

The regional context of the East coast of Africa for coastal management decision making informed by ocean observation

THE NAIROBI CONVENTION KNOWLEDGE AND INFORMATION SHARING SYSTEM





**Regional
Seas**

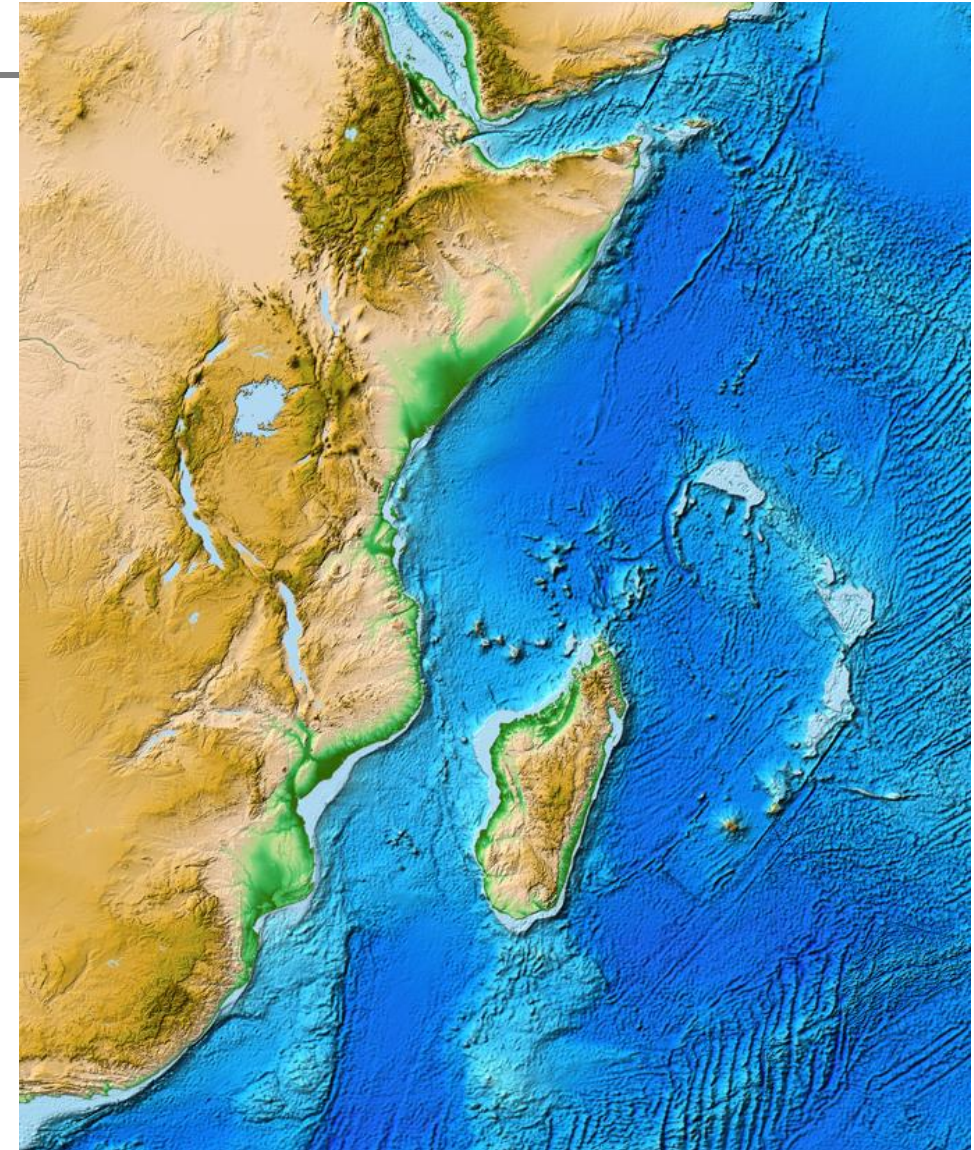
The Contracting Parties:

- Somalia
- Kenya
- Tanzania
- Seychelles
- Comoros
- Madagascar
- France
- Mauritius
- Mozambique
- South Africa



WHO ARE WE?

- **The Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean**
- **A legal framework** and platform for regional collaboration between countries and agencies.
- **Mandate:** protect, manage and develop the Western Indian Ocean at the regional level.
- **Vision:** A **partnership** between governments, civil society and the private sector, working towards a prosperous Western Indian Ocean region.





PROTOCOLS

1. Protocol concerning protected areas and **wild fauna and flora** in Eastern African region (MPAs/Biodiversity).
2. Protocol concerning cooperation in **combating marine pollution** in cases of emergency in the Eastern African Region (marine pollution)
3. Protocol concerning **Land Based Sources and Activities** (land-based pollution sources)
4. Protocol on **Integrated Coastal Zone Management – ICZM**

PARTNERS

(EXCLUDING DONORS AND FUNDERS)



National institutions



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission



INDIAN OCEAN
COMMISSION



PMAESA
Port Management Association of
Eastern and Southern Africa



INTERNATIONAL
MARITIME
ORGANIZATION



The Nature
Conservancy



Strategic partnerships

WHY THE WESTERN INDIAN OCEAN MATTERS



5% global industrialized fish catch (4 million tonnes/yr)

11,257 marine species (13% endemism)

2,200 fish species (83% of known fish families)

65 million people live within 100 km of the coast



Over 40 EBSAs & approx. 700 Seamounts identified

Estimated US\$ 22 Billion/year from marine & coastal resources; assets estimated at US\$ 333.8 billion

