



Ra'ui in the Cook Islands – today's context in Rarotonga

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Though I had heard the word *ra'ui*, until I started working in the environment field I was not sure of its meaning. As a consequence of my work, I started to learn more about *ra'ui* through reading and talking to other conservationists and elderly people. Only then did I begin to understand more about this traditional practice.

When the Koutu Nui (formalised group of traditional leaders) embarked on reintroducing the *ra'ui* around Rarotonga's coast, the late Akaiti Ama Tamarua Nui Mataiapo (traditional chief) remarked to an overseas journalist, "There was resistance because the younger generation didn't know what *ra'ui* meant. They didn't realize that in those days the fish were bigger and they weren't scarce."

Background

The Cook Islands consist of 15 small islands with a total landmass of only 237 km², spread over an ocean area of 1,830,000 km² in the South Pacific (between 9° and 23°S latitude, and 156° and 167°W longitude). The islands stretch out from Samoa to the west and French Polynesia to the east, and are divided into a Northern Group consisting of six lower-lying islands and a Southern Group of nine mostly higher islands. The capital, Rarotonga, is the largest (6719 ha) and most populated island of the group.

The most recent population census in December 2001 showed that the official resident population of the Cook Islands was 14,990 with approximately 9,500 living on Rarotonga. Large numbers of Cook Islanders have migrated to New Zealand, Australia and elsewhere over the years, generally seeking better employment opportunities.

The major income earners for the Cook Islands are tourism, black pearls, fishing, agriculture and offshore banking (Cook Islands Government 2003). The top performing economic sector is tourism, which has developed considerably since 1971 when only a few hundred tourists visited the Cook Islands compared to the year 2001, when a record 75,000 people holidayed in the country (Cook Islands Government 2003). Rarotonga, as the gateway to the Cook Islands, receives the most visitors, while Aitutaki is the second major destination. Tourism and associated industries have generated an average 80% of gross domestic product in recent years (Cook Islands Government 2003).

Legal systems

The Environment Act 2003 provides national legislation for the protection, conservation and management of the environment in a sustainable manner. Responsibility for managing the environment is divided between several government ministries, agencies and councils with non-government organisations also helping to address environmental concerns.

The Environment Act currently applies to Rarotonga, Aitutaki and Atiu. For islands not covered by the Act, the island council is the main body with the authority to enact protected areas (PA) under the Local Body Act. Of these, only Rakahanga and Pukapuka have developed specific by-laws to establish and manage *ra'ui*, though there are intentions to do so for other islands. For example, the people of Atiu, owners of the uninhabited island of Takutea, have started preparing draft bylaws to protect the biodiversity of the island.

On Aitutaki there has been considerable discussion on giving legal status through bylaws to *ra'ui*. However, this has not progressed any further mainly because the island council is unsure of its jurisdiction and lack of local drive to pursue *ra'ui* development. Furthermore, the current bureaucratic system of enacting by-laws for PA is extremely time-consuming (Saul and Tira 2004). Lack of knowledge of the required procedures has resulted in very few new strictly environmental bylaws being established in recent times, although some have been established for the control of economically important resources such as trochus¹.

1. A marine gastropod with a valuable shell that is exported for manufacture of mother-of-pearl buttons.

There is no formalised national system of PA in the Cook Islands. A consultancy was recently completed, under the National Biodiversity Strategy Action Plan (NBSAP) to determine a suitable national system for PA (Saul and Tiraa 2004). This showed differences throughout the country in the way existing marine and terrestrial PA have been established and managed. Traditional leaders, island councils, landowners and government have all played roles in establishing and managing these PA.

Saul and Tiraa (2004) recorded 36 known PA in the Cook Islands, 34 of which include the marine environment. These consist largely of areas not covered by legislation, with the majority being community owned. Suwarrow National Park, Rakahanga rahui (= *ra'ui*) and Pukapuka rauwi (= *ra'ui*) are the only PA with legal status. There may be other PA, but as yet there are no systematic, complete data on the total number of PA in the Cook Islands. The atolls include both the land and adjoining lagoons in the PA.

The Outer Local Body Act 1987 and the Environment Act 2003 are specific with regards to the development of PA in the Cook Islands. The Local Body Act 1987 allows island councils to make bylaws to regulate and control the use of any reserve or park vested under their control. The Environment Act provides for the establishment of a PA proposed by an Island Environment Authority. However, neither act provides regulations to assist PA established outside of these bodies.

