



working **together** towards a  
**sustainable** Solway Firth

# **Solway Firth Partnership Vision**



**Solway Firth Partnership works to support a vibrant and sustainable local economy while respecting, protecting and celebrating the distinctive character, heritage and natural features of our marine and coastal area**

# The Area We Cover



**Solway Firth**  
Partnership

# Solway Firth Partnership



## Core Activities

- **Partnership**
- **Planning**
- **Environment**
- **Fisheries**
- **Energy**
- **Awareness**

## Funding for 2021/22

- **Marine Scotland**
- **RWE – Tidelines**
- **Cumbria County Council**
- **Allerdale Borough Council**
- **Carlisle City Council**
- **Project Fees / Other income**



# Solway Firth Partnership Projects 2021/22

## Partnership

- Webinar Series with Solway Coast AONB
- Working on cross-border community archaeology project application

## Planning

- SMILE Project / Solway Review Storymap
- SEASS and SEAES Project
- Bringing in the Rhins Stakeholder Engagement

## Environment

- Marine Litter – Solway Marine Litter Project / Rotary Club Education Project / Wild Goose Festival
- Rhins Coastal Footpath Activity Programme - Rhins Revealed Online / Explore and Record the Rhins
- Marine INNS Monitoring
- Marine Natural Capital Development Project (D&G) and 3Cs Cumbria

## Fisheries

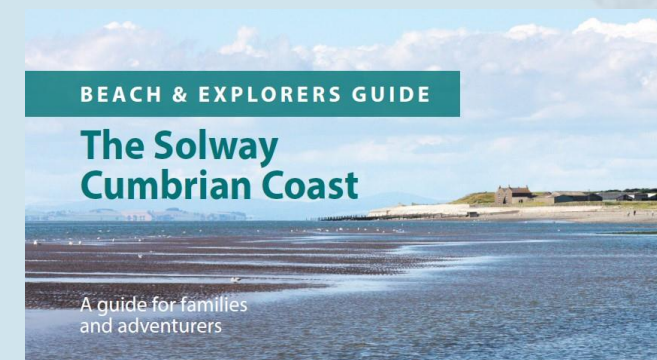
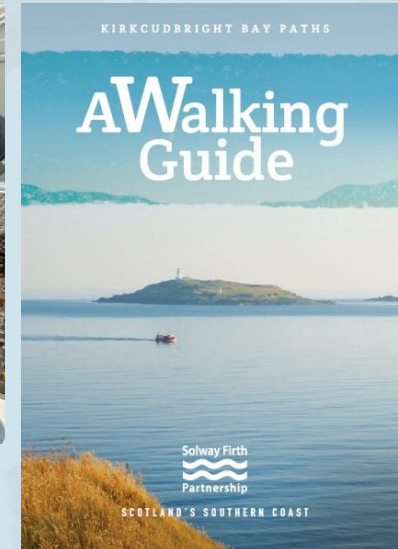
- Fishing Faces Allerdale
- Fishing for Litter

## Energy

- Robin Rigg Community Fund

## Awareness

- Tidelines / E-newsletters / Website / Social Media
- Galloway Glens – Kirkcudbright Bay Interpretation
- Geology Events





# Natural capital



- Natural capital is the stocks of natural assets
- UK marine natural capital estimate asset value of £211 billion  
(Marine Accounts, natural capital, UK 2021)
- Marine Natural capital assets include;  
Seagrass, Saltmarsh, Shellfish beds, Fish, Seafloor sediments – all  
living things and habitats

# **Solway Coast and Marine Pilot Project SCAMPP (Scotland)**



**Will undertake a number of key strategic  
interventions to help restore and expand  
coastal and intertidal habitat in support of;**

- **Climate mitigation, adaptation**
- **Biodiversity**
- **Fish stocks**
- **Water quality**
- **Tourism & Communities**
- **And more!**

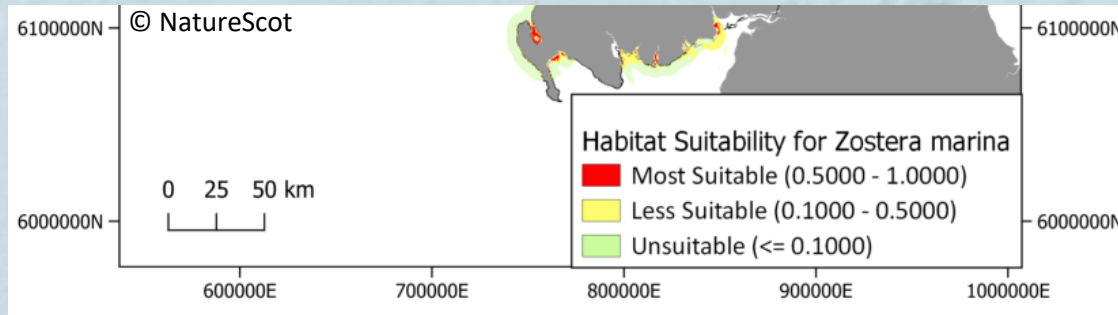


# SCAMPP Development work

- Gather information
- Learn lessons
- Form connections
- Feed into the business case to release  
Borderlands funding

