PriorOECMs

Decision Support Tool to Identify and Prioritise OECMs

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priorOECMs Tool

“PriorOECMs: A decision support tool for identifying and prioritising Other Effective Area-Based Conservation Measures (OECMs) using Multi-Criteria Decision Analysis”

In preparation

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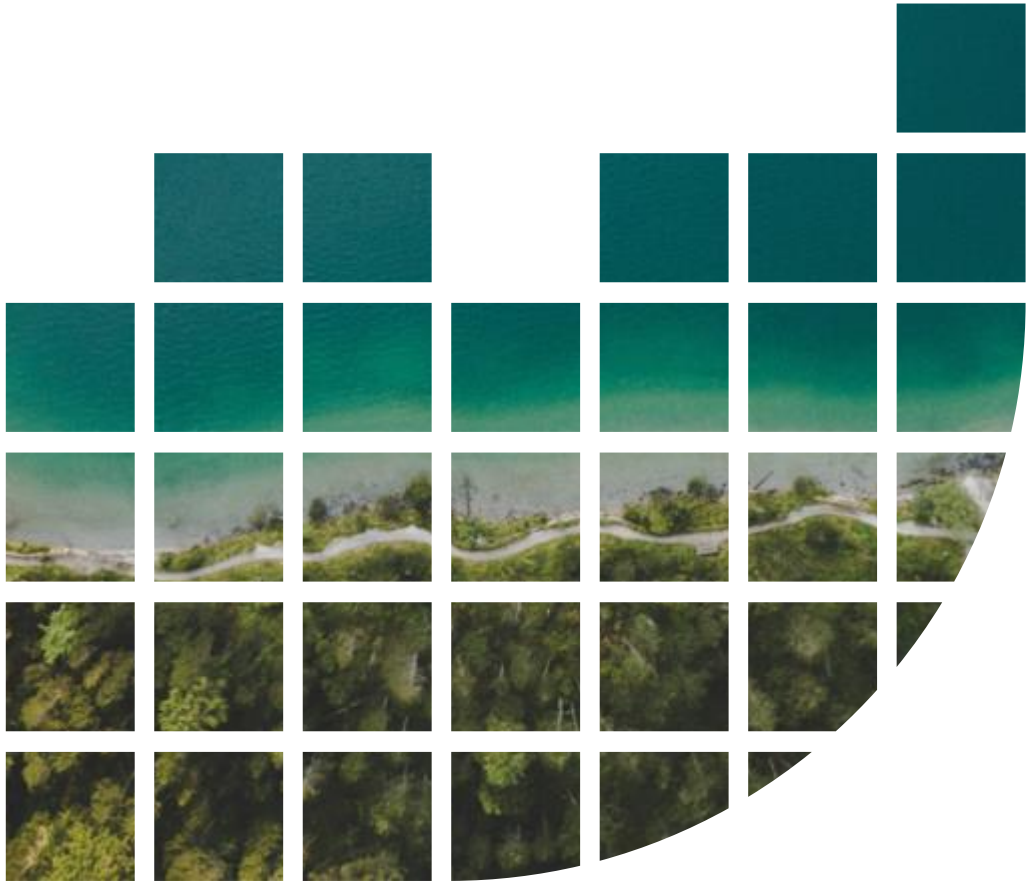
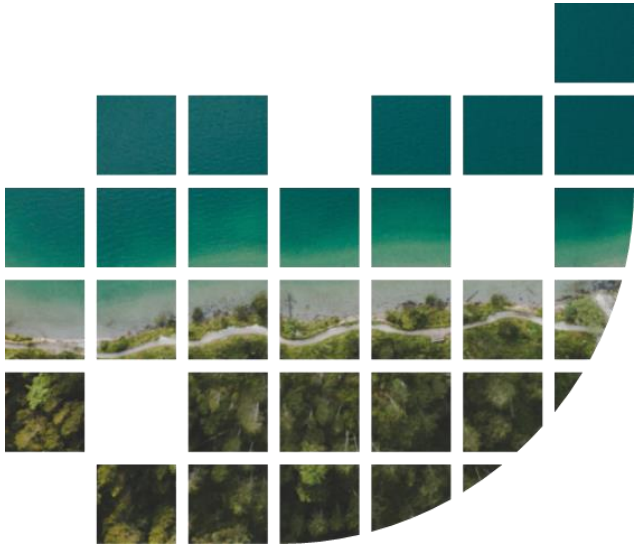
Scope of the priorOECMs tool

Present a novel decision support tool for assessing areas on a case-by-case basis to be identified as OECMs, guided by a **systematic review of the literature (ScR)** to incorporate existing knowledge on relevant tools and methodologies (Fraschetti *et al.*, 2023; Petza et al., 2023; submitted).