Emerging Oil & Gas sector of global interest

Threats to the Western Indian Ocean



Biodiversity and habitat loss



Illegal fishing



Overfishing



Pollution from land based sources



Climate change impacts



Inadequate governance

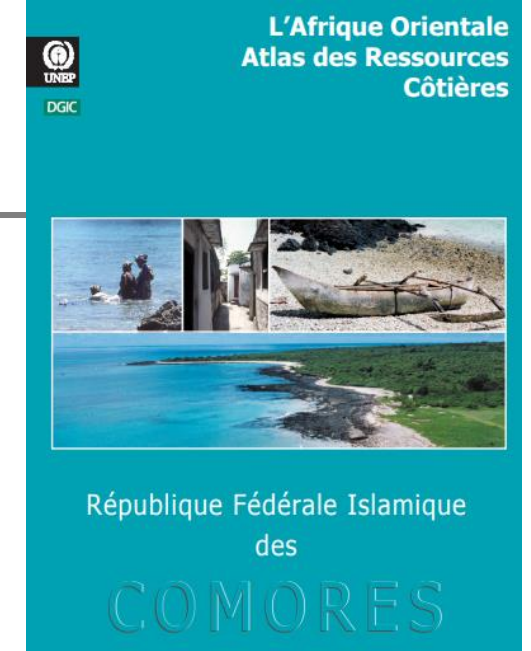
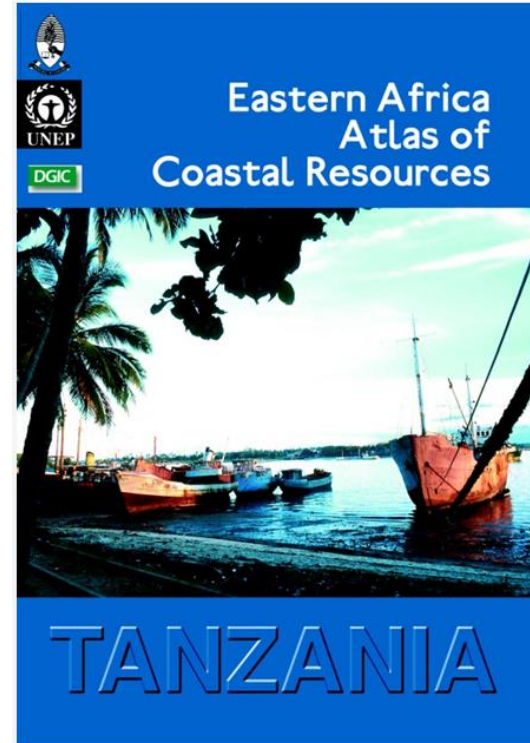
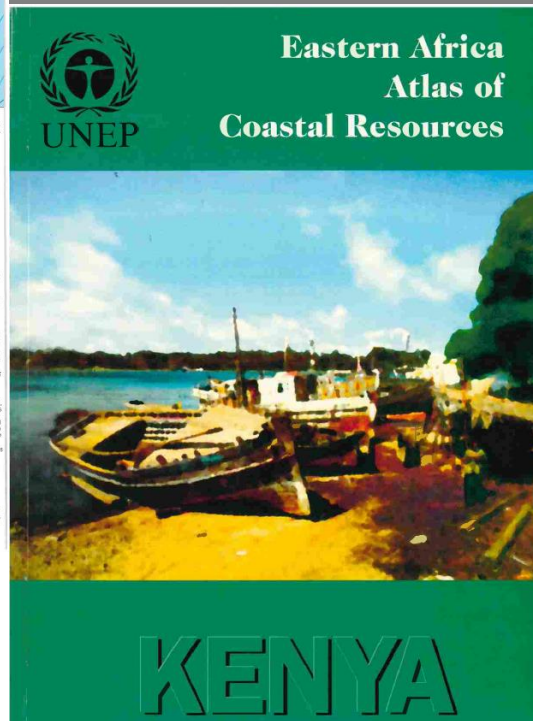
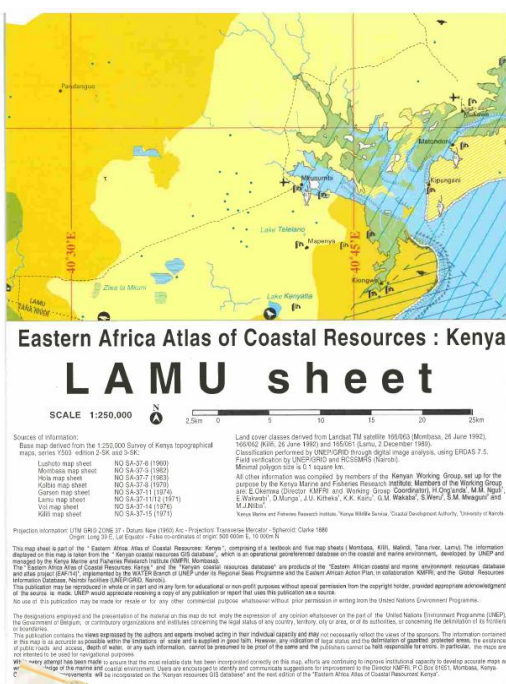


New opportunities



Infrastructure

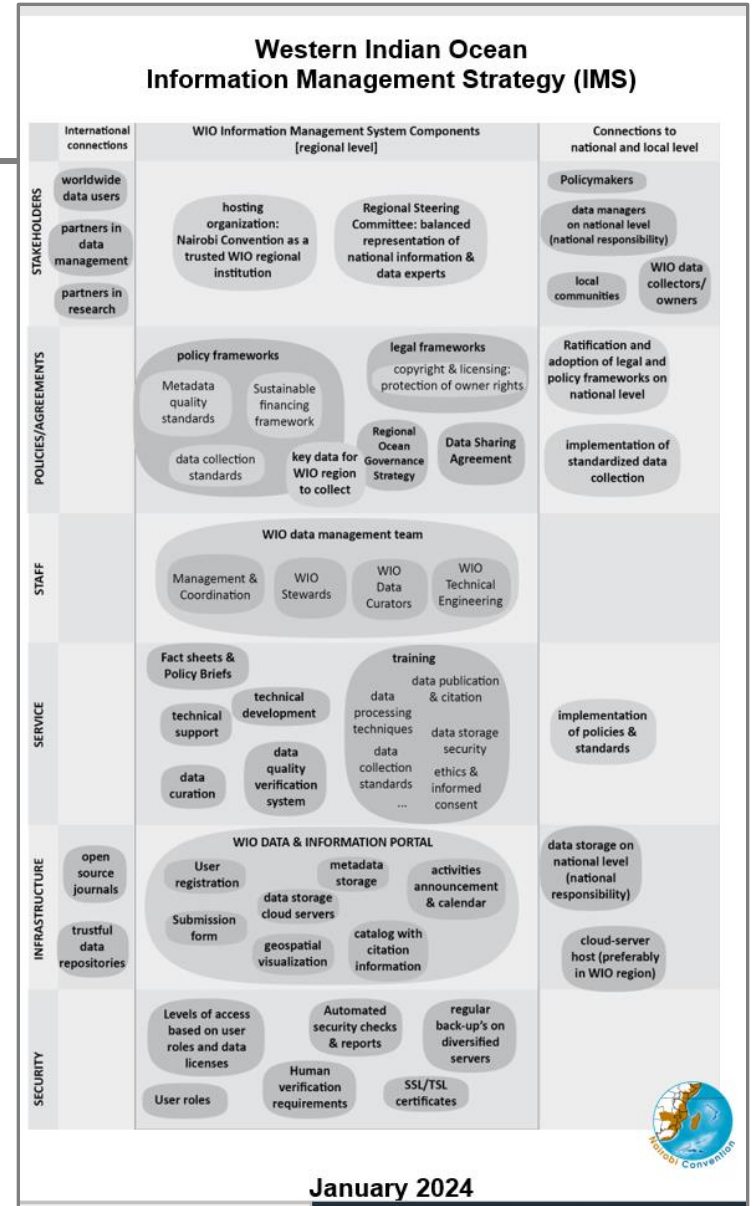
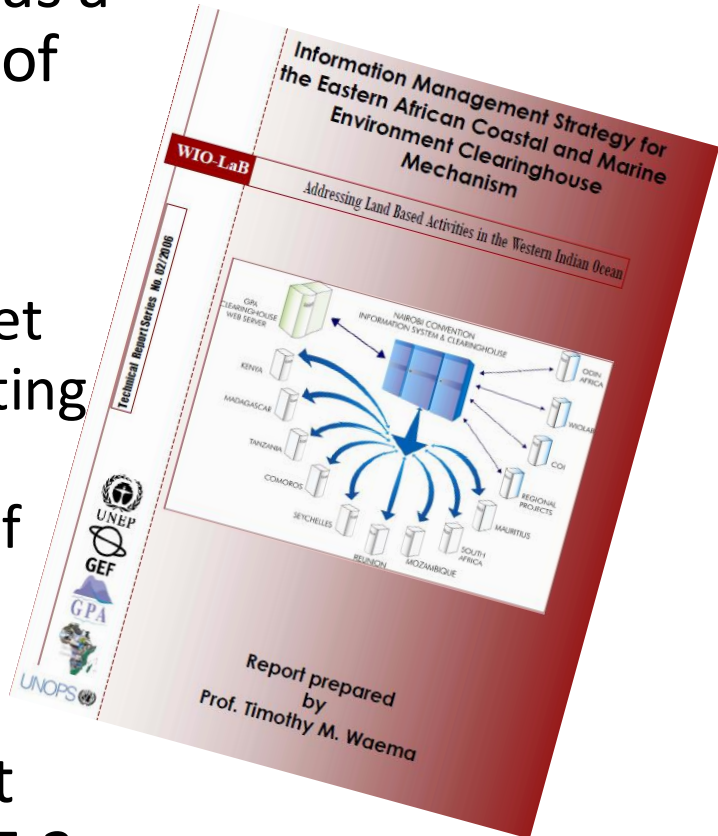
GEO PRODUCTS



? Underwater resource mapping challenging
? Near & real-time data e.g. chlorophyll a movement

MANDATE FOR KNOWLEDGE AND INFORMATION

- The Nairobi Convention knowledge management as a response to Decision 4/8 of the Fourth Conference of Parties (COP4/8, 2004)
 - Enable Governments meet their needs of implementing the Nairobi Convention through access and use of comprehensive data and information
- Information management strategy COP2021 CP.10/5.3



