生物多様性の国際モニタリング
International Monitoring of Biodiversity

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Contents

- Scientific data is essential for the conservation of biodiversity
  - Example: use of data for conservation of marine biodiversity in high seas
- Current available data and international efforts for
  - Increasing amount of available data
  - Increasing availability of existing data

Use of Scientific Data in CBD

- Decision COP IX/20 (Marine and coastal biodiversity: 14. Designing network of MPAs)
  - Adopts the scientific criteria, as contained in annex I to the present decision, for identifying ecologically or biologically significant marine areas in need of protection, and the scientific guidance, contained in annex II to the present decision, for designing representative networks of marine protected areas, as recommended by the Expert Workshop on Ecological Criteria and Biogeographic Classification Systems for Marine Areas in Need of Protection

Scientific Criteria for identifying ecologically or biologically significant marine areas

- Uniqueness or rarity
- Special importance for life history stages
- Importance for threatened, endangered or declining species and/or habitats
- Vulnerability, fragility, sensitivity or slow recovery
- Biological productivity
- Biological diversity
- Naturalness

Example of proposed MPA in the North Mid Atlantic Ridge

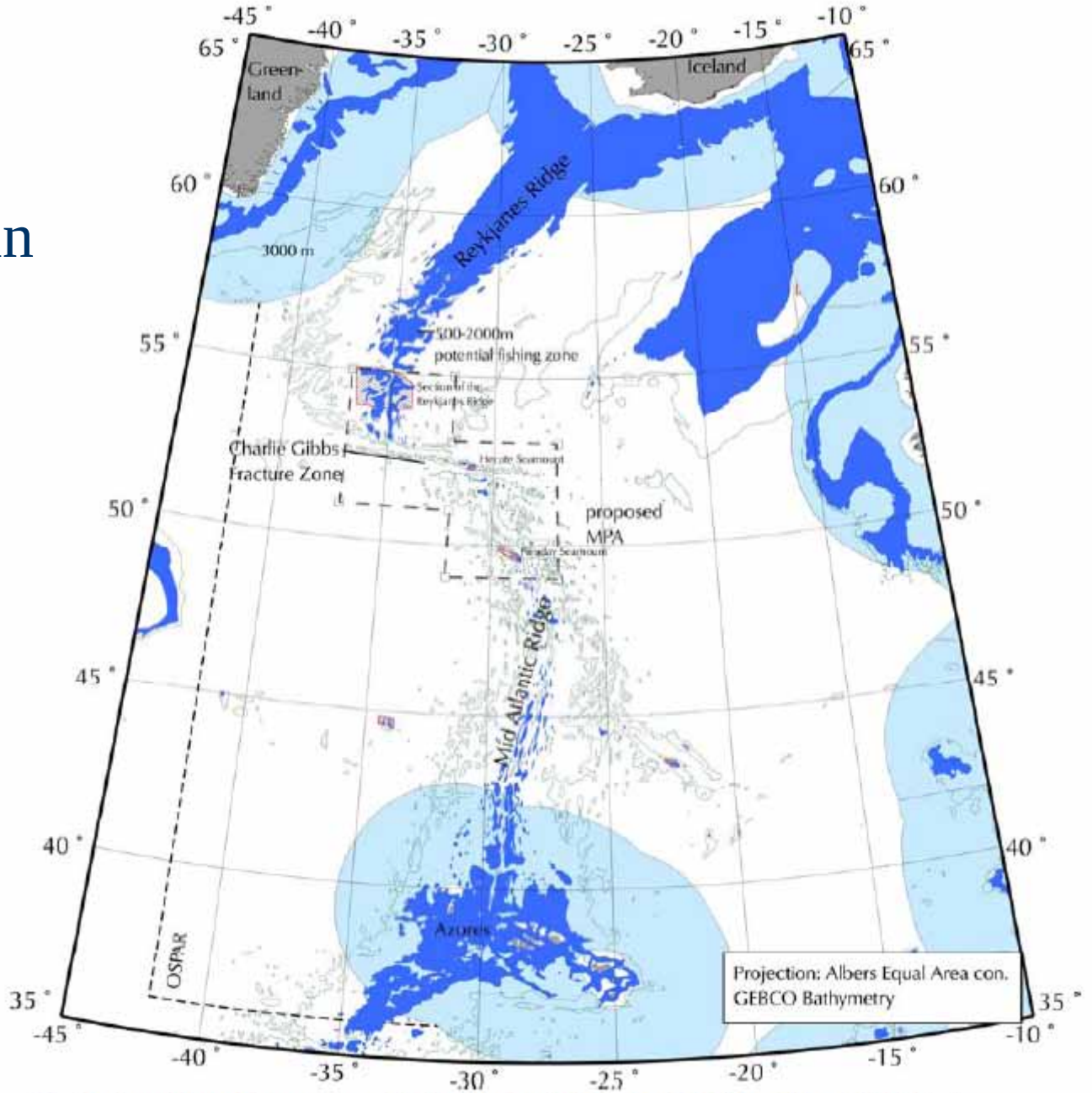


Fig. 1: Location of the proposed MPA on the Mid-Atlantic Ridge. The NEAFC closures within the proposed area are outlined in red (Hecate, Faraday Seamounts and Reykjanes Ridge).

Census of Marine Life

A decade-long program (2000-2010)
to assess and explain marine life's
diversity, distribution & abundance
- past, present & future

The Known, the Unknown, the Unknowable

The Census of Marine Life: Making ocean life count

Grand Challenge Questions
CoML Components

1) What did live in the oceans?

History of Marine Animal Populations (HMAP)

2) What does live in the oceans?

Ocean Realm Field Projects (Protocols & SCOR Technologies)

⬇

Ocean Biogeographic Information System (OBIS)

3) *What will live in the oceans?*

Future of Marine Animal Populations (FMAP)

CENSUS OF MARINE LIFE

New Ocean Realm Projects

Human Edges

- NaGISA - Natural Geography **In Shore** Areas
- CReefs - Coral **Reef** Ecosystems
- GoMA - Gulf of Maine Area Program **(Regional Ecosystem)**
- POST - Pacific Ocean **Shelf** Tracking

Hidden Boundaries

- CoMargE - Continental **Margins** Ecosystems
- CeDAMar - Census of Diversity of **Abyssal** Marine Life
- CenSeam - Census of **Seamounts**
- ChEss - Chemosynthetic Ecosystems **(Vents)**

Central Waters

- TOPP - Tagging of Pacific Pelagics **(Top Predators)**
- CMarZ - Census of Marine **Zooplankton**
- MAR-ECO - Mid-Atlantic **Ridge** Ecosystems

Ice Oceans

- ArcOD - **Arctic** Ocean Diversity
- CAML - Census of **Antarctic** Marine Life

