



# Back To The Future: Using Traditional Knowledge to Strengthen Biodiversity Conservation in Pohnpei, Federated States of Micronesia

## Abstract

Pohnpei's traditional belief system strongly supports conservation, but years of foreign rule and influence, population growth, excessive US aid, shift to a cash economy and other factors have combined to weaken the islanders' conservation ethic. The result has been a rapid decline in biodiversity health, which has in turn led to a decrease in quality of life and increased dependence on outside assistance. Conventional government-led western style approaches to resource management were clearly failing, and in 1990, The Nature Conservancy, the local government, and other partners embarked on a program to involve the island's traditional leaders and other cultural experts in the protection of the island's upland forest watershed. After a difficult start, the program has focused on combining Pohnpei culture and traditional knowledge with modern conservation planning and management practices with some success. The result has been a unique community-based management approach that establishes local control over spatially discreet resources that are legitimately considered to belong to the community and the return of resource management and use to an autonomous, consensus-based decision-making process. In a sense, the approach is an act of reconciliation, reconfirming those aspects of both political systems that are considered legitimate. For the participants, it has been a valuable learning experience through which a uniquely "Pohnpei-style" approach - suited specifically to the island's social and political conditions - is being developed.

## Introduction

The forests, reefs, and seas of Pohnpei island in the Federated States of Micronesia are an essential source of both cash and subsistence livelihoods for most of the 355 km<sup>2</sup> island's 35,000 human inhabitants. They also harbor biodiversity of world importance including one of the greatest concentrations of endemic plant species in Oce-

ania and some of the most diverse coral reefs on the planet. Traditionally, complex resource management practices maintained these resources while providing subsistence and prestige goods for the island's inhabitants. However, in the last 50 years, population growth, unsustainable resource use, and the destruction of forest and marine habitat now threaten these unique environments with serious consequences for the island's human inhabitants.

In order to avert this escalating damage and to establish long-term solutions, the Nature Conservancy, in conjunction with the Pohnpei State Government and more recently the Conservation Society of Pohnpei, is developing an integrated and community-centered management framework for the protection and sustainable use of Pohnpei's natural heritage. The Pohnpei Community Resource Management Program (PCRMP) is an attempt to strengthen the abilities of customary leadership and communities in natural resource management and to ensure that they are supported by government and non-government organizations. It seeks to link action in the **kousapws** (villages) with that at a municipal, state and federal level and hopes to draw on and incorporate knowledge and meth-

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ods across a wide range of disciplines and traditions. A number of the elements of this integrated framework are already in place including community planning methodologies, structures for community level management, co-ordinating bodies at a municipal (**wehi**) and state level, and monitoring programs.

This paper details what is known about traditional forest resource management on Pohnpei, traces contemporary changes and their impacts on both traditional resource management systems and the resources themselves, examines recent interventions to using traditional structures and systems to strengthen biodiversity conservation, and suggests possible activities and processes that might further strengthen the capacity for integrated and community-centered resource management at all levels.

### Traditional forest resource management on Pohnpei

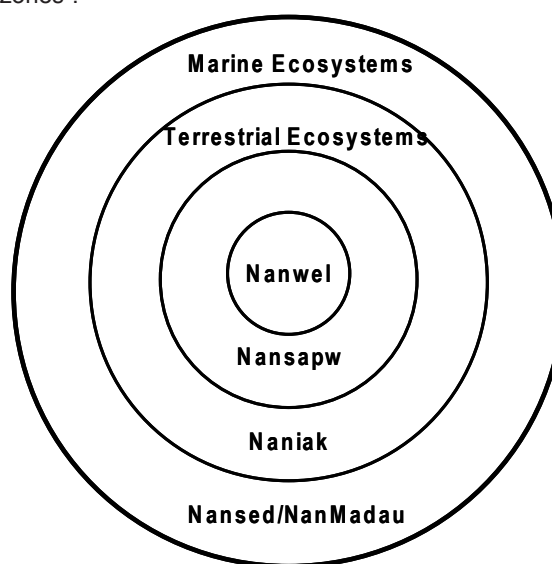
Before humans arrived on Pohnpei thousands of years ago, the entire island and basaltic islets of the lagoon were covered with rain forest (Glassman 1952). Several forest types make up the upland forest resource, spatially distributed on the island due to altitude and, to a lesser extent, drainage. Broadleaf forest is the most widespread and is dominated by *Camposperma brevipetiolata* Volkans, *Elaeocarpus carolinensis* Koidz, and other tree species. Almost pure stands of the endemic palm *Clinostigma ponapensis* (Becc.) Moore & Fosb. are found on upper elevation ridges. Upland swamp forest, characterized by the endemic ivory nut palm *Metroxylon amicarum* Becc., occurs in scattered patches. Montane cloud forest occurs on mountain tops and along ridges above 450 m.

