Towards a balanced Seascape: Integrating EB-MSP and EBSA Criteria in Celtic Sea Planning

Robert M. Runya, Denise O'Sullivan, Caitriona Nic Aonghusa, David Reid

Marine Institute, Rinville, Oranmore, Co. Galway
Republic of Ireland

www.marine.ie / www.marineplan.eu   robert.runya@marine.ie

Why planning in the Celtic Sea?

Main challenge: Safeguarding loss of ecosystem biodiversity and functioning while allowing for exploitation

i. Ecosystem: High biological productivity and biodiversity (including hotspots for cetaceans, spawning and feeding grounds).

ii. Fishing: High fishing pressure

iii. ORE: Proposals to develop ORE sites

iv. Conservation: MPA network for 30/30 Global Biodiversity Target
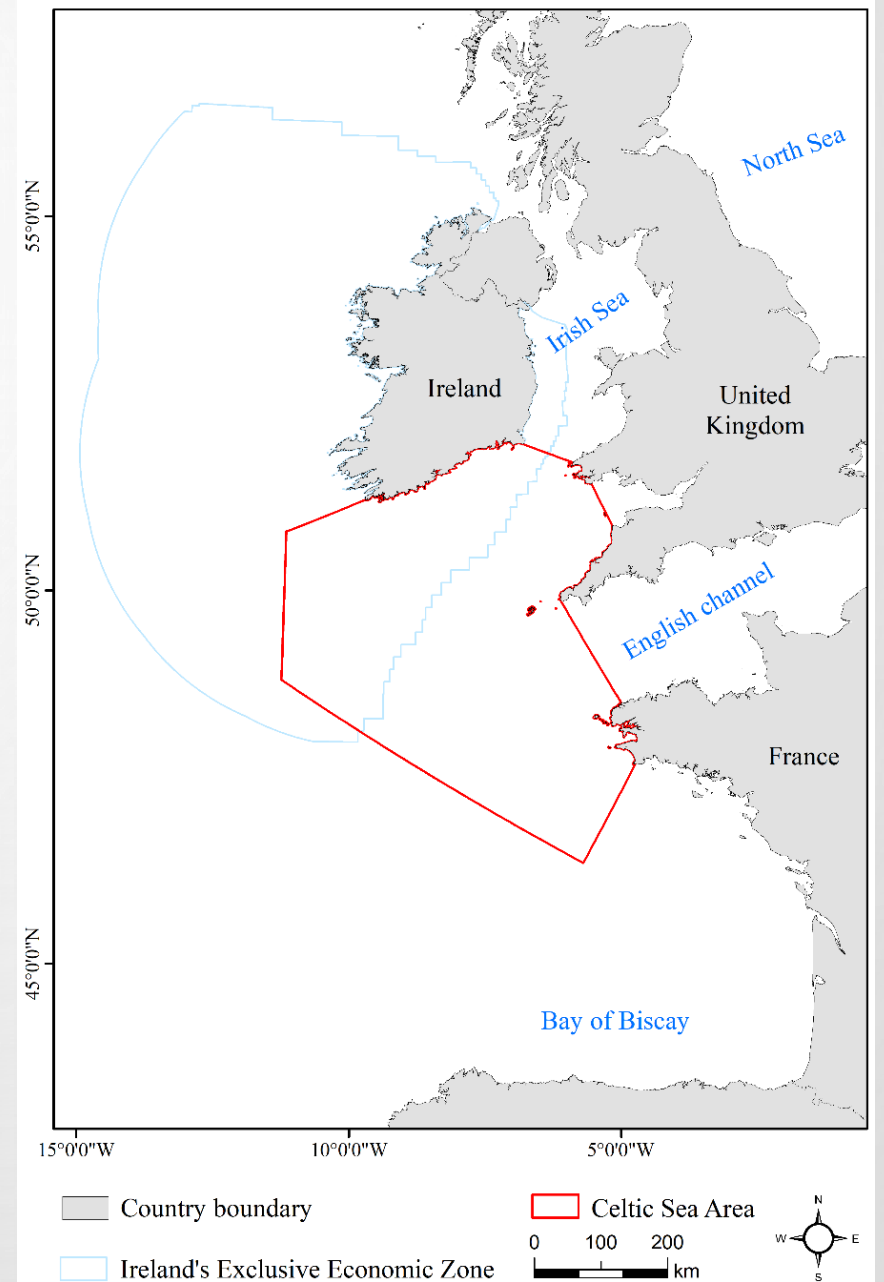
Fishermen

