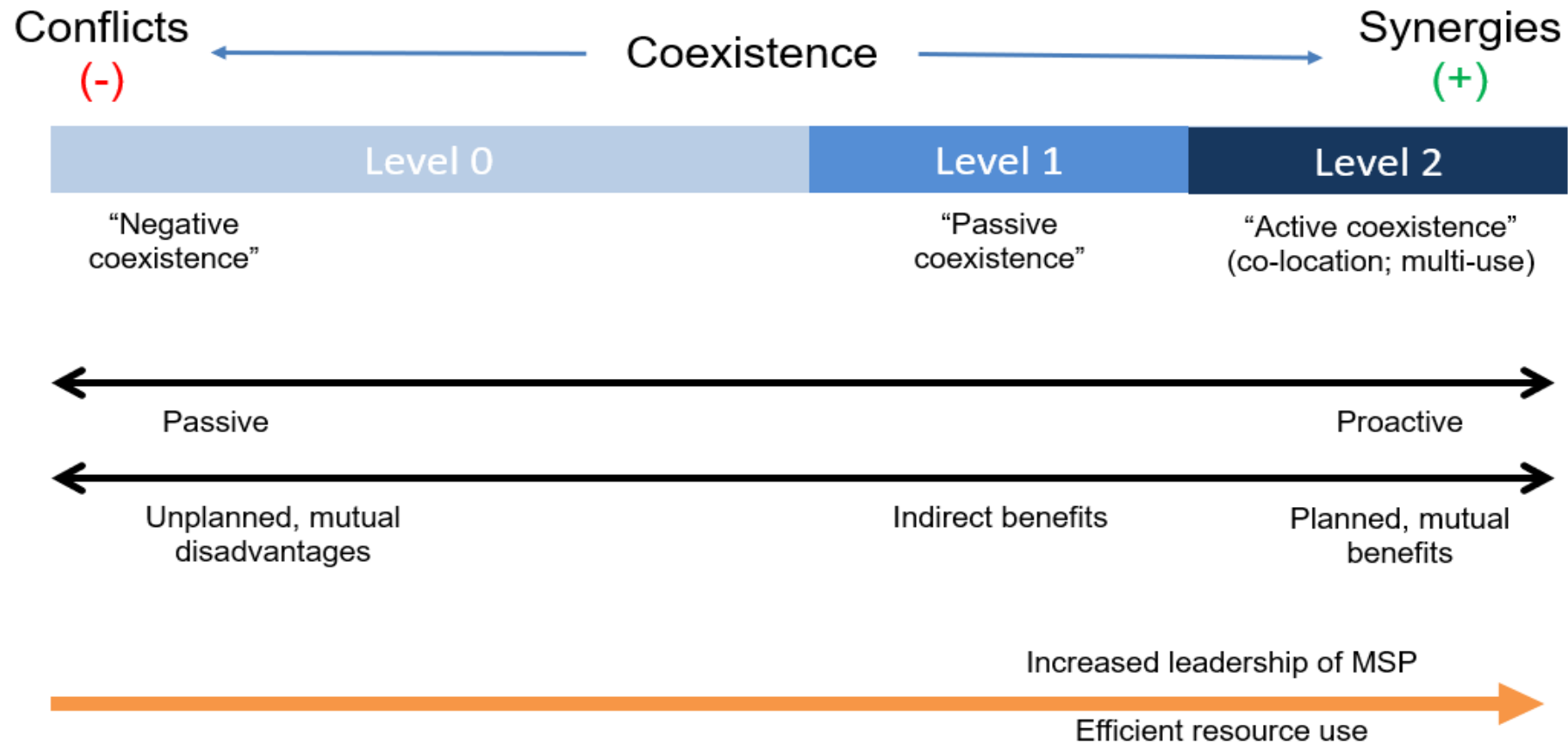


Embracing Opportunities - Ocean Multi-Use Action Plan

Why Multi-use?



