Pacific Community

Communauté du Pacifique

RESCCUE

COASTAL COMMUNITY-BASED PROTECTED AREAS, MANGROVES PROTECTION AND FISHERIES MANAGEMENT IN RA PROVINCE - DIAGNOSIS AND ACTION PLAN

AGENCE FRANÇAISE DE DÉVELOPPEMENT

FONDS FRANÇAIS POUR L'ENVIRONNEMENT MONDIAL

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Overview of the objectives and components of RESCCUE projet :

The *Resilience of Ecosystems and Societies to Climate Change* (RESCCUE) project is a regional project implemented by the Secretariat of the Pacific Community.

The overall goal of RESCCUE is to contribute to increasing the resilience of Pacific Island Countries and Territories (PICTs) in the context of global changes. To this end RESCCUE aims at supporting adaptation to climate change (ACC) through integrated coastal management (ICM), resorting especially to economic analysis and economic and financial mechanisms.

The RESCCUE project operates both at the regional level and in one to two pilot sites in four countries and territories: New Caledonia, Vanuatu, Fiji and French Polynesia.

RESCCUE is funded primarily by the *French Development Agency* (AFD) and the *French Global Environment Facility* (FFEM) for a duration of five years (01/01/2014 to 31/12/2018). The total project budget is 13 million Euros, including 6.5 million Euros from AFD/FFEM and about the same in co-funding.

RESCCUE Project sites in Fiji are RaProvince and Kadavu province. Ra has about 95 communties and Kadavu 73 communities. The follwing are the RESCCUEcomponents that will be implemented in these two sites.

It is structured around five components:

Component 1: Integrated coastal management – supporting ICM implementation through ICM plans, ICM committees, and management activities concerning both terrestrial and marine ecosystems, capacity building and income generating activities.

Component 2: Economic analysis – using economic analysis to support coastal management and policy decisions.

Component 3: Economic and financial mechanisms – setting up economic and financial mechanisms to generate additional and sustainable funding for ICM: review of options (payment for ecosystem services, taxes, user fees, trust funds, quota markets, offsets, labels…); feasibility studies; implementation; monitoring.

Component 4: Capitalization, communication, dissemination of project outcomes in the Pacific – going beyond pilot sites activities in order to have impacts at the regional level, by fostering experience sharing between sites, cross-sectoral expertise, and communication and dissemination of the project outcomes.

Component 5: Project management – implementing and coordinating the project, by providing technical assistance, organizing local and regional steering committees, conducting audits and evaluations (mi-term and ex-post), etc.

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Executive summary

The objectives of this RESCCUE deliverable are: (i) identify key activities for mangrove restoration and protection of spawning fishing areas within the mangrove ecosystem; and (ii) evaluation of the current status of the LMMA and identification of priority actions that need to be undertaken to improve institutional and technical capacity of policing and monitoring "*tabu"* areas from poachers. The other important component of LMMA is the process of managing *tabu* areas in particular temporary after a natural disaster such as a Topical Cyclone Winston.

Diagnosis

- Togovere the mangroves are stunted and were classified as in Fair – Poor condition have managed to survive in these areas for over long periods hence in their natural condition and will not get any better to reach the ''Excellent'' condition as listed in the criteria by (Deguit et al. 2004).
- *Togovere* recorded the highest regeneration reading of 4.8/m^2 which could either indicate a healthy and mature mangrove forest or that most of the seedlings recorded were actually mature saplings or even young trees [1](Naikatini et al. 2014).
- *Malake* and *Nayavuira* mangrove stands are more lagoonal stands instead of the bay or river estuary stands and were recorded to be in Poor-Fair conditions.
- Fin fish post TC Winston, the abundance, biomass and diversity across each depth zones for each sites fluctuated. For example, fish abundance declined within the shallow zones of *Malake* and *Togovere* sites and the deep zones within *Navuniivi* and *Togovere*, while an upturn of these categories occurred at *Navuniivi* shallow zones; an increase in diversity at both depth zones was notable. The low abundance across most of the sites is the main focus from this survey as it is quite alarming.

[1] The latter is an important note to consider as mature trees with DBH less than 4cm were commonly recorded in the three transects from this site.

For the marine ecosystems and fisheries the major threats are:

- Poaching;
- overfishing
- Lack of Yaubula committee at village levels;
- algal growth dominance;
- weak *vanua* governance;
- performance of core role;
- Coastline erosion; and
- *Tabu* areas (MPA) not demarcated.

Action plan November 2016 – March 2017

With regards to mangrove five communities *Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau* will be involved.

RESCCUE activities will be focusing on mangrove protection and rehabilitation in the five villages. The following will be primary activities:

- Mapping the coastline and a profile of coastal area;
- Identification of high energy and low energy areas to determine areas that will be revegetated;
- Identifying in-situ seed source (mangrove and coastal vegetation) and collecting of seeds;
- Establishing temporary nursery at the site;
- Carry out a participatory historical profile of the vegetation;
- Demarcate the areas to replanted;
- Gathering community information on which places they would not to be replanted with mangroves and coastal native plants (e.g. areas access to sea etc.);
- Developing a mangrove monitoring plan; and
- Mobilizing of communities in the replanting.
- Community consultation to establish a *tabu* area within their existing mangrove area and developing a management plan for it.