DATA PRODUCTS & OCEAN ECONOMY



- Cruise and coastal tourism
- Shipping, maritime transport
- Mariculture/Aquaculture
- Offshore oil and gas
- Mining / Seabed mining
- Fisheries
- Dredging
- Submarine cables/pipelines
- Built up area
- EEZ, ABNJ biodiversity
- Nodules minerals
- Seafloor resource mapping
- Wave/tidal energy/offshore wind energy
- Ports/marinas
- Recreational boating/use
- Desalination
- Navy/military use
- Carbon sequestration
- Ecosystem support sectors
- Finance/Investment
- Insurance
- Maritime laws
- Ship strikes



ONGOING PRIORITY PROJECTS

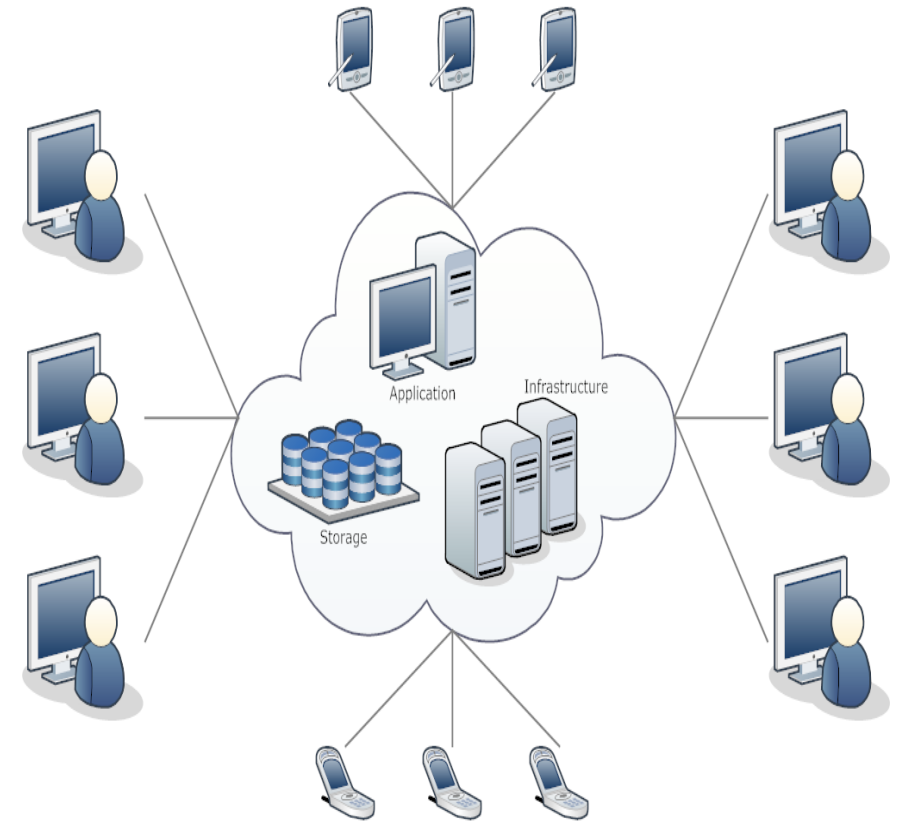
1. A Partnership for Marine and Coastal Governance and Fisheries Management for Sustainable Blue Growth in the Western Indian Ocean SAPPHIRE
2. Western Indian Ocean Large Marine Ecosystems Strategic Action Programme Policy Harmonisation and Institutional Reforms (SAPPHIRE)
3. Integrated Management of the Marine and Coastal Resources of the Northern Mozambique Channel (NoCaMo) Project
4. The Western Indian Ocean Governance Initiative (WIOGI)
5. Implementation of the Strategic Action Programme for the protection of the Western Indian Ocean from land-based sources and activities (WIOSAP)
6. ACP MEAs 3 Programme (Eastern Africa)
7. SWIOFC Nairobi Convention Partnership for Resilient Marine and Coastal Ecosystems and Livelihoods (SWIOFC NC PP2)
8. Go Blue Partnership between the EU and the Government of Kenya to advance the Blue Economy Agenda through Coastal Development.





CURRENT PHASE OF THE CLEARINGHOUSE MECHANISM

1. Development of an interactive and knowledge sharing platform (Community of Practice)
2. Cloud hosting to reduce the need of the national data institutions to maintain and support their servers
3. Enhance the Clearinghouse mechanism for data interoperability, access and sharing
4. Enhancing metadata catalogue, and enable the interlinkages to consume web mapping services
5. Promote regional data sharing policy and develop national data sharing protocols to strengthen the exchange and sharing of data and information on the coastal and marine environment





CAPABILITIES

- I. **Data dashboard:** a quick snapshot of selected indicators to show the state of the coast
- II. **Mapping services:** capability of viewing all the spatial data in the Clearinghouse without the need for specialized software.
- III. **Search:** enable/allow users to locate specific data and maps using a comprehensive search criterion categorized according to coastal and marine thematic areas, countries and type of resource.
- IV. **Data dictionary:** a quick snapshot or reference list of the **data, documents, maps or map services, graphs and imagery** available in the clearinghouse



AN OVERVIEW OF DATASETS AVAILABLE IN THE CHM

The datasets and catalogue available in the CHM

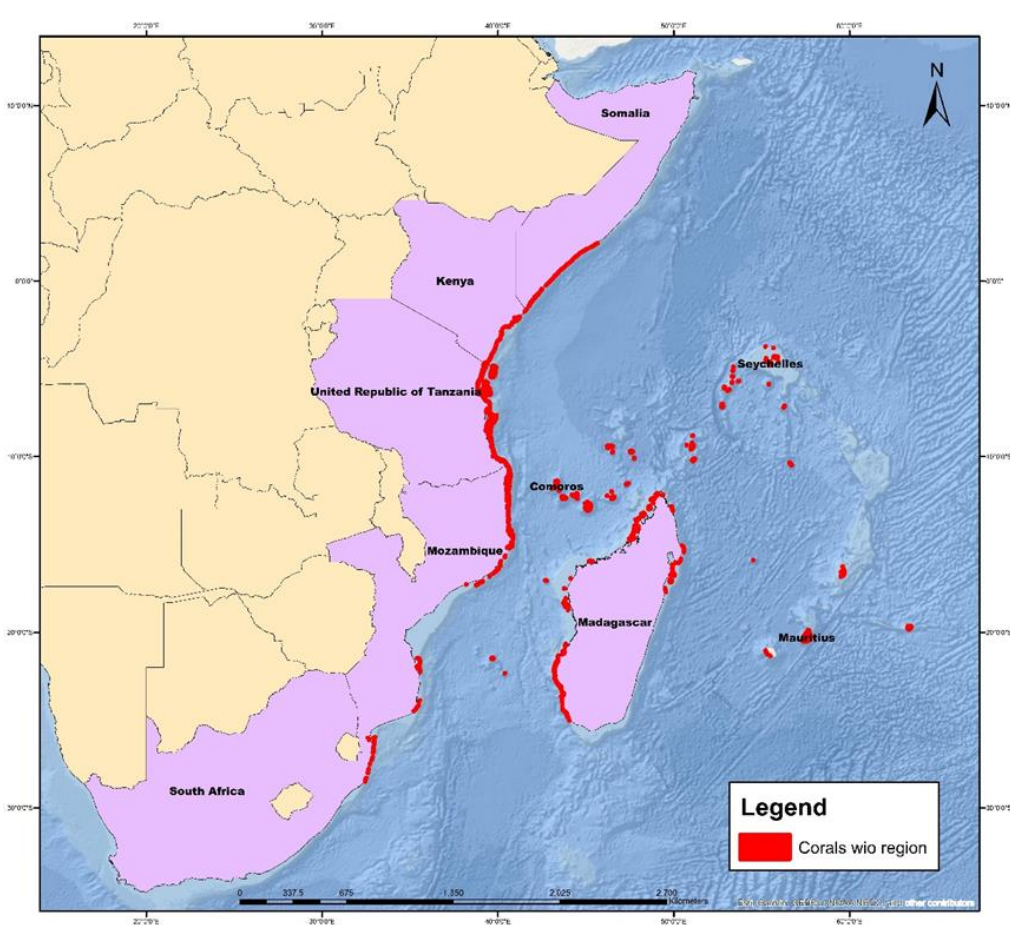
<http://nairobiconvention.org/CHM/Data/>