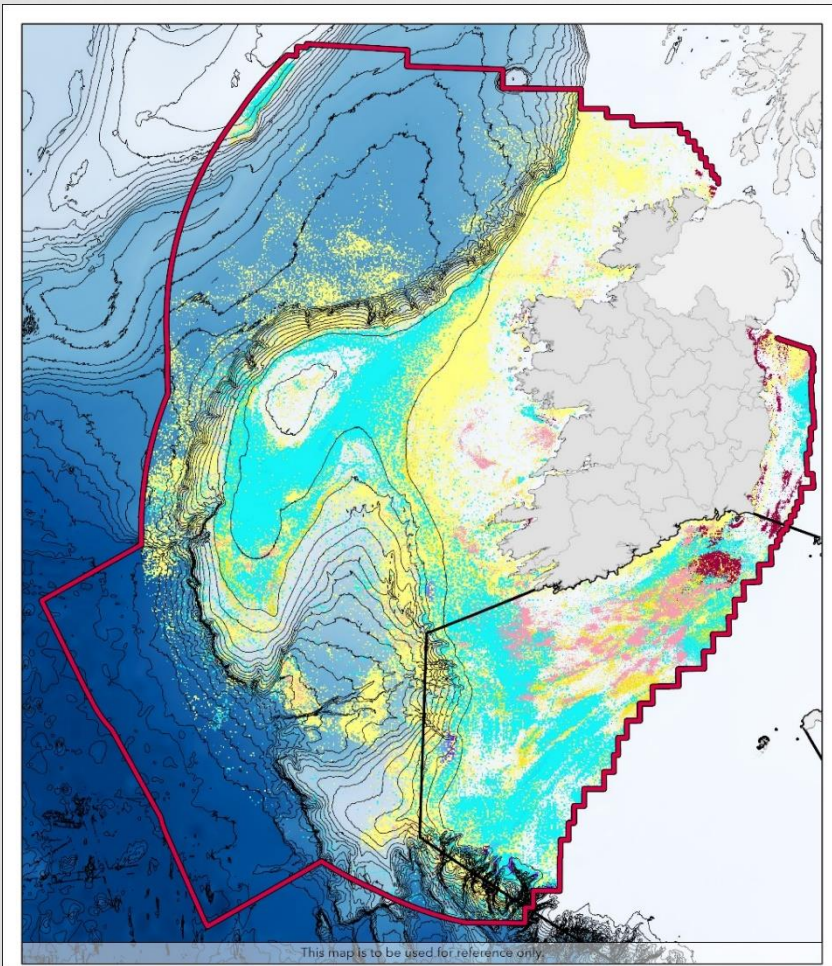Policy makers

ORE sector

Developing integrated approaches

to ocean use: MPAs, OREs and fishing

The competing interests & spatial overlap/conflicts!!!

Human activities in Celtic Sea

Fishing Effort within Ireland MSP Area

- MSP_Assessment_Area
- 200m contour
- Celtic Sea

Water Depth (m)
1
-2500
-5000

This map is to be used for reference only.

0 70 140 Kilometres

Credits: Marine Institute, 2022 (Bathymetry: INFOMAR/GEBCO)
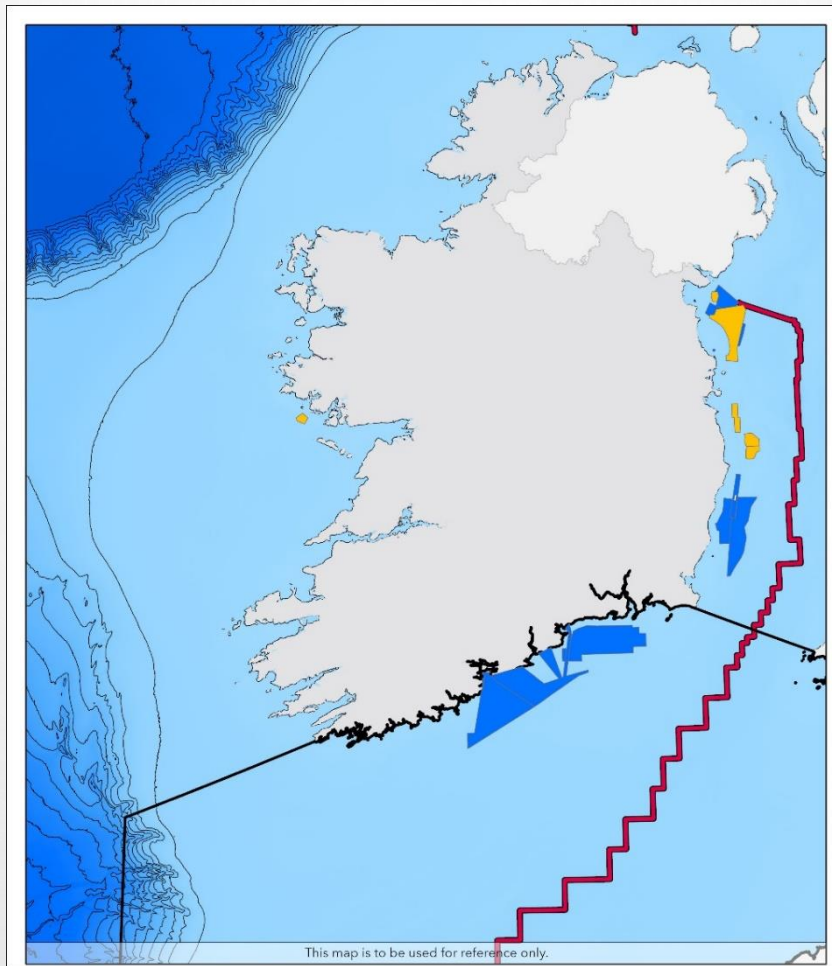
Offshore Renewable Energy within Ireland MSP Area

- Site Investigations
- Relevant Projects
- Fully Commissioned
- Celtic Sea
- MSP_Assessment_Area
- 200m contour

Water Depth (m)
1243
-5015
1
-2500
-5000

This map is to be used for reference only.

