Marine Spatial Planning Zoning Approach in the Red Sea

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MARINE SPATIAL PLANNING ZONING APPROACH IN THE RED SEA

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Who is Red Sea Global?

Red Sea Global (RSG) is **one of the world's most visionary developers –** the force behind the most ambitious regenerative tourism destinations on the planet, The Red Sea and Amaala.

We put **people and planet first**, leveraging **innovative concepts and technologies** to deliver developments that actively enhance the wellbeing of guests, communities and environments.

A cornerstone of **Vision 2030**, RSG will transform the nation, creating massive economic opportunities for the people of Saudi Arabia and actively **enhancing its rich environmental and cultural heritage**.

We are determined to become **a global corporate citizen**, widely sharing our knowledge, technology and expertise and ushering in new standards for what responsible development can achieve.

THE RED SEA
البحر الأحمر

AMAALA

Baseline Established

73 Screening Reports reviewed and **16** Appraisal Reports

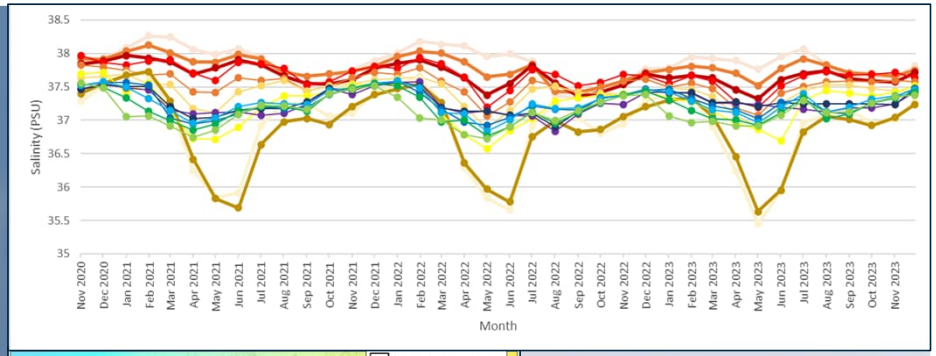
> **200** Literature sources reviewed and cited

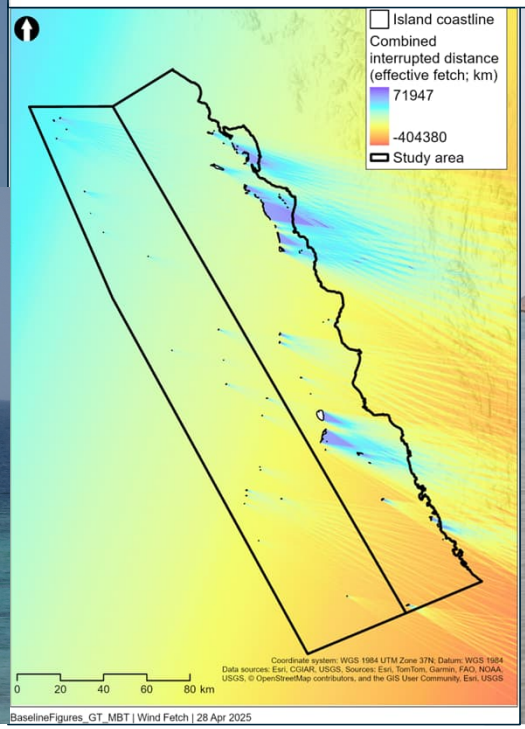
> **100** Datasets/parameters reviewed

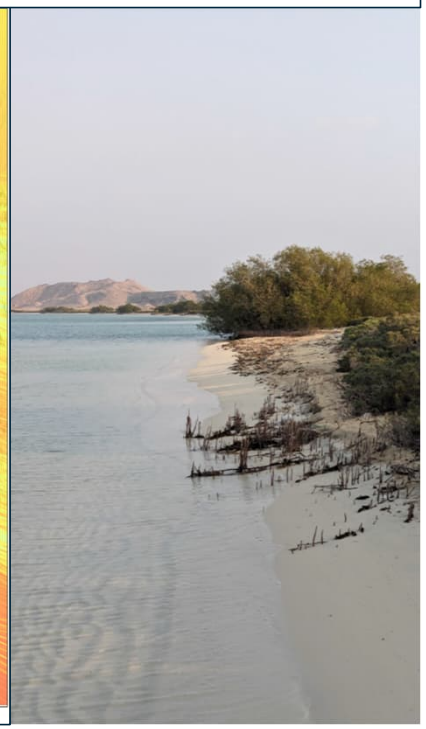
> **17** Stakeholder groups contacted

> **30** Different stakeholders identified

Site visit undertaken to identify characteristics and interactions of the islands

