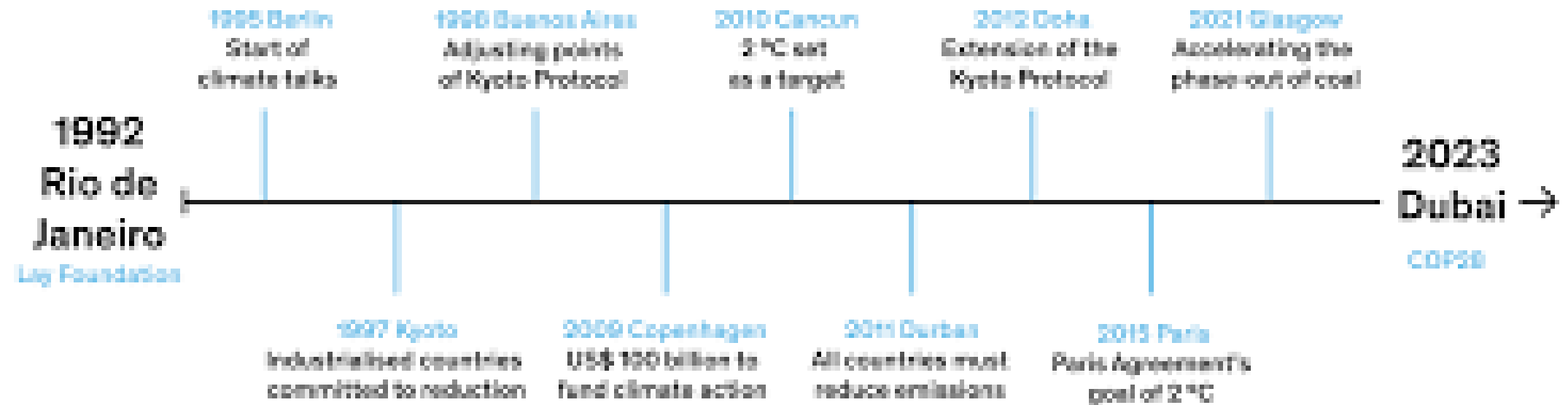


BC and Climate Change: *From theory to practice*

Dr. Jame Kairo/KMFRI

Towards Paris Agreement and Beyond



ipcc

INTERGOVERNMENTAL PANEL ON climate change

Task Force on National Greenhouse Gas Inventories (TFI)

- **IPCC Scoping Meeting on Carbon Dioxide Removal Technologies and Carbon Dioxide Capture Utilisation and Storage**

Copenhagen, Denmark

14-16 October 2024



2027 Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture, Utilization and Storage (Supplement to the 2006 IPCC Guidelines)

- Draft Table of Contents
- Overview Chapter
- Volume 1: General Guidance and Reporting
- Volume 2: Energy
- Volume 3: Industrial Processes and Product Use
- **Volume 4: Agriculture, Forestry and Other Land Use**
- Volume 5: Waste
- Volume 6: Carbon Dioxide Capture, Transport, Utilization and Storage
- Volume 7: Direct Removal of CO₂ from Waterbodies. Alkalinity Enhancement of Waterbodies



ipcc

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

2013 Supplement to
the 2006 IPCC Guidelines for
National Greenhouse Gas
Inventories: Wetlands

Methodological Guidance on Lands with
Wet and Drained Soils, and Constructed
Wetlands for Wastewater Treatment

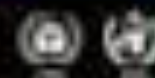


Task Force on National Greenhouse Gas Inventories

Volume 4: Agriculture, Forestry and Other Land Use

Coastal wetland systems not yet
considered in previous IPCC
Guidelines area:

- Tidal flats;
- tidal marsh-coastal sabkhas,
seaweeds (macro-algae),
- subtidal sediments,,,



Intergovernmental Panel on Climate Change

2006 IPCC Guidelines
National Greenhouse Gas Inventories

Volume 4

Agriculture, Forestry
and Other Land Use
Part I



IGES

IPCC National Greenhouse Gas Inventories

Mangroves of WIO

745,518 ha

Mangrove cover in WIO (2022)

30,156 ha

Mangrove net loss (1996-2020)

