

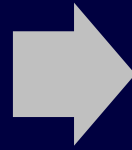
# Marine Protected Areas and Critical Coastal Ecosystems Visualisation Tool



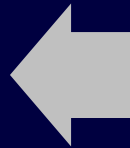
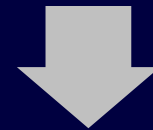
Proteus Partners Meeting  
8 June 2009

Kristian Teleki  
Head of the One Ocean Programme

# Outline

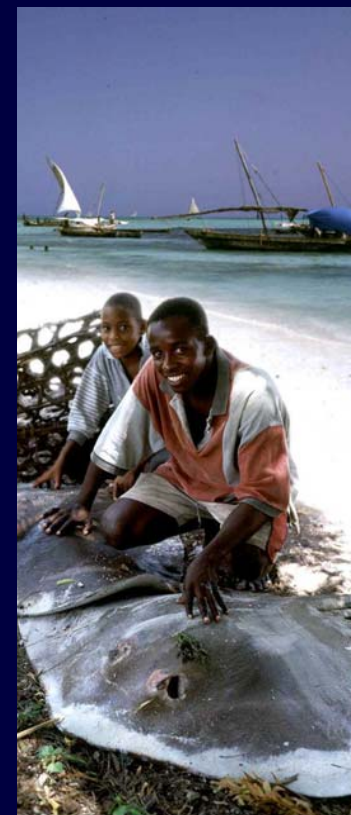


Marine  
Protected  
Areas (MPAs)



## Objective 3: Increase access to up-to-date information on the distribution and status of coastal and inshore marine ecosystems

- Understanding of opportunities and needs
- Partnership agreements with key data providers
- Data integration and delivery, including data visualisation and geo-wiki functionality
- Promotion of the partnerships and products
- Leveraged funds - \$273,000





*Our oceans, Our responsibility*

“Safe, healthy and productive seas and oceans are integral to human well-being, economic security and sustainable development”





