

# NAIROBI CONVENTION

*For the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean*

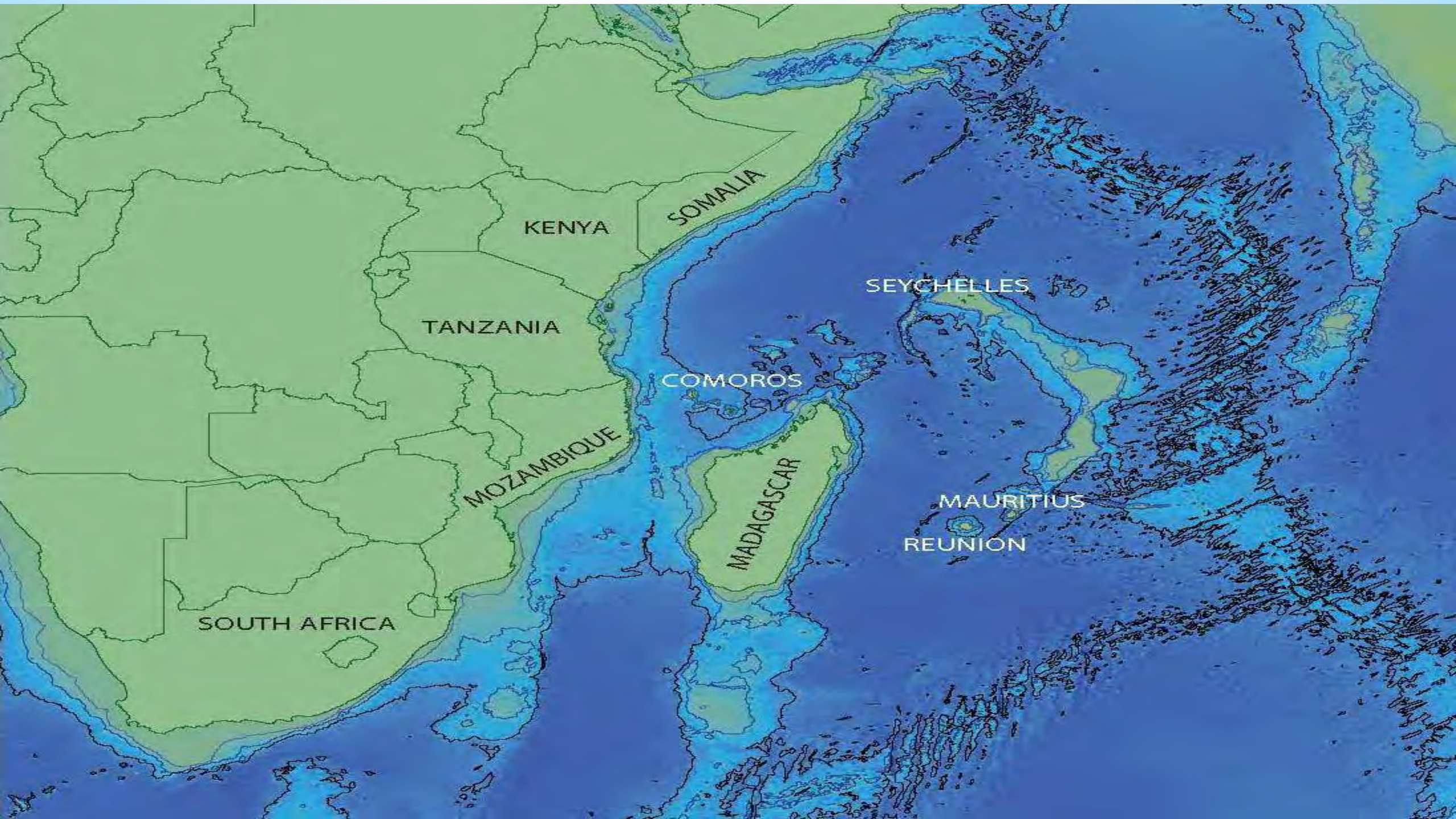


## MANAGING MARINE WASTE IN WESTERN INDIAN OCEAN

**Julius Francis (WIOMSA) &  
Dixon Waruinge (Nairobi Convention)**







KENYA

SOMALIA

TANZANIA

SEYCHELLES

COMOROS

MOZAMBIQUE

MADAGASCAR

MAURITIUS

REUNION

SOUTH AFRICA





# Regional Prioritization Processes



- African Process: 2000-2002 (Kenya, Tanzania, Mozambique, South Africa, Seychelles & Mauritius)
- WWF processes: Eastern African Marine Ecoregion (EAME) (Somalia, Kenya, Tanzania, Mozambique and South Africa) and Western Indian Ocean Marine Ecoregion (WIOMER) (Comoros, Madagascar, Mauritius, Réunion and Seychelles)
- GEF-funded projects - Addressing Land-Based Activities in the Western Indian Ocean (WIO-LAB) (2007-2012); Agulhas Somali Current Large Marine Ecosystems (ASLMEs) and South West Indian Ocean Fisheries Programme (SWIOFP) (2011-2015)
- Regional State of the Coast Report - 2015
- WIOMSA's Research Priority Themes - 2017
- Nansen Programme Science Plan



# Regional Prioritization Processes



## **African Process**

- **The loss/modification of ecosystems**
- **The over-exploitation of resources**
- **The modification of stream flow**
- **The use of destructive fishing practices**

## **WIO-Lab Project**

- **Water and sediment quality degeneration due to pollution from land-based sources**
- **Physical alteration and destruction of habitats**
- **Alteration in freshwater flows and sediment loads from rivers**

## **ASCLME/SWIOFP**

- **Water Quality Degradation**
- **Habitat and Community Modification**
- **Declines in Living Marine Resources & Unpredictable environmental variability and extreme events**



