

Essay

Wetland Cultural Heritage in the Pacific

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Local people contribute much to wetland conservation, and the Pacific island countries offer invaluable information demonstrating the cultural value of wetlands vis-à-vis sustainable livelihoods. Drawing primarily on examples from Papua New Guinea, the Solomon Islands and Fiji, but generalizing for many of the Pacific countries, this paper argues that traditional uses of and indigenous cultural expression in wetland areas, and the wise use of wetland resources, should be identified and incorporated in the conservation and management of these unique aquatic-terrestrial ecosystems. The paper concludes that governments need to recognize and support those cultural expressions of communities that are manifested in time-honored and tested uses of wetlands. With appropriate support and assistance, Pacific island countries could lead the rest of the world in developing new and innovative mechanisms for the sustainable use of wetlands as a source of livelihood.

Keywords: wetland, Pacific, Papua New Guinea, Solomon Islands, Fiji, Ramsar Convention

1. Introduction

The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) defines wetlands as “areas of marsh, fen, peatlands, or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine waters, the depth of which at low tide does not exceed six metres” (Convention on Wetlands 1971). Wetlands in the islands of the Pacific include estuaries and deltas, mangroves and inter-tidal mudflats, coastal lagoons, freshwater lakes and marshes, swamp forests, rivers and streams, and coral reef systems.

The term cultural heritage refers to the complex whole of life’s activities, including those beliefs, values, customs, mores, and traditions that are embodied in folklore and ethnography, and relatable to environmental concepts at the local level. Included are communal creations such as dances, songs, myths, and designs.

The principal functions of wetlands include, among others, shoreline stabilization and reduction of erosion; flood storage; groundwater recharge and discharge; sediment trapping; nutrient retention and removal; support for food chains; and the provision of wildlife habitats. They are also used for fishery and recreation. However, wetlands also have cultural heritage values as a consequence of these functions. For example, a wetland that functions as wintering ground for waterfowl may also be valued by local people who customarily harvest birds for food and ornaments. Furthermore, such a wetland

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might attract eco-tourists, as well as being an educational resource for television viewers around the globe.

Indeed, the wetlands of the island countries of the Pacific greatly benefit their inhabitants. They are part of the region's natural and cultural heritage which must be treasured and conserved for posterity. Despite the impacts of global warming and the threats of sea-level rise, the Pacific wetlands should be extensively and effectively managed in order to maintain their functions and values for the subsistence and well-being of the islands' inhabitants.

2. Communal land ownership as cultural information resource

Common to the South Pacific countries (which include, among others, Fiji, Kiribati, Papua New Guinea, the Solomon Islands, Tuvalu, and Vanuatu) and their Melanesian culture, is the practice of "customary" ownership of lands, which means that land is owned by groups or clans but used by individual households. In a typical land tenure system, which extends to wetlands, users of the land will normally have the right of access and permanent tenure and to temporary cultivation, the right to harvest and to hunt, and the right and to grant occupancy of the land to strangers. Such rights in communal ownership are widely known to also regulate exploitation of resources (Asian Development Bank 1995).

A common thread that runs through ancestral communal land ownership, specifically in Papua New Guinea and the Solomon Islands, is the *sing-sing*, a celebration to strengthen relationship among kinfolk and between human and spiritual beings. Apart from rituals and ceremonial dances, some *sing-sings* feature pig sacrifices, where hundreds of swine are killed one after another as a sort of socio-cultural agreement between people and their ancestral spirits, aimed at strengthening old ties, creating new ones, or simply restoring ties that are broken. Domestic pigs are held as sacred by the indigenous peoples of the region, who believe that the beasts communicate directly with the ancestral spirits.

The *sing-sing* is a spectacular show, where glistening, warrior-like men dress up in their finest: pig-tail aprons; cummerbunds woven from mangrove vines; cassowary quill, pig tusk, and hornbill beak necklaces; and yellow and red face paint, all topped with wigs and headdresses decorated with splendid bird of paradise plumes and forest flowers. The men dance simply, in a rotating line-up, making an eerie, squeaking cry: a call on their ancestors to mediate and somehow help them experience salvation on earth, which is understood as an abundant life endowed by resources from their natural environment. Referred to by Western researchers as an "ancestral cult", the ancient practice of ritual dance is an integral part of the religious and cultural customs associated with the natural resources of their environment.

