

**Sustainability of socio-economic activities
in the community-based conserved mangroves:
a comparative study between Samoa and Iriomote Island**

Juliet Mavis BOON

Today, one of the great challenges facing many societies is to develop approaches that will not only sustain mangroves but also socio-economically develop the local communities concerned. The purpose of this study is to evaluate the sustainability of the socio-economic activities conducted in two types of community-based conserved mangroves in Sa'anapu-Sataoa of Samoa and Iriomote Island, Okinawa.

In Iriomote, research, being the most conducted activity along with a few leisure activities, had slightly destructive impacts on mangroves. However, it benefited the residents to pursue education and leisured interests. Conversely, kayak and sightsee had major ecological impacts on mangroves but it economically benefited some of the residents. Minor but consumptive activities like fishing and dyeing slightly impacted the mangroves. However, it satisfied economic revenues but more important it maintained cultural and spiritual values for the indigenous.

Canoeing, beach *fale* accommodations, and ecotour guiding was more prominent in the Samoan mangrove preserved areas, and were slightly destructive. This is because there was a low magnitude/intensity of visitors at the mangrove site together with the minimum frequency of use compared to kayak and sightsee in Iriomote. Unlike the Iriomote case, these activities provided limited socio-economic benefits for the locals. Although the Iriomote model seem to be more successful in terms of satisfying and sustaining socio-economic standards of its resident, in reality, the above activities can not be adopted in Samoa. The reason being the Samoan locals are not academics, they consumed on the mangrove resources through fishing which was most important to obtain cash to meet socio-economic and cultural obligations. Fishing which was banned in the Samoa mangroves had already deteriorated its fish supply imposing a major ecological impact on the mangrove marine resources. Because of this ban, the community-based conservation scheme in Samoa was received with apprehension, therefore had limited success. Furthermore, the kayak and sightsee activities were receiving intense tourist numbers where mangroves were becoming over-commercialized.

In conclusion, community-based conservation efforts in Samoa were merely tokens to participate in the international awareness of the fragility of the mangroves. In effect, it only aimed at preserving mangrove biodiversity rather than developing the mangrove uses at the context of how the locals would like to preserve or use it. In this sense, it was developed from external factors such as the Rio Summit, regional and government organizations and not from within, by and for the locals. Hence, socio-economic factors are equally important to consider in line with preserving an ecosystem's biodiversity. Otherwise any form of conservation management remains controversial and sustainability

cannot be achieved. In light of such a problem, the author recommends that locals should initiate conservation schemes based on how their own local knowledge of resource uses. This, together with the networking procedures with external agencies to develop other income-generating activities can promote sustainable development of mangrove biodiversity while at the same time maintain the socio-economic needs of the locals in Samoa.

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