



FEASIBILITY STUDY OF FINANCIAL AND ECONOMIC MECHANISMS FOR INTEGRATED COASTAL MANAGEMENT IN NORTH EFATE, VANUATU



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Overview of the objectives and components of RESCCUE Project:

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 to support 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 5 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.

Brief summary of RESCCUE Project in Vanuatu

The Vanuatu RESCCUE Project covers the northern side of the island of Efate beginning at the village Mangaliliu and ending with the village of Epao (inclusive). The islands of Nguna, Pele, Lelepa, Emao and Moso are also included in the project site. In total, the site covers around 50 km² of marine ecosystems (coral reefs, seagrass beds, lagoons, mangroves and beaches), 180 km² of terrestrial ecosystems (including forests) with a total population of approximately 8,000 (VNSO 2009). The project area also includes an established network of marine protected areas at Nguna-Pele, as well as multiple community-managed marine protected areas.

The RESCCUE Project is structured around five components:

Component 1: Integrated coastal management. This component aims to support ICM implementation “from ridge to reef” through ICM plans, ICM committees, coastal management activities concerning both terrestrial and marine ecosystems, capacity building, and income-generating activities.

Component 2: Economic analysis. This component aims to use the economic analysis toolbox to (i) demonstrate the added-value of ICM activities, and (ii) inform coastal management and policy decisions.

Component 3: Economic and financial mechanisms. This component aims to set 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, biodiversity offsets, carbon finance, labels...); feasibility studies; implementation; monitoring.

Component 4: Capitalization, communication, dissemination of project outcomes in the Pacific. This component aims to go beyond pilot sites activities to make RESCCUE a truly regional project, to have impacts at the national and regional levels. This is done through fostering experience between sites, providing cross-sectoral expertise, and communicating/disseminating the project outcomes.

Component 5: Project management. This component aims to implement and coordinate the project, by providing technical assistance, organizing local and regional steering committees, and conducting audits and evaluations (mid-term and ex post), etc.

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Abbreviations and Definitions

APTC	The Australia Pacific Technical College
Custom land	Land owned or occupied, or land in which an interest is held, by one or more persons in accordance with the rules of custom (from Land Reform Act 2014)
Custom owners	Any lineage, family, clan, tribe or other group who are recognised by the rules of custom, following the custom of the area in which the land is situated, as the perpetual owners of that land and, in those custom areas where an individual person is regarded by custom as able to own custom land, such an individual person (from Land Leases Act 2013 and Land Reform Act 2014)
DEPC	Department of Environmental Protection and Conservation
ELMA	Efate Land Management Area
ICM	Integrated coastal management
LCR	Landcare Research
L&L	Live and Learn
MPA	Marine Protected Area
REDD	Reduced Emissions from Deforestation and Forest Degradation
RESCCUE	Project name, representing the activity of 'Restoration of ecosystem services and adaptation to climate change'
SPTO	South Pacific Tourism Organisation
State land	All land in Vanuatu which on the 1st day of January 1980 was owned in freehold or perpetual ownership by the British Government, the French Government, the Condominium or a Municipality (from Land Reform Act 2014).
USP	University of South Pacific, School of Tourism and Hospitality Management
VT	Vatu

EXECUTIVE SUMMARY

The North Efate area for the RESCCUE project covers the northern side of the island of Efate from Mangaliliu village to Epao village, including the islands of Nguna, Pele, Lelepa, Emae and Moso. Within this area are approximately 50 km² of marine ecosystems (coral reefs, seagrass beds, lagoons, mangroves and beaches), 180 km² of terrestrial ecosystems (including forests) and a total population of approximately 8000 people. While there is little information on the state and trends in the condition of natural resources, the assessments by the RESCCUE projects note that many parts of the marine, coastal and terrestrial landscape are degraded.

There are two community-based environmental organisations in the North Efate area. The Tasivanua Environmental Network (TEN) covers the Northern area of Efate Island and Emae Island. The Nguna-Pele Marine and Land Protected Area Network (NPMLPAN) focuses on the islands of Nguna and Pele. Both of these organisations, along with the Provincial administrators, Shefa Province, provide excellent focal points with which to engage.

Working with these organisations, RESCCUE Vanuatu partners and in discussions with government agencies a number of potential options were identified for economic and financial mechanisms to provide sustainable financing for environmental conservation and integrate coastal management efforts in North Efate. The main needs identified by the environmental networks related to both capacity to undertake and funding for conservation activities. This included the extent of a conservation issue and what to prioritise, sustainable funding for the purchase of materials for conservation activities or to undertake a conservation activity, and knowledge of how to manage funds. In terms of conservation, marine fisheries, reef health and invasive species were highlighted. Government departments noted the challenges related to land lease practice and, in general, capacity issues to implement the laws that already exist. This highlighted the importance of the environmental networks in implementing the identified economic or financial mechanisms. Through these discussions the establishment of conservation funds was the most promising financial mechanism.

Conservation Funds

The funding source for these funds is a proposed voluntary conservation levy applied to tourism activities in the area. It is voluntary in the sense that tourism operators would be voluntarily adding the conservation levy to their prices (not that a visitor may or may not pay the levy). The aim of the levy would be to provide mutual benefits where environmental improvements benefit both communities and the quality of visitor offerings in the area.

The key tourism activities that would impose such a levy include:

- Accommodation owners (smaller private and community establishments)
- Attractions (e.g. caves at Siviri Village, Top Rock at Saama Village, Chief Roi Mata's Domain, Pele Island day tours, Nguna volcano hike)

The proposed development of a conservation fund was discussed with members of the Tasivanua Environmental Network, Nguna-Pele Marine and Land Protected Area Network and the Tourism Associations for North Efate and Nguna and Pele Islands. The members of these groups have agreed that these types of funds would be beneficial to their area and indicated their support for their establishment.

The Conservation Fund will operate through a community trust mechanism, with the trustees coming from communities, the environmental networks and the tourism associations. The estimated annual levy revenue, based only on contributions from accommodation owners, is between 850,000-1,320,000VT/year.

Two other initiatives were identified that could also contribute to these conservation funds. These were contributions from yacht moorings and the newly established farmer cooperatives on Nguna and Pele Islands. The yacht moorings do not yet exist. However, members of the Pele community have indicated their willingness to also contribute a portion of any potential yacht mooring fees to a conservation fund. Similarly, with the farmer cooperatives a guaranteed revenue stream is needed before any contribution could be made to a conservation fund. The use of produce supply contracts are being discussed to provide that regular income stream.

Another initiative to grow contributions to the conservation funds is to boost tourism opportunities in the North Efate area. Compared with the southern part of Efate, the tourism options in North Efate are far less sophisticated and also under-developed. Efate, being a relatively small island, is reasonably easy to get around and the northern area has a number of natural and cultural attractions that can be capitalised on, e.g. coral reefs, coralline beaches,

volcano hikes, surf spots, caves, WWII relics, and Chief Roi Mata's domain. There are also a number of bungalows available for overnight stays, and some restaurants. However, there are relatively few visitors to the area.

