# Amal/Crab Bay Tabu Eria review, Malekula Island, Vanuatu

By Francis Hickey

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SPREP PO Box 240, Apia Samoa E: sprep@sprep.org

T: +685 21 929 F: +685 20 231

Website: www.sprep.org

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# Acronyms

ACTE Amal/Crab Bay Tabu Eria CF **Community Facilitators** CMT**Customary Marine Tenure** FEO Forestry Extension Officer LUPO Land Use Planning Office **IWP** International Waters Project MCManagement Committee MPA Marine Protected Area

REDI Rural Economic Development Initiative
RFDO Rural Fisheries Development Officer

PSA Participatory Situation Analysis
VTRM Vanua-tai Resource Monitors
WSB Wan Smolbag theatre group

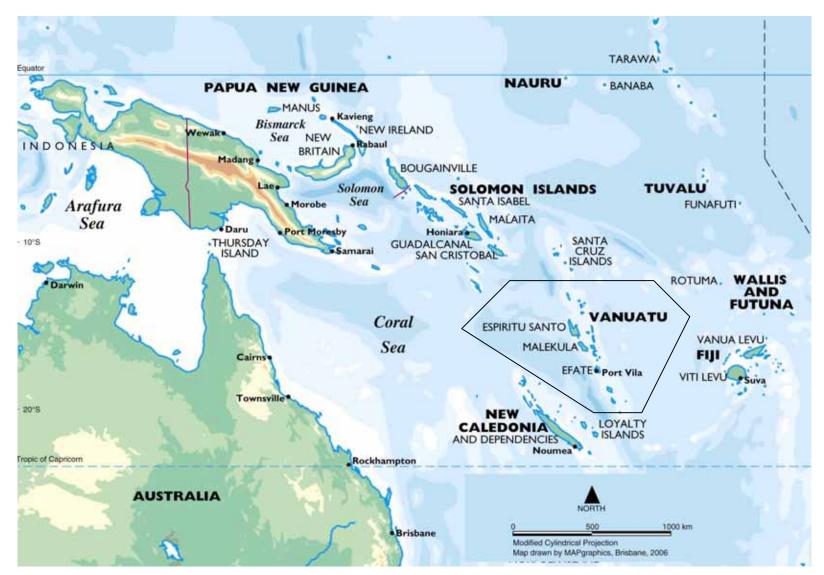


Figure 1: Map of Vanuatu

### 1 Background

#### International Waters Project

The International Waters Project (IWP)<sup>2</sup> is a 7-year, USD 12 million initiative concerned with management and conservation of marine, coastal and freshwater resources in the Pacific islands region, and is specifically intended to address the root causes of environmental degradation related to trans-boundary issues in the Pacific. The project includes two components: an Integrated Coastal and Watershed Management (ICWM) component, and an Oceanic Fisheries Management component (the latter has been managed as a separate project). It is financed by the Global Environment Facility (GEF) under its International Waters Programme. The ICWM component is implemented by the United Nations Development Programme (UNDP) and executed by the Secretariat of the Pacific Regional Environment Programme (SPREP), in conjunction with the governments of the 14 independent Pacific Island countries: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. The ICWM component focuses on integrated coastal watershed management, and supports national and community-level actions that address priority environmental concerns relating to marine and fresh water quality, habitat modification and degradation and unsustainable use of living marine resources through a 7-year phase of pilot activities, which started in 2000 and will conclude at the end of 2006.

#### Pilot project selection

During a review of the priority environmental concerns in Vanuatu (Tapisue et al. 2003) sustainable coastal fisheries were highlighted as an area for action under the IWP.

IWP Vanuatu, in close consultation with the National Task Force, screened a number of potential communities to host the IWP pilot project. Coastal resource management has increasingly become a priority in many communities, but is sometimes hampered due to the lack of cooperation within and among communities, often as a result of land boundary and village leadership disputes (Johannes and Hickey 2004).

Despite these constraints, initial collaboration efforts were undertaken by the various traditional resource owners within Crab Bay and Malampa Provincial Authority,<sup>3</sup> through the Rural Fisheries Development Officer, with the goal of establishing a local tabu covering all resources. The goal was to arrest the decline of marine resources in Crab Bay, and this was seen as a significant opportunity for the IWP pilot project. The core Crab Bay communities (comprising seven villages (Uripiv, Port Indir, Baddick, Leone, Lingarakh, Hatbol and Tavaliaut) and two plantation settlements (Mapest and Bushman's Bay), were ultimately selected as the setting for the IWP pilot project, in part because Malekula is one of the largest islands in Vanuatu and will be facing accelerating development pressures on coastal areas (Fig. 2). An additional factor was the rich biodiversity associated with the coastal environment, which has been impacted by extensive coconut and cattle plantations. The selection of Crab Bay was based also on the strength of the initial actions undertaken by the community, and their commitment to sustainable coastal resource management.

<sup>&</sup>lt;sup>1</sup> Community based activities may include low-tech solutions to addressing environmental degradation while national level activities may involve activities that have a broader or more strategic focus.

<sup>&</sup>lt;sup>2</sup> IWP is formally titled Implementation of the Strategic Action Programme of the Pacific Small Islands Developing States.

<sup>&</sup>lt;sup>3</sup> Malampa Province includes the main islands of Malakula, Ambrym and Paama, from which its name is derived.

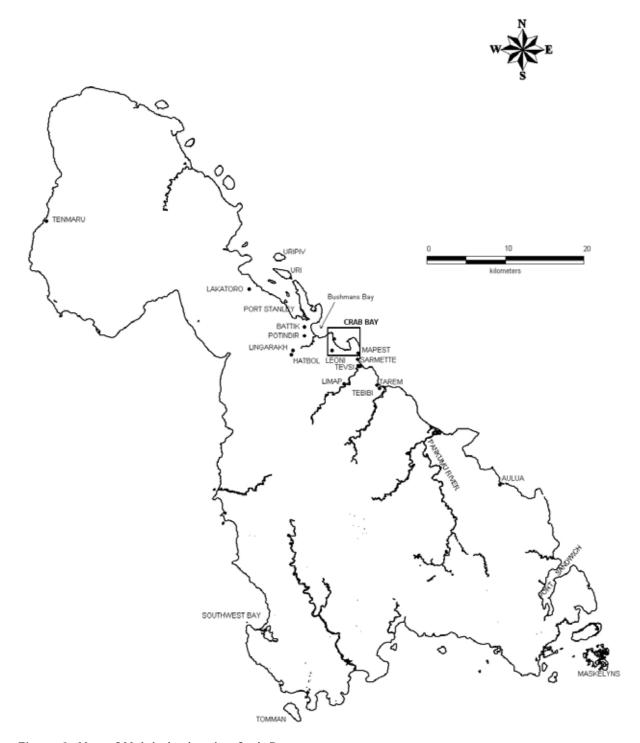


Figure 2: Map of Malekula showing Crab Bay.

Socioeconomic factors must be considered when addressing sustainable management of coastal fisheries resources in Vanuatu and other Pacific Islands. This is particularly the case for a pilot project, which is intended to generate best practice lessons that may be replicated elsewhere in Vanuatu and the region. The Crab Bay area has a number of coastal communities where the livelihood of local people depends significantly on marine resources, especially for income generation. It is expected that the lessons learned will be of value assisting nearby coastal communities facing similar opportunities and constraints.

#### IWP in Vanuatu

The IWP in Vanuatu is a collaborative effort between traditional resource owners at Crab Bay, Malekula, the MALAMPA Provincial Administration, two neighboring commercial coconut/cattle plantations (MAPEST and Bushmans Bay), the Environment Unit, the Fisheries Department and Department of Forestry. The project in Vanuatu is steered by a National Task Force (NTF), which includes representatives from the pilot project site, government and NGOs. The National Coordinator provides the day-to-day management in consultation with the Management Committee (MC), while Community Facilitators (CFs) are responsible for capacity building of community members and on-the-ground implementation of IWP activities at Crab Bay.

