

Area Size

## Marine Mammal Diversity (D2)

Balaenoptera musculus, Ziphius cavirostris, Balaenoptera physalus, Mesoplodon grayi, Cephalorhynchus hectori, Megaptera novaeangliae, Globicephala melas, Kogia breviceps, Balaenoptera borealis, Physeter macrocephalus, Mesoplodon layardii, Balaenoptera edeni, Tursiops truncatus, Delphinus delphis, Mesoplodon densirostris, Balaenoptera edeni, Orcinus orca, Hydrurga leptonyx, Globicephala melas, Arctocephalus forsteri, Caperea marginata, Globicephala macrorhynchus, Mirounga leonina, Eubalaena australis, Lissodelphis peronii, Stenella coeruleoalba

### Summary

The Hikurangi Trench lies parallel to the east coast of the North Island of New Zealand. This IMMA starts from southern Hawke's Bay to about 100km offshore up to East Cape and shallower slope and shelf areas from East Cape to Whakatane, eastern Bay of Plenty. The Hikurangi Trench is a southerly extension of the Kermadec Trench incorporating a highly diverse canyon and channel system. The westward extension of the IMMA into the eastern part of the Bay of Plenty provides an important corridor connecting the two systems. The area is potentially important to pygmy sperm whales, accounting for 65% of all New Zealand strandings, including a high

# Hikurangi Trench IMMA

#### Summary cont....

proportion of mother/calf pairs. The canyon systems support an exceptional diversity of deep diving-cetaceans, various inshore delphinids and New Zealand fur seals over the shelf.

#### **Description:**

The Hikurangi Trough dominates this IMMA, with geologically complex canyon and channel systems fed by the East Cape Current from the north and the productive Wairarapa Eddy from the south (Hadfield 2007). The area supports an important area for pygmy sperm whales with a high proportion of mother-calf pairs in the region reported from strandings data (Baker and van Helden 1990, Brabyn 1991). There are other deep-diving species most notably Gray's, strap-toothed, Cuvier's, and other beaked whales, sperm whales, and long-finned pilot whales, all of which are well represented in the stranding and sighting records for the region (Gaskin 1973, Betty et al. 2020).

The Hikurangi Trench is a southerly extension of the Kermadec Trench incorporating one of the most geologically diverse canyon and channel systems in the world. It is enriched by the East Cape Current (Hadfield et al. 2007). The south travelling East Cape



Figure 1 - Leopard seal. - Jamie Quirk - Department of Conservation



Figure 2 - Cetacean richness estimates in the Hikurangi region (accounting for uncertainty of predictions as described in Stephenson et al. 2021) Current and the north flowing component of the Wairarapa Eddy brings nutrient-rich waters to this region. These conditions provide an abundant and important habitat for teuthophagous and deep-diving species (see criterion D2) including in this region: pygmy sperm whales, sperm whales, Gray's beaked whales, straptooth beaked whales, Cuvier's beaked whales, other beaked whale species, and long-finned pilot whales. There are many sighting and stranding records from these species along the eastern coastline of the North Island, many with stomach samples providing good evidence for this IMMA as an important feeding area for these deep diving species.

The Shelf area has coastal dolphin species particularly common and common bottlenose dolphins, and some of the only records of Hector's dolphins on the east coast of the North Island (Freeman 2003, Gaskin 1968). NZ fur seals are also numerous in the area (Baird 2011). The area appears to be part of a migratory corridor for various species of Balaenopterid possibly following distinctive geophysical features or current systems. Humpback and southern right whales are occasionally seen near shore along this coastline as their numbers around New Zealand are increasing post whaling (Carroll et al. 2014, Dawbin 1956, Riekkola et al. 2018). These species contribute to the overall species diversity in the area.

# Criterion D: Special Attributes Sub-criterion D2: Diversity

Limited sightings data and the stranding record indicate the occurrence of 22 cetacean and 3 pinniped species in this IMMA (Brabyn 1991, Baird 2011, New Zealand Department of Conservation (DOC) Marine Mammal Sighting and Stranding database 2020). This represents an exceptional diversity of deep diving cetaceans. There is also a high diversity of other cetaceans including coastal and shelf delphinids (including killer whales, common dolphins, striped dolphin and Hector's dolphin), and mysticetes including 6 rorqual species, the southern right whale, and the pygmy right whale (Brabyn 1991, Baker and van Helden 1999, Baker 2002, van Helden et al 2002, Thompson et al 2013, Gaskin 1973, Roberts et al 2019, Freeman 2003, Betty et al. 2020, DOC Marine Mammal Sighting and Stranding database 2020; Cranswick et al. 2022). The primary species recorded for the region are pygmy sperm whale, Gray's beaked whale, strap-toothed beaked whale, and Cuvier's beaked whale (Baker and van Helden 1990, Thompson et al. 2013). There are numerous records of strandings and sightings of various species of Balaenopteridae (Dawbin 1956, DOC Marine Mammal Sighting and Stranding database 2020). Sighting records of southern right whales are increasing (Cranswick et al. 2022), New Zealand fur seals are common in the region with 2 other pinniped species (i.e. southern elephant seal, leopard seal) regularly recorded from the region. The warm subtropical East Cape Current may explain the occasional records of cetaceans more commonly

sighted in tropical waters (e.g. short-finned pilot whale, dense beaked whale).

# Supporting Information

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based on a decision of the German Bundestag

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PDF made available for download at: <u>https://www.marinemammalhabitat.org/portfolio-item/hikurangi</u> <u>-trench/</u>