# The Statistics

By 2025, coastal populations are expected to reach 6 billion

80% of 441 global fishery stocks are in coastal waters

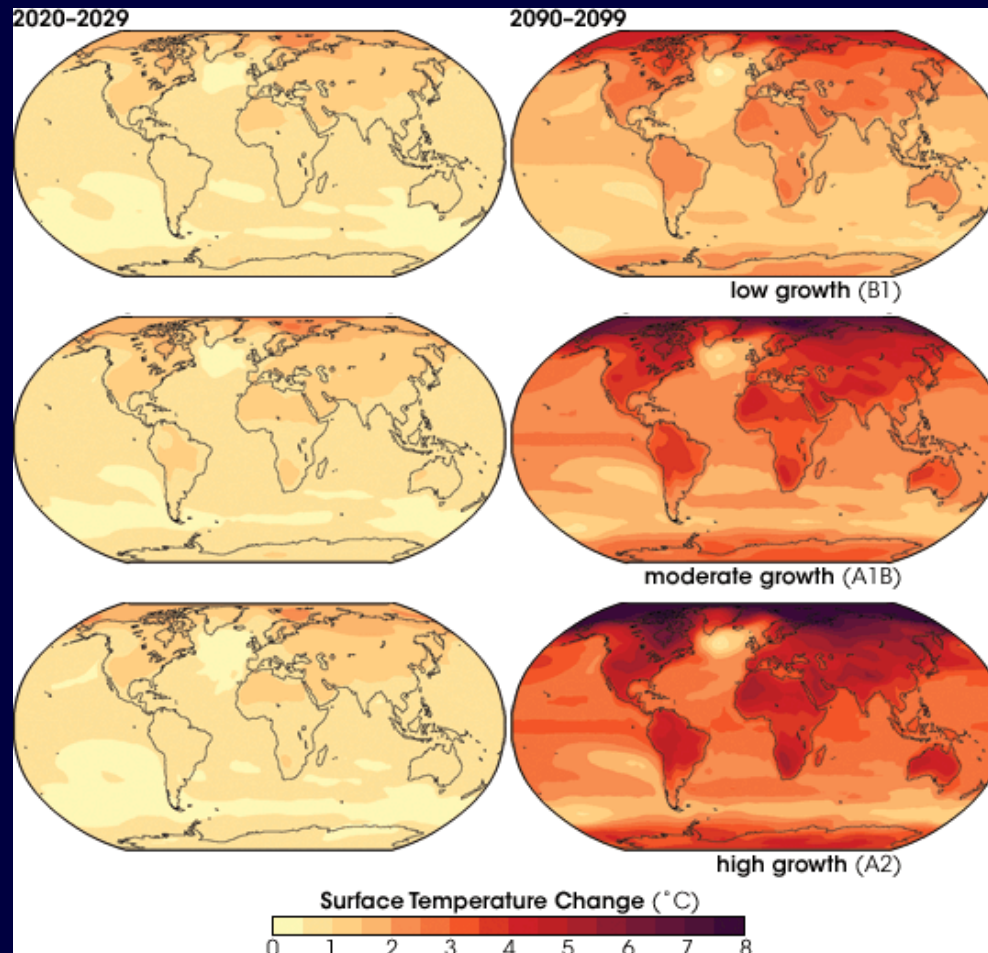


Male, Maldives



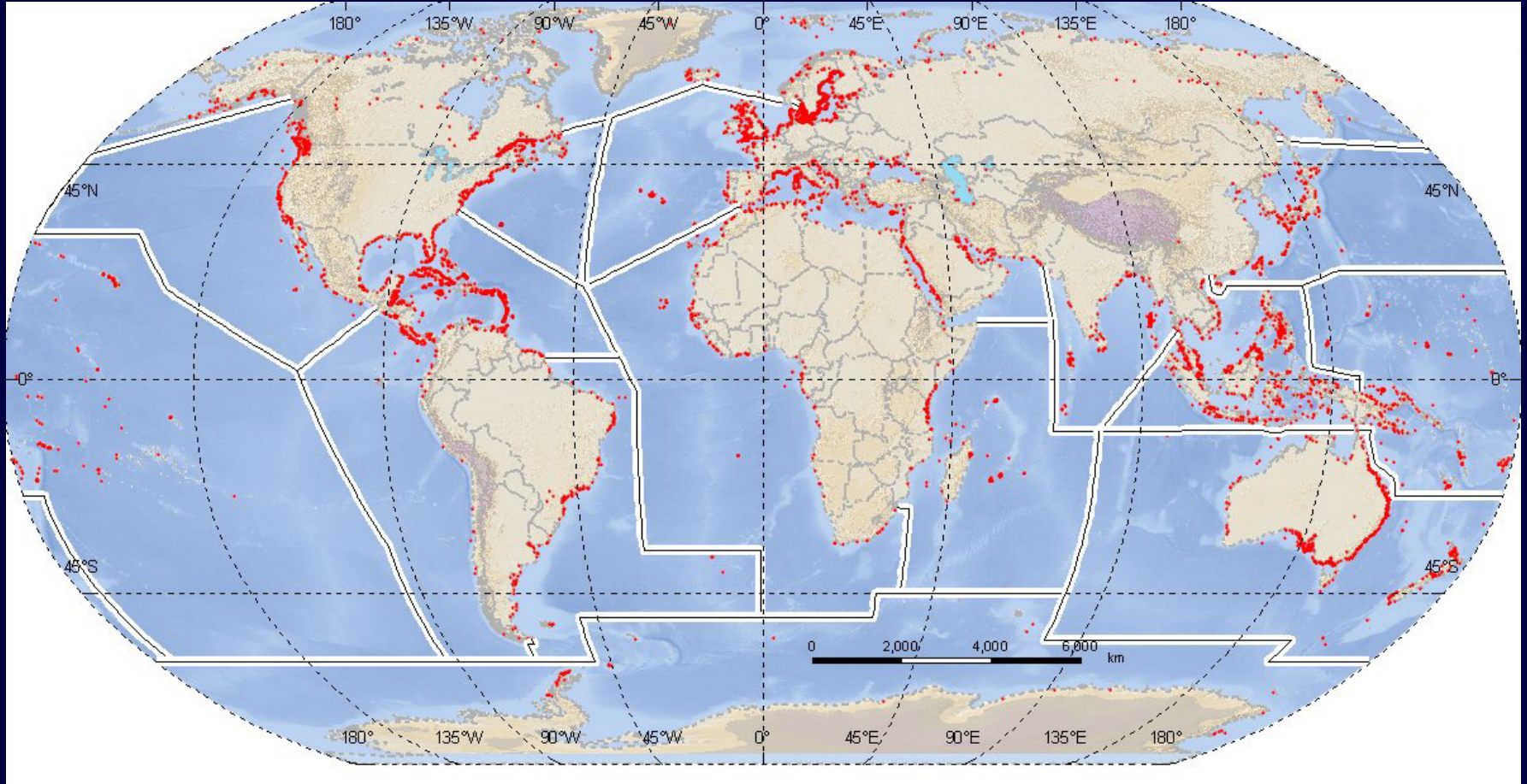
Palm Jumeirah, Dubai

# The Future Oceans – Warming Up, Rising High, Turning Sour

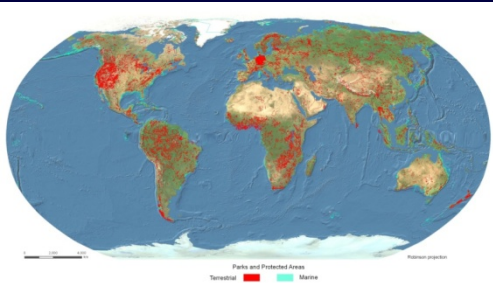
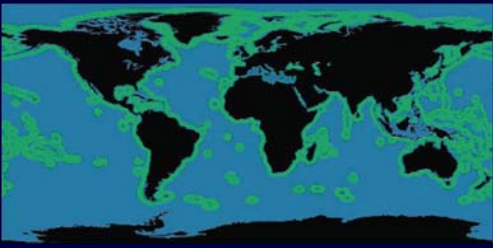