IWP, under the guidance of the NTF, is focusing on promoting sustainable use of land crab resources at Crab Bay by strengthening the traditional system of restricting resource use through tabus. Such taboos are implemented by village leaders on behalf of communities, and may focus on fishing areas, species or harvesting methods. They are commonly used throughout Vanuatu to manage a range of natural resources (Johannes 1998, Hickey and Johannes 2002, Johannes and Hickey 2004). This system is traditionally-based (Hickey in press) and is supported by the legal recognition of customary land and marine tenure in Vanuatu (Amos 1993). The tabu in place in Crab Bay was initially established by a local community through an initiative of the Land Use Planning Office in 1996. In recognition of the strong heritage of traditional resource management of resources by community leaders and their community's, the name of this resource management initiative is Amal/Crab Bay Tabu Eria. The IWP effort is intended to promote increased community involvement and responsibility for local resource management and conservation, while strengthening traditional resource management practices.

To support the Crab Bay project a series of phased activities involving key stakeholders from the pilot communities and other relevant groups have been implemented. These include:

- stakeholder engagement and planning for stakeholder consultations;
- conducting participatory consultations using appropriate participatory tools and techniques, including Participatory Situation Analyses (PSA);
- implementing social, economic and environmental baseline assessments to assess the scale of problems and causes;
- identification and selection of solutions to address root causes; and development of action plans for implementation.

To this end, a series of activities related specifically to the pilot communities have occurred to date. These include:

- preliminary investigation of issues and socioeconomic baseline assessment in the pilot communities (April 2004);
- PSA workshop in October 2004 and further socioeconomic baseline assessment in December 2004;
- an ecological baseline assessment commencing in November 2004.

This report relates specifically to the recommendation from the PSA workshop for the need to assess the effectiveness of the existing locally-initiated tabu, to identify areas for strengthening to support sustainable management of coastal resources in Crab Bay as part of the implementation of the IWP pilot project. The execution and preparation of this review was closely linked with an Ecological Baseline Survey and Socioeconomic Survey of the Crab Bay communities (reported separately). See Annex 2 for the review terms of reference.

### 2 Methodology

This review was performed by initially surveying any literature pertaining to the Crab Bay area, as well as conferring with national and provincial government and NGO personnel who have been involved in resource management efforts in the area. The literature (both published and unpublished) is referenced in the literature cited. Much of the information, however, came from the community members themselves. A broad range of community members — including fishers, village leaders and members of the Amal/Crab Bay MC, and CFs — were interviewed. A list of personnel consulted, including government and NGO staff and primary community informants, is given in Annex 3.

The Ecological Baseline Survey was carried out simultaneously with this review, and in conjunction with the socioeconomic study; readers are referred to those reports for additional and related information on the Amal/Crab Bay Tabu Eria.

# 3 Amal/Crab Bay area

Crab Bay, located in eastern-central Malekula, is an area rich in biodiversity. This is due in part to extensive mangals (mangrove forests), which provide nutrient enrichment to the semi-enclosed embayment (Figure 3). The green waters within the inner bay are lagoon-like and highly productive, supporting soft corals, seagrasses, turtle and dugong populations as well as a fish community typical of lagoons including mullet (Mullids), rabbit fish (Siganids), scads (Carangids), mackerel (*Rastrelliger* spp. and Scombrids) and sardines (*Sardinella* spp.). The bay is surrounded by two large fringing reefs covered in seagrasses and coral rubble and pavement. The fringing reef drop-offs, enriched with freshwater springs, support hawksbill turtles, a variety of corals and an abundance and diversity of reef fish typical of the Indo-Pacific; beyond the reefs are deep (1000 m) waters. Tuna (Thunnids) and other pelagic fish are seasonally abundant off Crab Bay.

Crab Bay is in fact an oasis of biodiversity, both terrestrial and marine, surrounded by extensive plantations of coconuts intercropped with cattle (and more recently cacao) that cover most of Malekula's coastal plain. Many of these plantations were established by European colonists in the late 1800s and early 1900s. This had a significant impact on the biodiversity of the area, due to the extensive clearing of coastal forests and resultant sedimentation within watersheds and fringing reefs. These plantations continue to dominate the coastal plain of eastern Malekula from Tenmaru in the northwest to Port Sandwich in the south (see Figure 2), although some are now overgrown due to uncertainty over tenure since independence in 1980.

Following the local terminology used for this area, Crab Bay refers to the eastern headland of the bay, while Amal refers to the smaller, western headland. The idyllic beach spit at the end of the Crab Bay headland is also a well sheltered port with deep water extending close to the beach, thereby creating an ideal landing for ships. Under the French company, Ballande, that held Crab Bay and surrounding plantations during colonial times, this beach was used to export copra from all of central Malekula throughout the 1900s. The access road, concrete footings of their copra warehouse, water cisterns and some coconut trees near the point are the main features remaining of the site's colonial history.

The physical configuration of Crab Bay, with two headlands and their associated large fringing reefs backed by extensive mangals, makes for an ideal area to manage resources while ensuring local benefits. The high productivity and nutrient production of the extensive mangroves feeding the bay, fringing reefs and contiguous waters that are restricted from fishing will enhance their productivity and biodiversity. The central portion of the bay that remains open to fishing and resource harvesting will receive spillover and recruitment benefits from both surrounding headlands under tabu. These resource enhancement benefits will be accessible to the fishers and crab collectors of the surrounding Crab Bay communities.

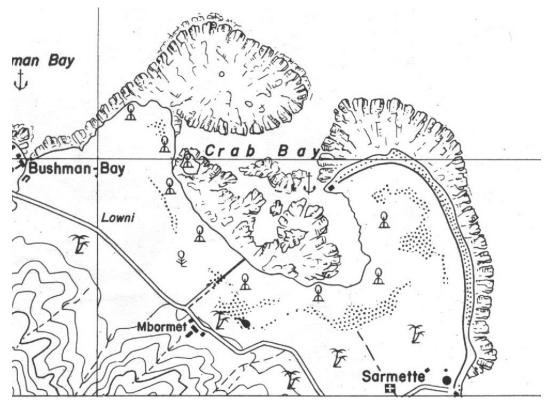


Figure 3: Amal and Crab Bay

The complete list of community's surrounding the Crab Bay area that have initiated and support this resource management effort include Tarem, Tembibi, Limap, Leoni, Hatbol, Lingarakh, Tavaliaut, Port Indir, Baddick the offshore islands of Uri and Uripiv and the plantations of Sarmette, Tevsi, Mapest and Bushman's Bay (see Fig. 4).

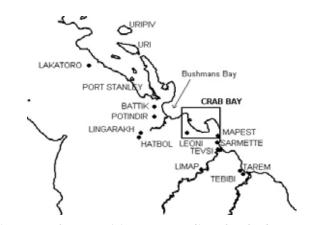


Figure 4: Communities surrounding the Crab Bay area

### 4 MPA history and objectives

Crab Bay was named by the early planters and traders of the area who noted the abundance of crabs in the area. Interestingly, the Crab Bay resembles a crab in shape, with the two headlands and fringing reefs representing the claws of the crab (see Fig. 3). Although the area was optimum land crab habitat, the significantly reduced human population after European contact (Bedford 1989) resulted in less pressure on natural resources. It is said locally that, throughout the 1900s (until independence) the colonial plantation owners were quite strict about who could access the resources within the plantation boundaries. After 1980, with the return of the plantations to indigenous control, the issue of traditional tenure throughout many parts of

Vanuatu became problematic (Van Trease 1987). This was due to extensive depopulation after European contact, land alienation that had lasted for multiple generations, as well as the migration of people to coastal areas from other parts of Malekula in response to traders, employment on plantations, and the efforts of missionaries.