3. Wetland resource sustainability and thriving enterprises

Colorful multi-purpose and much sought-after *bilums*, a kind of string bag, have been in use in Papua New Guinea for many years. They are carry-all bags, and can be used as baby hammocks and for many other purposes. *Bilums* are made out of a palm that grows in or near wetland areas. This material is also used for making bows and arrows for hunting, which have recently become desirable decorative objects for tourists. Three artifact shops have opened in the Crater Mountain area of Papua New Guinea, one at

Herowana, another that has been opened by the local clan near the airstrip in Maimafu, and another that has recently opened in Haia. All are yielding valuable income for their respective communities.

In other areas, research has developed into a resource-earner for the village people. For example villages in Verata, Fiji, set up *tabu* (no take) areas and monitored and documented the effects. Areas that were previously bare rock were found, after a time, to be covered with a sandy substance preferred by clams. Another village started replanting sea grapes, an important nutritional and cultural food that disappeared years ago due to over exploitation. Village women bought the grapes from the market, ate the fruits and then planted the stems in their *tabu* area. Sea grapes were found to grow again. The community attributed all this to leaving the area undisturbed in accord with traditional knowledge to ensure the regrowth of plants and living organisms. On the other hand, in Makira in the Solomon Islands the focus of the local people is on NGO and government-assisted ecotourism, as well as on modernized extraction of ngali-nut oil; partly for their medicinal and other daily needs, but mainly for the production of high-quality bath soaps and oils for sale to tourists.

Lately, the coral reefs of the South Pacific are attracting much attention as a source of novel chemicals that may hold cures for cancer, AIDS, and drug-resistant bacteria. These corals, which are traditionally part of the Pacific islanders' environment, are the object of growing interest from pharmaceutical companies prospecting for chemicals with medicinal potential. They are a new source of significant economic returns from marine resources. Verata, a county near the Fijian capital of Suva that consists of eight villages, is renowned worldwide for its blue-green coastal lagoons and abundance of marine resources. Recently, the residents of Verata joined with the University of the South Pacific (USP) to establish a unique bio-prospecting agreement with Strathclyde Institute of Drug Research (SIDR), a pharmaceutical research group in Scotland. The project began by helping the communities to develop and implement a bio-prospecting agreement. People are naturally interested in having their medicinal plants evaluated and receiving financial benefits for their efforts. Villagers collect and do the preliminary processing of samples. Instead of simply selling the plant or animal samples to a pharmaceutical company, extracts are prepared at USP and then licensed for evaluation by the SIDR to pharmaceutical companies for evaluation. Payments to the villages are derived from the licensing of the samples. After one year, the samples may be further licensed by SIDR or returned to Fiji. Since Fiji is a relatively small country and the project participants have close contacts with appropriate government officials, the project has also been well positioned to influence government policy regarding prospecting at a national level. Additionally, the practice demonstrates that local communities can make the decisions necessary to manage their biological diversity, especially in the Pacific where most indigenous people have clear rights of tenure over their resources.

The Verata model of bio-prospecting agreement proves that local communities can be effective partners in marine conservation provided that their knowledge and skills are acknowledged and respected. An understanding of traditional management practices is useful as it is generally easier to adopt something that people already know than to introduce an entirely new concept. At the same time, the involvement of women and youth should be encouraged, as this can lead to broader participation and a greater chance that the management of resources will be sustainable.

In the Solomon Islands, an assisted fishing enterprise demonstrates the successful use of modern conservation efforts alongside traditional fishing customs, such as through the practice of forbidding fishing in certain areas in certain seasons. In the white beaches, lagoons and coral reefs of the Arnavon island group in the Solomon Islands live an extraordinary diversity of marine mammals, including the endangered hawksbill turtle. They also support commercially valuable animals such as *bêche-de-mer* (sea cucumbers), trochus, black- and gold-lip pearl oysters, and giant clams, as well as an abundance of reef fish. The islands' economy has traditionally relied on harvesting these organisms on an open access basis. In the 1980s, shellfish prices rose steeply, and so did the temptation to over-harvest them. Gradually the stocks were depleted.

In response the government established the Arnavon Islands Community Marine Conservation Area, in which there are prohibitions on the taking of commercially valuable key species. The project involves implementing a management plan in the *tabu* area, as well as a sustainable deep-water finfish enterprise at two sites to provide the local communities with alternate food and income while taking the pressure off the reef species. Six community officers from the village monitor the project. The creation of the conservation area marks the first time that communities in the Solomon Islands have created a marine sanctuary, as well as being the country's first cooperatively managed marine conservation area. Today, turtles nest in peace on the small islands of the Arnavons group, and mangroves are growing back both naturally and in response to a replanting effort by conservation officers. Even the previously depleted stocks of marine invertebrates are beginning to return to natural numbers and there is a noticeable upsurge in the resident bird populations, in particular among the previously heavily hunted pigeons.