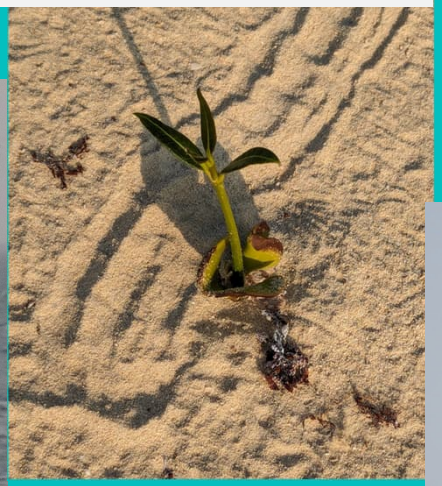




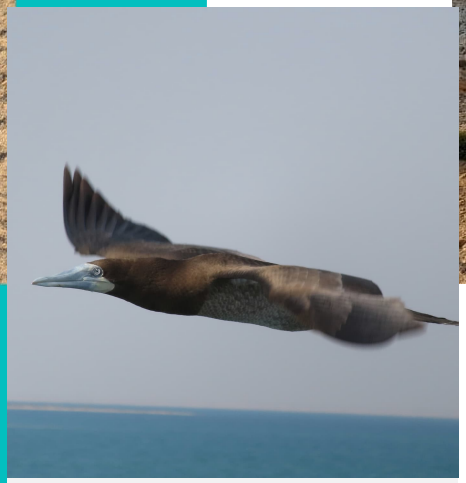


Baseline key points

Complex physical interactions

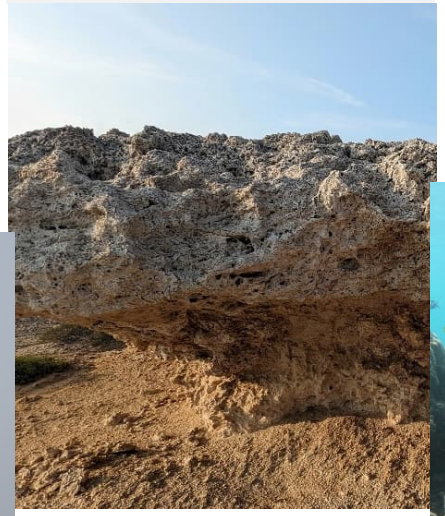


Abundant fish stocks and fishing activity



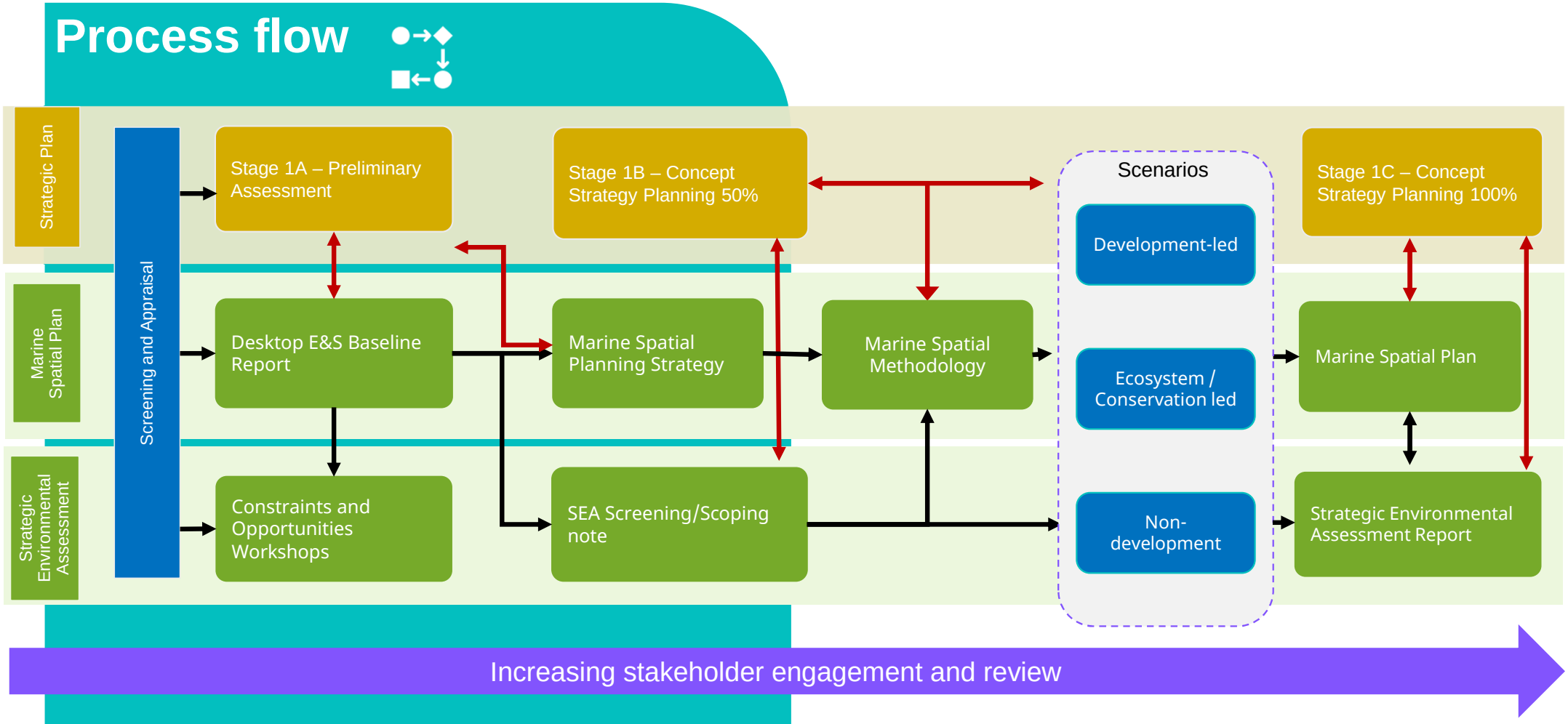
Variety of important habitats

Heritage features



Vulnerable ecosystems

Process flow



Indicates where the MSP and SEA deliverables will inform the three stages of the Strategic Plan

