



Large-scale ecosystem-based parks formed by communities, supported by dive tourism: Namena Marine Reserve and Vatu-i-Ra Conservation Park

The Namena Marine Reserve and Vatu-i-Ra Conservation Park are an exception to most other tourism-related protected areas in Fiji, as they cover full reef ecosystems, including small islands, passages, deep reefs and ocean, as well as shallow reefs and slopes. Together, they make up almost 80% of the area in Fiji protected by local communities in partnership with the tourism industry. These areas are popular dive destinations for both local and international guests.

Namena Marine Reserve

Established in 1997, this 88 km² no-take marine reserve protects coral reef habitats within an extensive barrier reef system extending into the Vatu-i-Ra Passage, and surrounding Namenalala Island, a seabird and turtle nesting site (Fig. 1). The Namena Marine Reserve was established through a *tabu* by the traditional leaders of Kubulau District in Bua Province with the support of locally-based SCUBA dive tourism operators, particularly Moody's Namena Island and Jean-Michel Cousteau Resort Fiji. It was established to address the threat of overfishing, particularly from the tuna pole and line vessels prevalent in the early 1990s. Two NGOs, Wildlife Conservation Society (WCS) and Coral Reef Alliance (CORAL) have been instrumental in the establishment of the marine reserve with the 10 villages in Kubulau District, bearing some of the initial and ongoing transaction costs (e.g. monitoring, printing of dive tags). The management of the reserve is currently carried out by the Kubulau Resource Management Committee (KRMC) which was established in 2005 to oversee the implementation of the Kubulau District Ecosystem-Based Management Plan which includes the Namena Marine Reserve.¹

In 1998, through a verbal agreement with local land-based tourism operators including Moody's Namena Island, Jean-Michel Cousteau Resort Fiji, Koro Sun, and Namale Resorts, and dive operators including Sea Fiji and liveaboard operators NAI'A Cruises and Sere ni Wai (Fiji Aggressor), and later including Namena Divers and the Fiji Siren liveaboard ship, divers were given the option of making a voluntary contribution (currently FJ\$30 per diver) in return for an annual dive tag.

Contributions are collected by the tourism operators and are paid into a trust fund, which is used to cover management costs for the reserve, and to provide tertiary education scholarships to selected children from the district. The board of trustees comprise members of the community and representatives from the tourism industry. The dive tag, produced and paid for by CORAL, has provided at least 160 scholarships to children from Kubulau District, three bus shelters, maintenance of moorings, and supported Fish Warden trainings. Upwards of 1500 dive tags were sold annually in recent years. The flow of benefits between providers and beneficiaries is shown in Figure 3.

Coral reef monitoring has shown that coral cover has remained fairly stable, with a 17.3% decline following Cyclone Tomas in 2010, and 20.6% decline following Cyclone Winston in 2016.^{2,3} Fish biomass has been consistently above 1000 kg/ha in the reserve from 2009–2016 (WCS unpublished data), indicative of healthy fish communities.⁴ WCS currently bears the cost of the long-term biological monitoring to measure the impact and success of the reserve.

The Namena Marine Reserve is 14 km offshore, and as such has some natural protection from local community subsistence fishing, but is vulnerable to large fishing boats from the mainland. Although community resource owners have long-term commitments to the Reserve, the reefs are too far offshore

1 WCS (2012) Ecosystem-Based Management Plan: Kubulau District, Vanua Levu, Fiji. Wildlife Conservation Society, Suva.

2 Mangubhai S (2016) Impact of tropical Cyclone Winston on coral reefs in the Vatu-i-Ra Seascape. Report No. 01/16. Wildlife Conservation Society, Suva. 27pp.

3 Mangubhai S, Sykes E, Lovell E, Brodie G, Jupiter S, Lal R, Lee S, Loganimoce EM, Morris C, Nand Y, Qauqau I, Rashni B (2018) Fiji: Coastal and marine ecosystems. In C. Sheppard (ed.) World Seas: An Environmental Evaluation Volume II: The Indian Ocean to the Pacific. Elsevier, Oxford.

4 MacNeil MA, Graham NAJ, Cinner JE, Wilson SK, William ID, Maina J, Newman S, Friedlander AM, Jupiter S, Polunin NVC, McClanahan TR (2015) Recovery potential of the world's coral reef fishes. *Nature* 520: 341-344



for them to regularly monitor and police. From the establishment of the Reserve until 2013, the owners and staff of Moody's Namena EcoResort on Namenalala Island were the principal enforcement agency of protection of the area. In particular they were assiduous in the protection of seabird and turtle nesting sites on the island, as well as preventing anchoring and fishing on the dive sites.

