



Convention on
Biological Diversity

SBSTTA 17 Plenary Panel, 15 October, ICAO, Montreal

Using scientific data to inform the description and use of EBSAs

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Disclaimer

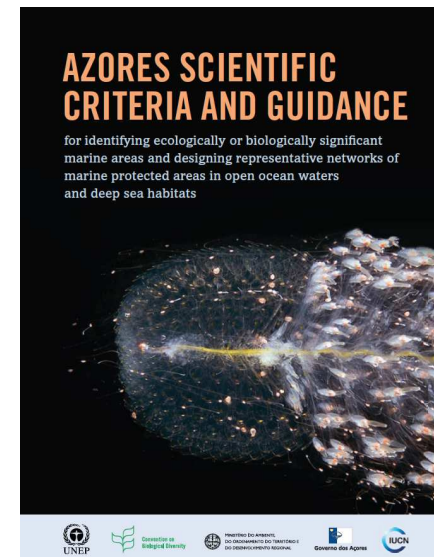
The designations employed and the presentation of material in these slides do not imply the expression of any opinion whatsoever on the part of the Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Ecologically or Biologically Significant Areas (EBSAs): Criteria

EBSAs are not MPAs!

1. Uniqueness or rarity
2. Special importance for life history of species
3. Importance for threatened, endangered or declining species and/or habitats
4. Vulnerability, fragility, sensitivity, slow recovery
5. Biological productivity
6. Biological diversity
7. Naturalness

After COP10 it was decided that the description of sites meeting the EBSA criteria would be conducted by parties through regional scientific workshops.



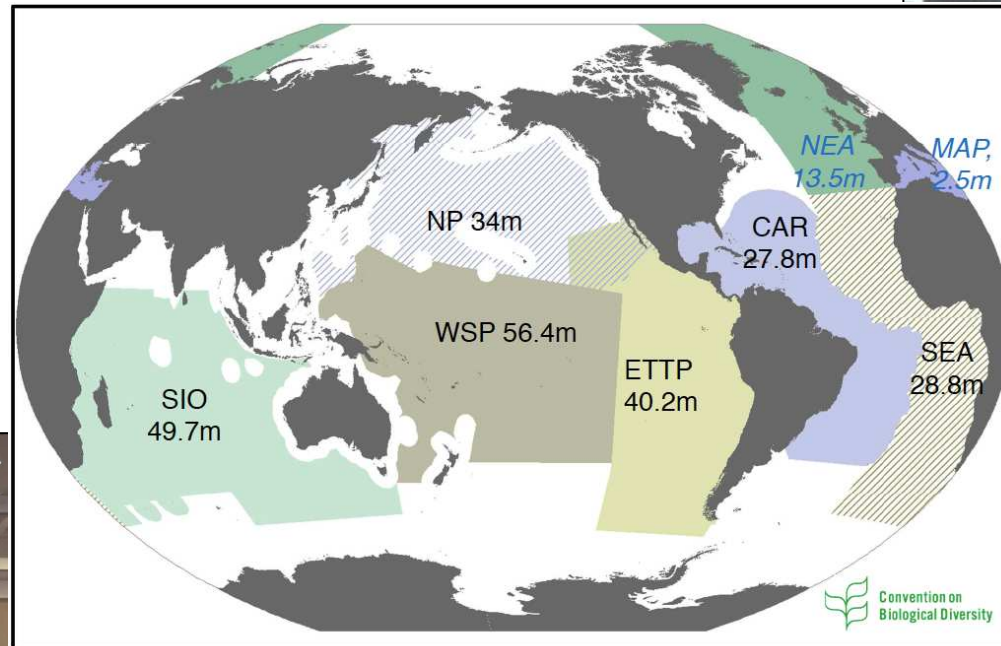
2008 COP9 criteria established

Regional EBSA Workshops

Synthesis of best available *scientific* and *technical information* to support expert scientific judgment on description of areas meeting EBSA criteria

~75% of ocean area covered

A regional scientific expert process



**6 CBD EBSA workshops
Nov 2011 - April 2013**

Workshop Process

Submissions of potential areas meeting EBSA criteria

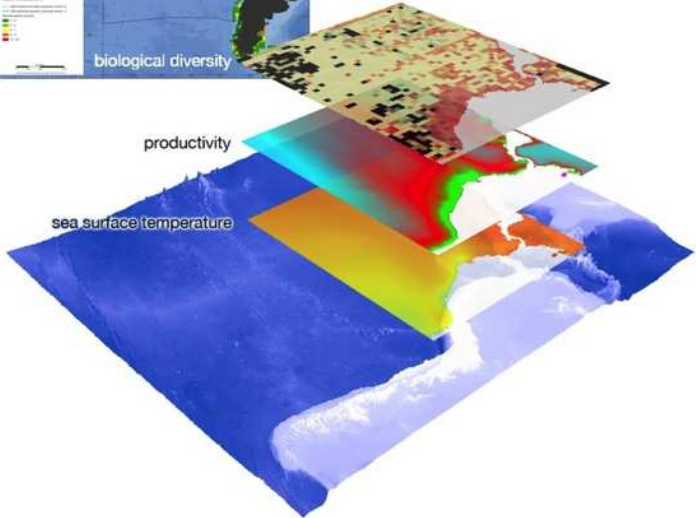
Compilation of scientific data & information

Two methods for bringing data into the process

Workshop description of areas meeting EBSA criteria

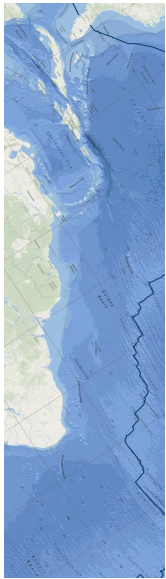
Adoption of workshop report

Final report



Compilation of scientific data & information


~70 GIS data layers



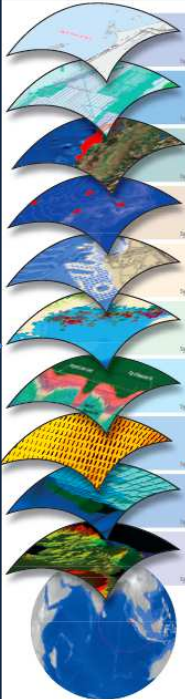
Data to inform the CBD Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas in the Wider Caribbean and Western Mid-Atlantic

Patrick Halpin, Jesse Cleary, Corrie Curtice, Ben Donnelly
February 20, 2012

Prepared for the Secretariat of the Convention on Biodiversity (SCBD)



