



MPAs as a valuable tool for governance in LMEs:

Global status and trends in MPA application and the Promise of Sydney

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Institution: IUCN

Session: 2

Day of presentation: Tuesday, September 29



Presentation Overview

Why MPAs? Why now?

Current status and trends

The “Promise of Sydney”

The LME / MPA interface

NEWS

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Marine population halved since 1970 - report

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Populations of marine mammals, birds, fish and reptiles have declined by 49% since 1970, a report says.

The study says some species people rely on for food are faring even worse, noting a 74% drop in the populations of tuna and mackerel.

In addition to human activity such as overfishing, the report also says climate change is having an impact.

The document was prepared by the World Wildlife Fund and the Zoological Society of London.

SCIENCE

Warming Oceans Putting Marine Life 'In a Blender'

SEPT. 3, 2015



A lobsterman threw back a lobster off Mount Desert Island, Me., in 2012. The catch in the area has reached record highs. Robert F. Bukaty/Associated Press



Carl Zimmer
MATTER

Up in Maine, lobsters are thriving. The Atlantic States Marine Fisheries Commission reported last month that stocks there [reached a record high](#).

Down the coast, however, the story is different. In southern New England, lobster stocks have plummeted to the lowest levels ever recorded, [putting many lobstermen out of business](#).

Lobster populations rise and fall for many reasons. But in its new report, the commission singled out one factor that is probably driving the recent changes: The ocean is warming.

Email

PUBLIC RELEASE: 16-SEP-2015

Restoring ocean health

A UCSB analysis of 10 years of monitoring data from marine protected areas in the Channel Islands finds positive results

UNIVERSITY OF CALIFORNIA - SANTA BARBARA



PRINT E-MAIL

More than a decade ago, California established marine protected areas (MPAs) in state waters around the northern Channel Islands off the coast of Santa Barbara. Several years later, the National Oceanic and Atmospheric Administration (NOAA) extended these MPAs into the federal waters of the Channel Islands National Marine Sanctuary.

To evaluate whether the MPAs are meeting their ecological goals, marine scientists from the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) have been monitoring these rocky reef and kelp forest communities. Three UC Santa Barbara PISCO scientists have now published an analysis of 10 years of monitoring data for the MPAs in the Channel Islands network. The results appear in the journal *Scientific Reports*.

"The Channel Islands MPAs appear to be fulfilling their role as refuges for many fish and invertebrate species," said lead author Jennifer Caselle, a research biologist at UCSB's Marine Science Institute (MSI). "2013 marked the 10-year anniversary of the Channel Islands MPAs. A snapshot view in 2008 indicated that the MPAs were enhancing ecological communities, but we didn't have enough data to assess the long-term changes. Now, for the first time, we can compare long-term trends in the protected areas with areas open to fishing."

After the first five years of protection, scientists found that fish species targeted by fishermen had both greater density (numbers of fish per area) and biomass (total weight per area) inside MPAs as compared to reference sites outside -- and this was still true in 2013. "We expected to find an increase in biomass inside the MPAs for fish species that are the targets of fishing, and that did occur across the MPA network," Caselle said. "Perhaps more important, we also found increases in fished species outside in the unprotected areas. That means that one of the most common fears of fishermen was not realized -- and that's huge."

16 September, 2015

"...scientists found that fish **species targeted by fishermen had both greater density** (numbers of fish per area) **and biomass** (total weight per area) inside MPAs as compared to reference sites outside...we also found increases in fished species outside in the unprotected areas"

"It was feared that ... extra effort would deplete the fish stocks outside of MPAs. Happily, there is no evidence of depletion. In fact, **fish stocks outside of MPAs have increased over time, although at a slower rate than inside MPAs.**" Robert Warner, co-author

Features of Marine Protected Areas Worldwide

No-Use Zone

No activities permitted.

No-Take Zone

Measures are taken to protect species whose populations may be affected in other zones/areas. Examples include spawning and nursery grounds.

Non-extractive activities are permitted, such as diving and mooring.