0 40 80 Kilometres

Credits: Marine Institute, 2022 (Bathymetry: INFOMAR/GEBCO)
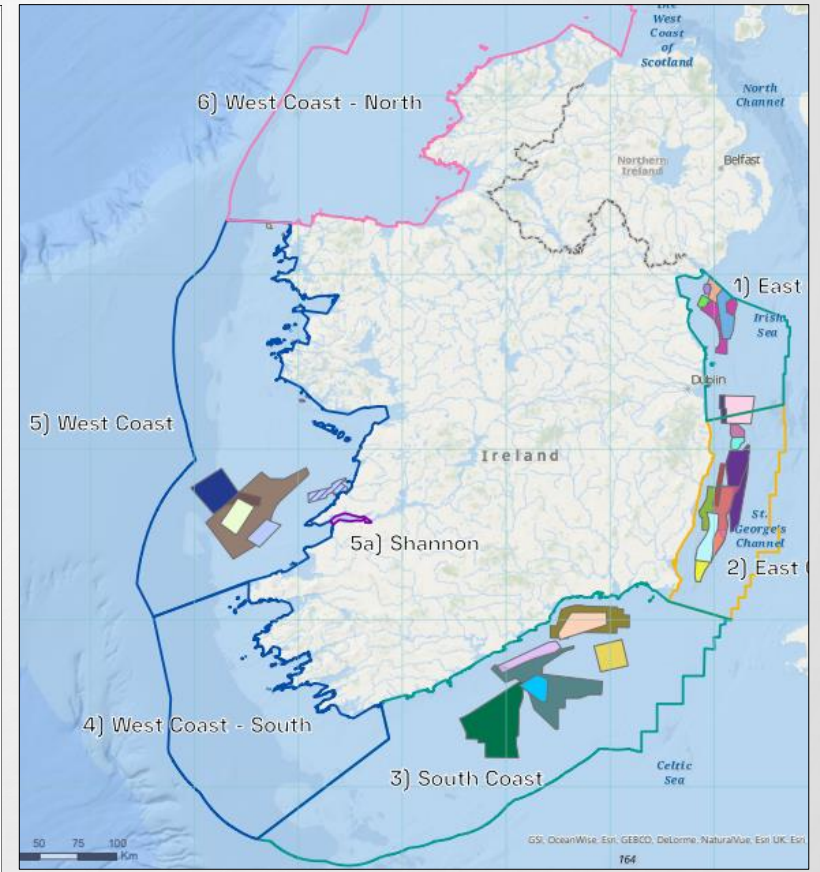
https://www.mria.ie/site/assets/files/1121/ireland_offshore_renewable_energy_locations.pdf

Conservation in the Celtic Sea

- Special Areas of Conservation and Special Protected Areas - Natura 2000 sites under the Habitats and Birds Directive (Council Directive 92/43/EEC)

- <1% Protected in the Celtic Sea Planning Site

- No EBSAs

- No 0-use zones

- Fishing banned at depth of >800m – not within Planning Site

- MPA bill expected to become law soon

Special Protected Areas (SPAs) and Special Areas of Conservation (SACs)

Depth (m)

- ——— MSP Assessment Area
- Country boundary
- Celtic Sea Area
- Special Protected Areas
- Special Areas of Conservation (offshore)
- Special Areas of Conservation (inshore)

Institutional Context

Organogram

INTERNATIONAL OBLIGATIONS

INTERNATIONAL MARITIME ORGANISATION (IMO)

Ireland Shipping

******* REPUBLIC OF IRELAND GOVERNMENT

European Union/Commission

EU DGENV | EU DGMARE | EU DGENER | EU EDA

Foreign Affairs Office

Cabinet office

Department of Finance
Implement government policy, and, advise and support the minister of finance on the economic & financial management of the state, and overall management and development of the public sector.

House of Oireachtas / Parliament

Seanad Éireann (Upper House)

Dáil Éireann (Lower House)

The Oireachtas Committees

Department of Housing, Local Government & Heritage
(Oversees the local government system & provides policies and framework for sustainable development including marine planning)

National Parks Wildlife Service
(Secures the conservation of a representative range of ecosystems; designates and advise on the protection of habitats and species)

Maritime Area Regulatory Authority
(Regulates development and activities in Ireland's maritime area)

Met Éireann
(Provides weather and climate-related services)

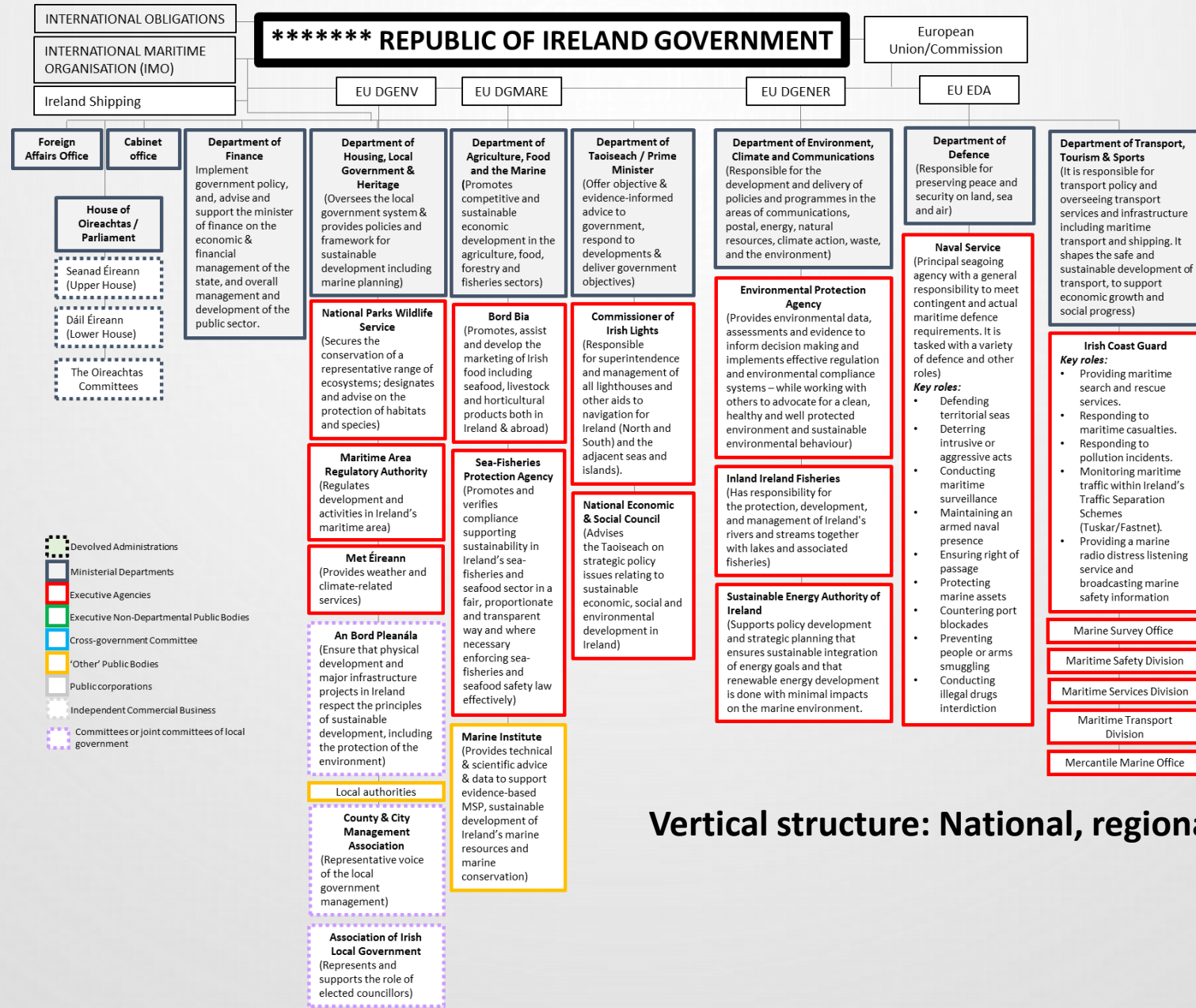**An Bord Pleanála**
(Ensure that physical development and major infrastructure projects in Ireland respect the principles of sustainable development, including the protection of the environment)