In 2013, the resort changed hands, and then closed following extensive damage from Cyclone Winston in February, 2016. Although a local day-boat dive operation has technically taken over enforcement and monitoring of the park, bearing this transaction cost themselves, informal reports suggest that without a continuous and conscientious presence on the island, poaching is on the increase.

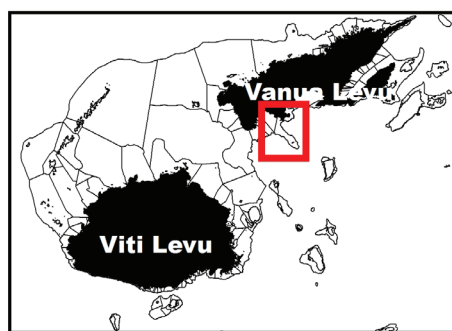
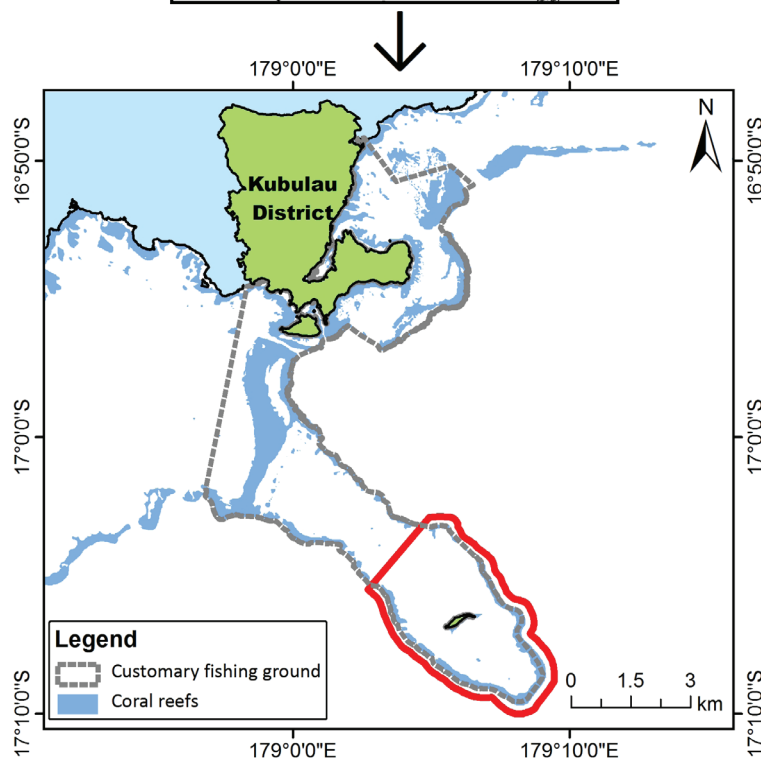


Figure 1. Map of the Namena Marine Reserve in Kubulau District, Bua Province.



Vatu-i-Ra Conservation Park

Based on the model established by the Namena Marine Reserve, the Vatu-i-Ra Conservation Park was set up as a *tabu* area in 2012 by the 28 villages of Nakorotubu District in Ra Province. The Vatu-i-Ra Conservation Park was extended in 2015 and covers 110.5 km² of barrier reefs, slopes, passages, deep ocean, as well as Vatu-i-Ra Island (0.023 km² land cover) (Fig. 2), which supports large breeding colonies of seabirds. The island is listed as a "Site of National Significance" in Fiji's National Biodiversity Strategy Action Plan, and is one of the 28 internationally "Important Bird and Biodiversity Areas" (IBA) recognised by BirdLife International. The island belongs to the Nagilogilo clan (*yavusa*), who reside in the two villages of Nasau and Navuniivi in the Navitilevu District within Nakorotubu District.



The WCS has been instrumental in facilitating the discussions between local communities and tourism operators and has largely borne the initial transaction costs through external grants. A management plan has been developed with inputs from local communities, tourism operators, the Ra Provincial Office and NGOs (e.g. WCS, BirdLife International, Mareqeti Viti/Nature Fiji, Fiji Environmental Law Association, FELA, Tourism Suncoast, Volivoli, Wananavu, Nai'a Cruises, Resort Support). The objectives of the Vatu-i-Ra Conservation Park are to: (i) protect the unique biodiversity of the island and the surrounding reefs; (ii) protect the unique cultural history of the area; (iii) protect critical breeding grounds for fish so that the 'spillover' from this Conservation Park supports community fisheries in the adjacent *qoliqoli* Cokovata Nakorotubu area; (iv) to establish a voluntary mechanism through sustainable tourism, that will ensure the sustainable financing of the Conservation Park while supporting the sustainable development of resource owners; and (v) to establish the Vatu-i-Ra Conservation Park as the leading Conservation Park for Fiji and the wider South Pacific.⁵ The management plan sits under the Integrated Coastal Management Plan for Ra Province.