Visualization: <https://nairobics.maps.arcgis.com/home/index.html>

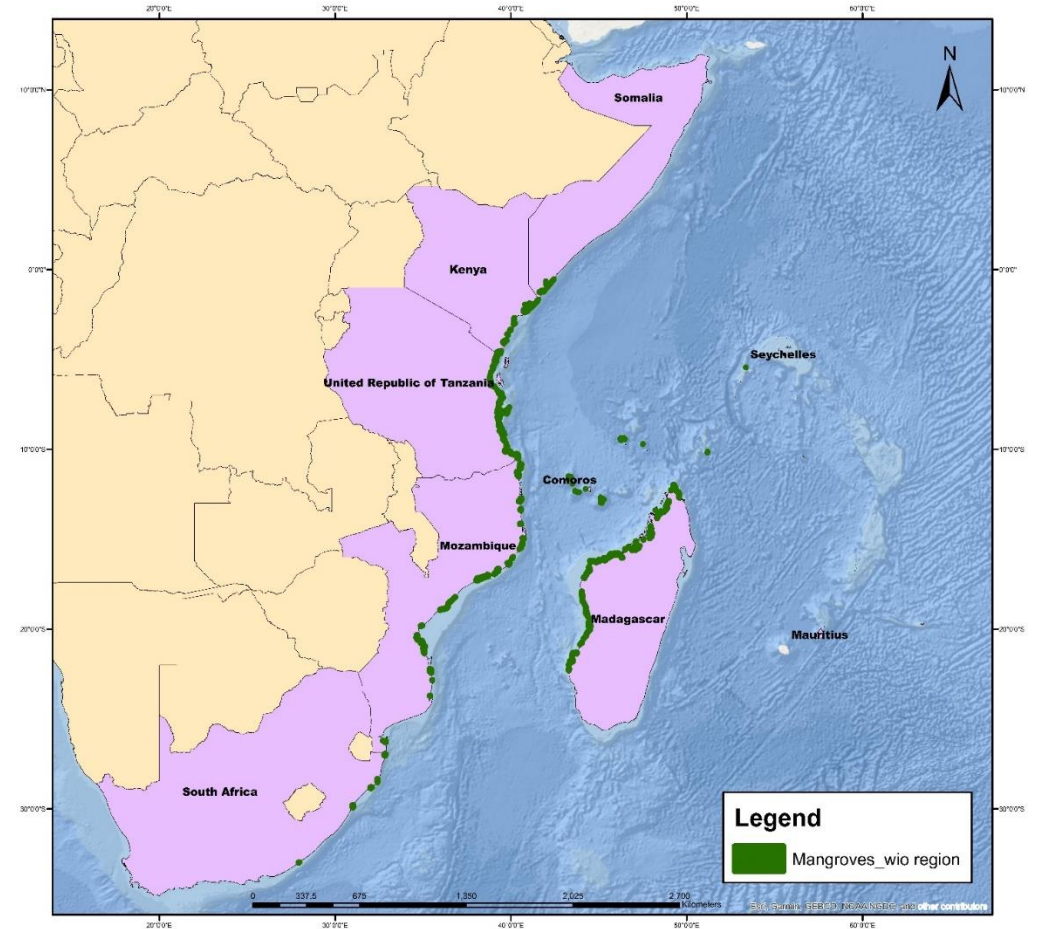


EXAMPLES OF DATASETS

Corals_WIO



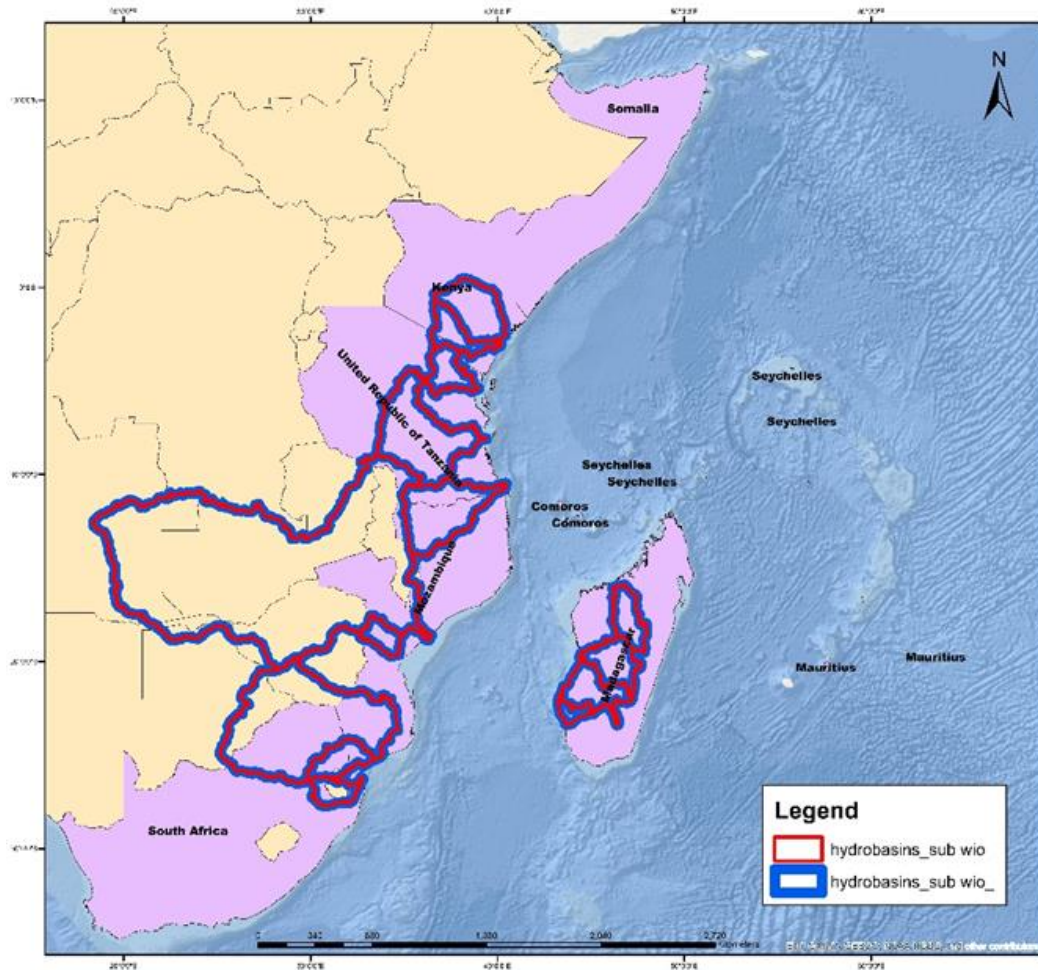
Mangroves_WIO Region





DATASET THAT IS ARE DUPLICATES

Hydro-basins



Table

temp_dec_feb

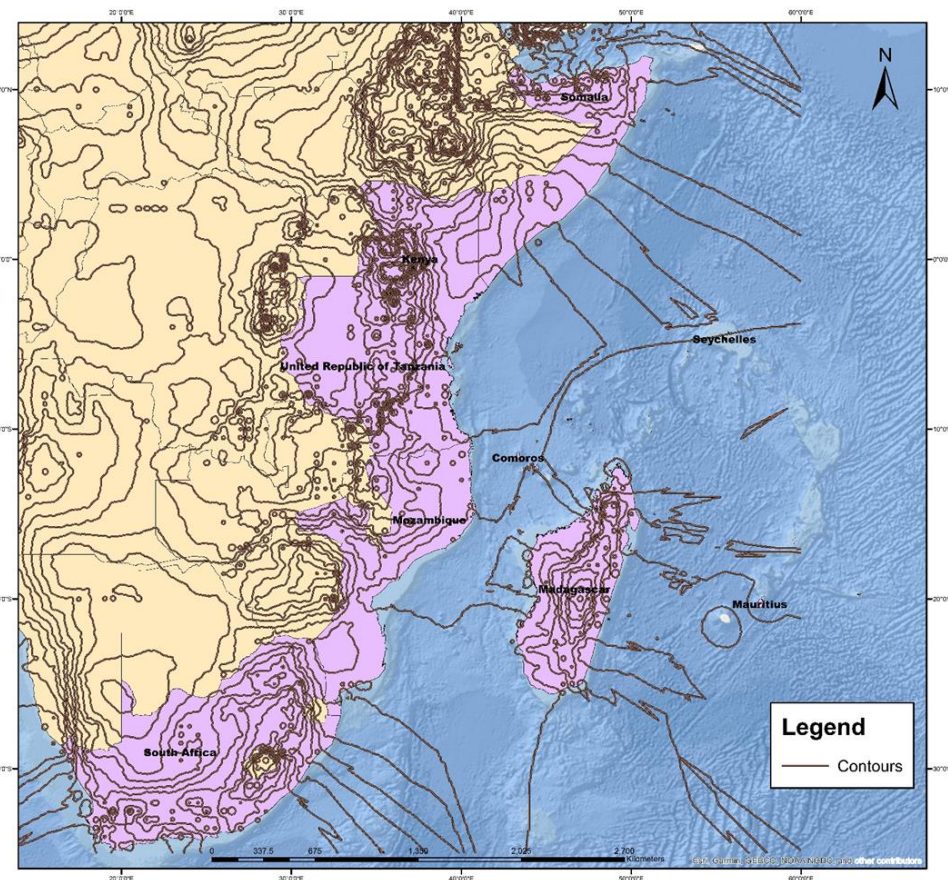
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(0 out of 1684 Selected)