Overlay & Analysis

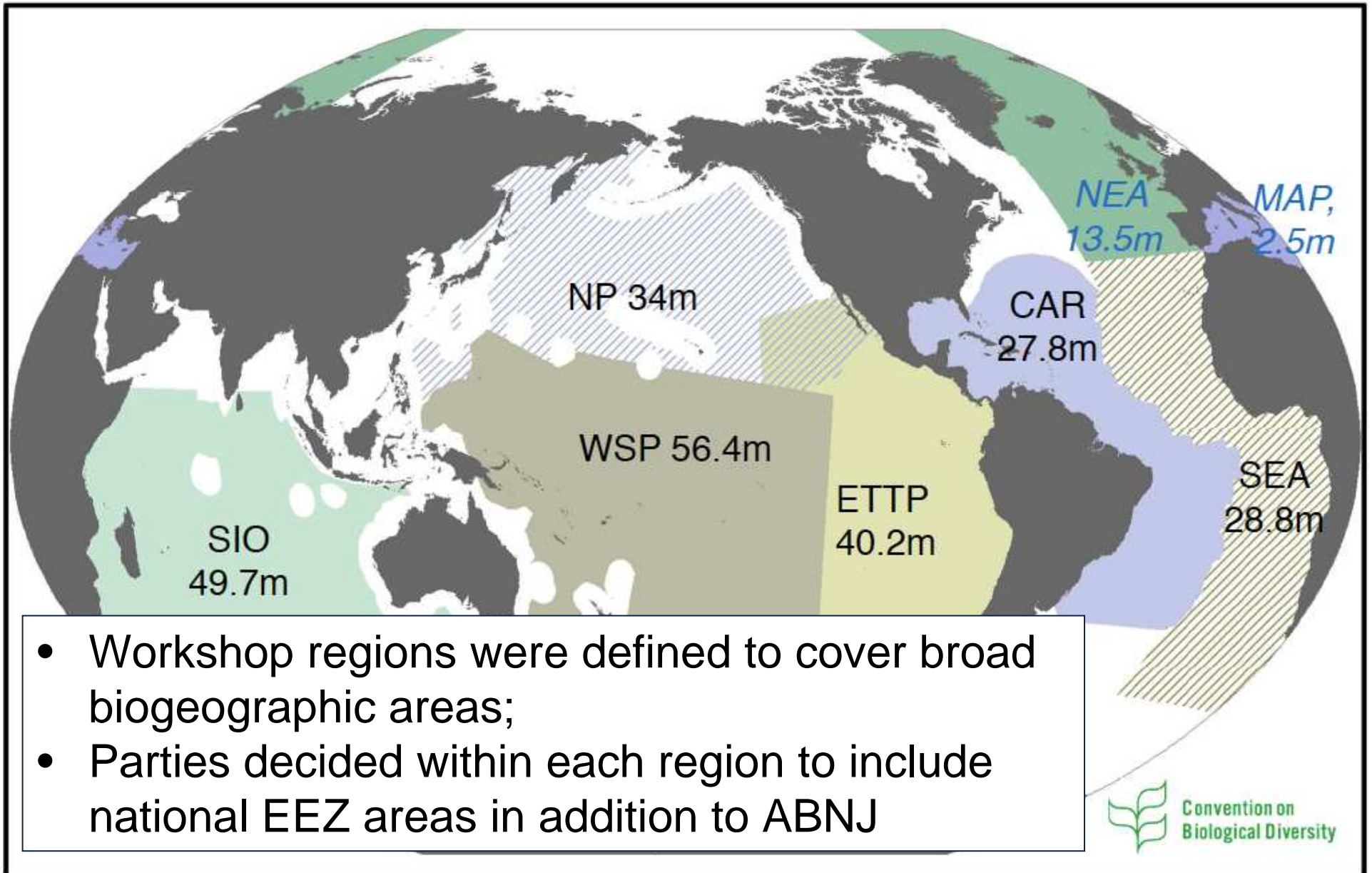


The Thematic Layers

- Depth**
Description: Bathymetric data used to create depth contours and depth profiles for habitat mapping, species planning, and other marine science applications.
Data Source: Derived from coastal survey maps, nautical charts, and other sources.
Representation: Contour lines and shaded relief.
Scale: Can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Time Series Data**
Description: Time series data used to track changes in marine resources, habitats, and other indicators over time.
Data Source: Derived from satellite imagery, field observations, and other sources.
Representation: Time series plots and maps.
Scale: Time series data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Temperature**
Description: Sea surface temperature (SST) data used to track changes in ocean temperature and other indicators over time.
Data Source: Derived from satellite imagery and other sources.
Representation: Color-coded maps and time series plots.
Scale: SST data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Salinity**
Description: Sea surface salinity (SSS) data used to track changes in ocean salinity and other indicators over time.
Data Source: Derived from satellite imagery and other sources.
Representation: Color-coded maps and time series plots.
Scale: SSS data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Chlorophyll a**
Description: Chlorophyll a concentration (Chl a) data used to track changes in phytoplankton biomass and other indicators over time.
Data Source: Derived from satellite imagery and other sources.
Representation: Color-coded maps and time series plots.
Scale: Chl a data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Sea Level Rise**
Description: Sea level rise (SLR) data used to track changes in sea level and other indicators over time.
Data Source: Derived from satellite altimetry and other sources.
Representation: Color-coded maps and time series plots.
Scale: SLR data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Marine Mammals**
Description: Marine mammal distribution data used to track changes in marine mammal populations and other indicators over time.
Data Source: Derived from field observations and other sources.
Representation: Point maps and range maps.
Scale: Marine mammal data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Marine Birds**
Description: Marine bird distribution data used to track changes in marine bird populations and other indicators over time.
Data Source: Derived from field observations and other sources.
Representation: Point maps and range maps.
Scale: Marine bird data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Marine Invertebrates**
Description: Marine invertebrate distribution data used to track changes in marine invertebrate populations and other indicators over time.
Data Source: Derived from field observations and other sources.
Representation: Point maps and range maps.
Scale: Marine invertebrate data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.
- Marine Fish**
Description: Marine fish distribution data used to track changes in marine fish populations and other indicators over time.
Data Source: Derived from field observations and other sources.
Representation: Point maps and range maps.
Scale: Marine fish data can be presented in various scales, but typically 1:50,000 to 1:100,000.
Map Scale: Typical map scale range from 1:50,000 to 1:100,000.
Map Accuracy: Typical map scale range from 1:50,000 to 1:100,000.
Map Projection: UTM or other standard map projections.

For consistency, similar data collection and technical support were provided at each workshop.

