KENYA OCEAN HEALTH INDEX

The Ocean Health Index (OHI) scientifically combines key biological, physical, economic, cultural, and social data to understand the health of a country's ocean resources. It reflects how well countries optimize potential ocean benefits in a sustainable way relative to a target, on a scale of 0 to 100.

Preliminary Kenya OHI

The Kenya OHI assessment was conducted as a participatory process involving government institutions and stakeholders, hosted nationally by the National Environmental Management Authority (NEMA) and Kenya Marine and Fisheries Research Institute (KMFRI), with technical coordination by CORDIO East Africa, Conservation International, and the National Center for Ecological Analysis and Synthesis (NCEAS, USA). The preliminary OHI+ assessment was funded by the Indian Ocean Commission through the Biodiversity Project funded by the EU, and the Dalio Foundation.

Why Now?

Kenya's use of ocean resources is set to expand, with fisheries, tourism, and shipping as key national sectors dependent on the ocean. County governments also have new lead responsibilities through devolution, and a new Blue Economy drive is a top national development priority, which is highlighted by Kenya hosting the global Sustainable Blue Economy Conference in November 2018. This OHI analysis can help to align actors from diverse sectors and across scales to ensure sustainable use of the ocean and future prosperity. Institutional contributors to the process included Kenya Fisheries Service, The Nature Conservancy, Pwani University, WWF Kenya, Coast Development Authority, Kenya Forest Service, Kenya Wildlife Service, Kenya Maritime Authority, and the Ministry of Tourism.

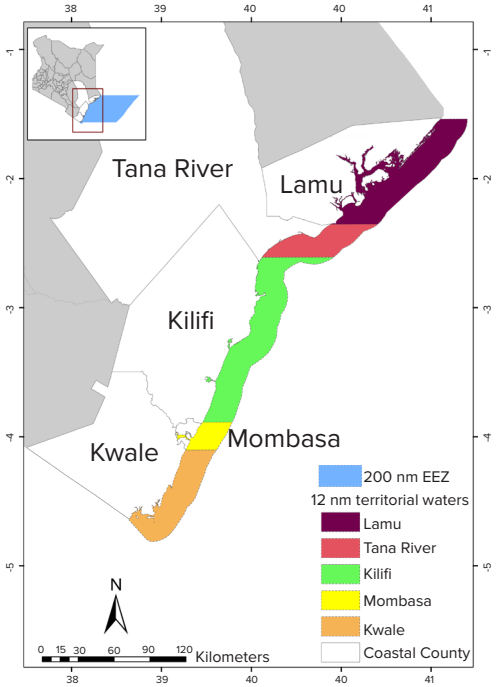
Tailoring OHI to Kenya's Needs and Priorities

The preliminary OHI assessment in Kenya was a stakeholder led process, where through a series of focused meetings with experts from key government institutions and NGOs, the issues around ocean conservation were discussed using the OHI framework as a guiding mechanism.

The aim of this assessment was to build on and improve the OHI global assessment through the use of local datasets and more applicable targets, and identify the most relevant models for Kenya. Results from this assessment are preliminary and can be used as a baseline to develop and improve in the future using more suitable and accurate metrics and data.

Two goals were ranked as most important, and selected for assessment:

1. Sustainable fisheries for food provision
2. Critical habitats for biodiversity



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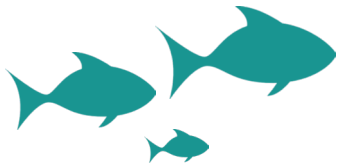
KEY FINDINGS

Food Provision: Fisheries

Measures the amount of wild-caught seafood harvested and its sustainability for human consumption



25 artisanal fish and prawn stocks tested

Counties scored very similarly (82-88) due to lack of County-specific data

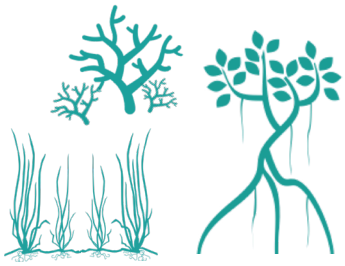
National average score for fisheries was 85

Pressures and resilience measures suggest that fisheries have the potential to improve in the future

We tested the fisheries model used in the OHI, based on Maximum Sustainable Yield, in the context of data-poor fisheries. Of the 25 taxa, only 6 had data available at County levels, and the data for only 1 of these met the requirements for MSY calculations. Thus, this fishery result is only illustrative, and more suitable models for the existing length-based data should be trialled e.g. spawning potential ratio, to improve the fit of the assessment to data-poor fisheries.

Biodiversity: Habitats

Measures the average condition of critical marine habitats for a broad range of species



Coral reefs, mangroves, and seagrasses assessed

Lamu: 92
Tana River: 45
Kilifi: 78
Mombasa: 65
Kwale: 89

National average score for habitats was 74

Habitat health projected to decline for all but Lamu

Kwale and Lamu Counties retain over 85% of their mangrove extent, while Tana River and Mombasa are the most heavily impacted, having lost 80% of their cover since the early 1990s. Very limited data before the 1998 mass coral bleaching event results in an apparent low decline of coral reefs, though independent studies document significant decline.

Climate change, increased coastal populations, infrastructural developments, and energy projects are likely to cause increased pressures on Kenya's coastal and marine ecosystems and will translate into continued degradation if management measures are not scaled up in both quantity and quality.

Recommendations

This preliminary analysis of two sub-goals of the OHI reveal its potential for future application to support national objectives. The following recommendations focus on next steps for OHI goal assessments to produce tangible results in ocean and coastal management:

1. Enhance cooperation between National and County governments and between neighboring states
2. Appoint relevant high authority to coordinate assessments and inter-sectoral cooperation
3. Modify the Index to fit available fisheries data whilst working toward improving data collected so that b/bmsy estimates can be used in the future
4. Institutionalize sectoral agencies as the authority for goal-specific data, models, and reference points to link goal assessments to management
5. Invest in comprehensive monitoring and data collection programmes to improve the quality of assessments