For the community based marine management (LMMA) RESCCUE: will be the focusing on the following activities:

- Evaluating the current LMMA activities and *tabu* (MPA) areas in light of impact of TC Winston by visiting and assessing MPAs and discussing issues that have affected their marine management activities before and after TC Winston;
- Clearly demarcate using GIS mapping the *tabu* (MPA) areas in *Rakiraki* with the post TC Winston marine assessment to facilitate this process;
- Review the existing policing of *tabu* (MPA) area strategy and find out new measures with assistance of other operators such as CI and WCS and the Ra ICM Committee to stop poaching incidence;
- Work with communities who have been identified by authorities that have been involved in poaching activities and identify the root-causes plus collaboratively work on practical and acceptable solution;
- Review the Qoliqoli owners marine management plans for *Rakiraki* and *Nakorotubu* and incorporate means to financial sustain it
- Other key issue to be addressed are:
    - How to reduce overfishing;
    - Lack of Yaubula committee (at village level, though Tikina level is present);
    - Reduce algal growth;
    - How to strengthen the vanua governance and performance of core role;
    - Reduce coastline/ land erosion; and
    - Demarcation of Tabu areas.

1. Background

Mangrove is found at the interface between the sea and dry land in the tropics and sub-tropic regions providing an important link between the marine and terrestrial habitats (Tuiwawa et al. 2013). Ecologically, it is a spawning ground and nursery for numerous marine and freshwater fish and invertebrates. It helps to maintain healthy coral reefs and enhance of the quality of coastal waters. In terms of climate change impacts mangrove ecosystems are now under threat sea level rise (Gilman et al. 2008; Ellison & Zouh 2012; Friess & Webb 2013) and anthropogenic pressure such as coastal reclamation for development purposes (Lal 1990) .

Tropical Cyclone Winston severely devastated the province of Ra and the coastal areas including the adjacent fringing and barrier reefs (Tikaram & Dautei 2016). Interestingly the mangroves were affected but not destroyed. *Bruguiera gymnorhiza* suffered the most. *Rhizophora* sp. were more resilient and based on observation from the Conservation Officer in the Ra Provincial Office with most of the standing stock were not destroyed even though the leaves had withered and turned brown there are new buds appearing just after few months after the cyclone (Qoro, personal communication, 9 August, 2016). In 2014 a team from Institute of Applied Sciences, The University of the South Pacific, conducted a mangrove assessment in several communities along the Ra coast. It was a baseline survey for the development of the Integrated Coastal Management Plan for the Ra province. The findings from this assessment provided an overall picture of the status of the mangrove in Ra prior to Tropical Cyclone Winston (TC Winston).

A coral and finfish survey was also conducted pre and post Tropical Cyclone Winston in the five communities and the key findings are presented in sections 4 and 5.

Furthermore, the objective of this RESCCUE deliverable is mangrove restoration and protection of spawning fishing areas within the mangrove ecosystem. The five communities that were covered in the 2014 assessment *Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau* will be the communities will be involved in the RESCCUE project.

2. Diagnosis

2.1 Pre Tropical Cyclone Winston – mangrove baseline report in the five sites in Ra

The following are the key findings for the 2014 baseline surveys.

Table 1 Mangrove species found in five sites along the Coast of Ra Province

Tree Species name	*Togovere*	*Malake*	*Nayavuira*	*Navuniivi*	*Naocobau*
Mangrove species					
Rhizophora samoensis					
Rhizophora stylosa					
Rhizophora x *selala*					
Bruguiera gymnorhiza					
Excoecaria agallocha					
Xylocarpus granatum Koenig					
Lumnitzera littorea					
Heritiera littoralis Ait.					
Mangrove Associates					
Cocos nucifera					
Hibiscus tiliaceus					
Pandanus tectorius					
Pongamia pinnata					
Total area surveyed	1500m^2	1100m^2	700m^2	1000m^2	1100m^2

Adapted from Naikatini et al. (2014)