History of *ra'ui*

Traditional pre-contact societies of the Cook Islands had a complex system of marine and land tenure that allowed delineated and enforceable control over the use of land and sea. The customary prohibition known as a *ra'ui* was one example of such control.

A *ra'ui* was imposed by the chief of the tribe or the head of the landowning lineage to control the use of resources or facilities. These included land areas, lagoons, rivers, freshwater ponds, lakes, swamps, fruit trees, coconuts, birds, and other wildlife such as turtles and coconut crabs for conservation management (Utanga 1989). The system bans the harvest of food resources for a set period to enable stocks to increase. Traditionally, when a *ra'ui* was lifted, it could be moved to another area or re-established at a later time in the same area, sometimes after a very brief harvest period.

The system was not perfect. Infringements occurred and penalties were imposed. For example, in Atiu, one of the islands in the southern

group, depending on the severity of the offence, punishments ranged from execution, being set adrift in a canoe, banishment from the community, deprivation of certain land rights, to being physically beaten or having one's house, canoe, crops or other property destroyed. In addition to physical punishments, supernatural forces (*tapu*) were invoked to inflict further penalties for breaking traditional rules (Crocombe 1989). On Pukapuka, in the northern group, a common punishment is relegation to child status in the community, losing the rights and respect afforded to an adult for a certain period (Munro 1996). This punishment is still enforced today on Pukapuka.

The elimination of customary ownership of the lagoon and sea under the Cook Islands Act 1915 took away the right of landowning units to impose enforceable controls, weakening management regimes in these areas, particularly on Rarotonga. The lagoon and seas now belong to the Crown. The last marine *ra'ui* decreed by a traditional chief on Rarotonga was in the 1950s (Evans 2001).

Though the authority of the traditional chiefs has been eroded considerably since European contact, the Cook Islands Government has allowed traditional leaders to maintain an advisory role to the government by establishing the House of Ariki, a formalised group of high chiefs (Ariki) and the Koutu Nui, consisting of chiefs and sub-chiefs (Mataiapo and Rangatira).

The state of Rarotonga's marine environment — in particular the depletion of seafood resources found in the lagoon and on the reef slope — became a matter of considerable concern to the Koutu Nui in the late 1980s and early 1990s. After a number of public meetings in 1997 relating to the development of a Tourism Master Plan, at which the public expressed concern about Rarotonga's marine resources, the Koutu Nui decided to attempt to re-establish the *ra'ui* system in some areas of the lagoon and reef slope (Passfield and Tiraa 1998).

A total of five areas were initially selected in which to implement the *ra'ui*. A series of consultations with stakeholders in these areas showed that there appeared to be sufficient support to give at least some chance of success and the *ra'ui* were declared in 1998.

There is no legal basis for the *ra'ui*. Rather they rely on respect for traditional authority (Reid undated). Any poaching is assumed to be dealt with by rebuke and community pressure. The main purpose of the *ra'ui* is to help protect the marine environment, and to contribute towards an increase in marine life for present and future generations (Passfield and Tiraa 1998).

Socio-economic benefits of the *ra'ui*

Preliminary suggestions of reviving the *ra'ui* met resistance from some community members who perceived that access to resources would be lost for those who fished the area. As *ra'ui* areas range from about 300 to 800 m in width it was explained that fishers could continue to fish outside the *ra'ui* areas. The fact that nobody relied on the resources in the lagoon for their livelihood also meant that the negative impact on the community would be minimal.

The *ra'ui* appeared to meet with obvious success within a comparatively short time of 12 months. Surveys conducted at the beginning of the *ra'ui* and later by the Ministry of Marine Resources indicated an increase in abundance of marine life. Education and awareness activities were used to promote the *ra'ui* extensively during its early stages and support for it grew. This resulted in the number of *ra'ui* increasing to a maximum number of 12. Each *ra'ui* differs in its execution. Some are short-term involving rotational closures of nearby sites, some are long term, while others involve no or partial take. The management measures for *ra'ui* sites are continually evolving; for example, part of the Tikioki *ra'ui* has now been permanently reserved (*ra'ui mutukore*).

However, the active community consultations common at the onset of the *ra'ui* became less frequent with time. Dissemination of information on the *ra'ui* through the media and other channels also declined after an initial flourish. The resulting lack of awareness has contributed to uncertainties about the current status of some *ra'ui* and unfortunately reduced support for them with infringements increasing in several.