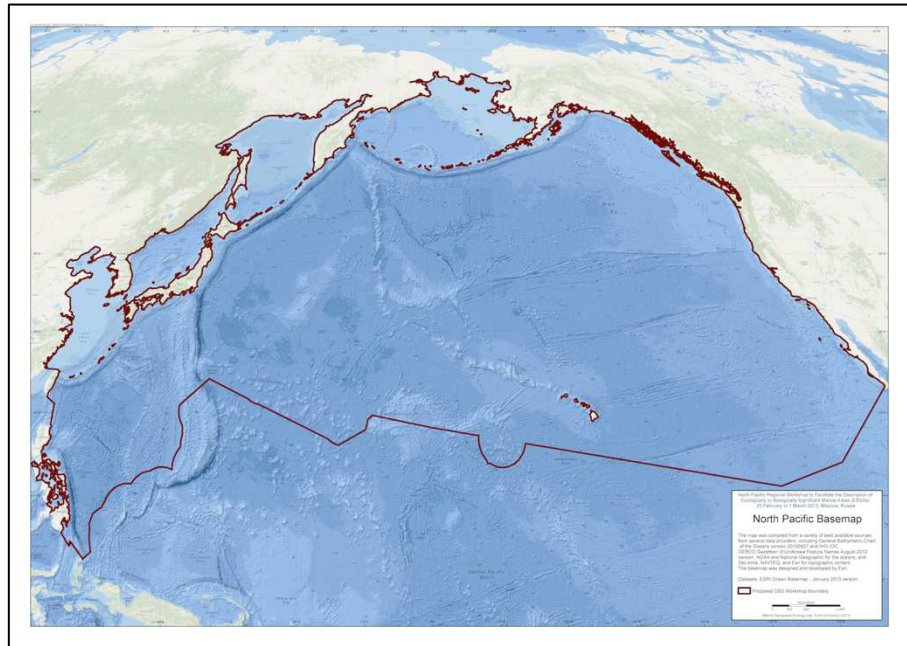
Step 1: definition of workshop regions



Step 2: Develop baseline data

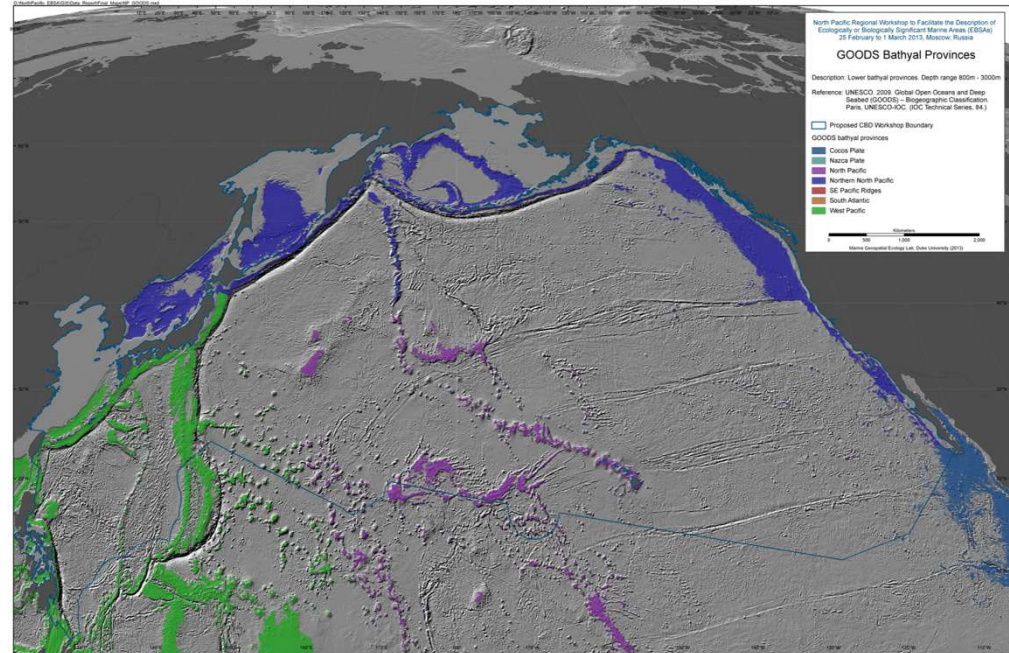
Data types

- Biogeography
- Biological Data
- Physical Data

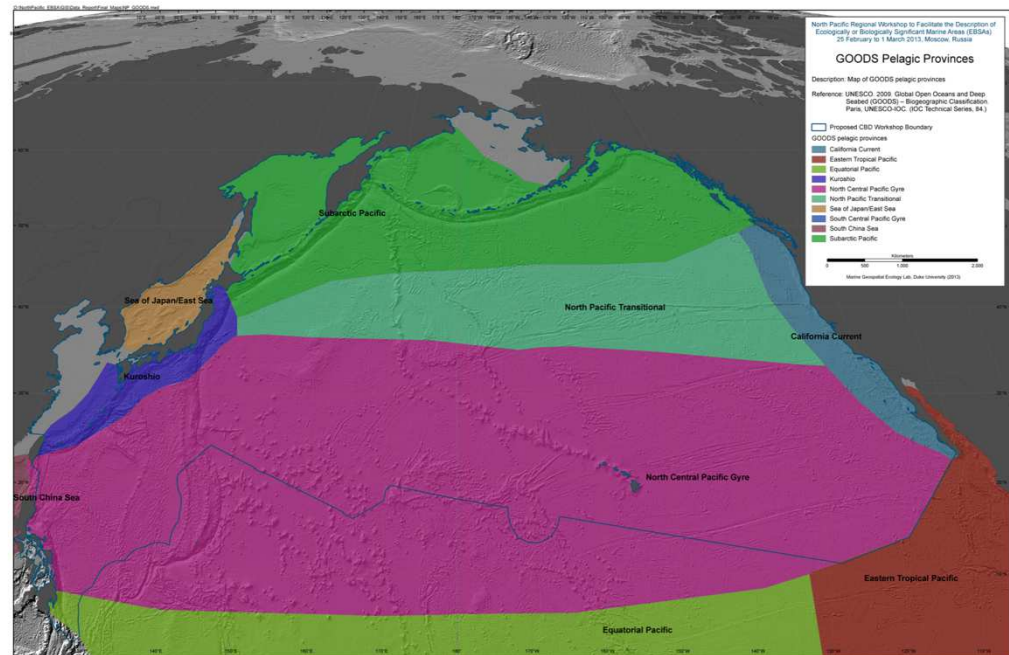


Biogeography

GOODS:
Global Open Oceans &
Deep Seas - Bathyal



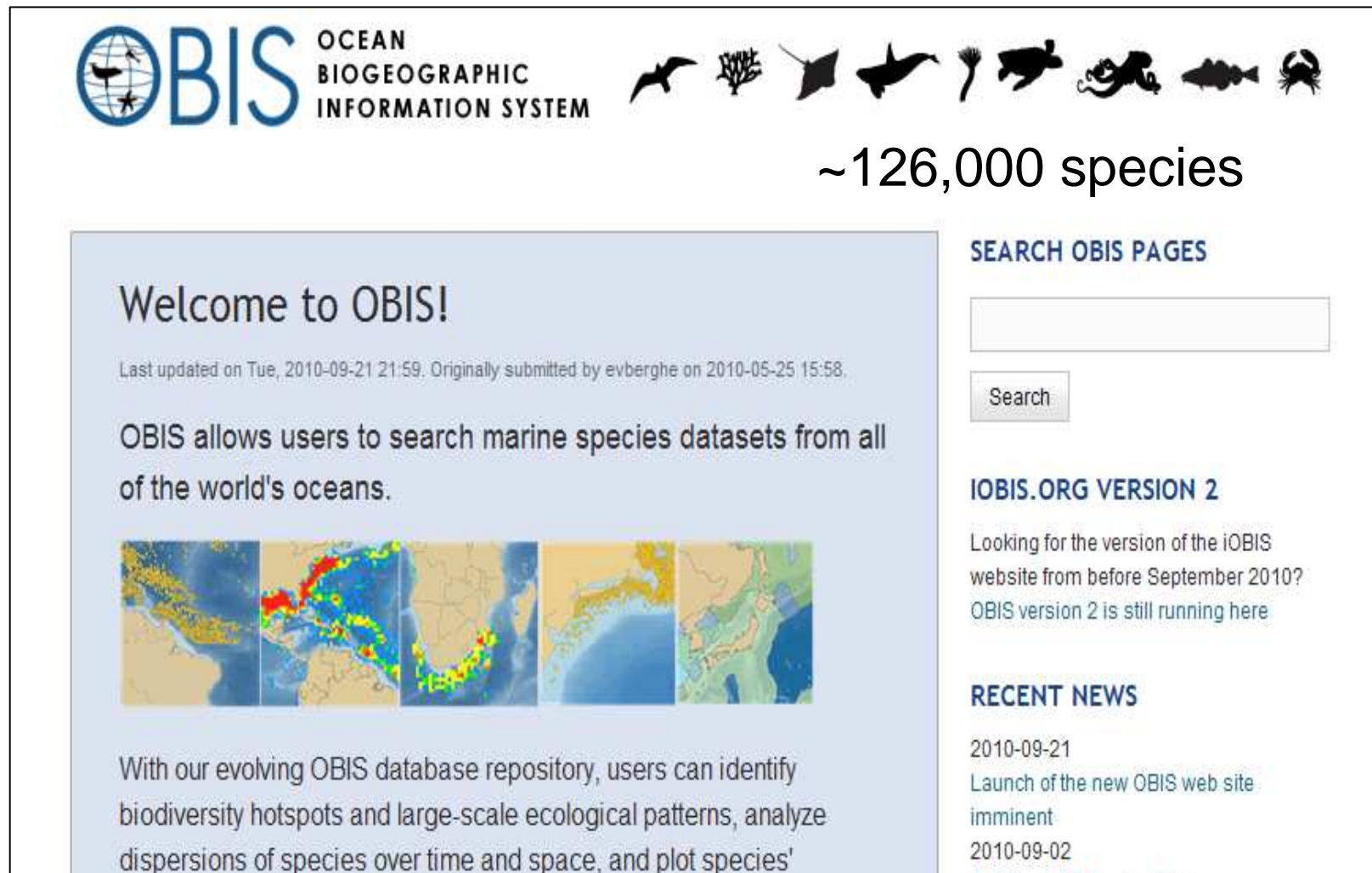
GOODS:
Global Open Oceans &
Deep Seas - Pelagic