Land leasing guidance

A growing portion of Efate Island is being leased to expats or investors. In Vanuatu, there is state land and custom land. The latter is owned by communities or individuals within communities. This land can be leased by the customer landowner for periods up to 75 years. In North Efate, much land is still under custom ownership and not yet leased. However, increasing amounts of land on the North East and North West of Efate are under leasing pressure. Most of the coastal area between Port Vila and Port Havannah is now leased for residential or resort development. There are also leases for cattle grazing in the North East and North West that have been in place for many years.

When land is leased there is an opportunity to attach conditions to the lease agreement that could provide access to the natural resources on that land or related to the sustainable management of those resources. However, conditions that are based on customary community uses or values are not commonly attached to lease agreements. The RESCCUE project also proposes to develop of a short guide in Bislama for landowners to help them understand the implications of leasing their land and what sort of conditions could be negotiated within a lease. This guidance would be aimed at new leasing arrangements as it would not directly affect existing leases unless the lessor agreed to amend the conditions.

The proposed actions identified are outlined below:

Actions	Timeline	Who
<p>Local Conservation Fund</p> <p>The primary mechanism for seeding this fund would be a conservation levy.</p> <p><i>Conservation levy-accommodation/tourist attraction</i> Continue discussions with the Tourism Associations on the proposal for a voluntary levy on tourism activities (e.g. guest nights at bungalows). Proposed format is outlined in Section 5.1.</p> <p>Begin fund establishment process through a community trust mechanism. This includes the:</p> <ul style="list-style-type: none"> • Legal establishment of a community trust • Memorandum of Wishes/Understanding for how the trust will operate, identifying trustees and setting parameters around the powers of the trustees (e.g. restrictions on spending size). The details will need to be negotiated between the environmental networks and tourism associations. <p>Establish bank accounts</p> <p>Assist with developing joint management plans (this will be in concert with ICM Plan development)</p> <p><i>Conservation levy-mooring fees</i> This initiative is to increase contributions to the conservation funds (as well as decrease reef damage)</p> <p>Assist with establishment of mooring sites including identifying possible funding sources for construction of mooring sites and process for fee collection</p> <p>(Note: funding may be through conservation levy funds so this initiative may have a longer timeline. Should funding become available through RESCCUE then the timeline would be significantly shorter and driven by the availability of mooring contractors to design and build the moorings).</p>	<p>Discussions began in October 2016 and will continue</p> <p>Establishment initiated in February 2017</p> <p>Once community trust mechanism is established and trustees appointed (anticipated March-April 2017)</p> <p>Aligned with ICM Plan development and implementation (anticipated between June and August 2017)</p> <p>Discussions began for Pele Island in October 2016 and will continue.</p>	<p>L&L to lead establishing the governance structure LCR to support establishment Tourism operators/ Environmental Networks to participate in negotiations</p> <p>L&L to oversee LCR to support Trustees to establish</p> <p>L&L to facilitate initial discussions (Trustees will have to manage this moving forward) Tourism Association/ Environmental Networks to participate in discussions</p> <p>If funding becomes available through RESCCUE to build moorings then: LCR to initially engage with yacht mooring developers L&L/ NPMLPAN to oversee the construction.</p> <p>If funding is via the Conservation Fund then NPMLPAN will oversee the construction.</p>

<p><i>Supply contracts</i></p> <p>This initiative is to increase contributions to the conservation funds.</p> <p>This is a newly identified opportunity and additional information is needed to verify supply and demand for cooperative products (initially eggs) including:</p> <ul style="list-style-type: none"> • Egg production calendars • Verifying resort/restaurant demand (note: given the number of eggs likely available for sale the contracts could only service a small number of resorts/ restaurants) <p>(Note: if resorts/restaurants are unwilling to enter into supply contracts this initiative will not move ahead)</p>	<p>Calendars provided to SPC-GIZ in October 2016 by LCR</p> <p>February-March 2017 (once more is known about volume of eggs that could be sold through supply contracts)</p>	<p>LCR to provide template SPC-GIZ to manage data collection</p> <p>LCR to undertake initial engagement with restaurants</p> <p>USP to provide contract template</p> <p>SPC-GIZ to finalise contracts</p>
<p>Land Leases</p> <p>Develop draft guidance in Bislama on conditions that could be included in a leasing agreement.</p> <p>Test with community members how well they understand the draft guidance.</p> <p>Finalise guidance</p>	<p>By October 2017</p> <p>November to December 2017</p> <p>By April 2018</p>	<p>L&L to lead development & translation</p> <p>LCR to support</p> <p>L&L to facilitate workshops</p> <p>L&L to lead revisions</p> <p>LCR to support</p>

1 INTRODUCTION

The North Efate area for the RESCCUE project covers the northern side of the island of Efate from Mangaliliu village to Epao village, and included the islands of Nguna, Pele, Lelepa, Emae, and Moso (Figure 1). Within this area are approximately 50 km² of marine ecosystems (coral reefs, seagrass beds, lagoons, mangroves, and beaches), 180 km² of terrestrial ecosystems (including forests), and a total population of approximately 8,000.

The North Efate communities, mostly subsistence based, rely on family-run fishing, invertebrate harvesting, and agricultural plots for food security as well as on small tourism ventures for livelihoods. Natural resources play a key role in household food, income, fuel, values and disaster recovery. The state and management of many natural resources have been described in other RESCCUE Vanuatu reports and will not be repeated in detail here (see Fraser et al. 2016; Johnson et al. 2016; MacGibbon & Fraser 2016).

