



Food and Agriculture  
Organization of the  
United Nations



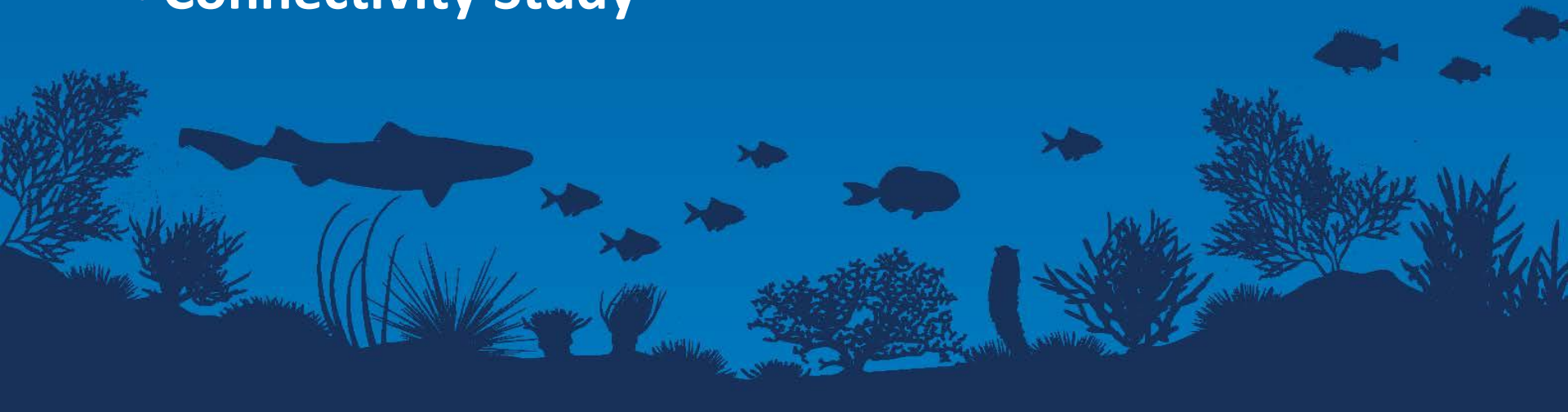
# Marine Ecological Connectivity & Metadata Inventory

*The planned work*

Ruth Fletcher Senior Programme Officer

# Overview

- \* Two related pieces of work:
  - \* Metadata Inventory
  - \* Connectivity Study



# Overview of presentation

Aim – to present the methodology for these two pieces of work for feedback

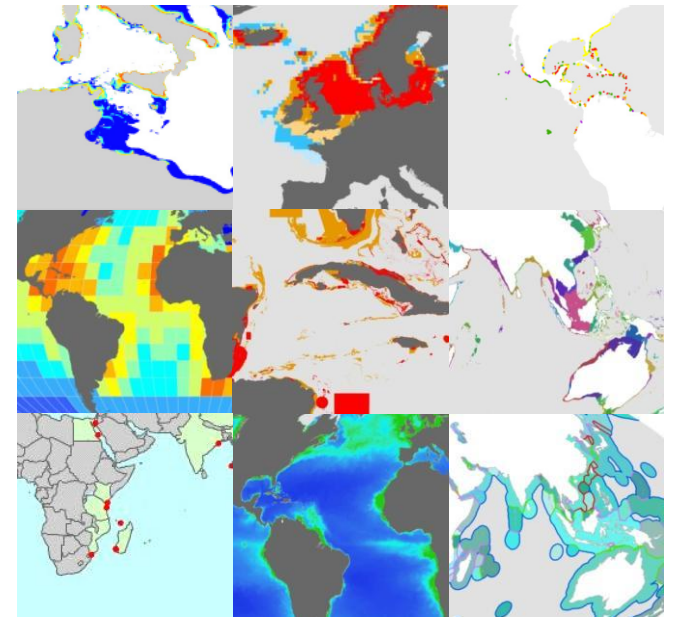
- \* Outline the aims of the two pieces of work
- \* Review the methodology
- \* Get feedback at the end of this presentation
  - \* Focus
  - \* Methodology

