

# GCRMN

Number of sites regularly monitored

What is being Monitored

Monitoring Partnerships

Engagement in international efforts

Outputs/reports

Recent key findings

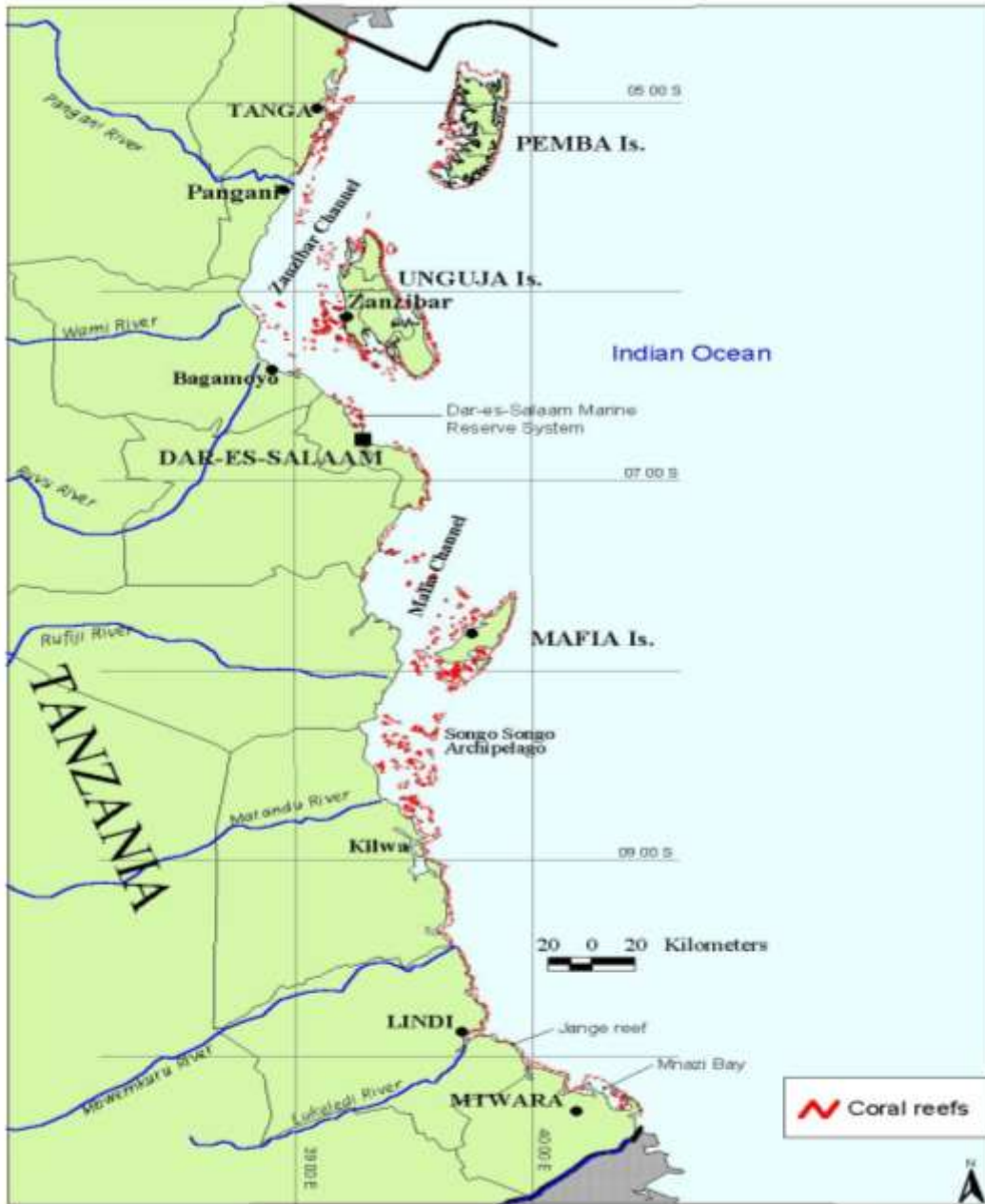
Notable successes and challenges

Presented at ICRI Meeting

Reunion 12 – 16 December 2011

By Rose Sallema Mtui

# Tz Coral Reef Distribution Map



# Number of sites regularly monitored

- Mnazi Bay and Ruvuma Estuary Marine Park, Mtwara - Reef biodiversity and socio-economic studies were carried out
- Mafia Island Marine Park (MIMP) - coral reef resilience studies were carried out in 2007
- Dar es Salaam Marine Reserve systems – Coral reef restoration - Efforts to restore coral reefs in Tanzania were initiated in 1998 (Wagner *et al.*, 1999).



# Sites Monitored.....

- Rufiji, Mafia and Kilwa (RUMAKI) area - Various socio-economic and ecological studies with direct or indirect impact to coral reefs – MACEMP, WWF
- Tanga, Dar es Salaam & Bagamoyo - Community based coral reef monitoring
- Mkuranga, Mnazi Bay, and Kilwa (Songosongo) – efforts are underway
- Zanzibar and Dar es Salaam sites - SCUBA based coral reef monitoring by Institute of Marine Sciences team



# What is being Monitored

- In the past, the GEF- CRTR contributed substantially towards coral reef research & monitoring in Tanzania
  - coral settlement using settlement plates; coral recruitment; community changes after 1998 coral bleaching event, e.g., coral species richness, diversity, composition and cover
  - Measurement of environmental factors with direct and indirect impacts to coral reef health, e.g., seawater temperature, nutrients, sedimentation, ocean currents and tides, fishing and coastal erosion processes.



# What is being Monitored

- investigation of coral diseases, coral restoration/remediation and the diversity of zooxanthellae in the reefs
- research on indigenous knowledge to elucidate how it is contributing to modern coral reef management.