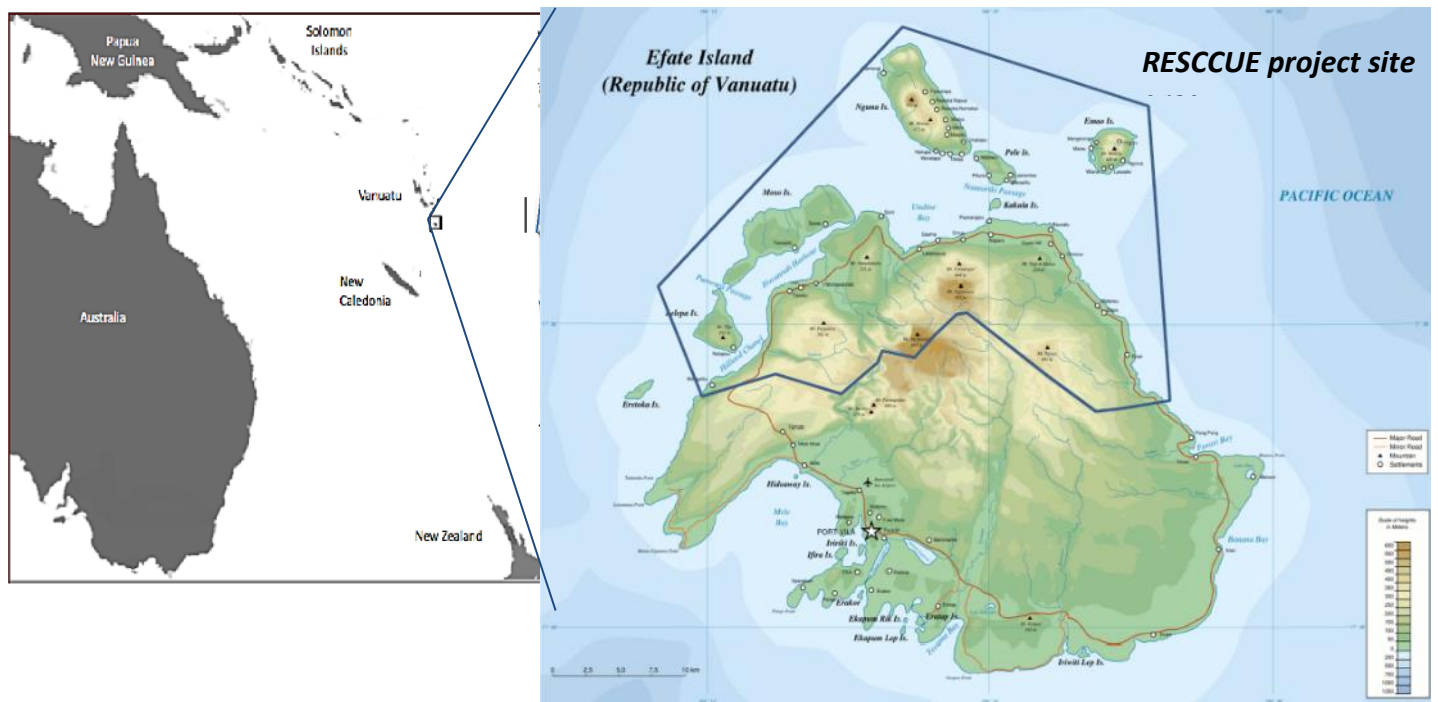


Figure 1. RESCCUE Vanuatu project area

1.1 MARINE AREA

The coastal and marine environment in the area consists of coral reefs, seagrass meadows, mangroves, beaches, and intertidal habitats. These environments support a wide diversity of species; the main threats being tropical cyclones, overexploitation of fisheries, coral predation and bleaching, land-based pollution, and coastal development (Johnson et al. 2016).

There is substantial spatial variability in the condition of the marine and coastal areas, with some being in relatively poor condition. The surveys undertaken as part of the RESCCUE project (Johnson et al. 2016) indicated that hard cover coral varies across the region: relatively high cover in some areas to low in others (22% hard coral on average). Coral bleaching was also spatially variable (from 13% to 15% in most of the smaller islands, except Undine Bay and Emae Island whose cover were 1% and 6% respectively). There was some evidence of coral recovery from bleaching. There were a number of indications for overfishing. Herbivore abundance, such as parrotfish and surgeonfish, was particularly low and also small in size compared with unfished populations in other areas, while rabbitfish were often not present. Piscivores (e.g. snapper and grouper) also had low abundance, biomass, and size. Water quality sampling found, in general, that most parameters tested were low or below detectable limits, and therefore is not an issue in the areas sampled.

1.2 TERRESTRIAL AREA

Vanuatu is located in Eastern Melanesian biodiversity hotspot but does not have lower levels of endemism than other Pacific Islands such as the Solomon Islands and Fiji. There is little information, however, on the ecology and biodiversity of North Efate. The terrestrial landscape of Efate is shaped by its volcanic origins and by frequent and historical disturbances. In the steeper forested areas there is evidence of forest tree crown dieback/defoliation, which was apparently caused by Tropical Cyclone Pam in 2015. Closer to the coastal margins there are more agricultural areas as well as scrub areas. These scrub areas are likely to have been previously farmed or clear felled areas. As with most Pacific Islands, invasive plant and animal species have historically, and continue to have, a major negative impact on the ecology and agriculture (MacGibbon & Fraser 2016).

1.3 LEGAL CONTEXT

The legal situation in Vanuatu is complex, with over 1500 pieces of legislation and amendments¹ (not only relating to the natural environment), many of which have not been fully or partially implemented. As noted by Kate McPherson (Department of Environmental Protection and Conservation, pers. comm., 7 October 2016), some legislation seems to have been developed by different projects or international organisations and passed into law, but never actually implemented, e.g. the National Parks Act of 1993 – in other words, they are ‘paper’ acts. In addition, some issues are found under numerous acts, for example, as waste is currently covered by three Acts, and efforts are underway to consolidate all related legislation under one Act. As a consequence, it is challenging to know what Acts or parts of Acts are being implemented and/or enforced.

In terms of economic and financial mechanisms, an environmental trust fund (Section 44B) has been established under the Environmental Conservation Act. Environmental bonds, fines/penalties, and environmental protection fees and contributions/donations are paid to the Trust. While the fund is supposed to be used for environmental rehabilitation, management of community conservation areas, protection and conservation of the environment, the monies to this Fund go into the government’s consolidated revenue. It is currently unclear if any of these monies are used to fund environmental conservation (Kate MacPherson, pers. comm., 7 October 2016). In general, most government agencies appear to be under-resourced, which is compounded by vacancies in higher management positions. In this situation decisions do not appear to be being made and little is being progressed.²

This report provides an overview of economic and financial mechanisms for environmental conservation and Integrated Coastal management (ICM), describes some mechanisms that currently operate in Vanuatu, outlines some of the opportunities for establishing economic and financial mechanisms to support conservation activities in North Efate and an action plan for how to move forward.

¹ The list was kindly provided by Stephen Sam at the State Law Office and outlines the laws as of 29 July 2016.

² Observations by Suzie Greenhalgh after discussions with a number of government agencies.

2 OVERVIEW OF FINANCIAL AND ECONOMIC MECHANISMS³

There is no widely-agreed definition or classification of financial and economic mechanisms (Greenhalgh & Selman 2014; Billé & Marre 2015). RESCCUE have developed a basic framework for these mechanisms (see Table 1) that uses four categories to differentiate between mechanisms. Two categories describe the primary objectives of the mechanisms and two categories distinguish mechanisms based on who pays.

