

PSI2009/583**Identification of threats and resiliency on Pacific Reefs through establishment of a long term reef monitoring network in Fiji: The Fiji Coral Reef Monitoring Network (FCRMN)**Helen Sykes^a and Edward Lovell^b^aMarine Ecology Consulting (Fiji), PO Box 2558, Government Buildings, 0000 Suva, Fiji^bUniversity of the South Pacific, Private Mail Bag, 0000 Suva, Fiji
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The Fiji Coral Reef Monitoring Network (FCRMN), a node of the Global Coral Reef Monitoring Network (GCRMN) includes scientists, tourism operators, and community members. Long term monitoring of reefs across the Fiji Islands for nine years included mass temperature-related coral bleaching events, cyclones, and Crown of Thorns outbreaks.

Survey protocols used variants of Point-Intercept Transects for coral cover, and Belt Transects for indicator fish and invertebrate populations. Percentage hard coral cover was used for regional and time-line comparisons. More detailed protocols allowed comparisons by coral life-form category. Data was compiled through the Coral Reef Initiative for the South Pacific (CRISP).

Coral cover fell dramatically in 2000 - 2002 after two mass bleaching events, plus regional Crown of Thorns outbreaks, but recovered to pre-bleaching levels by 2005. Cyclones affected localised coral health in shallow waters, but caused no large scale or permanent damage, and in some cases served coral recovery by lowering water temperatures and clearing new substrate for settlement.

Overall, Fiji's reefs appear to be remarkably resilient to sudden catastrophic events, a cause for optimism.

Major "chronic" continual impacts on coral reef health in Fiji: o Eutrophication o Siltation (deforestation / coastal development) o Over fishing

Occasional or sporadic "acute" impacts on coral health: o Temperature-related bleaching o Predation and disease o Cyclones

Features contributing to coral resilience: o Geographically remote from major industrialised land masses o Large physical reef diversity o Connectivity of habitats and genetic stocks o Few overtly destructive fishing practices o Network of locally managed marine protected areas

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