

Marine sciences in the Agulhas and Somali Current Large Marine Ecosystems (ASCLME) Project

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The UNDP GEF Agulhas and Somali Current Large Marine Ecosystems (ASCLME) Project has been concerned with the improved transboundary, ecosystem based management of coastal and marine regions in nine countries of the Western Indian Ocean (WIO), including Kenya.

The project ran from 2008 to 2014, beginning with a baseline national and regional ecosystem assessment, a rigorous causal chain analysis, and culminated in the development of a regional Strategic Action Programme.

The Somali Current LME extends from north to south from the horn of Africa to the Comoros Islands and the northern tip of Madagascar. The Agulhas Current LME includes the Agulhas Current, which flows southwards along the east coast of South Africa, as well as its sources in the Mozambique Channel and its retroflexion south of Madagascar. As a result of studies undertaken through and alongside the ASCLME Project, it is now also scientifically probable that there is a third LME involved in this complex region. Before dividing in the vicinity of northern Madagascar, the South Equatorial current first reaches the Mascarene Plateau where a unique ecosystem has developed. This dynamic system of ocean currents and upwelling cells is responsible for regulating vital climate and influence weather patterns, sea temperatures, water chemistry, productivity, biodiversity and fisheries.

The LMEs are notably threatened by habitat modification, overexploitation of marine resources, pollution, and extreme events. Due to the interdependencies between the causes and effects of these threats, an integrated ecosystem-based management approach is needed to effectively mitigate them. A phased multi-project, multi-agency approach was planned that progressively strengthens management capacities at the regional scale to address transboundary environmental concerns within the LMEs, builds political will for threat abatement, and leverages finances, proportionate to management needs. The ASCLME project set out to gather new and important information about ocean currents and how they interact with and influence the climate, biodiversity and economies of the western Indian Ocean region. In parallel, it sought to strengthen scientific and management expertise, with a view to introducing an ecosystem approach to managing the living marine resources of the western Indian Ocean region.

An overview will be given of the science undertaken during the course of the ASCLME project, with special reference to Kenya.