Local authorities

County & City Management Association
(Representative voice of the local government management)

Association of Irish Local Government
(Represents and supports the role of elected councillors)

Department of Agriculture, Food and the Marine
(Promotes competitive and sustainable economic development in the agriculture, food, forestry and fisheries sectors)

Bord Bia
(Promotes, assist and develop the marketing of Irish food including seafood, livestock and horticultural products both in Ireland & abroad)

Sea-Fisheries Protection Agency
(Promotes and verifies compliance supporting sustainability in Ireland's sea-fisheries and seafood sector in a fair, proportionate and transparent way and where necessary enforcing sea-fisheries and seafood safety law effectively)

Marine Institute
(Provides technical & scientific advice & data to support evidence-based MSP, sustainable development of Ireland's marine resources and marine conservation)

Department of Taoiseach / Prime Minister
(Offer objective & evidence-informed advice to government, respond to developments & deliver government objectives)

Commissioner of Irish Lights
(Responsible for superintendence and management of all lighthouses and other aids to navigation for Ireland (North and South) and the adjacent seas and islands).

National Economic & Social Council
(Advises the Taoiseach on strategic policy issues relating to sustainable economic, social and environmental development in Ireland)

Department of Environment, Climate and Communications
(Responsible for the development and delivery of policies and programmes in the areas of communications, postal, energy, natural resources, climate action, waste, and the environment)

Environmental Protection Agency
(Provides environmental data, assessments and evidence to inform decision making and implements effective regulation and environmental compliance systems – while working with others to advocate for a clean, healthy and well protected environment and sustainable environmental behaviour)

Inland Ireland Fisheries
(Has responsibility for the protection, development, and management of Ireland's rivers and streams together with lakes and associated fisheries)

Sustainable Energy Authority of Ireland
(Supports policy development and strategic planning that ensures sustainable integration of energy goals and that renewable energy development is done with minimal impacts on the marine environment.

Department of Defence
(Responsible for preserving peace and security on land, sea and air)

Naval Service
(Principal seagoing agency with a general responsibility to meet contingent and actual maritime defence requirements. It is tasked with a variety of defence and other roles)
Key roles:
- Defending territorial seas
- Deterring intrusive or aggressive acts
- Conducting maritime surveillance
- Maintaining an armed naval presence
- Ensuring right of passage
- Protecting marine assets
- Countering port blockades
- Preventing people or arms smuggling
- Conducting illegal drugs interdiction

Department of Transport, Tourism & Sports
(It is responsible for transport policy and overseeing transport services and infrastructure including maritime transport and shipping. It shapes the safe and sustainable development of transport, to support economic growth and social progress)

Irish Coast Guard
Key roles:
- Providing maritime search and rescue services.
- Responding to maritime casualties.
- Responding to pollution incidents.
- Monitoring maritime traffic within Ireland's Traffic Separation Schemes (Tuskar/Fastnet).
- Providing a marine radio distress listening service and broadcasting marine safety information

Marine Survey Office

Maritime Safety Division

Maritime Services Division

Maritime Transport Division

Mercantile Marine Office

Legend:
- Devolved Administrations
- Ministerial Departments
- Executive Agencies
- Executive Non-Departmental Public Bodies
- Cross-government Committee
- 'Other' Public Bodies
- Public corporations
- Independent Commercial Business
- Committees or joint committees of local government

7 departments with marine responsibilities

DHLGH
DAFM
DECC

Vertical structure: National, regional and international

The big question!!

Can we identify mutually acceptable locations for protected sites and potentially for ORE based on EB-MSP which minimises displacement effect on fishing?

