

Vatu-i-Ra IMMA

Description

The Vatu-i-Ra IMMA lies between the two main islands of Fiji and contains healthy coral reef systems, a multitude of relatively pristine and untouched islands, and a deep central elongated canyon which drops to depths of more than 1000 m. The area generates active currents, moving from the south to the northwest, which create dynamic oceanography and high productivity. This extraordinary 7,500 mi² mosaic of mangroves, seagrass meadows, reefs, deep channels, and seamounts is one of the Pacific's last great wild places. It is home to the largest population of nesting hawksbill turtles in Fiji, as well as green and loggerhead turtles. Additionally, it is one of the few remaining sanctuaries for globally endangered humphead wrasse, bumphead parrotfish and white tip reef sharks.

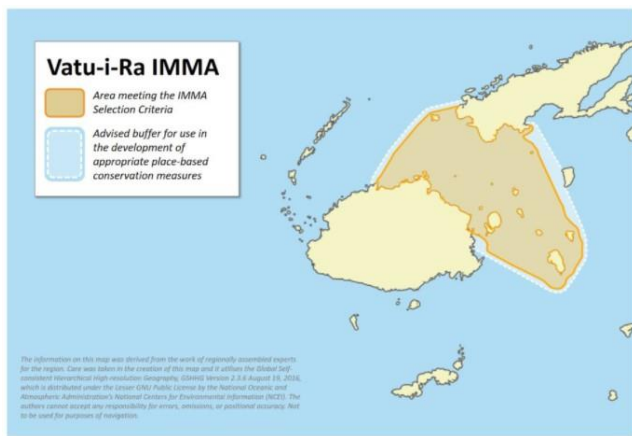
Criterion A: Species or Population Vulnerability

The Fiji humpback whale population belongs to the Oceania subpopulation which is classified as Endangered by IUCN (Childerhouse et al., 2008). The Vatu-i-Ra IMMA is a documented breeding and calving ground for these whales. The most recent study, carried out from 2010 – 2012, recorded 33 individuals in 480 h (across a 3-year period) from Ovalau Island, and 68 individuals in approximately 300 h at a field site on Makogai Island. Presence of calves was documented during the surveys as well, and re-sightings suggest that the humpbacks tend to stay around the shallow reefs of the Lomaiviti islands for some time.

Criterion B: Distribution and Abundance

Sub-criterion B1: Small and Resident Populations

There is a small, resident population of spinner dolphins (*Stenella longirostris*) regularly seen within the IMMA (Hunt, 2009; Cribb et al., 2012). The predictable presence of these spinner dolphins is



Area Size

14,293 km²

Qualifying Species and Criteria

Humpback Whale – *Megaptera novaeangliae*

Criteria A, C1

Spinner dolphin – *Stenella longirostris*

Criteria B1, C1

D2 – Marine Mammal Diversity

Balaenoptera acutorostrata, *Globicephala macrorhynchus*, *Megaptera novaeangliae*, *Orcinus orca*, *Physeter macrocephalus*, *Pseudorca crassidens*, *Stenella attenuata*, *Stenella longirostris*, *Tursiops truncatus*

Summary

The Vatu-i-Ra IMMA is a tropical marine region stretching between the two main islands of Fiji (Viti Levu and Vanua Levu). The IMMA encompasses a variety of habitats including healthy coral reefs in the coastal areas, a deep canyon, and dynamic and productive oceanographic processes. The region is known to provide critical resting habitat for spinner dolphins (*Stenella longirostris*), as well as calving habitat and a migration route for Endangered Oceania humpback whales (*Megaptera novaeangliae*). The culturally important sperm whale is also present within the Vatu-i-Ra IMMA, although in much lower numbers than in pre-whaling times. Other cetacean species seen across this area include the short-finned pilot whale, pantropical spotted dolphin, and false killer whale.



Figure 1: Images from the Vatu-i-Ra IMMA: A) A humpback whale fluking near the shoreline, B) a close look at a humpback whale's fluke pattern, C) a spinner dolphin leaping out of the water, and D) a mother and calf spinner dolphin. Photos: Cara Miller

a major draw for tourists. Photo-identification surveys and behavioural observations were conducted within the Moon Reef complex in 2009 and 2010. Analysis confirmed that most of the same individuals returned to Moon Reef daily. A pod of approximately 100 individuals has been consistently documented in the area for 10 years, underscoring the notion that Moon Reef is a critical resting area for the spinner dolphins (Cribb et al., 2012).

Criterion C: Key Life Cycle Activities **Sub-criterion C1: Reproductive Areas**

Within the Vatu-i-Ra IMMA, the presence of calves for both qualifying species (*Stenella longirostris* and *Megaptera novaeangliae*) (Fig. 1) have indicated that it is a reproductive area. Endangered Oceania humpback whale mom-calf pairs have been reported in proximity to a number of reef systems and islands within the IMMA.

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

There are regular and numerous sightings of short-finned pilot whales, sperm whales, and dwarf minke whales across the IMMA (Smith et al., 2011). Additional species that have been confirmed include pantropical spotted dolphins, common bottlenose dolphin, diminutive sperm whale (believed to be a dwarf sperm whale), pygmy killer whale, and false killer whale. See Miller et al., 2016 for additional details on these species' records.

Supporting Information

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Acknowledgements

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**MARINE MAMMAL
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IMMA

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