Source: IPCC 2007

# Global Marine Protected Areas

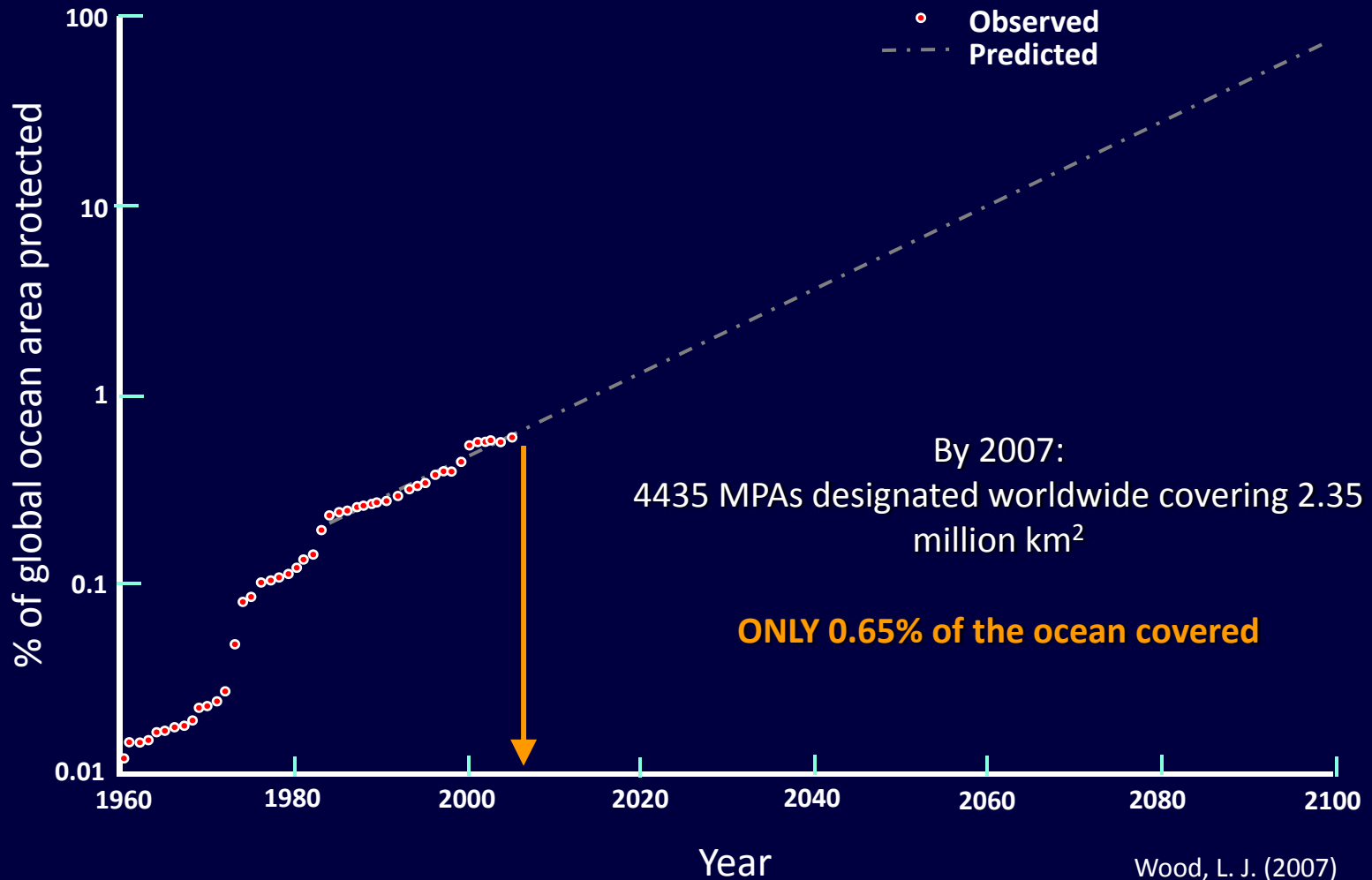


# Spatial Extent of Marine Protected Areas



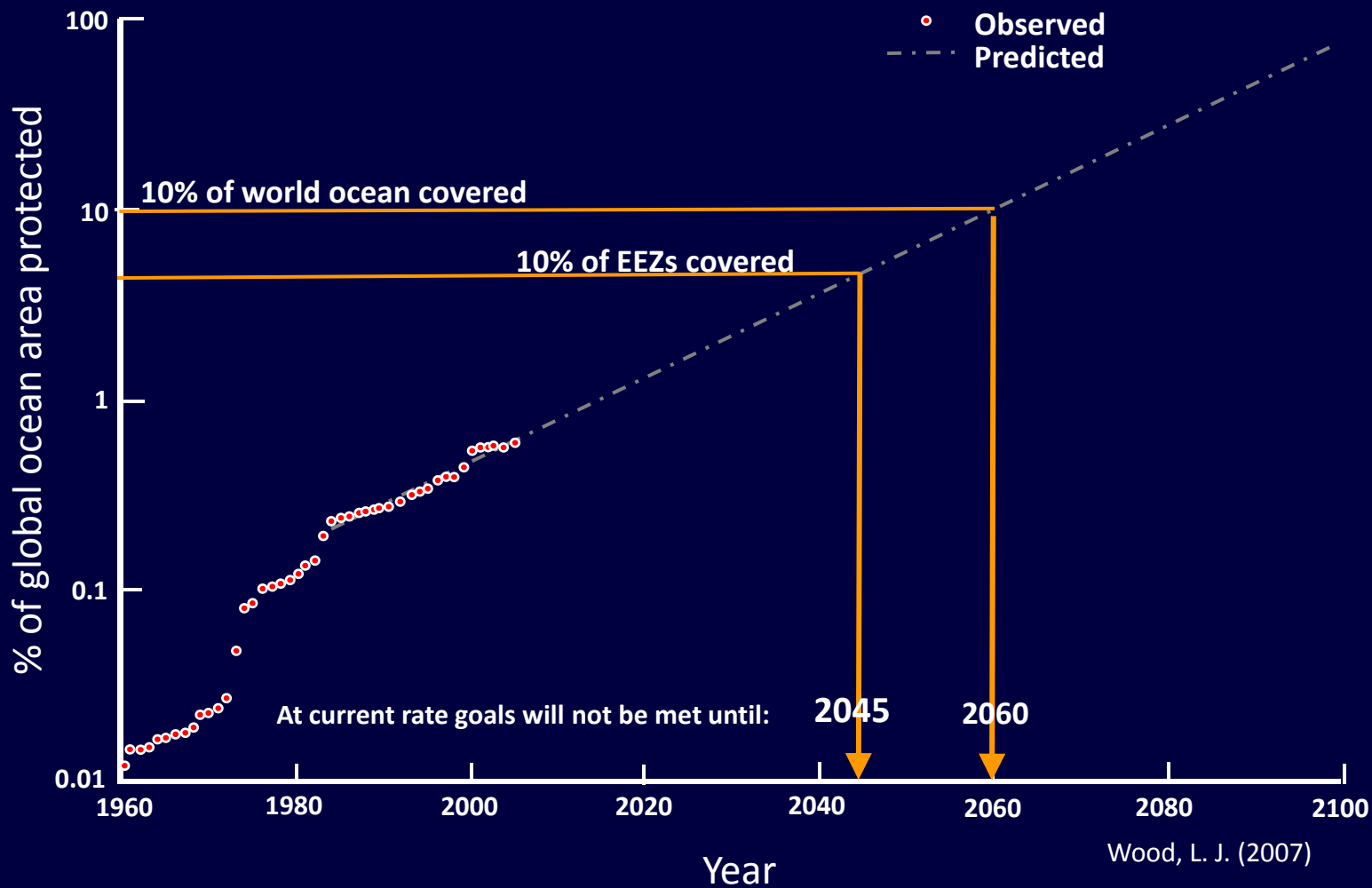
- ◆ Ocean realm is over 2/3 of planet surface
- ◆ 64% of ocean is beyond national jurisdiction
- ◆ 5096: Nationally designated MPAs, 377 proposed
- ◆ 5.9: % of territorial seas (within 12 nm) protected
- ◆ 0.65 percent of oceans are protected  
(12.8% of terrestrial)

# Global Progress on Marine Protected Areas



Wood, L. J. (2007)

# Global Progress on Marine Protected Areas

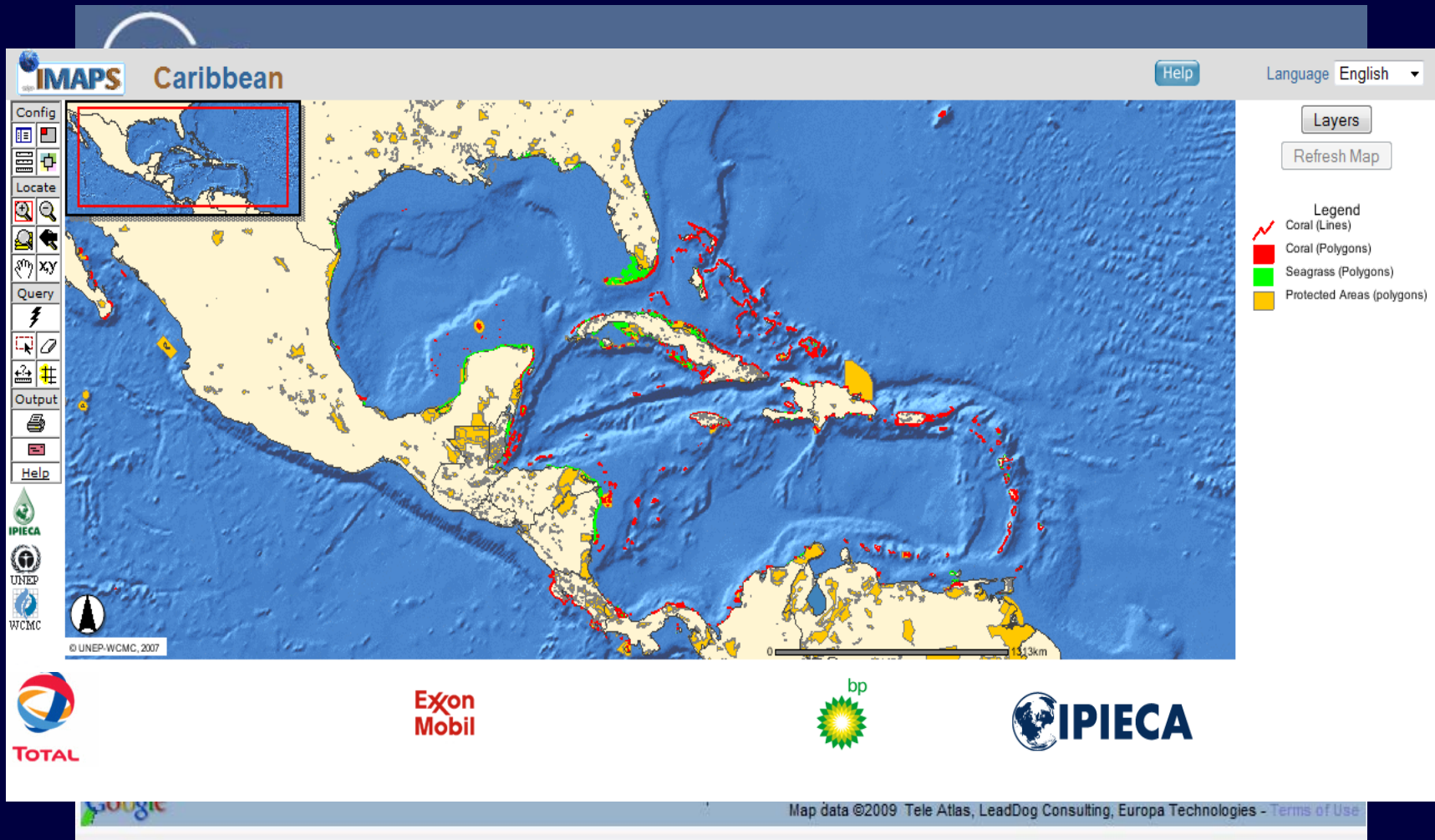




## Enhancing the flow of marine protected areas and biodiversity knowledge

- Increased contribution to global knowledge
- Better and more informed decisions
- How to access and contribute information
- Provide a suite of analysis and planning tools