temp_dec_feb

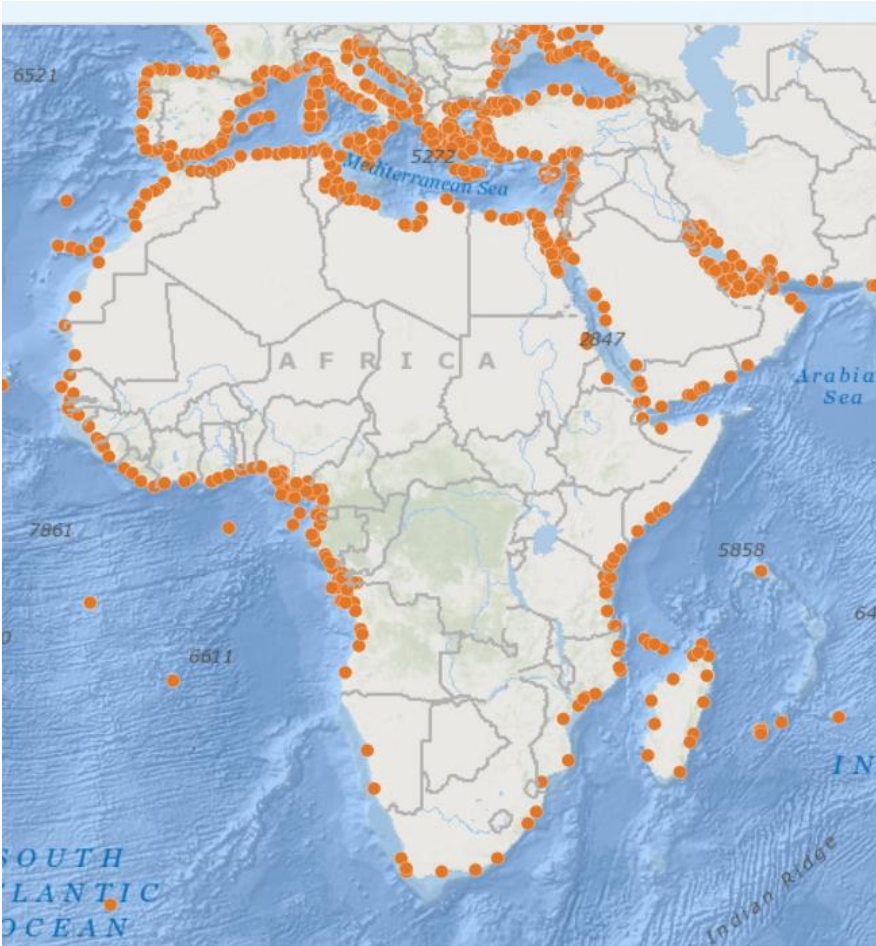
Table Of Contents Table

Contours

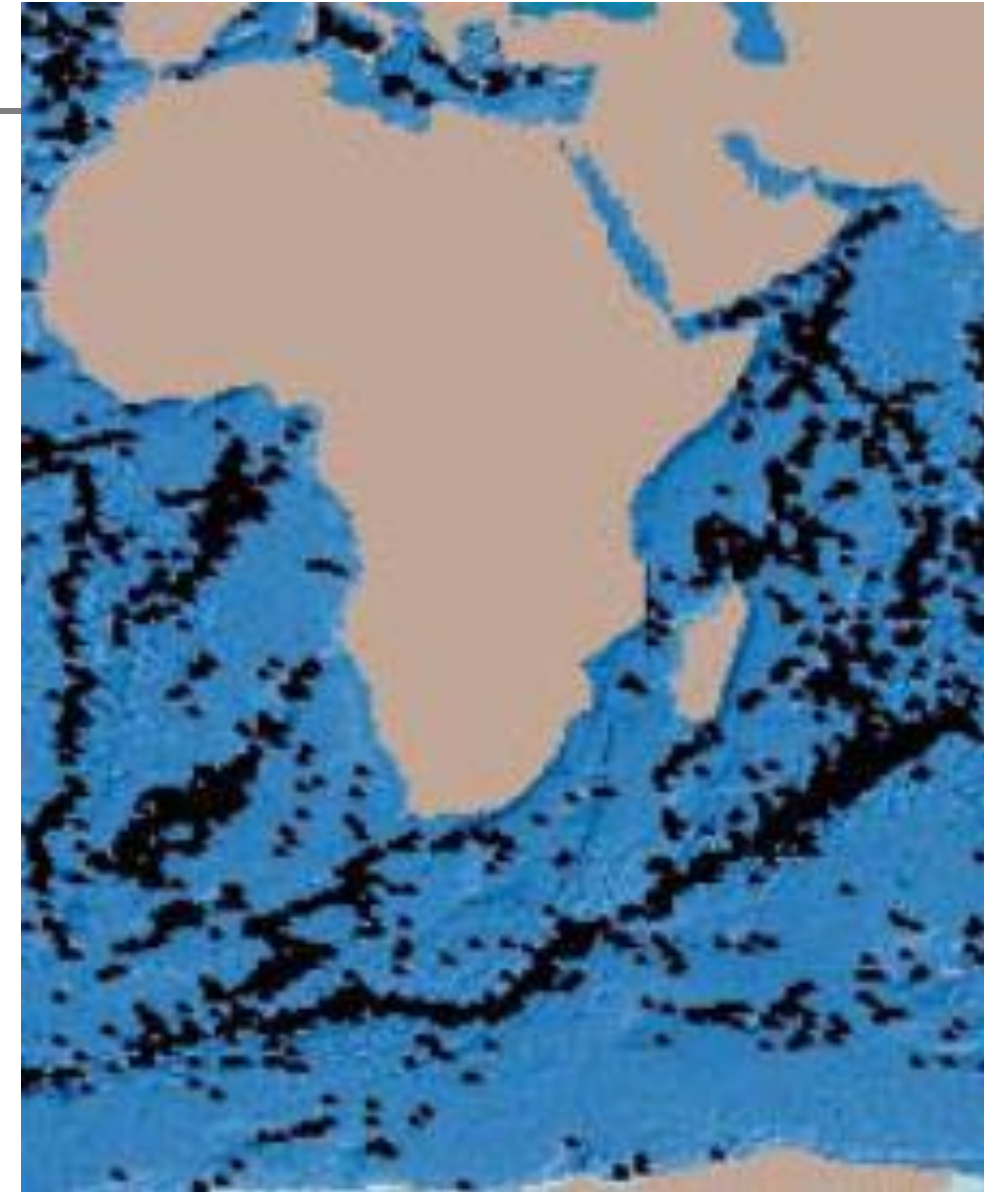




World Port Index



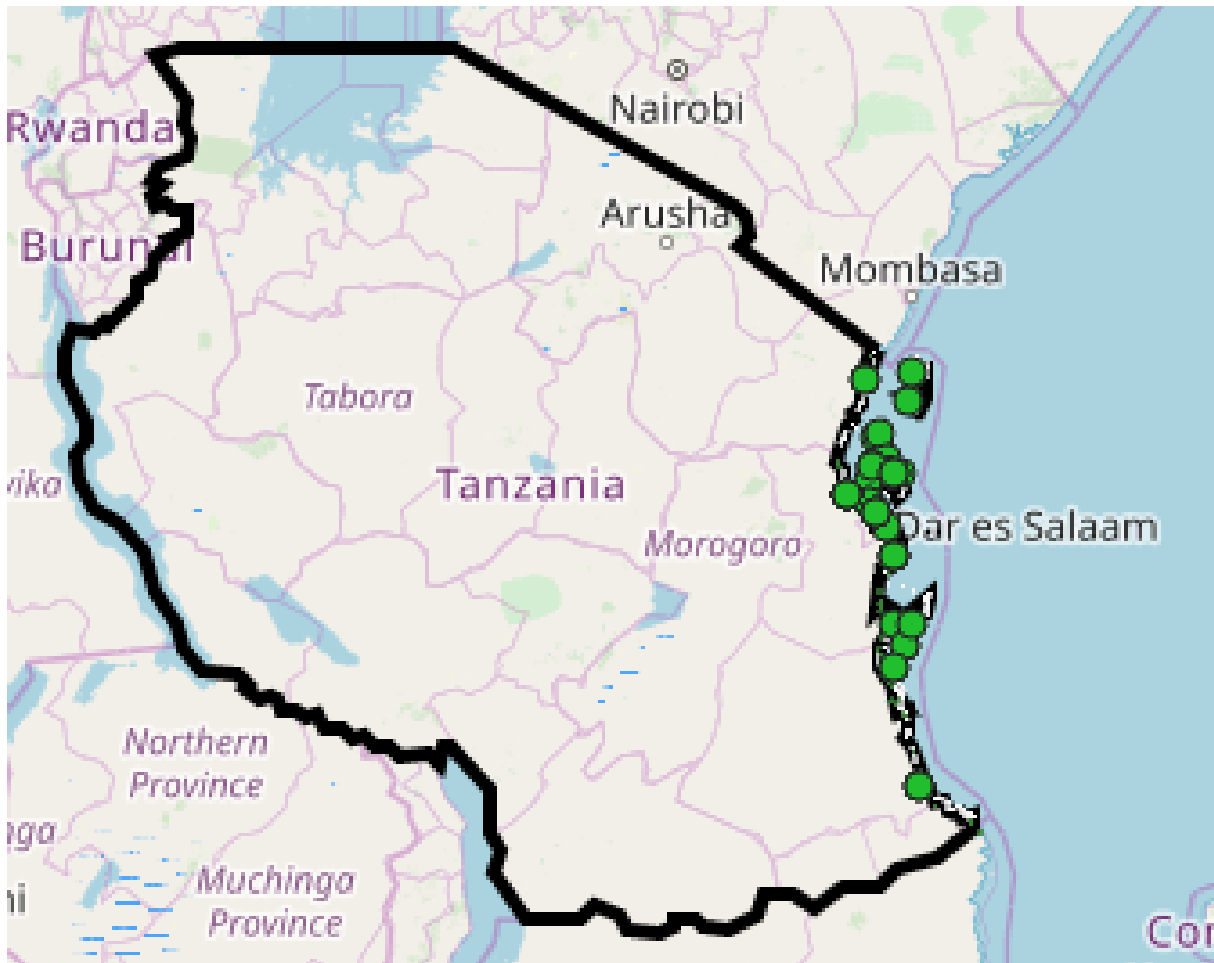
Large Seamounts Areas