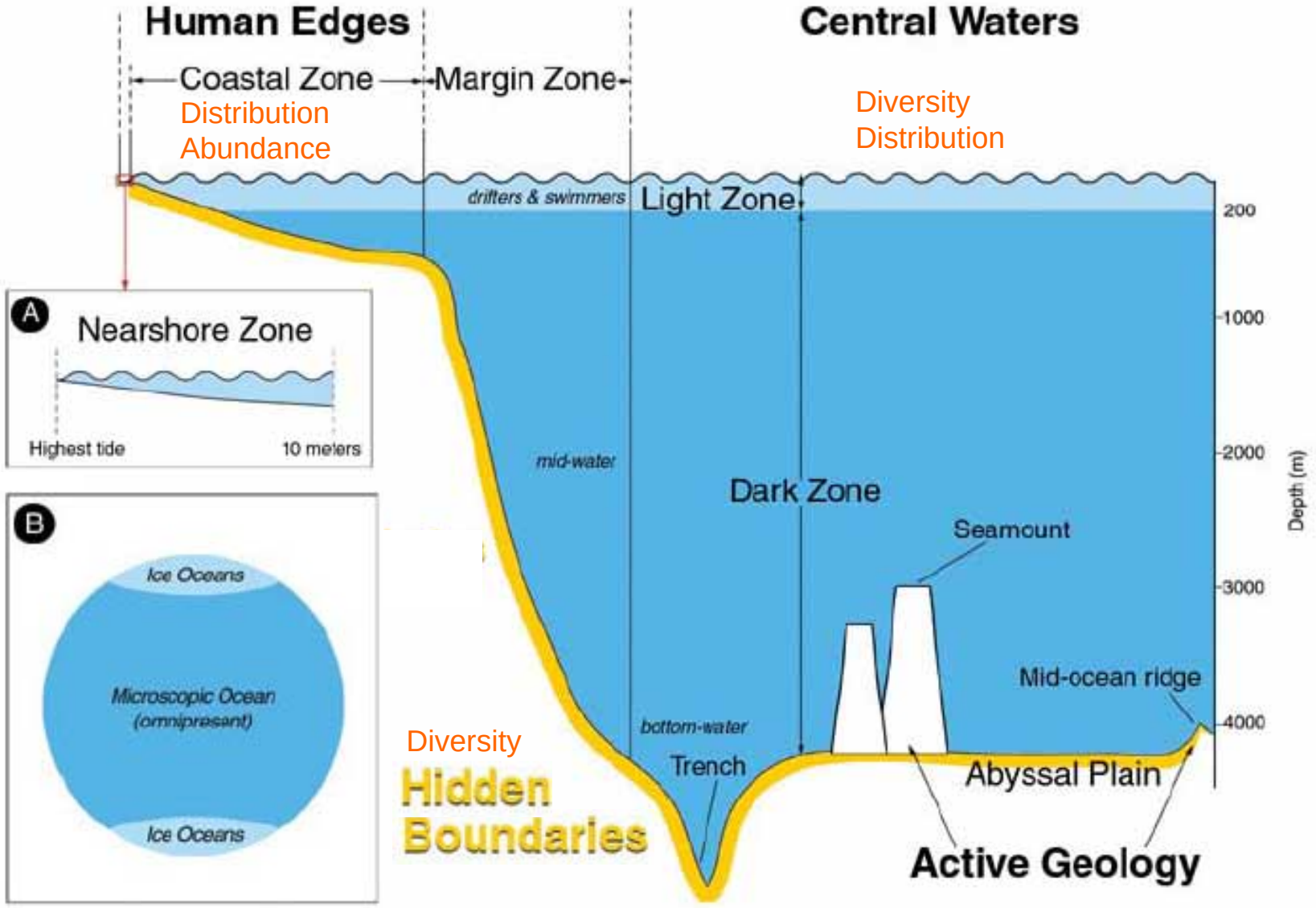
Microscopic Ocean

- ICoMM - International Census of Marine **Microbes**

CENSUS OF MARINE LIFE

Oceans Present – What lives in the oceans?

CoML Ocean Realms & Zones



CENSUS OF MARINE LIFE

CoML can provide

- Global pattern of marine biodiversity
- Past change of marine biodiversity (extinction)
- Prediction of future biodiversity
- Public access to the information of marine biodiversity

Current Project Map

Map of NaGISA Sites and Dreams

Current NaGISA sites (green), by the end of 2006 (red). Over the next 50 years (yellow) we will continue to fill in the global base line that we establish by 2010.

NaGISA started collaboration with Kenya scientists

Participants of the NaGISA meeting collecting samples and testing methodologies during the fieldwork session in Gazi Bay, south coast of Kenya.

Ocean Biogeographic Information System - Windows Internet Explorer

http://iobis.org/

File Edit View Favorites Tools Help

Ocean Biogeographic Information System

Page Tools

OBIS
OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM

Search | Using OBIS | About the Data | About OBIS | News |

EXPLORE DATA ON LOCATIONS OF MARINE ANIMALS AND PLANTS

Obtain data tables, maps and predict distributions using environmental information

13.6 million records of 80000 species from 231 databases

SEARCH BY NAME

"Great white shark" or "Carcharodon" or "Carcharodon carcharias"

Search »

Advanced Search including date, depth, dataset Browse by taxonomic groups

SEARCH BY GEOGRAPHY

Click on the map to set the query box 5° search area

Search »