Because of poaching problems, the traditional leaders who initiated the Pouara *ra'ui* (east side of Rarotonga) are asking for legal recognition of their *ra'ui* under the Environment Act 2003 and have commissioned a management plan towards this end. Some people believe that this will make the *ra'ui* more effective. However, this may not be the case, as although the Environment Act caters for preparing management plans for recognised PA, it is notably silent about enforcing compliance with such plans (Saul and Tiraa 2004).

Insufficient monitoring, control, and surveillance capacity is one of the major constraints to enforcing *ra'ui*. The increased poaching in some *ra'ui* areas shows that communities lack the capacity to prevent this harvesting in these areas.

Tourism operators have exploited the *ra'ui* status with some accommodation establishments marketing themselves on the basis of their proximity to a marine PA. As one accommodation owner said, "Tourists like to go to a place that values tradition." Other tourism activities include accompanied snorkelling activities and boat tours to some *ra'ui* areas.

There is no direct benefit to the traditional owners of the land adjacent to the *ra'ui* areas, who before 1915 had ownership and exclusive rights to the lagoon areas as well. In contrast, the Takitumu Conservation Area, a forested land-based PA on Rarotonga has provided direct financial benefits to the three clans who own the land through eco-tourism.

There are, however, some direct and measurable financial benefits for communities who exploit the *ra'ui* when they are opened for harvesting. For example, in 2000, the first commercial harvest of trochus on Rarotonga came from the Nikao *ra'ui*, located on the northwestern side of Rarotonga. Two tonnes of trochus were harvested and the shells were exported to New Zealand. The harvest raised NZD 35,000 for the community.

Other direct financial benefits from the *ra'ui* are minimal as resources harvested from the lagoon are mainly for subsistence purposes. However, marine resources have probably become more abundant in other areas of Rarotonga's lagoon as a result of a spillover effect as resources reach high population densities within the *ra'ui* area. A value could be calculated for these resources based on import substitution, i.e. people eat locally available foods rather than imported food sold by shops.

Not everyone agreed with the move towards legal recognition of the Pouara *ra'ui*. My late father, Tane Tiraa who held the chiefly title of Tuakana Mataiapo, was against it. I remember talking to him about this. He said, "The legalization of the *ra'ui* will weaken the *mana* (power) of the traditional leaders." I debated this point with him, suggesting that codifying the restrictions would give the *ra'ui* more teeth as people were not respecting it. When I now reflect on this discussion I am reminded that even under legally backed environmental initiatives and pre-European management systems, infringements occurred. The difference today lies more in the imposition of penalties, which are enforceable in a court of law with legally backed systems. Dorice Reid Te Tika Mataiapo said, "We would love our people to learn through education not legislation. Our approach to conservation is not through fear but through respect." The balance therefore may lie in incorporating traditional management regimes in modern legal systems.

Indirect financial benefits can be assumed to accrue based on increased tourism related to the *ra'ui*, and an associated increase in employment and revenue for accommodation establishments and tour operators. These benefits are, however, difficult to quantify without conducting a detailed study. Further financial benefits could be gained by the community if a system was in place requiring tourism operators utilising the *ra'ui* areas to pay a small fee to contribute to their upkeep (e.g. signs, education and awareness activities, etc.).

Aside from the potential income, there are also probable health benefits for people who eat fresh seafood rather than processed and often fat-laden commodities such as tinned corn beef from the local shops. However, because there were no baseline dietary surveys before the *ra'ui*, it is not possible to verify this.

There are also educational benefits for the younger generation of the community as *ra'ui* areas have been utilised for school field trips. However, while biodiversity conservation ethics may have been conveyed to students through these educational trips, the adult population has been less exposed to such information.

Costs associated with *ra'ui*

The *ra'ui* have had minimal financial input. There was support by WWF Cook Islands for preparation of management plans and awareness activities, and from NZAID for signage/demarcation in the initial stages of the *ra'ui*. The business sector has also provided some support for the maintenance of the *ra'ui*. The Ministry of Marine Resources has undertaken periodic surveys of the *ra'ui* and the National Environment Service has been working with one community to develop legal support under the Environment Act. The *ra'ui* are managed by the Koutu Nui. However, as the Koutu Nui does not have funding, this management is done on a voluntary basis. In addition, the amount of attention devoted to the *ra'ui* is inconsistent due to the other commitments and projects of the Koutu Nui. Therefore, the operation and maintenance of the *ra'ui* currently rely on the goodwill of the community.