So we aim to use **EBSA (Ecologically or Biologically Significant Area) criteria** to find most equitable use of space for MPAs (30*30 target), OREs and fishing

Overview of EBSA Criteria

Uniqueness or rarity

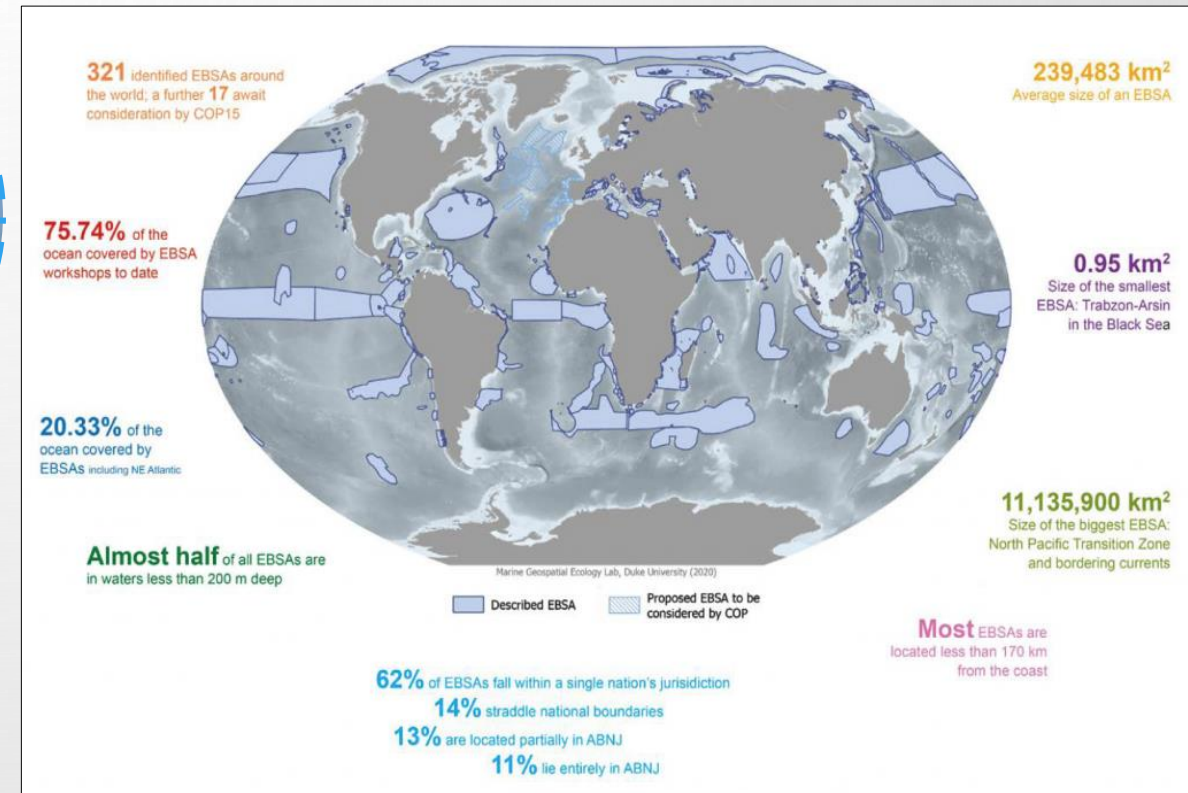Special importance For life history stages of a species

Importance for threatened, endangered or declining species/habitats

Naturalness

EBSAs

CRITERIA

Vulnerability, fragility, Sensitivity or slow recovery

Biological diversity

Biological productivity

Global distribution of EBSAs in the marine environment

321 identified EBSAs around the world; a further **17** await consideration by COP15

239,483 km² Average size of an EBSA

75.74% of the ocean covered by EBSA workshops to date

0.95 km² Size of the smallest EBSA: Trabzon-Arsin in the Black Sea

20.33% of the ocean covered by EBSAs including NE Atlantic

11,135,900 km² Size of the biggest EBSA: North Pacific Transition Zone and bordering currents

Almost half of all EBSAs are in waters less than 200 m deep

Marine Geospatial Ecology Lab, Duke University (2020)

Described EBSA   Proposed EBSA to be considered by COP

Most EBSAs are located less than 170 km from the coast

62% of EBSAs fall within a single nation's jurisdiction
14% straddle national boundaries
13% are located partially in ABNJ
11% lie entirely in ABNJ

Research objectives

Main Objective:

To propose a methodology utilizing **EBSA criteria** to identify priority areas for marine conservation and potential ORE sites while minimising the displacement effect on fisheries.

Specific Objectives:

i.   Identify and quantify the spatial and temporal distributions of EBSAs criteria/metrics

i.   Develop a robust workflow for integrating EBSAs criteria into spatial prioritization models, ensuring the consideration of key ecological indicators such as biological productivity, biodiversity, and naturalness in the decision-making process.

ii.   Apply the developed workflow to identify priority areas for marine conservation, utilizing EBSAs criteria alongside other relevant factors to delineate suitable locations for protected marine sites, with an emphasis on preserving critical habitats and supporting ecosystem resilience.