The issue of customary land and marine tenure for much of Malekula's coastline (which now consists mainly of plantations along the east coast) remains unresolved. Consequently, since 1980 the Crab Bay area was openly accessed or considered open to the public, by people from throughout eastern Malekula. Locals tell of trucks arriving, particularly during the wet season when the crabs were most easily caught, and literally being filled up with crab. With the resource being so plentiful, little regard was given to management or efficient use. Crab numbers were observed to decline throughout the 1980s due to open access by such a large number of surrounding communities, in combination with growing populations and uncontrolled harvesting.

In 1996, the Land Use Planning Office (LUPO) held meetings regarding establishment of a community area resource management action plan in the nearby village of Limap. These workshops identified a general decline in natural resources, including marine and mangal, due to a growing population, the emergence of the cash economy (monetisation of resources), the use of destructive fishing methods, and the introduction of modern fishing gear (beginning around 1980) (Vanuatu Land Use Planning Project, 1996). The declining trend was the same for crabs, for the reasons quoted above, coupled with open access to this area, due to unclear customary tenure.

With greater resource awareness as a result of the LUPO workshops, the community of Limap initiated a customary tabu on the taking of crabs from the Crab Bay area. This tabu was well observed by the people of Limap, but not by the surrounding villages. This was at least partially due to the lack of prior consultation with other stakeholders in order to gain their input and agreement with the idea of restricting access to the resource. As some neighboring communities also had tenure claims on the area, at least in principle, they did not feel inclined to respect the Limap community's tabu, particularly without consultation. To do so would undermine their own claims to the area. The mixed nature of the population, including people from other islands settled on nearby plantations, was also a contributing factor to the lack of respect for a tabu, as people from other places are less inclined to respect local restrictions. Also, since prior to independence, plantation workers generally had open access to the resources for subsistence purposes, which made it that much harder to impose restrictions.

The LUPO workshop also identified a decline in customary respect and values (which affected resource use and compliance with customary resource management measures), due to (i) the increase in western education, (ii) the death of older community members (who were rich sources of customary knowledge and generally commanded respect), and (iii) the influence of the church, which had made many efforts to undermine traditional systems. These factors, in addition to increases in population and in the number of youth involved in hunting and fishing, were perceived to lead to a continuing decline in "wildlife."

The 1996 tabu implemented in Crab Bay by the Limap community was initiated with the advice and support of the Fisheries Department (a Rural Fisheries Development Officer (RFDO) is based at the Provincial headquarters of Lakatoro), following their policy of supporting village-based resource management within the framework of customary marine tenure (CMT) (Amos 1993, Johannes 1998). As noted, it was difficult to enforce customary tabus due to the various outstanding land tenure claims in the area and resultant tension between villages. Where they exist, land and marine tenure and leadership disputes have been shown to significantly undermine village-based marine resource management in other areas of Vanuatu (Johannes and Hickey 2004). This was the case for the Crab Bay area until recently.

Under these circumstances, the process of resolving differences and initiating a change in attitude towards resource use is normally a lengthy one. However, by the year 2000, the other

stakeholder communities in the Crab Bay area that utilized and depended on the marine resources of the area became concerned with the decline in crabs and other resources. A related issue arising in 2000 concerned the village of Leoni, which harvested and shipped mangrove trees (primarily *Ceriops tagal*) to Port Vila for use in house construction. The clearance of live mangroves for commercial purposes further highlighted the need for resource management and habitat protection in the area. After two mangrove shipments, the Fisheries Department interceded and stopped the shipments, on the grounds of protecting important fisheries habitat <sup>4</sup>

Given the ongoing concerns raised by community leaders regarding the general decline of natural resources in Crab Bay, the Fisheries and Forestry Officers responsible for the area organized consultations among stakeholders to discuss the issue. The Officers encouraged the communities to separate the issues of land and marine tenure and resource management. This was a logical and necessary distinction, as land claims with multiple disputants are rarely straight forward or quick to resolve, and it was clear that the resources were being negatively impacted because the disputed claims. This concept was gradually accepted by the community leaders, and the idea of joining together to create a tabu area for crabs to safeguard the resource gained increasing support. Initially the tabu was to be solely at Crab Bay (the easternmost headland), but as a result of the consultations, stakeholder communities decided to also include the adjacent headland known (Amal) (see Fig. 5).

In September 8, 2002 a formalized agreement was made among the villages of Loeni, Tavaliaut, the Department of Fisheries and the traditional leaders (referred to as Chiefs) of the area to put a tabu on the two headlands of Amal and Crab Bay, including their respective fringing reefs. The agreement states that it is tabu to catch fish, shellfish, take crab, cut any trees including mangroves or to make a fire inside the tabu area for the period of one year. The fine for a breach was specified at 5000 vatu (VUV)<sup>5</sup>. The agreement was signed by representatives from Lingarakh, Bushman's Bay, Leoni, Tavaliaut, Limap, Litzlitz, Port Indir, Uri and witnessed by representatives from Mapest, Tevsi and Bushman's Bay Plantations along with the Fisheries Department and the Vanuatu Police Force based at Lakatoro. This agreement was the fruit of extensive stakeholder consultations and the beginning of a much stronger and widely accepted tabu at Crab Bay.

To assist with the ongoing consultative process and management of the tabu area following this agreement, representatives from all stakeholder communities of the area were selected by their respective communities to form a Management Committee (MC). Initially, the objectives of the tabu were simply to protect the resources within the area from being further impacted by overharvesting. With the support and intervention of IWP (beginning in November 2003), which included (i) stakeholder participation and training provided in the subsequent Participatory Situation Analysis (PSA), (ii) a Socioeconomic Stakeholder Survey, and (ii) the project's other awareness efforts, the commitment to supporting the tabu area has been significantly strengthened among all sectors of the community, including community leaders, fishers, women and youth. The objectives put forward and agreed upon at a meeting in February 2005 by the MC in relation to the Amal/Crab Bay Tabu Eria (ACTE) are to:

- 1. Allow the crab population (number and size) to return to former levels for the sustainable benefit of communities for both subsistence and revenue generation, now and in the future. The two headlands will thus act as a source of crabs to adjacent open areas through spillover and larval export (recruitment) effects.
- 2. Allow the marine resources, particularly fish and trochus, to recover and flourish

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<sup>4</sup> To date, there is no national or provincial legislation, nor a National Mangrove Management Plan in place to assist with the management of mangroves in Vanuatu. However, the Departments of Fisheries, Forestry and Environment Unit promote sustainable mangrove management as a matter of policy.

<sup>&</sup>lt;sup>5</sup> Equivalent (as of September 2006) to approximately 45 US dollars.

- for the sustainable benefit of local communities for subsistence and revenue generating purposes through spillover and recruitment effects.
- 3. Allow the terrestrial resources of the ACTE, including valued resources such as wild birds, flying foxes, mangals, medicinal and other plants, thus providing spillover and recruitment effects for the sustainable benefit of communities.

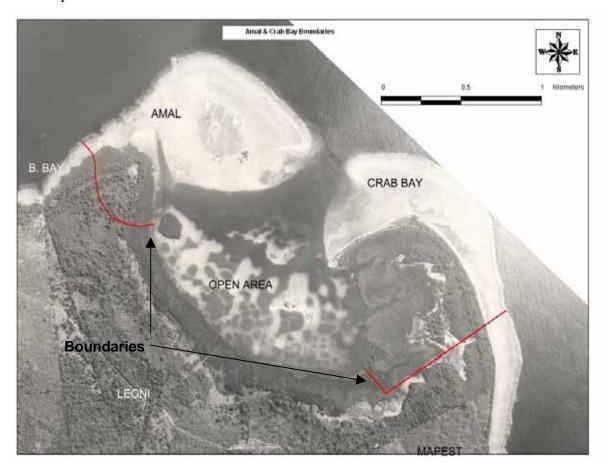


Figure 5: Amal/Crab Bay Tabu Eria

The two low-lying headlands are primarily composed of dense mangals, which are partially inundated with seawater at high water spring tides, with some adjacent lowland coastal forest, thus creating prime terrestrial crab habitat. The two large fringing reefs adjacent to the headlands, which contain extensive seagrass beds and good trochus and green snail habitat, are included in the tabu. The western headland, Amal, has the larger fringing reef (with some mangals on it).