Offshore wind farms & Fisheries

Drivers

- Administrative: Satisfy marine licence conditions & avoid licensing delays
- Indirect economic: Avoid unnecessary costs
- Societal: food security & clean energy, links to CSR
- Technological: most tools & techniques currently available

Kafas A. et al. (2018) Offshore wind and commercial fisheries in the East Coast of Scotland (Case Study 1A). MUSES Project. Edinburgh

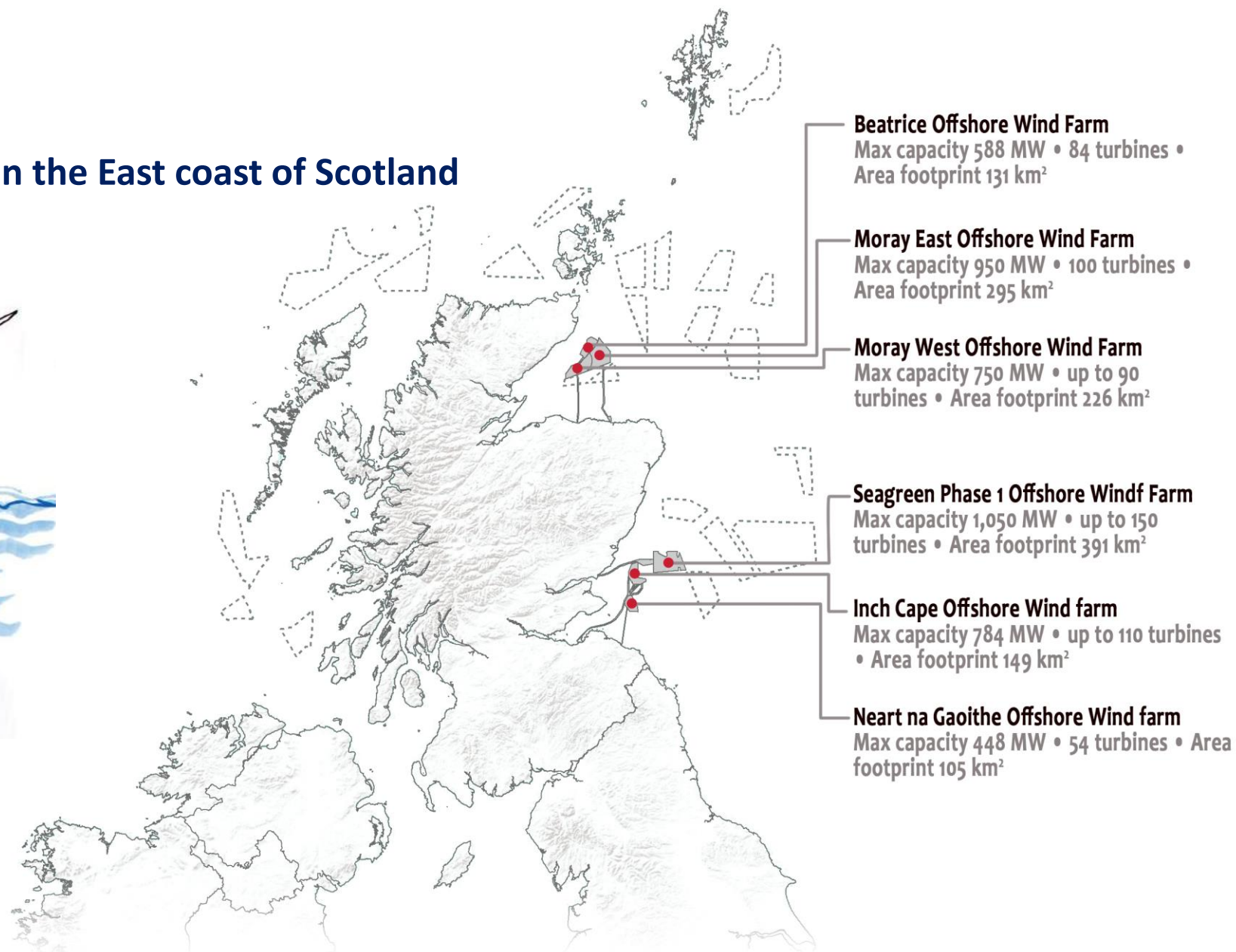
Offshore wind farms & Fisheries

