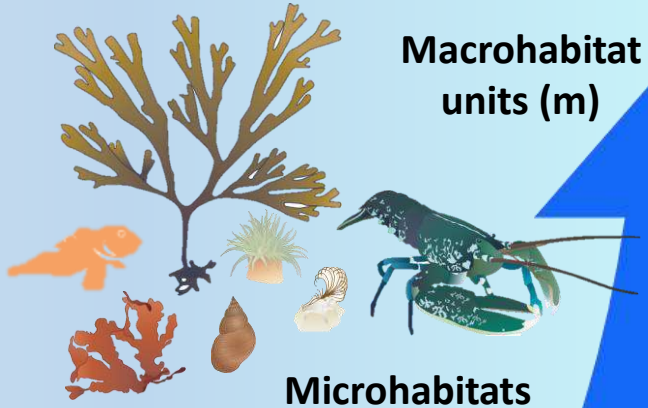
THE MARINE BIOLOGICAL ASSOCIATION

UNIVERSITY OF Southampton

From Ocean Sprawl...

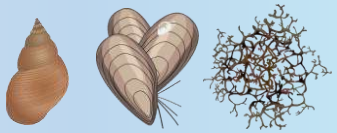
...To Blue-Green Infrastructure

Eco-engineering



Macrohabitat units (m)

Microhabitats (cm-m)



Microhabitats (mm-cm)

Material/Texture (µm)

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Climate Change Adaptation through Ecologically Sensitive Coastal Infrastructure

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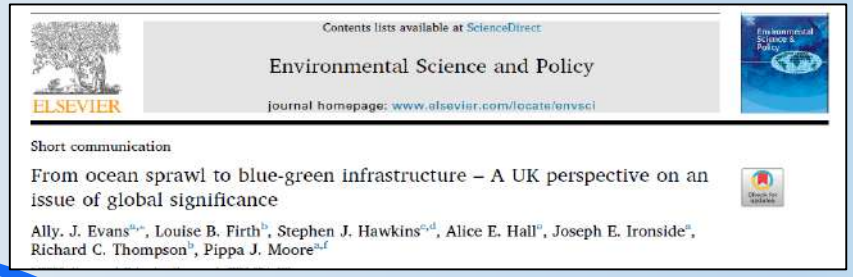
From Experiments… …To Implementation in Practice