# Metadata Inventory



# Types of data

- \* Biogenic habitats
- \* Species distributions
- \* Species habitats
- \* Biodiversity metric
- \* Biodiversity areas
- \* Biogeographic classifications
- \* Environmental descriptors
- \* Ecosystem services and natural capital
- \* Ecological status and impacts
- \* Environmental descriptors
- \* Databases and data portals
- \* Administration



# Metadata Inventory Aims

Identify regional data of relevance for the project

- \* Collate list of regional data in an inventory relevance to biodiversity and human activities in, or of relevance to, ABNJ in the Western Indian Ocean;
- \* Provide valuable metadata on the dataset, *for example*:
  - \* range,
  - \* resolution,
  - \* quality and
  - \* availability (i.e. any licence restrictions)
- \* Provide information on what data exists which may be able to support future work



# Metadata Inventory

## Metadata – information about datasets

Introduction to global marine datasets of biodiversity importance in the **Western Indian Ocean**

DRAFT

UNEP COMMON OCEANS gef

Dataset ID: INT64001

### Global Distribution of Hydrothermal Vent Fields

Description: The InterRidge Vents Database is a global database of submarine hydrothermal vent fields. The InterRidge Vents Database is supported by the InterRidge program for international cooperation in ridge-crest studies ([www.interridge.org](http://www.interridge.org)).

Citation(s): Beaulieu SE (2013). InterRidge global database of active submarine hydrothermal vent fields ("InterRidge Vents Database"; version 3.2); prepared for InterRidge, Beijing (China); InterRidge, Peking University. URL: <http://vents-data.interridge.org> (October 2014).

Beaulieu SE, Baker ST, German CR, Maffei A (2013). An authoritative global database for active submarine hydrothermal vent fields. *Geochemistry, Geophysics, Geosystems*. Vol 14, Issue 11, pp. 4892-4905

Temporal range: 1800-2011

Geographical range: Global

Supplementary information: Main fields of information of the online database (at [http://vents-data.interridge.org/ventfields\\_list\\_all](http://vents-data.interridge.org/ventfields_list_all)): name of the vent field (Vent Field Name); activity status (confirmed active, inferred active, inactive); tectonic setting (e.g. Mid-ocean ridge, arc volcano); region of the globe; latitude; longitude; maximum or single reported depth; year and how discovered.

The tabular version of the database ([http://vents-data.interridge.org/ventfields\\_list\\_all\\_CSV](http://vents-data.interridge.org/ventfields_list_all_CSV)) contains additional fields of information, including discovery and other references. Details can be accessed at: [http://vents-data.interridge.org/about\\_the\\_database/Contents](http://vents-data.interridge.org/about_the_database/Contents).

The database can be viewed interactively at: <http://vents-data.interridge.org/ventfields-geofield-map>.

The InterRidge Office is based at Peking University (China).

Some attributes of all of the records in the database are also coded in RDF (Resource Description Framework) and available as Linked Open Data.

Purpose of creation: The database aims to provide a comprehensive list of active and inferred active (unconfirmed) submarine hydrothermal vent fields for use in academic research and education. It is anticipated that the database will become the international

UNEP WCMC <http://www.unep.org/monocentre/> Page 1 of 3

Global biodiversity datasets with features in Western Indian Ocean



# DATASET-SPECIFIC METADATA SHEETS

Dataset ID: WCMC-001

## Global Distribution of Cold-water Corals (2005)



**Description:** This dataset shows the global distribution of cold-water corals. Occurrence records are given for four Orders (in Class Anthozoa): Scleractinia (reef-forming corals), Antipatharia (black corals), Octocorallia (octocorals) and Zoanthidea (encrusting or button polyps). Occurrence records are also available for the sub-Order Filifera (lace corals) in Class Hydrozoa.