The relative age and isolation of the island make the flora of Pohnpei's interior forests some of the most diverse in Micronesia, with a high level of endemism. The significance of Pohnpei's forests to the maintenance of biodiversity is reflected in the distribution of plant species. Of 767 plant species recorded on Pohnpei, 264 species (34.4%) are found chiefly in the upland forests. One hundred and eleven species (14.6%) are endemic to Pohnpei and 101 species (90%) are found mainly in the upland forests. Numerous native and endemic birds and other animals also make the island their home.

Archaeological evidence suggests that the first humans arrived on Pohnpei more than 2,500 years ago (Haun 1976). According to legend, when the first settlers arrived at the island's location, they found only a tiny bit of coral rubble. With magic and seven further canoe loads of materials, they built the island, thus the island's name Pohnpei, which literally means "upon a stone altar". The various gods of the time helped the human's work by furnishing the reef, mangrove forests, and upland forest to hold the island together.

Based mainly on anecdotal evidence, it appears that the native population developed a complex system of resource management early on in their exploitation of the island (Haun 1984). The island and its surroundings was classed by the prehistoric Pohnpeians into several concentric domains (Figure 1). An inner core - the upland forest (**nanwel**) - and the outer rings in marine space - mangrove forest (**naniak**), lagoon (**nansed**), and ocean (**nanmadau**), by virtue of their location outside the sphere of human influence, were believed to be controlled by spirits, or **eni**. The middle concentric ring in the Pohnpei "world" was made up of settled coastal areas (**nansapw**).

Figure 1. Traditional Pohnpeian concentric resource "zones".



The **nansapw** was considered to be land wrestled away from the **eni** through the human activities of clearing and planting (**sapwasapw**). Conversely, abandoned lands which reverted back to forest could be considered as returning to the stewardship of the **eni**. In addition, political boundaries of the village (**kousapw**) and municipal kingdom (**wehi**), formed contrasting radial divisions that encompassed the island's entire marine and terrestrial environmental diversity (Dahl and Raynor 1996). In both the forest and marine areas, it was believed (and to some extent the belief persists) that lack of respect for the **eni** or spirit guardians of these areas, either through not following proper etiquette in these zones or through improper use of resources, was punished supernaturally by severe illness or even death. Apparently, two broad property classes existed within prehistoric Pohnpei. Settled lands were within the human domain and were under the trusteeship (**kohwa**) of the paramount chief. Surrounding these humanized areas were the **luhwen wehi**, common property open to a variety of semi-secret and temporary uses. Ranked titles reflected the political structure within each **kousapw** and **wehi**, and amongst these, titles connoting

a resource regulation function are common, e.g., **Sou Madau**, 'master of the ocean', **Souwel Lapalap**, 'Great master of the forest'. The function of these titles, however, has been lost for at least several generations - no contemporary evidence exists for the exercise of such functions.

Management of land and waters, and thus effectively all natural resources, was carried out through the traditional leadership system. In this complex dual lineage system, which still exists today, people are divided into two lines with titles attributed to either the **Nanmwahrki** or the **Nahnken**. Each member of Pohnpeian society had a station, and held a unique rank within that station. Each station or level of leadership had clear responsibilities and powers, understood by all Pohnpeians. Promotion within the system was based on a combination of blood or clan, passed on through the mother's side, and achievements, especially in warfare and to a lesser extent, special skills and/or exceptional agricultural and marine production.