# WDPA – Marine Evolution





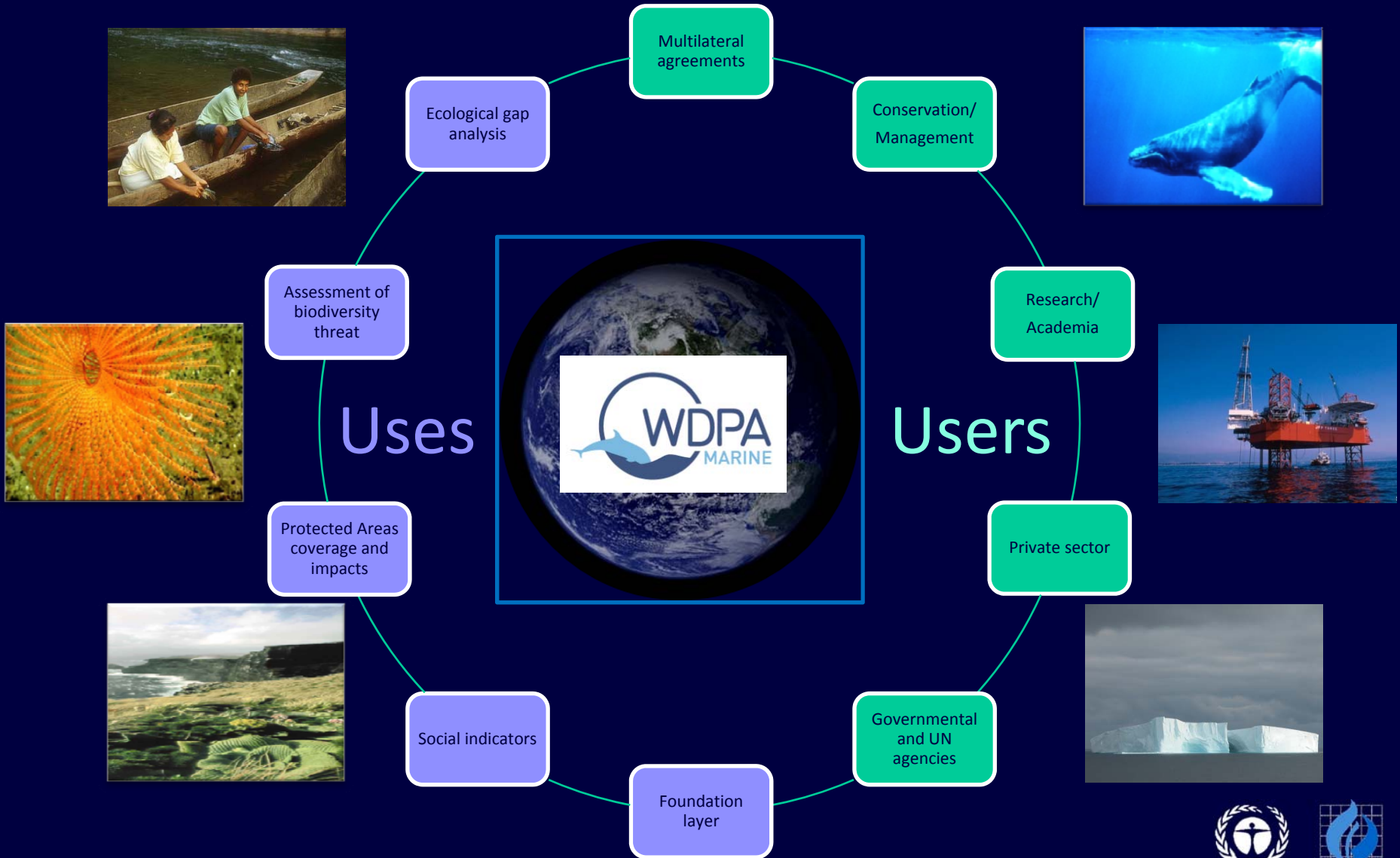
# Aims of the WDPA-Marine

- ◆ Provide the most **comprehensive set of MPA and marine** data for decision making
- ◆ **Harmonise** national processes for global monitoring
- ◆ Provide opportunities to **access, compile, manage, analyse, and use** marine and coastal protected areas and ecosystem data
- ◆ Improve **effectiveness and efficiency** of establishing and managing successful networks of MPAs
- ◆ Support **marine spatial planning**





# Marine Protected Areas Data





# Input to National and Global Processes

## Convention on Biological Diversity

- Monitoring of global protection targets e.g. 2010 and 2012
- National targets analysis
- Contribution to Programme of Work on Protected Areas
- Review of PoW on Marine and Coastal Biodiversity

## World Parks Congress

- Vital tool to measure the efforts of governments and civil society to build comprehensive protected area networks



UNEP



WCMC



# Informing Policy and Science

## Millennium Development Goals

- **Goal 7: Ensure Environmental Sustainability**
- **Indicator 7.6 - 'Proportion of terrestrial and marine areas protected'**

## UN list of protected areas

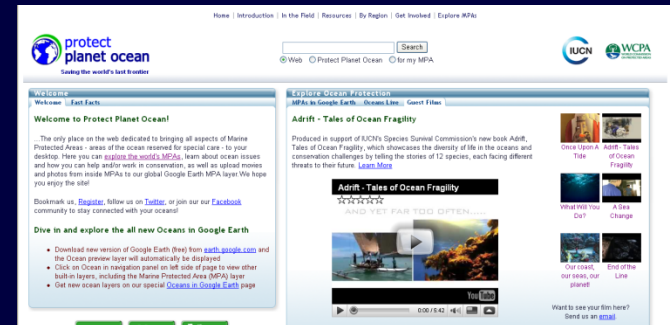
- Underpinning definitive list of the world's national parks and reserves

## Reefbase

- Supporting analyses and monitoring of coral reef health, use and livelihoods

## Protect Planet Ocean & Google Earth MPA layer

- Working with IUCN WCPA-Marine; serves as base layer and interoperable system





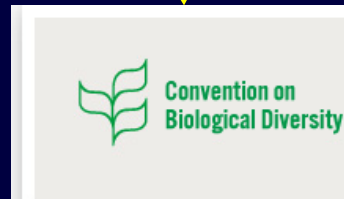
**Operational**

**Awareness**



**Research**

**Management**



**Policy**





# Informing and Supporting Decision Making

## ◆ Gap analyses

- Identifying extent of protection
- Informs prioritisation processes
- Identifying shifts in trends and early warning

## ◆ Informing Industry

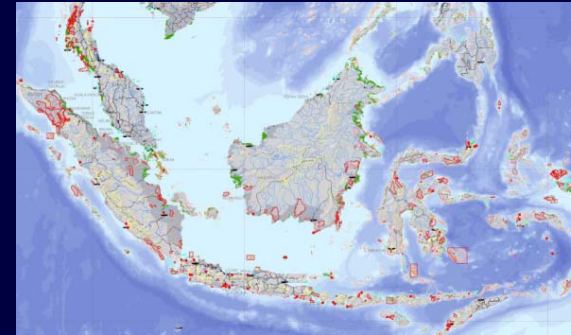
- Risk assessment and EIAs
- Informing decisions about current and future operations and project

## ◆ International Emergency Response

- Data used for emergency actions, e.g. oil spills

## ◆ MPA Management

- Access to an increasing number of attributes (i.e. governance and management effectiveness)



zoom terrain | satellite | map search filter about help fullscreen

WORLD Select a country to explore it

### WORLD STATS

TOTAL MARINE PROTECTED AREAS

# >5000

90% NATIONAL | 10% INTERNATIONAL

---

NAVIGATE

Countries Areas

## 0.7%

by country coverage  
 by number of areas

POWERED BY

beta version  
feedback

## WHAT'S NEW

### NEW WDPA-MARINE WEBSITE LAUNCHED

At the International Marine Conservation Congress (19-24th May 2009) and on World Oceans Day (8th of June).