Table 2. RESCCUE classification of economic and financial mechanisms

What for? Who pays?	Economic mechanisms Primary objective: provide incentive(s) to limit harmful behaviours to biodiversity and ecosystem services	Financial mechanisms Primary objective: generate funding to cover administrative or management costs for biodiversity and ecosystem services conservation or restoration (one-off or regular payments)
Polluter pays An agent pays because he degrades biodiversity and ecosystem services	Tax, ecotax (to change behaviour) Quotas, markets Eliminate harmful subsidies	Tax, ecotax (to generate funding) Offset Trust funds (filled by polluters) Compensation of environmental damage Royalty Usage fee, user fees, licence fees Tax (tourism, cruise ship)
Beneficiary pays An agent (or a representative) pays to benefit from ecosystem services and biodiversity conservation or restoration	Payment for ecosystem services Conservation agreements (involving a payment) Conservation easements REDD+ Label Subsidies Reverse auctions	Private/public donations Land acquisition Trust funds (filled by beneficiaries) Green lottery Entrance fees to protected areas User fee, licence fees Taxes (airport, tourism tax, cruise ship) Debt-for-nature swap

Source: from Billé & Marre 2015.

Another useful, and relatively common, way to describe mechanisms is whether the mechanism is price-based or market-based (or rights-based) (Fig. 2). Price-based mechanisms directly change price, while market-based mechanisms indirectly influence price through markets. Price-based mechanisms rely on explicit price signals to motivate changes in behaviour. There are two common types of price-based mechanisms – taxes that place a penalty on those who degrade ecosystem services and subsidies that provide rewards to reduce negative impacts on ecosystem services (Greenhalgh & Faeth 2001).

Market-based mechanisms refer to the creation of a market-like mechanism to determine the price paid for an environmental outcome (Morrison & Greig undated). These mechanisms encourage behaviour through market signals rather than through explicit directives such as pollution control levels or methods (Stavins 2001). Market-based mechanisms have some key theoretical advantages over stand-alone regulation or price-based economic mechanisms, especially in efficiency and cost-effectiveness in improving environmental quality and meeting environmental goals (e.g. Tietenburg 2006).

This type of classification is also useful as it provides insights into the types of signals an mechanism may provide to incentivise conservation actions. In this report, we attempt to look broadly across the range of different financial/economic mechanisms to see how they may not be applicable to conservation efforts in the North Efate, Vanuatu.

³ Note: this section is taken directly from Greenhalgh and Mangubhai (2016).

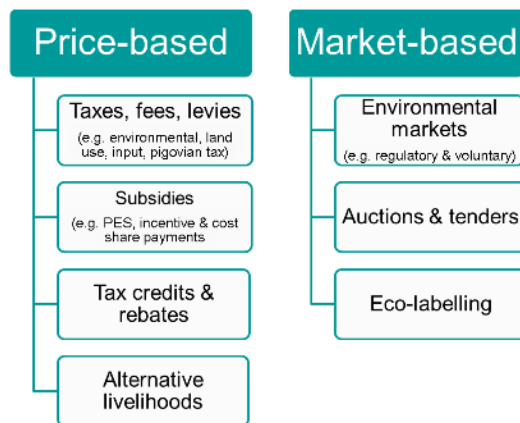


Figure 2. Description of price-based and market-based mechanisms.

3 EXISTING FINANCIAL AND ECONOMIC MECHANISMS IN VANUATU

Outlined below are some of the financial and economic mechanisms that are currently operating in Vanuatu. This is not an exhaustive list but rather outline the range of mechanisms currently in use.

3.1 ENVIRONMENTAL MARKETS: CARBON

Reduced Emissions from Deforestation and Forest Degradation (REDD) and REDD+ are global UNFCCC initiatives to stop tropical deforestation. Since the inception of these initiatives in 2001, a number of lesser-developed nations have been developing their ‘readiness’ to receive payments for reducing deforestation against a business-as-usual baseline. Vanuatu is in the REDD readiness process (the REDD desk 2016).

Blue carbon related to the carbon sequestered in coastal ecosystems is another source of carbon for environmental markets. A scoping study on coastal carbon sinks noted that only limited areas of mangrove and seagrass habitats occur in Vanuatu (Laffoley 2013), and acknowledges there are wider benefits outside of just carbon from these ecosystems. The study also notes that while there may be some opportunity for blue carbon additional knowledge is needed on the extent and carbon content of potential ecosystems in Vanuatu for blue carbon.

The Loru Forest Conservation Project

The only Pacific REDD+ credits that have been issued are for the Loru Rainforest Conservation Project in Espiritu Santo, Vanuatu. The first issuance of these credits was in 2016. The 166 ha of tropical rainforest are protected as a Community Conservation Area under the Environment Protection and Biodiversity Act (2010). The landowners have given up rights to land clearance for coconut plantations in exchange for the opportunity to sell rainforest carbon offsets as a way of generating revenue for local economic development.

The credits are currently listed on the Markit registry (Markit 2016) with most credits being sold to Sweden. The credits currently retail at US\$19.39/tCO₂e, with the wholesale price \$3 lower. There are 3000 credits available and the project generates 2442 credits per year. The project is part of national REDD+ pilot programme for Vanuatu under the Department of Forestry in Vanuatu. The project is certified to the Plan Vivo standard (not the Voluntary Carbon Standard).

Permanence is achieved through a mechanism of protection where the landowner creates a legal entity that is registered under a Community Conservation Area. There has been one instance, however, where a landowner in a similar type of project in Fiji has taken part of his land out of the lease after verification and sold the logging rights. ‘Additionality’ is a key aspect of climate-related projects and for this project additionality is based on the assumed high probability that this areas will be logged in the future.

Challenges and opportunities for expansion

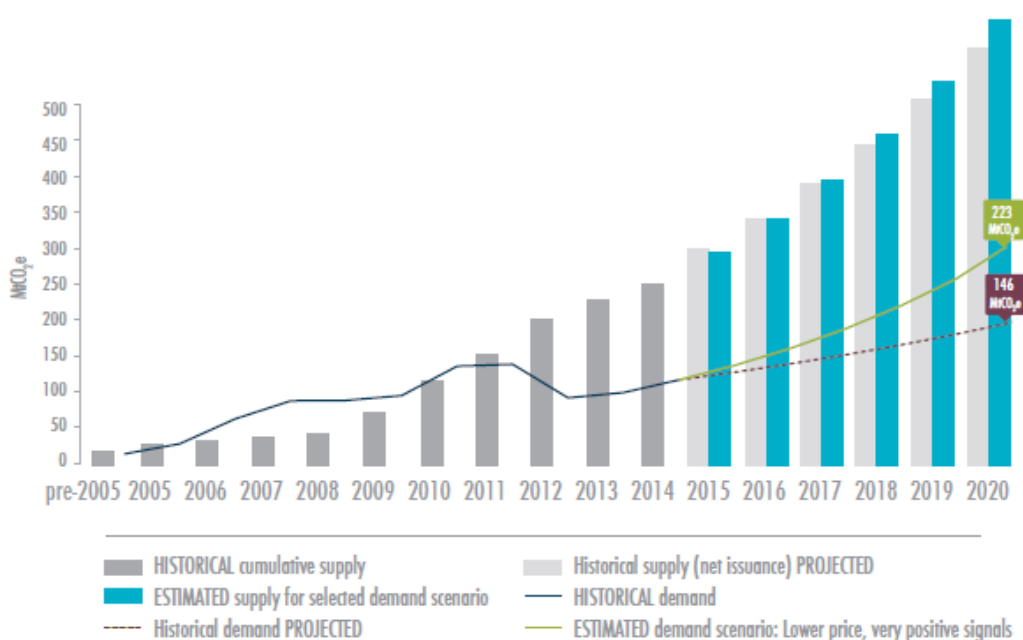
For REDD and REDD+ projects to be successful and enduring they rely on a constant credit demand. Historical and estimated future supplies of credits from REDD and REDD+ projects is expected to be greater than demand