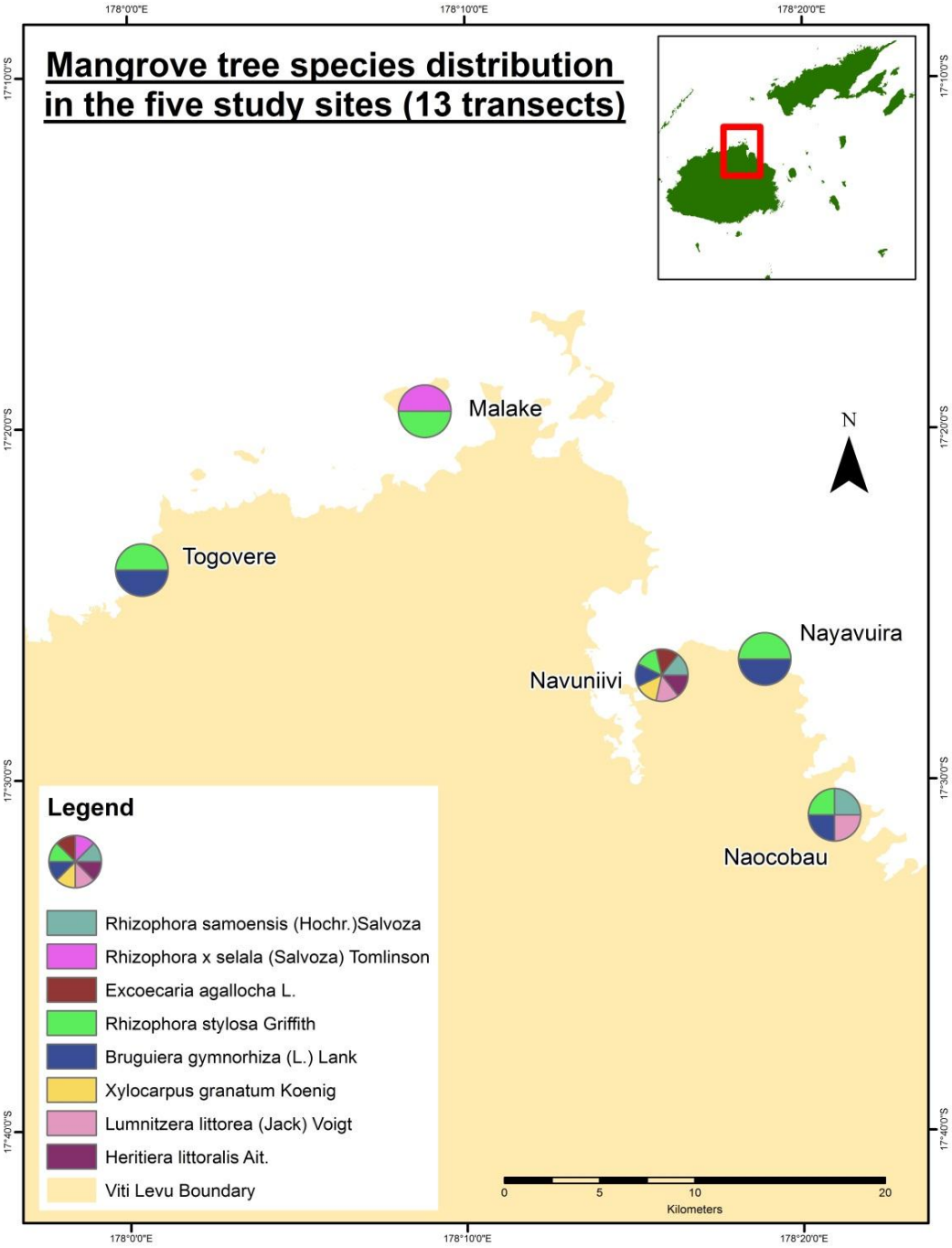

Figure 1 Mangrove tree distribution across the five sites in Ra

Source: Naikatini et al. (2014)

The results of the data analysis indicated that the mangrove forest in the *Navuniivi* area was in fair-excellent conditions and the mangrove forest of *Malake* and *Nayavuira* were in poor-fair conditions (Table 3). The mangrove forest of the other two sites was in fair-good conditions. One of the transect in *Navuniivi* was in excellent condition as it had well enclosed crown

cover, with regeneration greater than 1/m^2 and also recorded taller trees (Naikatini et al. 2014). The three transects in *Malake* and *Nayavuira* that were in poor condition, had more open crown cover, with less than 1/m^2 regeneration and also relatively short stunted trees (Naikatini et al. 2014).

Table 3 The condition of the mangrove forest in each of the five sites

Sites	Condition
Togovere	**Fair-Good**
Malake	**Poor-Fair**
Nayavuira	**Poor-Fair**
Navuniivi	**Fair-Excellent**
Naocobau	**Fair-Good**

Source: Naikatini et al. (2014)

Table 2 Explanation of condition criteria

Condition	Criteria
Excellent	76% and above in the % crown 1 regeneration per m^2 above 5m in average tree height undisturbed to negligible disturbance
Good	51-75% crown cover <1-0.76 regeneration per m^2 <5m – 3m average height of trees Slight disturbance and few cuttings
Fair	26-50% crown cover 0.50- 0.75 regeneration per m^2 <3m – 2m average height of trees Moderate disturbance and noticeable cuttings
Poor	0-25% crown cover 0.50 regeneration per ^{2} <2m average height of trees Heavy disturbance/ cuttings pollution, rampant conversion to other uses, nearly destroyed

Source:Deguit et al. (2004)

According to Naikatini et al. (2014), the average tree heights of mangroves in *Togovere* and *Malake* were about 1.9 to 2.5m high which are relatively short for normal mangrove stands indicating a more stunted mangrove forest. Crown cover in these two areas was generally less as well compared to the other sites, except for two transects that had more than 76% of crown cover. Regeneration data had mixed results from the different transects however transect 1 in *Togovere* had the highest regeneration record. The mangrove stands of *Navuniivi* and *Naocobau* had greater than 76% crown cover and generally taller trees.