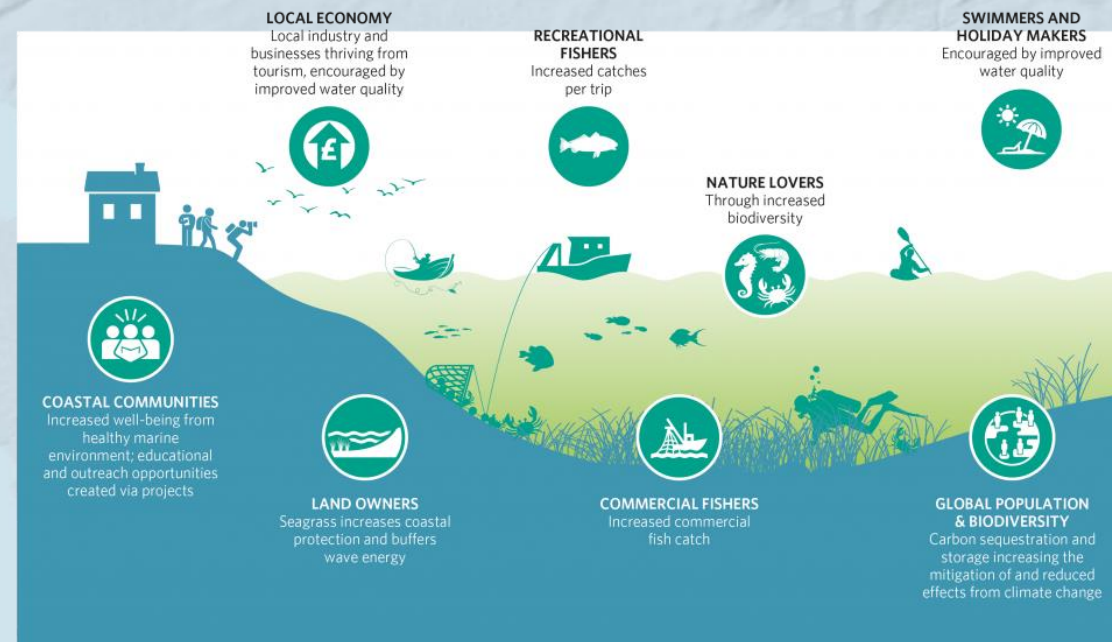


# Solway Seagrass





## BENEFICIARIES OF SEAGRASS BED RESTORATION



ZSL | LET'S WORK FOR WILDLIFE

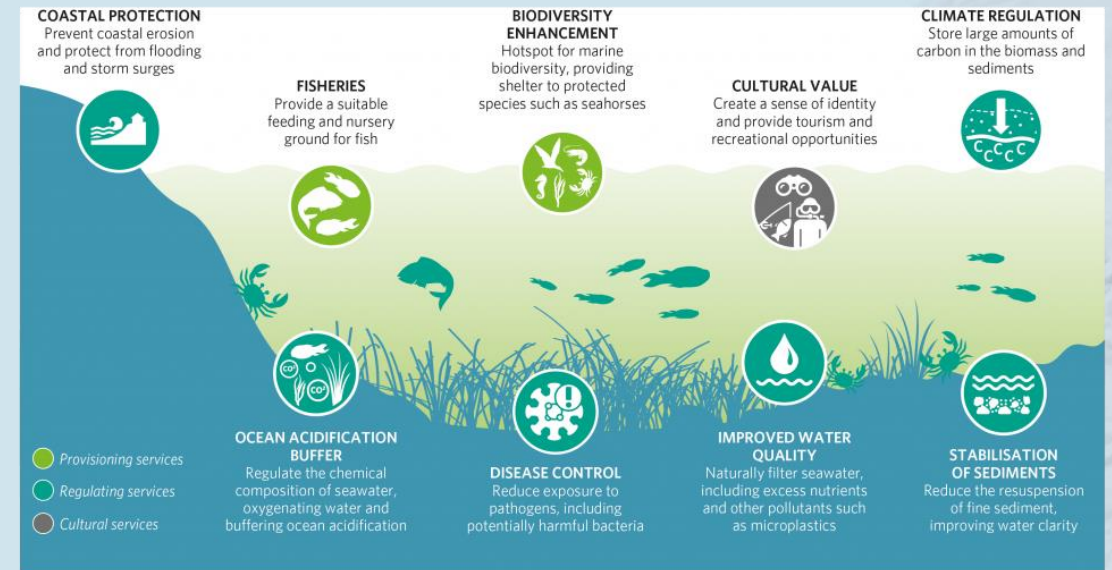
UNIVERSITY OF PORTSMOUTH

Environment Agency

©2021, Seagrass Restoration Handbook – UK & Ireland, Zoological Society of London and University of Portsmouth.

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## ECOSYSTEM SERVICES PROVIDED BY SEAGRASS BEDS



Modified from UNEP (2020) and Potouroglou, M., Westerveld, L. and Fylakis, G. (2020).