All visitors to the Vatu-i-Ra Conservation Park will be offered the opportunity to make a voluntary contribution (currently FJ\$15/person/year) to a trust being set up to support the day-to-day management of the park, and a tertiary level education fund, similar to the Namena Marine Reserve. A trust deed is being established by FELA, to oversee the funds with a board member representative from the community, the tourism industry and WCS. A management committee of 5–7 key representatives will provide advice and oversee the management of the Park and the education fund. The funds generated will be allocated as follows: (i) 40% will be allocated to provide educational support for students from a single clan, Naqiloqilo with rights to the Vatu-i-Ra Island; (ii) 30% to educational support for the remaining communities; and (iii) 30% for the day-to-day management of the Park.⁵ Similarly, the governance and membership will have greater representation from the one clan. While these decisions have been made within the Nakorotubu District and with the support of the *Bose Vanua*, it is not clear if this bias towards one clan will continue to be acceptable, and will work long-term. Currently, supporters of the MCA and its arrangements include a dive liveaboard operator (i.e. NAI'A Cruises Fiji), and two land-based dive operators (i.e. Wananavu Beach Resort, Volivoli Beach Resort) on the Ra coast.

The reefs are 15 km offshore and as such have some natural protection from most local community subsistence fishing, but similar to the Namena Marine Reserve, are vulnerable to large fishing boats from the mainland. Small-scale commercial fishers sometimes make camp on Vatu-i-Ra Island while fishing in the area. Since BirdLife International and local NGO NatureFiji/MareqetiViti funded and carried out a rat-eradication programme on Vatu-i-Ra Island to protect nesting seabirds, boats have been banned from landing and a biosecurity protocol has been developed. With the formation of the *tabu* area, fishing licences for the area are no longer being issued. However, small boats have still been observed pulled up on the beach, with spearfishers in the water. At this time, two enforcement options are being considered – community policing would be the preferred option, but requires a boat and fuel, and would be costly. Devolving the responsibility to the tourism operators is attractive, but would be limited to the times they visit the area.

Baseline ecological and socioeconomic monitoring commenced more formally in 2016, post-Cyclone Winston led by WCS through the RESCCUE Project.⁶ Although there was extensive damage to the south western side of the Park, the northern side frequented by tourism was largely untouched and therefore can continue to draw divers to the area. It is not known if the money generated through voluntary contributions will be sufficient to cover the costs of monitoring in the future. Early estimates of the voluntary contributions range from FJ\$15,000-35,000/year.

5 WCS (2018) Vatu-i-Ra Conservation Park Management Plan. Wildlife Conservation Society and Ministry of Fisheries, Suva, Fiji. 30 pp.

6 RESCCUE stands for the "Restoration of Ecosystem Services and Adaptation to Climate Change" project funded by the French Development Agency and French Global Environment Facility through the Pacific Community (SPC).