#### ***Decline of Traditional Forest Management Systems***

Europeans began to frequent Pohnpei in the mid-1800's, but the Spanish were the first to colonize the island (1886-1899). Largely ineffectual as colonizers, they were followed by the Germans (1899-1914). Between 1912 and 1914, the German Administration instituted individual ownership of land by deed and inheritance by primogeniture. The German code also assigned the luhwen wehi to the district (wehi) to be administered jointly by the paramount chief and the German governor. The Japanese, who assumed control of Pohnpei shortly after the German land reforms were instituted (1914-1945), considered unused land as belonging to the administration. In addition to the upland forest, these public lands included swamp lands and marine areas. The area under administrative control was additionally increased by forced sale. Some of these lands were made available to Japanese settlers while other tracts were appropriated for military use. When the Americans took over the island at the end of WWII all of this land remained under administrative control as public land.

Demographic change during the colonial period influenced strongly this gradual expropriation of land from traditional management and control. Like many Pacific islands, population declined sharply after contact, from an estimated 15,000 in 1840 to only 1,705 in 1891. Afterwards, the population recovered slowly until the mid-1960s. It is likely that much previously occupied land reverted back to forest, and then came under administrative jurisdiction. At the same time, the traditional form of land allocation nominally regulated by the paramount chiefs was replaced by the juridical-bureaucratic forms of land administration (Dahl and Raynor 1996). In the process, traditional resource management was undermined by loss, at least legally, of local authority. Since the early 1960s, population growth and an expanding economy have worked together

to intensify resource exploitation. Availability of more sophisticated technology (e.g., guns, chainsaws, and bulldozers), has also provided a means to increase per capita exploitation of resources. Resulting settlement and cultivation in upland areas has been the major cause of forest degradation.

Besides population growth, discontinuities in the Pohnpei land tenure system has also pushed settlement into previously unoccupied upland areas. The government-sponsored juridical-bureaucratic apparatus that regulates and certifies land ownership has been combined with beliefs about rights of use formed through tradition and history (Dahl and Raynor 1996). Population pressure on coastal lands has been exacerbated due to insecure tenure. Traditionally, the right of occupation was derived from bringing land under cultivation, thereby "humanizing" it. As "**kohwa**", land was not owned in a Western sense, but a century of colonialism has increased the desire for secure title, which represents the conveyance of rights by the state. However, occupation is still considered as the primary basis for assuming rights over land use.

Settlement is often preceded by cultivation and gradual conversion of forest by people from coastal areas. This upland cultivation both supplements existing areas under cultivation and prepares the area for permanent home-steading. *Piper methysticum* G. Forster, locally known as **sakau**, has emerged as the foremost crop leading to forest conversion. Roots of this plant are pounded to make a narcotic beverage has long been of central cultural importance on Pohnpei. Traditionally consumed only by the higher ranking members of society, since WW II, prohibitions against consumption by the general populace have been relaxed. **Sakau** has since emerged as the premier cash crop for the many of the island's population who have little prospect of finding wage employment. Commercial **sakau** production involves clearing forests for the richer soil and moist environment found there. Since commercially grown **sakau** requires direct sunlight, the forest canopy must be opened by felling or ring-barking over-story trees. Because **sakau** is shallow-rooted, planting on steep slopes can lead to soil erosion and mass-wasting during major storm events. Loss of forest habitat also negatively impacts biodiversity.

The magnitude of recent loss has only recently been appreciated 1995 aerial photography and vegetation mapping efforts revealed that intact native forest on Pohnpei had been reduced from 15,008 ha (42% of the island's land area) to 5,169 ha (15%) during the 20 year period between 1975 and 1995 (Trustrum 1996). The on-going cycle of cultivation, settlement, and road-building result in three broad impacts. First, more intensive resource exploitation is becoming unsustainable. This is already the case with avidly hunted bird species like the Micronesian Pigeon (*Ducula oceanica*) and the Purple-capped Fruit Dove (*Ptilinopus porphyraceus*), which have experienced drastic

population reductions in recent years (Buden 2000). Second, land clearance increases erosion which exacerbates the downstream impacts of sediment on mangroves, lagoons, and coral reefs. Finally, forest conversion results in a loss of species diversity. Since terrestrial endemism is relatively high, the local extinction of a species could be equivalent to its complete loss. Since the upland forest is relatively small anyway, it may already be close to a critical threshold in terms of habitat value.