Methodology/Workflow
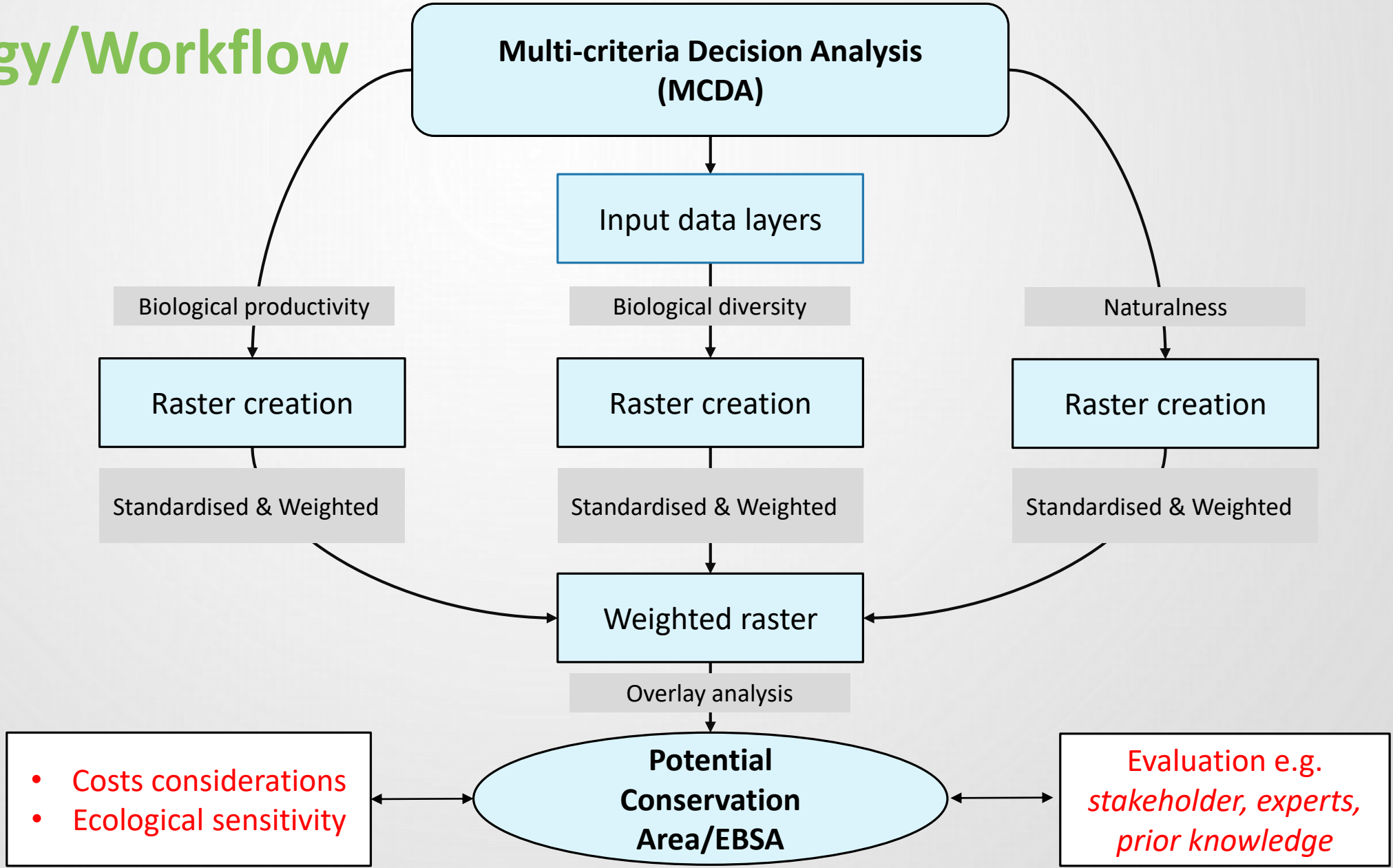
Data inputs/EBSA Criteria
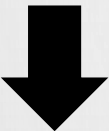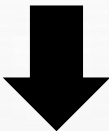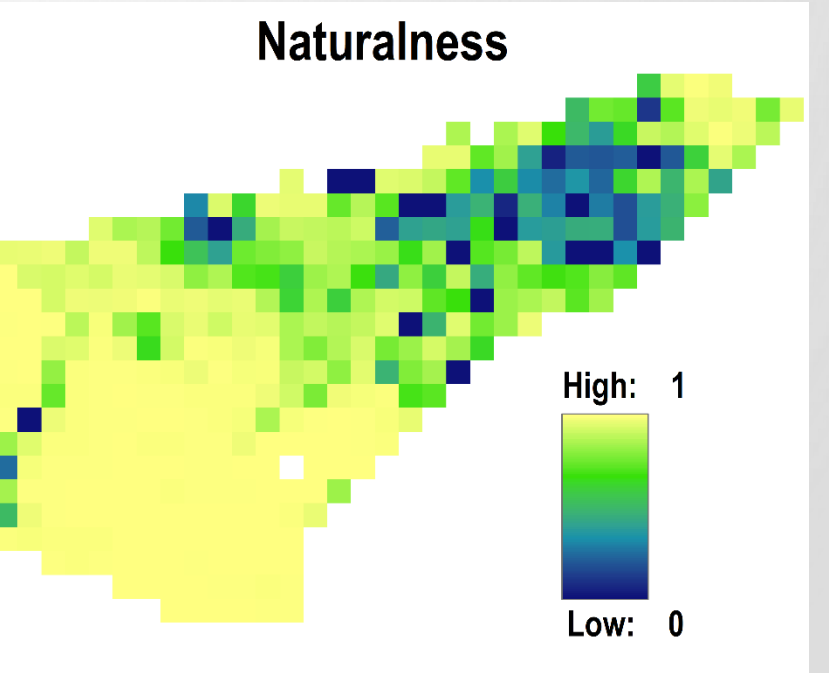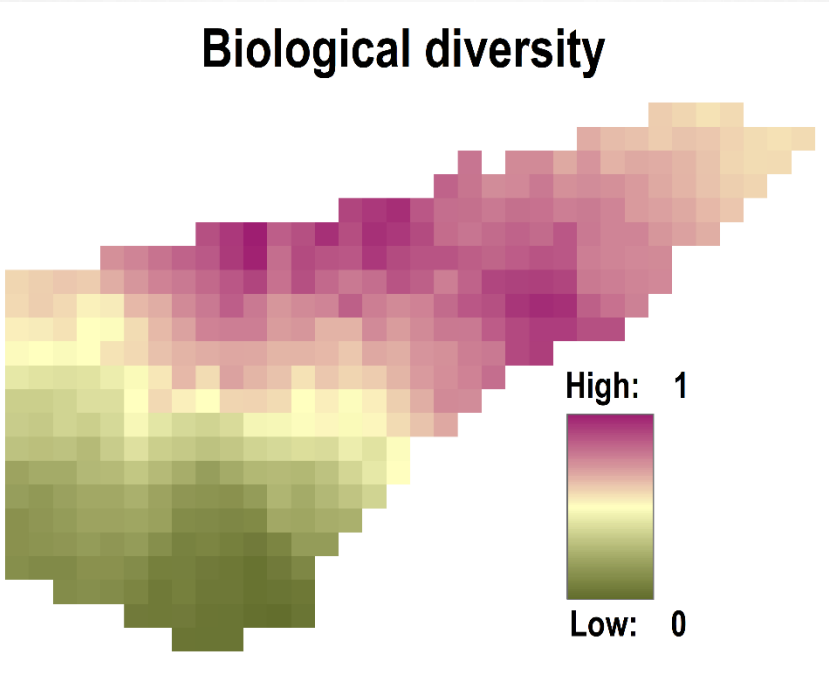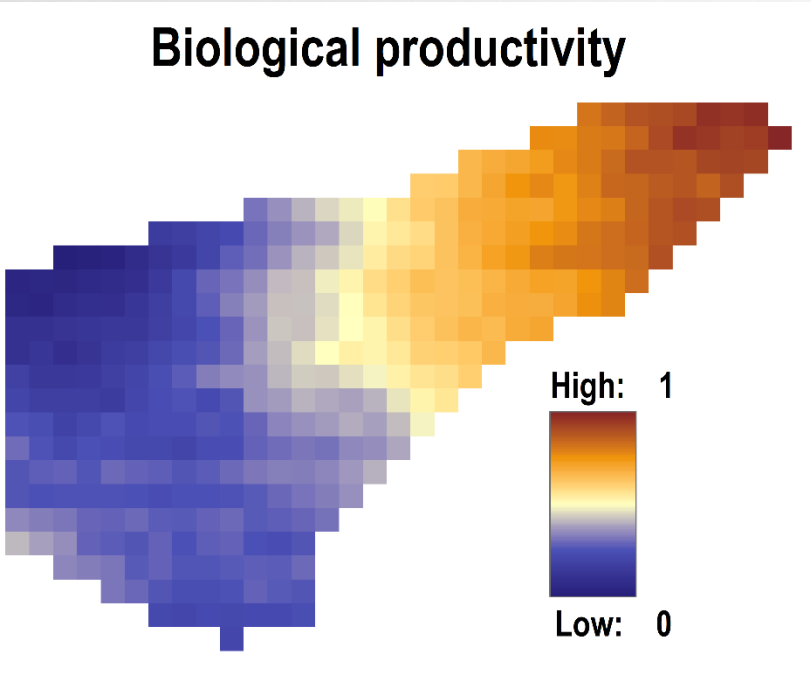
Preliminary Results - Spatial Scenarios
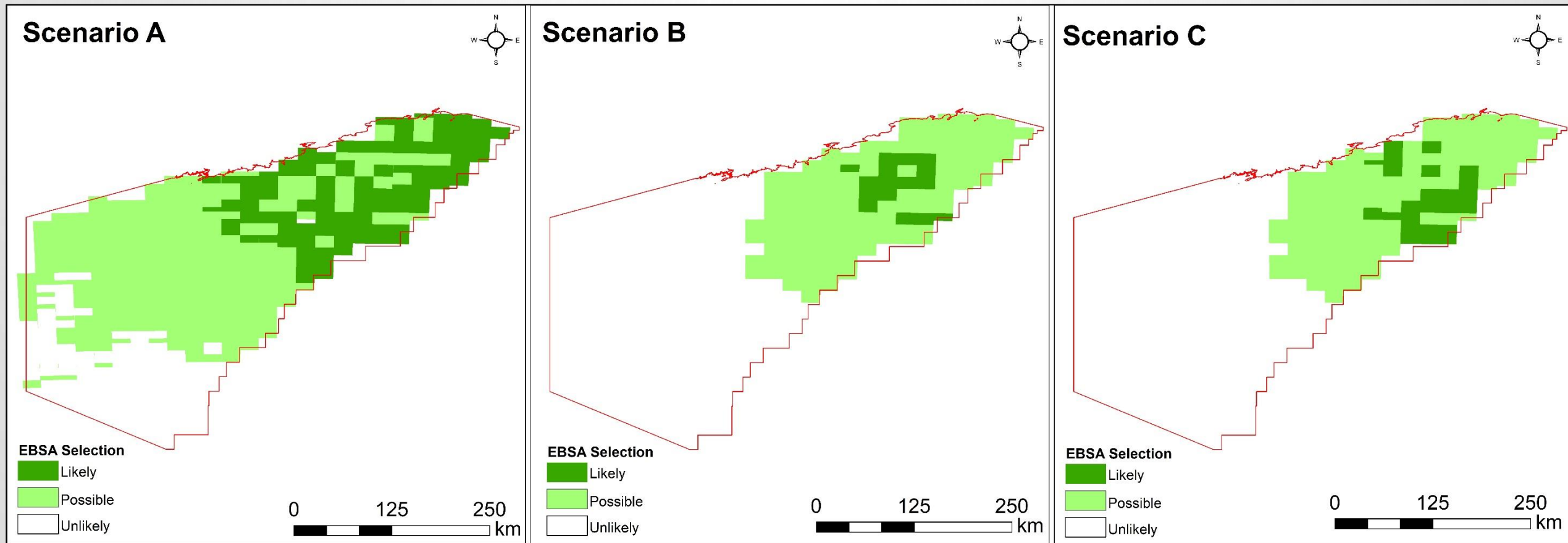
Equal importance/weighting

