

TANZANIA

MANGROVE CONSERVATION FOR LOCAL LIVELIHOODS AND ECONOMIES IN TANZANIA

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Despite the growing recognition of the importance and value of mangroves to nature and society, given the multiple ecosystem services of ecological and economic relevance that they provide, they have continued to be abused, degraded and removed. Accordingly, repeated calls for action to protect the remaining and restore the degraded and lost mangroves are made. In addition to appreciating the role of mangroves for job creation and food security, the need for their sustainable conservation is propelled as more knowledge is emerging on their high capacity

to serve as carbon sink and so an important inclusion in the international policy agenda on climate change agreements. “Save Our Mangroves Now (SOMN)” is one of such initiatives which was conceived from realization and recognition of the inadequacies in knowledge of the socio-economic landscape of mangroves in the Western Indian Ocean (WIO) region and the complexities in their conservation frameworks at local and national levels, particularly in the four major mangrove countries of Kenya, Tanzania, Mozambique and Madagascar.

KEY DRIVERS FOR MANGROVE DEGRADATION

- Increased human population (users of mangrove products)
- Poverty in the coastal community
- Increased demand for natural capital for livelihood and economic benefits
- Persistent illegal harvesting of mangroves
- Uncontrolled utilization of wood products
- Conversion of mangrove to other land uses such as agriculture, aquaculture and salt pans
- Dual institutional mandates and conflict of interests
- Conflict between people and state as a result of imposed ban on mangrove harvest
- Inadequate participatory processes
- Unprotected land and land encroachment by migrant communities eg. Pastoralists
- Inconsistence recognition of mangrove as a state reserve
- Inadequate protection and regulatory policies
- Inadequate extension services coupled with lack of technical guidance
- Corruption
- Dependency on short term donor funded projects
- Growing demand for mangrove products at local, regional and global markets



An initiative by:



The views expressed in this policy brief do not necessarily reflect those of IUCN, WWF, Wetlands International or BMZ. This policy brief has been elaborated based on a comprehensive study of socio-economic role of mangroves and their conservation framework in Tanzania between February and May 2021. It is part of the Save Our Mangroves Now! Initiative's efforts to disseminate best practices on mangrove use, management and governance in the Western Indian Ocean region."

KEY MESSAGES

STATUS AND EXTENT OF MANGROVE COVER:

- There is inconsistency in the estimation of mangrove forest coverage often related to differences in methodological approaches used.
- In mainland Tanzania, National estimate of 2015 indicates that there is about 158100 ha of mangroves, implying a significant increase from the earlier estimate of 115475 ha reported in the national management plan of 1991.
- In Zanzibar, mangroves are the second largest forest formation but there is no reliable statistics. The only would be officially accessible data is as old as 1950 and that of 1997 - indicating a total of 18000 ha and 19748 ha respectively.

SOCIO-ECONOMIC USES AND BENEFITS:

- Traditional uses: Provision of wood and non-wood products such as fuel wood, poles, timber, honey and traditional medicines as commodities for both domestic and trade.
- During the colonial era and early post-independence times, mangrove poles, charcoal and barks were important export commodities particularly to Arabia from both the mainland Tanzania and Zanzibar.
- Mangrove forests support fisheries, serving as home to a variety of fish, crab, shrimp, and mollusk species. They are also reported, though to a limited extent to securing the coastline, sequestering carbon and control of pollution.
- Eco-tourism with one successful example of the Pete Community Boardwalk within Jozani-Chwaka Bay National Park in Zanzibar.
- There are often no clear boundaries between subsistence and commercial activities, which involve a combination of use of the land, sea and inter-tidal resources coupled with the remote nature of mangroves. For example, poles, timber, charcoal, fish and shellfish associated with mangroves have mixed values as products for domestic use (subsistence) and/or commodities of trade (commercial).



Traditional boat building using mangrove wood in Rufiji Delta, Tanzania © Mwita Mangora

VALUATION OF MANGROVE ECOSYSTEM SERVICES

Valuation of mangrove ecosystem services is masked by regulatory complications, such that most of the extractable mangrove products are considered illegal commodities and therefore information on their market chain is not readily available. This largely explains why there is very limited information in literature about the value of mangrove ecosystems in Tanzania. There are also complexities in perceptions and definitions of the economic domain of mangroves associated to social wellbeing and local economies, which often limit the choice of ecosystems services for inclusion into economic valuation. A summary of Mangrove Ecosystem services is presented below.