40,900 ha

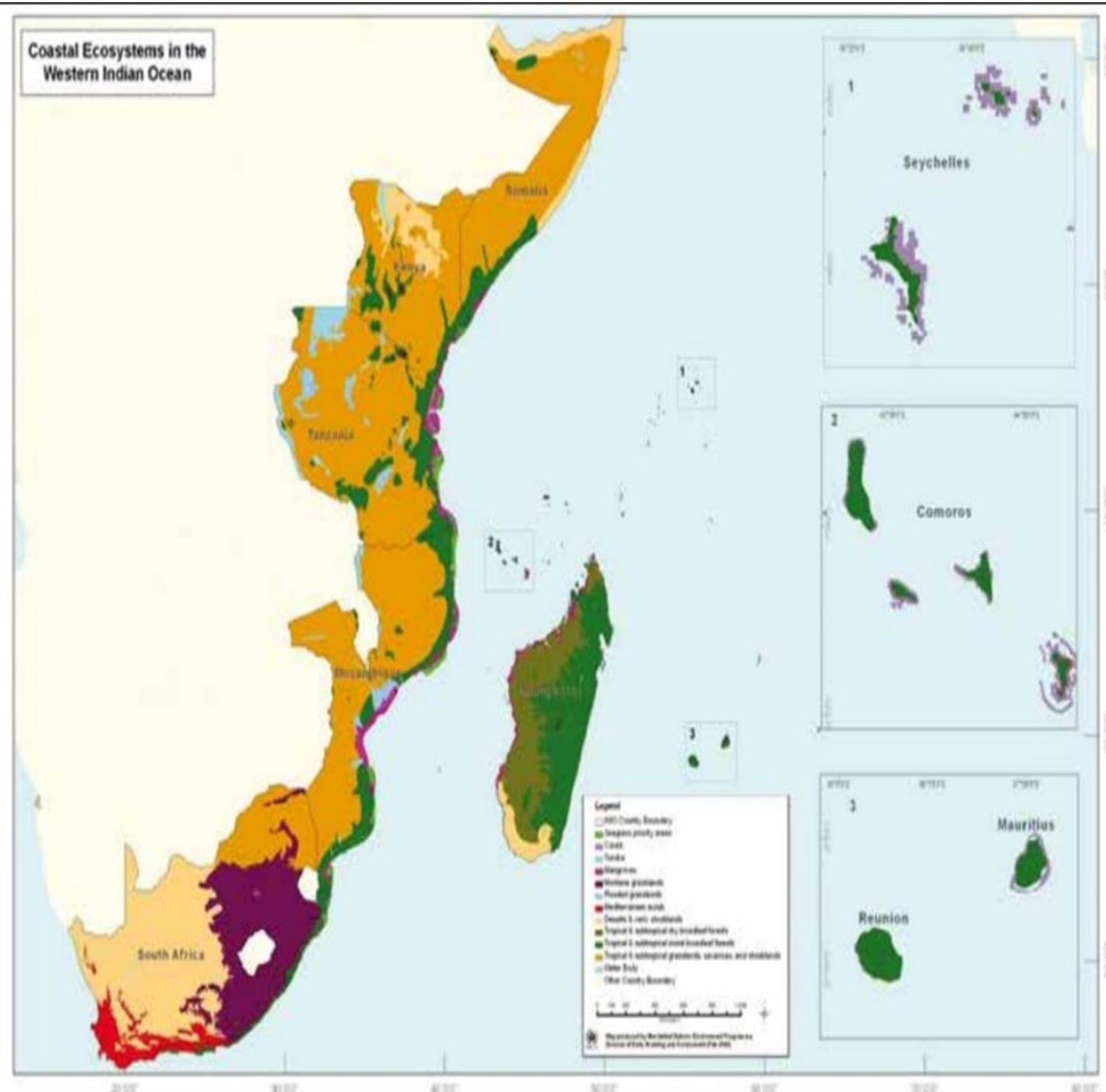
WIO mangrove restoration potential

40 million

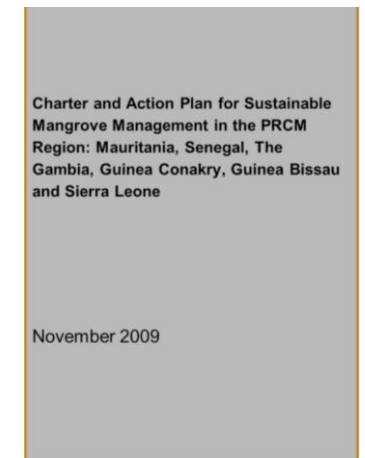
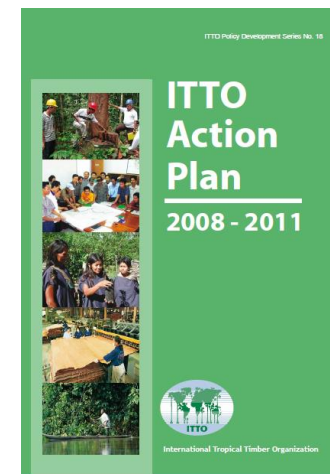