The environmental deliverables and the relationships between the same

Goals and objectives

Healthy Ecosystems

Delivery of Ecosystem Services

Sustainable Uses

Red Sea Islands Project MSP Goals

Environment

Protect area's biodiversity and ecosystems

Social

Protect and promote cultural values and social heritage

Climate

Support net-zero commitments and climate resilience

Economic

Achieve sustainable marine based economic and regenerative tourism sector

Governance

Promote good governance

Red Sea Islands Project MSP Objectives

Restore and enhance degraded habitats and ecosystems for species of conservation interest

Promote connectivity of habitats and species

Net benefit of conservation interest

Preserve the natural environment

Respect cultural values – protect traditions and livelihoods e.g. artisanal fishing

Promote social heritage – preserve and promote social heritage for future generations and tourists

Net zero – facilitate delivery of renewable energy infrastructure

Climate mitigation – protect natural sea defences e.g. mangroves

Climate adaptation and resilience – enhance for increased carbon sequestration

Regenerative tourism sector which supports sustainable economic growth

Accessing nature for recreational, educational, spiritual, and research purposes

Economic diversity of marine uses

Sustainable management

Effective enforcement

Agile adaption – adapt management approaches for future changes

Participatory and inclusive – seek stakeholder support

Environmental Categories

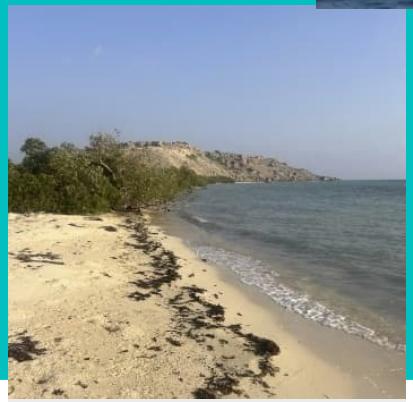
1.Species identified in CHA

Source: Assystem, 2023

3. Existing and proposed protected areas

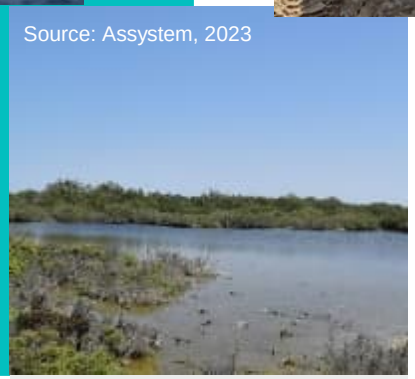
5. Cultural heritage features

7. Coastal protection



2.Habitats identified in CHA

Source: Assystem, 2023

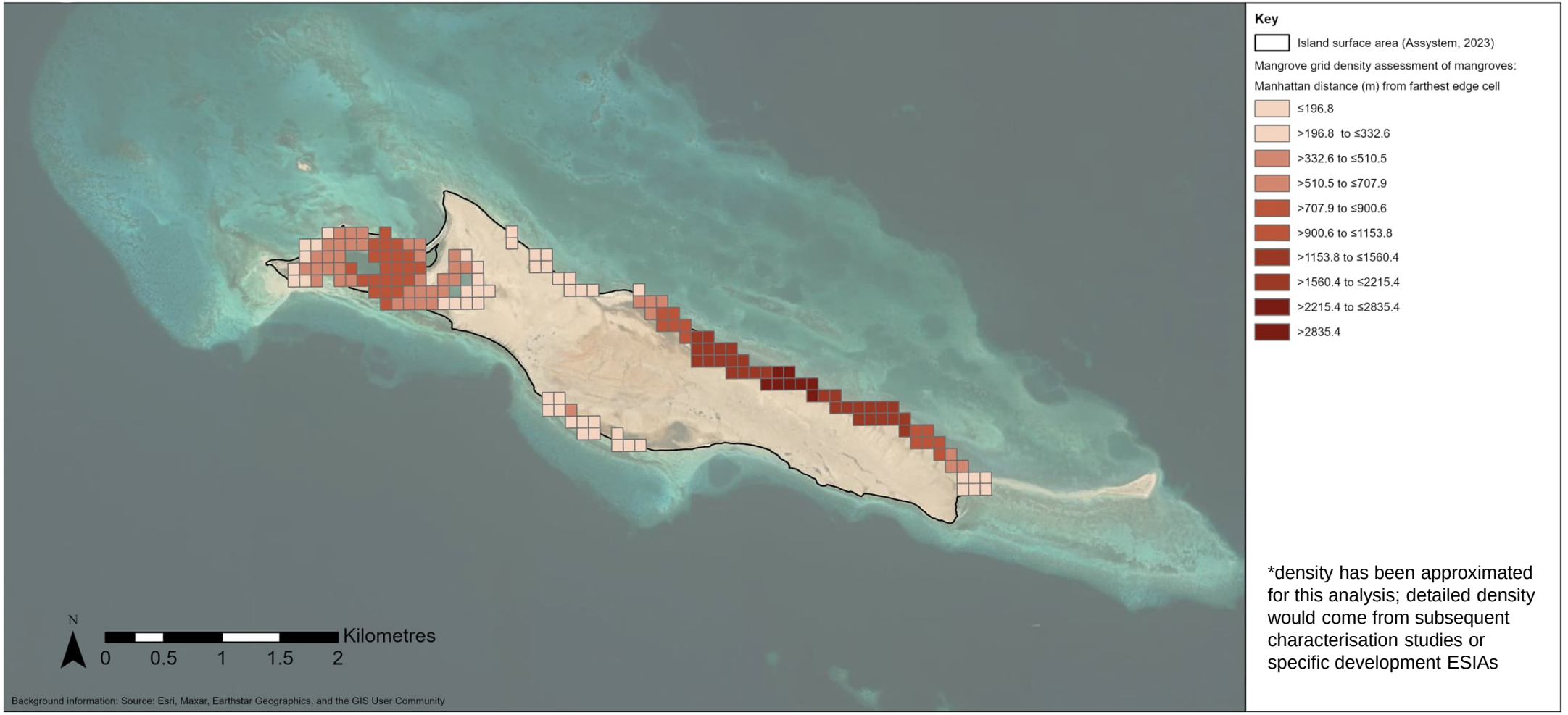


4. Oceanographic processes

6. Fisheries activities and aquaculture

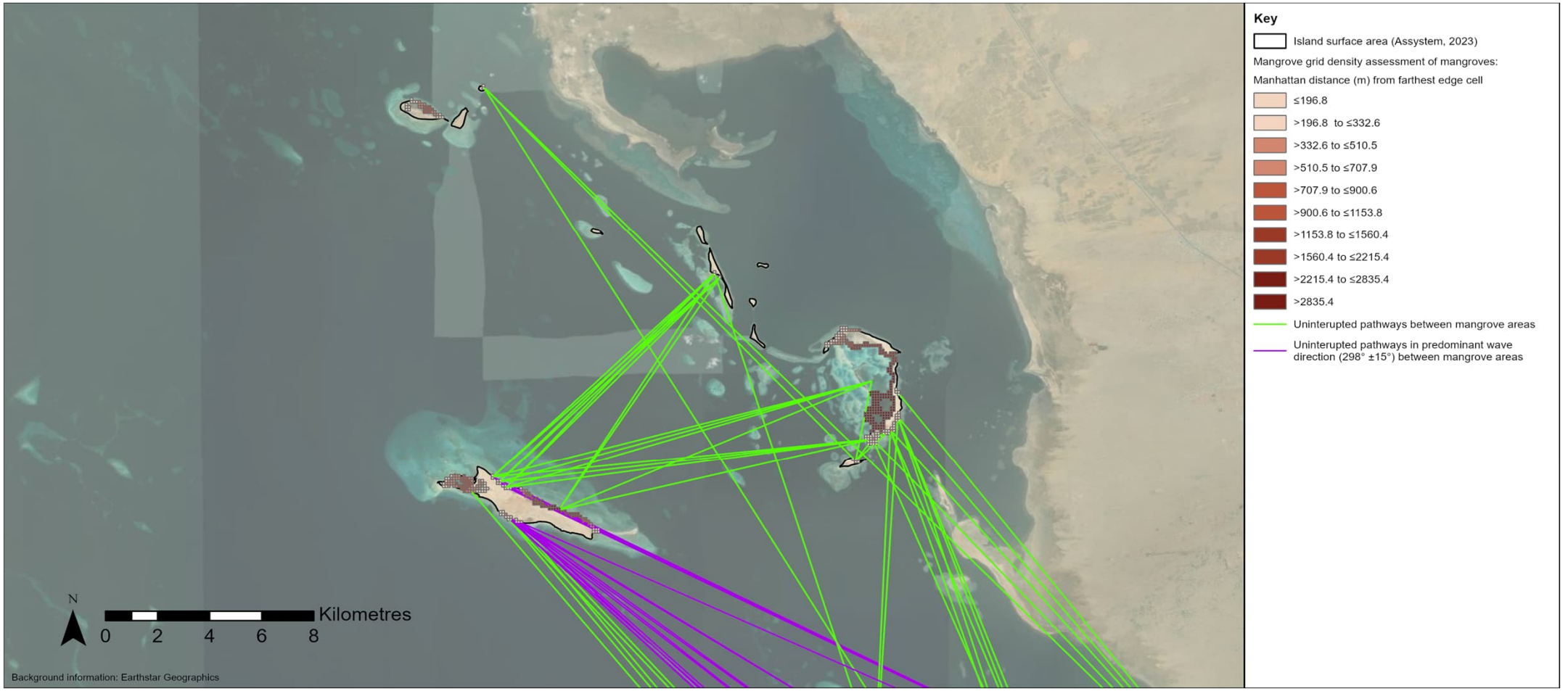
Examples of assigning value: Mangrove Areas identified across the project area