4. Wildlife management areas as effective protected areas

In Melanesian culture, land is a sacred inheritance; it has a sacred association with its traditional owners and is never for sale. Thus, very few protected areas have been established in Melanesia. There is little legislation that enables protected areas to be formally and successfully established on customary-owned land.

In the Solomon Islands, for example, the Queen Elizabeth II National Park in Honiara on the historic island of Guadalcanal is an illustration of the futility of establishing protected areas without regard to the unique cultural and developmental context of the country. It is the nation's only national park and was established in 1954 to protect a sample of lowland tropical rainforest. Most of the park has since been cleared for food gardens and the trees felled to provide timber for family homes. Its designation as a national park is of no concern to people who were not taken into account when the grand protective title was bestowed on their land. They received no immediate benefits from the park's protected status and simply carried on using the forest for its useful resources of timber and firewood.

Papua New Guinea could, perhaps, be said to be in a better position. Its forests are outstanding for their wealth of diversity and the uniqueness of their flora and fauna. A plethora of flowering plants, 200 species of frog, and an unusual variety of birds are found in the country. This rich diversity is owned and used by the indigenous Papua New Guineans in their daily life and traditional festivals. Mention should also be made of the country's home gardens, which not only supply households with materials to

weave baskets for domestic use but also provide a habitat for a diverse set of freshwater fish, frog, plant, and insect species.

Communities that value their natural assets and are concerned about the effects of forest clearance, logging, or modern hunting pressures on wildlife species have established portions of their land as wildlife management areas (WMAs) in accordance with the country's environmental legislation. Under a WMA covenant, landowners draw up rules, often based on traditional methods of conservation, for harvesting animals and protecting habitats. The main role of a WMA is to protect species of economic value to the landowner, such as birds of paradise for their plumes; megapodes for their eggs, which are eaten and sold at local markets; and dugongs, which are important as a traditional source of food. While landowners retain full control over the land and its resources, the Papua New Guinean government assists with legal recognition of the protected sites.

Whether or not WMAs offer long-term security for the landowner remains uncertain. Be that as it may, the principle of landowner control over conservation initiatives is an important one for Melanesia, and other governments in the sub-region are expressing interest in adopting the same principle in their own countries. In fact, community members in Balai on Malaita Island in the Solomons have initiated a protected-area project. Clan landowners have drawn up a collective management plan for the tribal land. Part of their land, which they agreed to have logged in the 1980s, will be replanted with tree species that are important to the community as providers of timber for building houses and canoes, for fuelwood, and for fruit. The most fertile land that the group owns is being managed for food gardens and the remaining forested land, an area of around 15,000 hectares, is to be set aside in a reserve. Clan members have chosen to reserve their forests to protect the water catchment above their gardens, and to protect the habitat of pigs and other domestic animals and plants. Another potential benefit lies in establishing a nature tourism enterprise, which will involve guiding tourists through the rainforest with its rivers and streams, wildflower meadows, wildlife, and other resources. In another project in Fiji, where it is also not permitted to sell indigenously owned land, a conservation lease agreement with local communities is being considered under which compensation would be made for lost financial opportunities, such as the sale of timber.

5. Conclusion

The Conference of the Parties (COP) of the Ramsar Convention has recognized the value of the cultural heritage and traditional uses of wetlands to the conservation of such areas and the wise use of their resources. Towards that end, Article VIII of the COP encourages incorporation of relevant aspects of cultural heritage into both the design and implementation of wetland management plans.

The Convention on Biological Diversity, on the other hand, recognizes the role of indigenous and local communities in conservation *in situ*. The Convention's preamble acknowledges the "close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components" (Convention on Biological Diversity 1992). Furthermore, Article

VIII of the Convention outlines the specific obligation of each Contracting Party “Subject to its national legislation, (to) respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote the wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices” (Convention on Biological Diversity 1992).

As keepers of cultural information resources, the people of the Pacific island countries possess a wealth of indigenous knowledge and local experience on environmental management. With this information, they can adopt development models which emphasize economic growth but do not jeopardize social and environmental sustainability. They should chart their own development path and balance their development strategies, making use of their cultural heritage to strengthen self-reliance in their quest for progress and development. To be more specific, the people of the Pacific islands, with appropriate government support, should effectively link their customary law and traditional practices into the nexus of sustainable development and protection of the environment. As a first step, the integration of their traditional environmental and management practices into the arena of legal and economic systems needs to be examined in order to produce a more comprehensive environmental/sustainable development package for the Pacific. Thereafter, with appropriate support and assistance, Pacific island countries could lead the rest of the world in developing new and innovative mechanisms for the sustainable use of wetlands as a source of livelihood.

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