Rhizophora stylosa was the dominant species in *Togovere* and *Malake* both in tree density and dominance respectively (Naikatini et al. 2014). *Bruguiera gymnorhiza* on the other hand was more dominant in *Nayavuira*, *Navuniivi* and *Naocobau*.

Three types of mangrove stands were observed during the survey: delta mangroves (*Navuiivi* and *Naocobau*); lagoonal mangroves (*Nayavuira* and *Malake*) and stunted mangroves (*Togovere* and Malake) indicating a diversity of mangrove stands (Naikatini et al. 2014).

There were four main mangrove habitats recorded from the five survey areas: *Rhizophora* forest, *Bruguiera* forest, Mix mangrove forest and Back of mangrove forest. The *Rhizophora* forest is dominant in Togovere and Malake. *Rhizophora* and *Bruguiera* forest were present in *Nayavuira*, Navuniivi and Naocobau. Stands of Mix mangrove forest were present in *Togovere*, *Navuniivi* and *Naocobau*.

The mangrove stands of *Togovere* and *Malake* are characterized by stunted growth, which is common in the leeward side of Viti Levu. This stunted growth as shown by *Rhizophora stylosa* is a common occurrence worldwide and has been related to the lack of proper nutrients needed for plant growth (Feller 1995), seasonal variation (Tyagi 2003; Naikatini et al. 2014) and high water salinity (Cintron-Molero 1993). The mangrove stands of *Togovere* and *Malake* being on the western most side of the Ra-ICM project experience more drier conditions compared to the other three sites. *Togovere* and *Malake* are devoid of freshwater streams/rivers that flow throughout the year and can therefore be attributed to the stunted growth (Naikatini et al. 2014).

The stunted mangroves of *Togovere* although they were classified as in Fair – Poor condition they have managed to survive in these areas for over long periods. This could mean that what is observed is their natural condition and will not get any better to reach the ''Excellent'' condition as listed in the criteria by (Deguit et al. 2004). *Togovere* recorded the highest regeneration reading of 4.8/m^2 which could either indicate a healthy and mature mangrove forest or that most of the seedlings recorded were actually mature saplings or even young trees (Naikatini et al. 2014). The latter is an important note to consider as mature trees with DBH less than 4cm were commonly recorded in the three transects from this site.

The mangrove stands of *Malake* and *Nayavuira* were recorded to be in Poor-Fair conditions which could be attributed to the fact that they are thinner strips along the coasts directly facing the sea and not along river mouths or bay areas. These mangrove stands are more lagoonal stands instead of the bay or river estuary stands and exposed to harsher conditions which is evident in the fact that they only cover a thin strip along the coast.

The mangrove stands of *Navuniivi* and *Naocobau* were found to be Fair-Excellent condition as their environment is more suitable for sustaining large stands of mangrove forest. They are more protected in bays and constant supply of freshwater from running streams results in higher diversity. This is very evident with Navuniivi which is part of the larger *Barotu* Mangrove system which is probably the largest mangrove stand in the Ra. The high species diversity in *Navuniivi* is an indication that it is part of a larger or good mangrove forest system. This system can be compared as a bit similar to the Rewa Delta Mangrove system as described in Tuiwawa et al (2013). *Bruguiera gymnorhiza* is the more common and dominant species in these three sites as the physical parameters in these areas are convenient for this species compared to *Togovere* and *Malake*.

2.2 Post Tropical Cyclone Winston – mangrove assessment of the five sites in Ra

Unfortunately there was no assessment conducted during the Post Disaster Needs Assessment on mangroves in the entire Ra province. So one of the key tasks of RESCCUE is to visit the five sites of mangroves and assess the current status. This would be done with the communities in each of the five sites prior to the implementation of on-ground activities.

2.3 Pre Tropical Cyclone Winston – Fish and coral reef status

The three major benthic categories are hard corals, silt and algae. Shallow reef flat sites had lower hard coral cover and coral genera diversity, higher silt and algae occurrence than deeper areas. A total of 45 coral genera were recorded across all survey sites. *Navitilevu* Bay recorded the highest number of coral genera (32) followed by *Togovere*, *Malake* and then *Naocobau* with 27, 25 and 23 coral genera respectively (Tikaram & Dautei 2016).

Average fish abundance and diversity was relatively low across all shallow sites for *Navitilevu* Bay; *Naocobau* and *Togovere* & *Malake* had higher abundance and diversity while the deep zones for all sites had more fish count than the shallow; the protected areas at *Naocobau*, *Nayavuira*, *Navuniivi* and *Malake* had higher fish abundance and diversity than the non-protected sites. The average fish biomass across all sites was low with the highest being 924kg/ha due to the open water schooling fusiliers *Caesionidae*.