Integration of *ra'ui* into ICZM

It has been assumed that the decline in marine resources in recent decades is mainly the result of over-harvesting by the community. There has been insufficient attention to activities on the land, which have probably had at least an equal, if not greater effect on Rarotonga's lagoon. One drawback of the *ra'ui* system as it is currently practised is the lack of links to land-based activities. Recent

health problems experienced in Rarotonga suggest that pollution on the land is having an impact on the lagoon, and the lack of an integrated approach to coastal management may be causing problems for the marine environment as well as affecting the health of local people.

In the Titikaveka area of Rarotonga, in 2003 and 2004, people swimming in the lagoon experienced a range of health problems, including a painful, burning sensation in the nose, running noses and sore, watery eyes, breathing difficulties, skin rashes and throat irritation. These problems also affected people on land who had not been swimming. Though the exact cause of the irritation has not yet been determined, it usually occurs after heavy rain and it is thought that it may be associated with pollution of inland areas that is being washed into the streams and down to the lagoon. The onshore breeze then causes some of the irritant to become airborne and blows it back, affecting people on the coastal fringe.

A number of initiatives have been taken recently to address these problems. For example, a project is underway to provide pig sewage digesters to pig farmers on Rarotonga in an effort to reduce pollution entering the streams and lagoons. The increase in tourism has led to a higher density of accommodation right on the coastline, leading to problems of sewage control. Almost all of Rarotonga's sewage is discharged through on-site septic tanks that consist of a single-chamber primary collection tank with an adjoining soakage cesspit. Research is currently underway to assess appropriate sewage systems for small tourism accommodation facilities. The Cook Islands Chamber of Commerce Environment Committee is compiling information in a bid to encourage accommodation providers to use better designed septic systems. Currently there are no specific regulations on the types of systems that must be used and septic tanks are not monitored by the Public Health Department, which is the responsible agency.

Conclusion

The recent use of *ra'ui* began well, but long-term enabling activities to ensure effective conservation measures appear to be less than adequate. There are a number of reasons for this — the most obvious being a lack of financial support to ensure dedicated and appropriate effort is expended on the *ra'ui*, where required. On the other hand, the more established PA in the outer islands seem less dependent on financial resources. This is partly because some of these PA are a considerable distance from the main island (e.g. Takutea, which is uninhabited) or are integrated into daily life as a matter of survival, as in Pukapuka.

Continued education and awareness is important to maintain support for the *ra'ui*. *Ra'ui* were well supported when intensive public education/awareness and community meetings were organised. This demonstrates that such activities must be maintained throughout the existence of a *ra'ui*.

Changes in customs have seen a shift in the way *ra'ui* are governed. For example, their importance in food conservation is less vital today than when society was largely subsistence based.

In the past, traditional leaders executed *ra'ui*. Now, the introduction of overriding legislation and new authorities for regulating PA, such as the Island Council and Environment Service, have weakened the authority of the Aronga Mana (traditional leaders) to effect *ra'ui*. The shift of power from the Aronga Mana to Government has displaced the power base of the traditional leaders.

The revival of *ra'ui* has restored some of the respect that previous generations had for their traditional leaders, and it is possible that this could be an important factor in getting community support for any expansion of PA into terrestrial areas on Rarotonga.

Lessons learnt

- In today's conditions, PA require financial input for long-term effective management.
- Gaining and increasing support for PA requires dedicated, continuous, and focused commitment to awareness and education activities.
- To avoid confusion over the roles and jurisdiction of various entities in relation to PA, in particular island councils and national government, awareness raising should not only remind people of the existence of *ra'ui* and their benefits, but should also publicise the roles of those concerned with the *ra'ui*.
- Management of lagoon areas alone may not be sufficient to solve all the problems. An integrated approach incorporating management of land-based activities that affect the lagoon is also needed.

Additional note

The Asian Development Bank is assisting the Cook Islands Government to develop an integrated system of regulations, bylaws and laws that together will provide institutional mechanisms for the effective and coordinated implementation of the Environment Act 2003 (TA 4273-COO: Legal and Institutional Strengthening of Environmental Management).

The focus will be on formulating appropriate regulations and bylaws to facilitate compliance and enforcement, and the review of legislation that may require amendments as a result of the enactment of the Act.

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