Mangrove-based beekeeping initiatives in Mtwara, Tanzania. © Kelvin Kamnde

Goods and Services	Ecosystem service value	
	(TZS)	Equiv USD
Mangrove poles	14.6 billion yr ⁻¹	6.4 million yr ⁻¹
Mangrove timber	48.2 billion yr ⁻¹	21 million yr ⁻¹
Fuel wood	8.8 billion yr ⁻¹	3.8 million yr ⁻¹
Prawns	5.2 billion yr ⁻¹	2.3 million yr ⁻¹
Honey	41.4 million yr ⁻¹	18000 yr ⁻¹
Coastal protection	1.8 trillion yr ⁻¹	795.6 million yr ⁻¹
Carbon storage	2.6 trillion yr ⁻¹	1.1 billion yr ⁻¹
Biodiversity (restoration)	255 million yr ⁻¹	111,400 yr ⁻¹
Eco-tourism	382.5 billion yr ⁻¹	165.9 million yr ⁻¹
Total	4.8 trillion yr⁻¹	2.1 billion yr⁻¹

BUSINESS CASES IN MANGROVE AREAS

Aquaculture (shrimp/prawn farming, mud crab fattening), eco-tourism (boardwalks, bird watching), salt pans are potential and promoted, but less practiced.

KEY MESSAGE

DUAL INSTITUTIONAL MANDATE AND CONFLICT OF INTEREST

The institutional, policy and legal framework is characterized by disintegration because the multidisciplinary nature of the mangrove ecosystems attracts several sectors that claim some role to play in the utilization, but often with little responsibility to protecting the mangroves. The complexity is summarized in the figure below.

The Vice President Office (VPO)/National Environmental Management Council (NEMC) has a strategy developed to promote and integrate the management of coastal resources but the strategy is rarely referred to in practicing conservation measures.

Tanzania Forest Services (TFS), the Marine Parks and Reserves Unit (MPRU), Ministry of Livestock and Fisheries (MLF) and Resident Mineral Authorities are

examples of barriers for concerted efforts to secure the future of mangroves.

In MPAs, Village Liaison Committees manage resources at local level (in paper) but devolution of power and authority to manage mangrove resources is minimal with little knowledge by the MPA practitioners and VLCs.

The MLF has instituted Beach Management Units to manage fisheries and coastal resources but little attention is given to mangrove resources – breeding and nursery habitats and with little skills and knowledge in managing mangrove resources.

Likewise, Tanzania Forest Services (TFS) has instituted Village Natural Resource Committee (VNRC) in mangrove communities and work in parallel with BMUs.