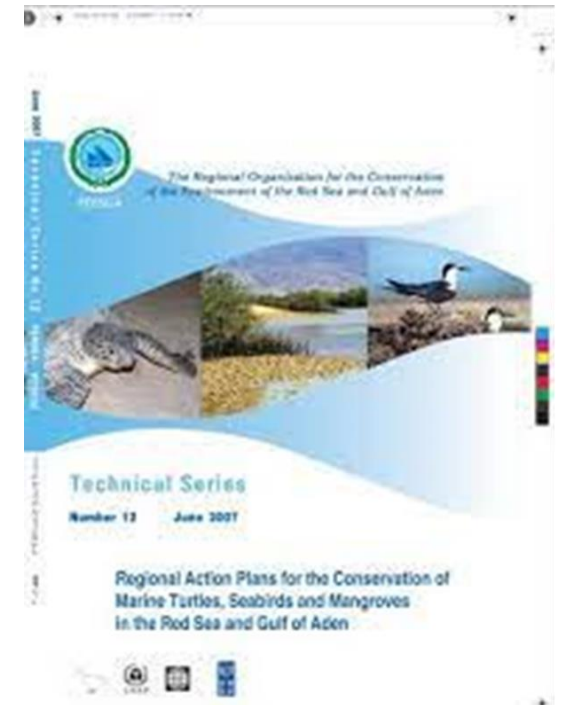
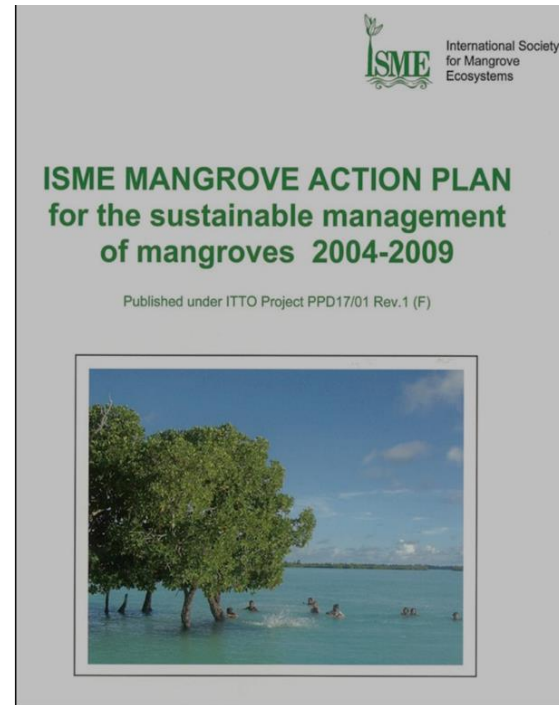
Number of people dependent on mangroves in WIO

US\$ 33,000-57,000/ha/yr.