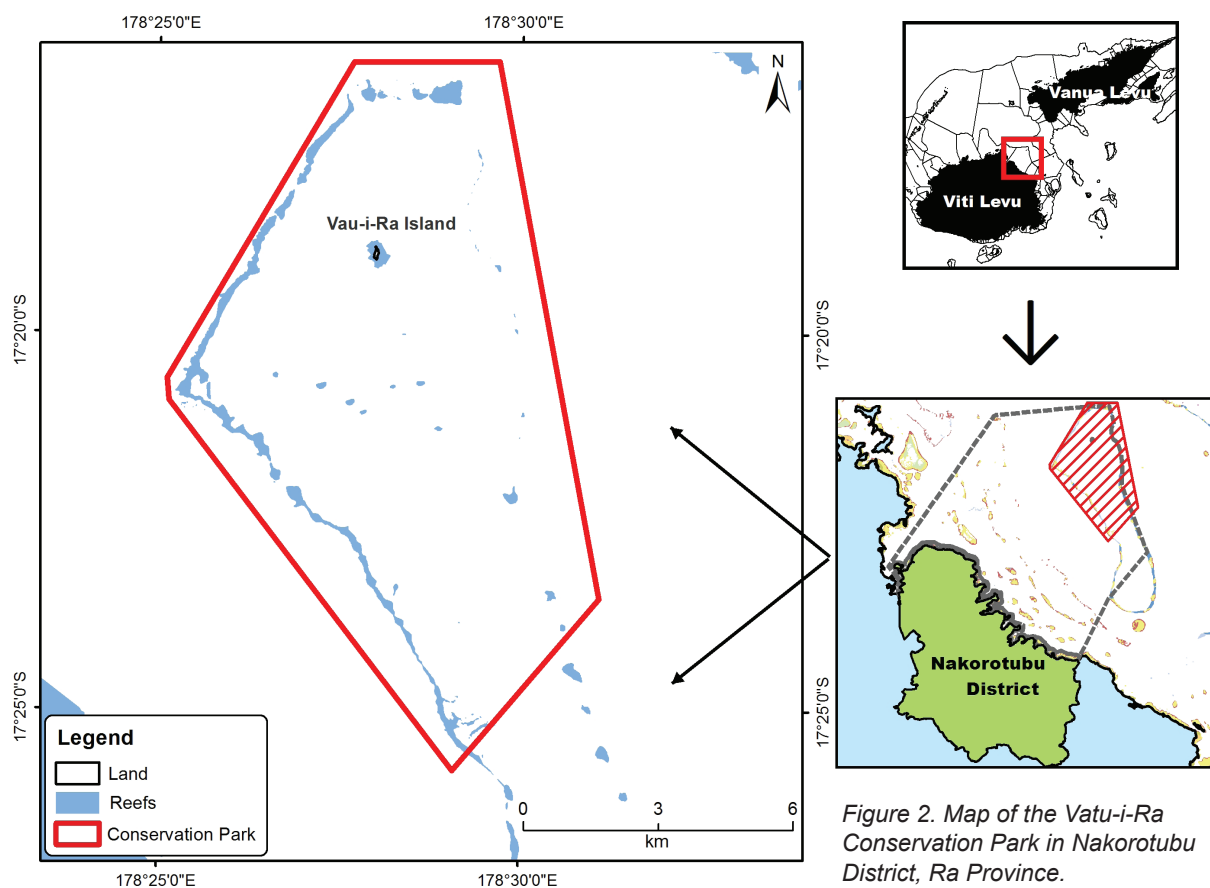
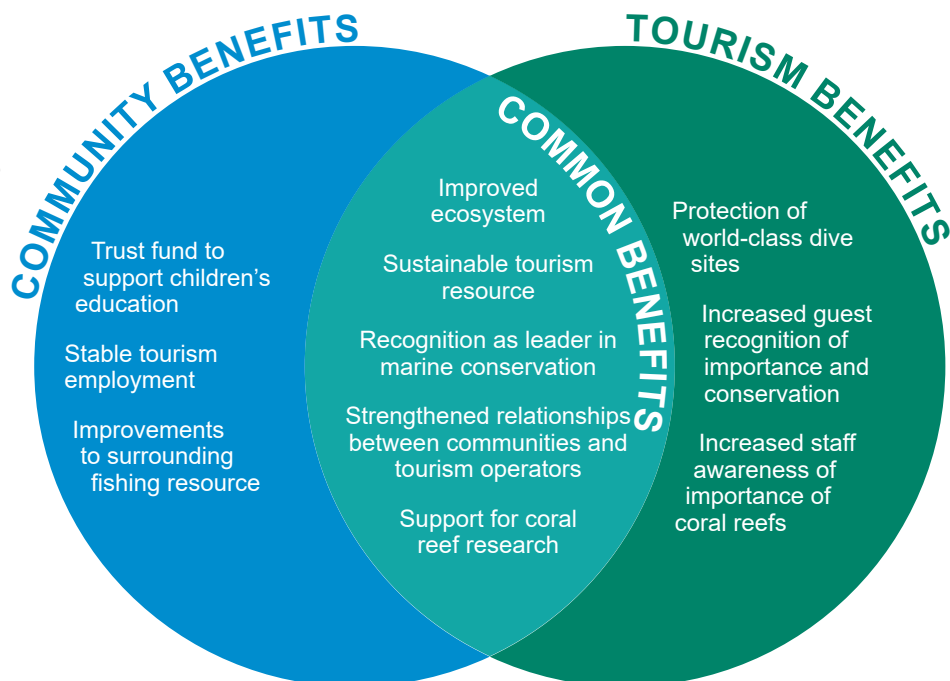


Figure 2. Map of the Vatu-i-Ra Conservation Park in Nakorotubu District, Ra Province.

Figure 3. Benefits to providers (community resource owners) and beneficiaries (tourism operators, divers) for the Namena Marine Reserve and the Vatu-i-Ra Conservation Park.



For more information on Marine Conservation Agreements

Sykes H, Mangubhai S, Manley M (2018) Contribution of Marine Conservation Agreements to Biodiversity Protection, Fisheries Management and Sustainable Financing in Fiji. Report No. 02/18. Wildlife Conservation Society, Suva, Fiji. 98 pp.
<https://fiji.wcs.org/Resources/Reports.aspx>

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