Global habitat mapping and data partnership

Louisa Wood

Head, Marine Assessment and Decision Support Programme

UNEP World Conservation Monitoring Centre

UNEP-WCMC

- Specialist biodiversity arm of UNEP
- Mandated to deliver biodiversity-related information & services
- 60 Technical & IT staff
- 8 Thematic Programmes
- Innovation enables delivery of authoritative, strategic and timely information on biodiversity & ecosystems for decision-making

UNEP WCMC

Marine Assessment & Decision Support Programme

We provide strategic scientific information

to guide decisions impacting on the marine and coastal environment.

We achieve this by

facilitating the collaborative creation & improvement of critical marine & coastal datasets,

and

enabling their use in relevant environmental and socio-economic assessments & tools.

UNEP WCMC

Critical habitats of international importance

CBD	MEA	WSSD	RAMSAR
★ Coral Reefs ✓	Coral Reefs	Coral Reefs	Coral Reefs
★ Mangroves ✓	Mangroves	Mangroves	Mangroves
★ Seagrasses ✓	Seagrasses	Seagrasses	Seagrasses
Saltmarshes	Saltmarshes		
Deep seabed:	**Near-shore:**	**Wetlands:**	**Wetlands:**
★ Cold water corals ✓	★ Beaches and dunes	★ Tidal mudflats	★ Deltas ✓
★ Cold seeps	★ Estuaries		★ Estuaries ✓
★ Hydrothermal vents	★ Kelp forests		★ Near-shore areas
★ Seamounts ✓	★ Lagoons		★ Tidal flats
★ Sponge reefs	★ Mudflats ✓		

UNEP WCMC

Ocean Data Viewer

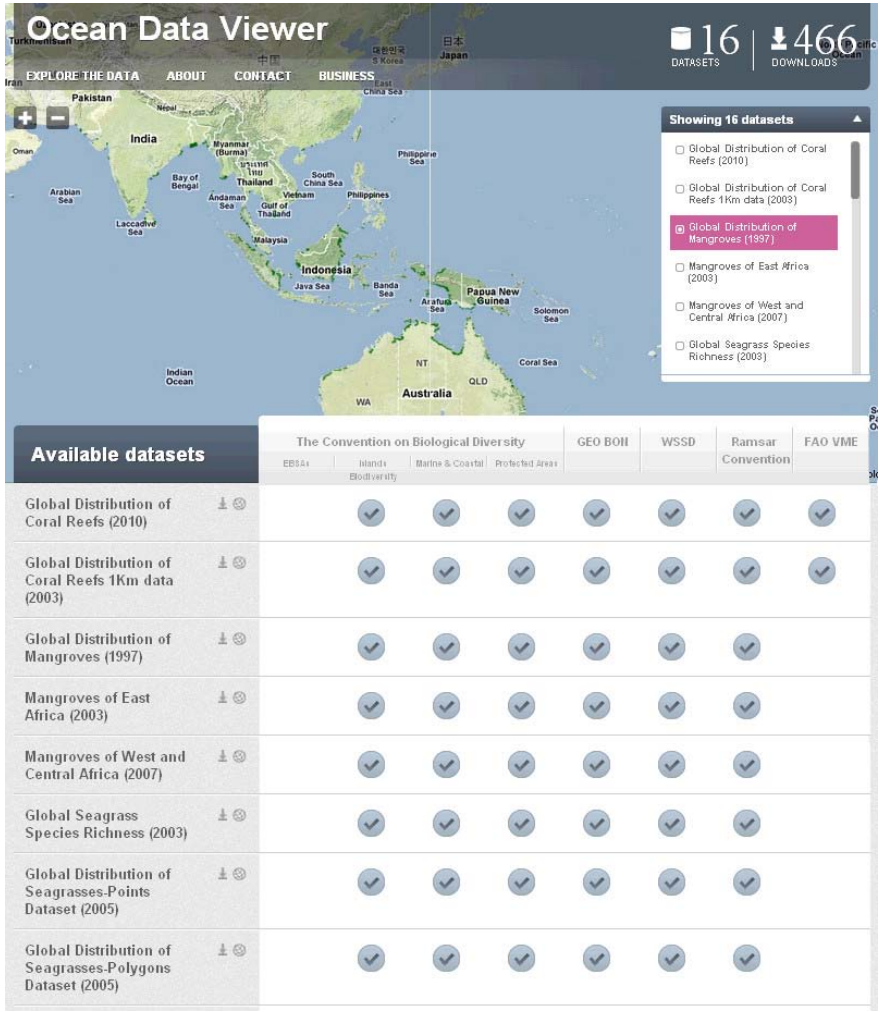
Ocean data Viewer

- Accessibility
- Transparency

Platform to improve data:

- Quality
- Timeliness
- Resolution
- Accessibility

http://data.unep-wcmc.org



UNEP WCMC

Dataset factsheet:
Global distribution of coral reefs (2010)

The value of coral reefs – economic and ecological

Healthy coral reefs are among the most biologically diverse and economically valuable ecosystems on earth. They provide valuable and vital ecosystem services such as food, coastal protection; and employment through fishing, recreation and tourism. They are a source of new medicines, provide habitat, spawning and nursery grounds for economically important fish species; and are hotspots of marine biodiversity.

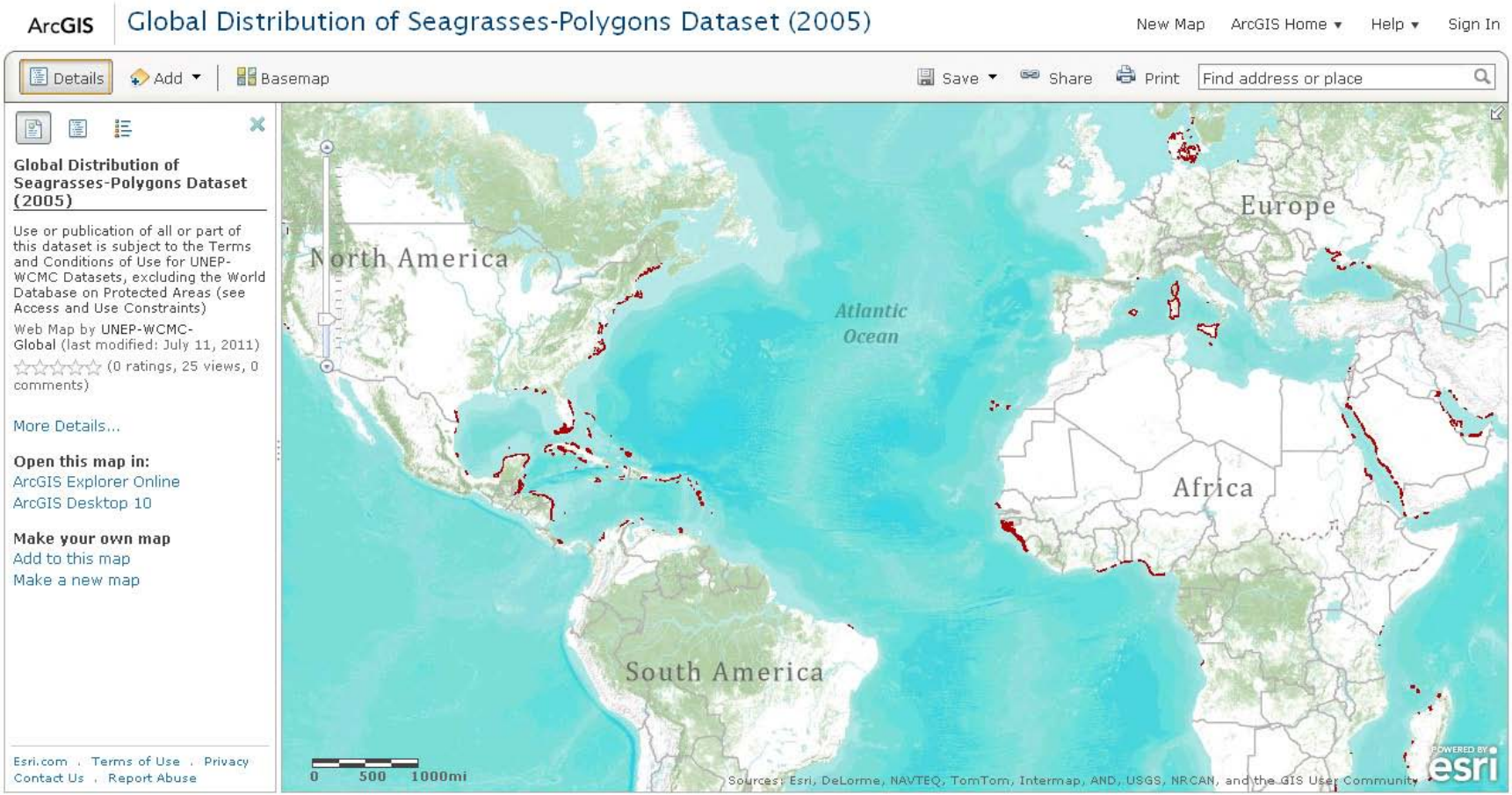
Coral ecosystems face serious threats through the impact of climate change, unsustainable fishing, and land-based pollution. Together, these and other threats are decimating corals faster than they can adapt for survival. The decline and loss of coral reefs have significant social, cultural, economic, and ecological impacts on people and communities around the world. With effective leadership and management, healthy, resilient reef ecosystems can continue to provide these valuable services to current and future generations.