### FREQUENTLY ASKED QUESTIONS

Find answers to protected areas questions [here](#).

### WATCH THIS SPACE

For new developments such as an expanded tools library and new data.

## TOOLS

### MARINE PROTECTED AREA PLANNING RESOURCES

Relevant publications, Tools, Applied planning tools and Web resources.

[VIEW NOW >](#)

## ★ THE LARGEST AREA



PHOENIX ISLANDS PROTECTED AREA, KIRIBATI, 41 050 000 ha

## ★ THE SMALLEST AREA



ECHO BAY PROVINCIAL PARK, CANADA, 0.4 ha



# Improving Access, Tools, and Services

- ◆ **Linkages** with regional and national systems
- ◆ **Searchable** and interactive (upload, download)
- ◆ **Explore** data through maps
- ◆ **Export and review** with various applications (ESRI, Google, etc.), add data layers
- ◆ New **tool library**
- ◆ **www.wdpa-marine.org**





# Features

## Marine and Coastal Datasets

Coral Disease

Seagrasses and Mangroves

Marine Mammals and Turtles

Warm and Cold Water Coral Reefs

Global Islands Database

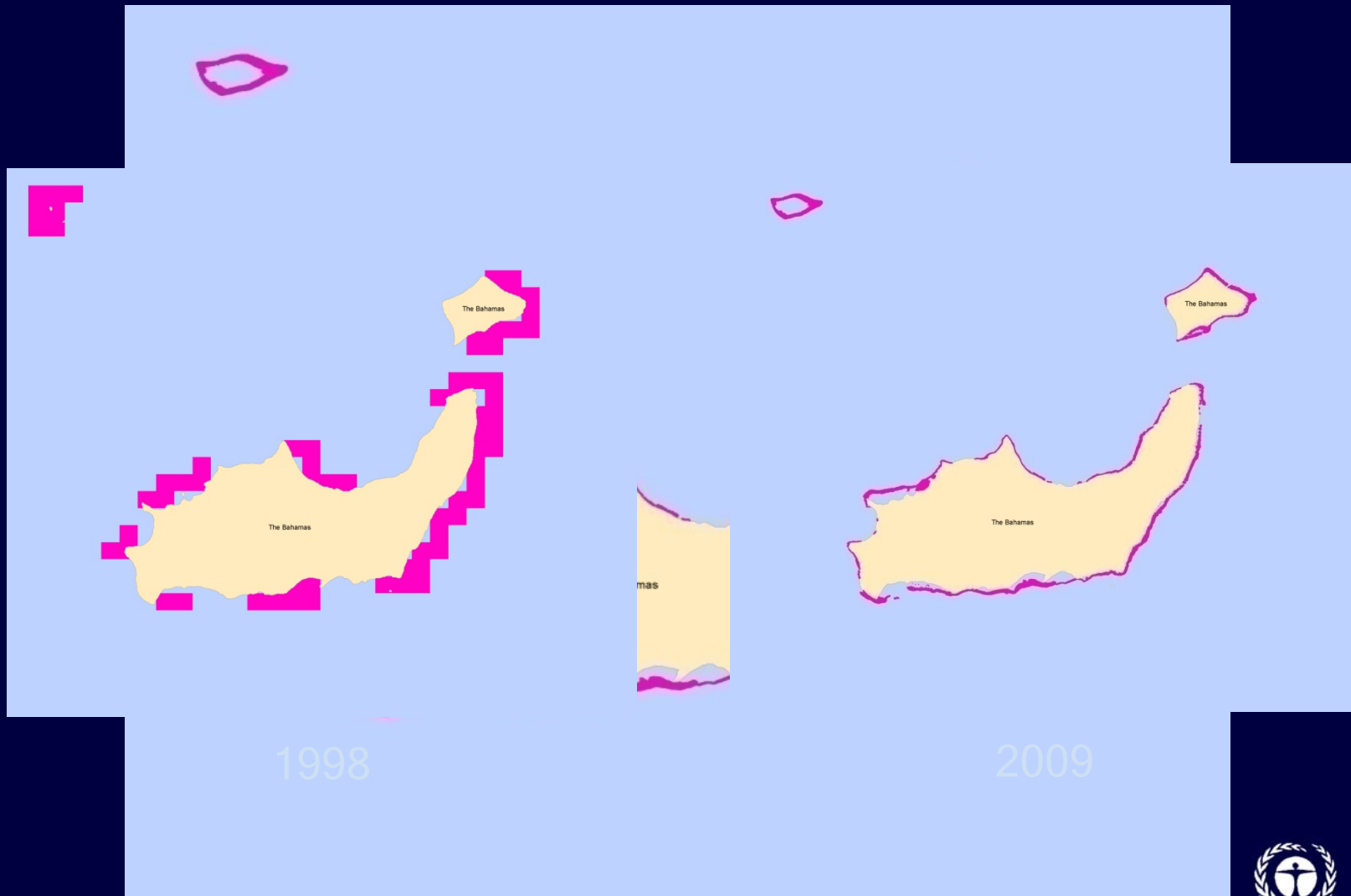
Global Biodiversity Information  
Facility (GBIF)

