

# Biodiversity and health of marine and coastal ecosystems in Kenya

Mwaura Jelvas

Kenya Marine and Fisheries Institute (KMFRI), PO Box 81651 80100, Mombasa, Kenya  
E-mail: [jmwaura@kmfri.co.ke](mailto:jmwaura@kmfri.co.ke)

Kenya's marine and coastal ecosystems, which include coral reefs, mangroves and seagrass beds, are threatened by a number of factors including unsustainable exploitation, poor coastal development and climate change. One of the most holistic approaches to protecting these ecosystems is ecosystem-based management approach, which recognizes the need to protect entire ecosystems instead of individual species. The KCDP programme is a GEF & World Bank funded project supporting partnerships of different stakeholders with a stake in marine ecosystems towards promoting an integrated management approach in order to maintain their functional and structural integrity of ecosystems, and to ensure economic and social benefits for local communities. The presentation will briefly provide an overview of issues impacting on biodiversity and health of marine ecosystems and gaps identified during KCDP interventions, with a view of providing a platform for future collaborative research work.

KCDP main objectives are to: 1. Contribute towards enhanced biodiversity conservation and sustainable use of marine biodiversity; 2) enhance marine biodiversity conservation through the strengthening of locally managed marine areas to meet their conservation and social- economic objectives and; 3) facilitate the transfer of best practices and the dissemination of relevant information on sustainable use of marine resources. The project has been under implementation since January 2011, designed to achieve the above-mentioned objectives, through developing and enhancing strategies and actions for marine ecosystems conservation and sustainable livelihoods in selected regions/areas. The following are some of the major achievements accomplished.

## **Strengthening of scientific base and development of management-oriented reports**

Marine ecosystems (coral reefs, mangroves and seagrass beds) are the key ecosystems types associated with the main coastal fisheries in Kenya. They are of critical importance not only to most fisheries but also tourism which is another industry of major importance in Kenya. Dedicated scientific field studies have been undertaken on biodiversity and health status of coral reefs, mangroves and seagrass beds, in the south coast-Shimoni-Vanga, Kilifi-Malindi, and Lamu regions. An important major delivery under this component has been production of both scientific and technical reports highlighting on the current biodiversity and health status of marine ecosystems, major issues and recommended actions for their sustainable management and conservation. A second delivery is development of a database for monitoring, evaluation and reporting. The project has established an integrated information management system (IMS) to provide a central repository for data and information to guide in further research activities, conservation and management of marine resources.

The scientific biodiversity studies led to implementation of the following pilot projects in some areas:

- Pilot project 1.  
Strengthening locally managed marine areas  
Field trips on established CCAs have been made with aim of gathering data on their status and prospects towards improved marine biodiversity conservation and social-economic welfare of the local communities. A technical report entitled 'Community-managed areas (CMAs): needs assessment for a healthy coastal and marine environment and sustainable livelihoods' has been produced incorporating local community's views on interventions needed.
- Pilot project 2.  
Restoration of deteriorated marine habitats, particularly near-shore reef systems
- Pilot project 3.  
Strengthening of mangrove management and governance
- Pilot project 4.  
Environmental and economic impact assessment of gated-basket trap