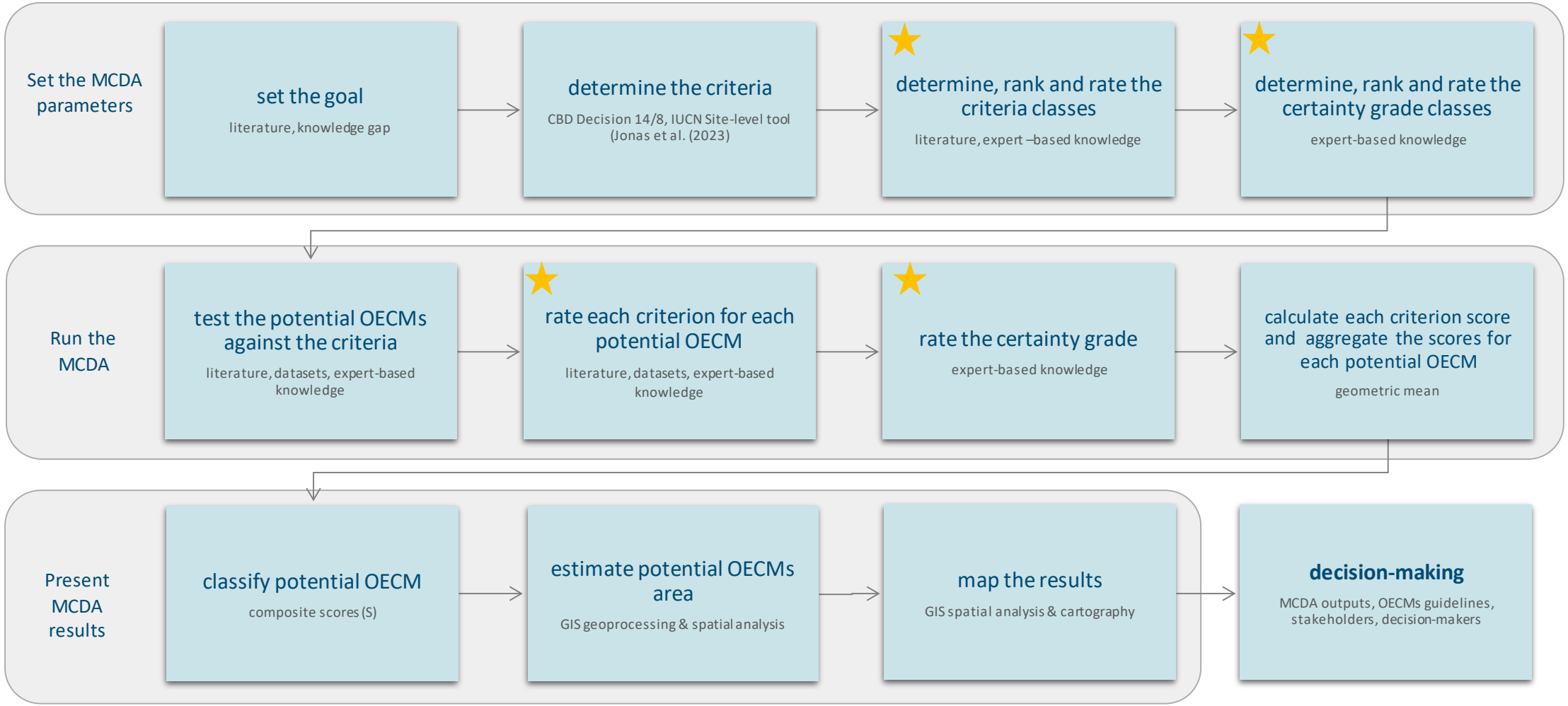
Methodology Outline

- Adopt a **multi-criteria decision analysis (MCDA)** approach based on **expert knowledge**
- Capitalise and update previous **relevant efforts** (Petza et al., 2019)
- Consider **CBD OECMs criteria** (CBD, 2018)
- Reflect **documentation and guidance of international Organisations** (IUCN-WCPA, 2019; FAO, 2022; Jonas et al. 2023; 2024 etc.)
- Integrate **ecological, spatial, social, and governance aspects** to evaluate areas
- **Prioritise areas for OECMs recognition** based on their conservation value and potential contributions to broader conservation objectives
- Allows for **adaptation to diverse geographic, sectoral and socio-economic contexts**
- **Applicable across different regions** worldwide

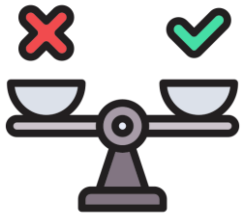


MCDA Workflow

Overview of the steps



Available tools vs proposed tool

OECMs Identification Tools		
Available	Jonas et al. (2023) Shore and Potter (2018) Mackinnon et al. (2015) Shabtay et al. (2019) CCEA (2018) Garcia et al. (2022)	• qualitative approach • yes/ no or traffic light rating of the sites
Proposed	Petza et al. (2019) PriorOECMs tool | Petza et al. (*in prep*.)	• quantitative approach • ranking and prioritisation the sites • Insights into how well the site performs by criterion

MCDA Workflow

Criteria classes/ rates & Certainty grade – Example Criterion 3

Criterion	Question	Answer/ Criteria classes	Rate
CRITERION 3. The site is a geographically defined area	Does the site have clear boundaries?	Site clearly defined in **three dimensions** (coordinates and depth or altitude)	100
		Site clearly defined in **two dimensions** (coordinates)	80
		Site clearly defined by **description**, with fixed boundaries that can be mapped	50
		Site clearly defined by description, with physically marked boundaries that can be mapped but which **may slightly vary due to physical processes**	20

Certainty grade	Certainty score
Low	0.2
Medium	0.5
High	1

Criterion class	Criterion rate	Certainty grade	Certainty score	Criterion score
Site clearly defined in **two dimensions** (coordinates).	50			

Criterion class	Criterion rate	Certainty grade	Certainty score	Criterion score
Site clearly defined in **two dimensions** (coordinates).	50	Low	0.2	