Barriers

- Single-sector challenges
- Ineffective consultation processes
- No spatial policies for commercial fisheries
- No legal requirement for compensation & non-statutory consultee
- Spatial data issues
- Current EIA practice
- Perceptions about safety of operations
- Power imbalances & negative attitudes

Study area

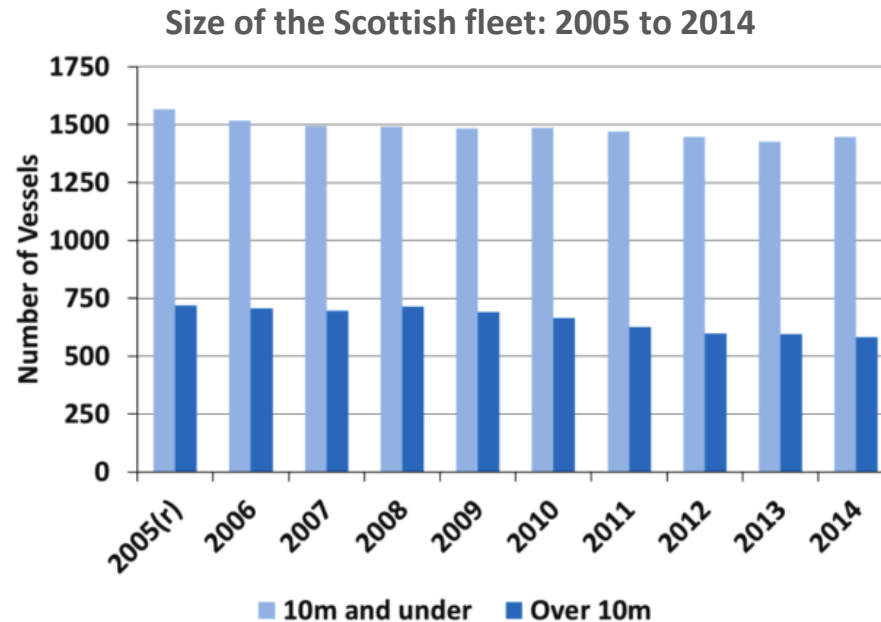
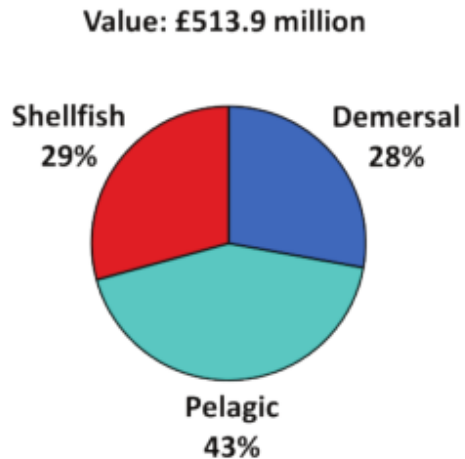
Offshore wind farms in the East coast of Scotland