Buffer Zone

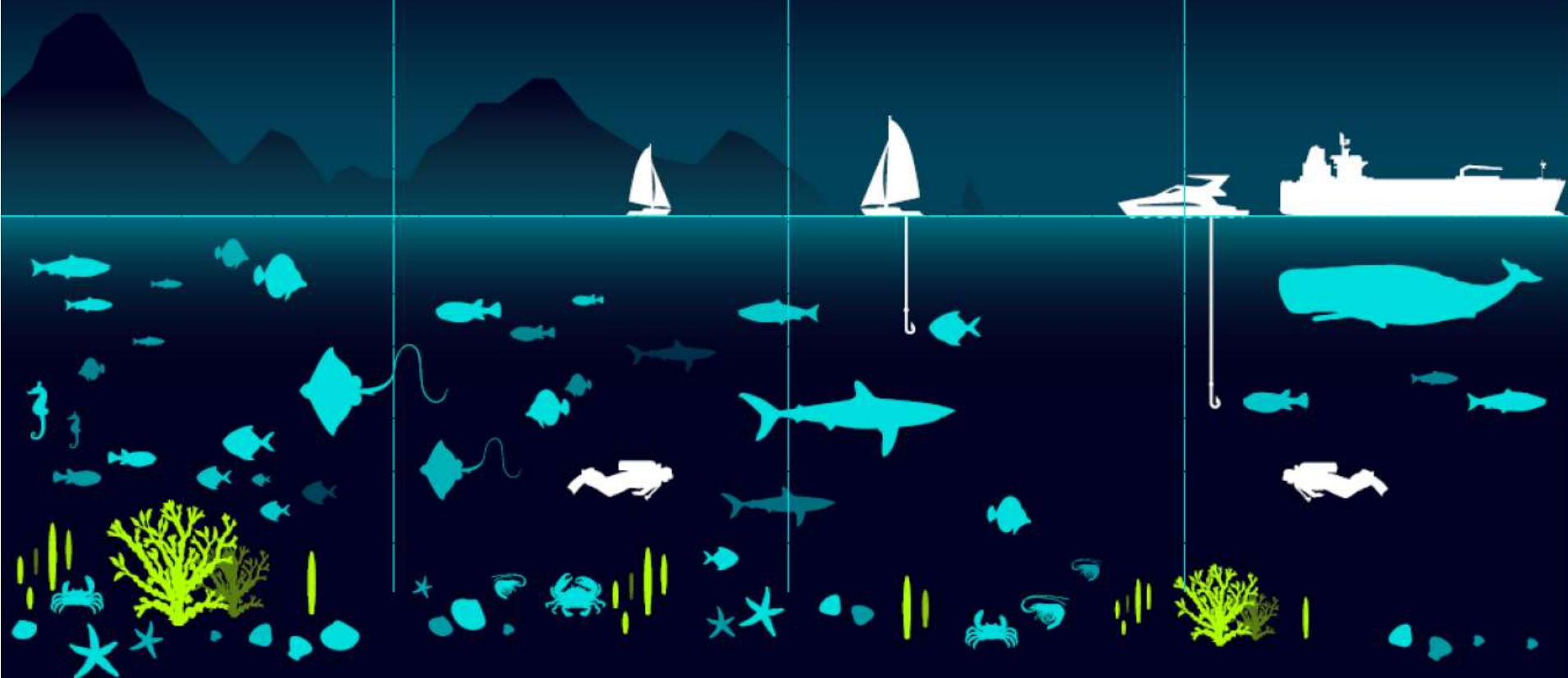
Transitional zones from no-take zones to multiple-use zones.

Moderate activities, such as hook-and-line fishing, limited aquaculture, and limited tourism are permitted.

Multi-Use Zone

All tourism, fishing and aquaculture activities permitted.