Contents lists available at ScienceDirect

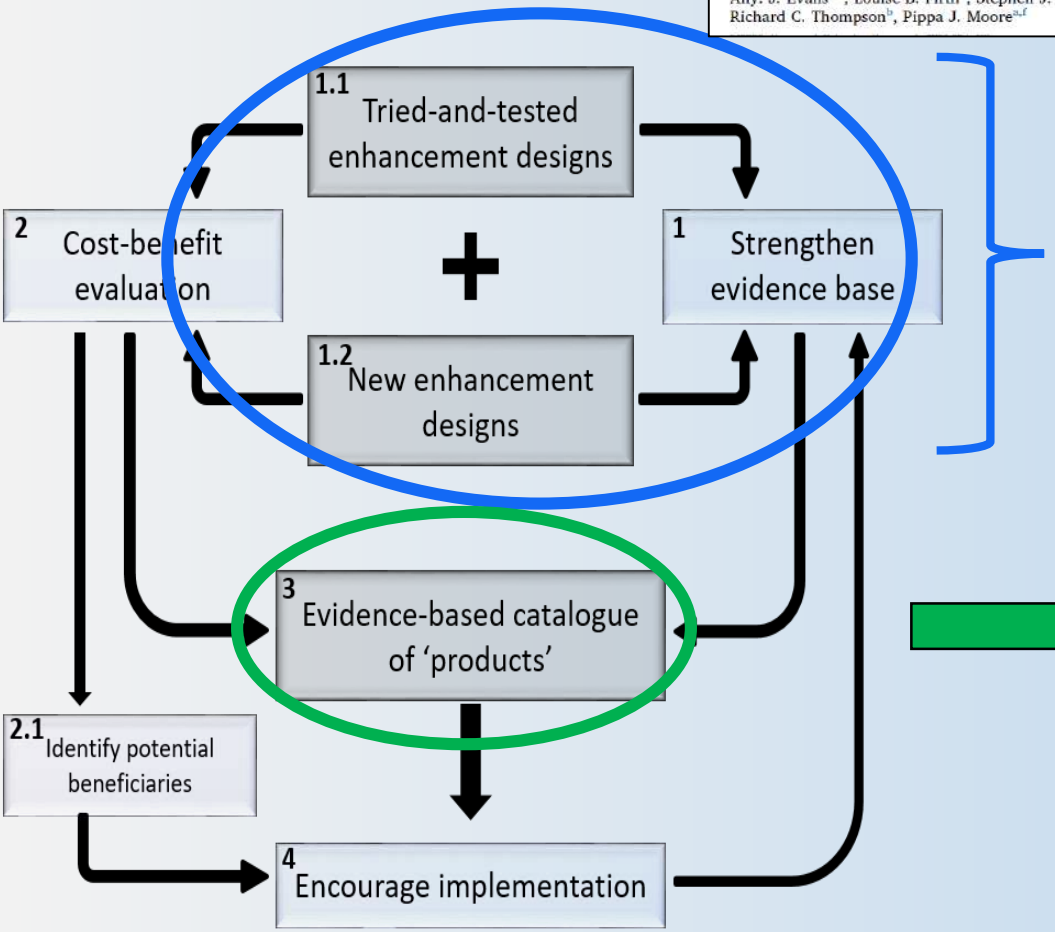
Environmental Science and Policy

journal homepage: www.elsevier.com/locate/envsci

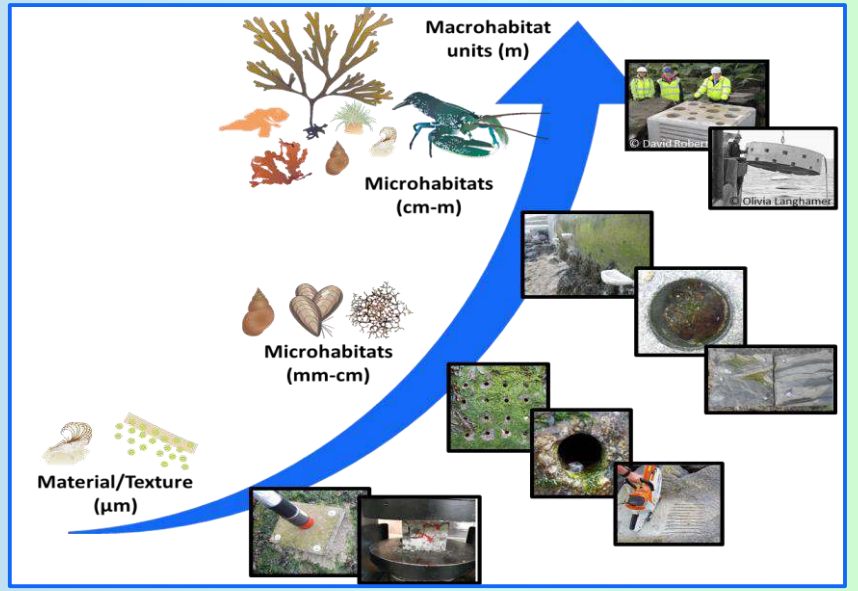
Short communication

From ocean sprawl to blue-green infrastructure – A UK perspective on an issue of global significance

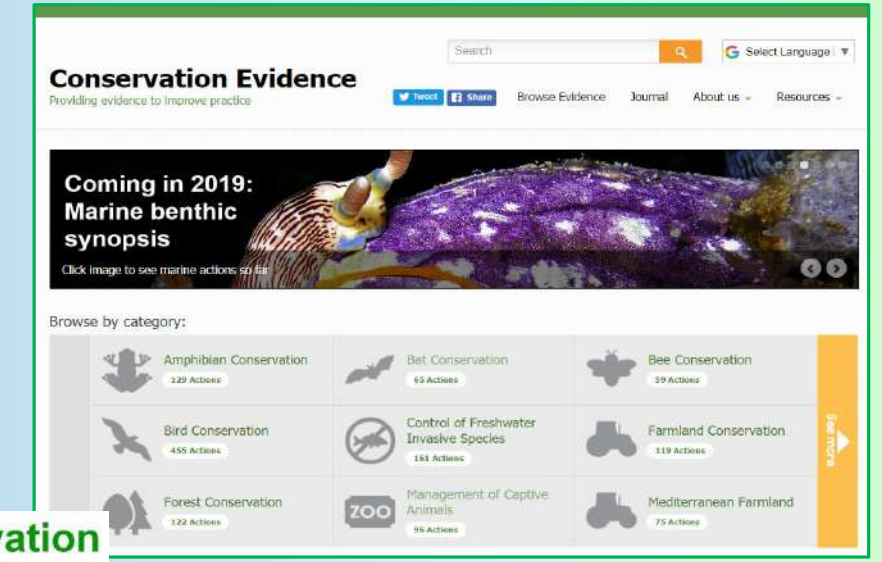
Ally. J. Evans[a,*], Louise B. Firth[b], Stephen J. Hawkins[c,d], Alice E. Hall[a], Joseph E. Ironside[a], Richard C. Thompson[b], Pippa J. Moore[a,f]