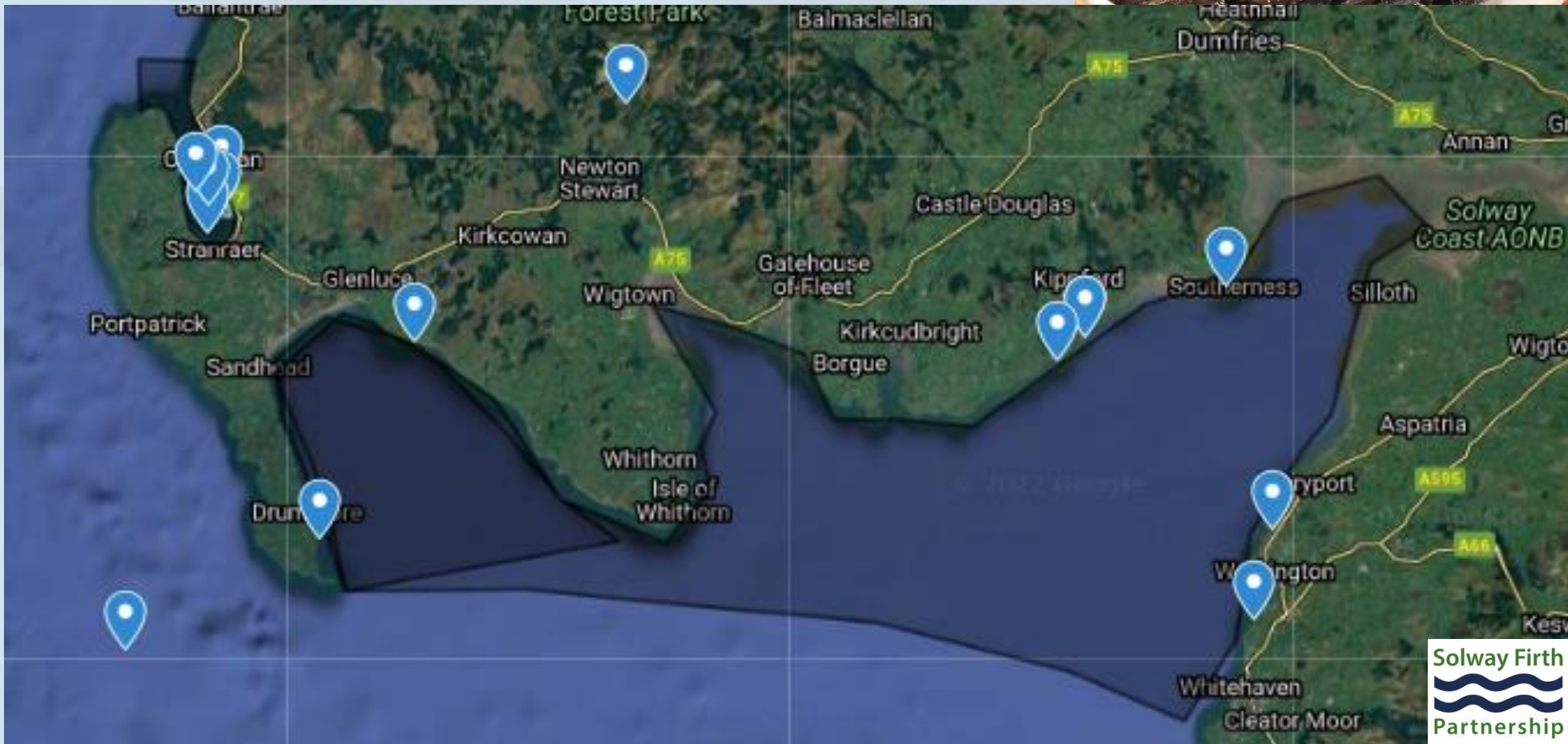
ZSL | LET'S WORK FOR WILDLIFE

UNIVERSITY OF PORTSMOUTH

Environment Agency

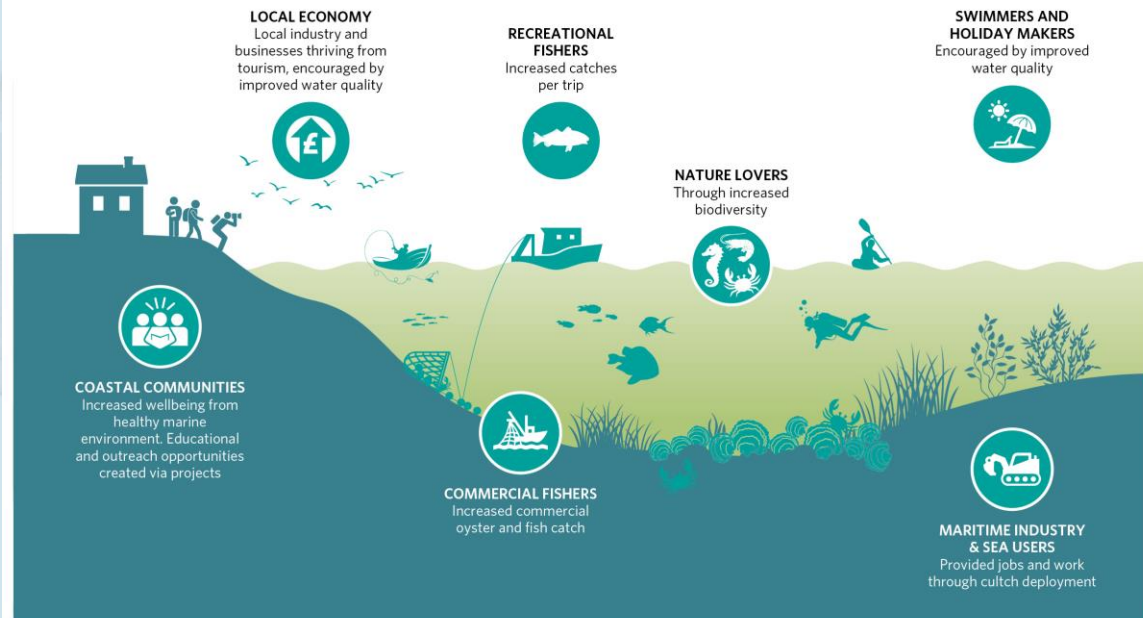
©2021, Seagrass Restoration Handbook – UK & Ireland, Zoological Society of London and University of Portsmouth.

# Native Oysters





## BENEFICIARIES OF NATIVE OYSTER RESTORATION

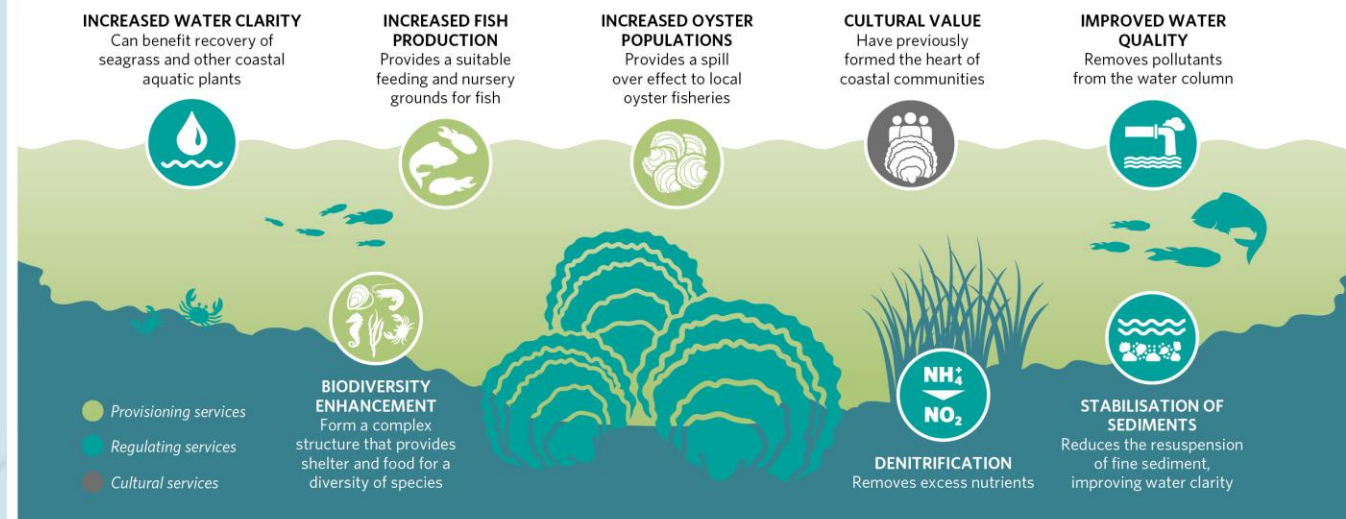


©2020, Native Oyster Network - UK & Ireland, Native Oyster Restoration Alliance.