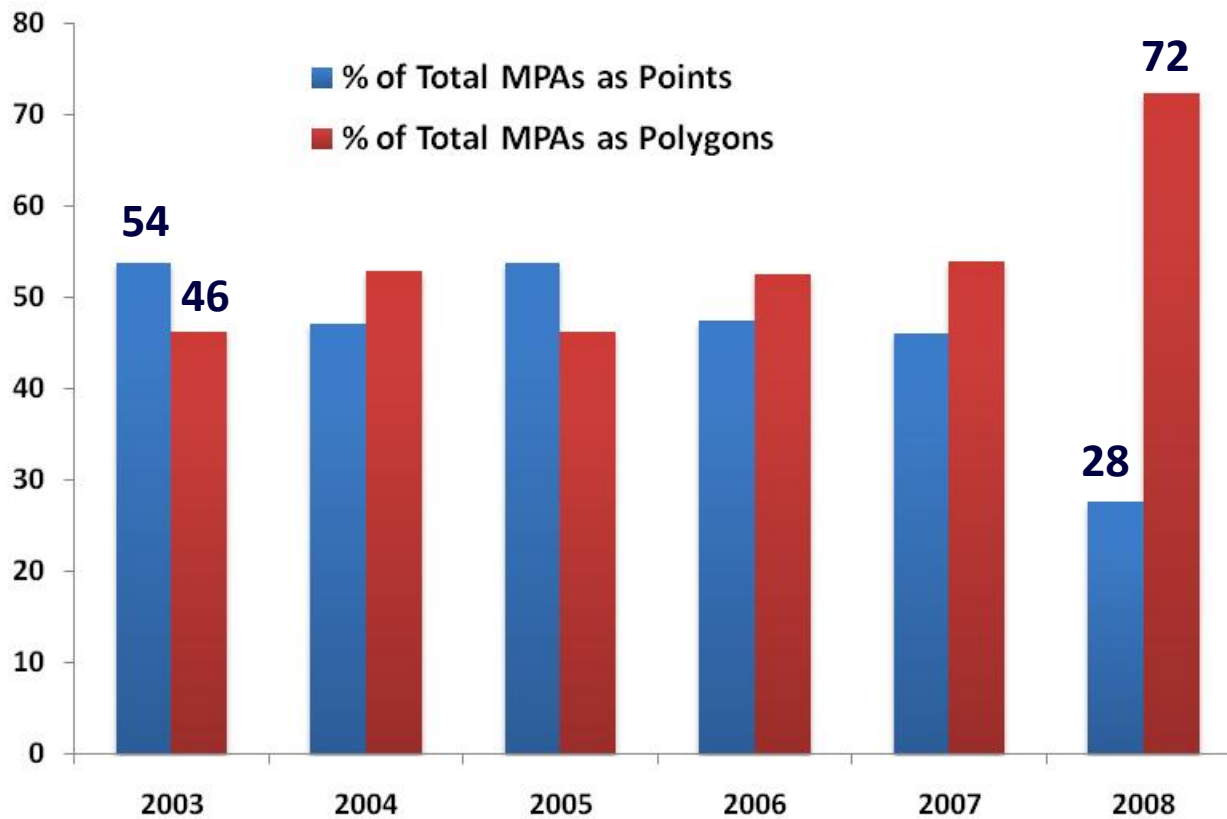


# Data - Then and Now

Data set	1998 Resolution	2009 Resolution
Coral reefs	4 km <sup>2</sup>	0.5 km <sup>2</sup>
Population	4.6 km <sup>2</sup>	1 km <sup>2</sup>
Bathymetry	4 km <sup>2</sup>	1 km <sup>2</sup>

# Coral Reef Data





UNEP



WCMC



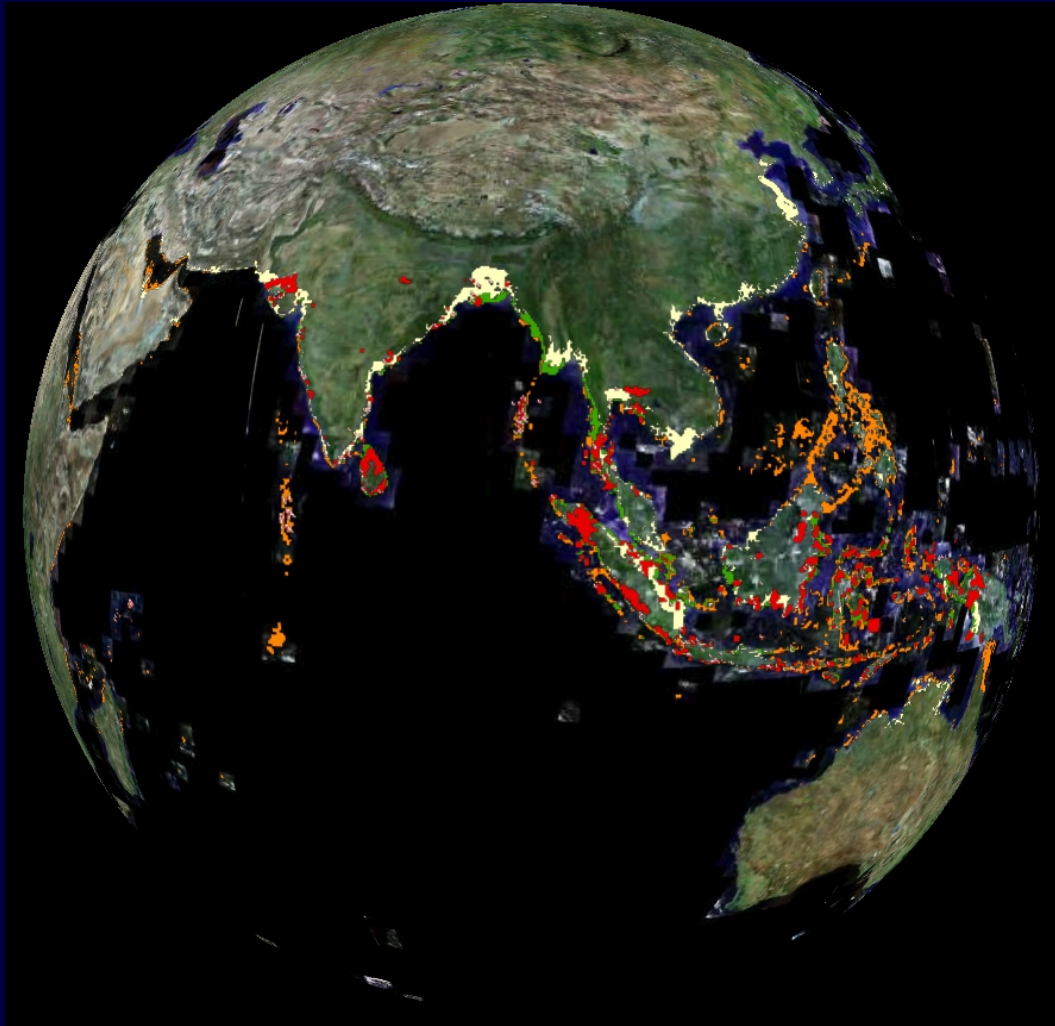
# Features Partners and Contributors

- Adding value to decision-making by increasing the **quality and quantity of knowledge**
- Implementing **important national commitments**
- Providing **increased access** to information for protected area managers
- Developing more **accurate analyses**
- Supporting the *Conservation Commons* - making conservation information **accessible and more open to the world**



# Gap analysis of MPAs in Tsunami affected countries

To identify a process for the establishment of regionally and nationally representative MPA System