1. Plugging the evidence gaps



2. Translating the evidence



ECOSTRUCTURE Climate Change Adaptation through Ecologically Sensitive Coastal Infrastructure

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Conservation Evidence
Evidence to improve practice

www.conservationevidence.com

Marine Ecosystem Services Optimisation Model: using Bayesian Belief Networks to evaluate the impacts of pressures on flows of services

Marine Natural Capital team

Vicky Morgan, Paul Ivory & Jed Nicholson

vicky.morgan@jncc.gov.uk

www.jncc.gov.uk

MESO tool

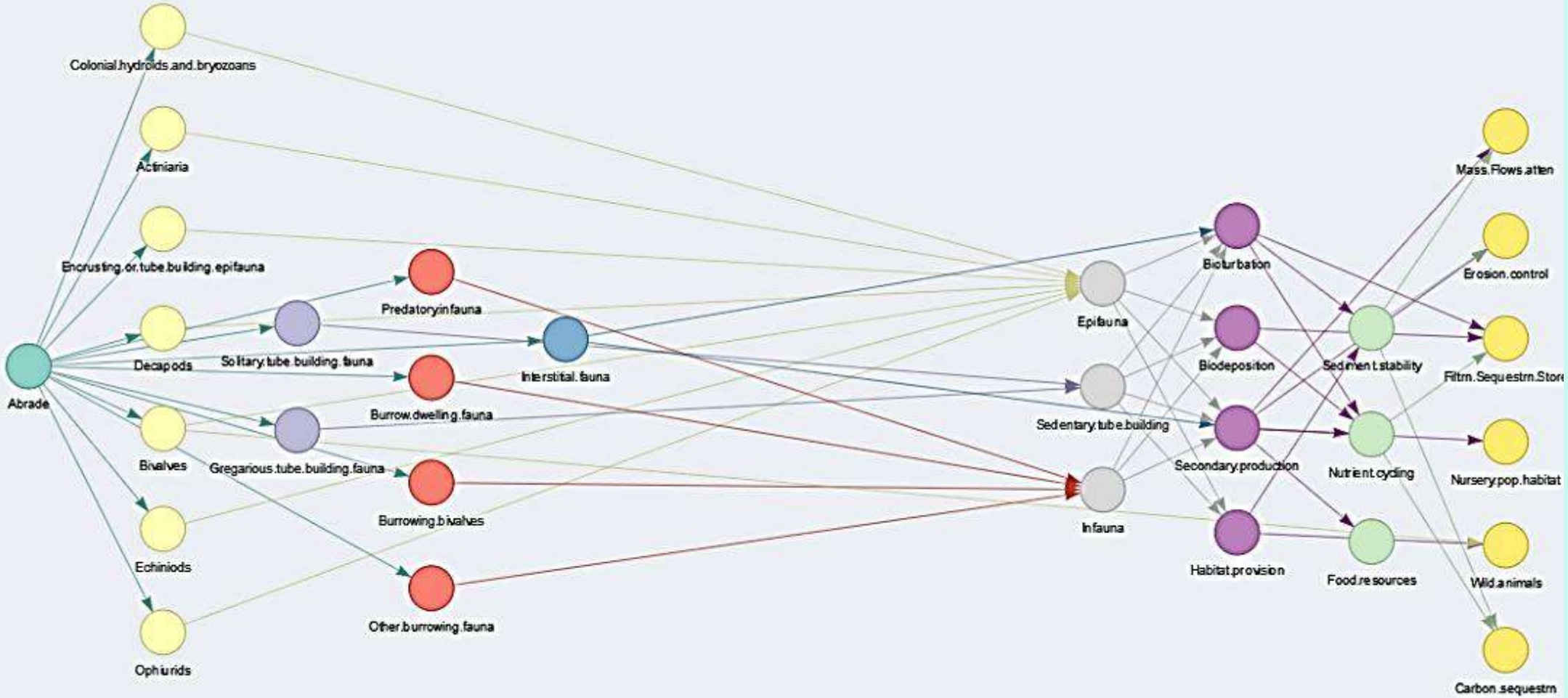
Why?