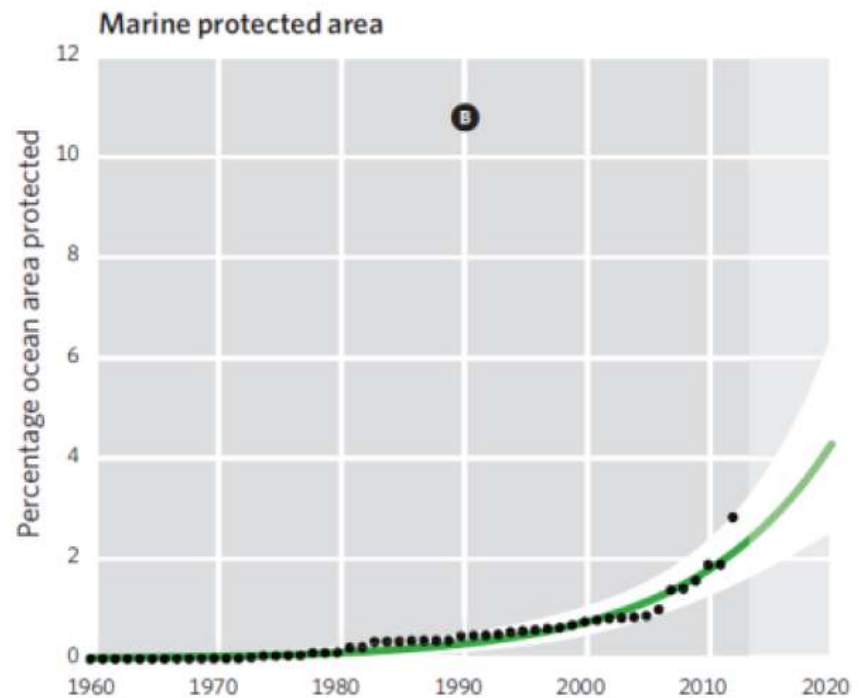
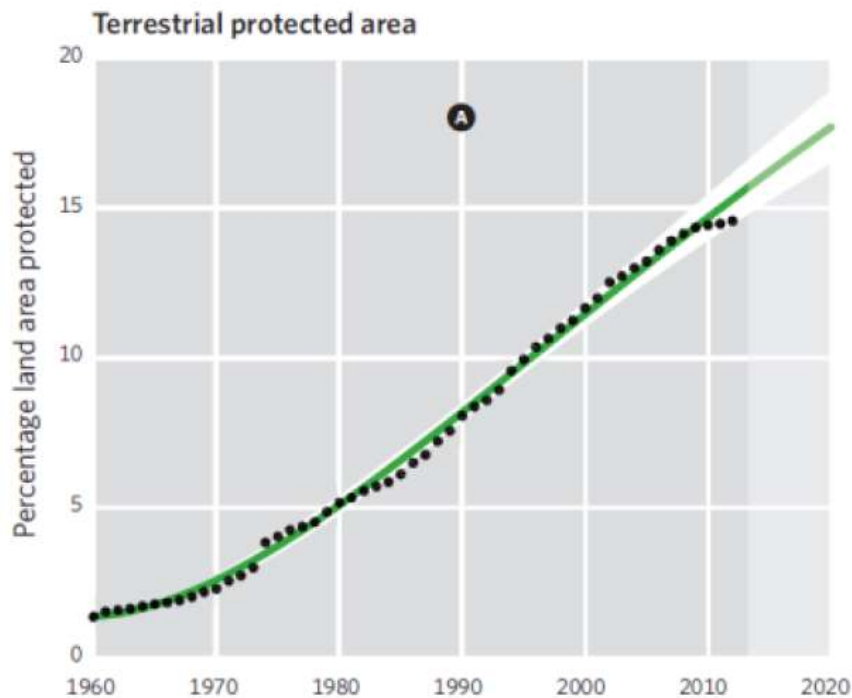
Permitted activities include diving and snorkeling, artisanal fishing, large-scale commercial fishing, and aquaculture.