⁴ REDD with social and sustainable benefits including enhanced biodiversity.

into the future (at least until 2020), with most demand coming from voluntary buyers and bilateral government deals (Fig. 3) (Hamrick & Goldstein 2015).

From an international policy perspective, REDD and REDD+ projects do not generate or trade in Kyoto Units. Rather, countries can apply for funding under the Kyoto process in return for a commitment not to fell rainforest (REDD) and to manage existing forests to enhance sequestration and biodiversity (REDD+). In other words, there is no such thing as a Clean Development Mechanism (CDM) REDD or REDD+ carbon credit. To further complicate things, it is currently unclear where international policy is headed in the negotiations on the new carbon trading regime under the Paris Agreement. Kyoto units may not exist under the Paris Agreement (Ted Jamieson, New Zealand Ministry for the Environment, pers. comm., 2 September 2016).

Credits have been issued for REDD and REDD+ projects under the Voluntary Carbon Standard. Currently, VCS projects are legitimate until 2020 in countries that do not have reduction targets under the Kyoto Protocol (Kyoto period 1) and the Doha Agreement (Kyoto period 2). Under the Paris Agreement, all countries (Annex I and Annex II) that ratify the agreement will be required to have Nationally Determined Contributions (generally emissions reduction targets). Therefore, this calls into question whether VCS (or similar) projects will be legitimate post 2020 (Ann Smith, Enviro-Mark Solutions, pers. comm., 14 September 2016). We imagine that the VCS will be heavily involved in the negotiations on the design of the new carbon trading regime under the Paris Agreement.



Notes: Estimates based on historical voluntary offset demand growth rate (9%) and historical offset issuance growth rate (30% year on year) after subtracting 1) non-issued volumes (est. 40% of potential supply); 2) retirement (average 40% of issued supply); and transacted volumes (variable, based on historical transactions). Projections assume a 10% annual project (and thus new supply) "dropout" rate; -7.2% average decrease in demand for given policy and price scenario; and -17.5% baseline decrease in supply for given policy and price scenario.

Source: Forest Trends' Ecosystem Marketplace. *State of the Voluntary Carbon Markets 2015*.

Figure 3. Historical voluntary offset (or credit) supply and demand including estimated future supply and demand based on an assumption of lower prices but very positive policy signals).

This highlights the potential risks associated with the legitimacy of these types of credits post-2020, and concern with their continued supply exceeding demand. This latter situation is likely to depress the price resulting in insufficient funds being generated to deter a landowner from selling the logging rights to these forested areas. Another point that has been highlighted with avoided deforestation projects are the potential for inflated baselines which leads to higher estimations of sequestered carbon (Sellyer 2016). Baselines for these types of projects are challenging as they are typically based on an assumed or predicted rate of deforestation in an area rather than the actual rate.

In terms of the context for North Efate, much of the land that is still in customary ownership (i.e. not leased to investors or ex-pats) and may be eligible for REDD/REDD+ are the subject of land disputes (Vanessa Organo, Shefa Province, pers. comm., 4 October 2016). Additionally, most of the inland portion of Efate Island has already

been extensively logged (Watson Lui, Deputy Director of Forests, pers. comm., 3 October 2016). Both these conditions may make any efforts to establish a credit-generating carbon project challenging.

3.2 TAXES, SUBSIDIES AND LEVIES: USER FEES

There are a number of private agreements or fees levied with the proceeds going directly to the custom landowner (e.g. custom landowners charging to visit the beaches they own). These are not outlined here as they directly benefit the landowner and are more akin to a business transaction than a financial/economic mechanism where the proceeds support conservation activities. Some communities, however, have established user fees where the proceeds go back to the community rather than to a landowner. These tend to be individual community agreements with tour operators or other organisations and reflect the use of customary land. There is no legal context for these fees and it was noted that visitors from yachts did not tend to pay for any diving etc they do in areas under customary ownership. How any revenue raised is used was also at the discretion of the community and was not targeted toward specific projects.

Some examples include:

- Piliura (Pele) – The community has a long-standing agreement with Evergreen tours.⁵ As part of the day tour of Efate, the tour visits Piliura Village for a village tour and to snorkel on the reef adjacent to the village. The village receives 350VT per person from the tour company (Charley Manua, Serety Sunset Bungalow, Piliura, pers. comm., 5 October 2016). These funds are used for village projects, which are typically not used for conservation purposes.
- Worsiviu (Pele) – Snorkelling trips to the coral gardens near the village are available. Of the total cost to come snorkelling the community gets 500VT per person. This is not an organised venture, but an ad hoc offering to those who know about the coral gardens. Most visitors come from bungalows in the northern part of Efate. It is estimated that about 30 people per year may visit. There is also an agreement with 3 Steiner schools in Australia that visit each year. The schools send 10–40 upper high school students each year who live in the village and participate in conservation projects such as tree planting, coastal planting, coral reseedling, and waste management. The students stay for 1–2 weeks (Willie Kennent, Nguna Pele Environment Network, pers. comm., 5 October 2016).
- Turtle tagging (Pele Island) – in 2006 and 2007 a turtle tagging initiative split fees between the Nguna-Pele Marine and Land Protected Area Network, diver, and community. However, this no longer operates as there was no agreed agreement with the tour company (Willie Kennent, pers. comm., 5 October 2016).
- Diver fees – There are agreements between dive companies and individual landowners whereby dive companies pay a diver fee. All dive operators enter into these agreements with fees paid either on a per diver basis or as an annual payment (Big Blue Vanuatu and Nautilus Watersports, pers. comm., 9 October 2016). The fees are variable and range between AUD5-6.50/diver. These fees are paid to individual landowners not communities so are more akin to business transactions. Nautilus Watersports estimates they average approximately 300 divers per month but they have no dive sites in North Efate and don't believe they will in the future given the quality of dive sites close to Port Vila (Nautilus Watersports, pers. comm., 1 December 2016).