Total economic value of mangroves



Examples of Regional Mangrove Action Plans



White paper on Regional Policy Dialogue July 2021

Mangroves are extra ordinary ecosystem, providing multiple goods and services to human society

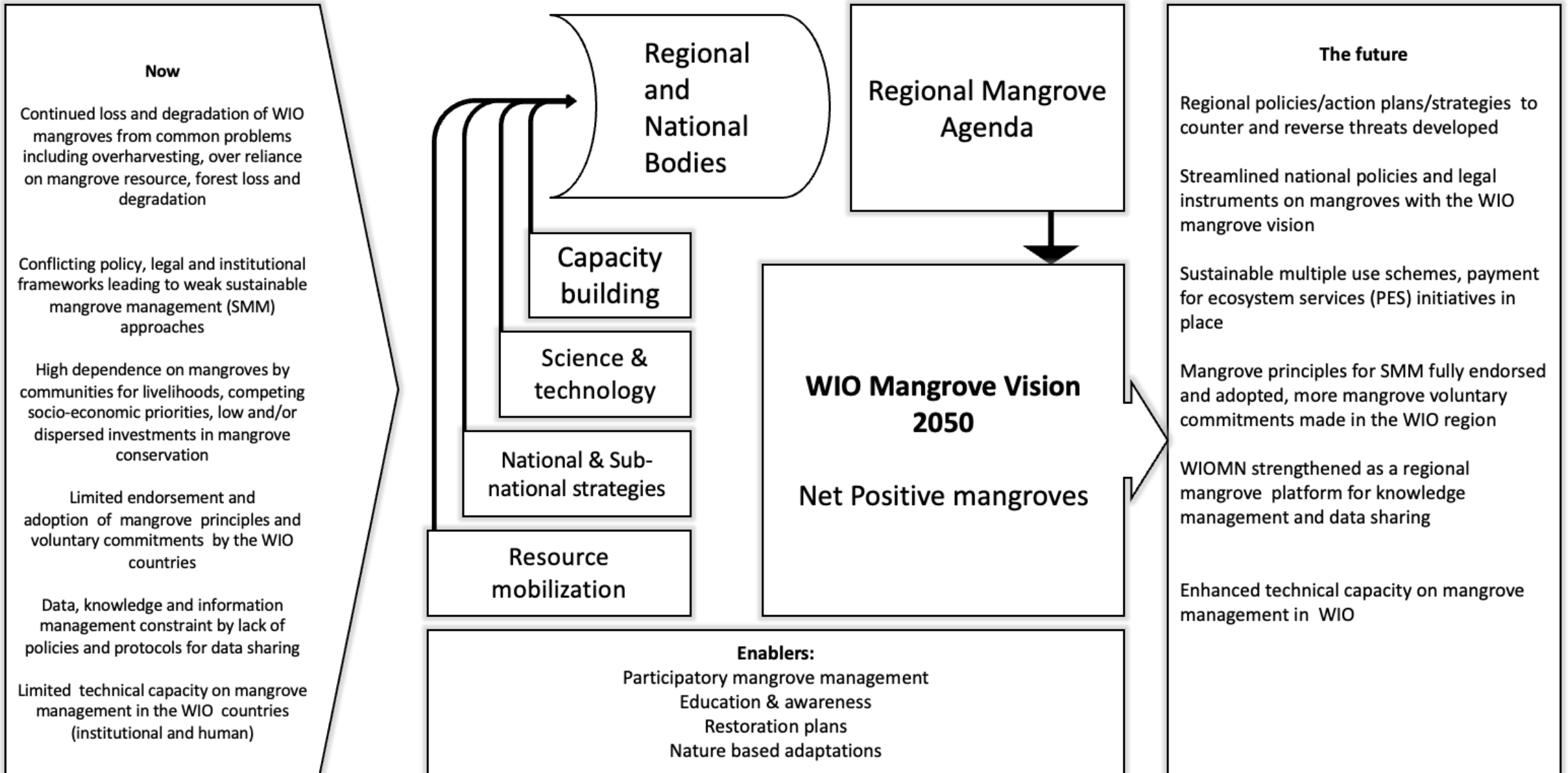
Mangroves in WIO faces similar challenges- (ecological, social-economic, governance...)

... dialogues and efforts to cooperate should aim at designing common policy and legislative frameworks, to manage and govern mangrove resources in a coordinated and effective manner.