**Citation(s):** Freiwald A, Rogers A, Hall-Spencer J (2005). Global distribution of cold-water corals (version 2). Update of the dataset in Freiwald et al. (2004). Cambridge (UK): UNEP World Conservation Monitoring Centre. URL: <http://data.unep-wcmc.org/datasets/>

**Other cited references:**  
Freiwald A, Fosså JH, et al. (2004). Cold-water corals: reefs out of sight – new world records from the NE Atlantic. UNEP World Conservation Monitoring Centre. <https://archive.org/details/unep-wcmc-001-cold-water-corals-reefs-out-of-sight-new-world-records-from-the-ne-atlantic>

**Temporal range:** 1915-2006

**Geographical range:** Global

**Supplementary information:** Attribute table: depth, range, order, class, order, species name (TAXON), person(s) who identified the species (DETERMINER), status of the sample (live, dead, etc), reference where the record was first published, and much more.

**Purpose of creation:** Version 1 of the dataset was created to accompany the report by Freiwald et al. (2004).

**Creation methodology:** Occurrence records were obtained from various sources, including reports, peer-reviewed articles and consultation with experts. Many individuals and organisations contributed by providing UNEP-WCMC with their data in electronic form.

**Version:** 2.0

**Data lineage:** This is an update of the original dataset.

**Category:** Biogenic habitat

**Keywords:** deep sea, high seas, benthic, marine

Dataset ID: WCMC-001

**Similar datasets:** Yesson-001, Davies-001

**Limitations:** The high density of reefs shown in the North Atlantic most probably reflects the intensity of research in this region. Further discoveries are expected worldwide, particularly in the deeper waters of subtropical and tropical regions.

**Maintenance frequency:** Data are not being updated.

**Main access/use constraint:** UNEP-WCMC  
[wcmc.org/](http://wcmc.org/)  
[www.unep-wcmc.org/support@unep-wcmc.org](mailto:www.unep-wcmc.org/support@unep-wcmc.org)

**Other access/use constraints:** None

**Contact organisation:** UNEP World Conservation Monitoring Centre

**Organisation type:** Custodian

**Name:** Dr. Steve Fletcher

**City:** Cambridge

**E-mail:** [marine@unep-wcmc.org](mailto:marine@unep-wcmc.org)

**Web site:** [www.unep-wcmc.org](http://www.unep-wcmc.org)

**Data format(s):** Vector (point; .shp)

**Distribution format(s):** Vector (point; .shp) Dataset size: 23 Mb (uncompressed)

**Webpage and/or download:** <http://data.unep-wcmc.org/datasets/3>

**Other webpage:** <http://www.arceis.com/home/item.html?id=3ecb764343324bcab4c64c66d324cbd0>

**Web map service:** [http://ec2-54-204-216-109.compute-1.amazonaws.com:6080/arceis/rest/services/marine/WCMC\\_001\\_ColdwaterCorals\\_2005/MapServer](http://ec2-54-204-216-109.compute-1.amazonaws.com:6080/arceis/rest/services/marine/WCMC_001_ColdwaterCorals_2005/MapServer)