- CRTR through its East Africa Centre of Excellence updated coral reef distribution maps and marked the locations of main coral threats
- studies on Coelacanth and associated habitats in Tanga. These studies involved mapping the bathymetry and coastal habitats, specifically coral reefs and mangroves – ACEP project

# Monitoring partnerships

- Key institutions includes:
  - Institute of Marine Sciences (IMS),
  - Department of Aquatic Science and Fisheries (DASF)
  - Tanzania Fisheries Research Institute (TAFIRI)
  - Mbegani Fisheries Development Centre (MFDC)
  - Marine Parks and Reserve Unit (MPRU)
  - Fisheries Division



# Monitoring partnerships

- Tanzania Coastal Management Partnership (TCMP)
- National Environment Management Council (NEMC) - TzCRTF, EIA, ICM, ECE and EICO
- MACEMP
- In the past, the GEF- CRTR contributed to research and monitoring
- NGOs, hoteliers, dive centres and fishers
- Community-based Fisheries management principles - Bagamoyo and Mkuranga districts



# Monitoring partnerships

## Conservation Organs

- Chumbe Island Coral Park (CHICOP)
- Mafia Island Marine Park (MIMP)
- Menai Bay Menai Bay Conservation Area
- Misali Island Conservation Area
- Mnazi Bay Ruvuma Estuary Marine Park (MBBREMPP)
- Maziwe Island Marine Reserve
- Mnemba Island Conservation Area
- Tanga Coelacanth Marine Park
- Former TCZCDP
- Former KICAMP
- Former MACT - governing the Marine Reserve System
- Former Rural Integrated Support Program (RIPS)

# Engagement in international efforts

- GEF-Coral Reef Targeted Research and Capacity Building Project (CRTR) contributed towards coral reef research and monitoring.
- African Coelacanth Project (ACEP - South Africa) carried out studies on Coelacanth and associated habitats in Tanga – Coelacanth MPA established
- Regional and International ICZM projects and programmes such as ReCoMaP, ASCLME, WIOMHP, WIOMSA, Nairobi Convention
- WWF and IUCN
- Coral Reef Conservation Programme
- CORDIO