# Major Pollutant Categories

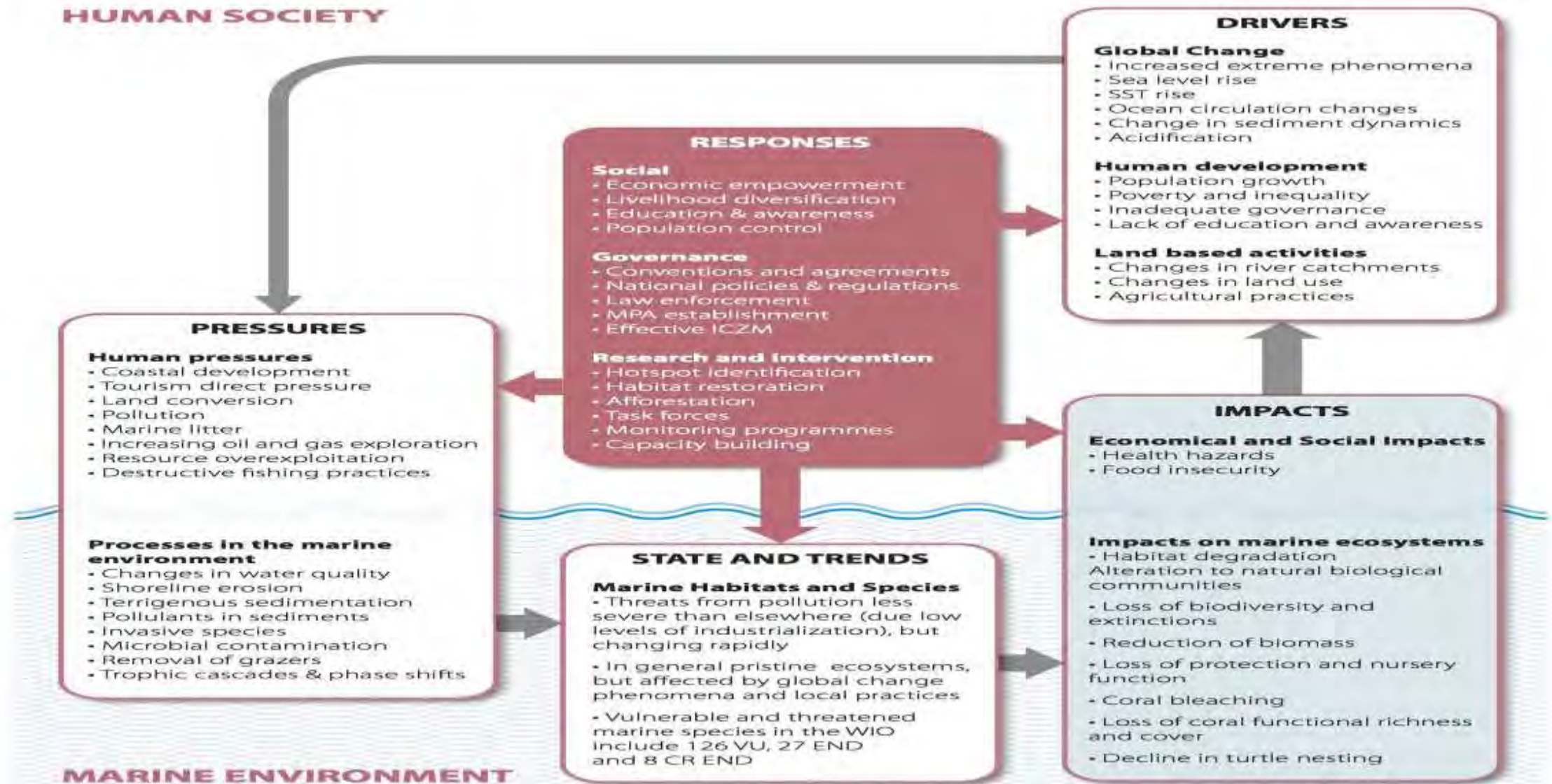


- Microbial Contamination
- High Suspended Solids
- Chemical Pollution
- Marine Litter
- Eutrophication





## HUMAN SOCIETY





# Nansen Programme: Drivers of marine ecosystem change



- Overfishing, ecosystem impacts of fishing
- Land-based pollution (including marine debris)
- Oil and gas exploration and exploitation
- Climate change & oceans acidification





# Science component



## Fisheries

- Abundance, distribution and dynamics of transboundary stocks
- Biology of main species
- Vulnerable marine habitats & Biodiversity

## Oil/Gas, pollution, including marine debris and microplastics

- Environmental assessment (oil/gas and mining)
- Fish safety
- Microplastics and other marine debris