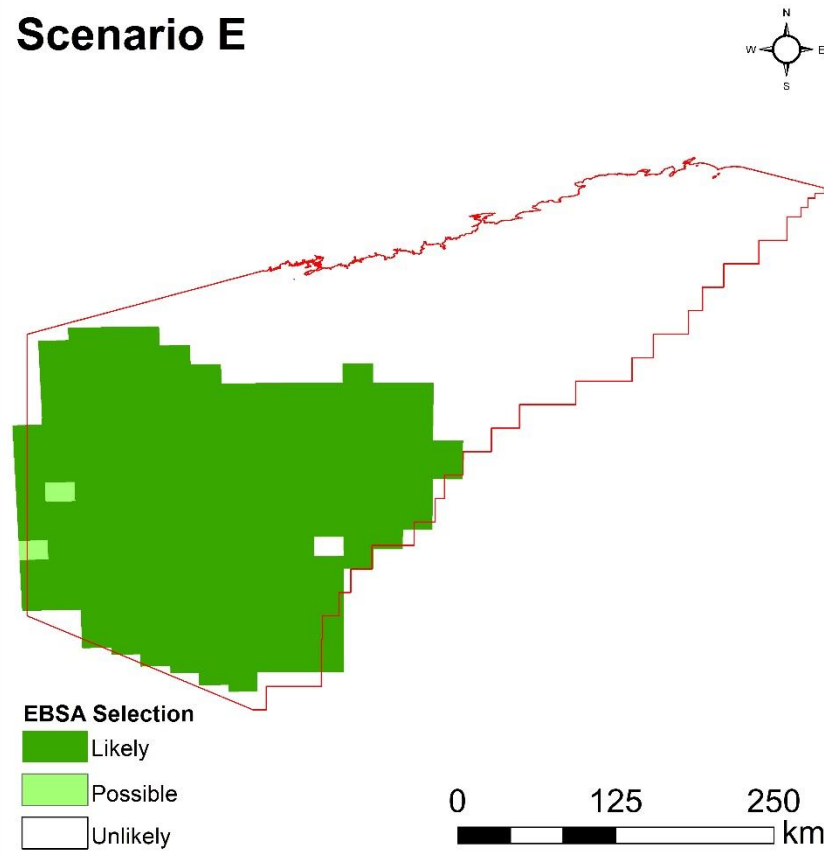Higher thresholds for biological productivity & biodiversity