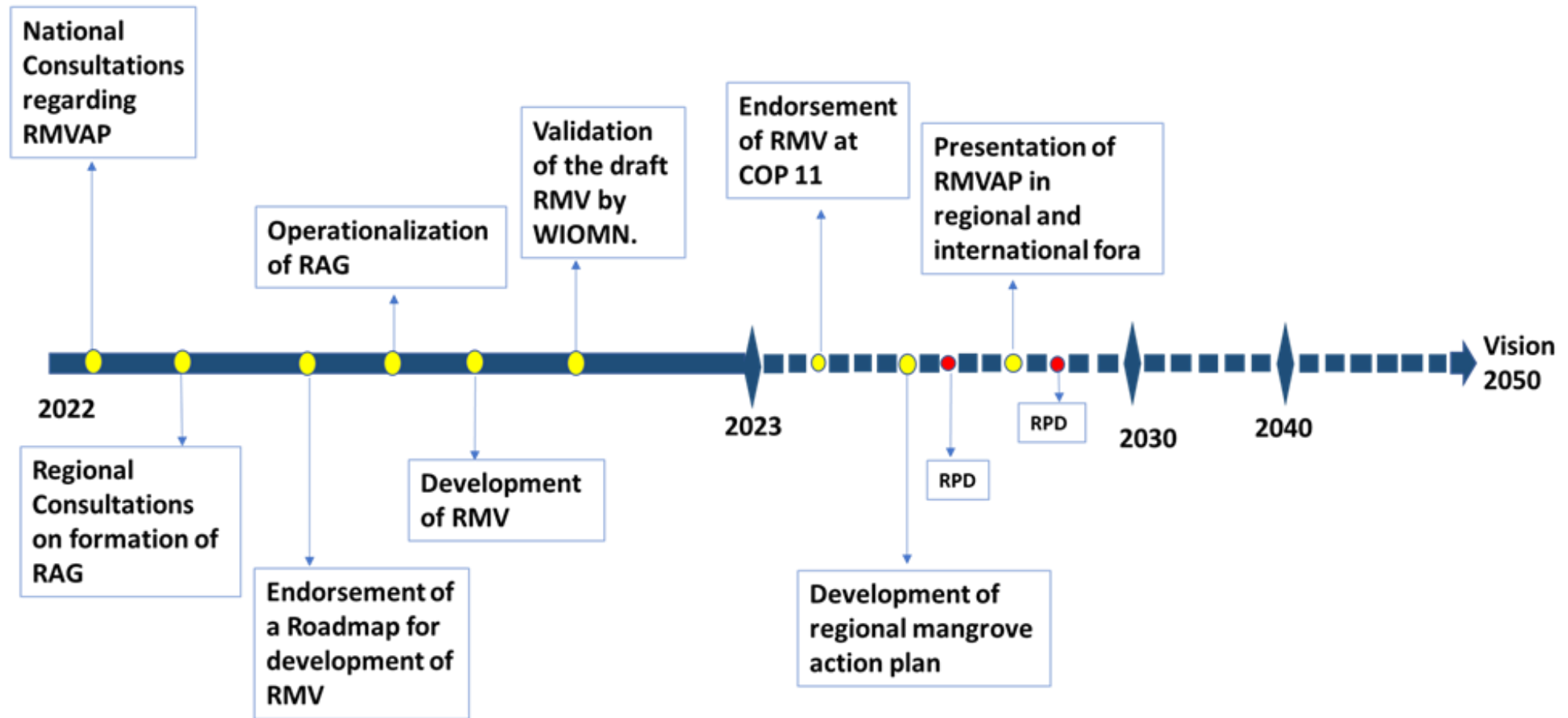
Decisions Adopted by COP10

CP. 10/12/1d . develop and implement a regional mangrove vision and action plan through the Western Indian Ocean Regional Mangrove Network..... and report progress at the eleventh meeting of the Contracting Parties,

Theory of Change



Roadmap to WIO mangrove vision and action plan



Decisions Adopted by COP 11

- **Decision CP 11/10:** *Mainstreaming climate change concerns in marine biodiversity protection*
- **Decision CP11/11:** *Conservation, Restoration, and Management of Critical Habitats and Species*