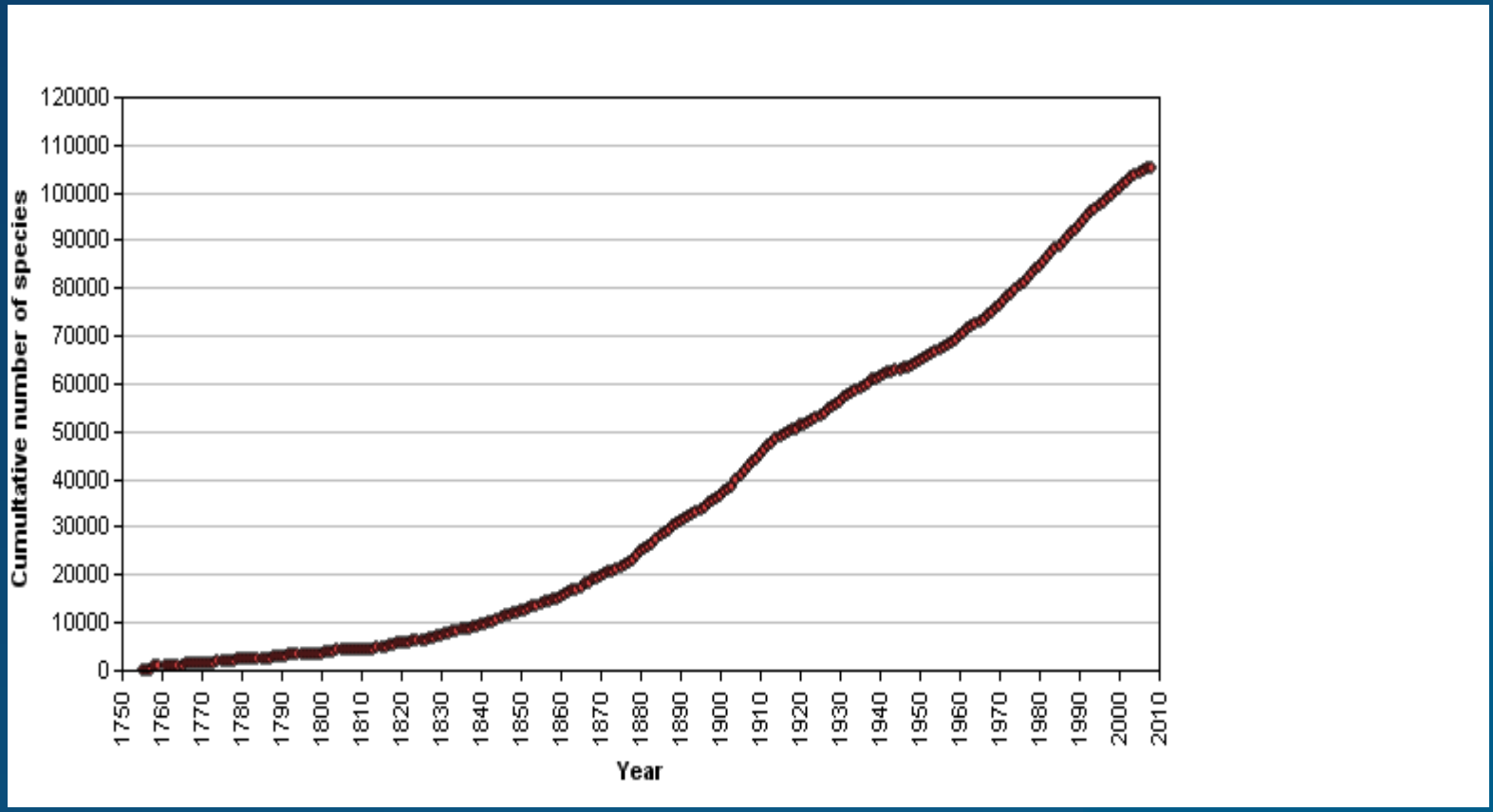
Done

Internet

100%

CENSUS OF MARINE LIFE

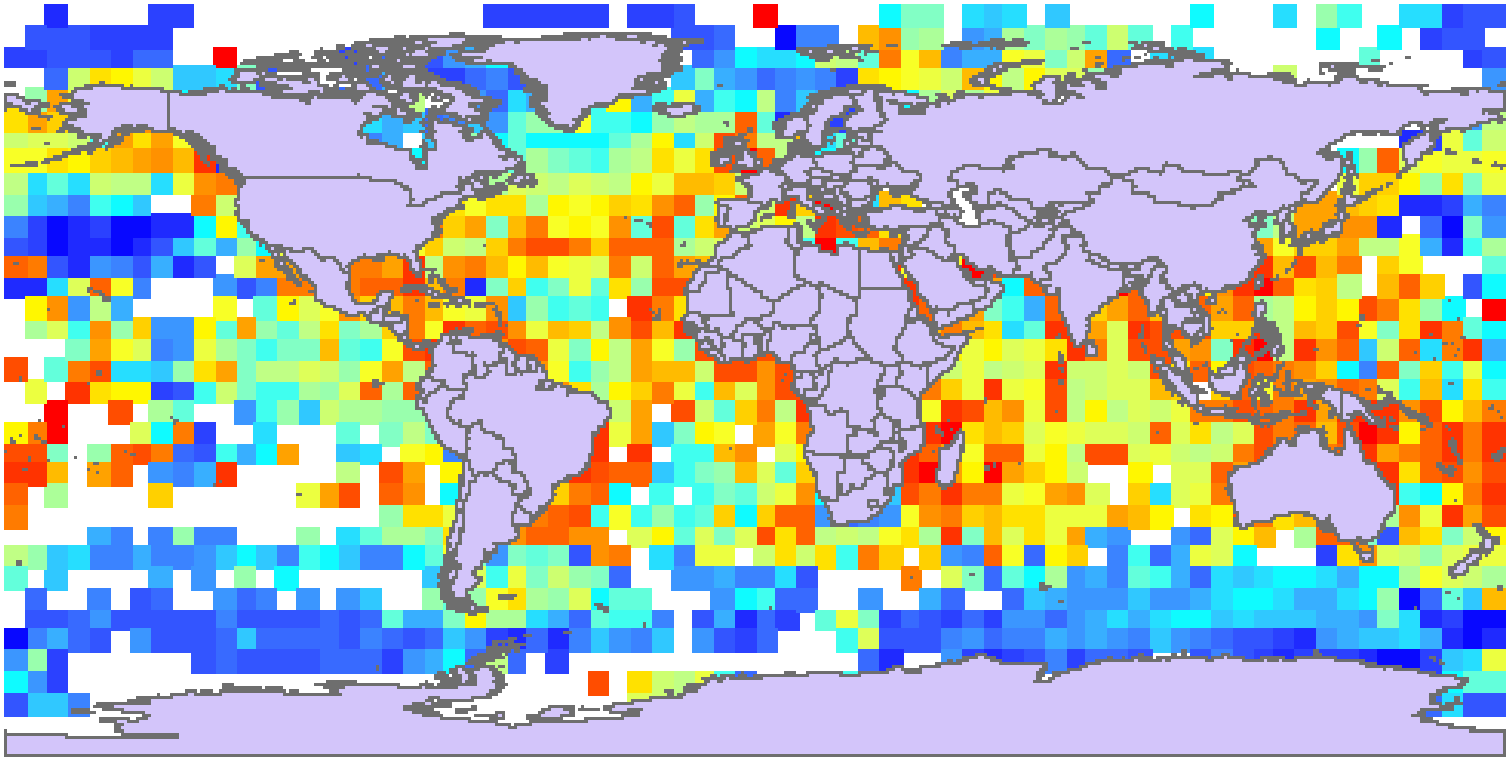
Growth of knowledge



Number of species in database WoRMS

CENSUS OF MARINE LIFE

Corrected for bias: ES(50)



Information of one species

SPECIES INFORMATION

How to cite OBIS data

Back to previous page

Notes to users

Ablennes hians

Name verified: Catalogue of Life; FishBase; Collette, Bruce B.
Organism type: a fish FishBase

Data Extent Map (from OBIS Australia/ C Square Mapper)

For more options, view full-size map

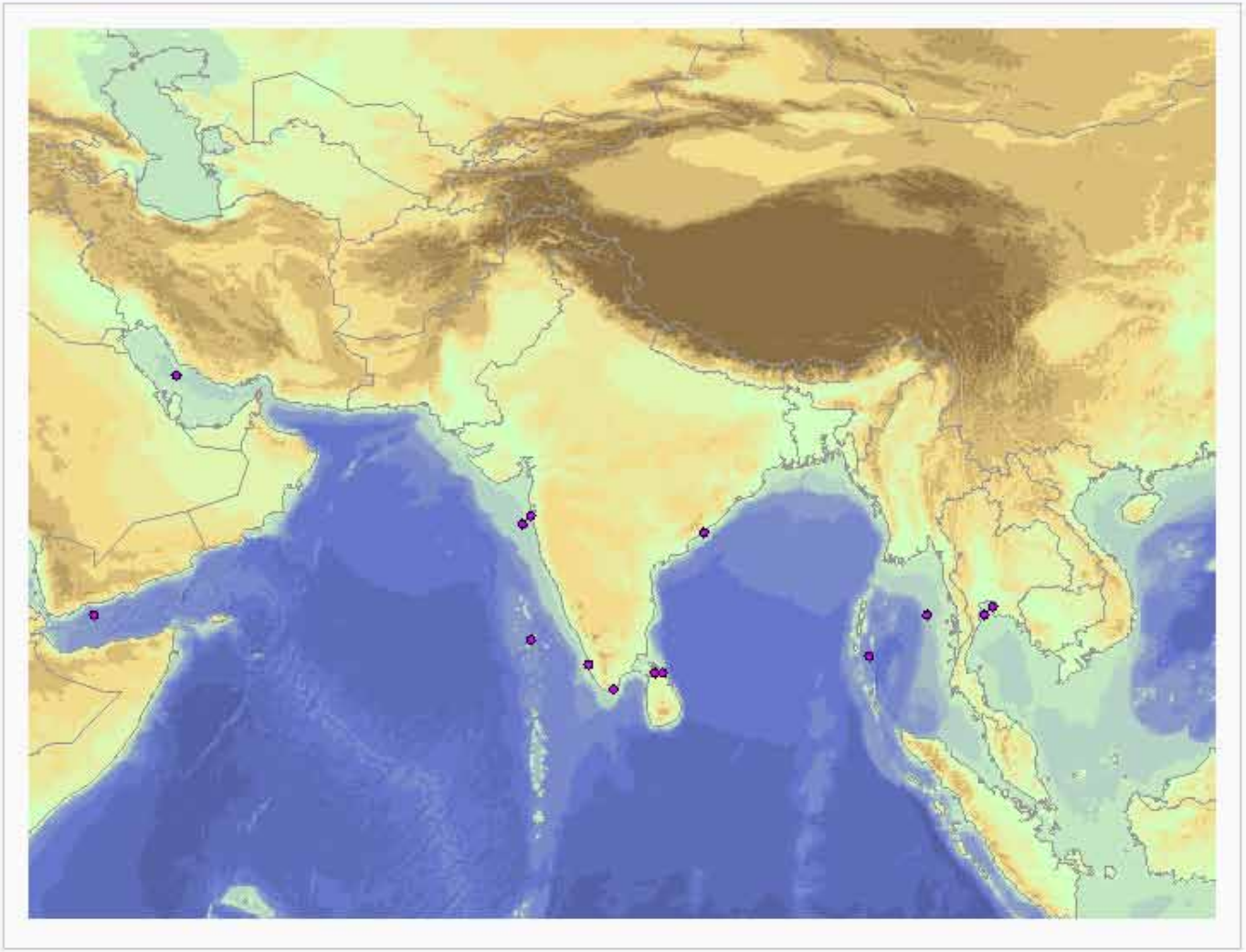
Additional information on *Ablennes hians*