Challenges and opportunities for expansion

Dive user fees are already widespread. Therefore, if new dive sites are found it is likely that dive user fees would be part of these agreements between a dive operator and the landowner. Most dive sites are in the Southern part of Efate Island with some diving in the Havannah Harbour area in North Efate. The main dive operator in the Havannah Harbour area, Eco Tranquility Island Eco Dive Resort, predominantly uses dive sites adjacent to the area they lease (and therefore don't need to pay any fees). They do pay a fee to the relevant landowners for any dive sites they use near Lelepa Island. They also visit Eretoka (Hat) Island which is outside the RESCCUE study site. However, they don't regularly dive these sites (Owen Drew, Tranquility Island Eco Dive Resort, pers. comm., 8 October 2016). Big Blue Diving and Nautilus Scuba, the two main dive companies operating out of Port Vila, only have dive trips in Mele Bay and sometimes to Hat Island (Big Blue Vanuatu and Nautilus Watersports, pers. comm., 9 October 2016).

⁵ At the time of writing, it is likely that Overgreen Tours may cease operations in the near future due to the downturn in visitors to Vanuatu (Carrisa Jacobe, South Sea Manning, pers. comm., 11 October 2016).

Fees to visit terrestrial sites will depend on the availability of terrestrial sites worth visiting (e.g. special features like waterfalls, views, historical relics, unique flora and fauna) and the number of visitors interested in such sites or tour companies willing to add those sites to their tour itineraries. There are currently some challenges facing many tour operators as visitor rates are quite depressed due to Tropical Cyclone Pam, airport runway issues with Qantas and Air New Zealand not flying to Vanuatu, and cruise ship passenger issues with taxis overcharging. Evergreen tours, for instance, is apparently likely to close their operations (Carrisa Jacobe, South Sea Manning, pers. comm., 11 October 2016).

3.3 ALTERNATIVE LIVELIHOODS

The SPC-GIZ 'Coping with Climate Change in the Pacific' Project currently operates in the area. Focused on Nguna and Pele Islands, this project aims to increase the islands' ability to cope with climate change. One of the initiatives in the project was to create a livestock income stream for landowners. An aspect of this was egg production, where approximately 90 farmers have been given 10 layer hens. The eggs produced are partly for their own consumption (to increase household food security) and partly for sale.

Farmer cooperatives – 1 on Pele Island and 2 on Nguna Island – have also been created. Landowners have to pay to be part of the cooperative (~9000VT) and all landowners who were provided with equipment or materials (e.g. hens) are automatically part of a cooperative. The cooperatives are currently in the process of being set up and the governance structure, including bylaws for dealing with different situations (e.g. conflicts and disputes) is being drafted. While the cooperatives are likely to cover a number of agricultural products, they are currently focused on eggs (Willie Kennent and Tatu Whitely, SPC-GIZ and Nguna-Pele Marine and Land Protected Area Network, pers. comm., 4 and 5 October 2016).

There has also been some deployment of fish aggregating devices (FADs) in North Efate through various SPC-GIZ and JICA AID-projects (Amos et al. 2014; Nimoho et al. 2014). The devices are aimed at reducing fishing pressure in the in-shore fisheries.

Expanded tourism operations is another opportunity which poses some potential.

Challenges and opportunities for expansion

There is an opportunity to build on this initiative, at least for communities on Nguna and Pele Islands, in terms of creating new markets for their produce. Currently, the produce is sold either on the island or in the markets in Port Vila. The cooperatives aim to coordinate the transport of produce to the Port Vila market. However, there is still no guaranteed sale of the produce.

To provide a more stable market for this produce, supply agreements with larger hotels or tourism operations could be explored. One of the key challenges with these types of agreements is to ensure that a guaranteed amount of produce can be supplied on a regular basis. With the cooperatives in place it should be possible to stabilise the supply fluctuations experienced by landowners.

In the future there may be opportunities to expand to Efate Island, if the supply contracts are successfully established and the demand for local produce increases.

There are initiatives underway to deploy additional FADs in the area by other funding donors. The fisheries component of RESCCUE has identified opportunities to collaborate with the FAD projects to promote access to nearshore pelagic fish (Johnson et al. 2016).

Given the relatively small number of international tourists that visit Efate Island venture to the Northern part of the island there is scope to increase these numbers. Domestic ex-pat tourism is also relatively limited and could be expanded.

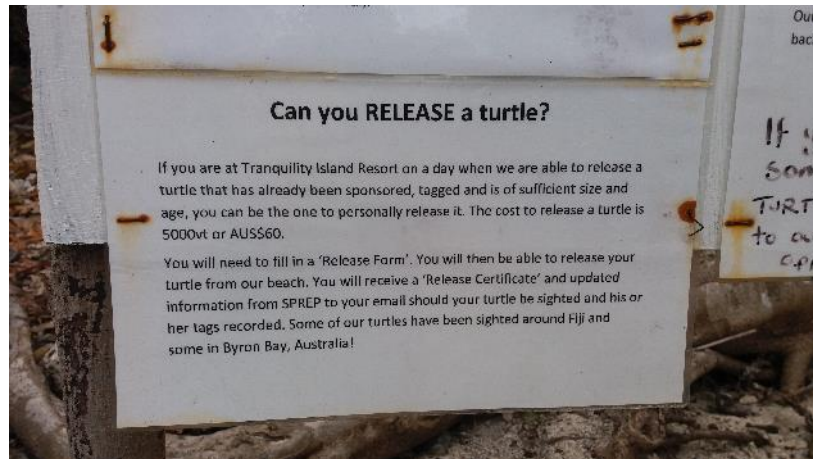
3.4 OTHER MECHANISMS AND INITIATIVES

Some other initiatives identified include:

- Moso Island – The Tranquillity Island Eco Dive Resort operate a hawksbill turtle rookery on a 365-ha leased area on Moso Island. This is a private conservation initiative undertaken by the lodge (Australian owner) and began about 15 years ago. Turtle hatchlings are collected after they hatch and grown until they are 30 cm in size, and then released. The costs of the operation are quite high, with food being approximately 20,000–25,000VT per week. They purchase the fish used to feed the turtles from the nearby village of Tassiriki, providing an additional revenue stream for the village. These funds, among

other things, are used to help educate the village children. The operation is run as part of the resort, so the cost is part of the resort running costs. They also offer a release-a-turtle programme, which costs AUD60 (Fig. 4), or the opportunity to sponsor and name a turtle.⁶ Once sufficient funds are available there are plans to move from a still-water tank system to a flowing water system in an attempt to reduce the number of turtle eye infections. Some of the potential avenues for increasing funding being explored are sponsorship from one of the cruise lines and a consortium of Australian vets (Joe and So, Tranquillity Island Eco Dive Resort Managers, pers. comms, 8 October 2016).