The long-term objective is to develop the Amal/Crab Bay area for eco-cultural tourism purposes. The target group includes yachts, and the attractions would include surrounding inland communities. The objectives include:

- 1. Generate revenue from the ACTE.
- 2. Revive and transmit traditional practices (including custom dances and other performances, and handicraft production such as carving, weaving, and canoe building and sailing) from elders to youth.
- 4. Assist in the strengthening, revival and use of traditional management practices and use of traditional knowledge to actively promote the use and transmission of this knowledge.

<sup>&</sup>lt;sup>6</sup> Equivalent (as of September 2006) to approximately 45 US dollars.

- 5. Promote and foster cooperation, understanding and respect within and among various stakeholder communities, while achieving a common goal of sustainably managing the natural resources of the area.
- 6. Use the ACTE for research and educational purposes to promote the use of traditional practices and knowledge (e.g. vernacular language names of plants, fish, birds, and reptiles, medicinal qualities of plants, and traditional harvesting practices) and the traditional management of resources.
- 7. Use the ACTE to further other opportunities, especially employment and alternative revenue generation, in order to support local communities (e.g. sale of local produce to visitors, horseback riding, and plantation and nature interpretative tours).
- 8. Promote the ACTE as a model for other communities to promote the sustainable use and management of natural resources by recognising, strengthening, utilising and transmitting to youth traditional management practices and knowledge.
- 9. Assist in the management and conservation of any endemic, endangered, rare or unique species present in the ACTE. Endemic lizards, birds and flying foxes are known to reside in the ACTE; two endangered species of turtles (green and hawksbill) have become plentiful in the ACTE; hawksbill and possibly green turtles also nest within the ACTE. The critically endangered leatherback turtle was also formerly found at the nearby blacksand beach at Sarmette.

### 5 CMT and ownership arrangements

As indicated, the CMT and land tenure arrangements in the ACTE and surrounding Crab Bay area are highly complex and further complicated by the extensive land alienation, depopulation, migration and inter-mixing of peoples that occurred prior to independence. Local sources indicate that the flat and arable coastal plain of eastern Malekula was alienated from the indigenous people starting in the late 1800s/early 1900s, and forms a chain of large copra and cattle plantations from the northwest south to Port Sandwich (see Figure 2). Fig. 6 indicates the extent of alienated land (leased) land — primarily in the form of large plantations dating from colonial times — on Malekula as recorded by the Vanuatu Lands Department.

Colonial plantation owners employed people from other parts of Malekula to work on plantations, starting in the early 1900s and continuing until recently. Some plantation owners also found it expedient to bring people from other islands, particularly Ambrym, Paama, Pentecost and the Banks Islands, to work in the plantations in this area. Many of their descendents remained on the plantations and continue to live and intermarry with the local and introduced population.

Starting in 1889, a Presbyterian Mission was established on the small offshore island of Uripiv (it had originally had been established at Lembubu on northwest Malekula, but was moved to Uripiv after extensive depopulation occurred at Lembubu). Many people migrated from other parts of Malekula, including the inland and western parts, to live closer to the mission on Uripiv. Prior to the colonial period, there appears to have also been a tradition of Uripiv Island leaders taking in mainland clans under threat by warfare (Frank Kenneth, Uripiv historian, pers. comm.). The history of Vanuatu is characterized by extensive migrations, warfare, trade and marriage alliances, mixing, mobility and isolation, probably since people first arrived on these islands more than 3000 years ago, giving rise to the highest linguistic diversity per capita in the world (Tryon 1996).

Local sources indicate that just prior to independence in 1980, some Uripiv residents moved back to mainland Malekula, to which they had historical ties, to establish the communities of Port Indir and Leoni. at about the same time, some Lakatoro civil servants and plantation workers, originally from Lopevi and Paama, bought a plot of land from Lingarakh people to

establish the village of New Bush. In 1980, a family left Lingarak to establish the small settlement of Lasarsar, located close to the boundary of the ACTE on Amal. Also at this time, Baddick village was established by Malekulan workers from the nearby Kidley Plantation, which was abandoned at independence. These recent migrations, along with the extensive intermarriages between and among descent lines from villages of this area, including with migrants from other islands, has created a complex web of kinship ties among the various stakeholder groups, which further complicates the process of defining land and marine tenure, as well as resource access and fishing rights.

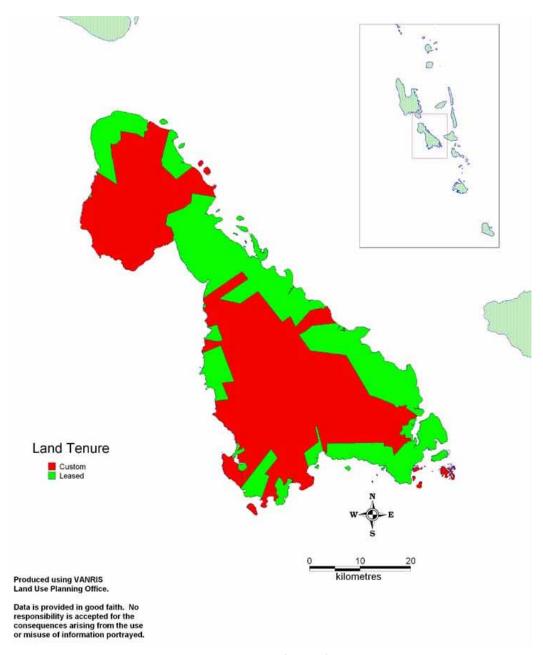


Figure 6: Areas of Malekula with alienated (leased) status.

There are three different indigenous Malekulan cultural/linguistic groups among the stakeholder villages, in addition to those brought by the migrant and settled plantation workers from the islands of Paama, Ambrym, Pentecost and the Banks Islands. The groups within the Crab Bay area are summarized in Table 1.

Table 1: Linguistic groups in the Crab Bay area

Language	Communities
Uripiv	Uripiv and Uri Islands (the latter formerly had their own language, but have adopted that of Uripiv upon losing their own), and Leoni, Baddick, Port Indir villages.
Neverver	Lingarak and Limap villages
Hatbol	Hatbol, Tarem and Tembibi
Paamese	Tavaliaut and New Bush village
Mixed languages	Mapest, Tevsi (primarily Limap residents), and Bushman's Bay Coconut Plantations, with mixed populations mainly from the islands of Ambrym, Paama, Pentecost and the Banks as well as from other parts of Malekula.

To date, the land and reef tenure of the Amal/Crab Bay Tabu Eria remains under dispute by the stakeholder groups, although no formal claims have been put forward by any disputing party. Much of the land (and some reefs) of much of eastern Malekula are, in fact, under dispute for the same reasons as listed above. Many of these claims are tied up in the courts, with some awaiting trial; other claims have not been formally lodged but exist between local communities. Due to the extreme complexity and sensitivity of land and marine tenure issues, this report can make no absolute assertions concerning the tenure of land or reefs in the Crab Bay area.