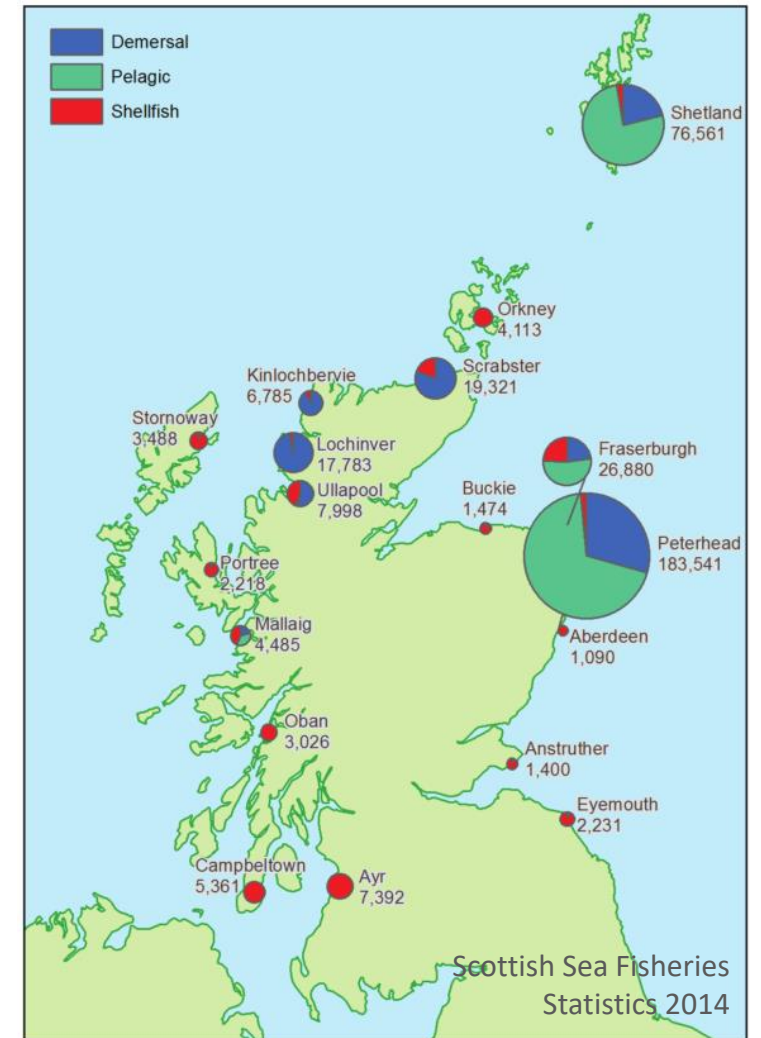
Scottish commercial capture fisheries

Present activities

- A non-homogenous dynamic marine activity
 - Pelagic landings
 - Demersal landings
 - Shellfish



Quantity of landings into Scotland by all vessels by district: 2014 (tonnes)



Fisheries in MSP & licensing

Types of sea space critical to the fishing industry:

- ☐ Resource (biological, human)
- ☐ Infrastructure (Access to ports & services)
- ☐ Vessel transit routes (safe passages)

Competition for space

- ☐ Emerging uses e.g. renewables & conservation
- ☐ Sectoral 'claims' perception
- ☐ General public has an increasing voice and influence in marine matters

“ **Conflicts** occur when a disagreement cannot be resolved through established mechanisms, or when parties fail to accept the solution that is developed through these. It is a disagreement which ends in behaviour or a situation that needs active management. ”

ICES. 2017. Workshop report on Conflicts and Coexistence in Marine Report (WKCCMSP), Organised by Working Group for Marine Planning and Coastal Zone Management (WGMPCZM), Geesthacht, Germany. 1-18 pp.