Criterion class	Criterion rate	Certainty grade	Certainty score	Criterion score
Site clearly defined in **two dimensions** (coordinates).	50	Low	0.2	**10**

50 * 0.2 = 10

MCDA Workflow

Final site assessment table

TEST	RESPONSE	CRITERION CLASSES	CRITERION RATE	CERTAINTY GRADE	CERTAINTY SCORE	CRITERION SCORE	TOTAL SITE SCORE
	(List: YES/NO)	*(Choose from the list)*		*(List: LOW, MEDIUM, HIGH)*			
CRITERION 1. The site is not a protected area (PA).	**YES**						
CRITERION 2. There is a reasonable likelihood that the site supports important biodiversity values.	**YES**						
CRITERION 3. The site is a geographically defined area	**YES**	Site clearly defined by description, with fixed boundaries that can be mapped.	50	LOW	0.20	10	
CRITERION 4. The site is confirmed to support important biodiversity values	**YES**	The information confirms that the site supports five of the six categories of important biodiversity values.	85	MEDIUM	0.50	42.5	
CRITERION 5a. Institutions or mechanisms exist to govern and manage the site	**YES**	Governance by a legitimate government agency or IPLCs, with clearly defined and stated governance scheme, partly applying the good environmental governance principles (legitimacy, accountability, inclusiveness, fairness etc).	85	HIGH	1	85	**26**
CRITERION 5b. Institutions or mechanisms exist to govern and manage the site	**YES**	Management authority in place, legal framework (regulations, policies etc.) and management plan not in place.	20	HIGH	1	20	
CRITERION 6. Governance and management of the site achieve or are expected to achieve the *in situ* conservation of important biodiversity values	**YES**	Mechanisms exist to identify and respond (prevent/ mitigate) to existing and possible future pressures on the site's biodiversity values.	100	LOW	0.20	20	
CRITERION 7: In situ conservation of important biodiversity values is expected to be for the long term.	**YES**	Guaranteed arrangements by formal agreement, covenant or policies.	20	HIGH	1	20	
CRITERION 8: Governance and management arrangements address equity considerations	**YES**	The governance and management of the site include modest efforts to address the three aspects of equity (recognition, procedure, distribution).	60	MEDIUM	0.50	30	