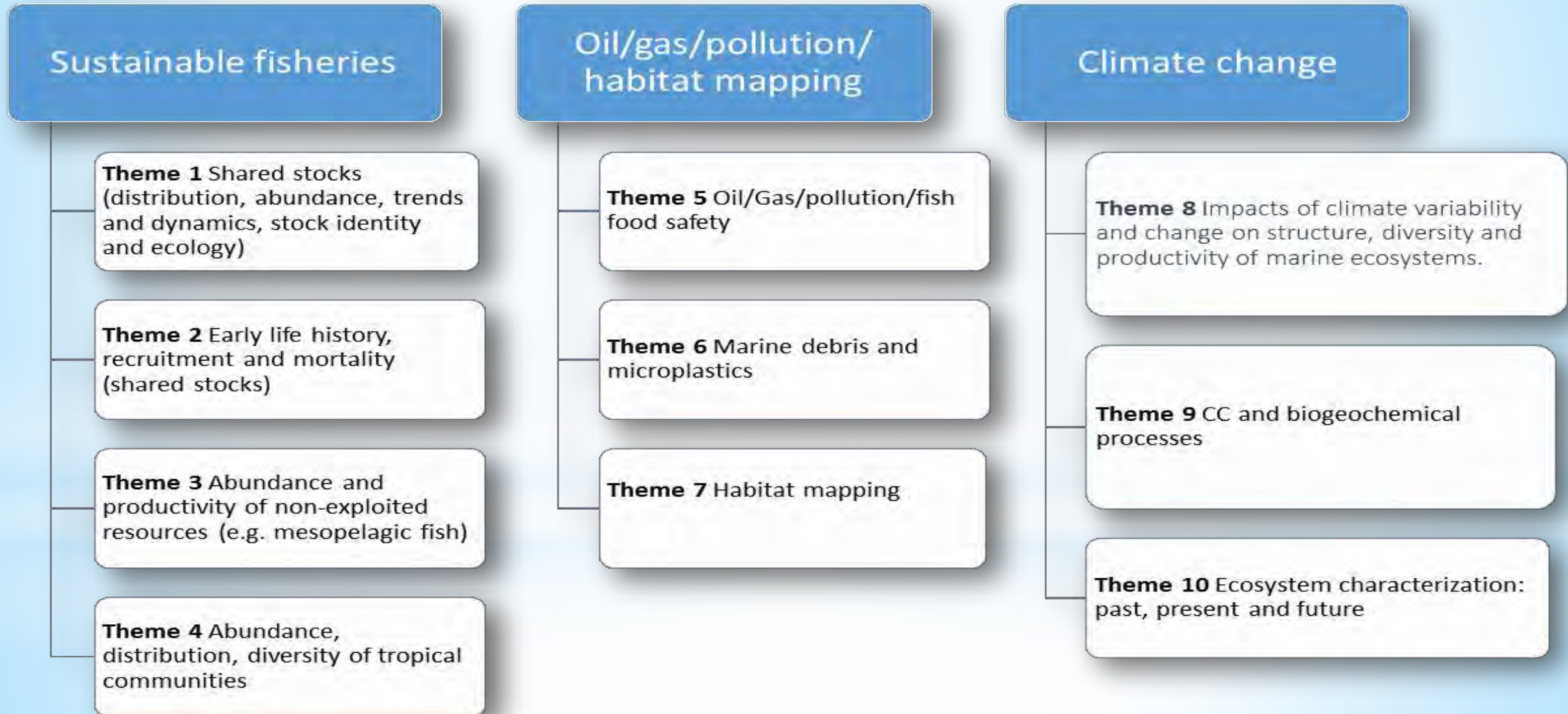
## Climate variability and change

- Trends in climate-change related indicators
- Effect of climate change on marine ecosystems, and on biology of fish species





The framework translates into three main research and 10 thematic areas





## Theme 6: Marine Debris and Microplastics



- **Are there areas of concentration of marine debris that may affect fishery resources, ecosystems or fishing activities?**
- **Are microplastics entering the food web and affecting productivity and safety?**