Coral reef data

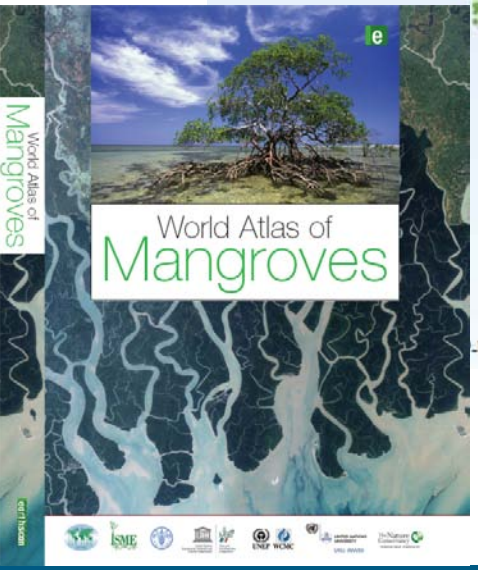
This dataset contains coral reefs in warm shallow waters in tropical and subtropical regions; cold water corals are not included. It is the most comprehensive global dataset of warm water coral reefs, acting as a baseline global coral reef map that can be a foundation for future more detailed investigations. Corals identified through remote sensing make up 80% of the dataset, the other 20% comes from other sources. It is also the most high resolution global coral reef dataset to date, with the majority (80%) of the data

To reduce risk to fragile ecosystems exploration technologies in the ocean environment require the best available data showing the distribution of marine habitats, with fit-for-purpose coral reef data being an important factor in informed decision-making. High spatial and temporal resolution coral reef data are critical for marine spatial planning and development of marine protected areas, enabling better decision-making across sectors, reducing risk, whilst maximising profit, health, well-being and success. Use of this coral reef dataset alongside oil rig data can highlight instances where oil exploration infrastructure have acted as artificial reefs and helped to add to the global area of coral reefs, enabling the private sector to give back to the marine environment.