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## ECOSYSTEM SERVICES PROVIDED BY NATIVE OYSTERS *OSTREA EDULIS*



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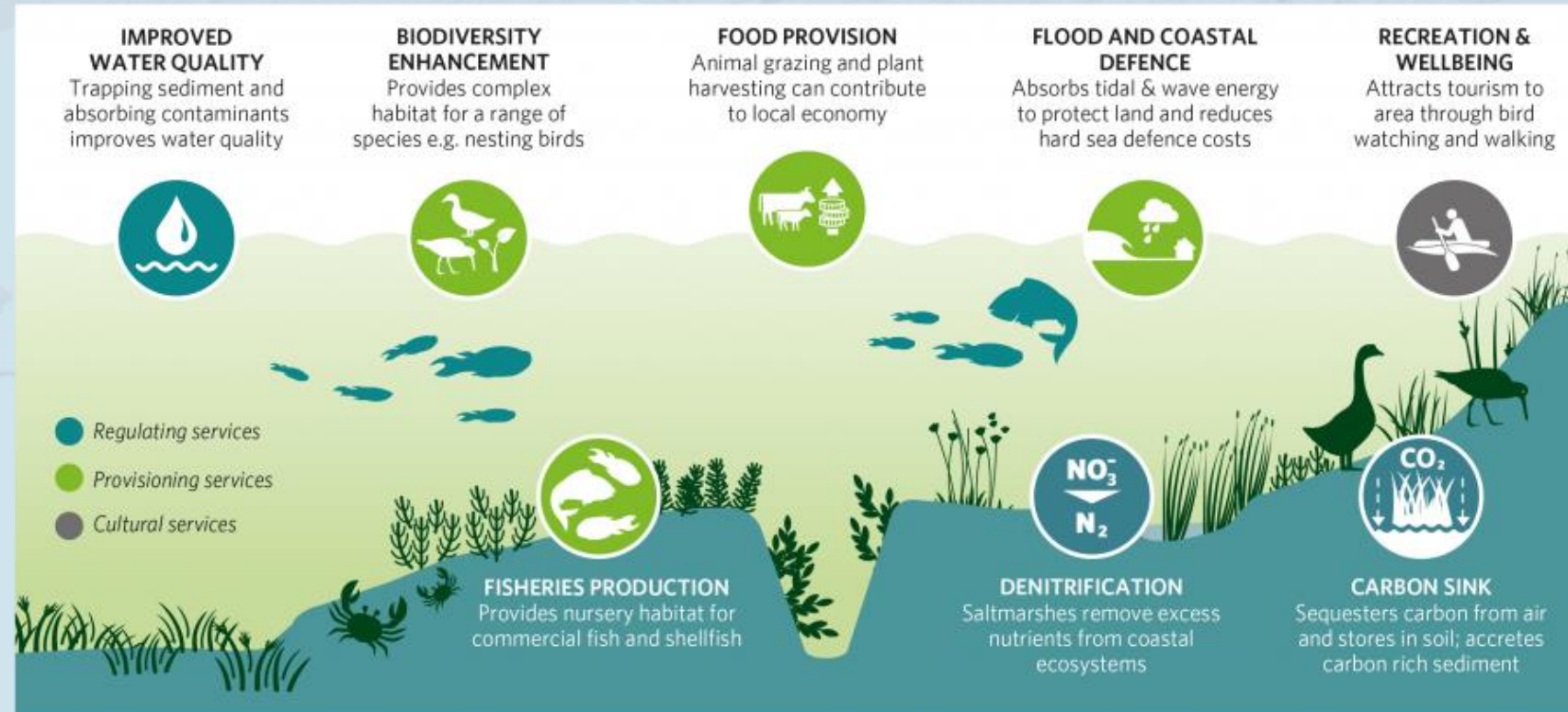




# Saltmarsh



## ECOSYSTEM SERVICES PROVIDED BY SALTMARSHES.





# Marine Natural Capital on the Cumbrian Solway

Funded by:





# Project Objectives

## Research

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- Highlight gaps and opportunities
- Prepare a baseline assessment using existing data
- Identify data gaps and deficiencies
- Prepare supporting information for future work

## Consultation

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- Engage all key stakeholders
- Liaise with relevant projects
- Consult gov agencies and key industry private sector, stakeholders



## Report

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- Report research and consultation results



# Project Objectives

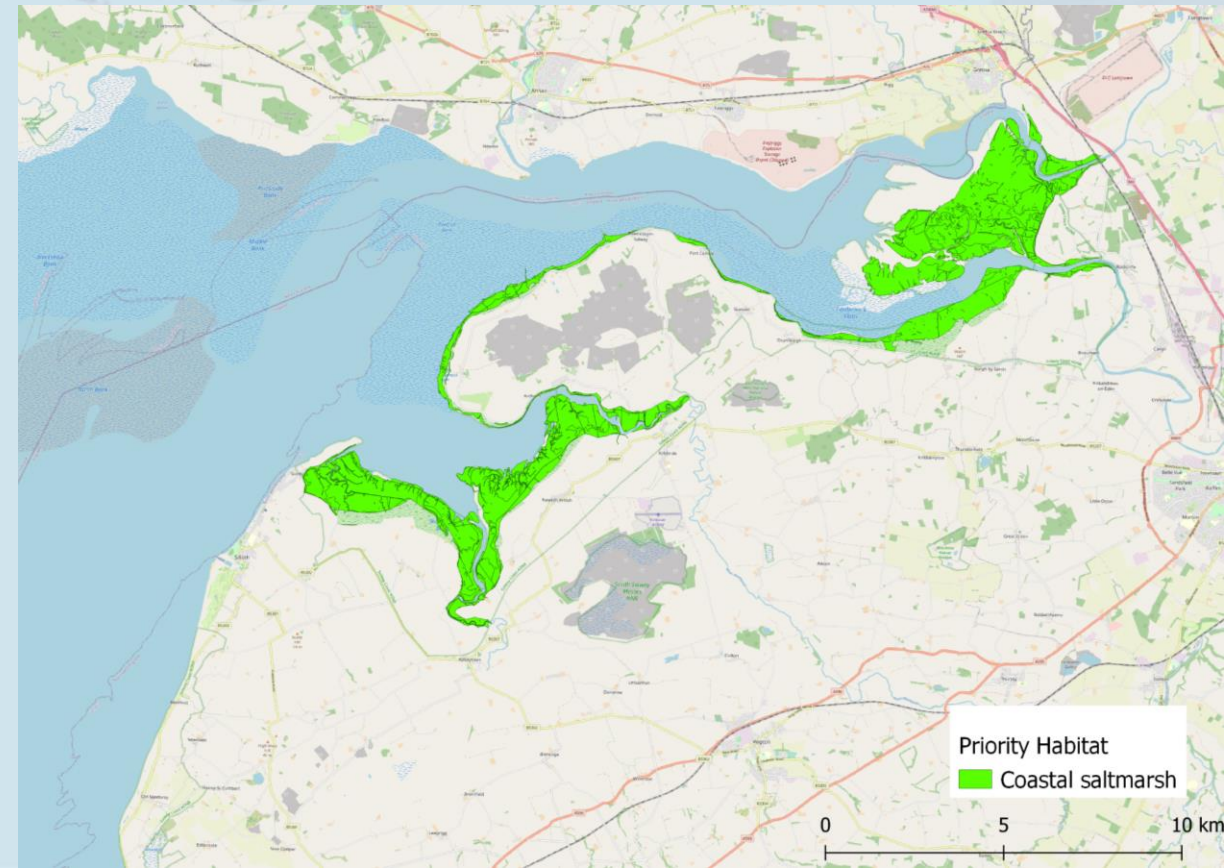
- Produce a **baseline** using existing data to show the **current state** of the Solway's marine natural capital → what we have, its **location**, what **condition** it is in, and its **benefits** to people.
- Decide on a **vision** → what are the **priorities**, what does each stakeholder want to see?
- What methods are feasible for the Solway → what is happening elsewhere, **lessons learnt** from relevant projects, what can be replicated or adapted