# SURVEY OF THE SOUTHERN INDIAN OCEAN

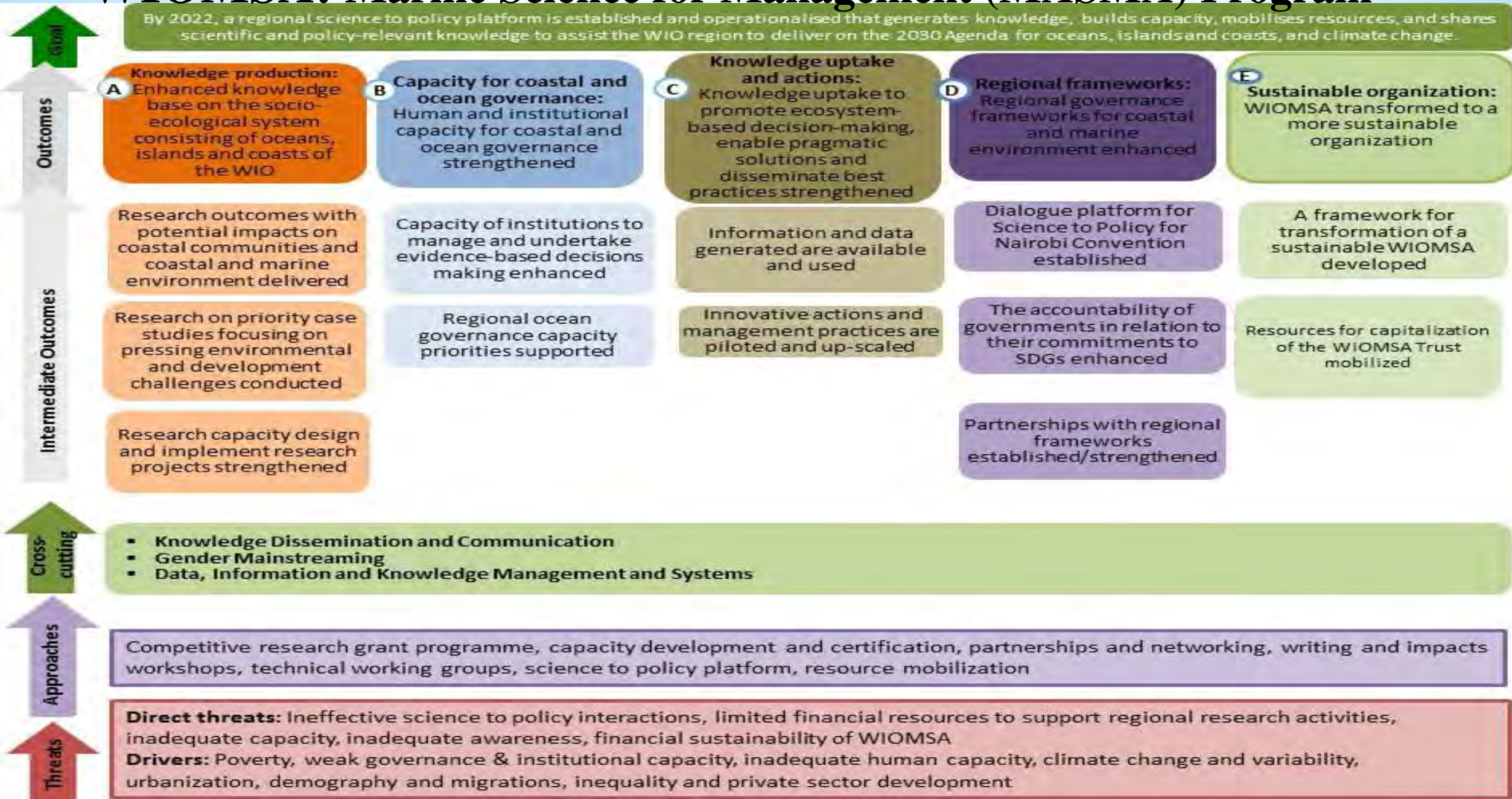


- Jakarta to Port Louis: 26 June – 16 July 2015
- Port Louis to Durban: 18 June – 6 July 6 2015
- investigate the abundance, composition and distribution of marine micro plastics in the international waters from Mauritius to Durban and Jakarta to Mauritius
- The trend in the number of micro plastics recorded showed an increase in particles as the samplings were done nearer to Madagascar
- The macro plastics caught with the Manta trawl were mostly land use materials such as soap holder, piece of PVC pipes and plastic wheels for toy cars.
- It was also observed that there were several fishing vessels around the Madagascar ridge where an increase of micro plastics were recorded.



# WIOMSA: Marine Science for Management (MASMA) Program

By 2022, a regional science to policy platform is established and operationalised that generates knowledge, builds capacity, mobilises resources, and shares scientific and policy-relevant knowledge to assist the WIO region to deliver on the 2030 Agenda for oceans, islands and coasts, and climate change.





# Priority Research Themes



- Impacts and mitigation of the risks of climate change
- Socio-ecological approaches for the sustainable use of marine living resources
- Aquaculture development, food security and food safety
- Understanding biodiversity and its change
- Approaches for the sustainable uses of ocean space
- **The threats from increased pollution**
- Cumulative impacts of human activities on marine biodiversity
- The socio-economic dynamics of inequality: the distribution of access to and benefits from coastal and marine resources
- Integrated management and governance of human activities affecting the coast and ocean