### **Early Management Interventions**

In 1983, as it became evident that the island interior was being rapidly deforested, the Pohnpei State Division of Forestry requested assistance from the Pacific Islands Forester Office (USDA Forest Service Institute of Pacific Islands Forestry - Honolulu). Utilizing the 1975 aerial photography of the island, the soils survey (Laird 1982), and aerial reconnaissance, proposed watershed reserve boundaries were determined. The two agencies closely cooperated in legislative efforts that resulted in the passage of "The Pohnpei Watershed Forest Reserve and Mangrove Protection Act of 1987". The Act designated some 5100 ha (13,000 acres) of the central upland forest area and 5525 ha (15,000 acres) of coastal mangrove forests of Pohnpei Island as a protected area, to be managed and enforced by the Pohnpei Department of Resource Management and Development. Legislative intent was that all utilization of the upland and mangrove forests within the reserves would have to be coordinated with State officials so that further upland settlement and other perceived unsustainable activities could be restrained.

However, community involvement in the development of the law was virtually non-existent, and the proposed rules and regulations, failing to recognize traditional Pohnpei resource use and authority, were universally rejected. As a result, government boundary survey teams were turned back by angry villagers around the island. These setbacks led to the formation of the Watershed Steering Committee (WSC) in 1990, an interagency task force made up of representatives from several Pohnpei State Government agencies, community leaders, and NGOs. With funding from the US Forest Service and subsequently from SPREP, the WSC initiated a watershed education and negotiation program and over two years, extended it around the entire island of Pohnpei. The program consisted of two parts - an overview of why Pohnpei's forested watersheds must be protected, and a critical review of the 1987 law. Two major changes were unanimously insisted upon by the local communities in over 200 meetings:

1. Paramount chiefs and their village representatives (**Soumas**) need to be partners in the management process;
2. Environmentally sustainable management should be extended beyond the WFR to encompass the entire island, from the mountains to the reefs.

Beginning in 1992, the government's effort to develop a community-based management program began to attract outside interest. The Nature Conservancy hired a local field representative to assist the government, and SPREP provided funding and technical assistance as part of the South Pacific Biodiversity Conservation Programme. The Asian Development Bank soon followed, advancing a technical assistance package that included development of a GIS system, new aerial photography, development of a detailed watershed management plan, and identification of compatible enterprise alternatives.

Over the last eight years, intensive efforts to reinvigorate traditional forest management on Pohnpei has exposed a number of inconsistencies and obstacles. Communities are small, coherent and have limited formal education. Decision making in the customary system is strongly hierarchical and male-oriented and is generally well respected by most community members. The role of this system in resource management appears to have eroded considerably over the past century. Conversely, many of the actors in the traditional system also hold positions of government authority. Yet while some of these formal responsibilities of traditional management have been taken over by government, government edicts and programs also have decreasing influence outside of the main towns as a result of being poorly integrated with customary structures. The result is a confusion between traditional and government systems in some areas and consequent reduction in the effectiveness of resource management.

In 1996, the Pohnpei Community Planning Program (PCRMP) was launched by The Nature Conservancy and local partners as an innovative attempt to support the island's communities as the primary managers of their biological resources. The program aims to develop coordinated management within and between communities that will maintain subsistence and cash resources while also protecting the island's remarkable biodiversity. It also hopes to develop a legal and administrative framework for equitable co-management between government and customary authorities on the island. The PCRMP was developed under the framework established by the Pohnpei Watershed Management Strategy (The Nature Conservancy 1996). This strategy recognizes the central role of communities in determining resource use and managing natural environments. The Strategy seeks to ensure the sustainable management of Pohnpei's natural resources; to help communities develop strategies for ecologically sustainable business; to strengthen community ties; and to maintain management of cultural and sacred sites.