However, the land boundaries (but not necessarily the tenure in all cases) of most of the plantations (e.g. Bushman's Bay, Tevsi and Mapest) are well defined, as these lands have been under registered titles since colonial times and are fenced. The Mapest Plantation was originally established by a large French company called Ballande, and originally included Sarmette Plantation. From a practical point of view, the fenced plantation of Mapest controls access to the southern headland of Crab Bay and the associated nearshore reefs. As these reefs are exposed to the SE trade winds, they are not otherwise easily accessible by canoe or small boat for fishing, due to the rough sea conditions which prevail in this area.

Since 1992, Mapest has leased the former Ballande plantation land, which includes the Crab Bay headland as part of the same title, from the people of Limap village, who appear to have unchallenged customary tenure. There are a number of parties within the village who share tenure, and thus share the revenue derived from the lease of Mapest. They have chosen to place this headland as well as the associated mangroves and fringing reefs under long-term tabu, in cooperation with the leaseholders of Mapest. Some Uripiv families reportedly dispute Limap's tenure to this area, as a result of their use of the reefs to hunt turtle, and collect trochus and green snail.

Uripiv Island residents also claim tenure over the Amal reef, which is geographically closest to them. They have normally accessed Amal primarily for trochus, green snail and turtle resources. The first two are commercial resources, while turtles are harvested for subsistence.

Following the declaration of the ACTE in 2002, the fishing grounds currently used by the various stakeholder groups are indicated below (Table 2). These fishing ground divisions are primarily a function of geography and therefore proximity to the resource areas (see Figure 4 for areas referred to).

Further exceptions to these general Crab Bay access rights include for other secondary rights holders who have marriage alliances with Leoni. Thus, residents of Baddick, New Bush and Port Indir with in-laws, or *taowians*, from Leoni may have secondary access rights to the open area within Crab Bay when accompanied by an in-law. Otherwise, on occasion, residents of any village may gain access to this area after successfully requesting permission from a Leoni resident. Leoni will generally give permission, as is the local custom, although it is said that sometimes Leoni will restrict residents of Tavaliaut, whom they consider to over-harvest the resources on occasion. There is also a local belief held that fishers who are not accompanied by Leoni fishers will not catch much of anything.

Table 2: Fishing grounds used by stakeholder groups

Villages	Fishing grounds accessed		
Uripiv and Uri	Residents no longer access Amal due to the tabu, instead utilising alternative areas for turtle hunting and trochus and green snail colection. The distance from Uripiv, and the fact that it has much closer and accessible fishing grounds for fish, shellfish and turtle means they now do not normally access the open reefs of Amal towards Bushman's Bay.		
Limap, Mapes, Tevsi, Tembibi, Tarem, Ransari Plantation	Residents collect crab and fish from areas outside the ACTE on the Crab Bay side, as well as from areas further south in the vicinity of Tarem, Tembibi. However, the villages of Limap, Tembibi, and Tarem are more dependant on river and bush resources as a source of wild meat than on marine resources, and are not generally avid marine fishers. These groups primarily use land crabs for subsistence purposes and rely more on copra and cacao for revenue. The Tevsi people are primarily Seventh Day Adventist (SDA), and are thus restricted from eating marine resources that lack scales; they do not collect crab and shellfish.		
Leoni	Villagers have primary rights to fish in the open area of Crab Bay, including mangle and reef. The open area is between the two headlands covered in the ACTE as indicated on Figs. 3 and 5.		
Tavaliaut and New Bush	Some residents have secondary rights to this area by virtue of marriage alliances, which restricts them to accessing these areas with permission, and in the company of primary rights holders from Leoni (normally, their in-laws). Some also have secondary rights, again through marriage alliances, to the more distant reefs towards Terem and Tebibi.		
Hatbol, Lingarak, Port Indir, Baddick and Bushman's Bay	Residents all access crabs and marine resources on the Amal/Bushman's Bay side of the ACTE (by virtue of geographical proximity). However, the people of Hatbol and Lingarak are primarily dependant on bush and river resources as sources of wild meat. They also rely mainly on their copra and cacao plantations as a source of revenue. Port Indir residents also have customary claims and access to the next headland further north (known as Nunbeken) for marine and crab resources (although this area is also subject to rotational tabus).		

Thus, fishing ground access within the open areas of Crab Bay is effectively controlled through the main access (due to the dense mangals surrounding the bay) by the Mapes plantation and the Leoni 'passage'. The passage, or canoe landing, is a lane cut by a bulldozer in the late 1970s from the main coastal road near Leoni village site through the mangals to the sea in Crab Bay. It is visible in the aerial photograph of Crab Bay (Fig. 5). Leoni village's location in Crab Bay effectively gives them control over the main access route to the central portion of the Bay (where fishing is open). The expanse of dense mangals serves to otherwise restrict access, and the fact that other groups have no place to keep a canoe limits the fishing their fishing.

Historical and cultural links with marine resources are an additional factor controlling which communities access the marine resources in Crab Bay area. As some communities are located inland, with much stronger links to bush and freshwater resources, as well as having well established copra and cacao plantations for revenue genration, their motivation to harvest within Crab Bay is reduced. These include the communities of Tarem, Tembibi, Lingarak, Limap and Hatbol.

### 6 Institutional arrangements

Formation of the MC began with the original declaration of the resource management initiative in October 2002, and comprised two representatives from each of the 11 villages surrounding the area. In addition, the MC includes the local Fisheries and Forestry Extension Officers based at Lakatoro, as well as the Provincial Area Secretary (there are 6 Provincial area councils throughout Malekula that assist with the decentralization process and collect revenue for the Province) and the Provincial Project Officer. This committee was formed as the primary decision making body to administer, guide and manage the establishment and running of the Tabu Eria.

Members were selected by their respective communities to represent them in the committee. Most of them are village leaders, referred to as chiefs. Some of the more elderly leaders involved in the early consultation process and initiation of the ACTE have since delegated one of their sons to take their place on the MC. In addition, the Chairman of the Malekula Council of Chief's, a traditional Hatbol leader, is a member of the MC. Effort was made to also include representation from each of the families that have tenure claims within the Crab Bay area, so as to continue to foster communication and cooperation between these parties.

The Fisheries and Forestry Officers have been effectively acting as pivotal resource people and facilitators throughout the consultative process of strengthening the MC and the ACTE. The Fisheries Officer also liaises with the Fisheries Department in Port Vila regarding other related projects, such as trochus restocking and monitoring. They have also been the primary link between the communities and the IWP team in Port Vila.

The Provincial Area Secretary and Provincial Project Officer (under the Rural Economic Development Initiative [REDI]) provide links to provincial support for the ACTE, while assisting to harmonize the ACTE with other provincial initiatives. For example, it is envisaged that the Province-run market house in Lakatoro, where crabs and other shellfish resources are sold, will assist in data collection of crab resources sold in the market. In addition, if considered necessary, seasonal control of crab or other resources sold through the market could be implemented by provincial authorities. The REDI Officer is also involved with tourism development within the Province, and may be able to assist with the long-term objective of developing the ACTE as an ecocultural-tourism destination. The current membership of the MC, their village of origin, and status in the community and MC are listed in Table 3.

### 7 Traditional leadership and resource management

In the past, traditional leaders in the Malekula area were ranked following the strict and complex rules of the *nimangi* system, which involved an ascending hierarchy of titles associated with a series of initiation rites, where traditional knowledge was passed to the initiates while accumulating and redistributing wealth in the form of tusked boars (Layard 1942). These tusked boars were raised with great care, with some hand fed to keep the circular tusk from being damaged. They were often acquired on loan from others who supported their ascendancy, and this created a complex web of social and economic alliances among and between clans. The tusked boar's ultimate sacrifice on the ceremonial grounds, in groups of a 100 or more in some cases, and distribution to other leaders and clan members witnessing the sacrifice, elevated the leader socially and spiritually, and the new title acquired in these rituals reflected this new rank.