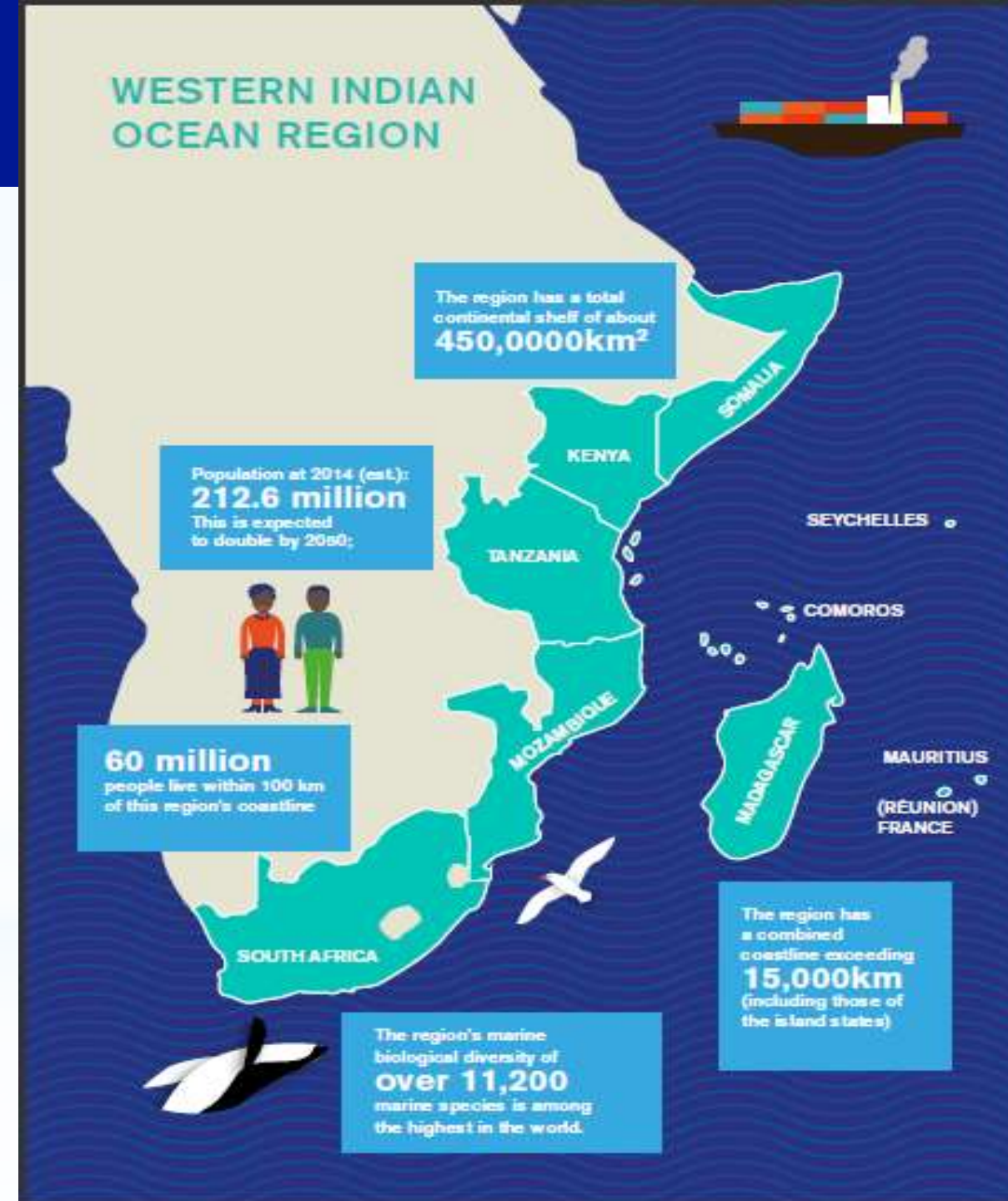


# Nairobi Convention

- A legal framework and platform for regional collaboration between countries and agencies
- Commitment to protect, manage and develop the Western Indian Ocean at regional level;
- Contracting Parties: Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa and Tanzania.