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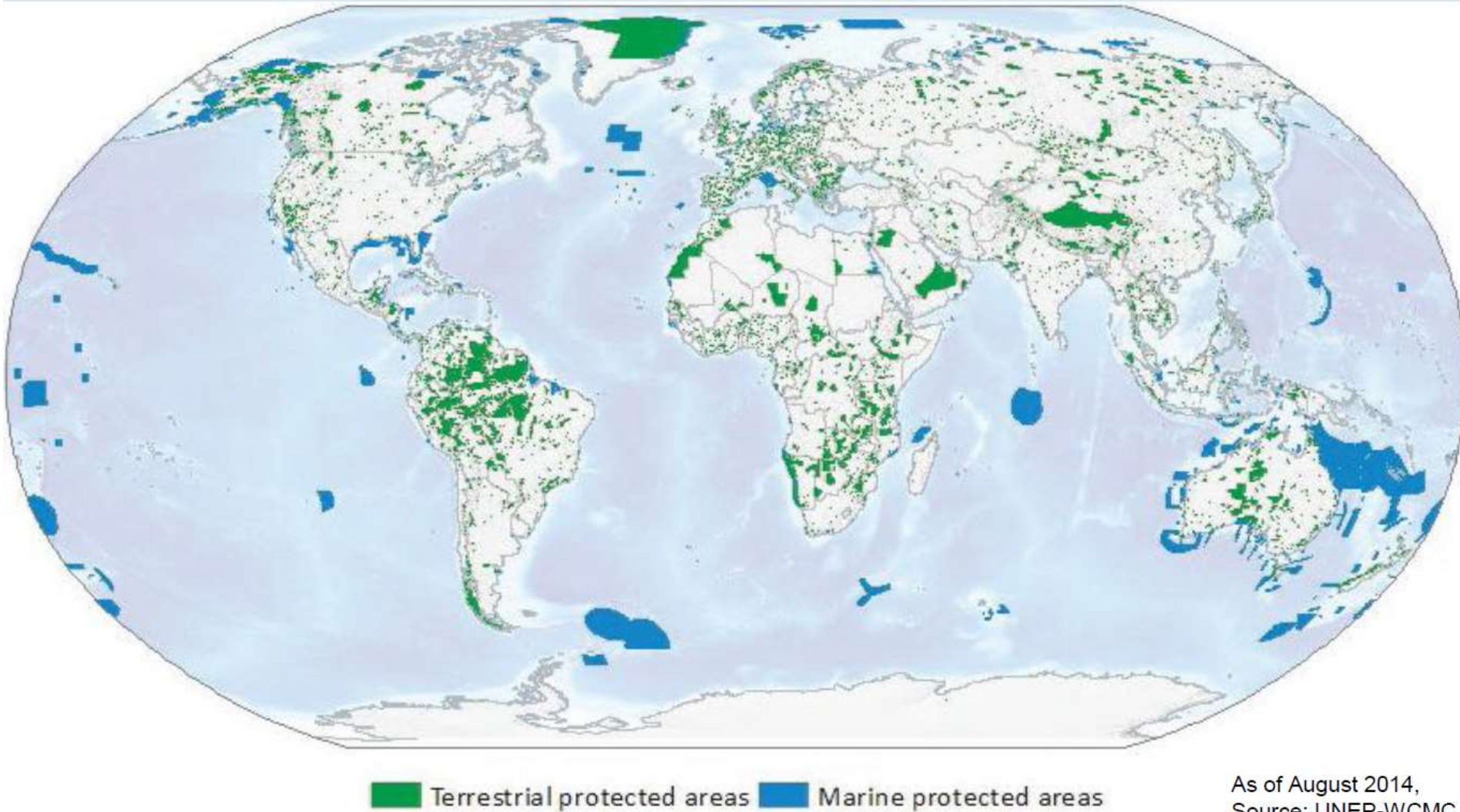
Marine Managed Areas: What, Why, and Where, Science to Action