Mapping fish & fisheries

Essential fish habitats

- ☐ Spawning grounds
- ☐ Feeding grounds
- ☐ Nursery grounds

Fishing activity

- ☐ Conventional approaches
- ☐ Participatory mapping

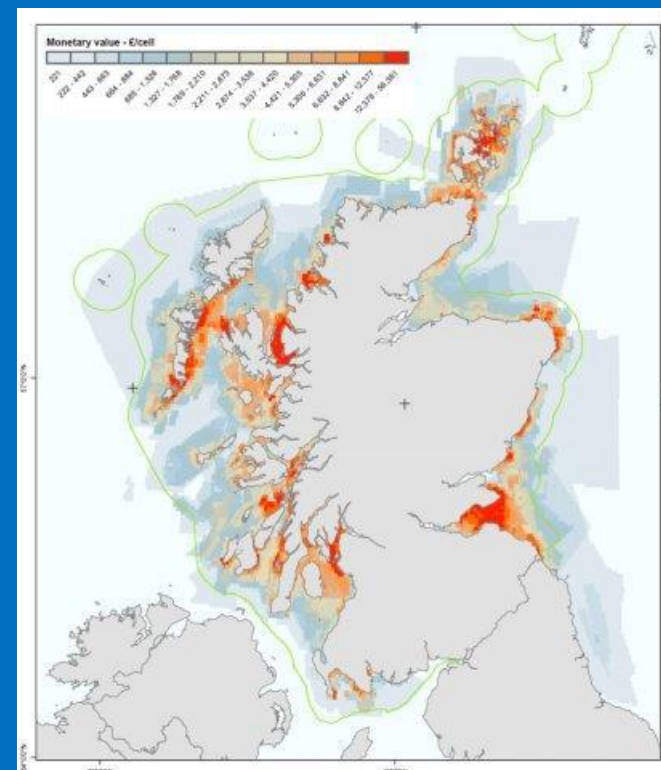
Fishers

- ☐ Demographics



Example:

Participatory mapping of under 15m fishing fleet - ScotMap



Kafas, A., McLay, A., Chimienti, M., Scott, B. E., Davies, I., and Gubbins, M. 2017. ScotMap: Participatory mapping of inshore fishing activity to inform marine spatial planning in Scotland. *Marine Policy*, 79.

Stakeholder engagement

Fisheries stakeholders

- ☐ Fisheries issues focused
- ☐ Bilateral fora ◀
- ☐ Research identification

Wider stakeholder engagement

- ☐ General public
- ☐ Non-sectoral interest groups

Sharing data

- ☐ General public
- ☐ Non-sectoral interest groups



Example:

Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW)

- ✓ Set up to foster good relations between the fishing and offshore renewable energy sectors
- ✓ Share knowledge on issues arising from the interaction between the sectors
- ✓ Develop best practice

<https://www.thecrownestate.co.uk/energy-minerals-and-infrastructure/offshore-wind-energy/working-with-us/floww/>



Bilateral interactions

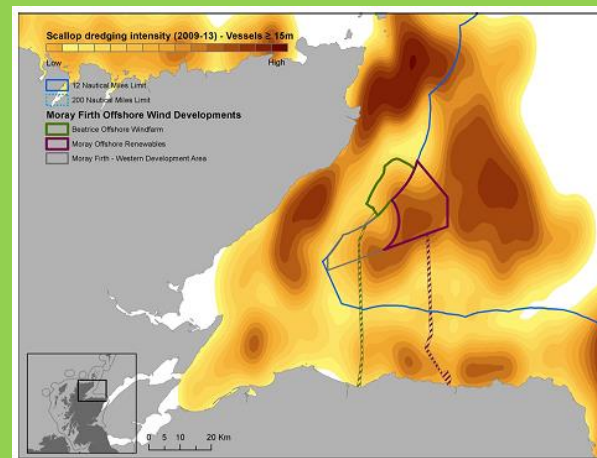
Supporting evidence

- ☐ Marine licensing
- ☐ Convert anecdotal evidence to scientific evidence

Analytical tools

- ☐ Fisheries displacement
- ☐ Cumulative Impact Assessment

Example: Fisheries displacement modelling



- ✓ Identify locations to host displaced fishing effort
- ✓ Economic impacts on the fishing fleet
- ✓ Develop effective mitigation measures

Kafas A. , Illian J. B., Davies I. M., and Scott B. E. (2016) Spatio-temporal modelling of fishing effort pattern after displacement due to offshore wind developments using INLA. International Statistical Ecology Conference, Seattle, Washington, USA.

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