Examples of assigning value: Calculate Density* of Mangroves

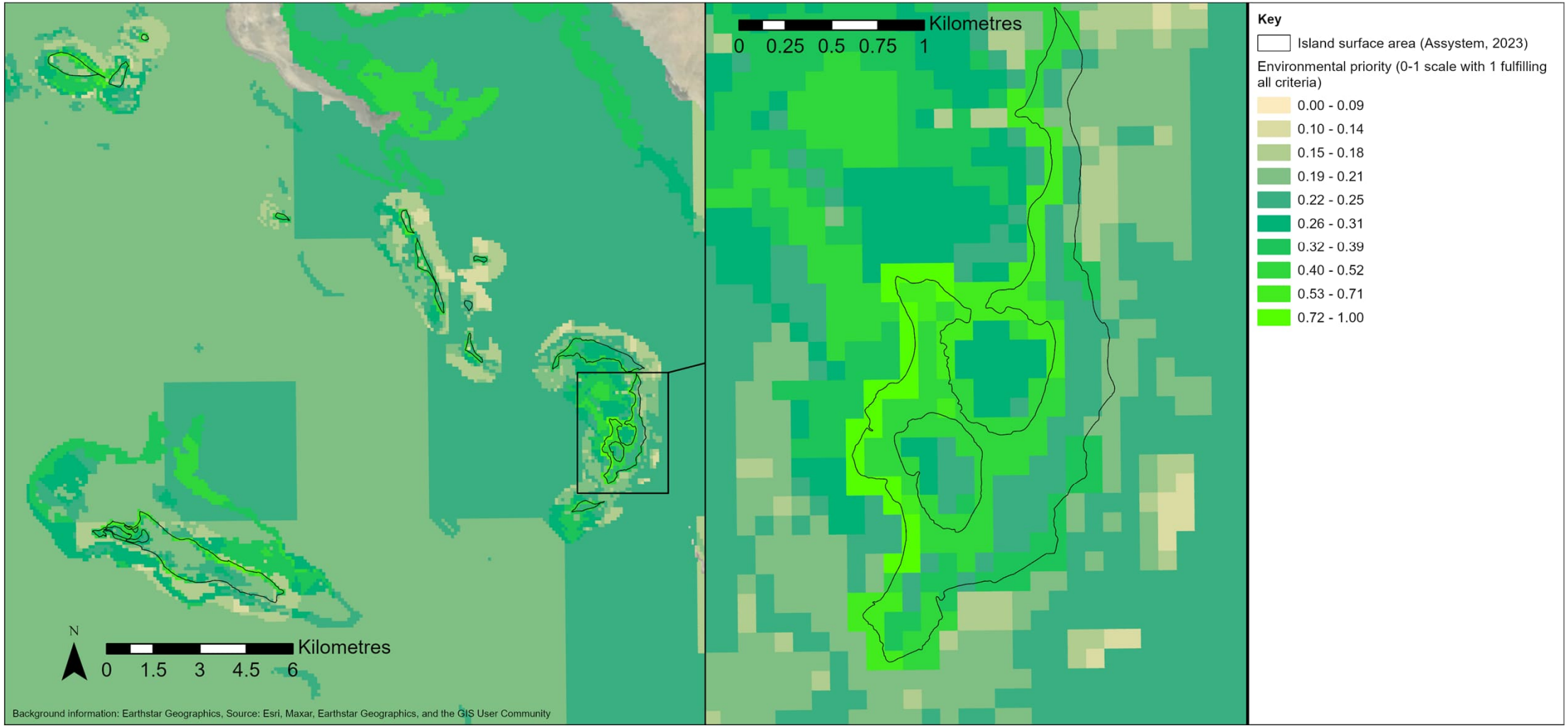


*density has been approximated for this analysis; detailed density would come from subsequent characterisation studies or specific development ESIAs

Examples of assigning value: Consider those with connectivity in the Predominant Wave Direction



