

Lamu Offshore IMMA

Description

Thirty confirmed sightings of 38 individual blue whales were made during September and October off the coast of Kenya during seismic surveys (Barber et al. 2016). These observations of blue whales are consistent with records of this species within the wider western Indian Ocean, specifically off Somalia and in the Gulf of Aden; including nineteenth century whaling records (i.e. Gulf of Aden) also made in September and November (Anderson et al. 2012), Japanese records in March, 1982 (Kasuya and Wada 1991), and 18 sightings of blue whales in 1985 off Somalia (October, November and December; Small and Small, 1991). Despite the seismic survey search effort continuing until January 2015, no blue whale sightings were made after October, and this absence of sightings after October suggests that blue whales are seasonally present in the area. Most of these sightings were of individual animals, although groups of up to three were recorded (Barber et al. 2016). The September and October period of the sightings is at the end of the South-East Monsoon period, when major upwelling of nutrient-rich waters and associated plankton productivity occur, particularly off the Somali coast (McClanahan 1988; Isaac and Isaac 1968). These sightings (Barber et al., 2016) suggest that the area off northern Kenya forms an important habitat for blue whales in the Indian Ocean, at least during the end of the South-East Monsoon period, although it is not known whether these waters represent a feeding

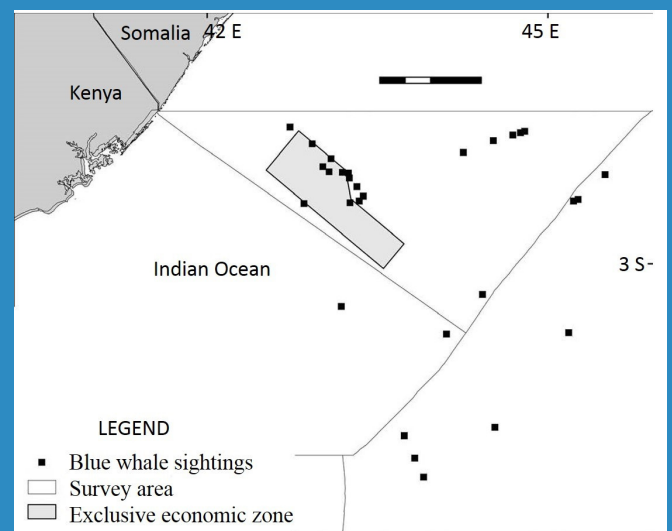
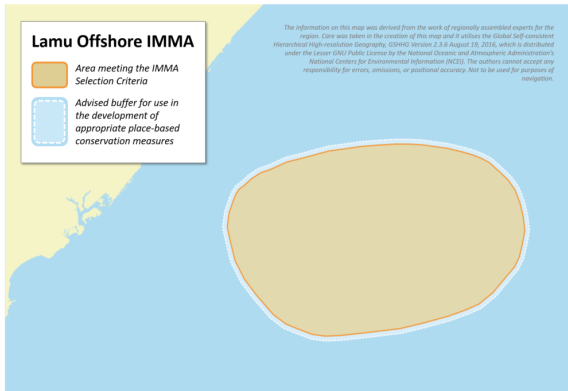


Figure 1. Sightings of blue whales recorded during a geophysical survey in Kenyan offshore waters, September 2014–January 2015. Taken from Barber et al. 2016.



Area Size

61,373 km²

Qualifying Species and Criteria

Blue whale
Balaenoptera musculus
Criterion A

Marine Mammal Diversity

Balaenoptera edeni, *Balaenoptera musculus*,
Globicephala macrorhynchus, *Grampus griseus*,
Indopacetus pacificus, *Megaptera novaeangliae*,
Peponocephala electra, *Physeter macrocephalus*,
Pseudorca crassidens, *Stenella longirostris*,
Tursiops truncatus

Summary

Sightings of blue whales, as well as other species, were documented during seismic surveys in September and October 2014 in the offshore waters of Lamu in northern Kenya. These sightings suggest that the waters of northern Kenya and southern Somalia constitute an important habitat for blue whales in the Indian Ocean, at least during the South-East Monsoon period, though it remains poorly understood as to whether these waters are a feeding ground or part of a migratory route. Three recognized subspecies of blue whales occur in the region; the pygmy blue whale (*Balaenoptera musculus breviceauda*), Antarctic blue whale (*Balaenoptera musculus intermedia*), and Northern Indian Ocean blue whale (*Balaenoptera musculus indica*). The recent identification of a unique blue whale call type recorded off Oman suggests a fourth subspecies also occurs in the Northern Indian Ocean though this is unconfirmed.

Whales sighted during the seismic surveys were likely either Madagascar pygmy blue whales (*Balaenoptera musculus brevicauda*), Antarctic blue whales (*Balaenoptera musculus intermedia*) or Northern Indian Ocean blue whales (*Balaenoptera musculus indica*) which could have been using the survey area as a feeding ground, or in transit, migrating through the area from major upwelling areas farther north (Barber et al. 2016). Recent acoustic survey effort off Oman, recorded a unique Blue whale song type suggesting the possibility of a distinct population separate from the three recognized subspecies in the northern Indian Ocean (Cerchio et al. 2018).

Due to the frequency of sightings in the western Indian Ocean, this area may also be a key habitat for the Longmans beaked whale (Anderson et al. 2006). Based on strandings and sighting locations, Longman's beaked whales are known to inhabit deep waters in tropical and subtropical regions of the Indian and Pacific Oceans (Yamada et al. 2012), although sightings are notably more frequent in the western Indian Ocean than in the Pacific region (Anderson et al. 2006). All recorded sightings have occurred in water depths between 2,990 – 4,705 meters. Stranding records of Longman's beaked whales have been documented in Kenya (Dalebout et al. 2003) and Somalia (Azzaroli, 1968, Yamada et al. 2012). Martin and Nimak-Wood (2016) documented what they determined to be the first-at-sea sighting of Longman's beaked whales off Kenya. On 17 October 2014, a group of approximately 20 Longman's beaked whales were observed in a mixed-species group with bottlenose dolphin (*Tursiops truncatus*) within the Kenyan Economic Exclusive Zone in a water depth of 3,707 m. (02° 08' 59" S, 43° 55' 87" E; Martin and Nimak-Wood, 2016). These whales were documented travelling in a tightly formed group (approximately 20 individuals) and in waters warmer than 26° C, similar to previous observations of this species in the western Indian Ocean (Pitman et al. 1999; Anderson et al. 2006, Rankin et al. 2011).

A number of other species have also been documented within this same area adding to the known diversity of species within the offshore waters of Northern Kenya.



Figure 2. Blue whale (*Balaenoptera musculus*) surfacing within the Lamu Offshore IMMA. Photo Credit: Guardline Environmental.

Criterion A: Species or Population Vulnerability

Globally blue whales (*Balaenoptera musculus*) are listed by IUCN as 'Endangered' (Cooke 2018). At least three of the five recognized subspecies of blue whale (Thomas et al. 2015), are found in the western Indian Ocean: the Antarctic blue whale (*B. m. intermedia*), the pygmy blue whale (*B. m. brevicauda*), and the northern Indian Ocean blue whale (*B. m. indica*; Branch et al. 2007; Anderson et al. 2012). An absence of abundance data has precluded assessment of the northern Indian Ocean subspecies (Thomas et al. 2015). Blue whales found in the IMMA represent one of, or a mixture of, the three subspecies known to occur.

Supporting Information

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Acknowledgements

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