SETTING PRIORITIES FOR MARINE CONSERVATION IN
The Fiji Islands Marine Ecoregion
The islands of Fiji provide one of the world’s most outstanding tropical marine environments, attracting escalating numbers of tourists and marine resource users from around the world every year. Fiji comprises of around 844 high islands, cays and islets, occupying an area of around 1.3 million sq km. The extent and remoteness of its shallow tropical marine habitats, from oceanic reefs to near-shore fringing reefs, mangrove forests, seagrass beds, lagoons, estuaries and deep oceanic drop offs, make it an area of high marine biodiversity, with many species unique to Fiji. Fiji is also home to the Great Sea Reef, the third longest barrier reef in the world.

“Safeguarding our natural environment is central to safeguarding our valued way of life.”
A wealth of marine life

It is estimated that there are around 1,000 coral reefs in Fiji, covering 10,000 sq km – representing around 3-4 per cent of the world’s coral reefs. Encompassed within this vibrant ecological framework are nearly 400 known species of coral, more than 1,200 varieties of fish, and a multitude of invertebrates. Fiji is also home to some unique marine and coastal species, such as the endemic Fiji petrel (Pseudobulweria macgillivrayi), the endangered humphead wrasse (Cheilinus undulates), now protected under CITES Appendix 1, and the world’s largest parrot fish, the bumphead parrot fish (Bolbometopon muricatum).

Five of the seven species of marine turtle migrate through Fiji’s waters. Green (Chelonia mydas) and hawksbill (Eretmochelys imbricata) turtles, in particular, use the sheltered waters as important feeding and breeding grounds. The warm waters are also important migratory routes for 12 species of cetacean. Four of these species, the blue whale (Balaenoptera musculus), sei whale (Balaenoptera borealis), the humpback whale (Megaptera novaeangliae) and sperm whale (Physeter macrocephalus), are considered to be endangered or vulnerable. In 2003, the Fiji government offered protection to these species by declaring Fiji’s territorial waters as a whale sanctuary.

Nature at the centre of Fiji’s way of life

Fijians have important traditional relationship with the sea, reflected in their lifestyles, customs, traditional knowledge and history. Around 80 per cent of the population live on the coast and rely heavily on marine resources for food, livelihoods and cash income. Marine resources are also used for minerals, pharmaceuticals, construction material and a vast range of useful products. The major sources of economic growth and livelihood are fisheries, the third largest export industry accounting for 1.5 per cent of GDP, and the tourism sector, which accounts for 17 per cent of the GDP.

Threats to the marine environment of Fiji

Like many island ecosystems, Fiji’s marine biodiversity faces the growing threat of over-fishing, unsustainable fishing practices, unregulated extraction of other marine resources, land-based pollution, increasing sedimentation from logging and poor land-use practices, climate change and associated coral bleaching, as well as increasing tourism and urbanisation. In some Fijian communities, many popular varieties of edible mollusc and invertebrates are already facing the local extinction. In addition, marine environment is continuously impacted through natural events, such as cyclones. The cumulative effects of these impacts, coupled with the dependence of Fiji’s coastal communities on marine resources and limited alternative livelihood options are putting increasing pressure on the marine environment. The need to manage the Fiji Islands Marine Ecoregion (FIME) sustainably and in an integrated way is becoming increasingly imperative.
Assessing and prioritising the biodiversity of the Fiji Islands Marine Ecoregion

In 2003, more than 80 representatives and experts from the scientific community, government and non-government organisations, local communities and other key marine resource user groups were convened by WWF to discuss the importance of, and to gather current scientific and anecdotal information on, the biodiversity and threats to Fiji’s marine environment. Areas of global, national or local importance were identified according to their unique biological, geological or cultural attributes. Thirty-five priority conservation areas (PCAs) were identified and agreed by stakeholders, five of which were considered to be globally important, 15 of national importance (mainly national fisheries areas) and 15 of sub-regional importance. These 35 areas attempt to capture the full range of marine biodiversity, species, and communities that makes FIME unique and that, if conserved, will contribute to maintaining the integrity of the whole of Fiji’s marine systems. Further research and review will be necessary over time to ensure that all the key habitats and species are included in further prioritisation exercises.

Taking an ecoregional approach to marine conservation in Fiji

WWF is facilitating an ecoregional approach towards the tackling the conservation and sustainable management of Fiji’s marine environment. Ecoregion conservation is a process that supports conservation planning and action at a regional scale; the overarching goal being to conserve and restore the fullest possible range of biodiversity over large spatial and temporal scales. It provides a mechanism for key stakeholders and sectors to place biodiversity conservation in the context of social and economic needs and opportunities, while respecting the need to protect outstanding natural features and preserve local lifestyles and livelihoods. Most importantly, it provides a basis for establishing priorities. In short, understanding the biological importance of an area or the rarity of a biological unit helps us to determine the urgency of action needed.

Sites of global importance

1. **Cakaulevu**, or the Great Sea Reef, Vanua Levu, is the third longest barrier reef in the world, with an exceptional level of endemism and intact systems of lagoons, channels, mangroves and seagrass habitats.

2. **Lomaiviti Triangle** (Vatuira Channel-Ovalau-Makogai-Wakaya Channel) is a deep water channel unique in the South Pacific. It supports intact and diverse habitats and species. It is also a known migratory route for whales, with the island of Gau known to be an important breeding area for humpback whales.