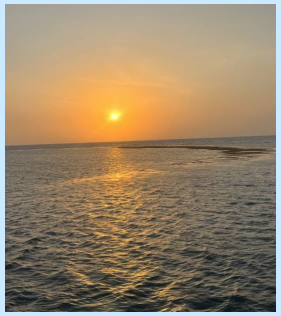
Maps: Ecological priority Example



Development Categories

Long sandy beaches

Island clustering



Shelter

Visibility of attractive habitats

Barriers to get to specific point on island

Coastal morphology

Example considering Visibly Attractive Habitats

Mangroves

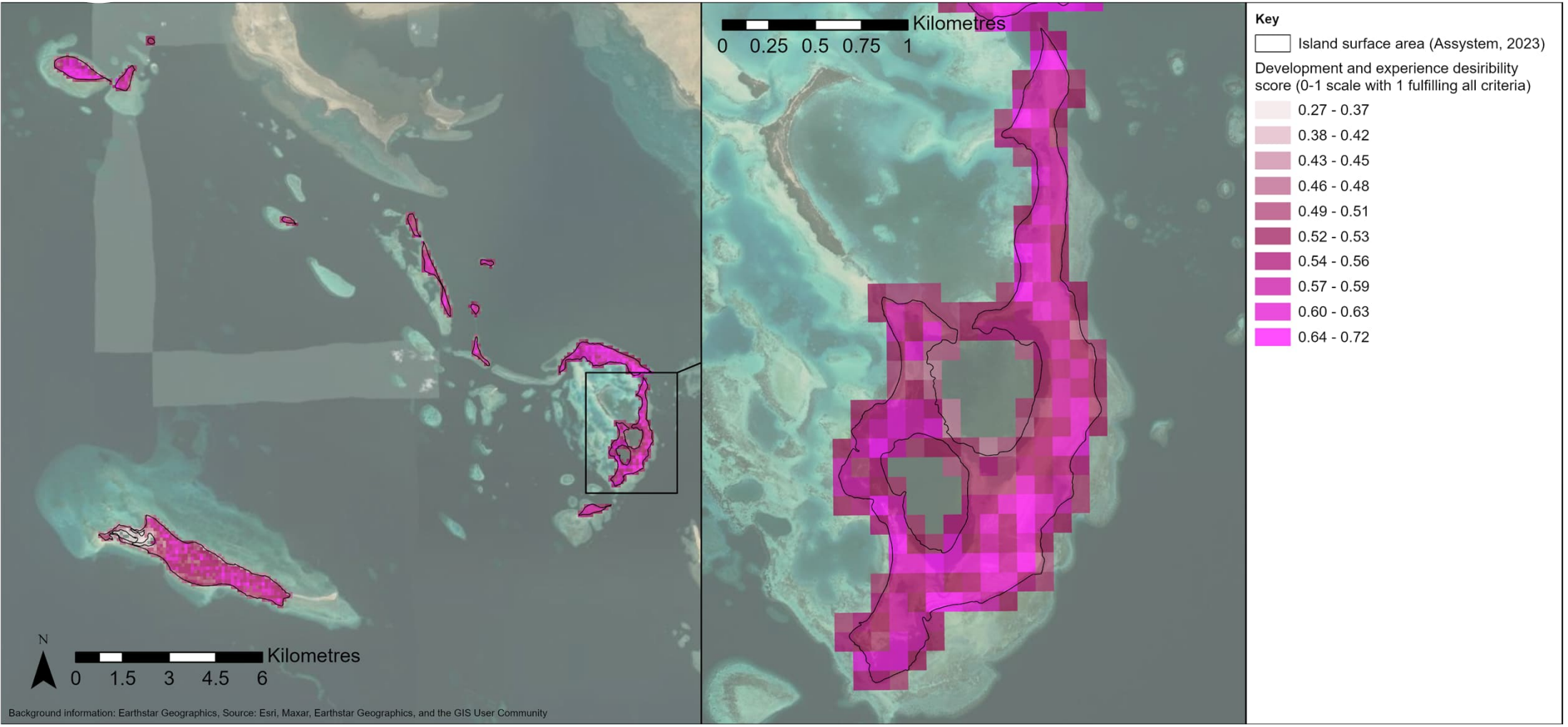
Coral reefs

Seagrass beds*

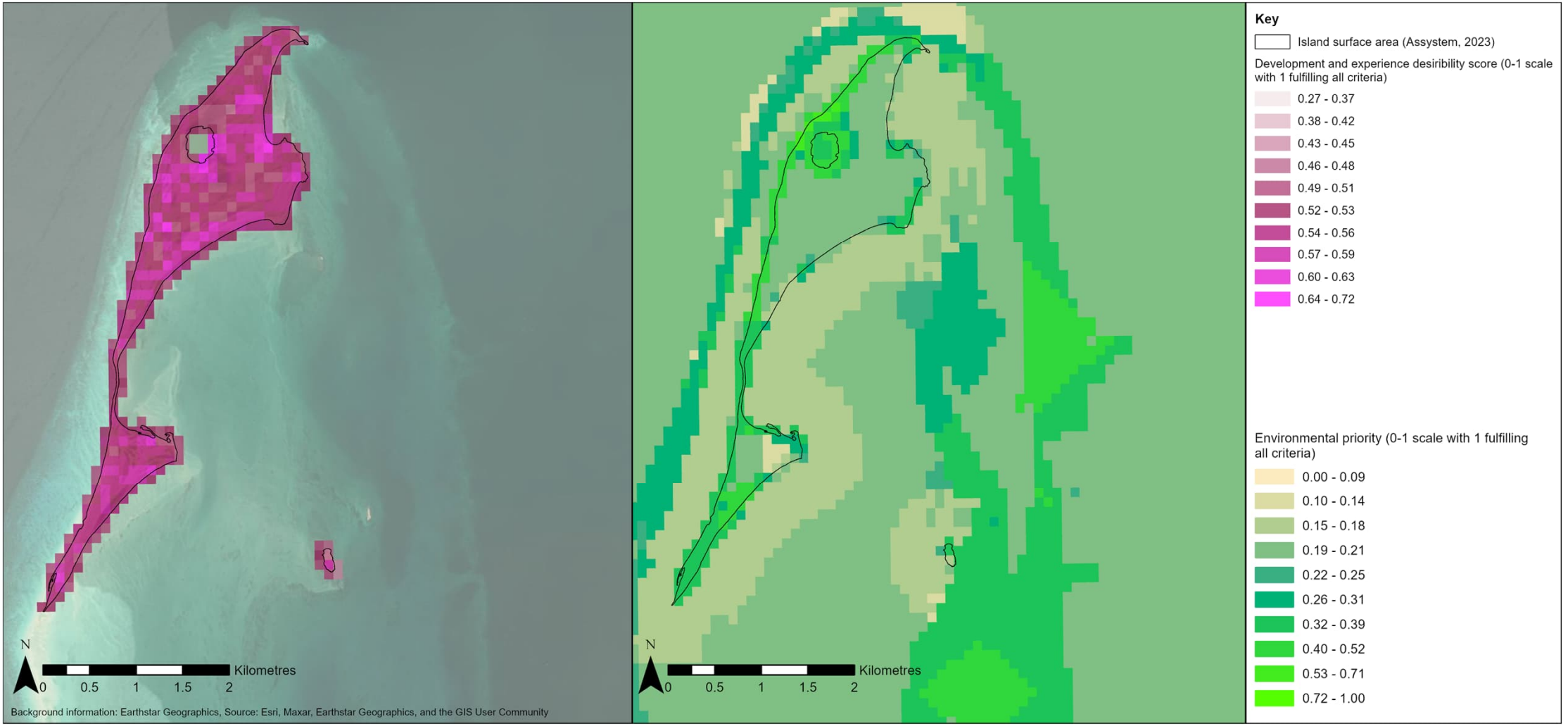
Value assigned to a hectare increases with proximity and relative elevation