With ascension to each new grade, the leader was initiated into a higher realm of spiritual knowledge and power associated with the ancestors. It included the power to place and remove a tabu, and this power commanded the respect of all, such that these tabus were well observed. The consequences for not doing so included not only heavy fines in traditional wealth (pigs, mats, etc.) commensurate with the grade of the leader that placed the tabu, but also retribution from ancestral spirits, which could make the transgressor sick, or worse (Hickey, in press).

This system, in various forms, existed throughout Vanuatu in the past (although the southern islands of Tafea Province lacked a comparable graded system, being based on hereditary leaders), and is still practiced in many areas, including southern and northern Malekula. In areas of southeast and southwest Malekula, many of these traditional systems have been recently revitalized to strengthen traditional leadership and practices. However, in central Malekula, including the Crab Bay area, the graded system of traditional leaders is apparently no longer actively practiced by this generation. Members of the previous generation, including some of the MC, however, are true traditional leaders in that they have followed the traditional ordination rights of leaders including pig killing ceremonies. Some of them have only recently accepted the church.

Table 3: MC members

No.	Name	MC Status	Community Status	Village
1	Freddy Mothy	Chairman	Chief, Church leader, Plantation Manager	Tevsi
2	Manua Kaun	Secretary	Chief, CF	Louni
3	Kalplelu Banga	Member	Mechanic (former Fisheries Worker)	Uripiv
4	Lui Kelep	Member	Plantation Manager	Bushman's Bay
5	Edwin Pitae	Member	Plantation Manager	Mapes
6	William Muramur	Member	Chief, CF	Port Indir
7	Graham James	Member	Chief/Youth, CF	Limap
8	Naling	Member	Chief	Limap
9	Davis Mansen	Member	Youth	Tavaliaut
10	Tories Naus	Member	Chief's rep.	Lingarak
11	Kenos Vatdal	Member	Provincial Area Secretary	Lingarakh
12	Kevin Morris	Member	Fisheries Dept.	Lakatoro
13	Japhet Hidson	Member	Forestry Dept.	Lakatoro
14	Nathan Noel	Member	Community member	Barrik
15	Andre Peter	Member	Chief/ Malekula Council of Chiefs Chairmen	Hatbol
16	Kalen Albi	Member	Youth, CF	Lingarakh
17	Salin Song	Member	Deacon, Women's Rep, CF	Port Indir
18	Angela Moki	Member	Women's Rep, CF	Hatbol
19	Petrith Willi	Member	Chief	Uri
20	Sema Morris	Member	Chief	Leoni
21	Willy Graham	Member	Provincial Project Officer	Lakatoro
22	Robert Abel	Member	Former Councilor	Baddick
23	Numa Fred	Member	Malekula Cultural Centre Curator	Uripiv

The Crab Bay area has maintained an important rite of passage for youth: that of circumcision, where boys are sequestered in a remote location for weeks where they follow strict traditional protocols and are taught the knowledge associated with entering this new stage of their life. Aside from this pivotal initiation rite, most of the education accorded to the youth of this area of Malekula is through the western system of education provided by the government or church, which continues to omit any recognition of traditional knowledge and practices, including the respect that accompany them.

This discussion is relevant to village-based resource management, as it is apparent today that some of the village leaders have lost the respect of their communities. This problem was identified in the LUPO workshop of 1996 and is apparent in some communities today.

Many of today's leaders lack the respect given the traditional leaders of the recent past, due to the loss of traditional initiation and ordination rites and titles, and the respect that accompanies these them. Implicit in these titles, and the rituals associated with them, is a level of knowledge and code of behavior fitting of a leader. The lack of recognition and respect accorded some of today's leaders often results in a loss of power and influence compared with what traditional leaders have formerly held, and impacts their ability to effectively place and remove resource management tabus.

The loss of strong traditional leadership that commands the respect of community members appears to be a root problem of the resource management issues of the Crab Bay area. Exacerbating the decline of traditional power and respect are the numerous land disputes, often with multiple disputants.

Recognizing the decline of strong traditional leadership as a root cause of the current constraint to village-based resource management, and making efforts to revitalize traditional leadership and respect, appears to be an obvious approach to the long-term resolution of this problem. This is an option that the communities have expressed interest in, including during the LUPO workshop nearly 10 years ago.

It would also be useful to emphasize the value of the remaining traditional knowledge base for the purposes of resource management, and it should be introduced into the formal education system, so as to acknowledge the systems that have kept this island rich in biodiversity in the past. Because traditional knowledge has not been acknowledged in the school system to date, youth grow up under the impression that it has no value in the modern world.

## 8 Strengths of the Amal/Crab Bay Tabu Eria

It is generally difficult to manage natural resources in disputed areas, especially in areas with weakened leadership, as the disputants are less likely to comply with a tabu set by another disputant. To do so would be tantamount to admitting that the opposing claim had validity. One way to manage the resources of a disputed area is to have the disputants agree that

- 1. there is a need for management (i.e., the resources are significantly declining); and
- 2. the situation is serious enough to warrant cooperation by all disputants to set aside the issue of tenure, and concentrate on managing the resources.

The rational and justification allowing for the suspension of the tenure issue, is that all disputants realize that ultimately, all stakeholders will equitably benefit. In the case of Crab Bay, this is achieved by the historically affirmed knowledge that the crab and other resources within the ACTE will increase over time with a prolonged tabu. The various access areas surrounding the ACTE (in which harvesting is permitted) will provide an ongoing source of crab and other resources, through spillover and recruitment effects from within the ACTE, for sustenance as well as a means for generating revenue through crab sales at the Lakatoro market. The strong historical, cultural and subsistence links to the natural resources of this area may thus be maintained. The long-term objective of developing the area for ecocultural-tourism purposes provides an additional incentive to manage the resources well, and to retain traditional dances, carvings and other practices and knowledge, as all will serve to enhance the attraction of the region to tourists.

The process of reaching an agreement to separate the issues of tenure and resource management requires the mutual cooperation of all disputants, which may be difficult to achieve without the facilitation of a mediator. In this case the RFDO and FEO largely filled this role initially; with the support and intervention of IWP (commencing in November 2003) this process has been significantly strengthened. The awareness raising and training associated with the PSA and socioeconomic surveys, and the support of a locally-based interim Local

Facilitator, has significantly furthered this process.<sup>7</sup>

One positive outcome of the IWP intervention has been the training of CFs, who have received training and awareness regarding resource management issues through the series of participatory workshops sponsored by IWP. Their role is to provide ongoing support, awareness and reinforcement to communities regarding the Crab Bay resource management initiative, while emphasizing the inherent equitable benefit sharing. Some of the CFs are also on the MC, and these individuals are generally those who have shown exceptional interest and commitment to the initiative, and are locally recognized as "champions of conservation".

#### 9 Enforcement issues

At the time the agreement establishing the earlier tabu was signed (September 2002) the MC also established that the standard fine for breaches would be VUV 5,000 per offender per offence. To assist in regulating the tabu, it was agreed that no one is allowed within the ACTE without a good and valid reason. Exceptions include if they have received prior permission from the MC, or if they are in the company of a MC member involved in monitoring the area. The MC is also considering increasing the fine for a second offence to VUV 10,000.

A total of two breaches resulting in fines have occurred to date. The first occurred approximately six months after the original agreement. Various people reported to the RFDO that people from the villages of Tavaliaut, Leone, Baddick and Port Indir had been fishing or collecting crab from within the ACTE. As these villages all accused each other without any clear indication of what had actually happened, they agreed among themselves that each village would pay a fine of VUV 5,000 to settle the problem. This was done, with Tavaliaut paying in labour to support a community project (as they have less access to cash generating opportunities). Thus VUV 15,000 was collected in fines and held by the RFDP on behalf of the MC.