Geometric mean

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Excel template form

CBD 14/8 Decision Annex III. Scientific and technical advice on OECMs			IUCN Site-level assessment tool for identifying OECMs Jonas *et al.* (2023)					priorOECMs Tool								
CRITERION	SUB-CRITERION	SPECIFICATIONS	STEP	TEST	QUESTION	JUSTIFICATION INSTRUCTIONS	GUIDANCE	RESPONSE *(List: YES/NO)*	BRIEFLY JUSTIFY YOUR ANSWER *(Free text)*	CONTINUE OR STOP ?	CRITERION CLASSES *(Choose from the list)*	CRITERION RATE	CERTAINTY GRADE *(List: LOW, MEDIUM, HIGH)*	CERTAINTY SCORE	CRITERION SCORE	TOTAL SITE SCORE
A. Area is not currently recognized as a protected area	**A1. Not a protected are**	The area is not currently recognized or reported as a protected area or part of a protected area; it may have been	*SCREENING*	**CRITERION 1. The site is not a protected area (PA).**	**Is the site outside any recognised PA?**	*Briefly summarise the information that supports the*	section 1.3 | page 4	**YES**	Fisheries Restricted Area	**CONTINUE**						46
B. Area is governed and managed	**B1. Geographically defined space**	Size and area are described, including in three dimensions where necessary. Boundaries are geographically delineated.		**CRITERION 2. There is a reasonable likelihood that the site supports important biodiversity values.**	**Does available information suggest that the site supports at least one of the following important biodiversity values? (a) Rare, threatened or endangered species**	*List the biodiversity values likely to be present, and briefly summarise the information that supports the response.*	section 1.3 | page 5	**YES**	The Cabliers Coral Mound Province, located in the Southern Alboran Sea Geographical Subarea (GSA) and partly in the Algeria GSA, consists of several elongated ridge-like mounds, mainly composed of scleractinian framework-building cold-water corals (CWC). The Cabliers reefs are mainly	**CONTINUE**					
	B2. Legitimate governa	Governance has legitimate authority and is appropriate for achieving *in situ* conservation of biodiversity within the area. Governance by indigenous peoples and local communities is self-identified in accordance with national legislation and applicable international obligation.	*FULL ASSESSMENT*	**CRITERION 3. The site is a geographically defined area**	**Does the site have clear boundaries?**	*Briefly summarise the information that supports the response given.*	section 3.1.3 | page 9	**YES**	The proposed core area of the FRA is demarcated by the following four vertices: Latitude Longitude A 35° 55' 00" N 02° 16' 33" O B' 35° 51' 34.06" N 02° 08' 51.04" O C 35° 34' 36" N 02° 13' 15" O D' 35° 38' 09,60" N 02° 21' 13,20" O	**CONTINUE**	Site clearly defined in three dimensions (coordinates and depth or altitude).	100	LOW	0.20	20	