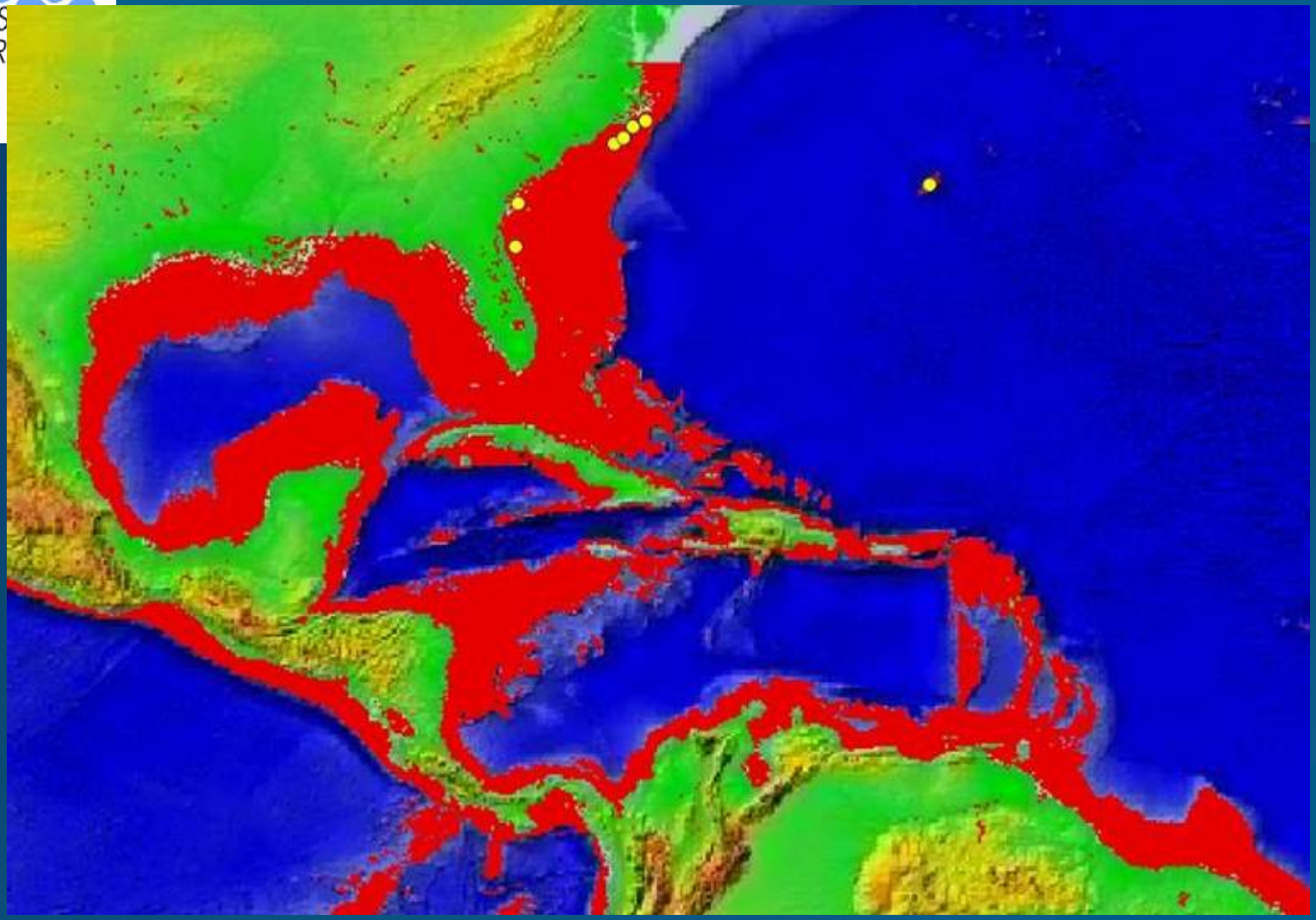
- World Register of Marine Species
- Barcode of Life
- GenBank
- Catalogue of Life
- ITIS
- Google Images
- Google Scholar
- uBio
- DiscoverLife
- DiscoverLife mapper
- Species-Identification.org
- Encyclopedia of Life

You searched for the distribution of *Ablennes hians*
Your search returned 272 records

View all 272 results as .TXT (download) **HTML** (download)