The second breach took place in November 2003, when the RFDO found three youth (sons of workers) from the Mapest Plantation collecting crab inside the ACTE. They were each fined VUV 5,000, bringing the total collected to VUV 30,000. These funds were subsequently used by the MC to assist in the establishment and maintenance of the MPA (by funding transport for members of the various villages to attend MC meetings in Lakatoro, and to clear the access lane that traverses the Amal side of the ACTE, after it was blocked by trees during a cyclone.

Until recently, all breaches were reported to the RFDP and it has been his task to follow up these complaints, investigate and raise the issue at MC meetings, and administer the funds. As part of the process of turning the responsibility for the ACTE over to the communities themselves and assisting in developing their own capacity to manage the ACTE, it was decided at an MC meeting in February 2005 that all subsequent breaches will be handled by the MC themselves. They will also administer the funds collected from breaches to support the ACTE.

An additional issue to be addressed is the clear marking of the boundary of the ACTE on the Amal headland. The boundary marker has been established on the western side of the Amal headland as the large Banyan tree (*Ficus* sp.) past the hamlet known as Lasarsar. The boundary marker on the southeast end of the Amal headland is in the mangroves adjacent to the small offshore mangrove island. The boundary between these two points is not a straight line, however, but follows the limit of the *burao* (*Hibiscus tiliaceus*) thicket on the headland (see Fig. 5).

However, there is nothing currently indicating where the boundary runs between these two points, making enforcement of the MPA difficult along this boundary, as its actual position is

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<sup>&</sup>lt;sup>7</sup> According to comments from the MC, and community members and leaders.

unclear when one is in the bush collecting crab. Boundary indicators (marks on trees has been locally suggested as practical) and the use of the *namele* leaf (used traditionally to indicate a tabu on Malekula) should be placed at regular intervals along this boundary by the MC, such that all communities are aware of (and in agreement about) the boundary placement. Having the boundary clearly marked by some means along its length would remove the uncertainty of where the ACTE begins and the open area finishes.

It would also be useful to erect a sign, in addition to *namele* leaves, at the entrances of the ACTE, both at Amal and Crab Bay. This should:

- delineate the open and tabu areas with a map;
- clearly explain what is restricted in the tabu area;
- specify the fine;
- present the information in Bislama; and
- include information about the benefit of respecting the tabu, for the benefit of future generations.

A sign in English, French and Bislama should also be placed at the beach spit at Crab Bay, for the benefit of visiting yachts. A brief note explaining the purpose of the community resource management initiative to visiting yachts would be instructive, as well as emphasizing the tabu on harvesting any resources. The MC may wish to also restrict the use of motorized dinghy's (for the benefit of the turtles and dugongs), as well as the use of jet skis, which power yachts sometimes carry and have reportedly used in the past in Crab Bay. This signboard would also be an opportunity to invite visitors to book a time for a traditional feast and to view some traditional performances, or have an interpretive tour of the area in order to assist with the initiating the long-term objective of developing eco-cultural tourism in the area. This information should also be forwarded to the organisation that markets a digital cruising guide (on CD) for yachts (which currently lists Crab Bay as a destination), to further promote awareness of the ACTE.



Figure 7: Marketing crabs

### 10 Recommendations for strengthening the MPA

From the extensive consultations held with community stakeholders, NTF members and IWP Vanuatu, the following list of recommendations emerged as a product of this review.

- Assist in the ongoing capacity building of the MC, community leaders, CFs and community members to manage resources, through continued training and awareness. This could be accomplished by encouraging the revival of traditional management practices and through the use of traditional knowledge for management purposes, as well as through the ongoing provision and integration of relevant biological knowledge (especially lifecycle, ecological and reproduction information) into a cooperative and adaptive management regime.
- Form stronger links with the Wan Smolbag (WSB) theatre group that provides ongoing environmental awareness (initially for turtles and now covering a broad spectrum of resource management issues) through their national network of *Vanua-tai* resource monitors (VTRM). There is currently a gap in the VTRM network in this part of Malekula, where turtles (including the critically endangered leatherback turtle) are regularly consumed. This would be particularly useful for raising awareness on turtle management in the ACTE area, as well as to provide further training on monitoring of turtle nesting. In addition, if community members (preferably CFs who are MC members) become active members of the VTRM network, ongoing awareness and support regarding resource management issues could then be, thus promoting an additional element of sustainability to the ACTE.
- Consider drawing upon WSB support and expertise to strengthen a local theatre group, recently established in the Crab Bay area, to develop plays and promote

- awareness regarding turtle and other environmental issues for the ACTE communities, as well as throughout Malekula.
- Emphasize the value of integrating available traditional knowledge into the management regime of the ACTE and surrounding villages. The use of traditional knowledge will assist in furthering the communities' objective of revitalizing traditional knowledge and values, including respect. This process will also deepen community sense of ownership of this initiative, while empowering them with the use of their own knowledge. This process also builds a sense of self-reliance, while strengthening links with the past, and reducing the dependency of communities on outside sources for management of their own resources.
- Develop recommendations for strengthening the MPA committee as a means for supporting sustainable resource management initiatives being implemented under the IWP.
- Provide training regarding general procedural rules in the conduct of meetings, including in establishing an agenda and passing motions, so as to enable the MC to keep minutes of meetings, and record events, workshops, decisions taken, etc.
- Secure a small building and some basic administrative and filing equipment to assist the MC in organizing the administrative side of the MPA.
- Recruit a suitable Community Facilitator, to be based within the ACTE communities, to assist with the process of strengthening the ACTE and implementing recommendations, new initiatives, monitoring, etc.
- Review the existing composition of the MC with the intention of including greater representation of all land and reef claimants, so as to foster better communication and awareness of decisions taken regarding the ACTE, while ensuring their ongoing support for the initiative.
- Review the existing composition of the MC so as to ensure fair representation of women. As women do much of the crab collecting and virtually all of the crab marketing, in addition to reef gleaning for shellfish and other resources, this is particularly important. (see Fig.
- Form stronger links and improve communication between the MC and the CFs trained through IWP workshops and awareness raising activities. At present, the CFs receive training and awareness raising, while the MC makes decisions regarding the ACTE. The CFs should raise awareness within communities regarding MC decisions.
- To ensure that traditional authority is maintained and strengthened, any additional resource management tabus or restrictions deemed necessary for areas surrounding the ACTE should be put forward by the chiefs responsible for those areas. CFs should liaise with the chiefs to advise them of the need for additional management measures, but the chiefs themselves should implement these, so as to avoid undermining authority, and creation of confusion in communities.
- The local leaders and/or chiefs should be educated regarding the benefits of revitalising and strengthening their chiefly system, in order to command greater respect, including through the use of traditional village court systems to resolve village issues. This would help to promote self-reliance in managing village affairs, including for resource management, while reducing the current reliance on the western court system, which is used even for small, village level infractions.
- Incorporate the use of some traditional protocols acceptable to all parties in the formal establishment and declaration of the ACTE. This could be done at the time of placing the signboards to indicate the boundaries. This follows from the observation that the more traditional protocols incorporated into the establishment

- of a tabu, the greater the level of respect for it (Hickey, in press). Use of these traditional practices will help to strengthen them, and help transmit them to youth. The protocols customarily used on Malekula may include practices such as a pig killing, kava drinking, sharing of food and the use of the namele leaf to indicate the tabu area boundaries. In addition, the Malekula Council of Chief's should all be present to add their support.
- The incorporation of religious protocols has been found to enhance observance of a tabu in contemporary Vanuatu (Hickey, in press), and should also be included. This could be facilitated by the inclusion of church elders, deacons and pastors in tabu area-related activities and for them to ritually put their blessing on the tabu area at a declaration associated with the placing of the boundary markers. Religious leaders from all of the various denominations in the area should be included at the declaration.
- Provincial leaders should also be included in the formal declaration of the tabu area to indicate their support for this initiative. This could also be presided over by representatives of the police to add additional support to the event.
- Production of local awareness materials (i.e., posters and videos) would provide further support and reinforcement of the value of sustainable management practices to the communities involved, and will be useful in communicating the value of the pilot project to other communities.
- Production of educational materials, such as illustrated booklets recording vernacular terms, traditional knowledge and traditional uses of locally utilized resources such as fish, shellfish, and flora, would assist communities in achieving their goals of maintaining these aspects of their language and traditional knowledge systems. These materials could be used in the local primary and secondary schools to further these goals.