Mash-up in Arcgis.com



Mangroves

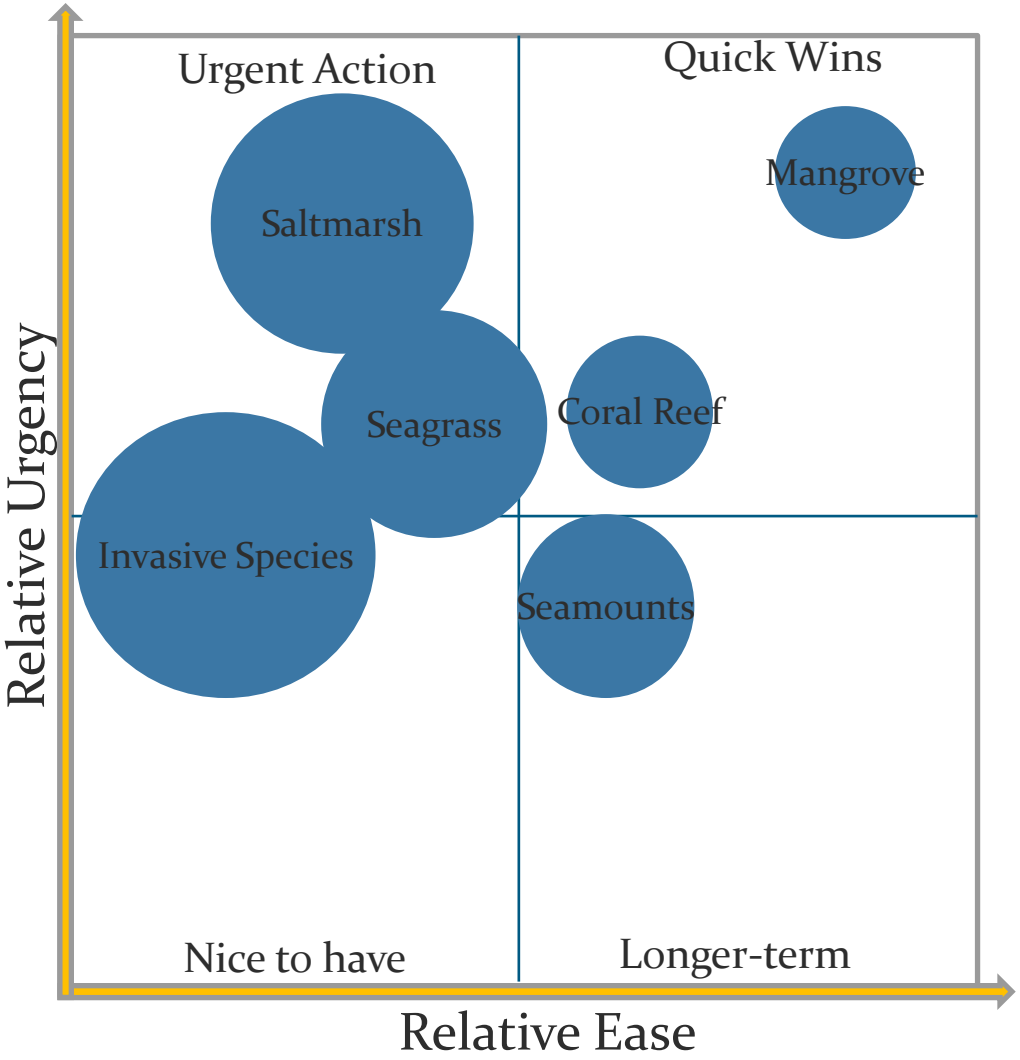


-WCMC, 1997.

Seagrasses

UNEP WCMC

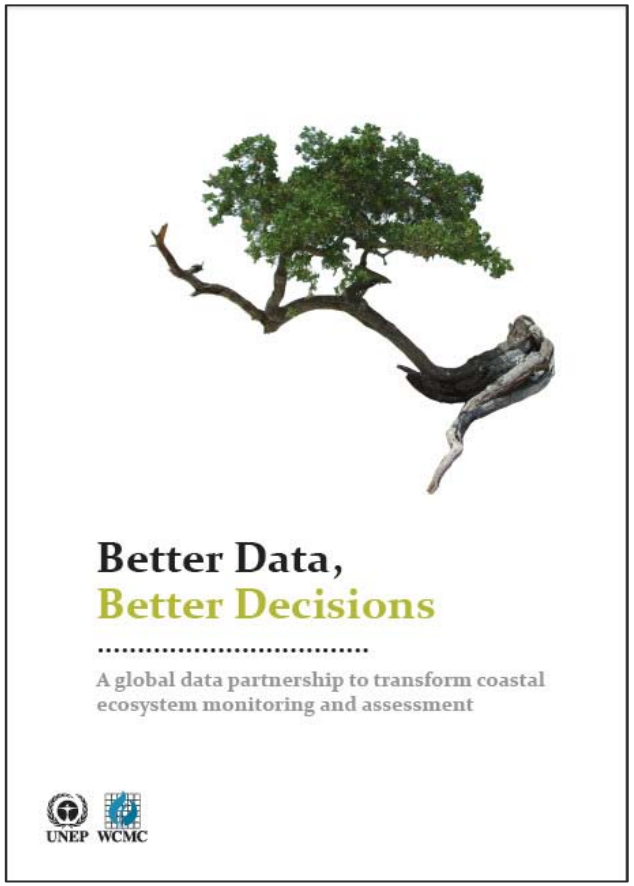
Data priorities could be endless!



UNEP WCMC

A Global Data Partnership

To transform the way in which coastal ecosystem data is collected and disseminated: to significantly increase the volume, reliability, and update frequency of four data-deficient datasets, namely, warm water coral reefs, seagrasses, mangroves, and saltmarshes.



UNEP WCMC

Objectives

1. Transformation of methodologies for data collection
   - Spatial & temporal resolution of extent
   - Measures of condition / health
2. Better decision-making across sectors
   - Improved assessments, including of blue carbon;
   - Support market based instruments for conservation
   - Strengthened capacity to incorporate management measures into national management / protection strategies

UNEP WCMC

Activities

- Networks and partnerships & communication fora: technical, technological, etc
- Global maps of ecosystem extent – improved spatial and temporal resolution
- Standards development, aligned with existing regional & international standards
- Citizen science tools
  - Validation
  - Attribution
- Pilot projects to demonstrate the chain from improving data to improved decision-making and conservation outcomes

UNEP WCMC

Global Coastal Carbon Data Archive

- Essentially the same thing!

Thankyou!