### **Towards Community-based Management**

The majority of project efforts over the last five years has focused on building capacity for community-based re-



source management. Capacity is based on three major components:

- **STRUCTURES** - Effective organizations and clearly defined responsibilities
- **STEPS** - Planning and review processes able to adapt to circumstances and manage conflict
- **SKILLS** - Trained staff and other stakeholders

**Structures for Community-based Resource Management: Community governance of natural resources in Pohnpei**

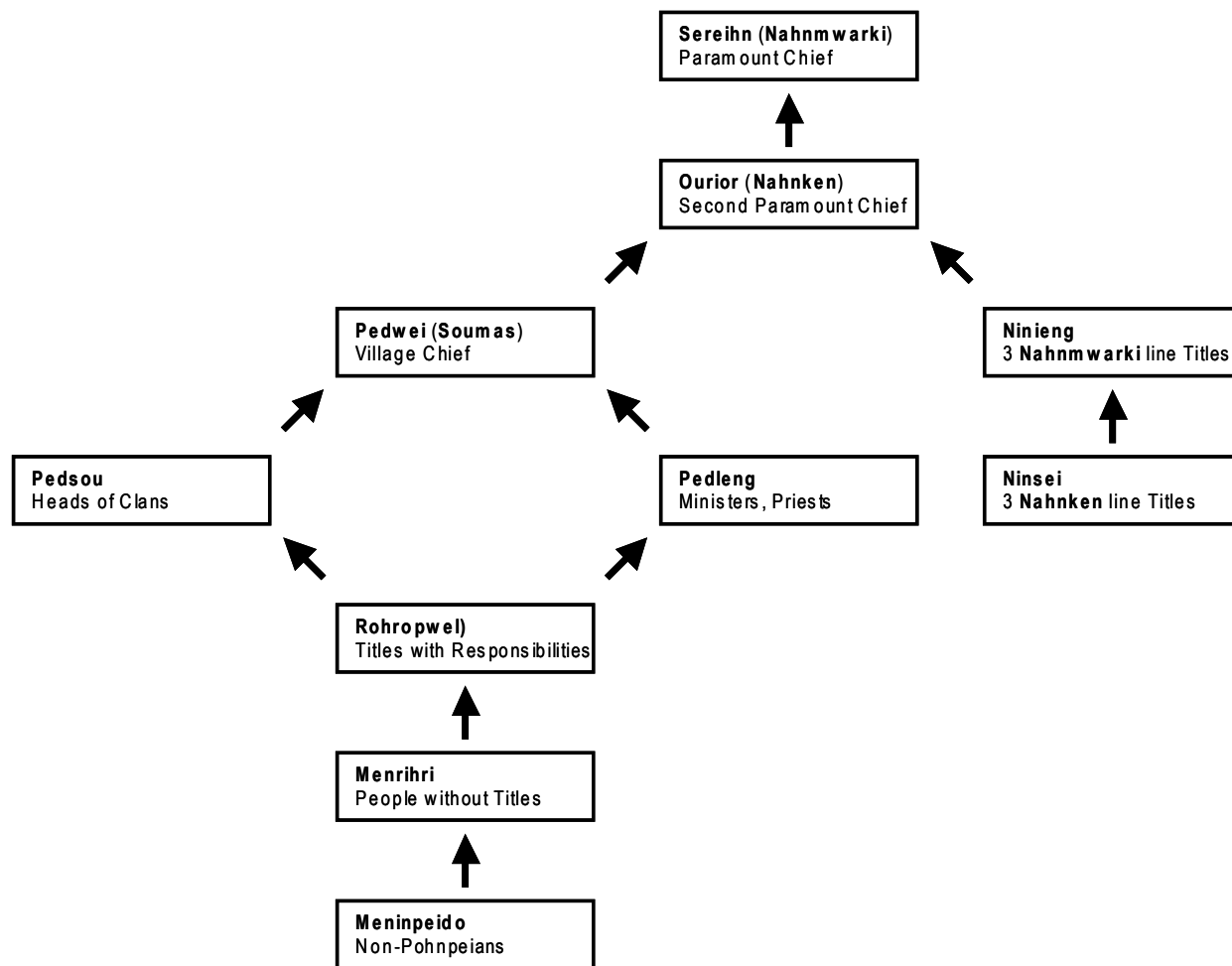
Pohnpei is fortunate in having a resilient and effective traditional system of governance running in tandem with newer systems of government control and support from non-government agencies. Pohnpeian society is extremely complex and sharply defined. Table 1 provides an overview of the three strands of governance currently operating in Pohnpei. The customary system (see Figure 2) is most prevalent in the rural areas and continues to hold a

strong place in the immediate questions of resource management. The system is very formal, has clearly defined and understood structure and is largely represented by men. Much of the weight of this system is distributed in the kousapw (village-level) with few people operating at municipal or state level. By contrast the government structures reach their most numerous in the Kolonia and municipal administrative centers and have little formal physical presence in the **kousapw**.