# Saltmarsh



- Carbon sink
- Flood and coastal defence
- Biodiversity enhancement
- Improved water quality
- Fisheries and food production
- Recreation and wellbeing
- Denitrification

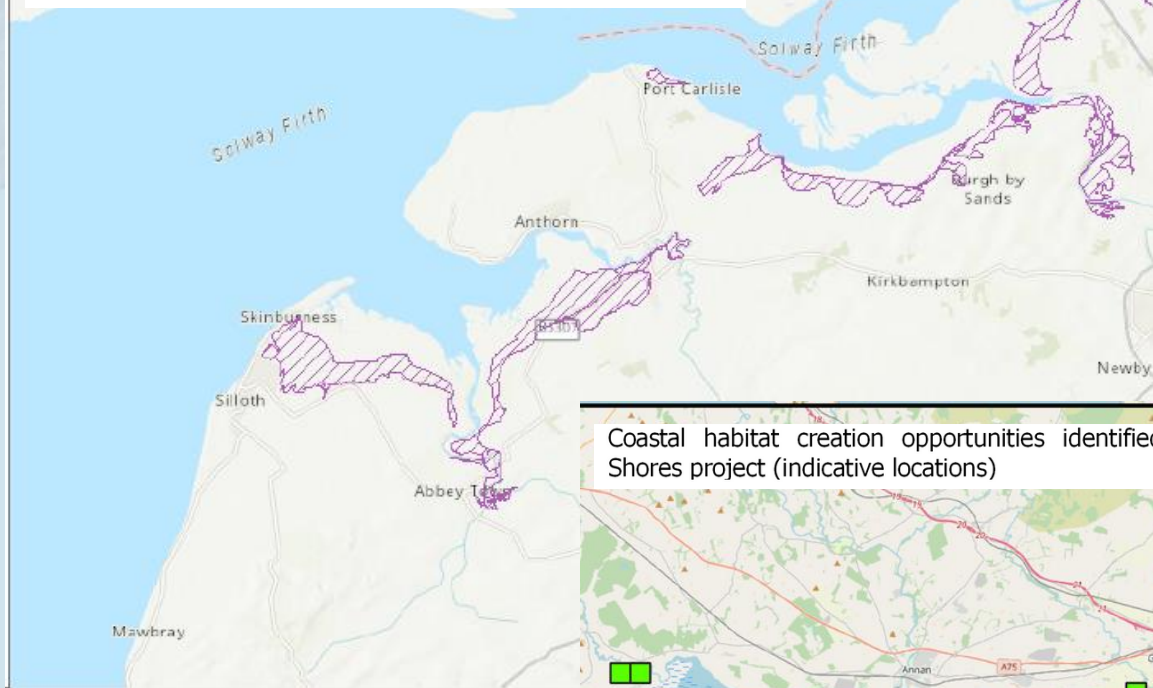




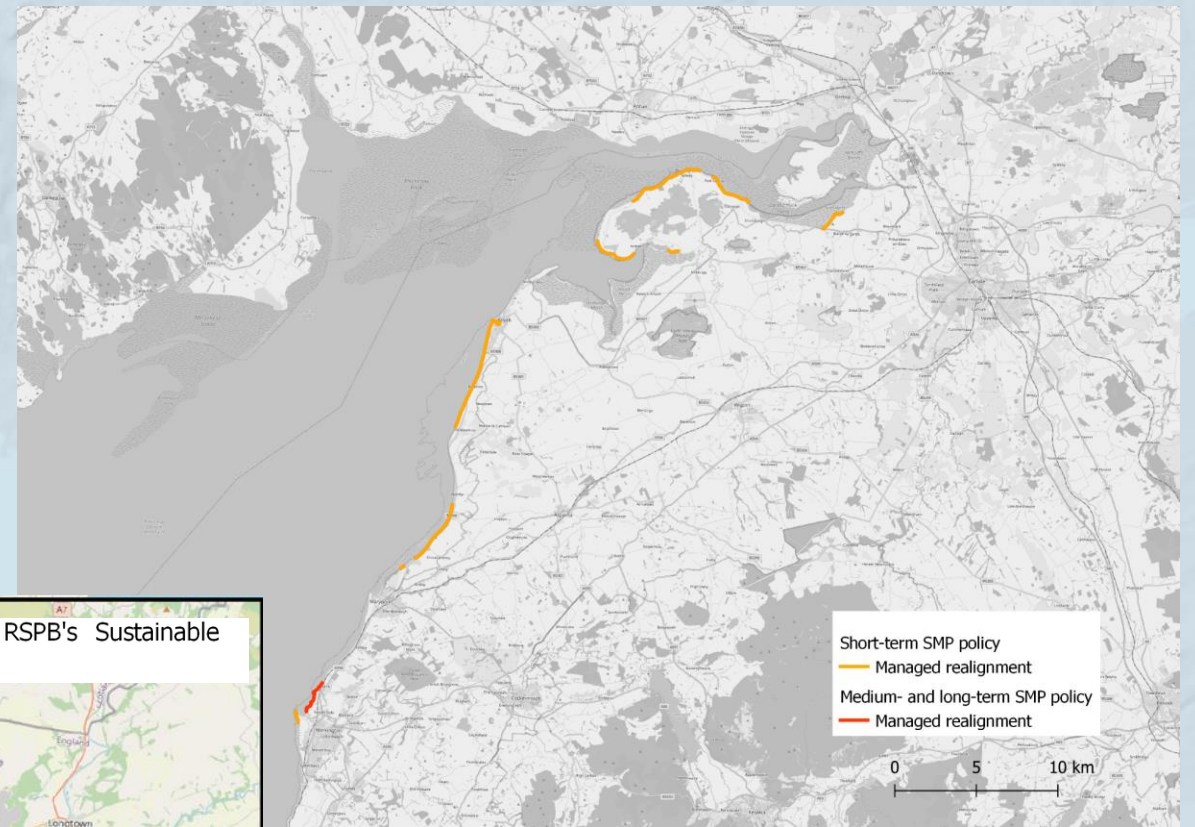
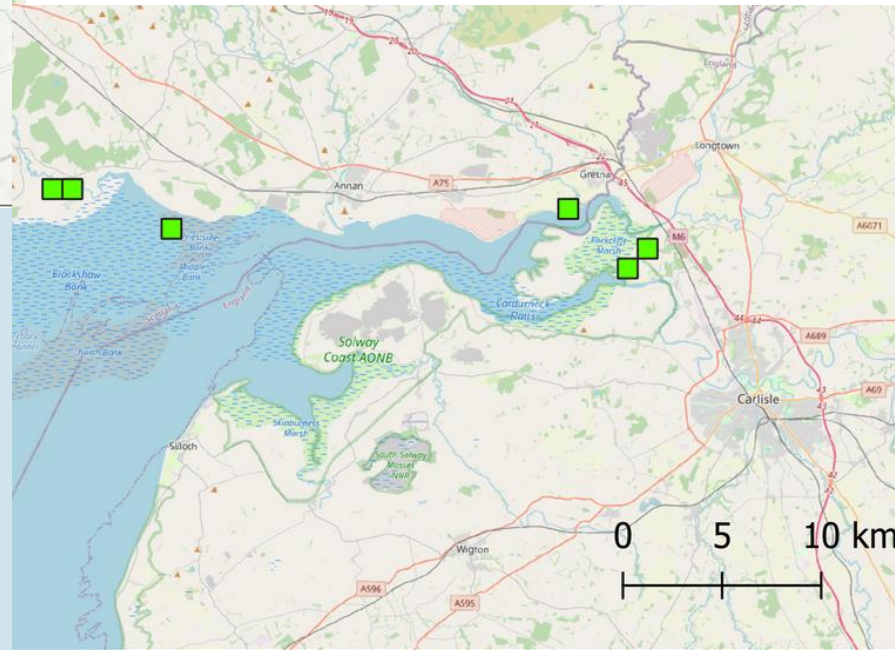
## Saltmarsh Potential (MMO) - Potential habitat creation sites within floodplain