Higher thresholds for all criteria
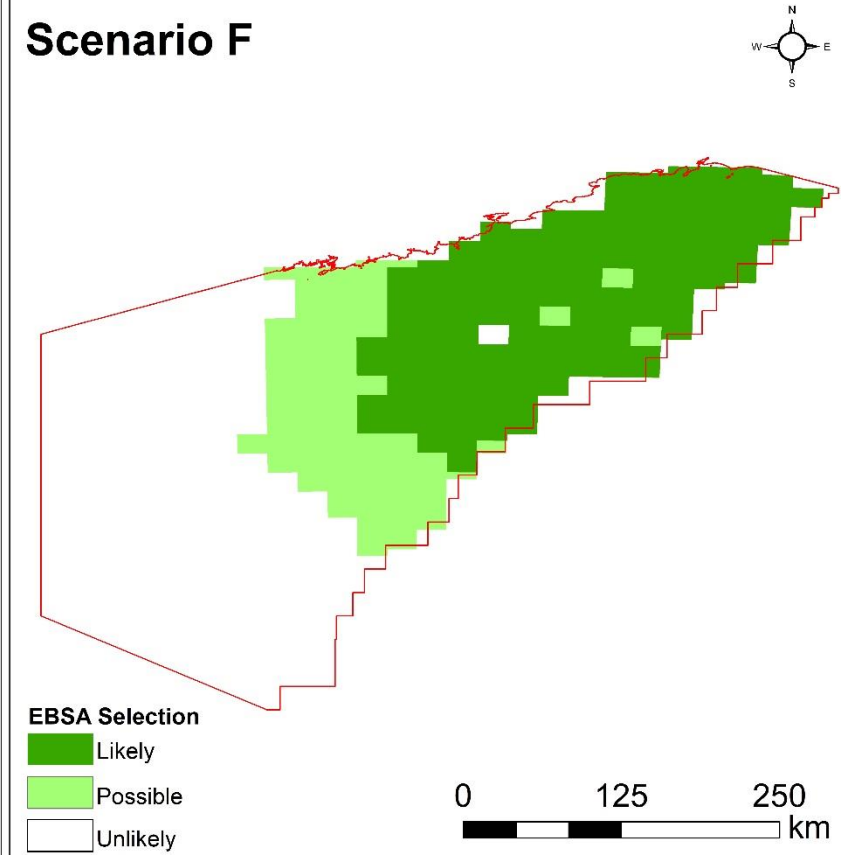
Preliminary Results – Spatial scenarios

Conclusion

- Data gaps: Need to fill in data gaps to provide more sound scientific advice

- Workflow: Easy to implement and adjust

- High spatial overlaps between selected EBSA and, fishing and proposed ORE sites

- Provides different solutions to choose from

- Consensus: Requires input from all stakeholders and expert knowledge.

- MSP: An ongoing process and requires continuous improvement (M&E)

- -Fishing, MPAs and OREs can co-exist

Hope on the horiizon:

Let's continue the conversation!

Post questions and comments in the IAIA24 app.

THANK YOU!!

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Robert Runya, Ph.D.

Post-Doctoral Researcher

Marine Institute, Rinville, Oranmore, Co. Galway
Republic of Ireland

Contact me via robert.runya@marine.ie & @marinepixels