	B3. Managed	Managed in ways that achieve positive and sustained outcomes for the conservation of biological diversity. Relevant authorities and stakeholders are identified and involved in management.		**CRITERION 4. The site is confirmed to support important biodiversity values**	**Does information confirm that the site supports at least one of the following important biodiversity values?**	*List the biodiversity values confirmed to be present, and briefly summarise the information that supports the*	section 3.1.3 | page 10	**YES**	(a) Rare, threatened or endangered species and ecosystems (b) Natural ecosystems that are under-represented in protected area networks (c) High level of ecological integrity or	**CONTINUE**	The information confirms that the site supports all six categories of important biodiversity values.	100	HIGH	1	100	
C. Achieves sustained and effective contribution to in situ conservation of biodiversity	**C1. Effective**	The area achieves, or is expected to achieve, positive and sustained outcomes for the in situ conservation of biodiversity. Threats, existing or reasonably anticipated ones are addressed effectively by preventing, significantly reducing or eliminating them, and by restoring degraded ecosystems. Mechanisms, such as policy frameworks		**CRITERION 5a. Institutions or mechanisms exist to govern and manage the site**	**Is there one or more institution(s) or mechanism(s) that govern(s) the site?**	*Briefly summarise the information that supports the response given.*	section 3.2.3 | page 12	**YES**	General Fisheries Commission for the Mediterranean - GFCM; Contracting Parties (mainly Algeria, Morocco and EU) and National and EU institutions	**CONTINUE**	Governance by a legitimate government agency or IPLCs, with clearly defined and stated governance scheme, applying the good environmental governance principles (legitimacy, accountability,	100	HIGH	1	100	
				CRITERION 5b. Institutions or mechanisms exist to govern and manage the site	**Is there one or more institution(s) or mechanism(s) that manage(s) the site?**			**YES**	GFCM Contracting Parties (mainly Algeria, Morocco and Spain) are the more relevant institutions. There is a regulation approved in the GFCM	**CONTINUE**	Management authority, legal framework (regulations, policies etc.) and management plan in place.	100	HIGH	1	100	
	C2. Sustained over lon	The other effective area-based conservation measures are in place for the long term or are likely to be. "Sustained" pertains to the continuity of governance and management and "long term" pertains to the biodiversity outcome.		**CRITERION 6. Governance and management of the site achieve or are expected to achieve the *in situ* conservation of important biodiversity values**	**Do the governance and management of the site prevent and mitigate threats, and conserve the site's important biodiversity values, or are they**	*Briefly summarise the information that supports the response given.*	section 3.2.3 | page 12-13	**YES**	The Cabliers Coral Mound Province represents a large and unique hotspot of deep-sea biodiversity, and provides key ecosystem services, especially in relation to maintaining regional fishery resources. The establishment of a Fisheries Restricted Area (FRA) would limit	**CONTINUE**	Mechanisms exist to identify and respond (prevent/ mitigate) to existing pressures on the site's biodiversity values. No mechanisms are available to identify and address possible future pressures on the site's	60	HIGH	1	60	

