TANZANIA 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 Tanzania OHI

The Tanzania OHI assessment was conducted as a participatory process involving government institutions and stakeholders, hosted nationally by the Tanzania Fisheries Research Institute (TAFIRI) and Fisheries Education and Training Agency (FETA) with technical coordination by CORDIO East Africa, Conservation International, and the National Center for Ecological Analysis and Synthesis (NCEAS, USA). The project was funded by the Indian Ocean Commission through the Biodiversity Project funded by the EU, and the Dalio Foundation.

Other institutional contributors include Vice president's office, The Nature Conservancy (TNC), Ministry of Livestock and Fisheries, WWF Tanzania Country Office, Ministry of Agriculture, Natural Resources, Livestock and Fisheries, Zanzibar Department of Environment, Zanzibar, Zanzibar Environmental Management Authority (ZEMA), National Environment Management Council (NEMC), IOC/Biodiversity focal Point, Tanzania, University of Dar es Salaam (UDSM), Youth Vision Kigamboni, Sea sense, Department of Fisheries, Department of Fisheries Development, State University of Zanzibar (SUZA), Institute of Marine Sciences (IMS), and Mwambao Coastal Community Network.

Why Now?

The ocean plays a significant role in socioeconomic development of the United Republic of Tanzania by supporting key economic sectors such as fisheries, tourism, and shipping as well as its rich cultural heritage. However, the growing interest and inevitable investment in the 'Blue Economy' within a changing climate and growing population, poses considerable risks. An OHI analysis can help to align actors from diverse sectors and across scales, to ensure sustainable use of the ocean for future prosperity.

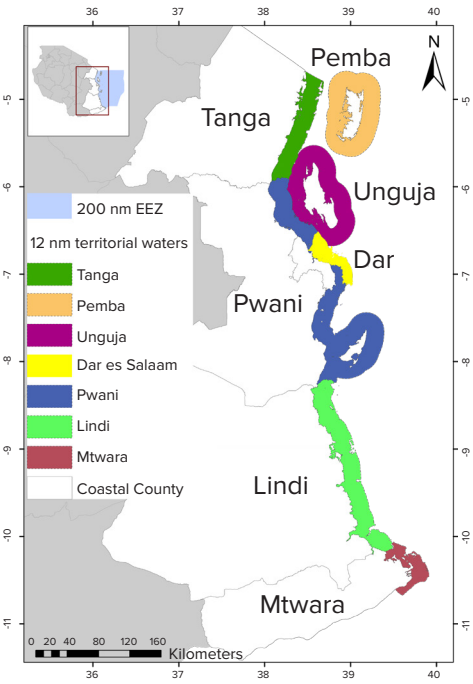
Tailoring OHI to Tanzania's Needs and Priorities

The preliminary OHI assessment in Tanzania 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 Tanzania. 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 at the zonal level (see map on the right):

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



For more information, contact info@cordioea.net

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KEY FINDINGS

Food Provision: Fisheries

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

Resilience

Pemba: 73
Tanga: 66
Unguja: 76
Dar es Salaam: 73
Pwani: 69
Lindi: 69
Mtwara: 67

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Pressures

Pemba: 47
Tanga: 50
Unguja: 35
Dar es Salaam: 52
Pwani: 47
Lindi: 43
Mtwara: 41

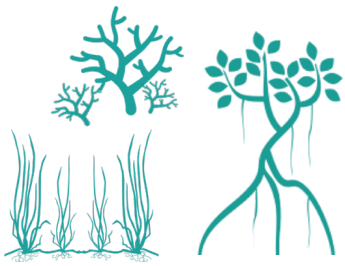
Resilience: condition of species located within 3nm offshore of each region, percentage of territorial waters under protection compared to 30% target, protected area management effectiveness, artisanal fisheries management effectiveness, social progress, strength of governance, water quality

Pressures: intertidal habitat destruction, weakness of social progress, weakness of governance, subtidal hardbottom habitat destruction, by-catch due to artisanal fishing, coastal chemical pollution, coastal nutrient pollution, blast and poison fishing

For this preliminary assessment, only artisanal fisheries within the Tanzania's territorial waters were discussed, and only pressure and resilience scores were calculated due to data constraints (i.e. availability, quality, timely access). For all zones, pressure scores are lower than resilience scores, with all resilience scores above 65. Technical discussions held during this project will help guide any subsequent analysis of this goal.

Biodiversity: Habitats

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



Coral reefs, mangroves, and seagrasses assessed

Pemba: 66
Tanga: 69
Unguja: 87
Dar es Salaam: 77
Pwani: 62
Lindi: 85
Mtwara: 73

National average score for habitats was 74

Habitat health projected to decline for all but Unguja

Habitat level results indicate the country lost around 16% of its mangrove cover between 2000 and 2014, with Mtwara and Lindi retaining around 90% of their mangrove cover but Tanga and Pwani losing over a quarter of their area, and Dar over 30% of mangroves.

Five of the seven zones showed declines in coral cover, with Pwani as the most impacted after losing about half its original living coral, whilst Mtwara and Pemba have lost around 40% and Unguja and Tanga about 30%. There was no variation in seagrass status score as OHI global score for Tanzania was applied in all zones due to lack of data.

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. Each competent authority should be a goal 'custodian' to embed the evaluation in their official processes
2. A relevant cross-sectoral entity should coordinate assessments to centralize the technical evaluation and integrate across levels of government e.g. ICZM strategy (Zanzibar) and NICES (mainland)
3. Invest in comprehensive monitoring and data collection programmes to improve the quality of assessments
4. Ensure adequate resourcing, capacity, and influence to undertake the assessments and implement recommendations
5. Use sub-products such as status, pressure, and resilience data layers and information to inform planning processes at regional and national level