SAMPLE INTERACTIVE MAP (COUNTRY)

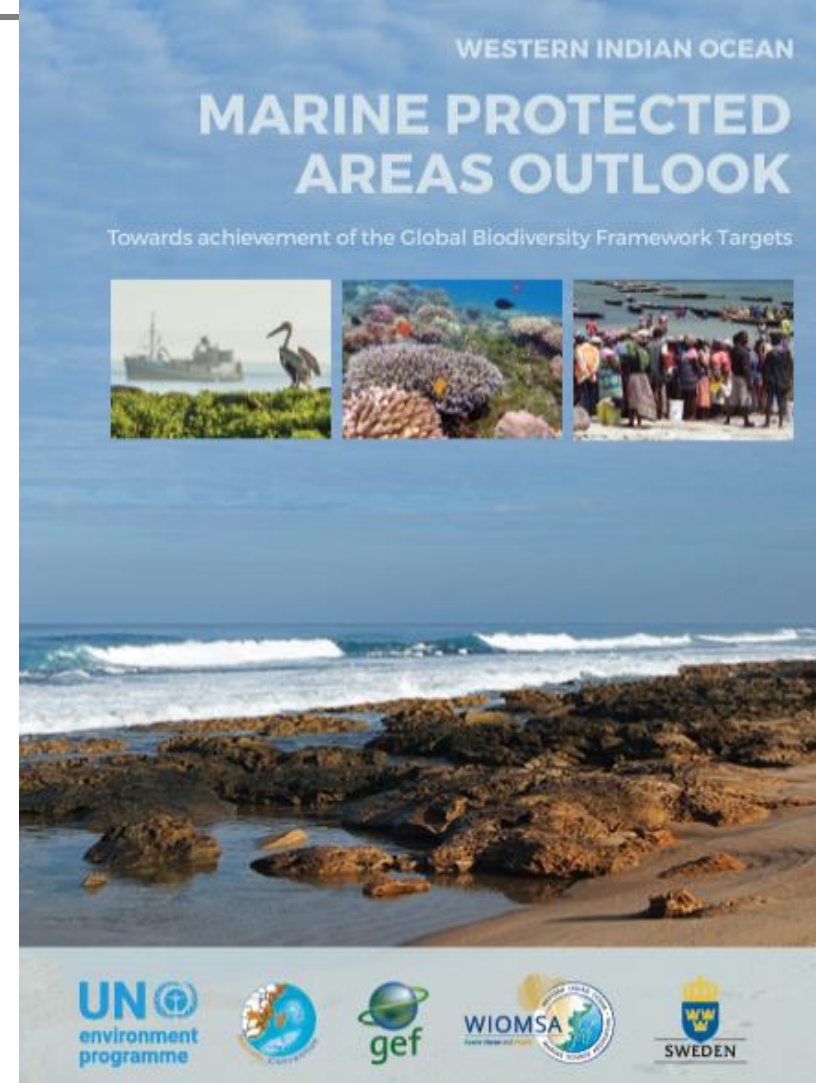
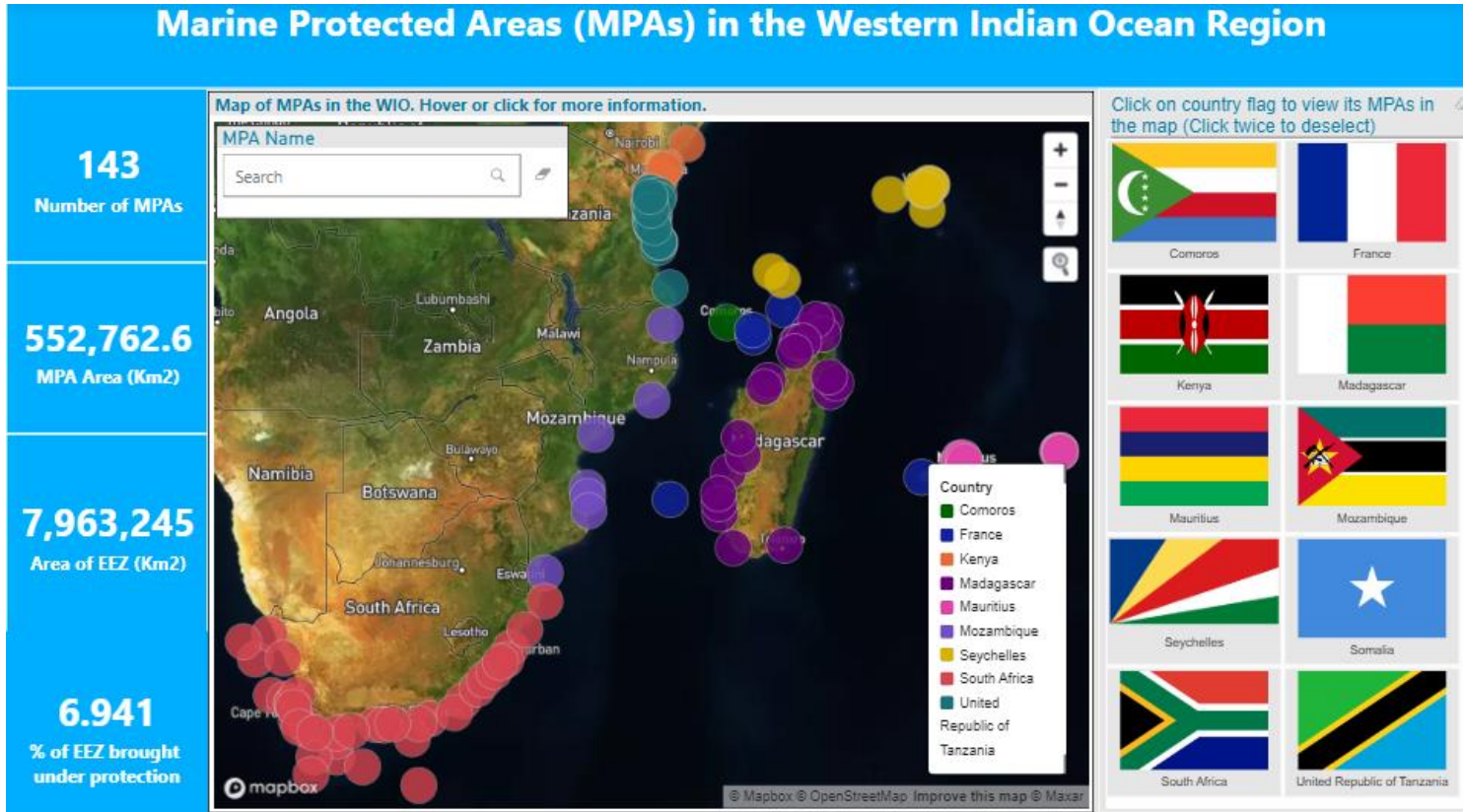
Each legend items opens an interactive map of biodiversity data of importance such as critical habitats