The number of juvenile fish recorded was higher than adult sizes across all sites which may signify a higher removal rate of adults or a good recruitment level; larger sized fish stock was low across the shallow sites and some of the deep zones. The low coral cover, especially on

the reef flats for e.g. 27.6% at *Navitilevu* Bay may also be a factor to the low fish abundance (n= 22 average fish families) – algal cover was dominant instead (Tikaram & Dautei 2016) .

2.4 Post Tropical Cyclone Winston – Fish and coral reef status

There was evident of massive coral destruction were encountered within and around the survey sites in most of the sites except *Togovere* Importantly, areas of coral damage were patchy and less common as it was only confined mainly to certain areas. *Malake* had more visible destruction of living corals colonies. Within the shallow zones of *Malake* there were notable areas of overturned Porites coral heads. These overturned Porites coral heads were still alive but were now showing severe signs of stress and bleaching (Tikaram & Dautei 2016).

A common trend observed for this survey, was the decrease in fish abundance and biomass at both depths at (in decreasing in order) *Malake*, *Navuniivi* and *Togovere*; the fish biomass was higher (327.4kg/ha) at *Malake* shallow zones compared to *Togovere* (35.04kg/ha). However, species diversity was highest for *Malake* at both depths. To assess the impact of TC Winston on these reefs, data was compared against the result of the same reefs in 2014 (Tikaram & Dautei 2014).

The fish abundance, biomass and diversity across each depth zones for each sites fluctuated. For example, fish abundance declined within the shallow zones of *Malake* and *Togovere* sites and the deep zones within *Navuniivi* and *Togovere*, while an upturn of these categories occurred at *Navuniivi* shallow zones; an increase in diversity at both depth zones was notable. The low abundance across most of the sites is the main focus from this survey as it is quite alarming (Tikaram & Dautei 2016).

3. RESCCUE activities

3.1 Ra Mangrove Protection Initiative

RESCCUE activities will be focusing on mangrove protection and rehabilitation in the five villages. The following will be primary activities:

- Mapping the coastline and a profile of coastal area;
- Identification of high energy and low energy areas to determine areas that will be revegetated;
- Identifying in-situ seed source (mangrove and coastal vegetation) and collecting of seeds;
- Establishing temporary nursery at the site;
- Carry out a participatory historical profile of the vegetation;
- Demarcate the areas to replanted;
- Gathering community information on which places they would not to be replanted with mangroves and coastal native plants (e.g. areas access to sea etc.);
- Developing a mangrove monitoring plan; and
- Mobilizing of communities in the replanting.
- Community consultation to establish a *tabu* area within their existing mangrove area and developing a management plan for it

3.2 Ra Marine Managed Areas

RESCCUE will be focusing on Qoliqolis of *Rakiraki* and *Nakorotubu* as illustrated in Figure 2