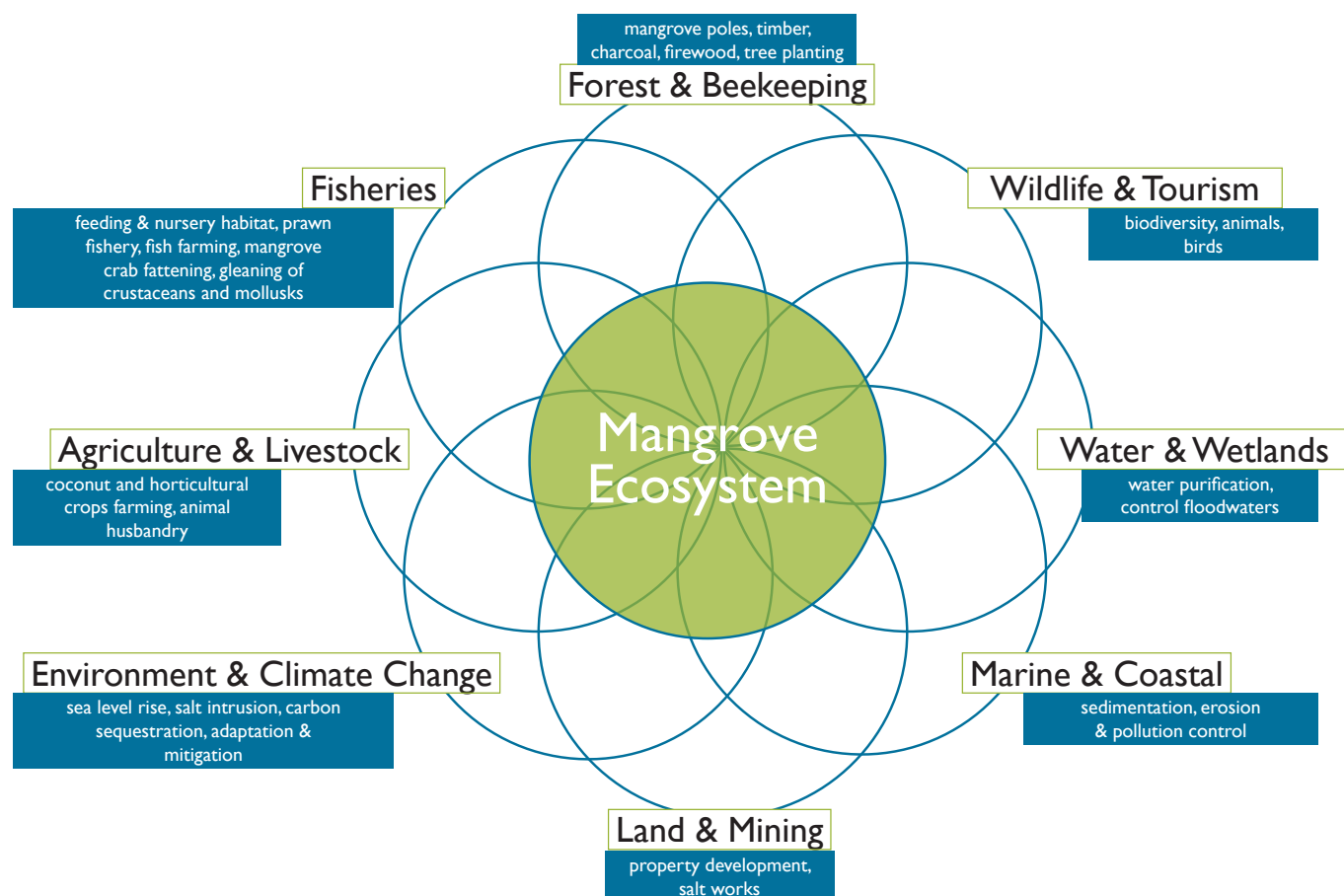


Siri Fish Farm at Pujini, Pemba practice integrated fish farming, salt production.
© Mwita Mangora



Large scale industrial sea salt production at Mahandakini and Mayomboni villages, Tanga for both domestic and export markets © Mwita Mangora

Community Livelihoods, Local Economies and Development



POLICY RECOMMENDATIONS

- Need for policy dialogues between salt producers and policy/decision makers on the role that the industry can potentially support conservation of mangroves such as through restoration and community development to incentivize local communities
- Afforestation in barren salt flats. Mangroves tend to come after abandonment of salt pans, conditions of which should be made favourable for afforestation.
- Promote integration of salt-fish farming with mangrove planting to offer opportunities to convert abandoned salt pans into productive fish ponds for investment into medium and large-scale fish production
- Encourage corporate social responsibility to support socio-economic development in mangrove communities
- Promote beekeeping and mariculture to meet community expectations. Guideline to facilitate establishment, management and development should be developed and updated from time to time
- More establishment/investment in eco-tourism should be encouraged in collaboration with private sector
- Develop/adopt a dedicated mangrove policy
- Promote state and non-state inter-agency and cross-sectoral coordination at different levels of governance
- Sustain and strengthen awareness raising programmes and institutional capacity at all levels
- Explore and engage private sector in mangrove ecosystem conservation and restoration
- Redefine the legal basis for community co-management arrangements for mangrove ecosystem,
- Appraise feasibility of the promoted alternative livelihood sources for mangrove dependent communities
- Marine spatial planning (MSP) has not yet been in its full practical terms, as it is still being conceptualized than applied on the ground.
- Need to harmonize MPA General Management Plan (GMPs) under MPRU and (Mangrove GMP for Mangrove Delta area) which is under TFS for biodiversity conservation. Much attention is given for institutional mandate. This practice results to separation in governing the resources by local institutions (they work in parallel)