

The blue carbon content and potential of the MPA networks and other areas with high potential for carbon sequestration in Mozambique and Tanzania

WIOMSA Conference 2017

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Background

The ocean functions as an important carbon sink by absorbing atmospheric CO₂. Carbon sequestration includes carbon absorbed in the water column, and carbon stored in sediments. Blue carbon is the term used for carbon captured by marine organisms. The capture rate of organic carbon is estimated to be particularly high in shallow coastal ecosystems such as estuaries, salt marshes and seagrass beds. In addition, these shallow water ecosystems receive substantial amounts of terrestrial carbon. Photosynthesis by aquatic primary producers such as macroalgae, seagrass and microalgae capture the organic carbon, part of which is stored in the sediments. Detailed measurements of the quantities and dynamics of organic carbon in systems such as seagrass beds, saltmarshes and mangroves are being reported from across the world although few studies have been reported from the Western Indian Ocean.

The IUCN Global Marine Programme has initiated a scoping project to estimate the scale of marine carbon stores in the MPA networks and other areas, e.g. with significant seagrass beds and mangrove forests, in the Western Indian Ocean. Initially, the focus is on Tanzania and Mozambique. The project will compile an inventory best available information on the diversity and scale of blue carbon habitats, carbon stores and sequestration potential. The results will serve as input to coastal management and protection planning, to ensure that ecosystem services such as carbon capturing as well as biodiversity are adequately protected and where possible enhanced. The results will also indicate where further research is needed.

Session objectives

The participants will discuss the known extent and distribution of critical blue carbon habitats considering both MPAs and other areas with known significant seagrass beds, mangroves, coral reefs, rhodolith beds and other biogenic habitats, as well as seabed sediments. Also, the participants will discuss the main threats to these habitats and species and what management measures may need to be considered to better protect them.

What is expected to be achieved

The workshop will deliver a first order review of the known extent and distribution of the main blue carbon habitats of the two countries, as well as a preliminary account of the major threats these habitats are facing. This review will result in a project workplan for the years to come regarding how to fill the gaps identified in terms of:

- more exact extent and distribution of critical habitats;
- the state of the ecosystem in key areas, i.e. the health of the habitats;
- the threats to these ecosystems in terms of anthropogenic activities;
- the management needs in order to maintain/improve the carbon sequestration potential; and
- research needs

Targeted audience

Experts and managers with detailed knowledge regarding:

- the extent and distribution of critical blue carbon habitats, both MPAs and other areas with known significant seagrass beds, mangroves, coral reefs, rhodolith beds and other biogenic habitats;
- the main threats to seagrasses, mangroves, and coral reefs of the region; and
- current and planned management measures to protect seagrasses, mangroves, and coral reefs of the region.

Session programme

Following a few introductory presentations reviewing current knowledge regarding carbon sequestration in coastal and marine habitats of the region, as well as general overviews regarding the state of the critical habitats of the region, the discussion will be open, and participants will be invited to discuss.

Side consultations will also take place with key experts during the WIOMSA Conference.