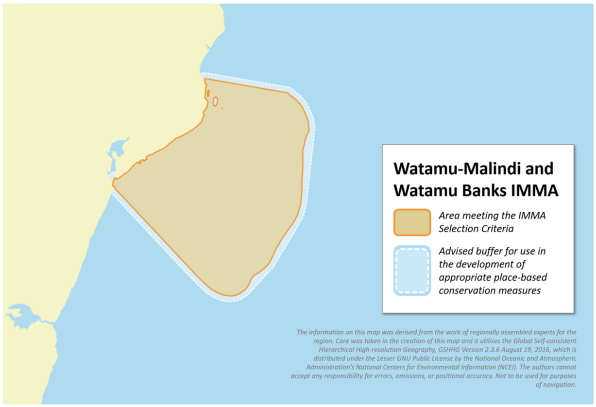

Area Size

951 km ^{2}

Qualifying Species and Criteria

Indo-pacific bottlenose dolphin
Tursiops aduncus
Criterion B1

Humpback whale
Megaptera novaeangliae
Criterion C3

Marine Mammal Diversity

Tursiops aduncus, Megaptera novaeangliae, Sousa plumbea, Stenella longirostris, Globicephala macrorhynchus, Balaenoptera edeni, Orcinus orca, Physeter macrocephalus, Pseudorca crassidens

Summary

Watamu – Malindi is located in the rich, shallow coastal waters off north-central Kenya and includes Watamu Banks, a large nearshore banks system that is important to oceanic species. A long-term inshore study shows that Indo Pacific bottlenose dolphins are resident in the IMMA, and that it represents important sanctuary habitat for use by mothers and calves. Indian Ocean humpback dolphins are also sighted within the study area. The Watamu Banks are used by Humpback whales from International Whaling Commision Breeding Stock C, for reproduction and nursing their calves.

Watamu-Malindi and Watamu Banks IMMA

Description

Located in the central northern Kenyan coast, the Watamu-Malindi and Watamu Banks IMMA includes a variety of habitats including shallow near shore reef, mangrove and sea grasses. The Watamu and the Malindi Marine Protected areas occur within the boundary of the IMMA, both of which support a high diversity of coastal marine life including corals, reef fish and sea turtles. Also included inside the border of the IMMA are the Watamu banks, which is a hotspot of diversity, famous for catches of large game fish, as well as a high frequency of humpback whale encounters. The deeper waters of the Watamu banks hosts spinner dolphins, pilot whales, brydes whales, and humpback whales on their seasonal migrations, while the near-shore waters of the Watamu coast are home to resident Indo-Pacific bottlenose and humpback dolphins.

Long-term studies of the Watamu area have been conducted during dedicated boat-based surveys and from 2010 to 2019, 141 individual Indo-pacific bottlenose dolphins have been photo-identified in this area. Indian Ocean humpback dolphins are occasionally sighted and a total of 8 semi-resident animals have been identified and catalogued.

Land-based observations of humpback whales have been made from a headland near Watamu recording regular whale sightings each year

Figure 1 - Surfacing Indian Ocean humpback dolphin (Sousa plumbea) in the Watamu-Malinidi IMMA. Photo credit: Watamu Marine Association.

Mwang'ombe et al. 2015). The Kenya Marine Mammal Network records using citizen science all marine mammal sightings in Kenya, and the Watamu area, especially the Watamu Banks, consistently have the highest number of reported whales in the country (KMMN, unpublished). This is partly because of increased effort and reporting in this location, but it is also undoubtedly a humpback whale hotspot.

Criterion B: Distribution and Abundance

Sub-criterion B1: Small and Resident Populations

A resident population of Indo-Pacific bottlenose dolphins has been observed to use the IMMA area (Mwang'ombe et al. 2015). From 2011-2014, 101 dedicated boat-based surveys were conducted that resulted in 92 sighting records of Indo-Pacific bottlenose dolphins. From 2010 to 2019, 141 individual Indo-Pacific bottlenose dolphins were photo-identified in this area and the high re-sighting rate suggests that the population is resident. Mother-calf pairs are frequently sighted in the coastal zone. The distribution of Indo-Pacific bottlenose dolphins that occur inside the Watamu-Malindi and Watamu Banks area shows a strong preference for the reefs inside the Watamu Marine Protected Area, where animals feed on inshore reef fish.

Criterion C: Key Life Cycle Activities

Sub-criterion C3: Migration Routes

The Watamu banks is an important area for breeding and migrating humpback whales, and the Kenya Marine Mammal Network, which logs all citizen science whale sightings, has more records from the Watamu Banks than from any other location. Although this is biased by effort, it is clear that the Watamu Banks is an important area for migrating and breeding humpback whales. Land-based observations of humpback whales have been made from a fixed land position on a headland near Watamu (Mwang'ombe et al. 2015). In 2014 land-based surveys recorded 54 sightings of humpback whale, which was the highest encounter rate (ER =0.51/hour) compared to 2015 and 2016 (ER = 0.17/hour). Calves were sighted in 2014, 2015 and 2016.

Supporting Information

Mwang'ombe, M.G., Pérez-Jorge, S., Charo, K.K., Yaa, J.K., Njuguna, L.N., Trott, S.J. & Spilsbury, J.H. (2015) Cetacean species distribution and encounter rates in the Malindi – Watamu National Marine Reserve 2011 – 2014. Poster presented at the. In Western Indian Ocean Marine Science Association, Durban, South Africa.

Mwang'ombe, M.G., Pérez-Jorge, S., Charo, K.K., Yaa, J.K., Njuguna, L.N., Trott, S.J. & Spilsbury, J.H. (2017) Improving understanding of whales migration through the Kenyan Inshore waters. Poster presented at the. In Western Indian Ocean Marine Science Association, Dar-es-salaam, Tanzania.

Aknowledgements

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