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MMO1135\_Potential\_Habitat\_Creation\_Sites\_within\_the\_Current\_Floodplain



Coastal habitat creation opportunities identified in RSPB's Sustainable Shores project (indicative locations)



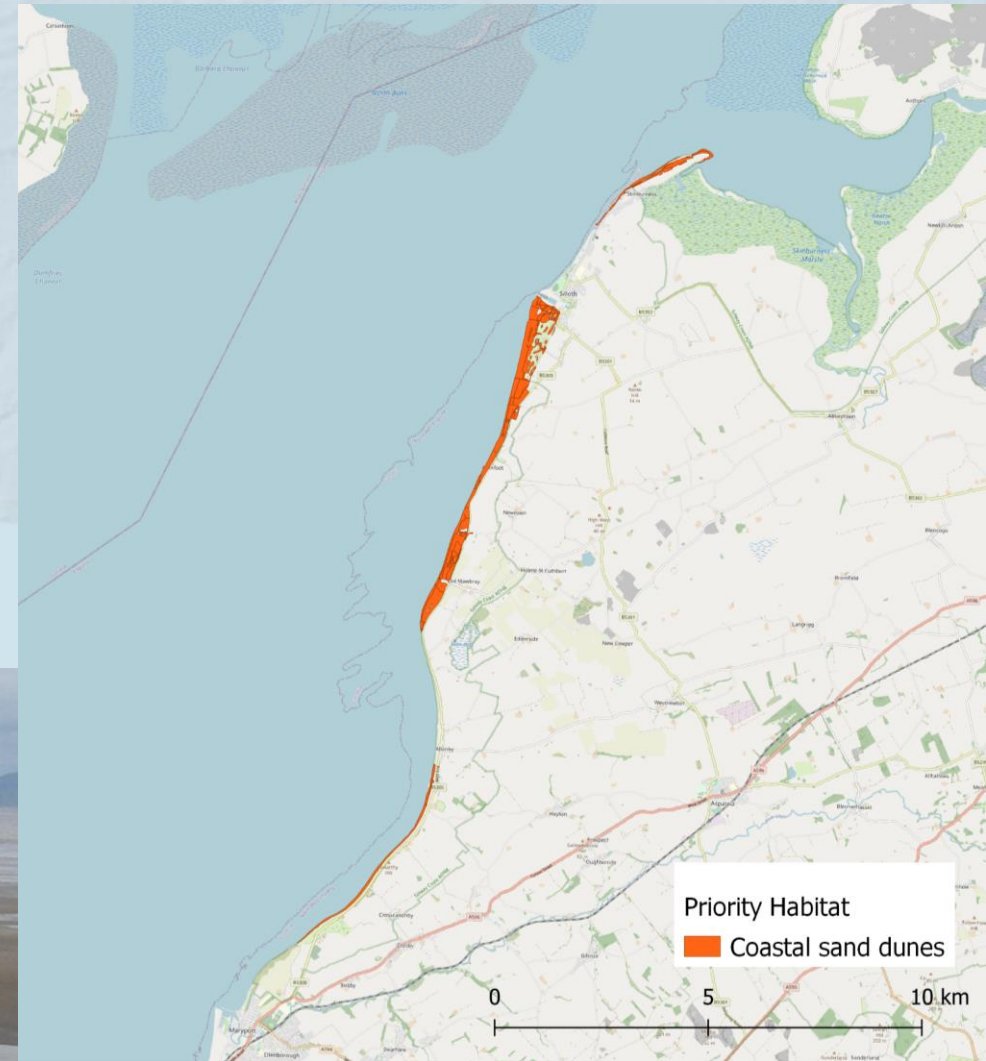
Short-term SMP policy  
Managed realignment  
Medium- and long-term SMP policy  
Managed realignment