Marine vs terrestrial ecosystems



Source: Secretariat of the CBD (2014),
Global Biodiversity Outlook 4,

Protected areas cover 3.41% of the oceans



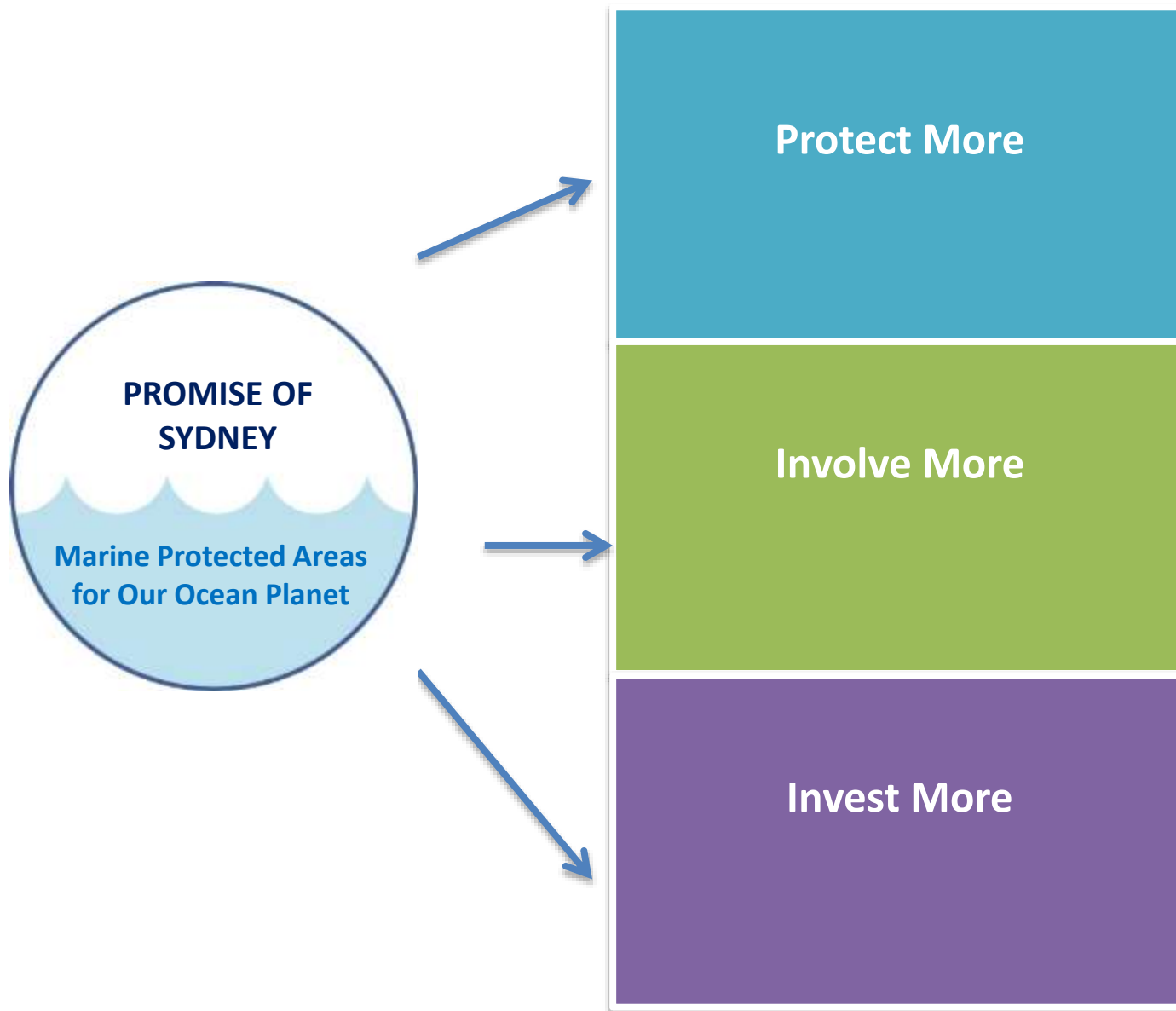
As of August 2014,
Source: UNEP-WCMC

Impact of Sydney:

Country Commitments on MPAs

- **Gabon** will designate a network of MPAs covering 23% of the nation's waters, or roughly 46,000 km².
- **Comoros** committed to protecting 5% of its EEZ in MPAs by 2017.
- **Madagascar** committed to tripling its MPA coverage in the next 10 years.
- **Australia** committed to ending the dumping of dredge spoil in the Great Barrier Reef Marine Park for capital dredge purposes.
- **Russia** committed to increasing its MPA coverage to 170,000 km² in the next 10 years.
- **South Africa** committed to tripling its MPA coverage in the next 10 years.
- **Brazil** committed to protecting 5% of its marine waters by 2020.
- **French Polynesia** committed to creating a new large-scale MPA initiative in the Austral Islands.
- **The Republic of Kiribati and the US** signed a cooperative agreement to coordinate research and protection of their adjacent MPAs: the Phoenix Islands Protected Area (Kiribati) and the Pacific Remote Islands Marine National Monument (US).

