

FISHERIES INSTITUTIONS: CLIMATE- AND SOCIAL ADAPTIVE CAPACITIES OF MARINE CONSERVATION

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It is increasingly evident that climate change and biodiversity losses are connected. Climate change is emerging as one of the greatest threats to biodiversity, increasing pressures on resources and the continued provision of ecosystem services. Examples of such threats can be especially drawn from increased coral bleaching as well as the associated effects on fish in tropical oceans. Addressing these challenges will require more than pragmatic conservation actions informed by site-specific understanding of adaptation capacities to climate change. It will also require an understanding of the institutional and societal/social capacity to cope with and adapt to change.

Coral reefs and mangrove forests as fish assemblages are one of the most species dense communities on earth, they contributing critical ecosystem functions and providing essential ecosystem services to poor human societies in tropical countries. The establishment of Marine Protected Areas has therefore become an important part of society's approach to conserving these habitats. Managing protected areas must therefore attempt to take account of climate change as well as other threats to its biodiversity, and to include the needs of the local communities in the conservation action.

Using the case of the Conservation Area “Menai Bay” in Zanzibar, Tanzania, this PhD thesis paper discusses the climate adaptation capacities of MPA’s managing institutions as well as their social capacity that enables a “fair” adaptive ecosystem-based governance process.

For this, the paper uses a new approach as it combines the theoretical findings of several scholars on climate change capacity, governing the commons and “fair” governance.

It focuses on the 6 dimensions of climate adaptive capacity identified by Gupta et al. to investigate the Institution’s climate adaptive capacities.

To identify a “fair” adaptive ecosystem-based governance process this paper distinguishes between distributive and procedural “fairness” (Adger 2006), and further analyses institutional social capacity with a selection of Ostrom’s Principles of successful governance of the commons. Such as:

- a. Clearly defined boundaries (effective exclusion of external unentitled parties)
- b. Rules regarding the appropriation and provision of common resources (adaptation to local conditions)
- c. Collective-choice arrangements (participation in the decision-making process)
- d. Effective monitoring and mechanisms of conflict resolution.

Information for the study is/ was collected through documentary surveys and interviews with the Marine Parks and Reserves Authorities and local management offices.

Parts of these qualitative interviews were held with managers of the Department of Fisheries and Marine Resources, Menai Bay Conservation Area during a workshop at the Institute of Marine Science, Zanzibar in October 2011. The interviews with authorities of the local communities are planned for next year (February-March). The outcome and the ongoing analysis of these interviews would be introduced at the ISEE conference. The aim is to provide several proposals through which coastal communities could be facilitated to better engage in protecting the marine ecosystem and their rights, which are dependent on the same environment.

The coast of Tanzania is characterized by a wide diversity of biotopes and species, and thus MPAs. These coastal and marine resources of Tanzania have for generations had profound influences on the socioeconomic well-being and health status of not only the immediate communities but also those far removed from them. A destruction of coastal resources will in turn impoverish the local communities, which depend on these resources.

The Menai Bay Conservation Area (MBCA) is located in Menai Bay, Zanzibar-Tanzania. It is Zanzibar's largest marine protected area in the traditional fishing area, known as Unguja Island, covering the tropical marine environment comprising extensive coral reefs, tropical fish, sea grasses, and mangrove forests. The conservation area is a participatory project with community of 19 villages in the project area actively involved in pursuing the conservation efforts. Managed by community and local government units facilitated by the WWF of Tanzania, the MBCA has succeeded in reducing destructive fishing. A system of permits and fees for use of the area by non-residents was established and the revenue is allocated to management and community development. But this area faces still many threats to its biodiversity assets and challenges to its sustainable development. These threats and challenges include but are not limited to climate change, serious overfishing, destructive practices such as clear-cutting of mangrove forests, and deterioration in water quality from industrial and municipal waste as well as runoff from farming.