More sophisticated mapper



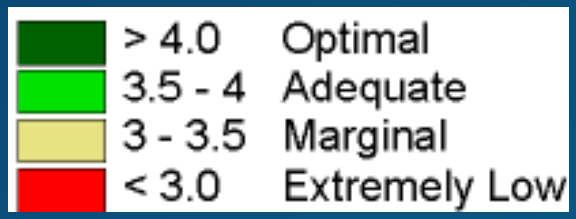


Predicting distribution of invasive species, *Pterois volitans*

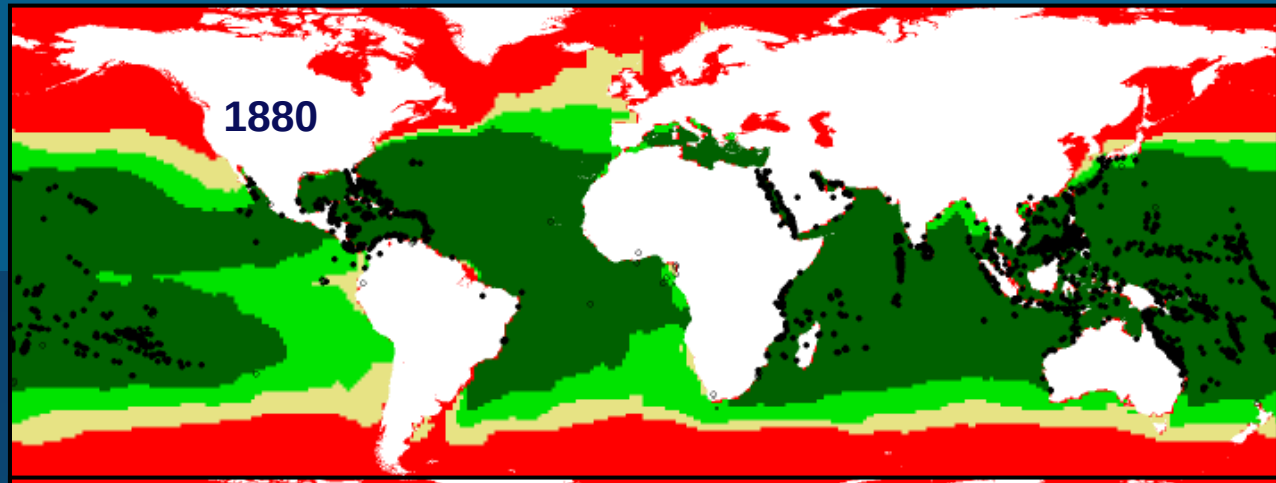
CENSUS OF MARINE LIFE

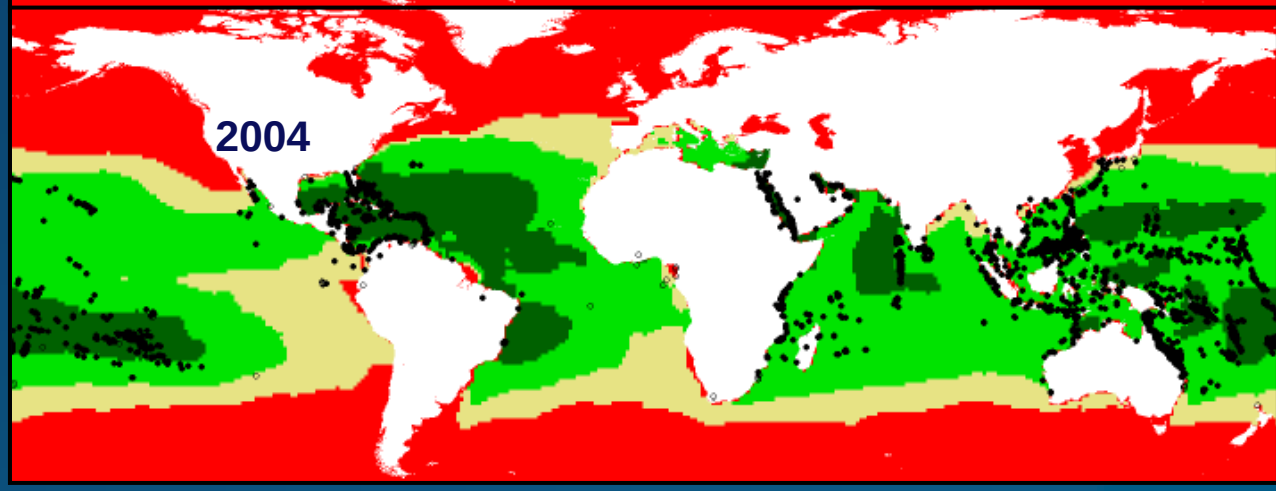
Maximizing Coral Reef Biodiversity

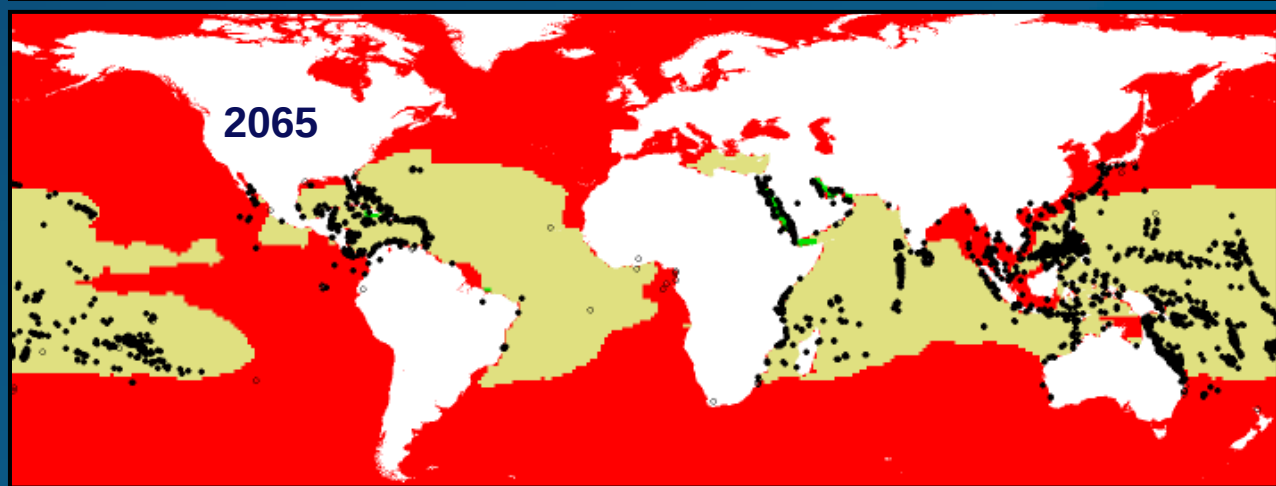
by conserving sites with long-term optimal temperature & pH conditions for calcification