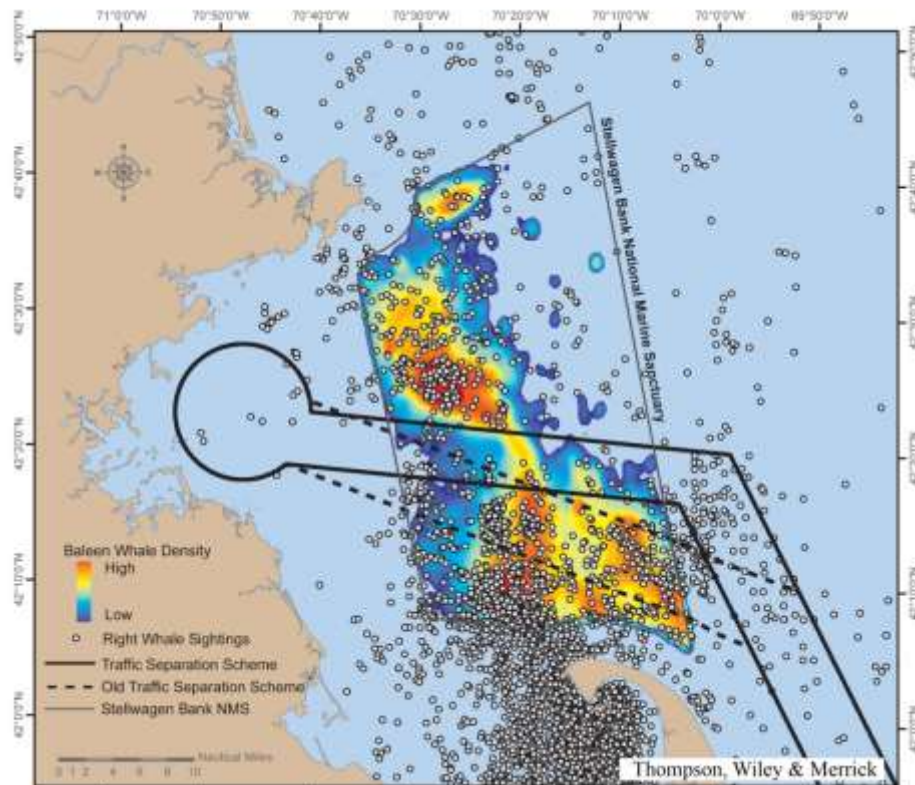
Marine Goals Planning for Sydney



Marine Recommendations

1. Increase Ocean Area in MPAs
2. Commit to Management Effectiveness
3. Integrate MPAs into the Broader Seascape

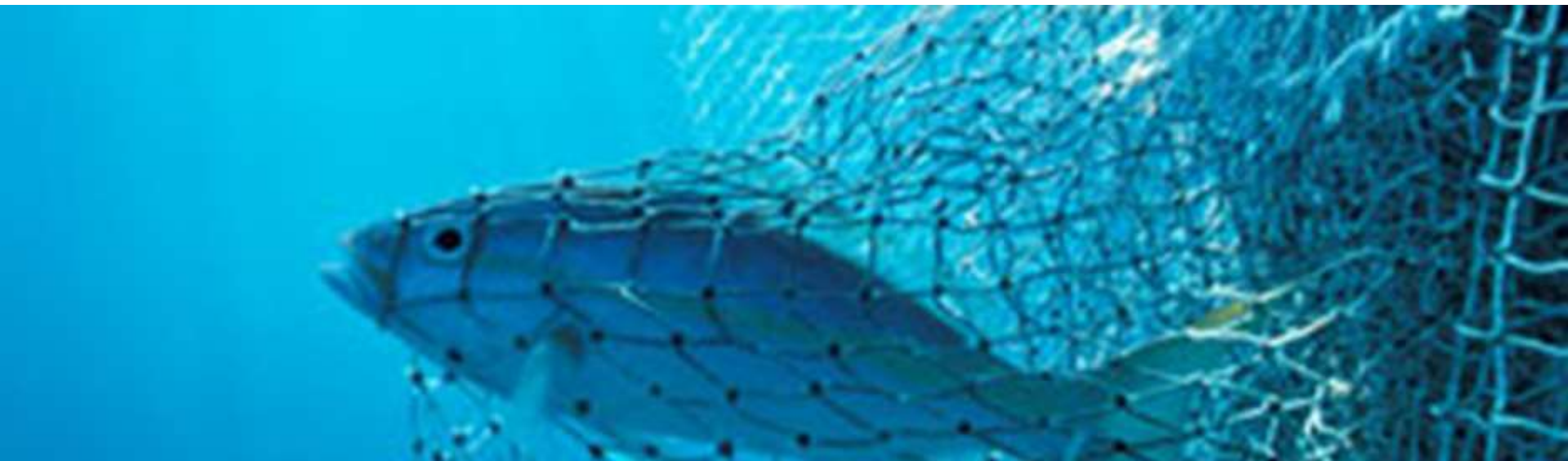
MPA Targets & Effectiveness



Marine Recommendations

4. Include MPAs as Part of the Solution for Climate Change Impacts
5. Protect the High Seas
6. Incorporate Oceans in Sustainable Development Goals
7. Prevent Illegal Fishing

International
Agreements



Marine Recommendations

- 8. Manage MPAs for Human as well as Ecological Benefits
 - 9. Strengthen Support for Marine Conservation
 - 10. Develop Innovative Partnerships with Business
- Engaging with people



