

Underwater Noise and Shipping and the threats they pose to marine species in the Western Indian Ocean

Tim Collins *et al*

Wildlife Conservation Society

Abstract

The threats that noise and shipping pose to marine life remain poorly understood in the region and are rarely considered in national or regional management and development plans. WIO states are accelerating the development of the regional “Blue Economy” including development & expansion of ports and offshore oil and gas production which will further increase shipping & noise. This has the potential to increase impacts of ship strikes & noise where shipping activity intersects with the migratory routes or feeding and reproduction habitats for vulnerable species. Previous studies indicate that ship-strike probability and oceanic noise pollution can be monitored, and their impacts may be reduced through for example noise quieting technologies or ship speed management schemes. Vessel-quieting guidelines have been developed by the International Maritime Organization & others and guidelines for the reduction of ship strikes by the International Whaling Commission (IWC). The need for increased action on oceanic noise & ship strikes has gained considerable attention with discussions being made at the 12th Convention on Migratory Species Conference of the Parties (COP), 2017, Nairobi Convention COP9, 2018 and United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, 2018. Guidelines for the reduction of impacts associated with offshore geophysical surveys as well as other forms of environmental imaging have been developed by IUCN. The IWC adopted a resolution on anthropogenic underwater noise in 2018. The parties are urged to take the following steps, to reduce threats associated with Shipping and Underwater Noise in the WIO:

- A technical review of current underwater noise mitigation policies within the Nairobi Convention area be undertaken. The review should identify
 - A plan for targeted regional and collaborative research that improves current understanding of regional WIO ocean noise levels, including establishment of acoustic baselines (such as soundscape maps) and modelled changes over time.
 - A plan for targeted research that highlights the potential impacts to marine habitats and species from underwater noise and shipping traffic and the effects of expanding regional maritime trade.
- The development of regional technical capacity should be encouraged by member states through academic frameworks.
- Regional research that actively investigates oceanic noise and its effects on marine life should be encouraged and supported, including prioritizing targeted research funding.
- Member states should be encouraged to routinely review current national guidance and regulation that pertains to maritime development and to address deficits linked to the following:
 - The assessment and mitigation of underwater noise associated with development projects, particularly ports and associated increases in vessel traffic.
 - To incorporate recommendations identified by the technical review proposed as well as any other relevant guidance provided by other appropriate agencies.