www.iobis.org





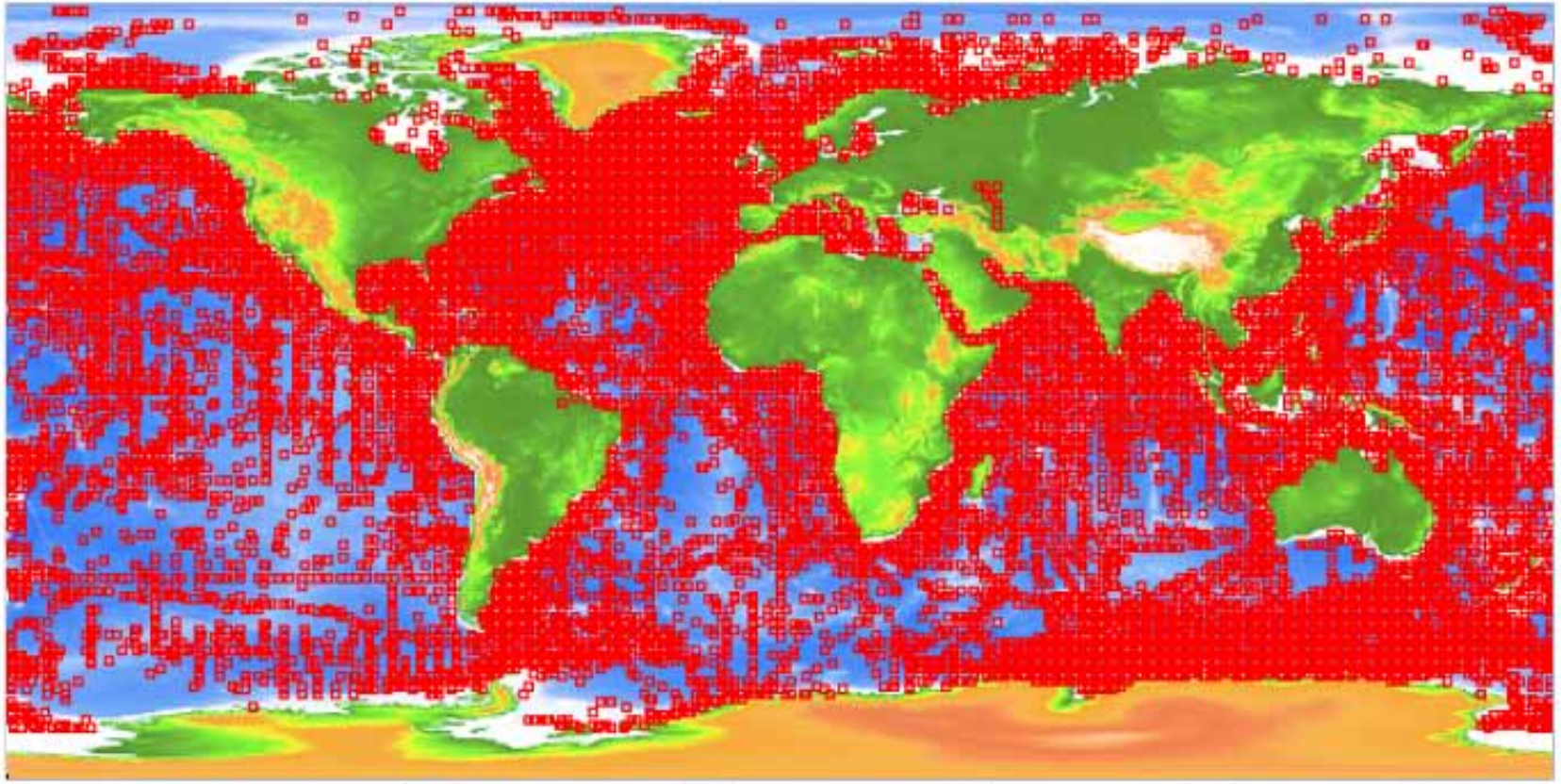


CENSUS OF MARINE LIFE

OBIS Datapoints

Global distribution of all taxonomic categories

Data Extent Map (from OBIS Australia/ C Square Mapper)



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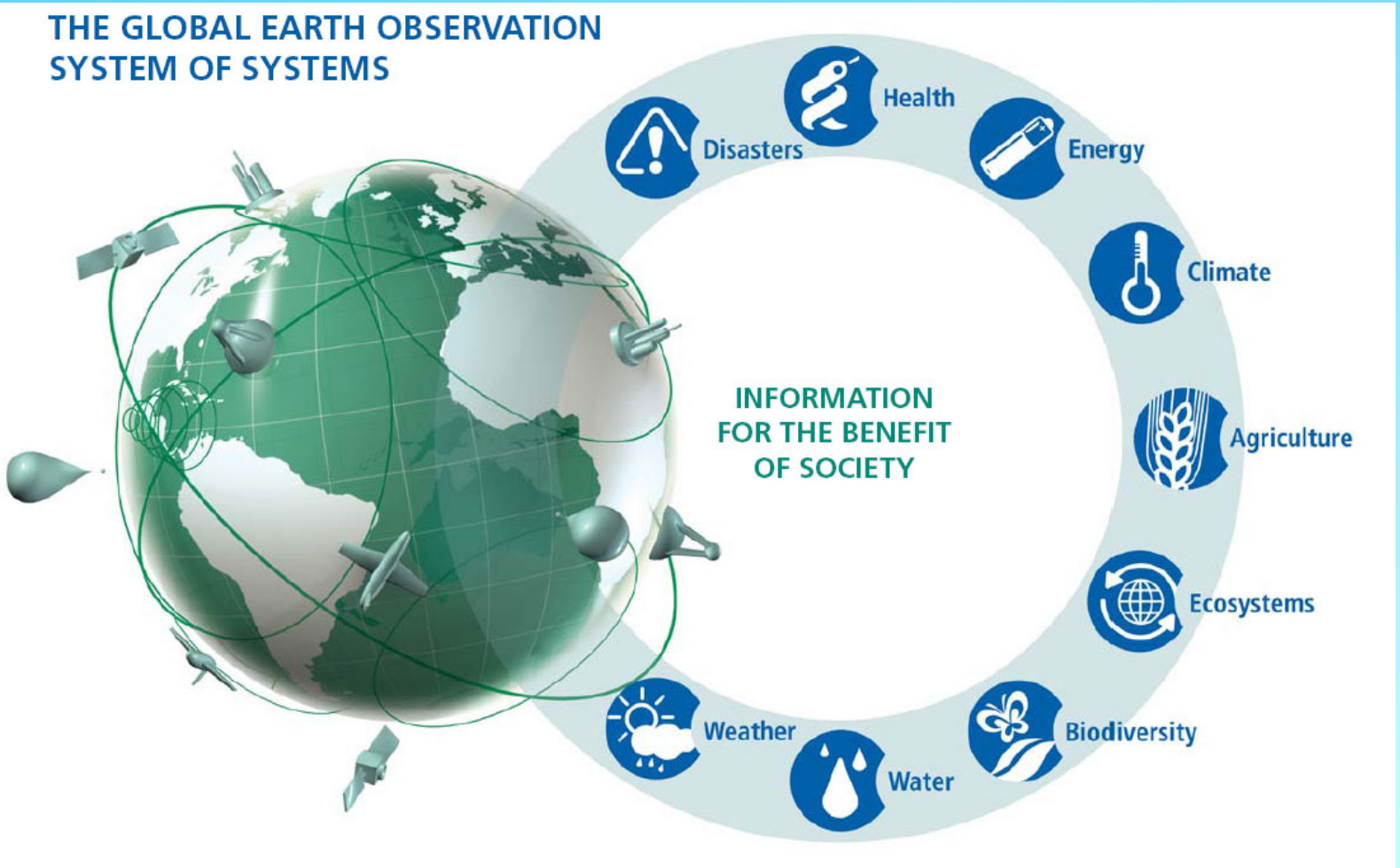
GEO: Group on Earth Observation