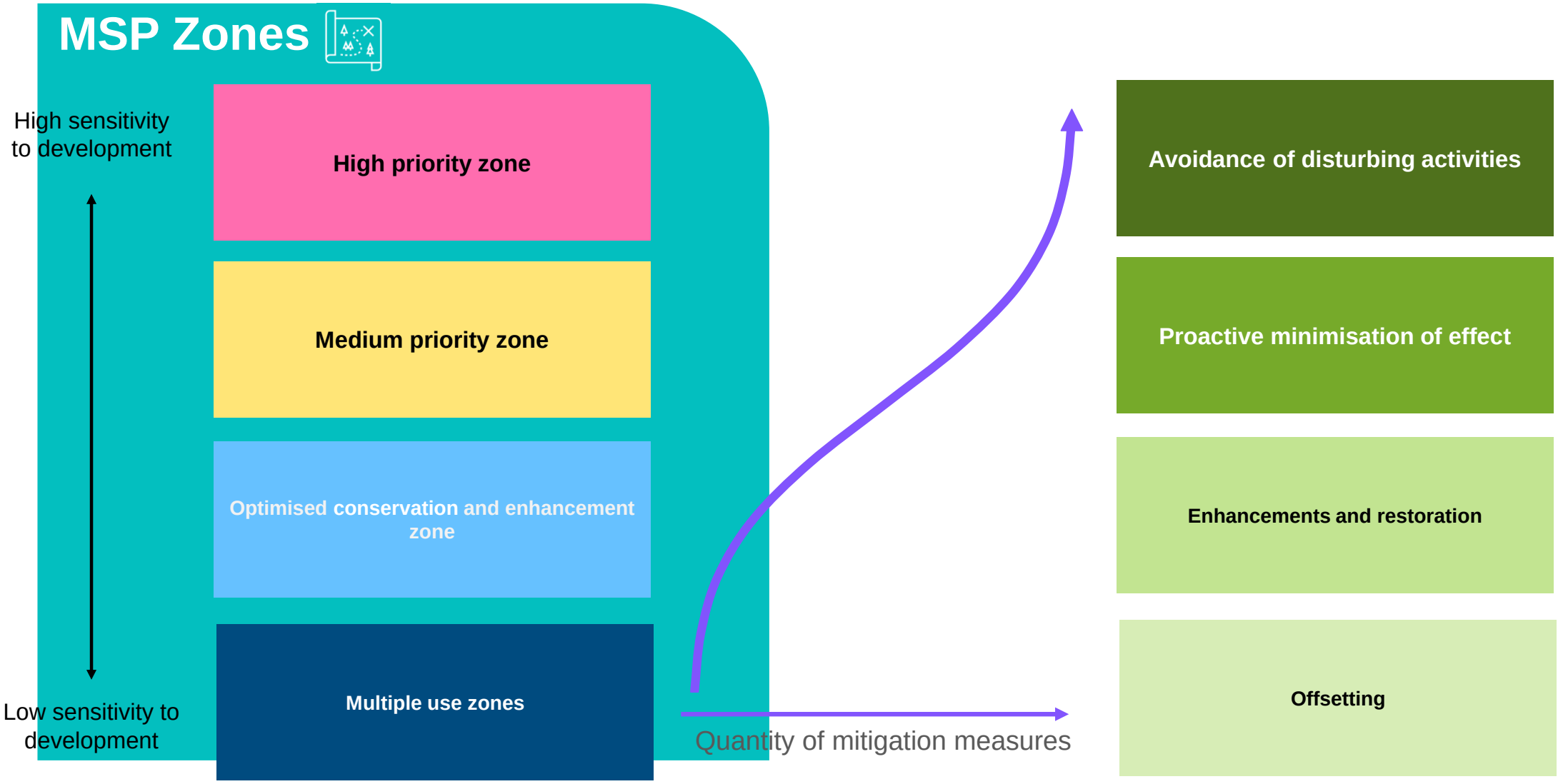
*Seagrasses provides shelter and food to invertebrates, large fish, crabs, sea turtles, marine mammals and some birds so provide an attraction for wildlife that are visibly attractive or enjoyable