3. **Namenalala** is a marine protected area located at a barrier reef system to the south of Vanua Levu. It is a known migratory route for open ocean species, such as whales, turtles and dolphins, and is a significant turtle nesting site. Namenalala is thought to be the last remaining nesting area in Fiji for hawksbill turtles.

4. **Southern Lau Group** is a region of isolated limestone and oceanic atoll islands with a range of habitats including seagrass, oceanic patch reefs and extensive barrier reef systems. The isolated oceanic conditions associated provide a distinct range of habitats, providing important breeding and nesting areas for green and hawksbill turtles and the endemic clam (*Tridacna tevoroa*). The deep sea drop-off to the east of Lau is an important migratory route for humpback whales.

5. **Rotuma** is an isolated volcanic island northwest of the main Fiji Group. Isolated oceanographic conditions create a distinct range of habitats and species, with high endemism and uniqueness. The blue coral, *Heliopora*, is limited in Fiji waters and is concentrated in Rotuma.
Establishing marine protected areas (MPAs) is an excellent means of protecting biological diversity. In January 2005, following intense lobbying by WWF and partners, the Fijian government declared its intention to implement a network of MPAs in Fiji’s Exclusion Economic Zone (EEZ). Consequently, “by 2020 at least 30 per cent of Fiji’s inshore and offshore marine areas (I qoliqoli) will come under a comprehensive, ecological representative network of MPAs, which are effectively managed and financed”. This commitment will contribute significantly to the global targets for MPA implementation, such as those under the Convention of Biological Diversity (CBD) and the Johannesburg Plan of Action (JPOA). Rolling out this commitment will require significant consolidation of efforts with partners, including communities, governments (provincial and national), fishing industry, NGOs and other interested parties, not least to identify what each is doing towards the development and implementation of a network of MPAs. The initial stage in this process is to develop a plan of action for the programme of work required to implement a network of MPAs. This was developed by stakeholders in October 2005. Implementing this commitment will also require further identification and assessment of potential MPA sites. The WWF facilitated biodiversity workshop in 2003 initiated the process of mapping out biodiversity rich areas in the marine environment.

Information regarding the majority of Fiji’s marine biodiversity and its distribution is far from comprehensive, however, and many areas are yet to be surveyed. It is essential to consolidate and expand this knowledge, as well as build capacities in country to ensure effective conservation and sustainable resource management of the marine environment. Opportunities for collaboration need to be identified to ensure that conservation efforts and considerations for further research and monitoring are an integral part of future marine resource management planning. In the shorter term, it is important to further ground truth these priority areas, pinpoint potential MPAs and work closely with relevant stakeholders to agree their implementation.

Fiji’s marine environment contains globally and regionally significant biodiversity that needs to be protected for its intrinsic value and the central role it plays in sustaining the livelihoods of the people of Fiji. Taking an ecoregional approach to conservation aims to add value and definition to existing and planned conservation frameworks. It also paves the way for the further development of conservation strategies. The National Biodiversity Strategic Action Plan (NBSAP) 1999, highlighted the need for more information on the biological and ecological significance of Fiji’s biodiversity, on which to base marine conservation. The outcomes of this initial stakeholder process for capturing Fiji’s biodiversity provides an important step towards this aim. The data will need to be updated consistently and reviewed following further scientific survey. There are myriad other existing projects, activities, strategies and policies at the international, national, regional, and local level that present important opportunities for collaboration and building partnerships. National frameworks and plans that offer potential for synergy with conservation action within Fiji include the:

- National Biodiversity Strategic Action Plan (NBSAP), 1999;
- National Environment Strategy, 1993;
- National Strategic Development Plan (SDP), 2003;
- Mangrove Management Plan, 2003;
- Fisheries Strategic Plan, 2003;
- National Tourism Strategic Plan (NTSP); and
A commitment to marine conservation action in Fiji

The outputs of this stakeholder process provides initial contributions to establishing a more integrated approach to the conservation and sustainable resource management of Fiji’s marine environment. Turning the plan into action requires building political will and inspiring key stakeholders to support conservation efforts. A concerted effort is required to link these efforts and ensure coherence of policy, action and governance. Moving ahead requires appropriate scientific information, capacity building, policy engagements and sustainable development of the tourism and fisheries sectors in support of conservation and management of FIME biodiversity.

WWF and its partners will continue to support local conservation efforts in the Fiji Islands Marine Ecoregion and commit to supporting the implementation of the government’s commitments to conservation and marine resource management.

Several national policies also exist that provide important legislative frameworks to support conservation and marine resource management with FIME, including:

• National Controls on Coral Harvesting, 2003;
• Marine Pollution Prevention Bill, 2004; and
• the Environmental Management Act (EMA), 2005.

It is vital that these policies and strategies are fully integrated and that a coherent governance system is put in place to underpin and enable effective conservation, conservation, to promote best practice and to make the best use of limited resources. Particular opportunities for conservation include the highly successful Fiji Locally Managed Marine Area (FLMMA) network, which aids communities to manage their marine resources more effectively by combining scientific appraisal and traditional management practices.

In addition, if well planned and managed, in line with existing strategies and policy commitments, the tourism sector could also provide a valuable source of finance for managing conservation.

Acknowledgements

WWF would like to warmly thank all the participants of the 2003 Biodiversity Visioning workshop for their contributions to the process. In particular, we would like to thank the Department of Land Use and SOPAC who provided significant support to the GIS team in compiling the workshop results.