## 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 (under development)



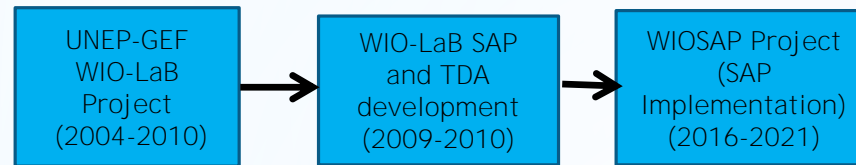




# What are we doing?



- Implementing the Strategic Action Programme for the protection of the Western Indian Ocean from land-based sources and activities (WIOSAP Project).



## Components:

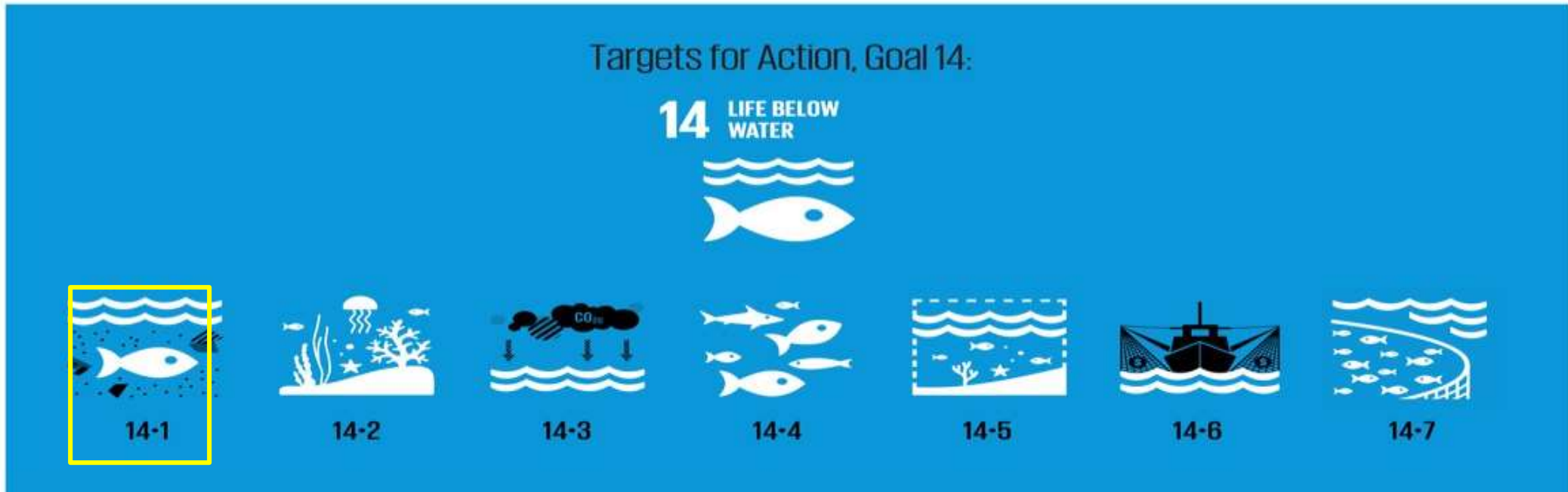
- ✓ Critical habitats
- ✓ Water Quality
- ✓ River Flows
- ✓ Governance and Regional Collaboration



- Protocol on Land Based Sources and Activities
  - ✓ Adopted in 2010
  - ✓ COP Decision 8/2: Ratification, Accession and Implementation of the LBSA protocol

# Sustainable Development Goals: New Global Agenda





- 14.1 - By 2025, prevent and significantly reduce marine pollution of all kinds
- WIOSAP project and LBSA Protocol contribute to this.





## Development of indicators for SDG 14.1 target



- 14.1 by 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution
  - Nitrogen use efficiency in food systems
  - Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters (*Goal 6. Ensure availability and sustainable management of water and sanitation for all*)
  - Proportion of the flows of treated municipal wastewater that are directly and safely reused (*Goal 6. Ensure availability and sustainable management of water and sanitation for all*)
  - Eutrophication of major estuaries



# Going beyond the research...





Thank you



# Nairobi Convention



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