The context of GEO BON

2006: User Needs workshop, Geneva 23-25 October

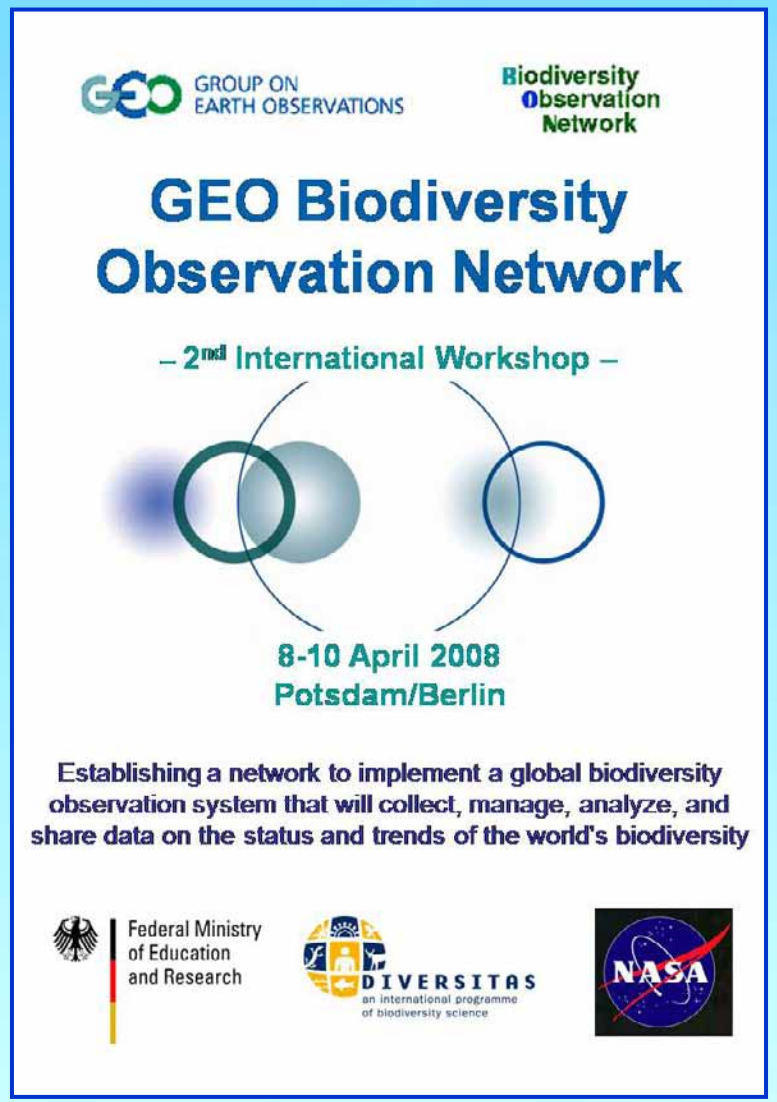
2007: GEO Ministerial in Cape Town

2008: Interim GEO BON Committee formed 14-16 January

- **Draft GEO BON concept document produced**

2008: 2nd International workshop, Berlin/Potsdam 8-10 April

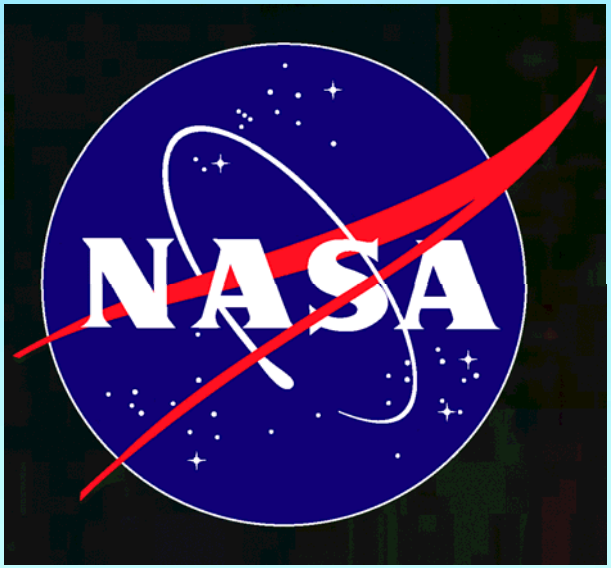
- **Draft GEO BON concept document discussed and amended, first implementation steps planned**



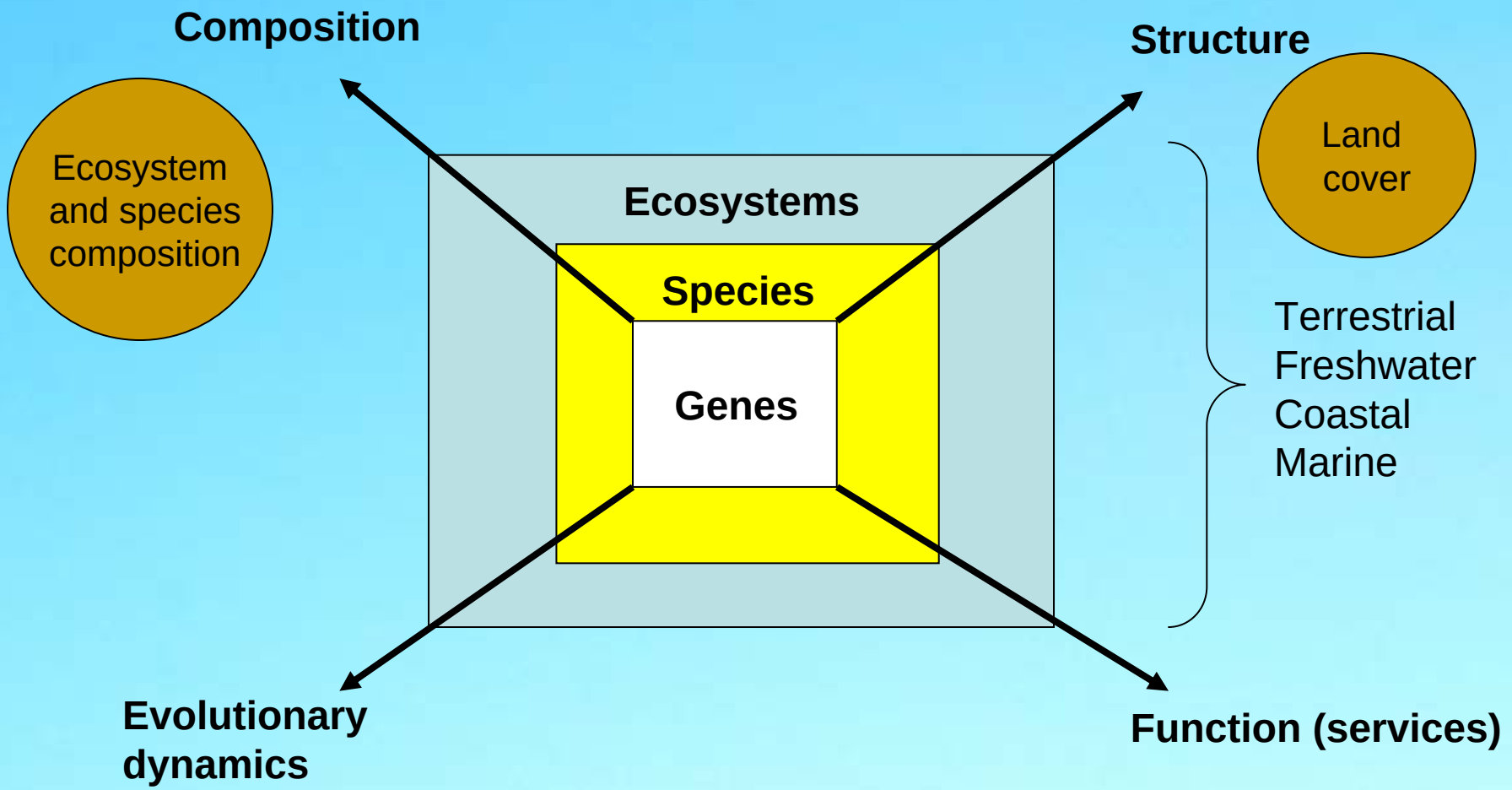
The context of GEO BON

- **DIVERSITAS and NASA have been appointed to lead task of developing a global Biodiversity Observation Network**