**Factsheet:** <http://wcmc.io/cold-coral>

**Resolution, scale:** Not applicable

**West bounding:** -179.9

**South bounding:** -77.9

**Metadata standard:** UNEP-WCMC Specific

**Reference system:** WGS 1984

**East bounding:** 179.9

**North bounding:** 71.4

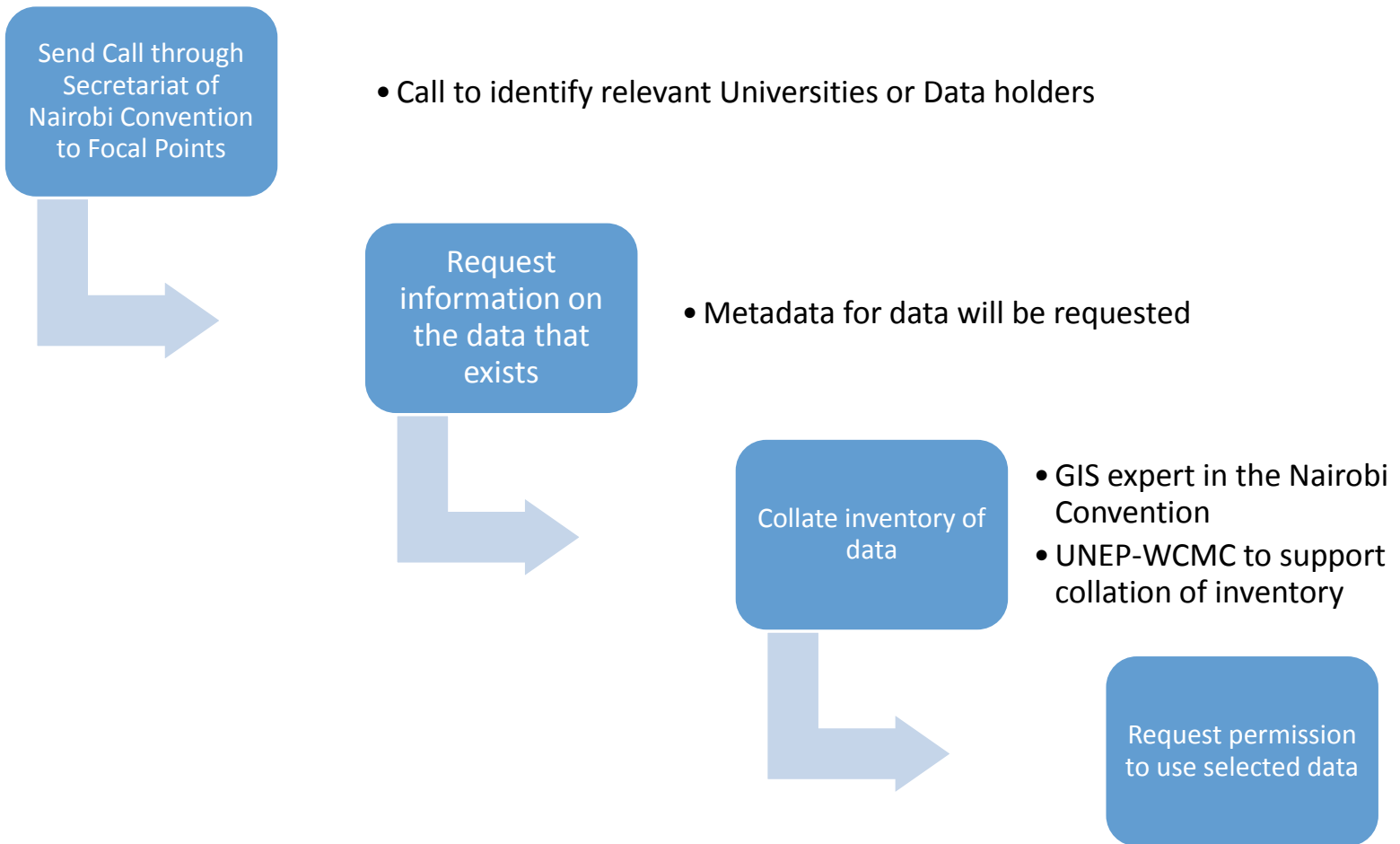
**Date of metadata:** 29/05/2015

Limitations,  
fitness for use

Purpose of  
creation

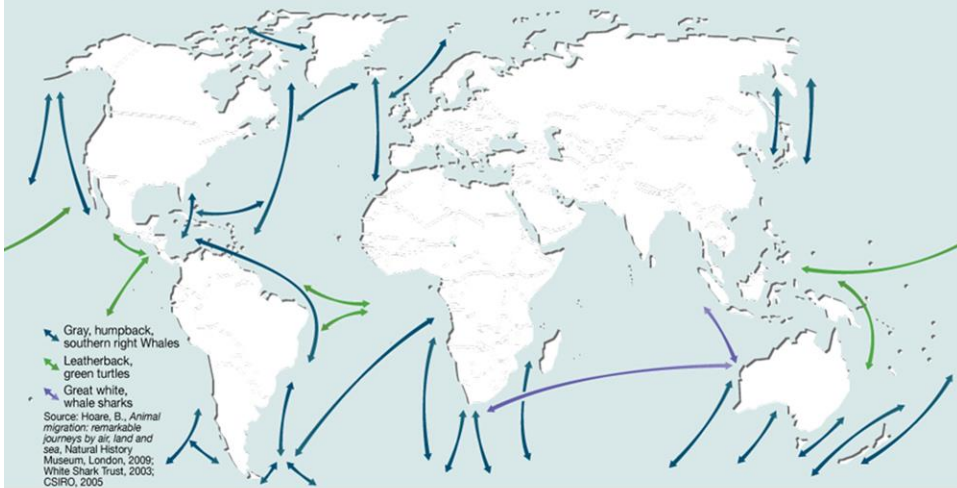


# Metadata Inventory Process

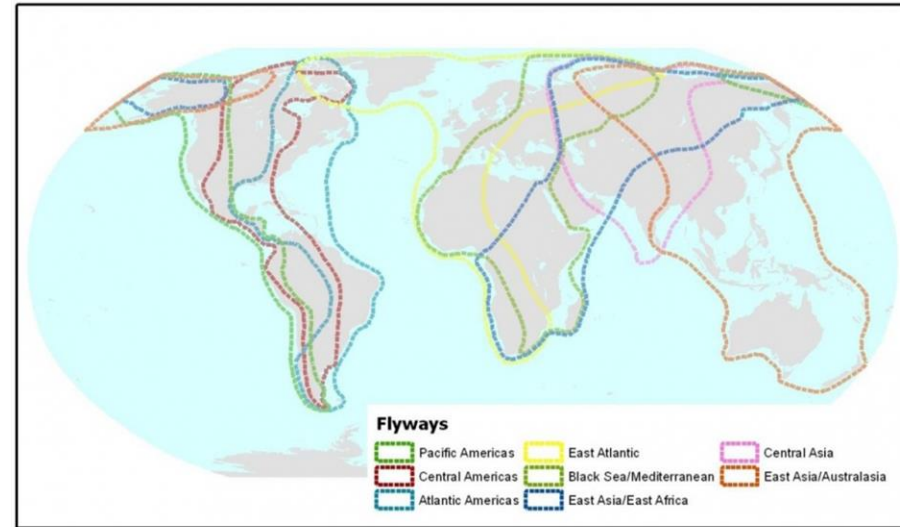


# Connectivity Study

**They swim...**  
Migratory routes for selected marine animals



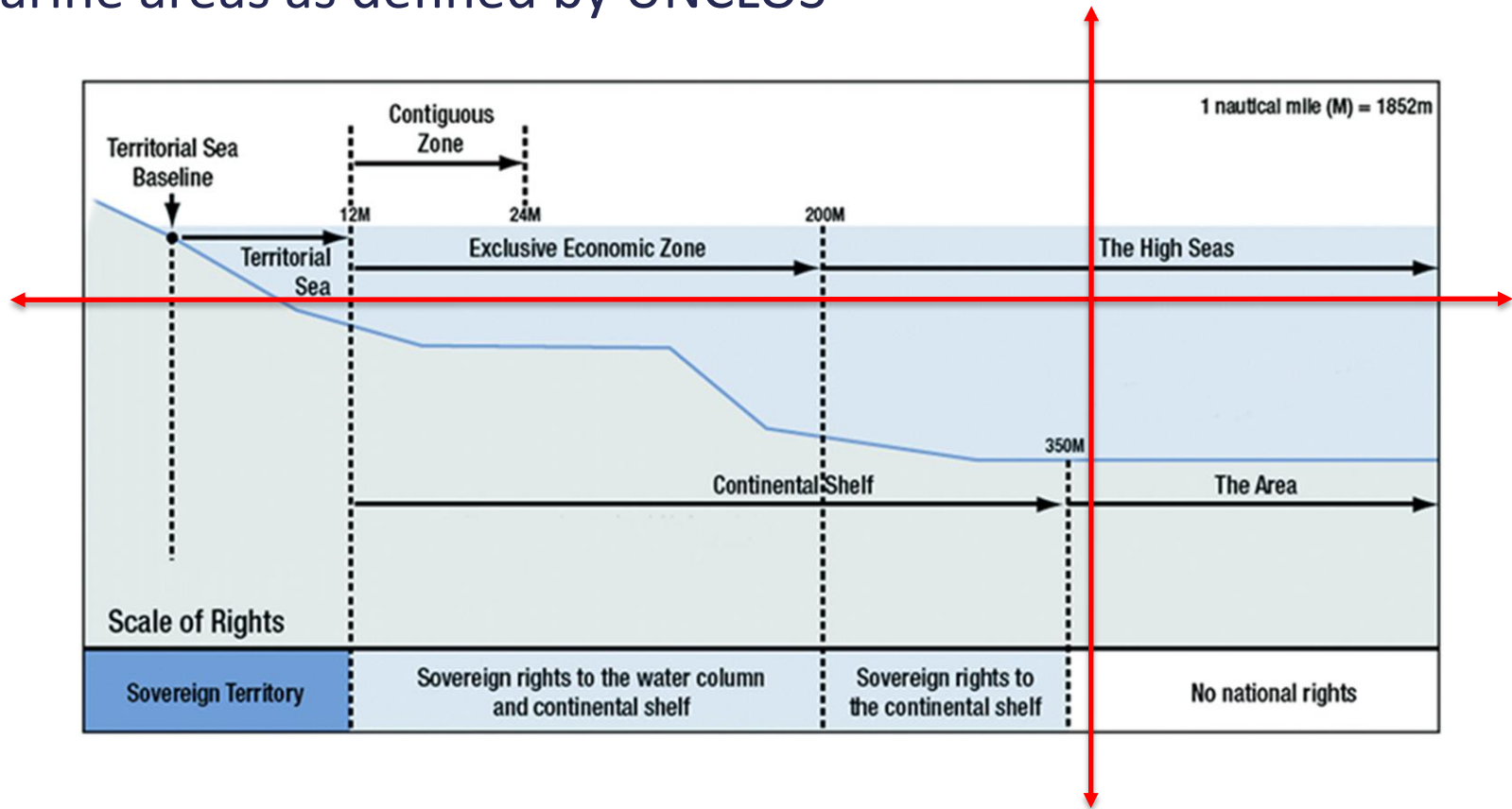
[http://www.grida.no/graphicslib/detail/migratory-routes-for-selected-marine-animals\\_166c#](http://www.grida.no/graphicslib/detail/migratory-routes-for-selected-marine-animals_166c#)



<http://www.birdlife.org/worldwide/programme-additional-info/migratory-birds-and-flyways>

# UNCLOS Marine Zoning

\* Marine areas as defined by UNCLOS



# Aim of study:

- \* Identify ecological linkages
- \* Provide examples of connectivity - case studies
- \* Highlight important areas which may benefit from area-based planning
- \* Identify ABNJ features that may provide benefits to countries



# Connectivity Study - Process

- \* Regional consultation
  - \* Review the focus of the study
  - \* Identification of case studies
  
- \* Expert analysis
  - \* Regional expert consultation via Forum for Heads of Academic Research Institutions (FARI)
  - \* Duke University input through their existing work on a migratory mammal database
  - \* UNEP-WCMC – collate report and publish



# Connectivity Study - Focus

- \* Patterns of primary productivity
- \* Economically important fisheries
- \* Charismatic megafauna (e.g. sharks, whales, turtles, birds)
- \* Governance and management



# Discussion

## Metadata

- \* Do you have any comments on the methodology?
- \* Are there any other suggested channels for identification of ABNJ data

## Connectivity

- \* Do you have any comments on the methodology?
- \* Does the study focus on the areas you would have an interest in?

# Thank you for listening

For more information please contact:

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