Biological Data

Ocean Biogeographic Information System

>37,000,000 ocean biogeographic records on-line



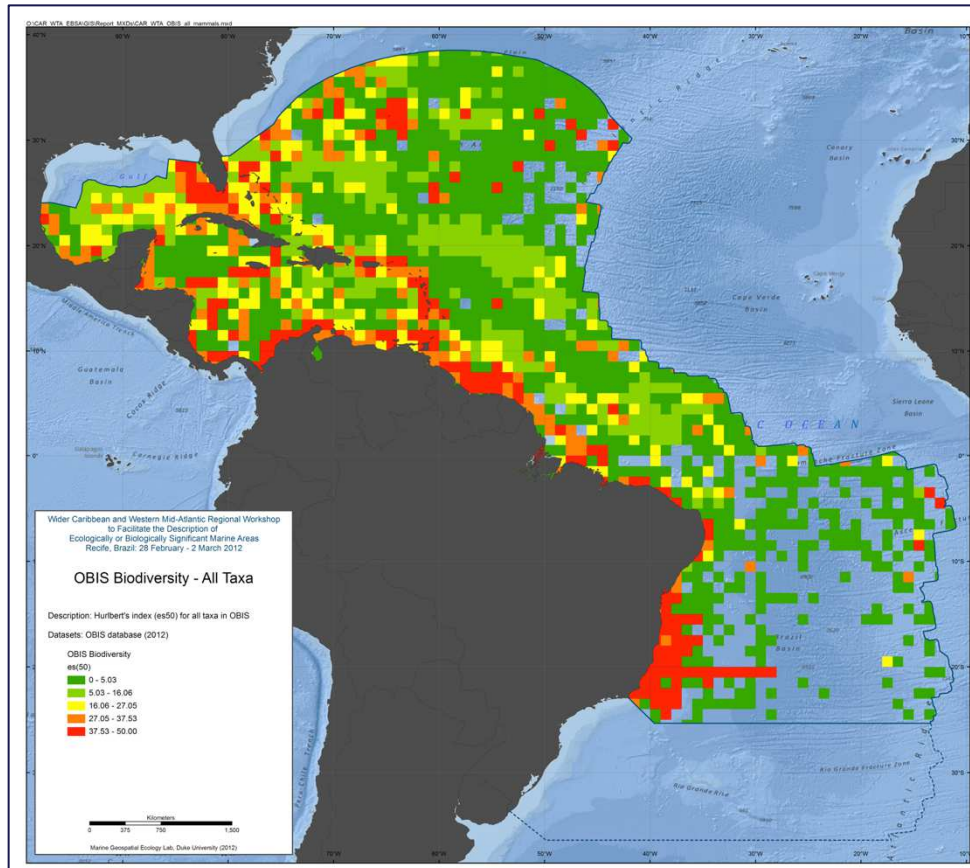
The screenshot shows the OBIS website homepage. At the top left is the logo for OBIS (Ocean Biogeographic Information System) with the text "OBIS OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM". To the right of the logo is a horizontal row of icons representing various marine organisms: a bird, coral, a ray, a shark, a squid, a turtle, a crab, and a fish. Below the icons, the text "~126,000 species" is displayed. The main content area is divided into two columns. The left column has a light blue background and contains the text "Welcome to OBIS!" followed by a small line of text: "Last updated on Tue, 2010-09-21 21:59. Originally submitted by evberghe on 2010-05-25 15:58." Below this is the text "OBIS allows users to search marine species datasets from all of the world's oceans." and a row of five small maps showing global biodiversity hotspots. At the bottom of this column is the text: "With our evolving OBIS database repository, users can identify biodiversity hotspots and large-scale ecological patterns, analyze dispersions of species over time and space, and plot species'". The right column has a white background and contains a search bar with the text "SEARCH OBIS PAGES" above it, a search input field, and a "Search" button. Below the search bar is the text "IOBIS.ORG VERSION 2" and a paragraph: "Looking for the version of the iOBIS website from before September 2010? OBIS version 2 is still running here". At the bottom of the right column is the text "RECENT NEWS" followed by two news items: "2010-09-21 Launch of the new OBIS web site imminent" and "2010-09-02".