DIVERSITAS
an international programme
of biodiversity science



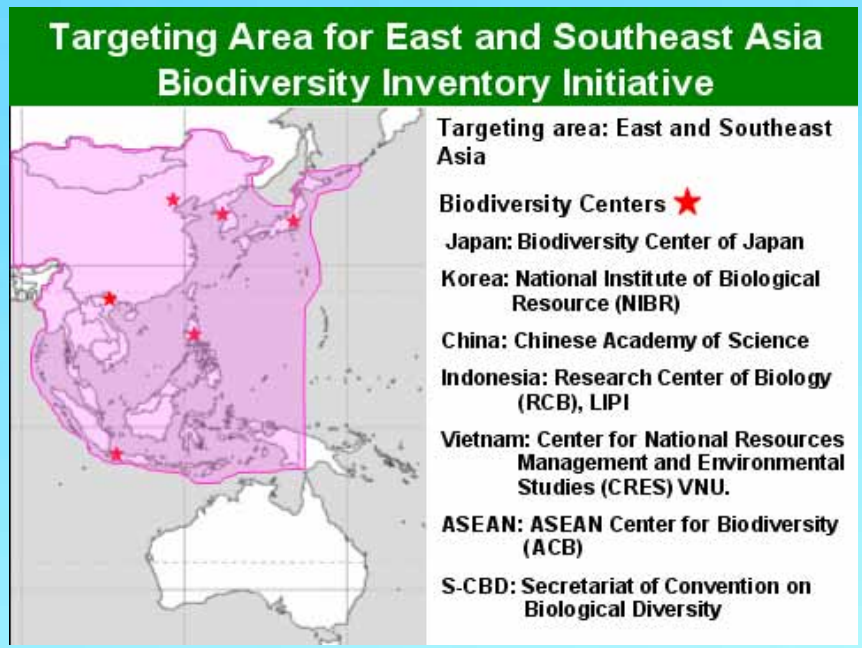
The concept of GEO BON



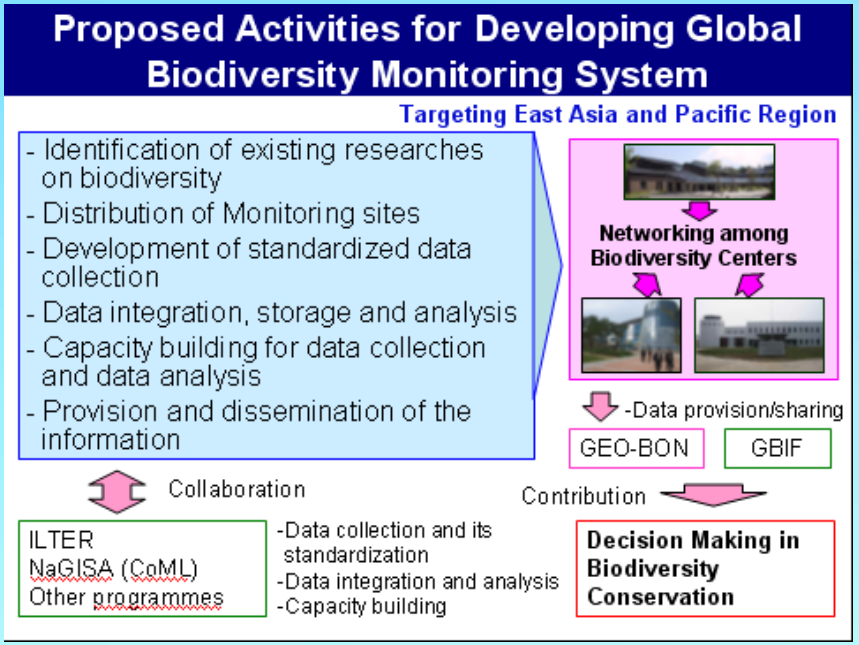
"States", "Drivers" and "Impacts" will be monitored.

Two initiatives of MoE, Japan

ESABII



GBMI

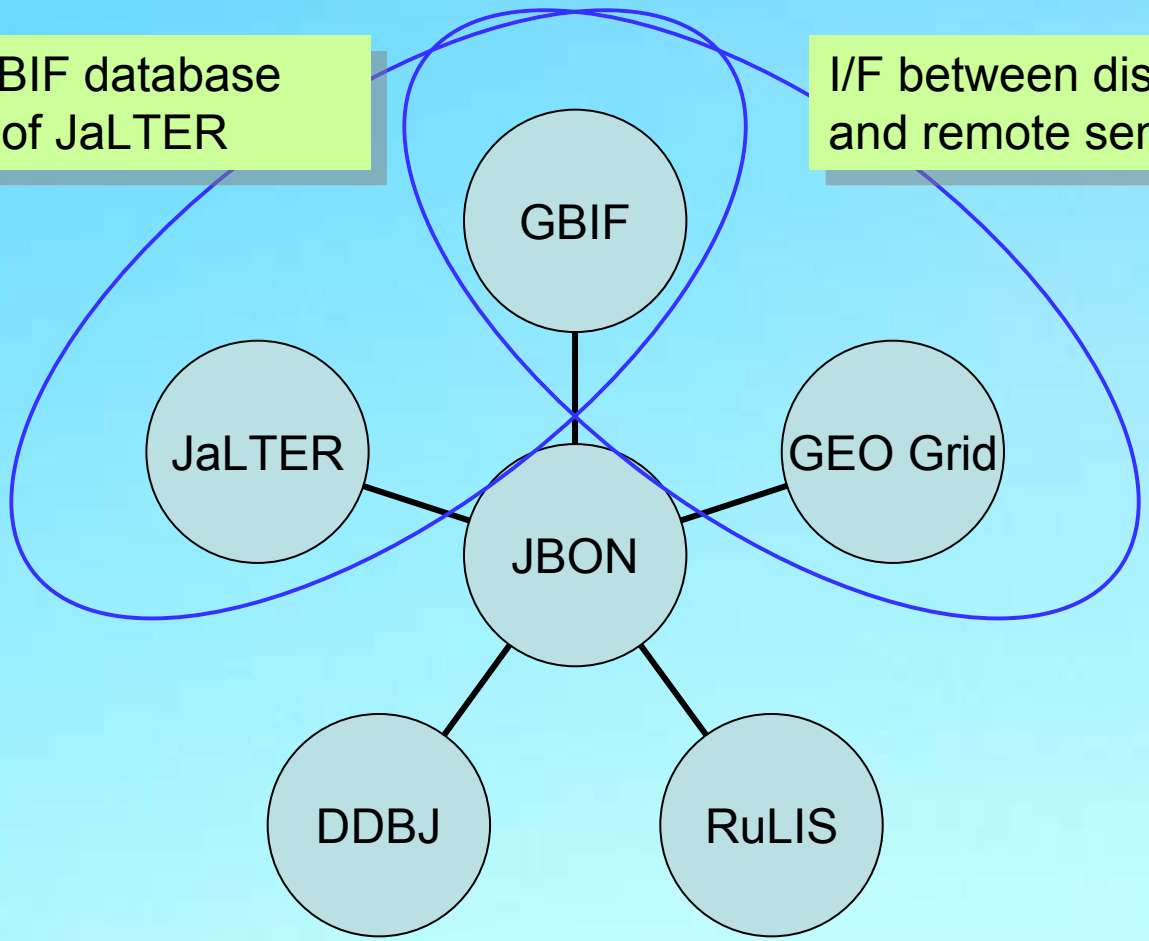


Needs for networking scientists → J-BON was organized

Toward developing J-BON Portal

I/F between GBIF database and metadata of JaLTER

I/F between distribution data and remote sensed data



Conclusion

- Scientific data are essential for establishing conservation plan of biodiversity
- Data are available, but not well integrated
- Strategic planning of scientific research and monitoring is need for the future actions of CBD
- COP10 is the best opportunity to discuss about the strategic planning

Thanks you
for your attention