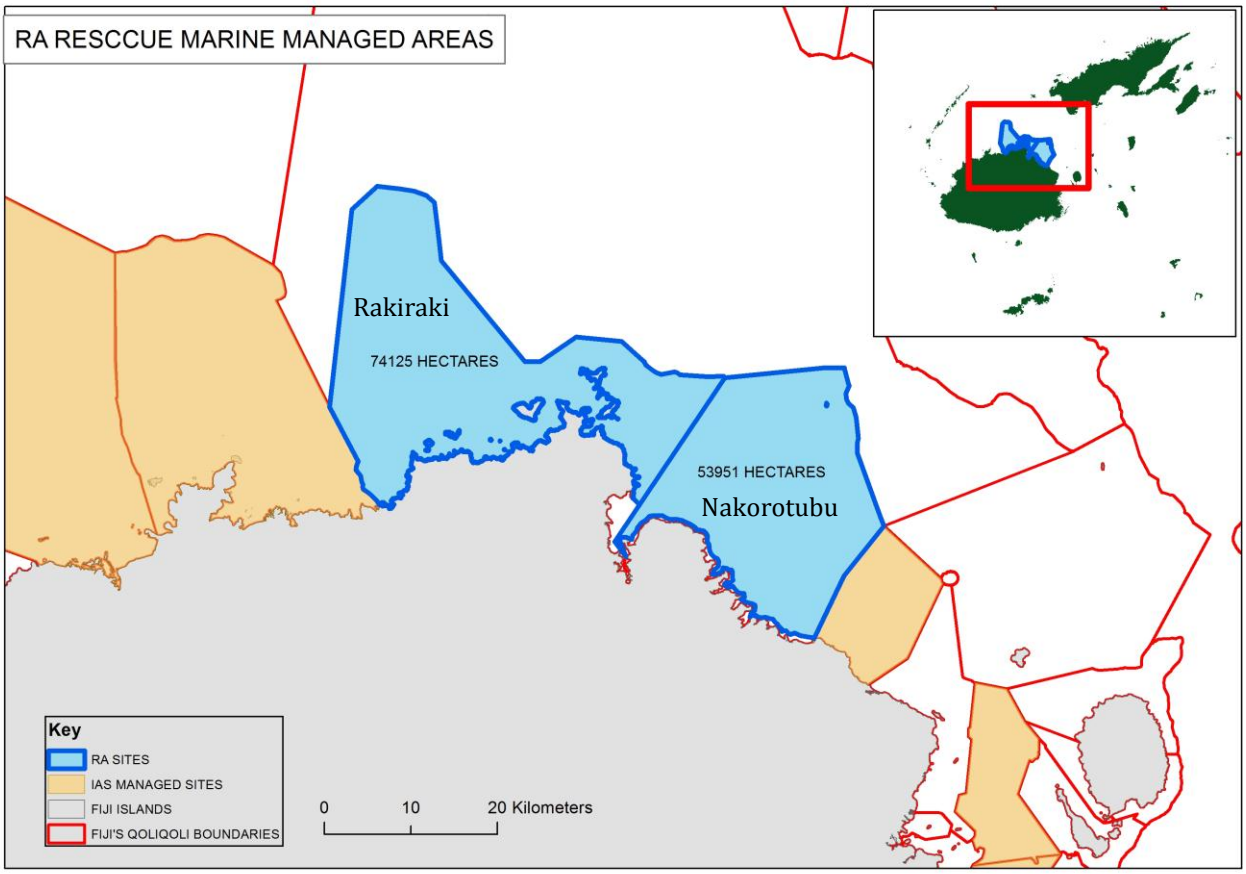

Figure 2 Ra RESCCUE Marine Management Sites

The major threats to the Ra Marine Managed RESCCUE sites are presented in the table below:

Table 4 Threats to the Ra Marine Managed RESCCUE sites

Threat & Issue	Malake	Togovere	Naocobau	Nayavuira	Navuniivi
1. Overfishing				x	x
2. Lack of Yaubula committee (at village level, though Tikina level is present)	x				
3. Algal growth dominance				x	
4. Strengthening the vanua governance and performance of core role				x	x
5. Coastline/ land erosion	x			x	x
6. *Tabu* not demarcated			x		
7. Poaching due to Lack of compliance and enforcement (tabu area pouching activities)	x		x	x	x

Source: Institute of Applied Sciences (2012)

Togovere and *Malake* villages are custodians of the Qoliqoli of *Rakiraki*. *Naocobau*, *Nayavuira* and, *Navuniivi* are the collective customary custodians of the Qoliqoli of *Nakorotubu*

RESCCUE will be focusing the following activities:

- Evaluating the current LMMA plan in light of impact of TC Winston;
- Clearly demarcate using GIS mapping the *tabu* (MPA) areas in *Rakiraki* with the post TC Winston marine assessment and the maps will be presented and discussed at the district meetings as well as the *iqoliqoli* owners meetings;
- Review the existing policing of *tabu* (MPA) area strategy and find out new measures such as joint operations carried out by police, community fish wardens and fisheries officers in surveilling the MPAs in the Central Division in Fiji to stop poaching incidence;
- Work with communities who have been identified by authorities that have been involved in poaching activities and identify the root-causes plus collaboratively work on practical and acceptable solution such as the introduction of Fishing Aggregation Devices (FADs) and honey bee farms. Fiji RESCCUE will be collaborating and facilitating the communities on reviving honey bee farms (bee keeping enterprise) since nearly most of it were destroyed by Tropical Cyclone Winston. FADs will be provided through the Conservation International (one of the consortium Fiji RESCCUE operators with funding from the Coral Triangle Initiative second phase) in the iqoliqoli of communities that have been involved in poaching activities. This provides them (poachers) an opportunity to only fish in their own *iqoliqoli* rather than poaching from their own no-take zone MPA and other communities MPA.
- Review the Qoliqoli owners marine management plans for *Rakiraki* and *Nakorotubu* and incorporate means to financially sustain. Options presented in L2.2 will be reviewed to identify the most appropriate option.
- Other key issues and how it could be addressed are:
    - How to reduce overfishing such as identifying other alternative livelihood option such as honey bee farms since most of the overfishing is related to the need to earn cash income;
    - Lack of Yaubula village committees so the action will be to seek approval from the chief and the elders through consultation on the purpose of having an *iyaubula* village committee;

- Reduce algal growth – this will be addressed with awareness work on reducing the volume of nutrients from domestic waste water that goes directly to sea which is the main cause of algal bloom. Proper waste water management and the reduction of the use of artificial fertilizers in their gardens;
- How to strengthen the *vanua* governance and performance of core role through leadership and management training;
- Reduce coastline/ land erosion will be addressed by coastal vegetation replanting ; and
- Demarcation of *Tabu* areas through surveying the boundaries of the *Tabu* (no-take zone areas). The surveying boundaries would be done be the *iTaukei* Lands and Fisheries Commission which is part of the Ministry of *iTaukei* Affairs. This process may take few years to complete if there are disputes on the boundaries by the different *iqoliqoli* owners. The TLF has the final say in these matters.