Figure 4. Release a turtle initiative



⁶ <http://tranquillitydive.com/turtle-sanctuary/support-the-turtles/>

4 OPPORTUNITIES FOR ENVIRONMENTAL AND CONSERVATION ISSUES, NORTH EFATE

There are two community-based environmental organisations in the North Efate area: the Tasivanua Environmental Network covers the Northern area of Efate Island and Emae Island and the Nguna-Pele Marine and Land Protected Area Network focuses on the islands of Nguna and Pele (Box 1). These networks provide excellent avenues to engage communities in conservation activities.

From the various assessments undertaken by the RESCCUE project a number of issues have been identified. Some of these are likely to be included in the Integrated Coastal Management (ICM) Plan due in February 2017, while others may not. In addition to those listed in the RESCCUE reports, other opportunities were noted during discussions with government agencies and communities that are worth noting in this feasibility assessment. As the actual components of the ICM Plan are not yet available, this discussion serves to highlight potential opportunities that may support actions that form part of the ICM Plan. The issues being considered in this assessment are listed, in no particular order, below.

Box 1: Nguna-Pele Marine and Land Protected Area Network.

The Network, winner of the 2013 Pacific Islands Environment Leadership Award and the 2008 UNDP Equator Prize, is a local, indigenous, non-governmental organization made up of 16 communities on Nguna and Pele Islands. The communities are dedicated to the sustainable use and long-term existence of marine and terrestrial resources. They are striving to ensure their people retain access to and use of the diversity of marine species of Vanuatu through proactive conservation, resilient management, and locally appropriate awareness.

Member communities have elected one or two volunteer MPA representatives to conduct reef surveys, tag sea turtles, plant coral, and run ongoing environmental awareness. A Management Committee representative of every community meets monthly to make decisions guiding the current and future management of the MPA network. Nguna and Pele's managed reefs, sea grass beds, mangrove forests and intertidal lagoons now exceed 3000 hectares. Our network relies financially on donations from visitors.

<http://www.marineprotectedarea.com.vu/>

4.1 COASTAL AND MARINE MANAGEMENT

Information on the state of the coastal and marine environments is fragmented in time and space, making a true assessment of its condition challenging. However, the surveys undertaken as part of the RESCCUE project (Johnson et al. 2016) indicate some areas are in relatively poor condition, with many areas overfished. Both environmental networks remarked on the importance of marine restoration and conservation. Nguna and Pele Islands had established a marine management plan of permanent no-take, tabu and fishing areas which were established as part of a European Union project (Willie Kennent, pers. comm., 5 October 2016). On Efate, itself, some communities had not protected any of their marine area (Kenneth Lango, Tasivanua Environmental Network, pers. comm., 6 October 2016).

Challenges and opportunities

Diver user fees are already used. Most dive sites, however, are not found in the North Efate area, with the exception being Havannah Harbour area where most diving is undertaken on sites that have already been leased from communities. The two main dive operations in Port Vila both indicated they did not have dive sites in North Efate and were unlikely to run dive trips to North Efate given the abundance of excellent dive sites close to Port Vila (Big Blue and Nautilus Watersports, pers. comm., 9 October 2016).

A voluntary tourism-based conservation levy could be used to provide funding to support conservation activities, including marine conservation efforts (See Section 5.1). This could be coupled with efforts to increase alternative livelihoods through tourism (see Section 6). FADs are another potential source of livelihoods and are being pursued through AID-donors in the area.

Other mechanisms are not likely to be relevant, e.g.

- Trust funds financed by industry: as no real industries are operating in the area. The manganese mine in North East Efate is no longer operational which could have been a candidate for a Trust Fund.
- Government established taxes: as any tax revenue is likely to go into consolidated revenue and not directed back to conservation.
- Quota markets: as the inshore fishery, the most at-risk fishery, is mostly subsistence fishing.

4.2 LAND MANAGEMENT

Large areas in the inland areas of North Efate (excluding the islands of Nguna and Pele) have been leased to foreigners (often called ex-pats or investors) – mostly for cattle grazing and residential/resort development. Some of these leases have been in existence for many years and land leases are discussed in more detail in Section 5.3.

Associated with some of the grazing leases is poor land management, which leads to erosion and invasive species infestation. The extent of this degradation is unknown and would require significant interaction with lessees to be able to assess its degree and extent. Unless there are conditions attached to the lease there is currently little recourse to require these lessees to manage the land differently (Kaltuk Kolomor, Livestock Officer, Department of Livestock, pers. comm., 3 October 2016). Some modifications can be made to lease agreements at review periods but these are rarely used and it was believed that most communities did not know that some renegotiation was possible (or how much it may cost) and it was unclear the extent of modifications that could be achieved (as this has been rarely tested) (Jimmy Sauo, Department of Land Valuation, Disputes and Forfeiture Officer, pers. comm., 4 October 2016).

As population increases in the area, there is also greater pressure on land in terms of slash and burn agriculture. There are also some communities who are wishing to re-establish historical villages in the inland areas which is likely to increase the use of the land for gardens (Vanessa Organo, pers. comm., 4 October 2016). There is an initiative to create the Efate Land Management Area (ELMA) in the non-leased inland areas of Efate (Fig. 5). While this is an aspiration of Shefa Province, there are a number of factors to work through, including a dispute over who has custom ownership, and determining the state and condition of biodiversity (including what flora and fauna exist in the area). To establish ELMA will require agreement from the custom landowners (Vanessa Organo, pers. comm., 4 October 2016) to establish a conservation agreement.

As most of this inland area has been previously logged, there is currently less pressure on the harvest of native timbers. If the area was to be logged again it would be using mobile sawmills. These sawmills can only mill larger trees (so the area would be selectively logged) and are able to mill approximately 50–60% of the tree as parts of the tree would be too small to process (Watson Lui, pers. comm., 3 October 2016).

In the coastal areas, residential and resort development pose the greatest risk. While there are Environmental Impact Assessment (EIA) requirements for all developments, these are not always well carried out and the review capacity is limited within government agencies (Vanessa Organo, pers. comm., 4 October 2016). Assessments are done by consultancies with reviews being undertaken by DEC and the EIA review committee (DEC 2016).

There have been some restoration activities undertaken by Nguna-Pele Marine and Land Protected Area Network, including hillslope and coastal replanting for erosion control undertaken on Pele Island as part of the SPC-GIZ project. However, Tropical Cyclone Pam destroyed the coastal replanting and a fire during the severe El Nino of 2016 destroyed the hillslope plantings. These are unlikely to be replaced without additional funding (Tatu Whitely, pers. comm., 4 October 2016).

