experts (kaitiaki) to administer and enforce rules in traditionally controlled areas, depending on local capacity. This team may assist fisheries officers and give access permission to indigenous areas, and propose the creation of reserves, management plans, and bylaws. This process of devolving fisheries management to the local level is reasserting local control over customary fisheries; however, the Maori Land Court or, the Minister of Fisheries, keeps control by maintaining a veto and major decision power. One of the benefits of this policy is the gathering of data from customary owners and the improvement of traditional management skills in both traditional and commercial fishing. Traditional knowledge can also be taken as an indicator for the conservation of resources, and be linked with science knowledge through observation (e.g. stock evaluation).

Lessons learned and recommendations

A few principles can be derived from this case study, which strike a chord with Principle 22 of the Rio World Summit Declaration of 1992, and Article 1 of the International Labour Organisation Convention 169 on international regulations recognising the rights of indigenous people. These principles call for:

- local participation in governance with a goal of
- local management with local knowledge for
- respect for and incorporation of traditional knowledge, institutions, custom and laws into conservation; and
- planning policy and implementation that serves to integrate local, national and international ecological conservation.

Case Study 8

Pohnpei watershed management: A case study of legal and institutional reform for co-management in the Pacific

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Pohnpei is one of the four states of the Federated States of Micronesia (FSM). Pohnpei's main island has a population of around 30,000 people, a surface area of 343 km², and 200 villages in five municipalities. Since the mid 1970s there has been nearly a 66% loss of intact catchment forest in Pohnpei. Downstream impacts have been severe and include erosion, sedimentation of mangroves and reefs, contamination of water supplies, loss of habitat for endemic species and threats to biodiversity. The primary cause of forest disturbance and clearing is the dramatic increase in kava (sakau) production. Kava consumption has expanded beyond ceremonial uses and is now a popular recreational drug.

Traditional laws and conservation practices

Traditional authority in Pohnpei

Pohnpei is divided into 200 kousapw (villages) and 5 wehi (traditional kingdoms). Customary authority in Pohnpei resides with the island's traditional title holders, whose roles and responsibilities are allocated and organised within complex hierarchical systems that operate in each kouspaw and wehi. While the nahmwarki (paramount chief) is the symbolic owner of all land within a wehi, the kousapw is the centre of social organisation and culture.

Traditional titles, while earmarked for men of particular matriarchal lineages, are earned through community service, displays of traditional skills and accumulation of traditional knowledge. Title holders were accountable to their constituents and titles could be revoked if the holders failed to perform their duties adequately. Historically, specific title holders were responsible for management of natural resources.

A society in transition

At the time of FSM's independence in the early 1980s, the Pohnpei state government took over governance of the island from the Trust Territory administration. The adoption of a western-style legal system and institutional structure reflected the need for Pohnpei and FSM to operate within modern economic and political contexts. The young Pohnpei state government is in some respects a model of good governance and democracy, with effective systems of administration and a general respect for the law.

The government faces severe difficulties, however, in the areas where the authority of Pohnpei's state government stands in direct conflict with that of Pohnpei's traditional title holders. These areas of governance include some aspects of land, family and criminal law, as well as conservation and natural resource management. As noted recently by John Hagelman (former FSM President) "the paramount chiefs are still the undisputed rulers in their kingdoms".

Interface between traditional and state laws: Issues and challenges

Early attempts by the Pohnpei state government to delineate watershed boundaries were a failure. The Pohnpei Watershed Forest Reserve and Mangrove Protection Act of 1987 was poorly received by the villagers (carrying guns and machetes), as they perceived it as "a government land grab in direct conflict with traditional Pohnpei resource use and authority".

There was then a thorough process of consultation and participatory planning that reoriented catchment management towards government-community collaboration. All stakeholders contributed to and approved the Pohnpei Watershed Management Strategy 1996–2000, followed by implementation of the Pohnpei Community Conservation and Compatible Management Project 2000–2004 (supported by the Global Environment Facility and The Nature Conservancy.

In 2001, after attempted legal reform at the statelevel collapsed due to a lack of consensus, a comanagement system was implemented in Madolenihmw Municipality. Madolenihmw's primary strengths are high quality leadership and good relations between the municipal government and traditional leaders. In 2002, the Madolenihmw Protected Areas Act was passed, institutionalising the collaborative process and embodying a bottomup approach to forest, coastal and marine conservation. The Sehnpen/Lehdau Mangrove Reserve became the first protected area to be declared under the Act in 2003. Madolenihmw's second-highest title holder gave the following perspective: "the greatest legacy of this process is that Pohnpeians are regaining control of their own resources".

Lessons learned and recommendations

• The persistent fact of FSM's legal pluralism: if the customary and governmental authority systems are not in harmony over control of resource use, they will probably be in conflict.

- "Legitimacy" is the key to effective authority: "what the rules are" is in many situations less important than "who decides the rules" and "who enforces the rules".
- One key to legal reform for collaborative natural resource management in FSM is local ownership of the negotiation and design of the regulatory system. Off-the-shelf solutions are likely to be met with little interest.
- If co-management systems develop in FSM, it will be via a complex adaptive process involving hundreds of communities working in partnership with government agencies, experimenting with rules, monitoring, sanctions and regulatory processes over time.
- A central principle when drafting laws to implement co-management is to build upon the respective strengths and shore up the weaknesses of both the customary and governmental institutions.

Conclusion

Two issues are central to understanding Pohnpei's troubles in achieving effective conservation and natural resource management. The first is that Pohnpei, as a collection of societies that lack (or are free from) the intellectual, cultural and historical traditions supporting centralised authority over local resources. The second is that Pohnpei does not command the necessary regulatory capacity and infrastructure to enable its government to genuinely control the everyday uses of the resource they govern. Any process of legal or administrative reform that could adequately address these deficiencies must aim to harmonise customary and governmental authority.

The recent reform in Pohnpei has provided a bridge between the "western" approach to resource management adopted by the young government, and the Pohnpeian traditional resource management system, characterised by decentralisation and consensus decision-making based on thousands of years of traditional knowledge. The approach is in many ways an act of reconciliation, reconfirming those aspects of both political systems that are considered legitimate.