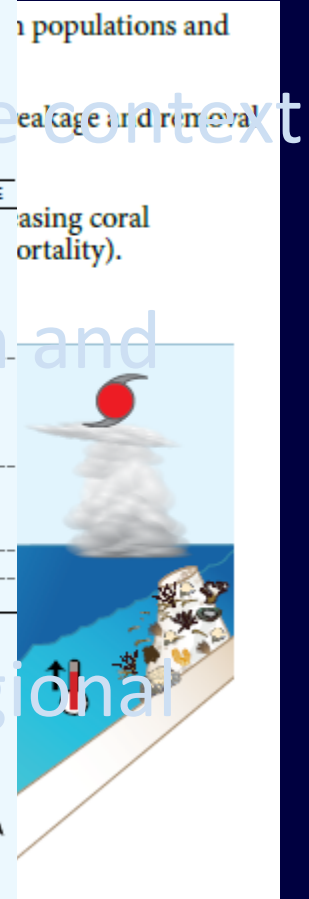
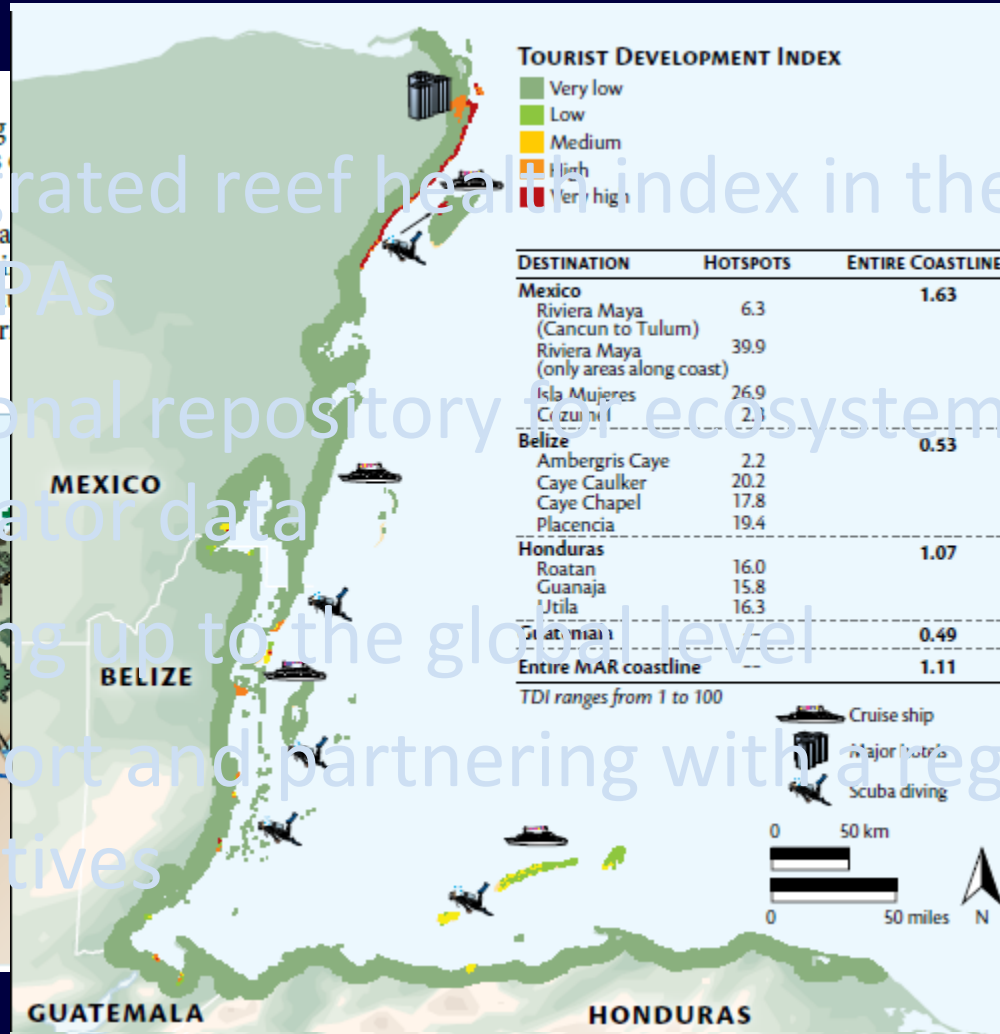


# Features

## Mesoamerican Healthy Reefs Initiative

- ◆ Coastal (causing and loss)
- ◆ Inland la (increasi sediment natural r)

- ◆ Integrated reef health index in the context of MPAs
- ◆ Regional repository of ecosystem and indicator data
- ◆ Scaling up to the global level
- ◆ Support and partnering with a regional initiatives