Biological Data

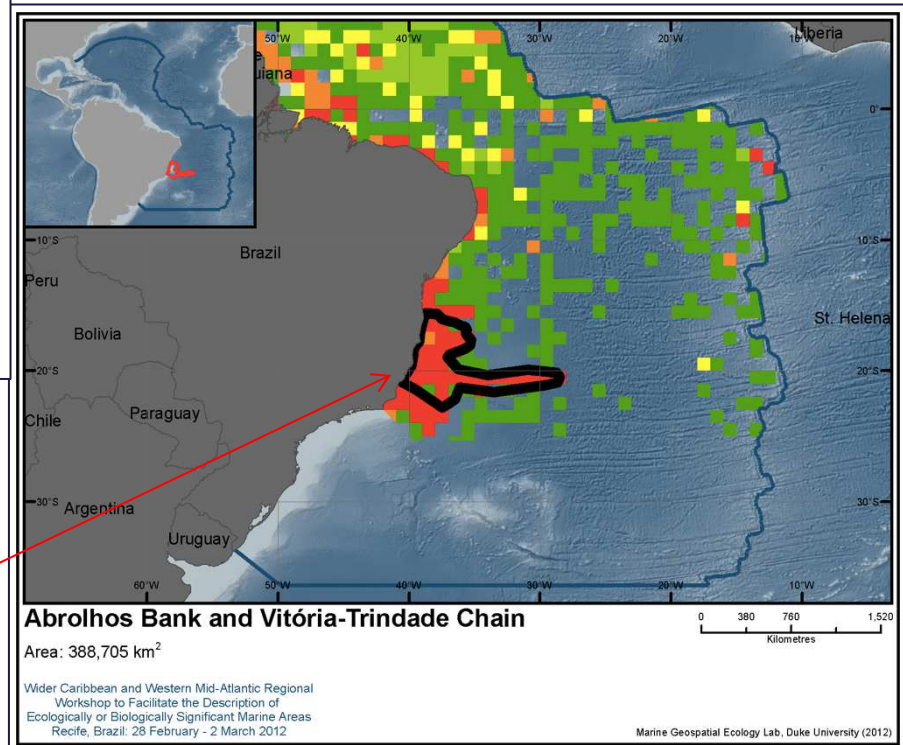
OBIS Biodiversity data

Biological Diversity all taxa

Wider Caribbean and Western
Mid-Atlantic workshop, Recife,
Brazil, February 2012

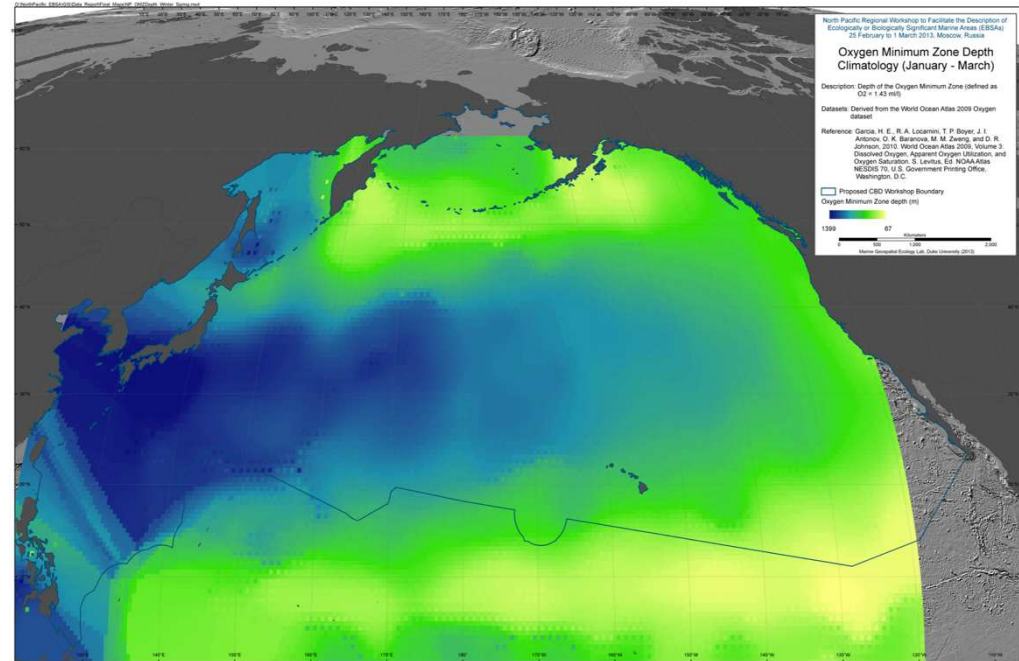


Proposed site meeting EBSA criteria:
Abrolhos Bank & Vitória-Trindade Chain
Described in-part due to high regional biodiversity as depicted using OBIS data.