- can help businesses, managers and regulators evaluate environmental impacts

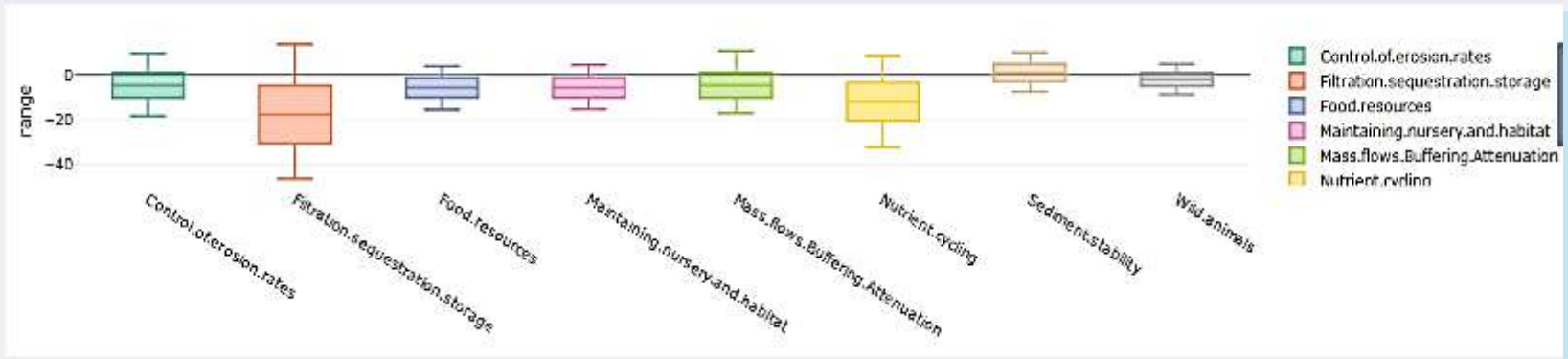
How does it work?

- Aggregates species into functional groups
- Links pressures and flows of services
- Reveals relative magnitude of impacts on ecosystem services
- Based on literature review & Bayesian belief model

Who? Marine Biological Association and AVS Developments for JNCC



Effect on Eco-system services



Coastal Futures 2020

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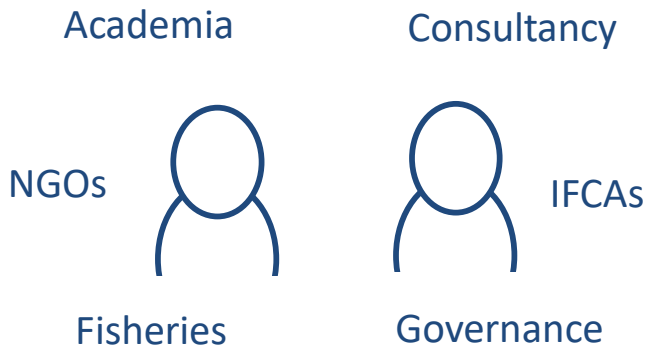
MMO1172 Evaluation of MPA Management Measures

Part 1 Interview with stakeholders for needs assessment of UK MPAs

Output

- Opinions of interviewees **differed notably**
- Literature review to support results from interviews
- Interviewees identified:
  - Successful management measures
  - Gaps in the management toolbox



Following points fed into Part 2

- Most hard-to-manage
  - Habitats and species – benthic reefs, ephemeral and mobile features
  - Section of fishing fleet – inshore, mobile gear
- Global examples of successful measures (and local ones too!)

ichthys marine

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MMO1172 Evaluation of MPA Management Measures

Part 2

Global case studies of MPA/fishery management and evaluation

Output

15 Global case studies

from comparable countries

focussed on identified interactions of importance

	Benthic reefs	Mobile species	Ephemeral / dynamic features
Towed gear	3	3	3
Static gear	3	3	None found

7 Applicability criteria

Each scored 1, 2 or 3, then summed to generate applicability potential of case study

- High (17-21) → *n* = 1
- Moderate (12-16) → *n* = 13
- Low (7-11) → *n* = 1

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MMO1172 Evaluation of MPA Management Measures

Aim

to identify **global examples** of successful **fishery management** measures in **MPAs** that could be applied in a **UK context**, with a particular focus on measures to protect **benthic**, **ephemeral** and **mobile** species

Output

Based on Interviews with Stakeholders and Global Case Studies
12 key recommendations were made for English fisheries management

- Use of technologies like REM and high-res VMS
- Changes to ways of working including MSP and increasing industry engagement
- Improving information – on fishing, bycatch, feature location etc.
- Combination of spatial and non-spatial measures e.g. technical controls, observer programmes and measures to reduce ghost fishing

Many of these already being considered – report **strengthens** ongoing work

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Project UK

Facilitated by MSC

matthew.spencer@msc.org

The Project UK FIPs

Stage 1

- North Sea plaice & lemon sole
  - Demersal trawl
  - Beam trawl
  - Seine
- Channel scallops
  - Dredge
- Western Channel monkfish
  - Demersal trawl
  - Beam trawl
  - Gill net
- South West crab & lobster
  - Pot