URT - Legend

- United Republic of Tanzania Seagrass
- United Republic of Tanzania Mangroves
- United Republic of Tanzania Coral Reef
- United Republic of Tanzania
- OpenTopoMap

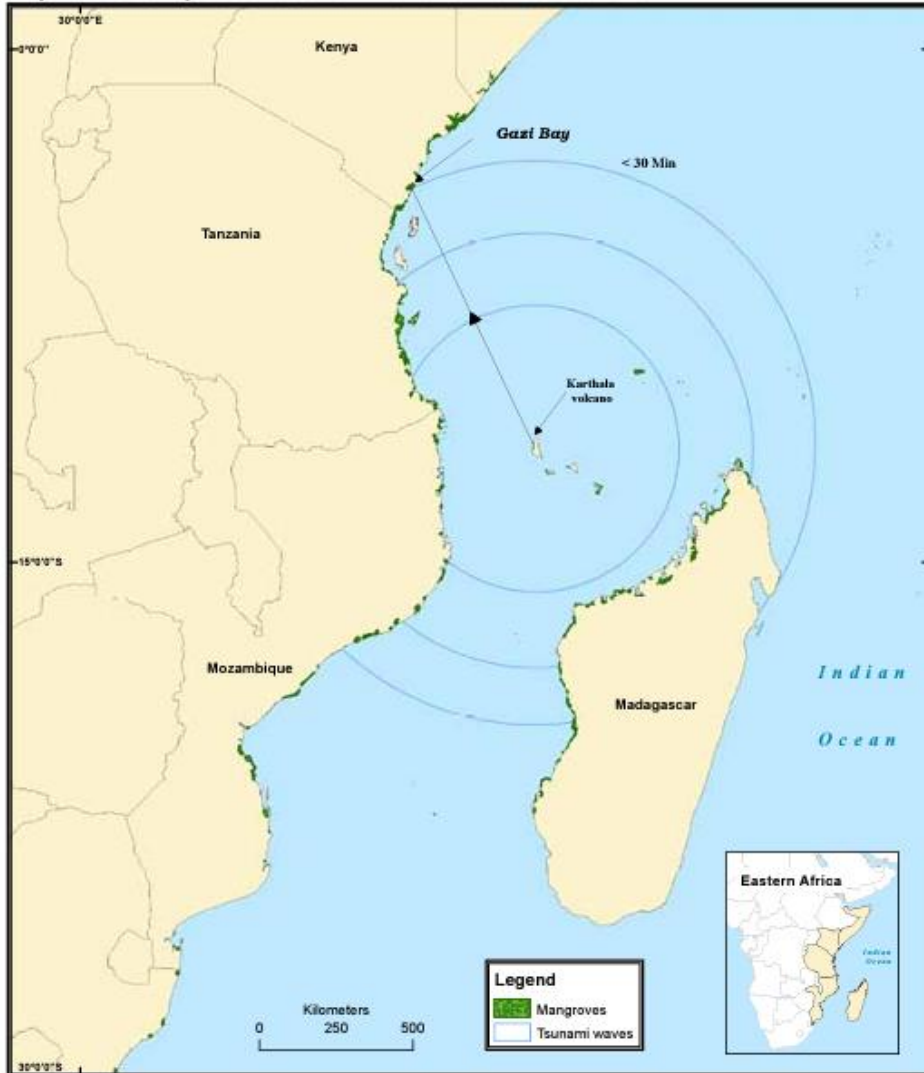
INTERACTIVE DATA DASHBOARD





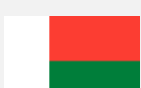
EARLY WARNING DATA

Tsunami



Data source: Giri et al. (2010); Hartnady (2005). Map redrawn by UNEP/DEWA

- Sea-level rise simulation
- Cyclones and floods
- Sea Surface Temperature: elnino / la nina phenomena / bleaching / seaweed farming
.....
- Ocean acidification
- Oil spill preparedness and response