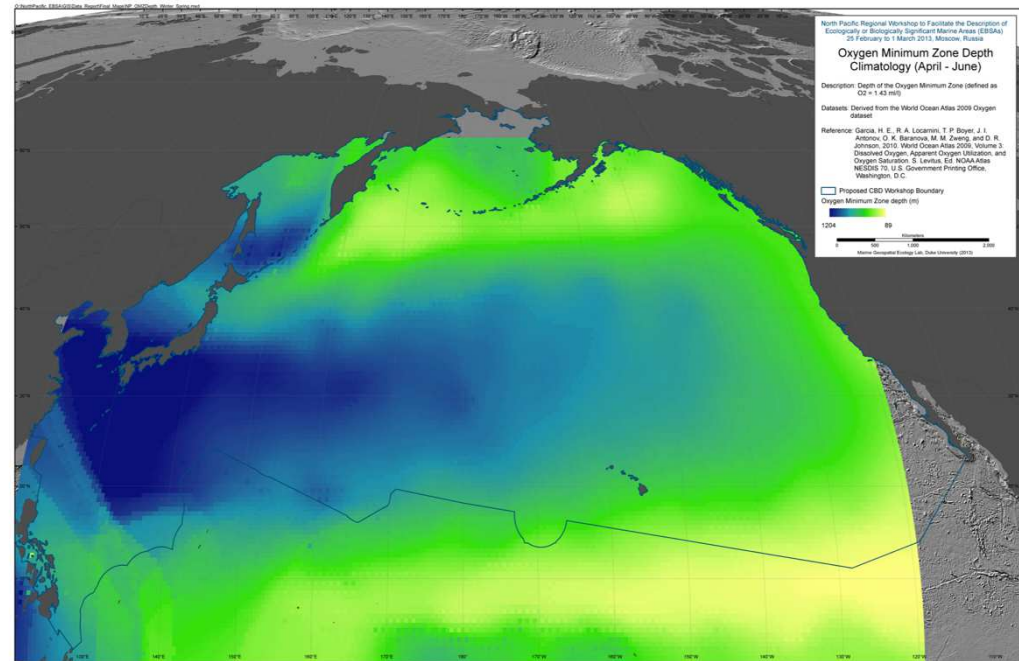


Physical Data

Oxygen Minimum Zone
(1.43ml/l) depth (m)
(Jan - Mar)



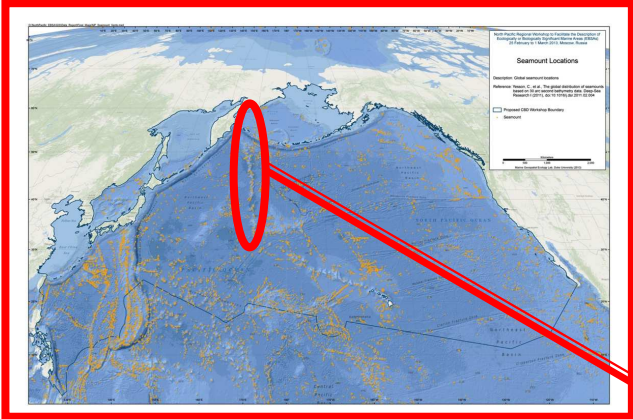
Oxygen Minimum Zone
(1.43ml/l) depth (m)
(Apr - Jun)



Fixed and dynamic features defining EBSAs

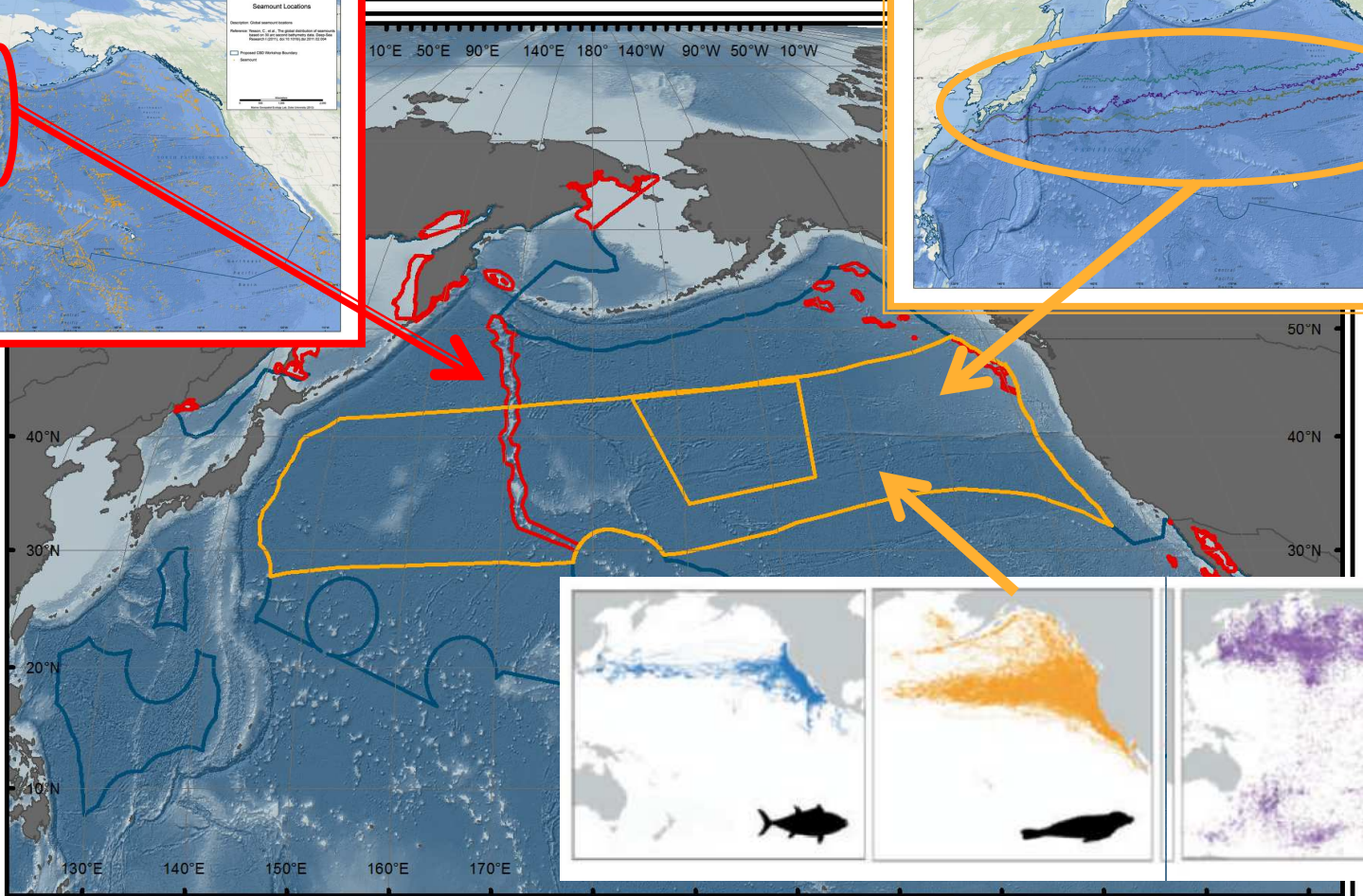
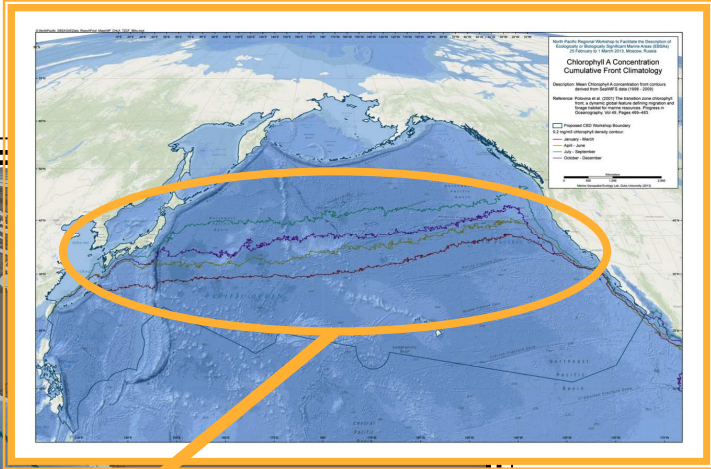
Fixed:

Emperor Seamount Chain

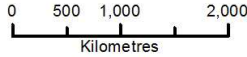


Dynamic:

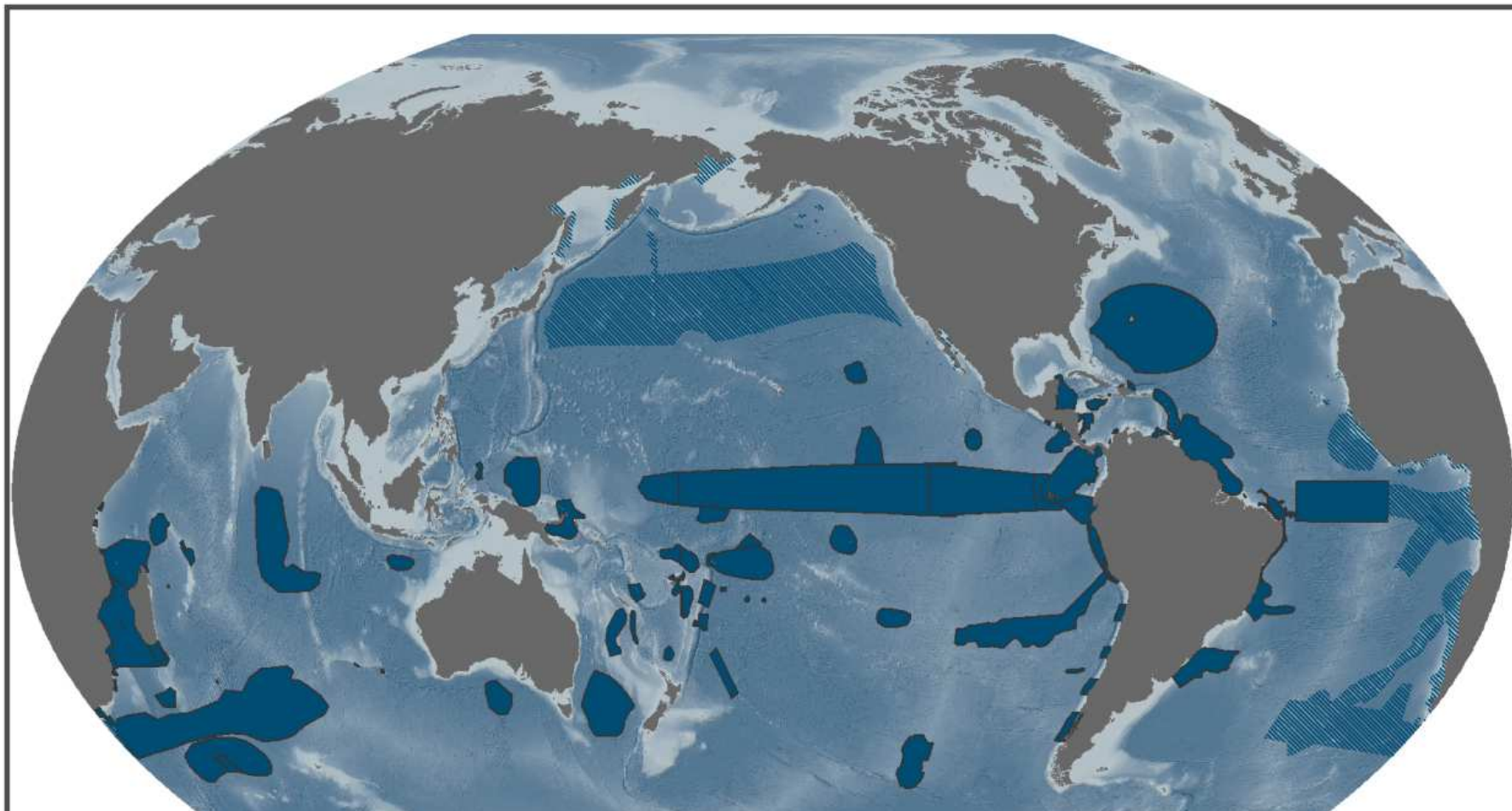
North Pacific Transition Zone



Areas Described to Meet the EBSA Criteria



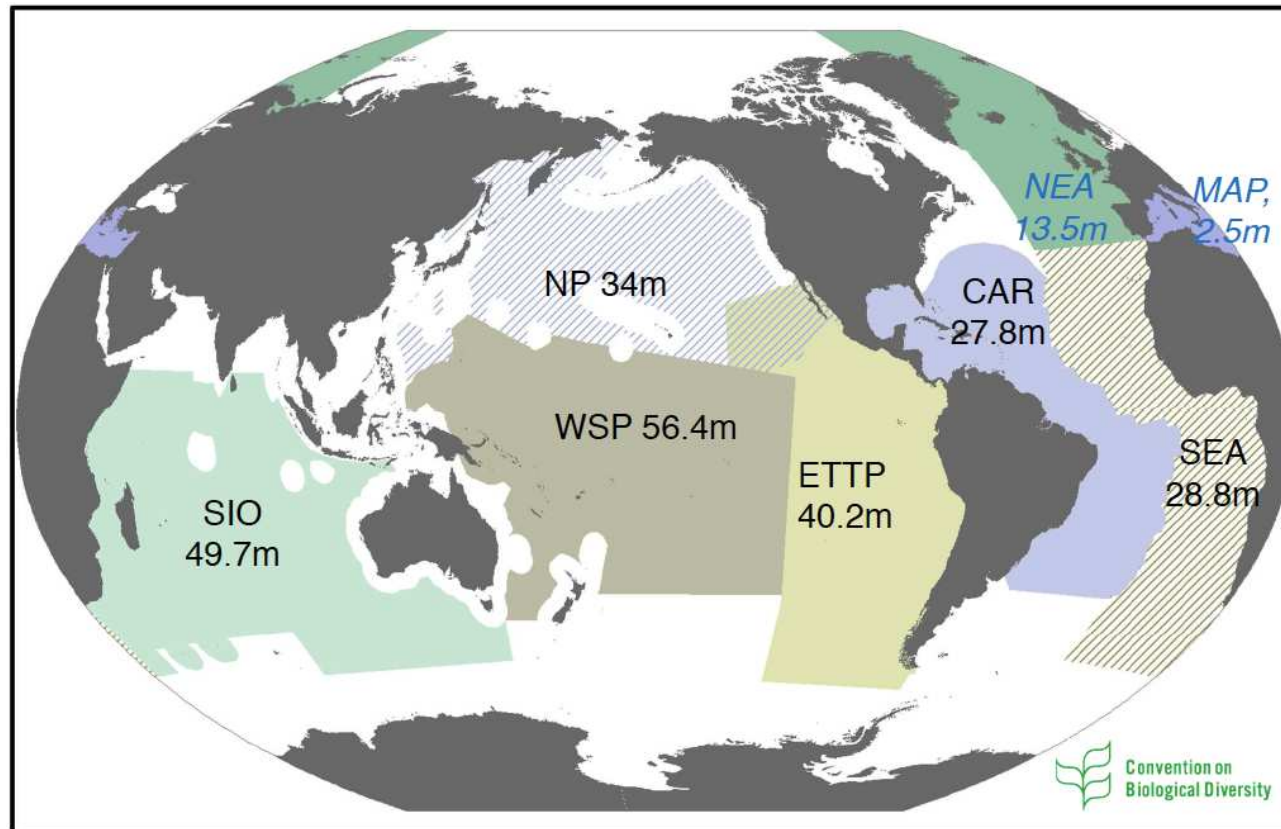
Areas meeting CBD Scientific Criteria for Ecologically or Biologically Significant Marine Areas (EBSAs, annex 1 to decision IX/20) : areas in ABNJ



Disclaimer: This is an information ONLY for the presentation at the SBSTTA 17 Plenary Event. Some information on the map is yet to be finalized. This is NOT for QUOTATION or Distribution.

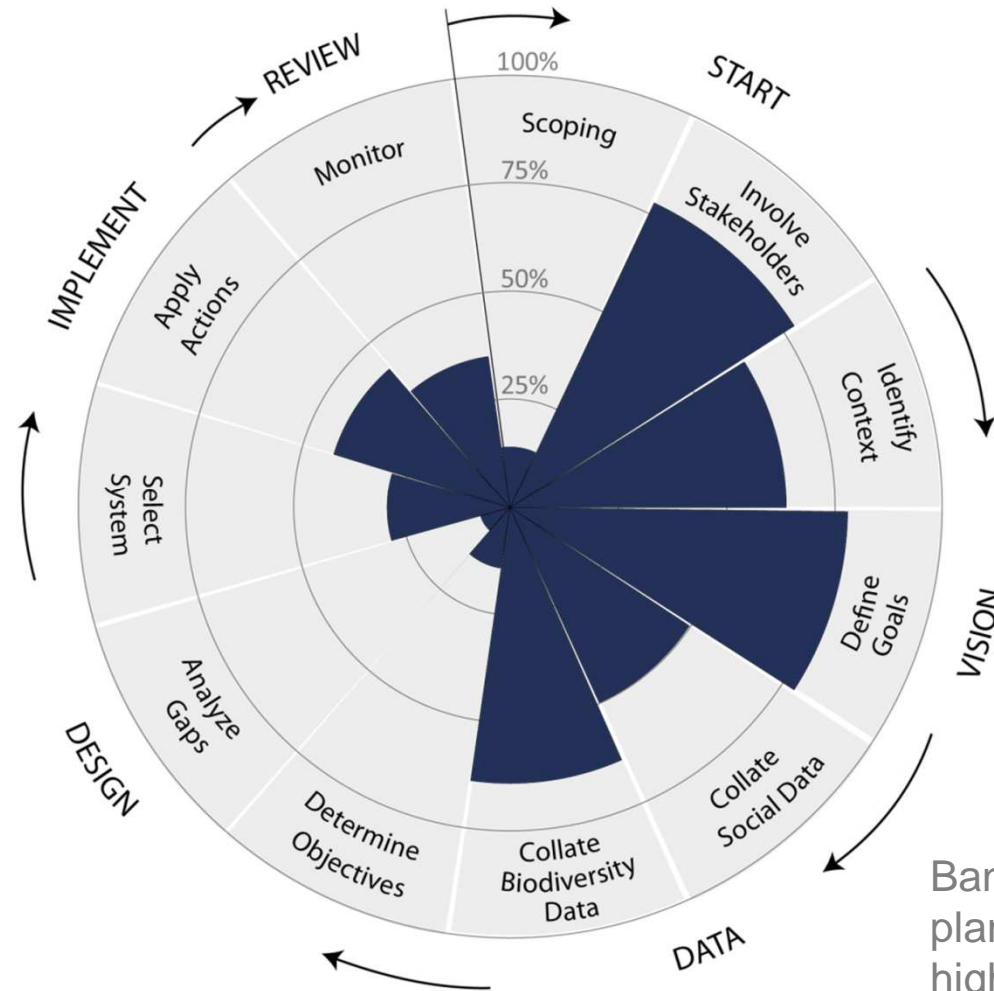
Next steps:

- Move from scientific expert process to more systematic assessment of representative coverage and types of sites;
- Assess threats, pressures and status level for EBSA sites;
- Evaluate future management priorities