Traditional leadership is easily as important as government at all levels in resource management in Pohnpei. However it is largely invisible to the outside. It has a far higher number of people deployed in the community and a highly decentralized at the point of use of natural resource. Therefore, the traditional leadership system is still the crucial system in establishing a low cost and effective program of natural resource management. Responsible positions within the traditional system include:

Table 1. Leadership Structure, Pohnpei - Customary, Government and Other

<b>Government</b>	<b>Customary</b>	<b>Community and Private Sector</b>
<b>FEDERAL</b> Federal Congress President		
<b>STATE</b> Governor / Lieutenant Governor Legislature Government Departments <ul style="list-style-type: none"> <li>• Land and Natural Resources</li> <li>• Environment Protection Agency</li> <li>• State Planner</li> <li>• Education</li> <li>• Foreign Investment Board</li> </ul>	<b>Mwoalen Wahu</b> (Council of Paramount Chiefs)	Non-Government Organizations <ul style="list-style-type: none"> <li>• The Nature Conservancy</li> <li>• Conservation Society of Pohnpei</li> </ul> Education and Research <ul style="list-style-type: none"> <li>• Marine Environment Research Institute of Pohnpei (MERIP)</li> </ul> Churches Businesses
<b>MUNICIPAL</b> Local Government Legislature Judiciary Executive Boards <ul style="list-style-type: none"> <li>• Health</li> <li>• Land</li> <li>• Sports</li> <li>• Development Advisory</li> <li>• Resource Management</li> </ul>	<b>Nanmwarki</b> (Paramount Chief) <b>Nahnken</b> (Second Paramount Chief) Higher titles <b>Nanmwarki</b> line <ul style="list-style-type: none"> <li>• <b>Wasahi</b></li> <li>• <b>Dauk</b></li> <li>• <b>Noahs</b></li> </ul> <b>Nahnken</b> line <ul style="list-style-type: none"> <li>• <b>Nahlainiw</b></li> <li>• <b>Nahnsauririn</b></li> <li>• <b>Namadau idehd</b></li> </ul>	Community-based Organizations <ul style="list-style-type: none"> <li>• Womens' groups</li> <li>• Youth groups</li> <li>• Church groups</li> <li>• Resource owners</li> </ul>
<b>SECTION / VILLIAGE</b> Councilors Representatives	<b>Soumas</b> <b>Paliendal</b> (Village chiefs) <b>Kaun en pwihn</b> (Section chief) <ul style="list-style-type: none"> <li>• various titles in <b>Nanmwarki</b> line and <b>Nahnken</b> line</li> </ul>	Community members Youth groups Churches Community Conservation Officers Local business

Figure 2. Kingdom (**Wehi**) Traditional Structure - Nett Municipality.

- **Nahnwarki**: First paramount chief in charge of the overall well-being and condition of the **wehi**.
- **Nahnken**: Second paramount chief who deals with political and administrative matters.
- **Soumas en Kousapw**: Village Chief, represents the **Nahnwarki** in the **kousapw** with total authority for overseeing that people are living well and that land is being managed sustainably. Monitor and address issues.
- **Palien dal**: Monitors the situation of the **kousapw** and informs the **Soumas** of the success of current policies and activities.
- **Kaun en Pwihn**: Section chief - Assists in promoting and maintaining communication between the **Soumas** in a Section. Promotes cooperation between the Section and the Government, within the Section and between **Soumas**. Organizes joint meetings of the **Soumas**.
- **Kousapw** members: Carry out the directives that will assist in improving overall living conditions.

Government leadership follows the American system of Federal, state and municipal legislatures with an executive body carrying out of the functions decided by the legislatures. The Christian church has a long history on Pohnpei and provides a further set of control and cooperation mechanisms. Non-government organizations are a new development in the political landscape of Pohnpei, with the local conservation groups, the Conservation Society of Pohnpei being one of the more recent arrivals. Community based organizations are also starting to develop as a result of community planning activities.