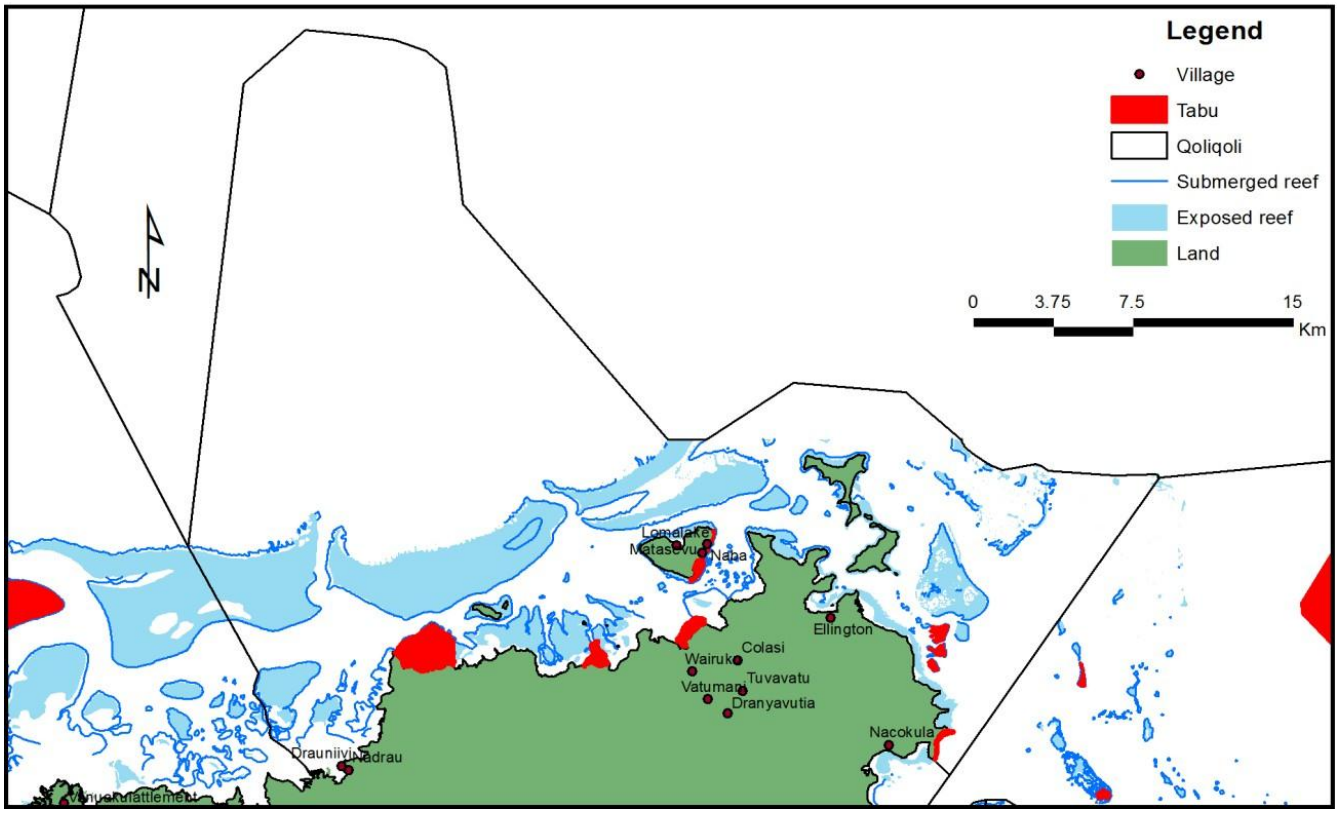

Figure 3 Rakiraki Tabu areas and Qoliqoli

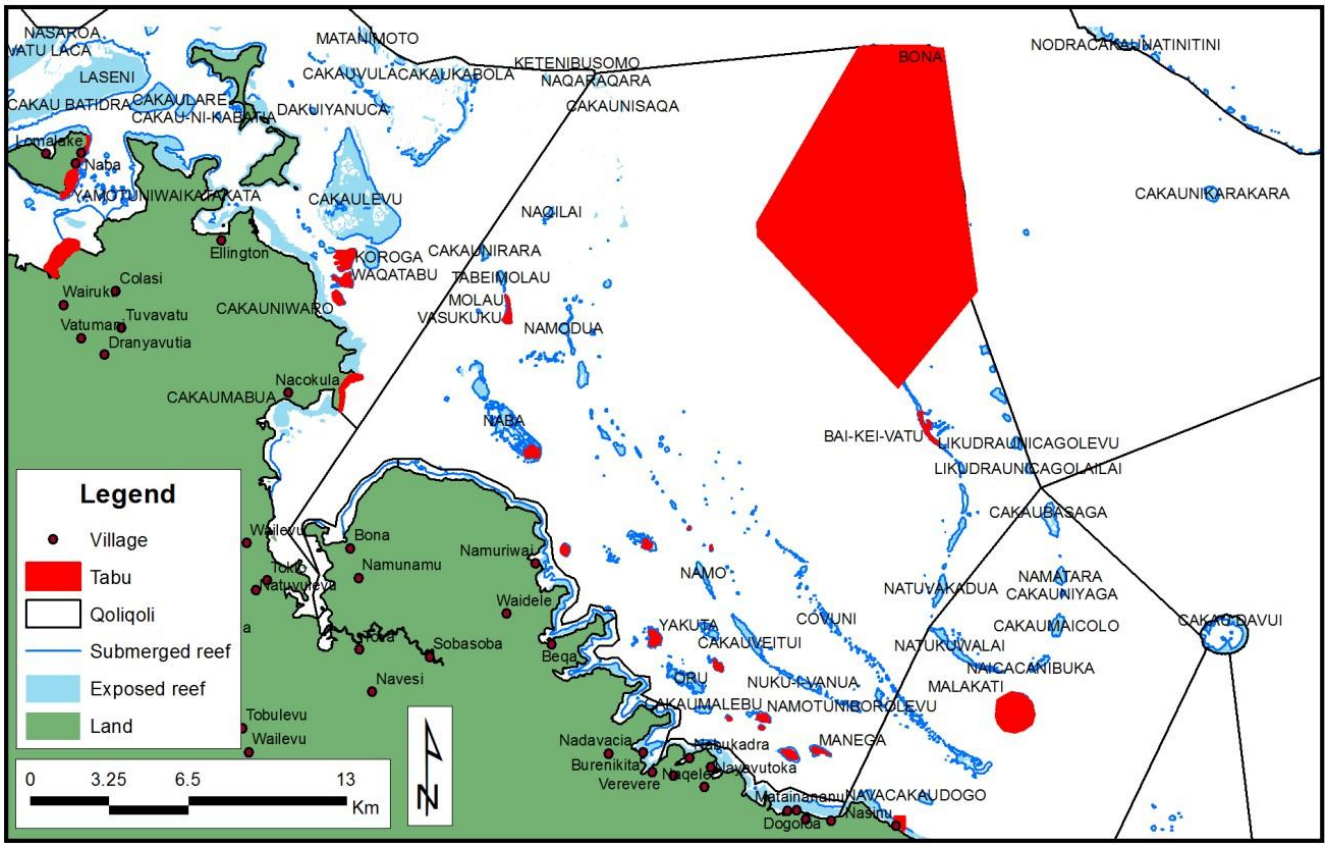

Figure 4 Nakorotubu Tabu areas and Qoliqoli

4. Work-plan

4.1 Mangrove activities

	Activity	Target Group (Villages)	Cost (F$)		2016		2017		
				Oct	Nov	Dec	Jan	Feb	Mar
Objective	Community engagement and consultation on the objectives of mangrove replanting		500						
	Mapping the coastline and a profile of coastal area	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	500						
	Identification of high energy and low energy areas to determine areas that will be revegetated	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	500						
	Identifying in-situ seed source (mangrove and coastal vegetation) and collecting of seeds	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	500						
	Carry out a participatory historical profile of the vegetation	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	1,000						
	Gathering community information on which places appropriate or inappropriate for replanting mangroves and coastal native plants (e.g. areas access to sea etc.)	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	500						
	Demarcate the areas to replanted	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	2,000						

Objective	Activity	Target Group (Villages)	Cost (F$)		2016		2017		
				Oct	Nov	Dec	Jan	Feb	Mar
	Mobilizing of communities in the replanting (transport and planting equipment)	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	5,000						
Mangrove monitoring community capacity strengthened	Developing a mangrove monitoring plan	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	500						
Establishment of a mangrove protected area	Community consultation to establish a tabu area within their existing mangrove area and developing a management plan for it	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	2,000						
Total F$			18,000						