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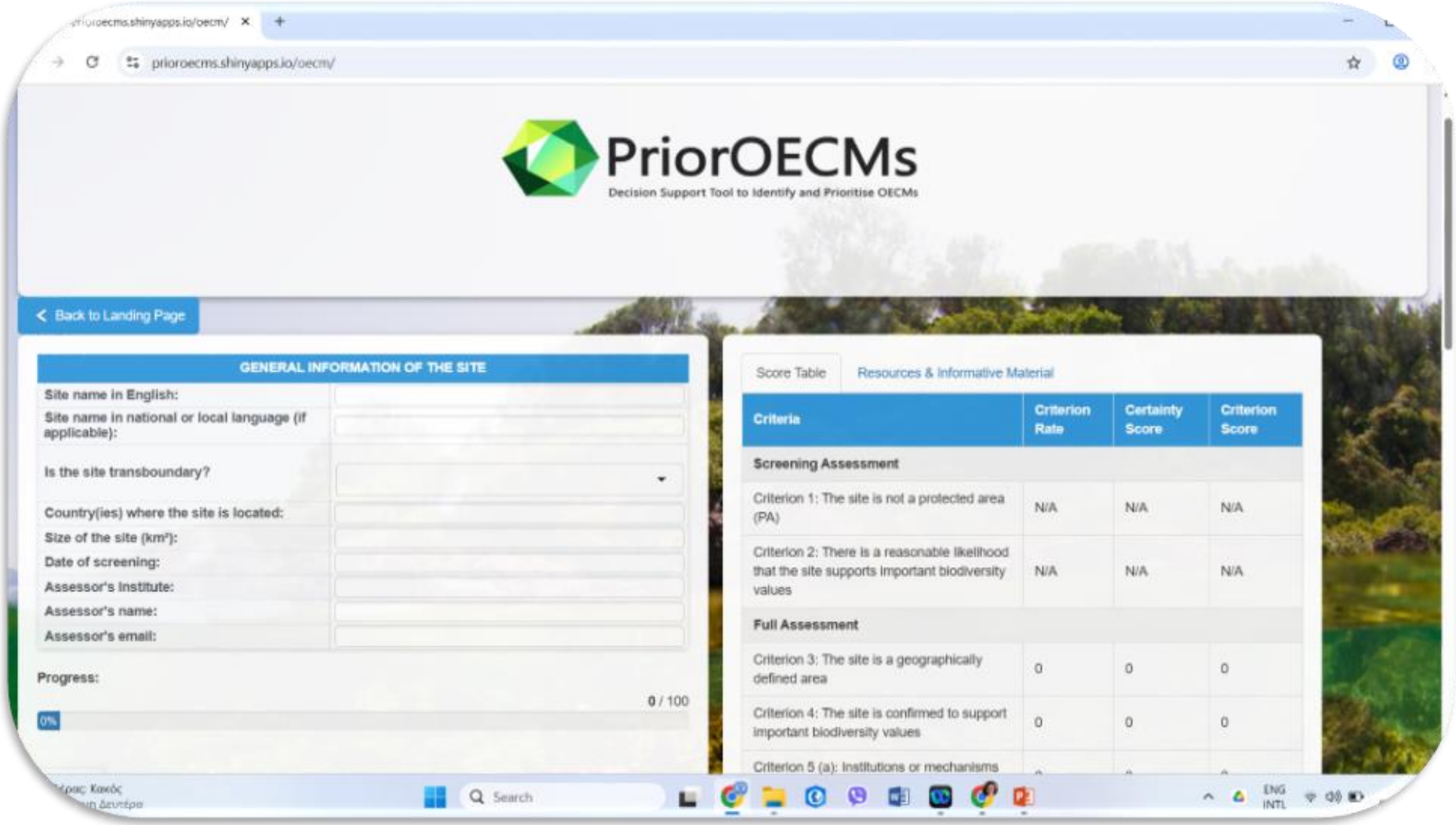
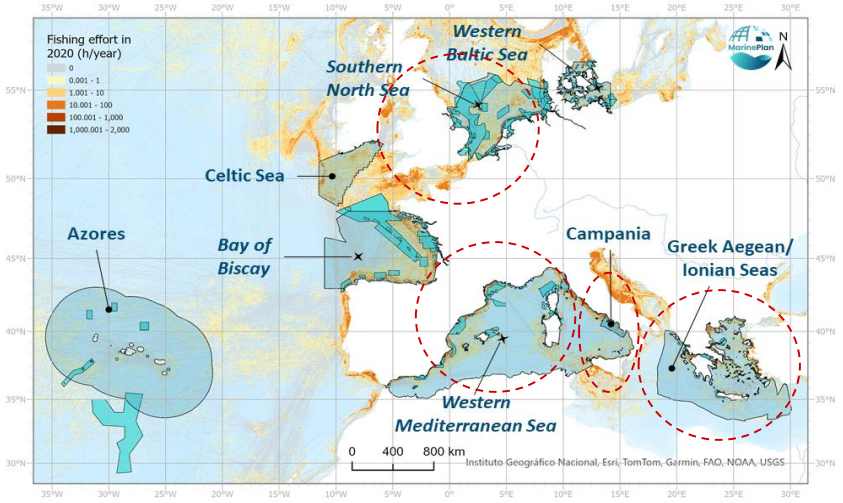
Shinny app