The existence of these three different strands of governance has led to some conflicts and confusions of boundaries of responsibilities at times. There have been complaints that government officers pay little regard to the wishes of tradition leadership; traditional leaders may use their powers to veto decisions of government officers; and NGOs are finding a position between the two.

The PCRMP has established a number of structures over the past three years to increase cooperation between all three sectors of governance and to ensure that the knowledge, skills and ambitions at a community level provide the basis for planning at higher administrative levels. Some of these include:

- Appointment and training of 250 Community Conservation Officers (CCOs) in Madolenihmw and Kitti with most Kitti CCOs having since become inactive
- Development of structures for community resource management including:
  - Community - Establishment of Community-based Organizations (CBOs) in Madolenihmw (**Senpehn Silepen Moar oh Sehd**)
  - Municipal Resource Management Committees established in Madolehnihmw and Nett in 1998
  - Pohnpei Resource Management Committee established in 1996 to oversee the CASO and provide a coordinating body between government agencies, NGOs and traditional leaders
  - Conservation Society of Pohnpei a local NGO that now has six full-time staff and projects focusing on terrestrial and marine conservation and compatible economic development

**Steps: Approaches to Community Planning**

The institutions for community planning and the approaches used within these institutions are two sides of the one coin. Through the PCRMP, steps and systems are being developed to support community management of natural resources and to integrate government, traditional and non-government systems of planning and management.

Community planning provides a structure by which these community members might tackle action to protect their environment and use it in the most sustainable ways. It also provides a framework that enables greater cooperation with outside agencies that might assist them. Resource owning communities generally have strong reason to promote conservation and sustainable development. They, more than anyone, bear the impacts of poor management decisions, they reap the benefits and they are most likely and in some cases most skilled to observe the changes.

As can be seen from the description of structures for community planning above, the PCRMP has focused on two primary units of planning the *pwihn* and *wehi*. Efforts over the past few years have identified the *wehi* (municipality - the main island of Pohnpei is divided into six municipalities)) as the most appropriate unit for planning and management. With populations of around 2,500-6,500 people and a recognized municipal and traditional political hier-

archy, *wehi* provide a coherent and well-trying framework for planning and management at a small enough level for detailed resource management. As will become obvious from a later analysis of traditional titles, this is also the level at which most of the personnel in the traditional system reside that have responsibility for natural resource management. Ecologically, there is a significant correlation between *wehi* boundaries and river catchments. This level is thus increasingly the base from which planning methods are being tried and developed.

A number of tools for community planning have been developed by the PCRMP. These are simple, easily replicable methods that can be conducted in groups which may have limited education or literacy. They including values clarification, visioning, issues identification, community action plans and simple evaluation techniques. These methods have been used in a sequence of activities that build community capacity for planning and which establish a set of steps for planning at a *pwihn* and *wehi* level. The steps in community planning described below is based on community planning method developed for Madolenihmw between 1997 and 1999 (adapted from The Nature Conservancy 1999):

- Conduct introductory meetings - Introductory meetings with the Paramount Chiefs and municipal leaders are conducted to explain the overall purpose of the program and garner community support.
- Establish Municipal Planning Committees - Upon their approval of the work, municipal leaders select a planning committee comprised of local representatives from the Municipal Council, Section Chiefs, Village Chiefs, church leaders, women and youth groups and other key municipal groups.
- Conduct training - Upon appointment, formal and informal training, based on each unique situation, is provided for planning committee members on a range of issues related to community vision planning and implementation.
- Facilitate community meetings at the Section level - Community planning sessions and related meetings are facilitated on a Section basis. Meetings are held to explore community values, map important features of community land, identify immediate issues and options and propose activities.
- Hold municipality-wide conferences - Upon completion of the planning meetings in all sections of the municipality, the municipal government and Paramount Chiefs are assisted in conducting three- to five-day municipality wide Leadership Conferences where the draft Municipal Vision Plan (which includes a clear vision for the future, major goals, and a detailed implementation plan) is presented, edited and finalized.
- Provide technical support for implementation of Municipal Action Plans - Together with the State and national government and other agencies, the implemen-

tation of Municipal Action Plans by municipal planning committees and key local government, traditional, and private partners is supported.