Western Indian Ocean Ecosystem Guidelines and Tools

Guidelines for Seagrass Ecosystem Restoration in the Western Indian Ocean Region



Western Indian Ocean Ecosystem Guidelines and Tools

Guidelines on Mangrove Ecosystem Restoration for the Western Indian Ocean Region



GUIDANCE ON MANGROVE INDICATORS IN THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Version 1.0 for the CBD Open-Ended Working Group Meeting, 23 August – 3 September 2021 (OEWG-3)



Carbon Markets & Blue Carbon



Singapore and Kenya
MOU transfers of carbon
credits projects

Kenya





Tanzania

- MoU between Blue carbon (UAE) and Tanzania to conserve 8 million ha of forest resources including 56,000 ha of mangroves and carbon trade

Preconditions

Additionality

- It must be demonstrated that the reduction in carbon emissions would not have happened without the project. Need good baseline info.

Minimize leakage

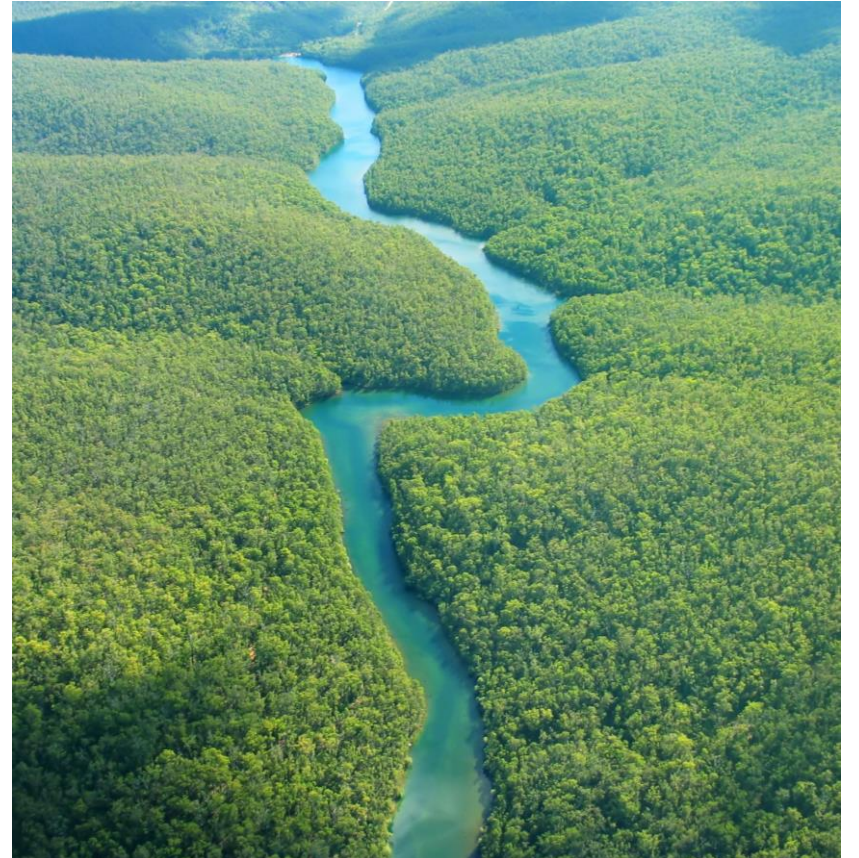
- The risk that the decrease in emissions by the entity selling the offset causes an equivalent increase in emissions by another entity.

Permanence

- the need to minimize the risk that carbon dioxide emissions occur after the carbon offset has been sold.

Blue Carbon Opportunities!

- Restoring and protecting Blue carbon ecosystems has the potential to **provide low-cost opportunities to mitigate carbon** emissions
- Pricing Carbon is **A Climate Action**, with multiple co-benefits
- Tools for measurement, reporting, and verification of blue carbon project exists
- Carbon credits are from activities or projects that avoid, reduce, or remove CO₂ emissions. Each credit is equal to one tonne of avoided, reduced, or removed carbon.
- Potential emissions from BC could be avoided at roughly US\$4-10/tCO₂ making it economic viable and socially acceptable... (multiple other benefits)
- **There is need to enhance understanding**, at all levels, of the true values of blue carbon ecosystems and need to protect them.... For climate, community and biodiversity benefits



Thanks