# Outputs/reports

- Published Reports/papers
- PhDs and Masters students/thesis.
- Coastal and Marine Sensitivity maps
- Oil spill and HNS contingency plans
- State of the Coast Report 2001, 2003 and 2010
- District ICM action plans
- National Integrated Coastal Environmental Management Strategy (NICEMS) and EMA
- Mariculture guidelines
- Collaborative Fisheries Management efforts

# Recent key findings

- Draft Regional Coral Reef Action Plan Draft – submitted ICRI.
- Model for prediction – resilience sites
  - revised regional coral reef climate change vulnerability model (under discussion by the ReCRTF)
- Defined zoning schemes mariculture & permits
  - Mkuranga, Bagamoyo and Pangani
- No take zones – Bagamoyo & Menai Bay



# Notable successes and challenges in reef monitoring



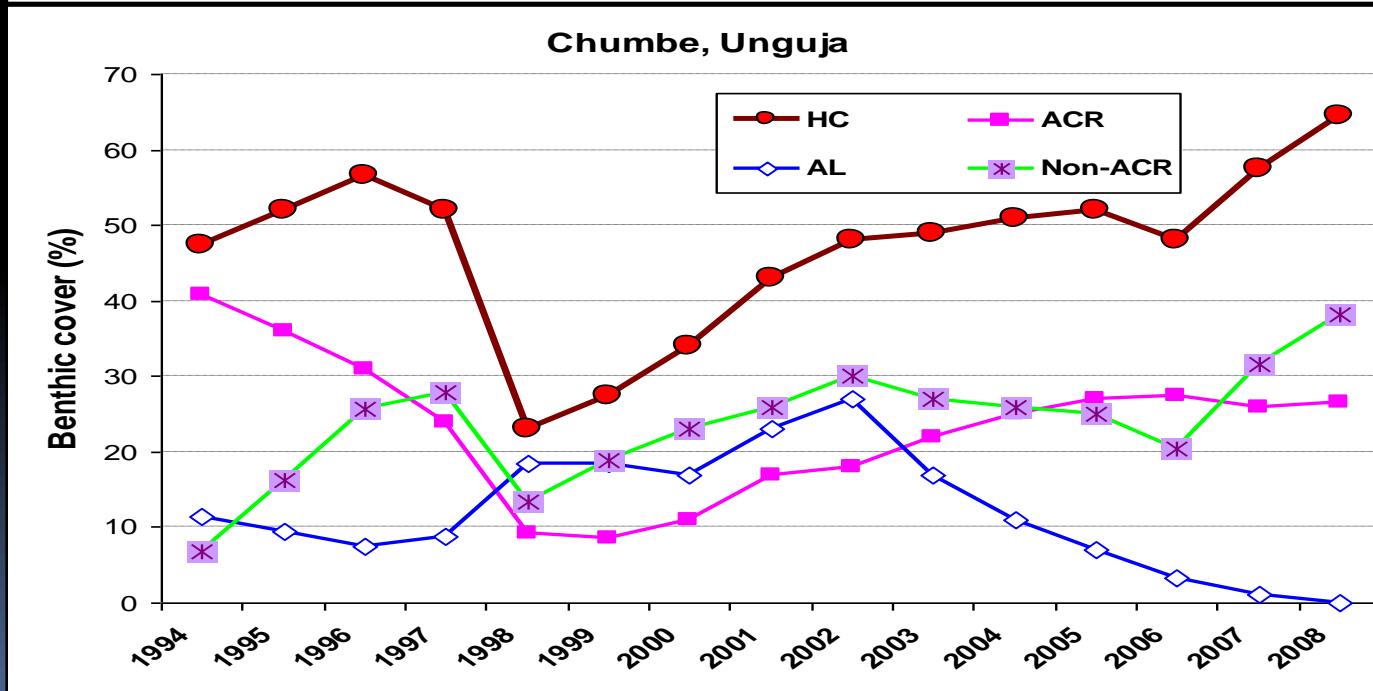
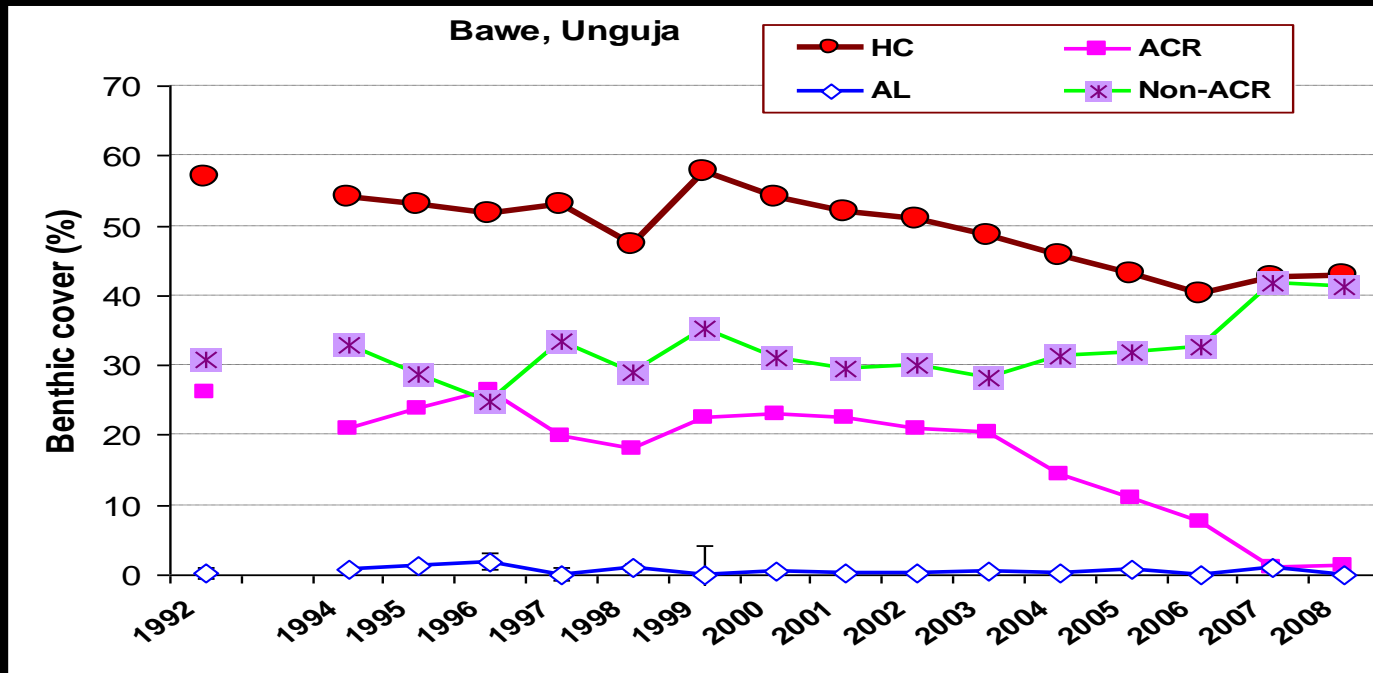
## ■ Success

- TzCRTF recognized in the government structures/budget
- MOU/letter of agreement between NEMC and IMS
- Affirmation of TzCRTF membership
- Communication network - Institutions & members
- Encourage Districts to adopt relevant regulations
- Engage dialogue with police and judicial sector
- Developing proposal for funding
- More Four Marine Reserves / Tanga MPA
- WWF commended (award) for conservation – RUMAKI .

# Threats

- Natural threats
  - storms
  - outbreaks of the crown-of-thorns starfish. This happened in Chumbe Marine Sanctuary, Murogo and Bawe (Zanzibar), Tanga, Dar es Salaam – 2004 – 2006
  - Coral bleaching - There were no serious incidences of coral bleaching besides that of 1998





# Human threats

- destructive fishing practices:
  - Dynamite fishing and dragnets
  - overfishing and pollution (near urban centres)
  - anchor damage (fishing and tourist sites)
  - coral mining for lime making
  - Sedimentation



- Fund /Resources for Research and Monitoring - coral strategy