https://prioroecms.shinyapps.io/oecm/



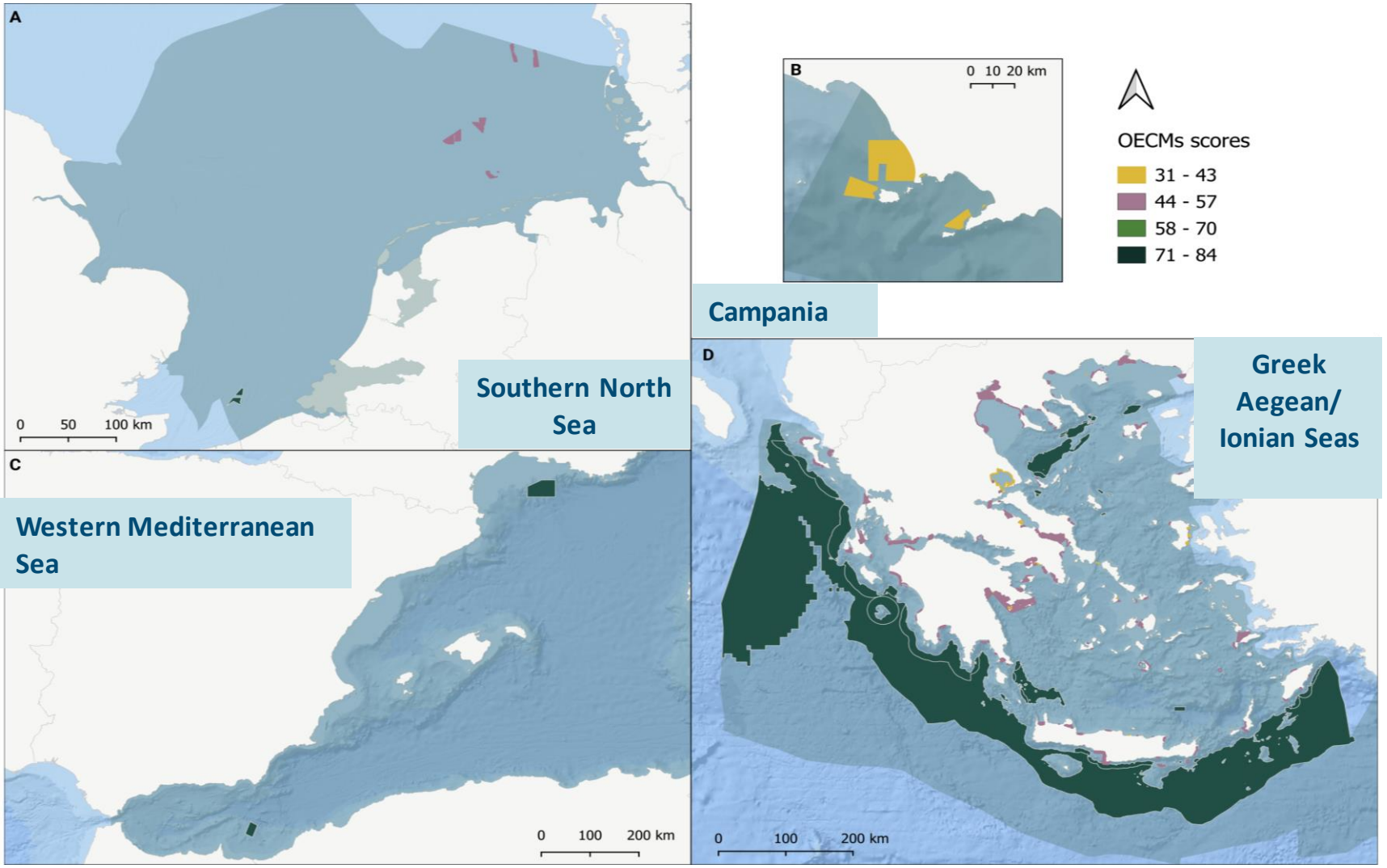
Implementation of the priorOECMs Tool

- **4 Case studies:**
  - Western Mediterranean Sea (Spain)
  - Southern North Sea (Germany, Belgium)
  - Aegean/ Ionian Seas (Greece)
  - Campania (Italy)
- **399 sites assessed**
- **225 sites passed** (confirmed OECMs) ~2/3



Study Area	Sector	Number of OECMs	Mean size (km²)	Min score	Max score
Southern Northern Sea	Renewable energy	10	48.53	46	82
West. Mediterranean	Fisheries	2	1,281.30	84	84
Campania Region	Defense	2	226.83	34	44
	Culture	1	0.29	35	35
	Environmental Sector	2	24.02	31	35
Greek Aegean and Ionian Seas	Culture	29	3.27	48	51
	Fisheries	147	839.61	41	76
	Maritime	21	6.09	30	32
	Utilities	4	1.85	30	32
	Defence	4	11.49	30	32
	Other	3	7.56	30	32
		225			

Implementation of the priorOECMs Tool



Next steps

- **PriorOECMs tool paper**
  - *In preparation* | to be submitted for publication soon
- **New Project** INSPIRE +Biodiversa

  “Assessing OECMs under Climate Change”
  - WS with topic experts
  - incorporate CC considerations to priorOECMs tool

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Thank you!

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