Stage 2

- Scallops
  - Dredge
- Nephrops
  - Creel/pot
  - Trawl

Stage 2 Areas

- **North Sea**
- **West of Scotland**
- **Irish Sea**


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M


MORRISONS


TESCO


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coombefisheries


Sainsbury's


MACDUFF
Wild about Shellfish


flatfish
THE FUTURE OF FRESH OCEAN PRODUCE


Waitrose

Progressing native oyster recovery

Blue Marine Foundation
morven@bluemarinefoundation.com

WIND FARMS AND OYSTER RESTORATION

- Oyster beds once covered 20% of the North Sea
- Opportunity for positive contribution with increasing number of wind farms
- Suitable location for survival, growth and reproduction of native oysters (Smaal et al. 2015, 2017)
- 2018 – Oyster cages installed in Van Oord wind farm (Dutch North Sea)

Dutch North Sea – oyster reef restoration pilot trials

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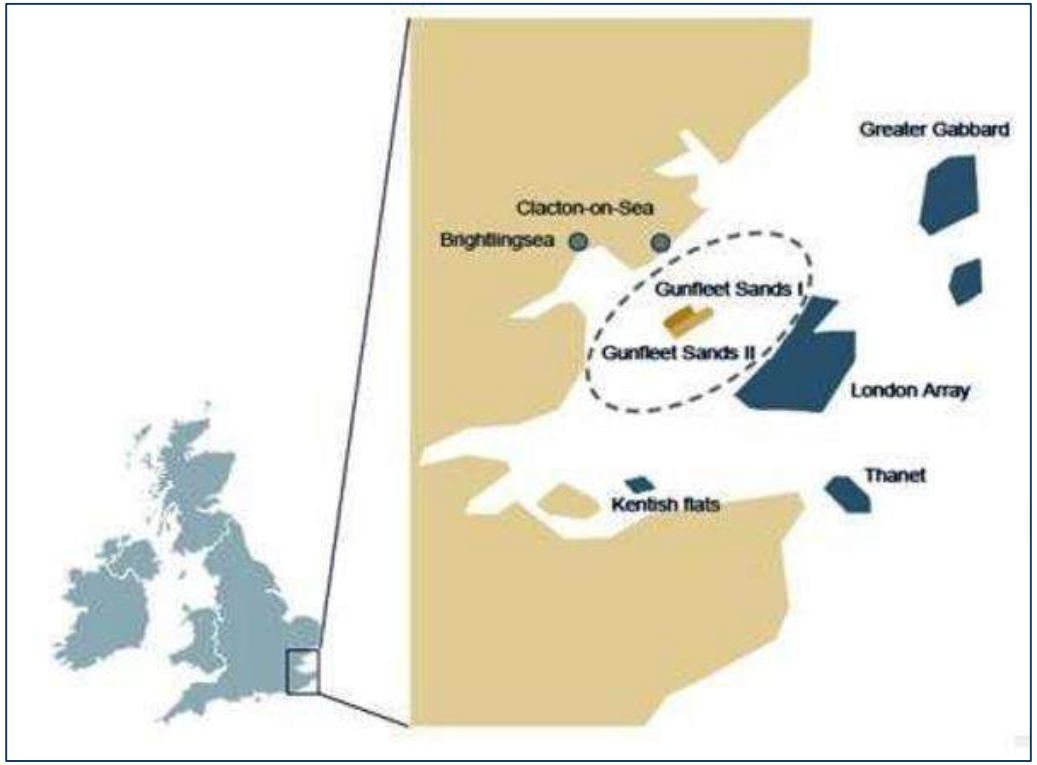
GUNFLEET SANDS WIND FARM, ESSEX

- Partnership with Ørsted and the Essex Native Oyster Restoration Initiative
- Sand bank, 7km offshore of Clacton-on-Sea
- Feasibility and pilot study
- **Opportunity – house breeding oysters within wind farm to seed inshore sanctuary sites**



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WHAT QUESTIONS ARE WE TRYING TO ANSWER?

- Can the Gunfleet Sands wind farm make a significant contribution to ENORI restoration efforts as larval sources/broodstock sites?
- Can this model be rolled out to other wind farms around the UK to aid inshore restoration of oysters?
- What are the requirements for oysters within UK inshore wind farms? What do they need to survive and reproduce?
- What are the best methods for housing oysters at wind farms?

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Coastal Futures 2020

Review and Future Trends

Welcome to the conference

#CoastalFutures20 and follow us at @CF Conf



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