

law, revealing successes as well as limits of the varied initiatives.

Section 2 case studies focus on community involvement in the management of marine resources. They show the need for co-management and the empowerment of communities, notably through decentralisation processes. Co-management can prove to be a success, as in Fiji, but intersectoral problems can have a negative

effect on cooperation, as shown in the second case study from Papua New Guinea.

The solution may rest in the establishment of an international regime protecting traditional knowledge, which is the focus of Section 3. The last case study explores the issue of access and benefit sharing, and intellectual property rights, through the example of the Australian Institute of Marine Science.

## SECTION I: INCORPORATING TRADITIONAL KNOWLEDGE INTO GOVERNMENT LAW

### Case Study I

#### Merging traditional resource management approaches and practices with the formal legal system in Vanuatu

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##### Traditional laws and conservation practices

Vanuatu is a multicultural nation, where more than 100 languages are in use in 80 different islands. Although it is threatened, traditional culture remains active and traditions and practices continue to be passed orally from generation to generation.

##### Pre-western contact

A wide range of traditional conservation approaches and practices existed in Vanuatu in the past. Two general types of resource management systems were in place: direct management and indirect management. Direct management occurred as a result of direct observations (and a perception of a change in resource status, or degradation of ecosystems), which led to decisions to take relevant, corrective action (e.g. declaring a ban — taboo or tabu). Indirect management had a more spiritual and cultural basis, and conservation measures were established via ritual and initiation ceremonies. Indirect resource management practices included the establishment of taboo sites, and taboos imposed by customs following particular events such as an epidemic, a murder, or a pig killing ceremony. Direct practices included periodic taboos imposed by chiefs or landowners, and symbolised by recognised markers.

##### What remains today?

Although traditional resource management practices continue to be used in Vanuatu, they are

threatened by development. Taboo sites and periodic taboos continue to be important, although concerns are continually raised regarding the decline in respect for taboo sites. Customary taboos have also declined due to the acceptance of Christianity and European mores. Differences in perceptions between traditional and western cultures about resources have led to considerable disagreement and confusion about marine management. However, the key underlying values of traditional resource management contain some elements of the western principle of “sustainable development”. These values (livelihood, equity, responsibility and cooperation) are anchored by the four main pillars of society’s existence: security of tenure; inheritance and use rights; site based focus and affinity with the land; and decision-making processes and decision-makers. However, these traditional values have been challenged by a lack of clear resource management and development policy directions at the national level, western education, the *wantok* system (especially rural-urban), and colonialism.

##### Interface between traditional and governmental laws: Issues and challenges

Traditional knowledge and practices can be useful in two key areas: education, and the design and implementation of an appropriate sustainable community resource management model.

Education in Vanuatu has suffered because the educational system, which was based on a western

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educational model, did not make allowance for, or respect of the country's culture and history. The current Education Master Plan (2000–2010) recognises these shortfalls, and consequently, there are now opportunities to incorporate traditional knowledge into national education.

The formal legal system faces the same problem because Vanuatu is in a transitional period in terms of its economic and socio-political development. The newly gazetted Environmental Management and Conservation Act (2002) strives to integrate traditional resource management approaches and practices into the formal legal system. It consists of laws designed to protect, conserve, develop and manage Vanuatu's environment for all people, and is based on the fundamental traditional principles and values that underpin traditional concepts and practices. The act consists of three major components:

1. Environmental impact assessment (EIA). Aimed at reducing conflicts, the law recognises an additional role for each agency, and gives additional powers to provinces and municipalities;
2. Biodiversity and bioprospecting. This component manages the activities of researchers in the country via a permit system. The goal is to ensure that government and communities have

access to research results, and to help prevent research piracy;

3. Conservation of biodiversity. This component reinforces traditional resource management. Conservation is often based on perceptions, with the rules, boundaries and enforcement left to communities, which decide the width of protected areas, as well as the permitted activities, penalties, courts and registration. There is no law on enforcement: the government only provides support and back up, and there is, therefore, considerable flexibility.

### Lessons learned and recommendations

Sustainable resource management in Vanuatu must be based on traditional resource management principles and values to be successful. However, these traditional resource management principles and values have been challenged by western ideologies, lifestyles and ethics. The integrated resource management systems currently implemented under the Environmental Management and Conservation Act (2002) constitute the most appropriate resource management system for rural Vanuatu; one that seeks to unify the economic, environmental and social objectives that underlie the philosophy behind sustainable development.

## Case Study 2

### Traditional management of marine resources in Palau

Alma Ridep-Morris<sup>2</sup>

#### Traditional laws and conservation practices

##### Pre-western contact

Palau was traditionally divided into *beluu* (villages), where a village council was responsible for managing public domain lands. Palauans have always been known as conservation-minded people and were taught to take only what they needed and leave the rest for future use.

The major traditional conservation practices were moratoriums (*buls*) and *taboos*. *Buls* were put into effect by the village *rubaks* (traditional chiefs) to help manage resources. For example, a vertical coconut frond buried in the soil indicated to the villagers that there was a ban in effect. Traditional chiefs had an intimate knowledge of the spawning season of fish species, and would enact a *bul* to

ensure that resources were naturally replenished during spawning seasons, thus guaranteeing sustained supplies of fish for the long-term.

Palauans had certain foods that were or are still taboo to them. Different reasons were given for the taboo: the animal was a protective spirit, or it was bad to eat certain foods during pregnancy or illness.

The nature of traditional management systems ensured more effective engagement of resource users in management decisions. As a result, decisions were more relevant, compliance with rules was improved, conflicts were reduced, and economic development paths were more in line with the desires of the people. Relatively decentralised and exclusive tenure systems lent themselves for better maintenance and application of the vast body of ecological knowledge gained by genera-

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