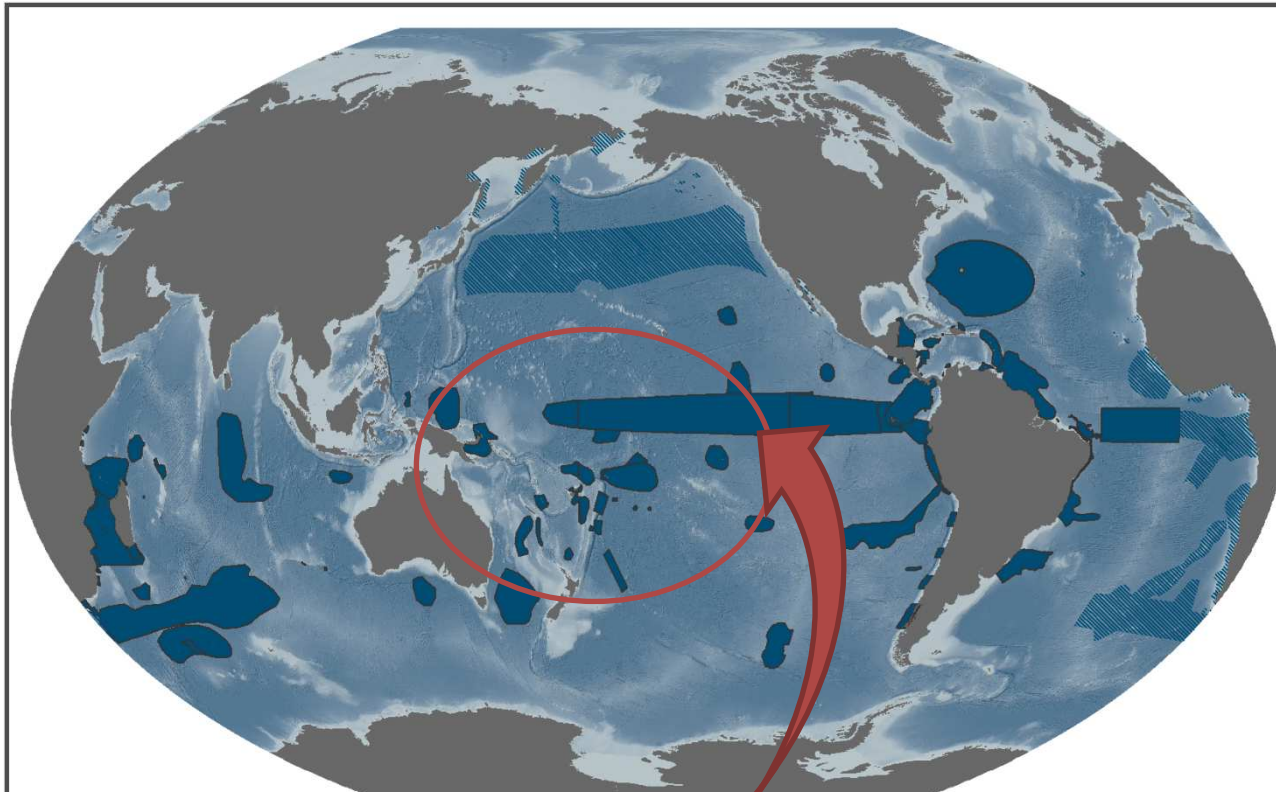
What Happens Now?



How could the scientific information used to describe EBSA be used to support biodiversity conservation, management and sustainable use?

7 existing high seas governance agreements ranked against systematic conservation planning criteria

Ban et al. 2013. Systematic conservation planning: A better recipe for managing the high seas for biodiversity conservation and sustainable use. Conservation Letters



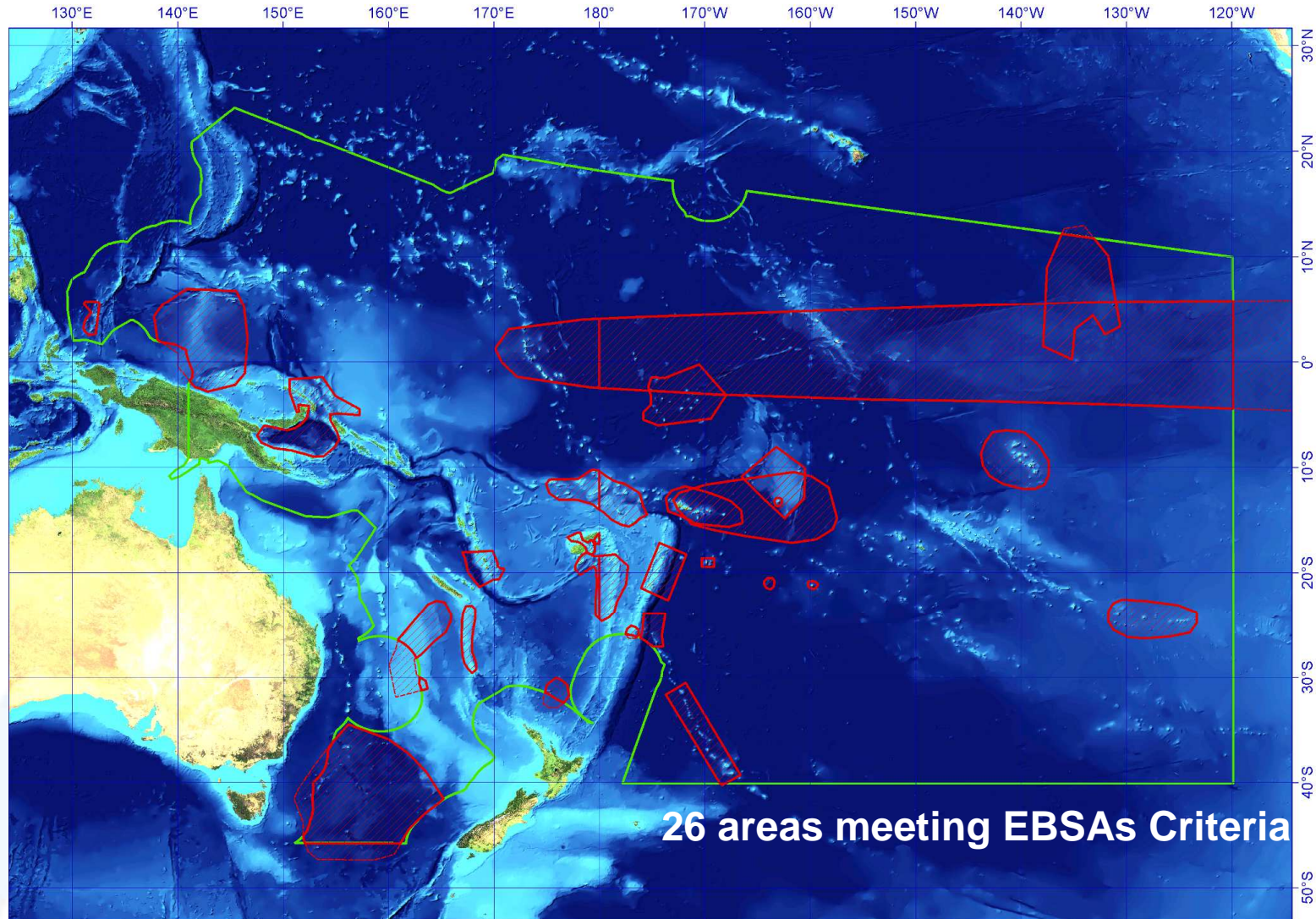
Western South Pacific Example (analysis undertaken by CSIRO-Australia)

- Scientific information about areas meeting EBSA criteria
- Geo-referenced information on threats and pressures



Support the application of **the ecosystem approach and precautionary approach** to the conservation and sustainable use of marine biodiversity

What are the pressures facing EBSAs?



Interaction between Pressures and Ecological/Biological Values

	Pelagic Fisheries	Benthic Fisheries	Shipping	Mining	Climate Change	Cyclones
New Hebrides Trench	Red	Light Blue	Green	Light Blue	Yellow	Red
Seamounts of West Norfolk	Green	Yellow	Yellow	Light Blue	Yellow	Green
Louisville Ridge	Green	Red	Light Blue	Light Blue	Green	Light Blue
Central Pacific Equatorial Productivity Zone	Yellow	Light Blue	Green	Yellow	Red	Light Blue
Ua Puakaoa Seamounts	Green	Light Blue	Light Blue	Light Blue	Yellow	Yellow





Forming the basis for ecosystem based management

EBSA can be used as the building block to begin developing ecosystem based management

- Identifying values (EBSA)
- Determining objectives
- Identifying and mapping pressures
- Develop management actions
- Establishment of monitoring
 - Cause and Effect Modelling
 - Selection of Indicators
 - Prioritise Indicators
- Implementation
- Evaluation and Review



SUMMARY

- A fractured long-winded process
- But real progress has been made
- Defining EBSAs is a first step in gaining international acceptance for managing ABNJ
- EBSAs are not MPAs, but areas that are considered to be of value by international community
- The EBSA process facilitated regional capacity building including designation of MPAs within EEZ
- Overlaying threats on EBSAs may help the international community understand risks and options
- EBSAs provide potential focus for future research and monitoring
- What else can we do?