The MPA/ LME interface

MPA objectives

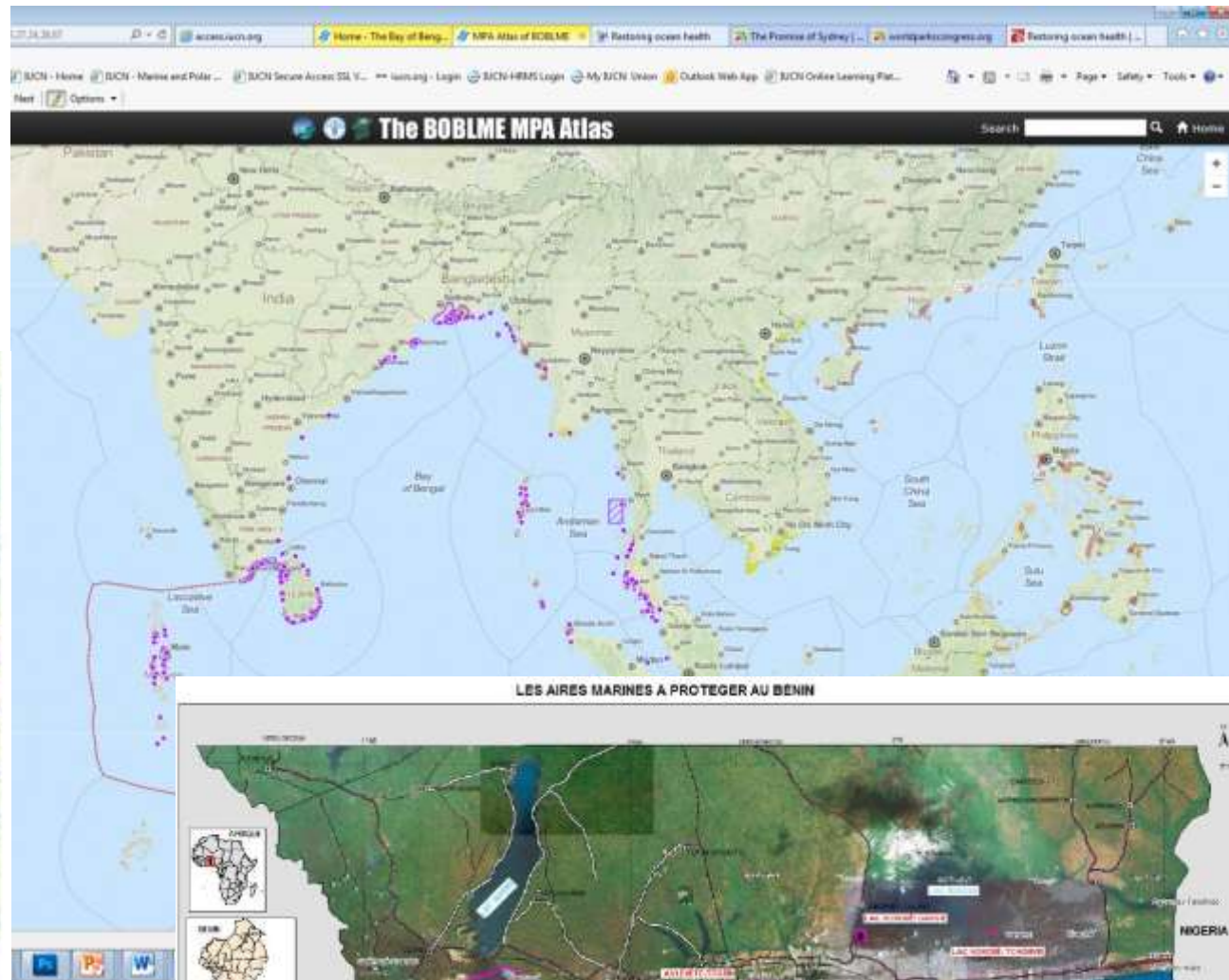
- Educate the public about marine ecosystems
- Offer nature-based recreation and tourism
- Provide undisturbed control or reference sites for research

- Preserve biodiversity & ecosystem services
- Protect spawning grounds & nurseries
- Reduce poverty and improve livelihoods
- Monitoring and evaluation
- Habitat restoration

LME objectives

- Improve understanding & governance of transboundary marine resources
- Reduce pollution and nutrients entering the marine environment
- Improve fisheries management
- Build capacity for ecosystem-based management of marine resources

Building on existing work



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Thank you for your attention

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www.iucn.org/wcpa