4.2 Marine Managed Areas activities

Objective	Activity	Target Group (Villages)	Cost (F$)	2016		2017		
				Nov	Dec	Jan	Feb	Mar
The LMMA plan are revised based to on-ground needs as well as the impact of TC Winston	Evaluating the current LMMA plan in light of impact of pre and post TC Winston through community based and stakeholders workshop;	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	1000					
	Clearly demarcate using GIS mapping the *tabu* (MPA) areas in Rakiraki with the post TC Winston marine assessment to facilitate this process;	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	500					
Surveillance (Policing) plan of *tabu* (MPA) is technically and	Review the existing policing of tabu (MPA) area strategy and find out new measures with	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi*	2,000					

Objective	Activity	Target Group (Villages)	Cost (F$)	2016		2017		
				Nov	Dec	Jan	Feb	Mar
financially resourced	assistance of other operators such as CI and WCS and the Ra ICM Committee to stop poaching incidence;	and *Naocobau*						
	Work with communities who have been identified by authorities that have been involved in poaching activities and identify the root-causes plus collaboratively work on practical and acceptable solution (materials for Honey bee farming, FADs);	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	1,000					
	Review the Qoliqoli owners marine management plans for Rakiraki and Nakorotubu and incorporate potential options to financial sustain it such as: • an annual village bazaar fundraising specifically for the management of the *iyaubula* • establishing a village (community based) revolving fund (Ideally to be managed by the village women's group); and . • Other options proposed by the villagers.	*Togovere*, *Malake*, *Nayavuira*, *Navuniivi* and *Naocobau*	1,000					
Total F$			5,500					

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