0 5 10 km



# Sand Dunes

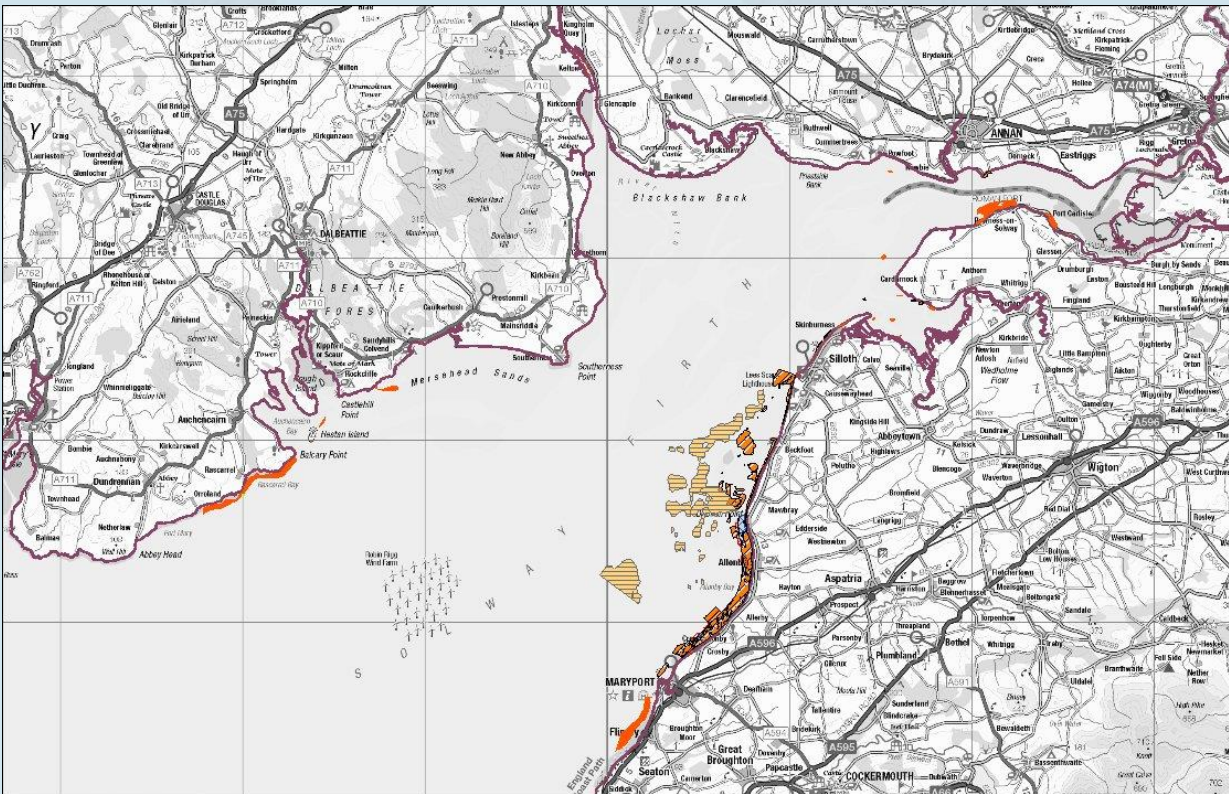
- Coastal protection -flooding and erosion
- Provide habitat for rare species such as natterjack toad
- Cultural value



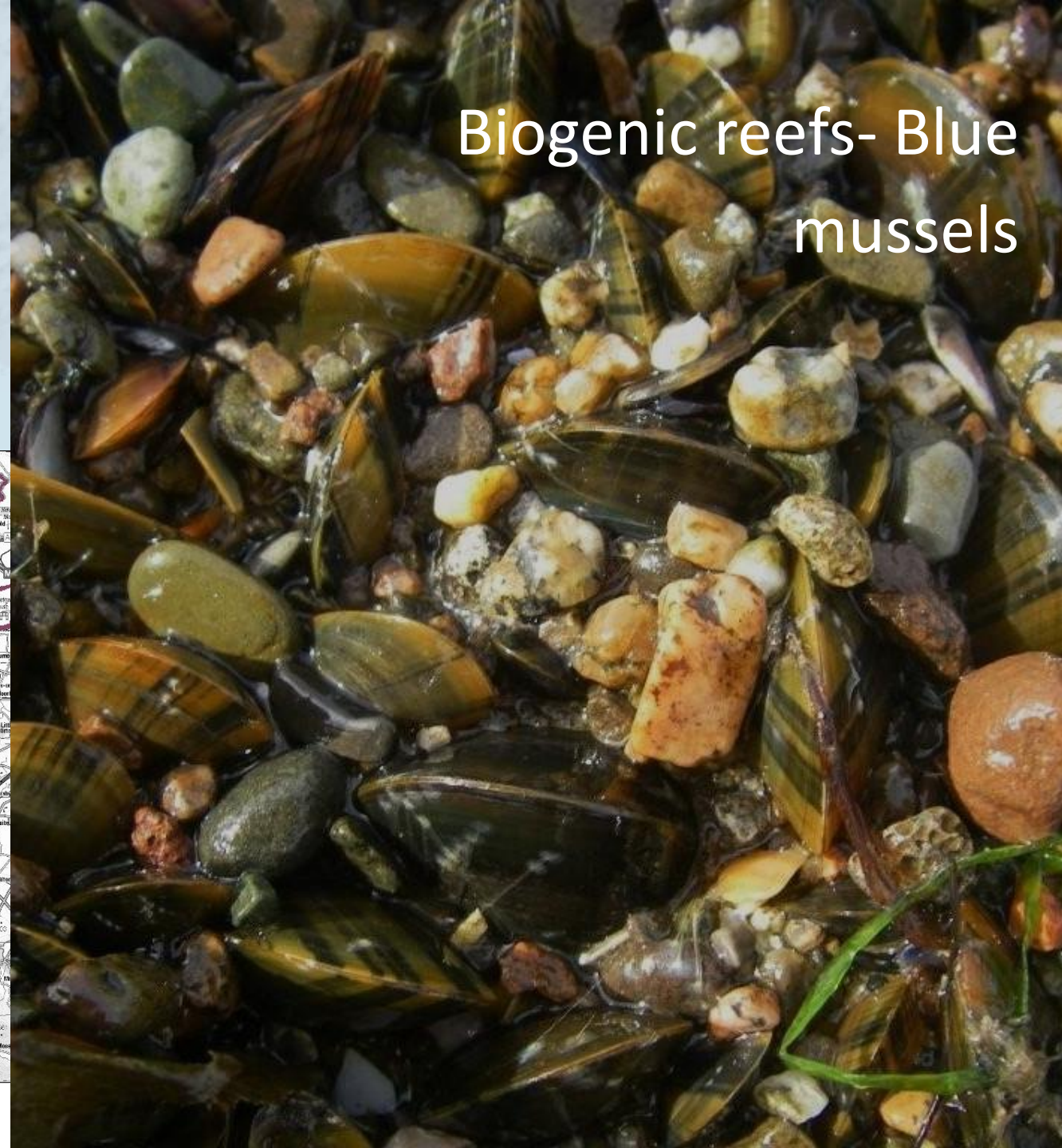


- Habitat creation
- Biodiversity enhancement
- Flood defense
- Blue carbon
- Fisheries