- Monitor and evaluate implementation progress - Review progress and revisit plans on an annual basis and update them as necessary.

A review of the planning process (Chatterton 1999) identified some of the lessons that have been learnt from developing this process. The reviewer recognized that effective communication between all leaders (traditional, governmental, church, youth, women) is critical. It is important to develop effective networking among the traditional leaders, church leaders and government leaders in the exchange of knowledge and skills. The report also urged that clearly defined roles for traditional, government and church leaders are needed in the area of resource management. A final lesson has been that the functional role of traditional leaders in resource management is vitally important and needs to be enhanced.

So far the project has accomplished the following:

- Establishment of community planning processes known as Community Visioning - at **pwihn** and **wehi** level
- Training of CCOs and various agency staff in Community Visioning methods, methods for increasing participation, leadership and reporting
- Completion of Community Vision Plans for Madolenihmw Municipality (around 6,000 citizens in 54 villages), U Municipality (2,500 citizens in 20 villages), and Nett municipality (around 5,000 citizens)

#### Skills

Once structures are confirmed and processes agreed, the ability to make these work successfully for integrated resource management depends also on the knowledge, attitudes and skills of the people who are charged with using them. The PCRMP strives to bring training to the community-level as much as possible. An initial assess-

Table 2. Capacity Building Needs of Key Participants in the Pohnpei Community Resource Management Project.

Target Group	Description	Identified Needs
<b>Community</b>	CCOs and other community members at Section and <b>Kousapw</b> level	Marketing English language Basic business skills Community planning and evaluation Proposal writing and fundraising Pohnpeian ecology and resource management methods Ecological principles and basics of resource management - marine and terrestrial Conservation area management planning Water quality testing Marine conservation area management Traditional system of resource management
<b>Traditional Leadership</b>	<b>Soumas</b> and <b>paliendahls</b>	Community planning and evaluation Conservation area management planning Legal responsibilities Community organizing, meeting conduct and record keeping Legal responsibilities Traditional system of resource management
<b>Municipal and State Government Officers</b>	Senior and middle level officers of government agencies involved in resource management with communities	Conservation area management planning Community planning and evaluation Legal responsibilities Ecological principles - marine and terrestrial Monitoring and evaluation
<b>Non-Government Organizations</b>	Staff involved in community resource management activities	Fundraising Surveys Community planning Methods for supporting community-based organizations



ment of capacity building needs has been carried out (Table 2).

The manner in which training is undertaken is crucial to the success of this training. A range of approaches to training are possible but PCRMP experience suggests that training is likely to be most successful where the following conditions are met:

- conducted on-island
- conducted in Pohnpeian language
- experiential based in practical exercises and allowing participants to test their skills in real examples
- contains an even mixture of classroom and practical
- training is not merely a one-off but involves sequence of trainings, action and reflection
- work and/or training in the community is preceded by awareness activities
- in the community where possible

### **Looking Towards the Future: Next Steps**

It has been fourteen years since the passage of the original watershed conservation law on Pohnpei. After a rocky start, significant accomplishments have been made, including:

- Conservation reserves established in **Senpehn** (forest), **Lenger** (marine), **Kehpara** (marine), and **Enpein** (marine and mangrove)
- Lowland sakau nursery program established, and 1,000,000 plants established in the field
- Reduction of forest clearance in some areas where community planning program is in place.
- Reduction of water pollution by moving pig pens and toilets from river edge in areas of community planning
- Restart of watershed conservation boundary marking in August 1999
- Monitoring activities begun on bird population survey; water quality measurements; forest clearing
- Community education

Most importantly, the project has provided a bridge between the Western conventional centralized approach to resource management adopted by the young government and the Pohnpei traditional community resource management system, characterized by decentralization and consensus-based decision-making based on thousands of years of traditional knowledge. In a sense, the approach is an act of reconciliation, reconciling those aspects of both political systems that are considered legitimate. It remains to be seen whether the watershed conservation program will be a success.

Change in opinion during the last ten years, from bitter opposition to general support of resource management - is the most visible sign of the program to date. For the participants, it has been a valuable learning experience through which a uniquely "Pohnpei-style" approach - suited specifically to the island's social and political conditions - is being developed.

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