# About the Project
## Background

Over the past 30 years, some gains have been made in protecting the coastal and marine environments in developing countries, mainly in capacity building, awareness creation, research, and formulation of policy and institutional frameworks. However, coastal and marine environmental degradation not only continues but has also intensified as a result of an array of threats.

The major threats in coastal Eastern Africa include (but are not limited to) climate change (e.g. erratic and torrential rains leading to flooding and massive erosion/deposition) marine pollution (dumping of domestic and industrial waste), over exploitation of living marine resources, and coastal habitat loss. This is despite national and international efforts to address these problems. Coastal erosion/degradation is one of the biggest threats to marine biodiversity and ecosystems along the eastern Africa coast. Coastal erosion is causing loss of beaches and structures adjacent to beach fronts, loss of mangrove forests (which act as the first line of defense against rising sea levels and wave action), and smothering of submerged plants such as sea grasses. Pollutants and sediments discharged through river systems, and floods highly affect the chemistry of lagoonsâ€™ sea water, consequently threatening biological equilibrium.

One of the greatest impediments to coastal and marine conservation is the lack of timely information necessary for planning for protection, monitoring, mitigation or restoration measures and carbon storage in coastal ecosystems. Earth Observation information is useful in helping to find solutions for some of these challenges.

Consequently, this task has developed a coastal and marine ecosystems geospatial products and database, and transfer the same to key governmental and community based organizations involved in the management of these resources.

This will complement the existing management efforts of these ecosystems in Kenya, Tanzania, Mozambique, and Madagascar.

## Objectives

The project has achieved the following objectives.

- Generate a general current mangrove forest cover map using medium resolution satellite images along the Kenya and Tanzania coasts to estimate above-ground biomass and validation.
- To estimate the current sea grass bed cover in Kenya, Tanzania, Mozambique, Madagascar
- To identify and map coastal ecosystem hotspots using high resolution satellite images to understand the nature and extent of degradation
- Conduct an awareness creation workshop to sensitize on the exercise and identify gaps in coastal sea grass and mangrove forests cover in the four countries in study.
- Conduct a regional training workshop to build the capacity of selected staff from national Marine and Fisheries Research institutions in the four countries.

## Resources

### Mangrove Cover Mapping

Mangrove Cover Mapping Field Technical Report (PDF)
Mangrove Cover Mapping Training Manual (PDF)

### Degradation /Coastal Erosion Mapping

Degradation Coastal Erosion Hotspots Technical Report (PDF)

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