# Biogenic reefs- Blue mussels



Map produced by MAGIC on 17 February, 2022.  
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# Biogenic reefs- Honeycomb worms

(*Sabellaria*)

## Benefits:

- Habitat creation
- Biodiversity enhancement
- Flood defense
- Blue carbon

-MCZ feature

-no known method for restoration







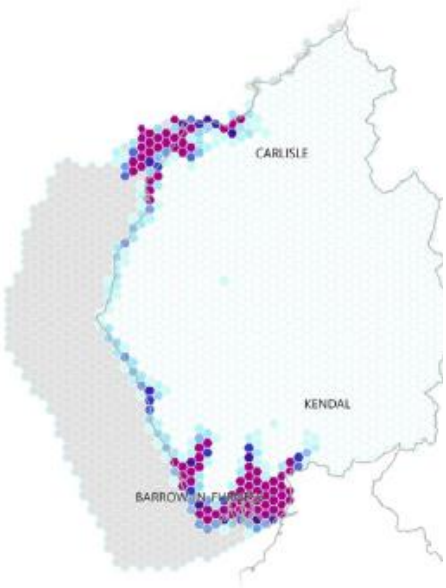
# Other habitats and species considered

- Seagrass
  - no historical data
- Native oysters
  - 2 x historical point data near Workington (1978)
- Mudflats
  - important NC asset
  - Understanding mudflat dynamics will be important in understanding saltmarshes
  - Need protecting, no known restoration methods.
- Smelt
  - Once an important fishery
  - Designated in the Solway Firth Marine Conservation Zone
  - Use saltmarsh as habitat

# Natural Capital Atlas –Natural England.

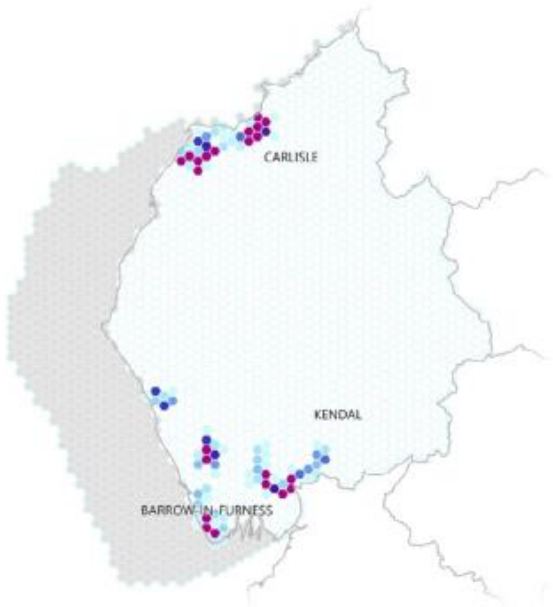
## Coastal:

**M F** Beach (ID: 37)  
**H C** Area of beach mapped using OS VectorMap District ('foreshore'). Note that this dataset includes areas of intertidal sediment as well as beaches.



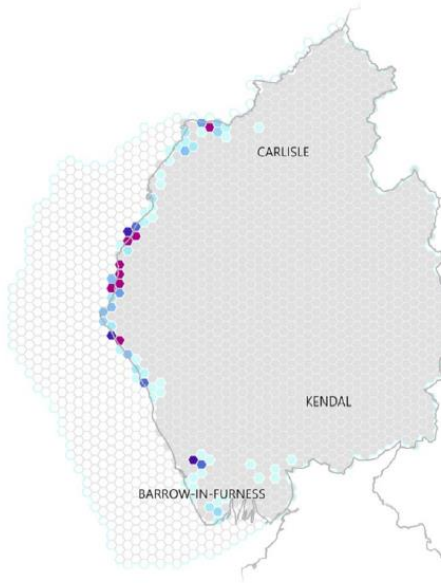
Hexagon values: 0 – 2.28 km<sup>2</sup>; Outliers: 2.28 – 5 km<sup>2</sup>

**M F** Salt Marsh (ID: 40)  
**H C** Area of saltmarsh mapped using EA's Saltmarsh Extent dataset.



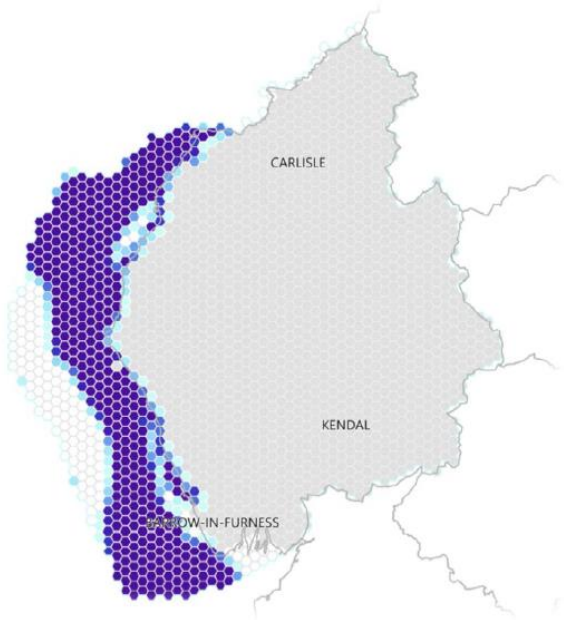
Hexagon values: 0 – 0.87 km<sup>2</sup>; Outliers: 0.87 – 4.54 km<sup>2</sup>

**W H** Intertidal Rock (ID: 44)  
Area of intertidal rock mapped using Natural England's Open Marine Evidence Base (EUNIS code A1).



Hexagon values: 0 – 0.28 km<sup>2</sup>; Outliers: 0.28 – 3.5 km<sup>2</sup>

**W H** Shallow Subtidal Sediment (ID: 48)  
**C** Area of shallow subtidal sediment mapped using JNCC's UKSea Map 2018 (biozone = shallow circalittoral or infralittoral and substrate = sediment, sand or mud).



Hexagon values: 0 – 5 km<sup>2</sup> (see note on data distribution)  
N.b. There are no 'outliers' symbolised on this map because a large number of the data values are at the high end of the scale. Instead, 10 equal interval classes are used.