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#### Annex 1: Mapping of boundaries and habitat areas

The GPS coordinates of the two headlands covered in the ACTE are given below (Table A-1) and are graphically represented in Fig. 5.

Table A-1 GPS Coordinates (in degrees)

	West Point	Middle Point	East Point
AMAL	16 09.769 S	16 09.798 S	16 09.448 S
	167 31.019 E	167 30.842 E	167 30.691 E
CRAB BAY	16 10.487 S	16 10.650 S	16 10.331 S
	167 32.252 E	167 32.416 E	167 32.894 E

The reef, mangrove and terrestrial areas within the ACTE calculated from the digital maps are as follows:

Table A-2 Reef, mangrove and terrestrial areas within the ACTE (ha)

Tabu Areas	Terrestrial	Mangrove	Fringe Reef	Totals
Amal	23.7	14.9	184.2	222.8
Crab Bay	70.1	77.5	126.0	273.6
Totals	93.8	92.4	310.2	496.4

#### Annex 2: Terms of Reference

The review of the existing MPA in Crab Bay will cover the following topics:

- History behind the establishment of the MPA why the MPA was established and its objectives;
- Description of customary marine tenure (CMT) and ownership arrangements in the MPA and surrounding Crab Bay area;
- Current institutional arrangements and membership of the MPA committee, and relationship to traditional political structure, local governance and administration;
- enforcement issues and description of any prosecutions or fines for breaches in relation to MPA area;
- recommendations for strengthening the MPA in relation to resource management actions to be implemented under the IWP; and
- recommendations for strengthening of the MPA committee as a means for supporting sustainable resource management initiatives being implemented under the IWP.

#### Annex 3: Resource people consulted

- Mrs Leah Nimoho, National Coordinator and Ms. Primrose Malalelu, Project Administrative Assistant of IWP, Vanuatu
- Mr Trinison Tari, IWP consultant assisting with Participatory Problem Analysis
- Mr Wycliffe Bakeo, IWP consultant conducting Participatory Situation Analysis
- Mr Moses Amos, Director, Department of Fisheries regarding National Fisheries Department policies on coastal resource management
- Mr Robert Jimmy, Principal Fisheries Biologist of the Department of Fisheries (DoF) to discuss the aspects of their trochus restocking program within Crab Bay that interfaces with support for the ACTE
- Mr Kalo Pakoa, Principal Officer, Resource Management and Policy Section, DoF to discuss PROCFish Survey Protocols, including for socioeconomic surveys and Results for Uripiv area
- Mr Sam Channel, (Senior Forest Conservation Officer and Curator of the Herbarium) and Philamon Ala Assistant Forest Conservation Officer within the Forest Conservation Unit of the Department of Forestry regarding existing flora and mangrove collections and conservation issues from the Crab Bay area;
- Ms. Leimon Kalomor, Forest Officer, Forest Conservation Unit regarding Department of Forestry policies and legislation regarding mangroves in Vanuatu
- Mr Ralph Regenvanu, Director of Vanuatu Cultural Centre regarding the Vanuatu Cultural Councils national policies on coastal resource management
- Mr Selwyn Garu, Secretary of Malvatumauri National Council of Chiefs regarding national traditional leaders policies on coastal resource management
- Mr Ernest Bani, Director, Vanuatu Environment Unit, regarding national Environment Unit policies on coastal resource management
- Mr Russel Nari, Deputy Director of Environment Unit (now Director General of Lands and Environment) regarding national Environment Unit policies on coastal resource management
- Mr Douglas Charlie, Department of Geology and Mines regarding geological influences including tectonic uplift rates in Vanuatu and specific information related to Malekula uplifting
- Mr Lino, Lands Records Office, Department of Lands regarding historical land claims in Crab Bay area
- Mr Renzly Hambu, Land Use Planning Office regarding mapping information available for Crab Bay
- Ms Jo Deras, Wan Smolbag Theatre Group, Port Vila, regarding historical coverage of central Malekula to WSBs environmental dramas; also any theatre training provided to date to this area and potential to assist more in this area
- Mr George Pedro, Wan Smolbag Theatre Groups Vanua-tai Resource Monitor (VTRM) Network Coordinator to discuss network coverage within the Crab Bay area and any known resource management issues with emphasis on turtles of the Crab Bay area
- Dr Kim Friedman of the Secretariat of the Pacific Community (SPC), PROCFish Project to discuss PROCFish survey protocols and Vanuatu survey results; also confer regarding accessing crab ecology, seagrass and mollusk identification information available through SPC

- Dr Mecki Kronen of SPC, PROCFish Project regarding socioeconomic survey results from Malekula
- Mr Japhet Hidson, Forestry Extension Officer, Department of Forestry, Lakatoro, Malekula and member of ACTE MC
- Mr Kevin Mores, Rural Fisheries Development Officer, Department of Fisheries, Lakatoro, Malekula and member of ACTE MC
- Chief Andre Peter, Malekula Council of Chiefs and member of ACTE MC regarding Malekula's traditional leaders policies on coastal resource management
- Mr Graham Willy, MALAMPA Provincial Government Project Officer and ACTE MC member regarding Provincial Government policies and support for resource management initiatives within MALAMPA Province
- Mr Roy Matariki, IWP Interim Local Facilitator assisting Crab Bay communities in the strengthening of the ACTE
- Mr James Fatial Bangsuh, a knowledgeable elder member of Limap village that had been traditionally ordained as a leader regarding the traditional use of resources in Crab Bay and other local customary practices and beliefs
- Mr Frank Kenneth, a knowledgeable elder, local historian and vernacular expert from Uripiv Island regarding the traditional use of resources in the Crab Bay area and historical information regarding the area
- Mr Numa Fred, Malekula Cultural Centre Curator from Uripiv Island regarding local history and traditional influences of the Crab Bay area
- Mrs Selene Song, a CF of Port Indir regarding traditional and contemporary women's fisheries including for land crabs as well the traditional knowledge associated with these fisheries
- Mrs Lekolan of Port Indir, an elderly crab fisher and regular seller in the market regarding traditional and contemporary knowledge associated with land crabs
- Chief Manoa Kaun, Chief of Leoni village, CF and member of ACTE MC regarding numerous issues related to the ACTE
- Chief Graham James, Chief of Limap village, CF and member of ACTE MC regarding numerous issues related to the ACTE
- Chief William Muramor, Chief of Port Indir village, CF and member of ACTE MC regarding vernacular terms and traditional use of resources as well numerous other issues related to the ACTE
- Chief Pedrid John, Chief of Uri Village, CF and member of ACTE MC regarding Uri mangrove management area initiative as well as numerous issues related to the ACTE
- Mr Spetly Johna CF of Hatbol village and member of ACTE MC regarding numerous issues related to the ACTE
- Mr Lency Kaun, CF for Leoni village and assistant to the DoF trochus program in Crab Bay
- Mr Edwin Pitae, Manager of MAPEST Plantation and ACTE MC member
- Mr Kalmari Noel of Baddik village a CF regarding contemporary fishing areas and practices within Crab Bay area
- Mr Johnlyn, VTRM from Uripiv Island regarding use of turtle resources and turtle management in the Uripiv area

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