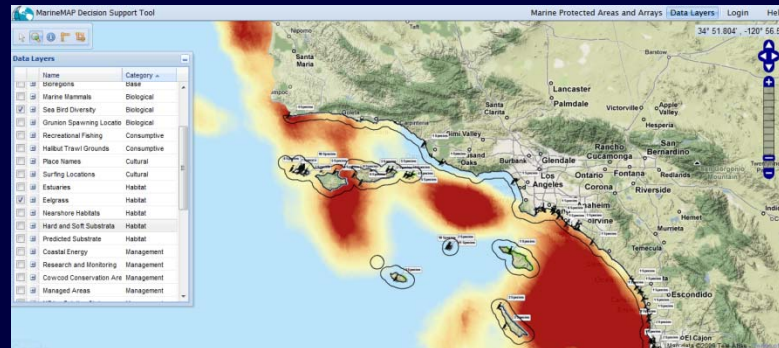
**Healthy Reefs**  
for Healthy People



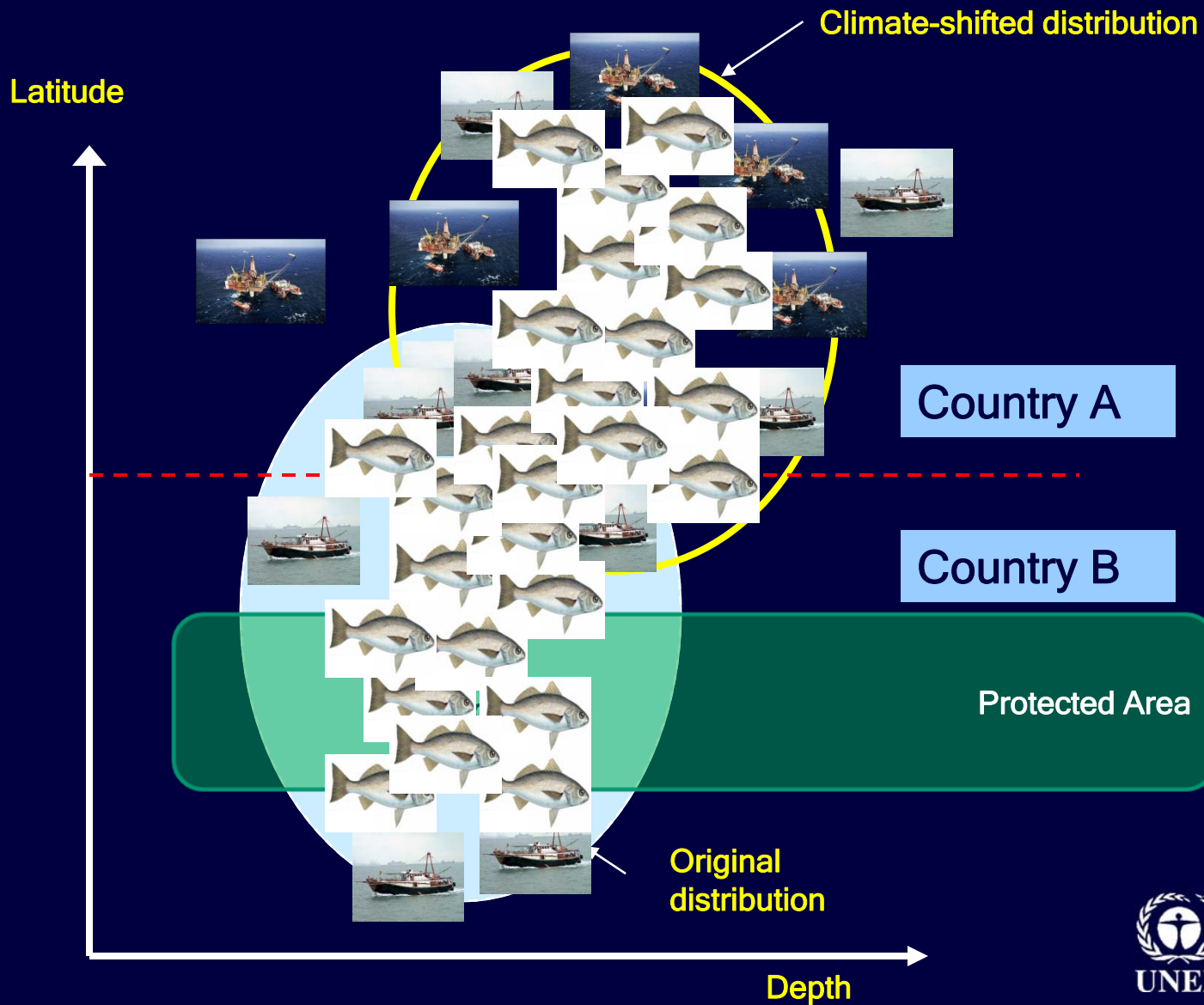


# Where Are We Going?

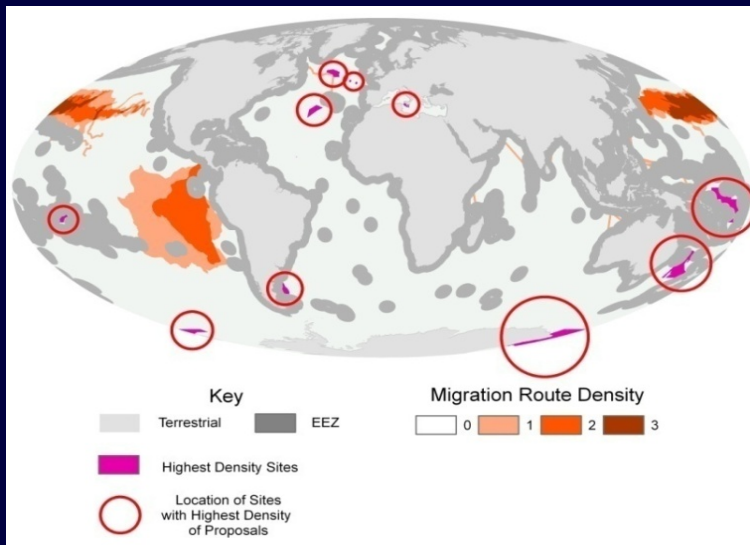
- ◆ Increasing participation through national and regional partnerships
- ◆ Geowiki / Citizen science
- ◆ Building additional features
  - High Seas visualization tools
  - Indigenous and Community Conserved Areas
  - Protected Area social assessment methodologies
- ◆ Creating enabling tools and technology transfer
- ◆ Decision support tools
- ◆ Just the beginning...



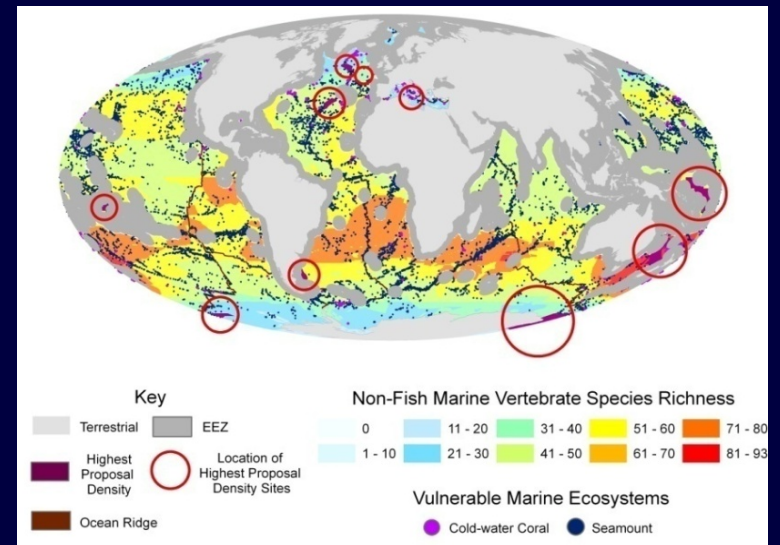
# Climate change impacts on marine biodiversity and fisheries



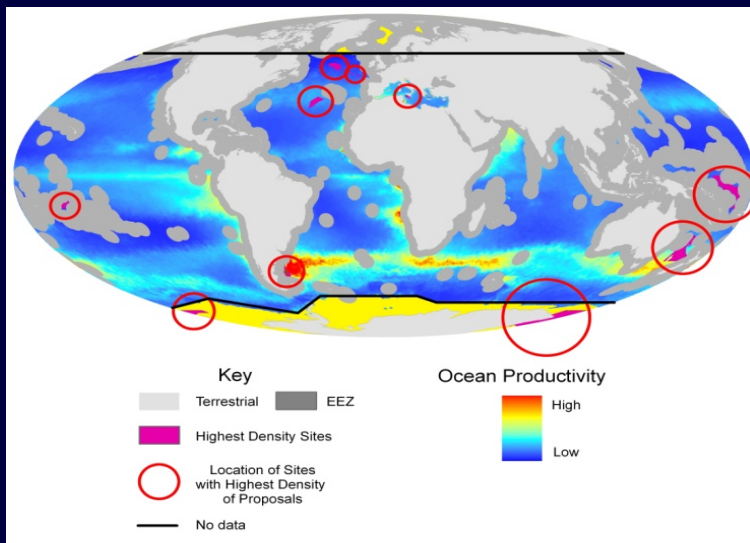
## migration routes



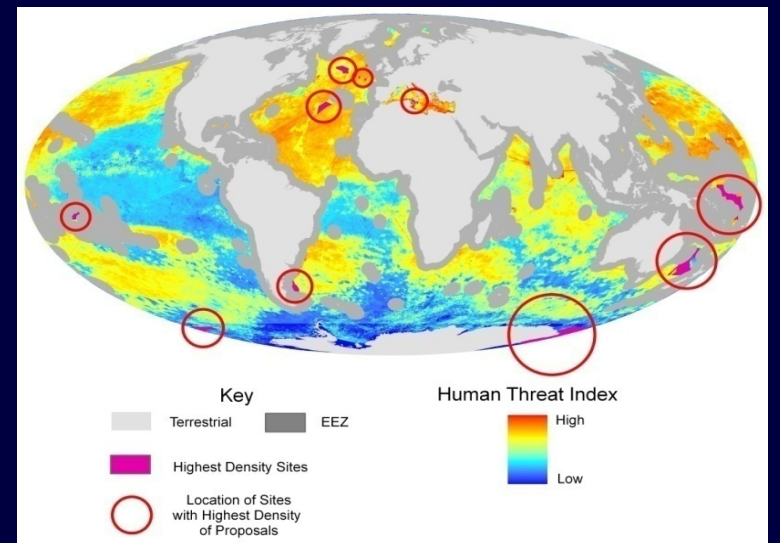
## species richness



## ocean productivity



## threats



# High Seas MPAs

# Next Six Months

- ◆ Continued data improvement and liberation
- ◆ Geowiki interface
- ◆ Citizen science
- ◆ Decision support tools and additional functionality
- ◆ Workshops
- ◆ Promotion and marketing



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**A world where biodiversity counts**

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

[www.wdpa-marine.org](http://www.wdpa-marine.org)



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