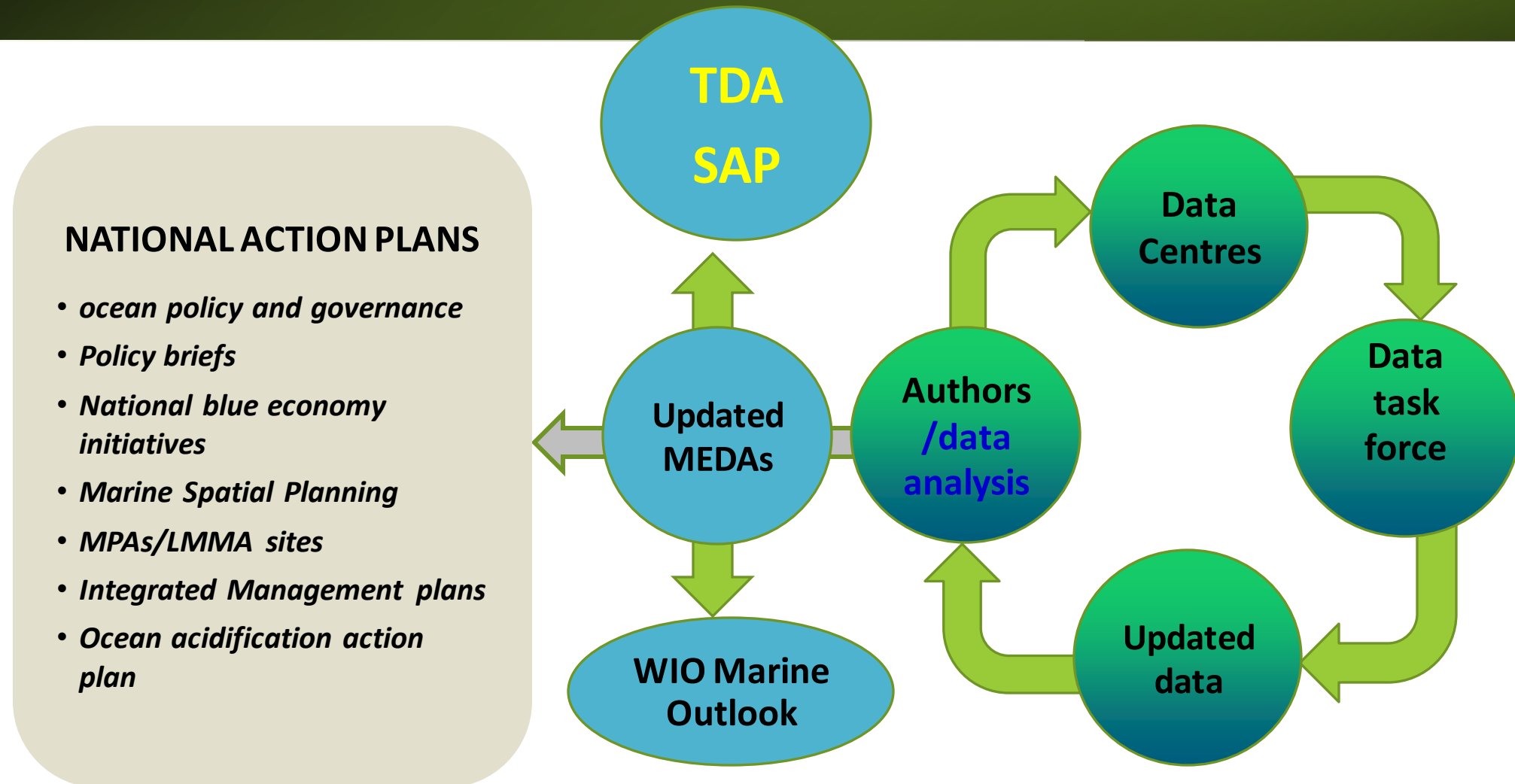
CoP, WG/TF, TOOLS & GUIDELINES, OUTLOOKS, MONITORING

- Thematic Community of Practice of experts
- Task forces and working groups (Water quality, eflows, critical habitats, ocean governance, MSP, Information Management Strategy)
- Outlooks (baselines on MPAs, critical Habitats,) & assessments e.g. CIA
- Restoration guidelines (mangroves, seagrass)
- Marine and coastal water quality standards and guidelines
- Critical habitats monitoring networks (mangrove, coral reef, ...)
- Regional Ecosystems Indicator monitoring framework

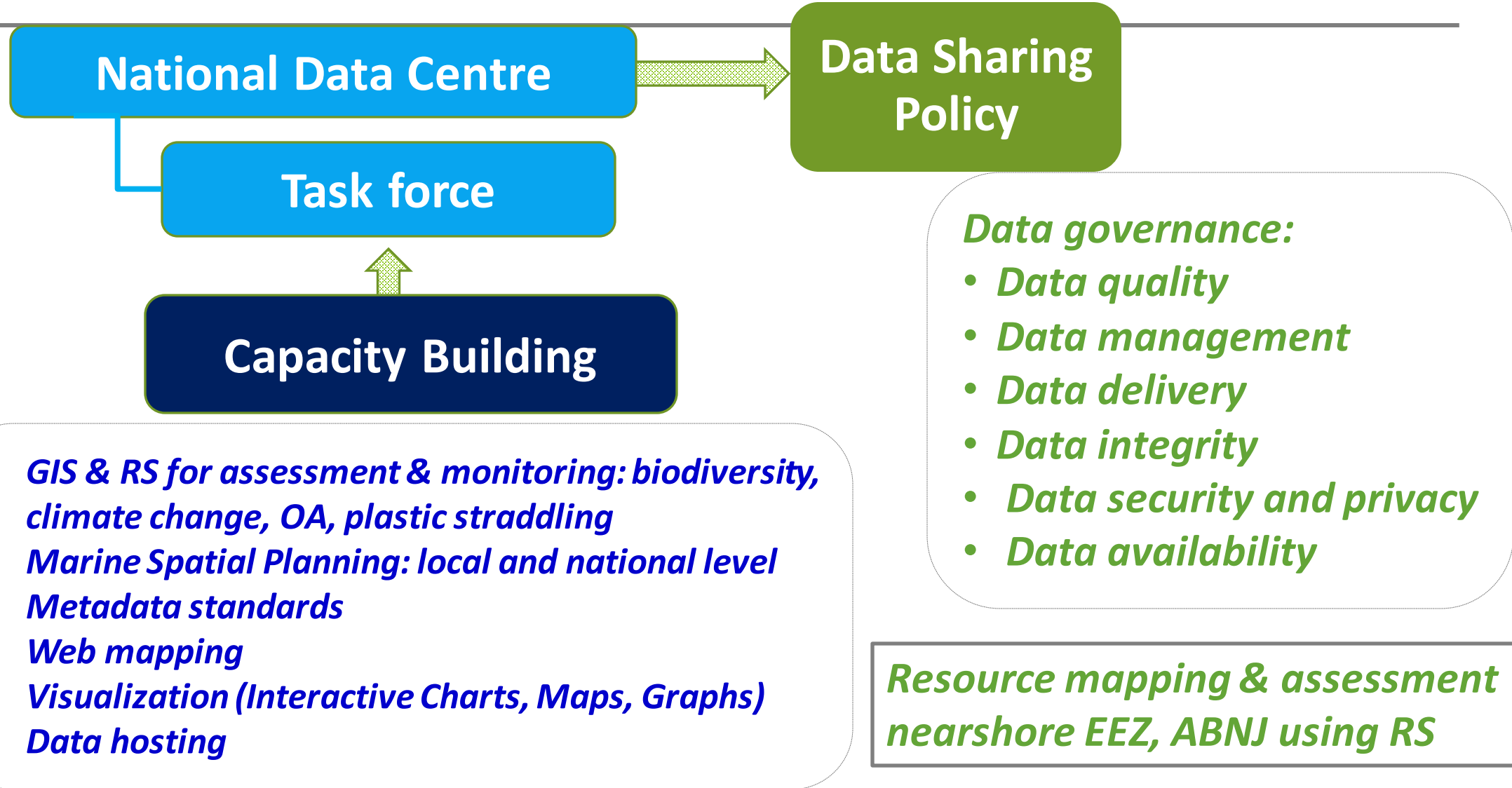
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- Case studies, local demonstration projects | MSP, pollution, OA, MPA, fisheries, plastics, CC
- Applications: WIOSYMPHONY for MSP <https://www.nairobiconvention.org/wio-symphony/>

RESULTS OF ASSESSMENT, DATA ANALYSIS, BRIEFS



NEED FOR CAPACITY BUILDING FOR DATA CENTRES & TASK FORCE





*Thank
you!*