Development Scenario Outputs Example

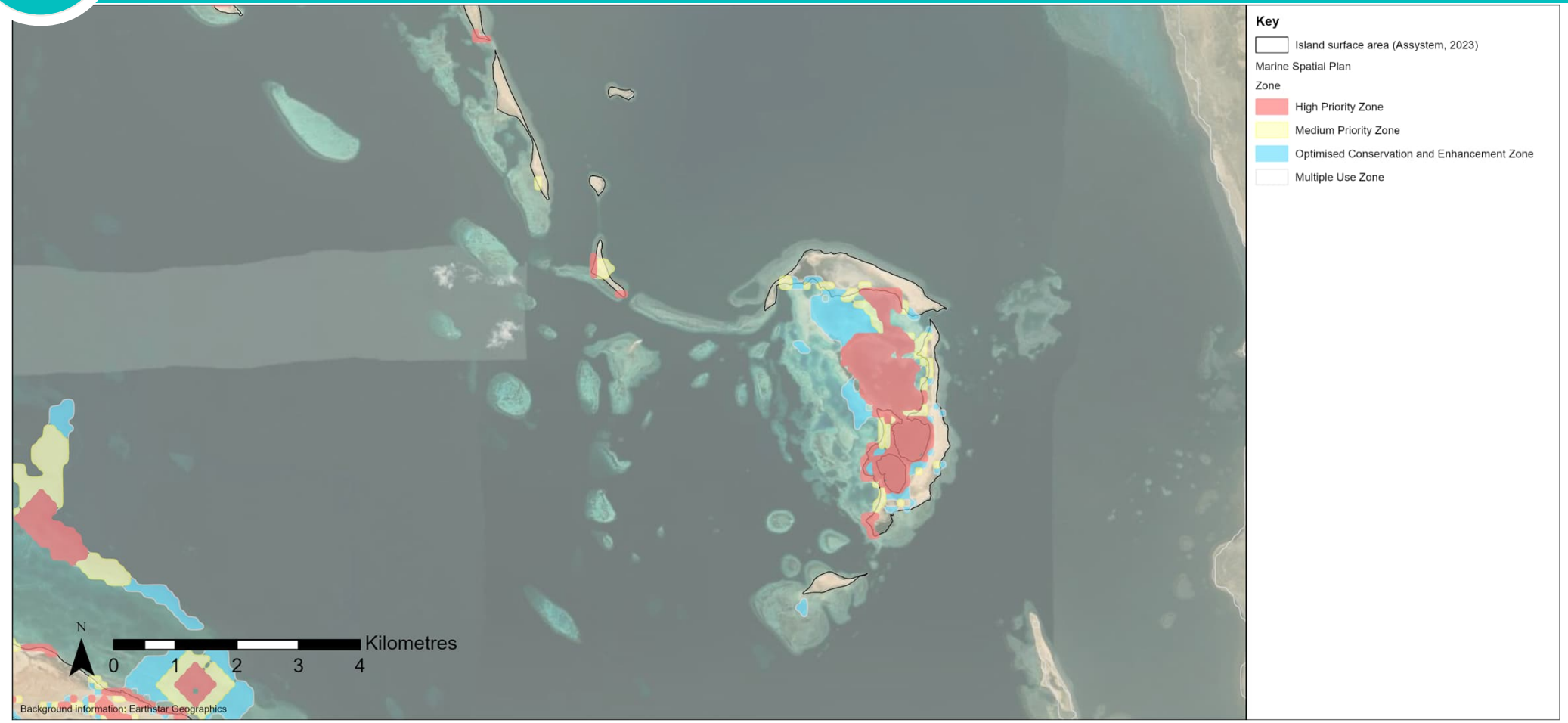


Scenarios overlain to Identify Spatial Synergies and Conflicts




MSP Zones
High sensitivity to development
Low sensitivity to development
High priority zone
Medium priority zone
Optimised conservation and enhancement zone
Multiple use zones
Quantity of mitigation measures
Avoidance of disturbing activities
Proactive minimisation of effect
Enhancements and restoration
Offsetting

Resulting MSP zones



Management measures

Management Measures provide a framework for how, where, and when human activities should occur to achieve the goals and objectives of the MSP.

This ensures **future ESIAs** can define and quantify mitigation measures within existing approval processes.

This is aligned to **international best practice** such as the United Nations Educational, Scientific and Cultural Organisation and the European Union Habitats Directive.

Engagement

المركز الوطني
لتنمية الحياة الفطرية
National Center for Wildlife
المملكة العربية السعودية

المركز الوطني
للرقابة على الالتزام البيئي
National Center for Environmental Compliance
المملكة العربية السعودية

Red Sea
Global

الهيئة السعودية للبحر الأحمر
Saudi Red Sea Authority

M
MOTT
MACDONALD
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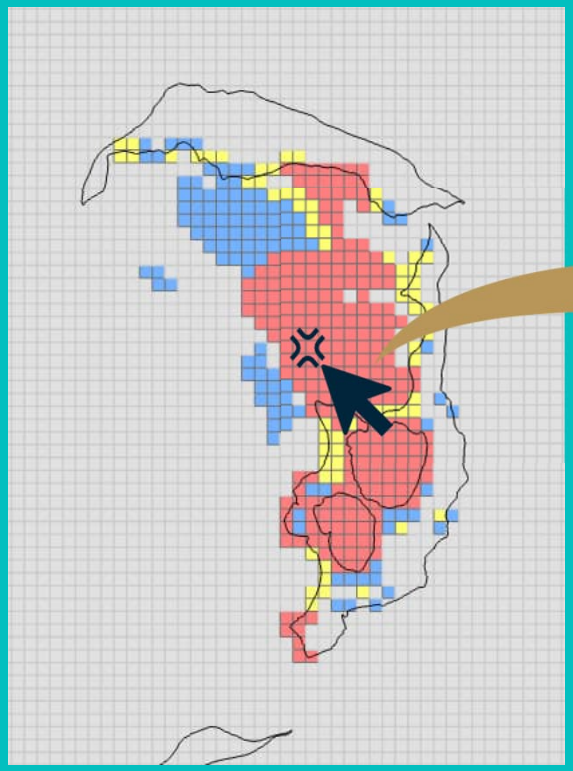
CALLISONRTKL™

shams
General Organization for Conservation
of Coral Reefs and Turtles in Red Sea

Useable planning outputs

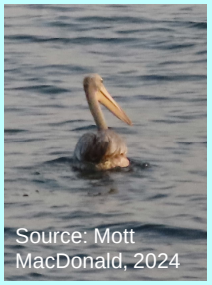
Clicking on a cell would relate what it is protected for



High Priority Zone for:

- Pink-backed pelican
- Spoonbills

Source: Assystem, 2023



Source: Mott MacDonald, 2024

Zone Objective:

Avoid disturbance of these species during nesting season within these hectares

Mitigation measure examples:

- No activities that generate disturbing noise levels (i.e. >55dB*)
- Avoid human presence within distance where birds are likely to take flight (i.e. within 200m*)
- Maintain existing water flow, silt and algae levels of the lagoon at all times.

*Specific thresholds to be established based upon ESIA results; these have been set with general published guidance at this stage.

شكراً

Thank you

Let’s continue the conversation!

Message me your questions or comments in the IAIA25 app.

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