Challenges and opportunities

There are a number of challenges to the creation of an economic/financial mechanism to address land degradation issues, including:

- The land lease conditions are difficult to amend once they have been agreed. There could potentially be opportunities related to new leases (see Section 5.3 below).
- In the past a reforestation levy was tied to each log milled. This was to reforest areas after logging, which was particularly important in areas of clear felling. However, due to reductions in government revenue, the Public Finance and Economic Management Act (1998) was promulgated and this removed many of the individual levies being used by ministries (Watson Lui, pers. comm., 3 October 2016). Despite the establishment of a Biodiversity Conservation Fund as part of the Forest Policy 2013-2023 (MALFFB 2013) this is unlikely to be established without changes to both the Forestry and Public Finance and Economic Management Acts. The payments currently associated with logging are a royalty payment to the communities and a forest management levy that goes to consolidated revenue.
- Land degradation and restoration efforts could be undertaken on custom-owned land in conjunction with the relevant environment networks. Again, a local conservation fund could be used to finance those efforts.

- A clearer picture of the benefits provided by the terrestrial environments and their management needs, particularly in the proposed ELMA area, are required before any assessment of additional economic or financial mechanisms (e.g. parks with entrance fees) can be made. An ecosystem services assessment approach could be undertaken with communities to identify what benefits exist (now and in the past) from a community perspective, which could then be used to inform the development of any initiatives.
- While REDD or REDD+ could be an option for the ELMA, there is little knowledge of the biodiversity in the area and it is likely the area has already been harvested (if only selectively logged) in the past. Therefore, it is not clear how relevant REDD or REDD+ would be in this context.
- There are no real industries in the area so there is little opportunity to establish trust funds, offsets or environmental markets. Resorts and residential developments could provide some opportunity for offsets. However, while there are resorts in the area, no new resort developments were noted during the October 2016 field visits. Residential developments are more common but exist at an individual landowner level. Land lease conditions would be a more effective avenue for addressing environmental conservation issues related to residential development.

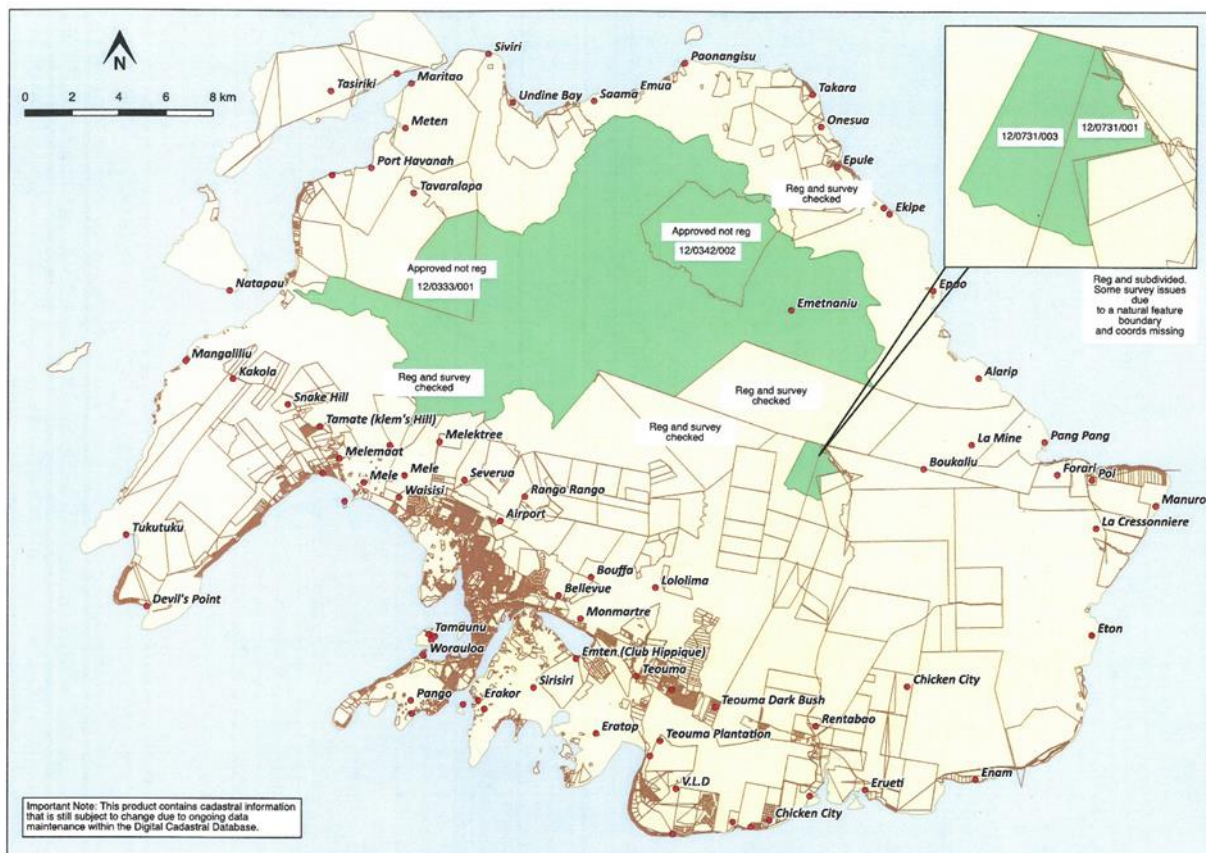


Figure 5: Map of Efate showing the location of the Efate Land Management Area (ELMA).

4.3 INVASIVE SPECIES

Invasive species are an issue in North Efate, like most parts of the Pacific. However, the extent of and damage caused to both gardens and native biodiversity are not well known (McGibbon & Fraser 2016). However, household level surveys, another component of the RESCCUE project, will gather detailed information on spread, type of damage, and control efforts for a number of invasive species that are present in North Efate. The biodiversity and garden response to invasive species control will also be measured to provide some indication of the potential for biodiversity improvement and increases in garden productivity. This will provide better information for communities in the area on what species to target and where to target their efforts.

Challenges and opportunities

The environmental networks for Tasivanua and Nguna-Pele both noted that invasive species control was an issue but it seemed more pressing within the Tasivanua Environmental Network.⁷ The challenge for the networks in invasive species control is what species to control, how to undertake that control, and the finances that may be needed for control (either in terms of time or to pay for materials, equipment or chemicals). All or part of the on-going financing for invasive species control could come through the creation of local conservation funds (see Section 5.1). It was also raised with Tasivanua Environmental Network the possibility of liasing directly with some of the resorts (e.g. Havannah) to determine if the resort owners/manager would be interested in either undertaking their own invasive species control or contributing materials to the Network to use for their own control activities. In addition, future leasing agreements could specify invasive species control conditions.

5 OPPORTUNITIES

Three opportunities were identified to explore further within the RESCCUE Vanuatu project and move to an implementation phase.

5.1 CONSERVATION FUNDS

Tasivanua Environmental Network and Nguna Pele Marine and Land Protected Area Network are well established but funding for these groups to undertake conservation tasks is limited. To provide an on-going source of revenue for conservation activities, the RESCCUE project is proposing to establish local conservation funds – one for the Tasivanua area and the other for Nguna and Pele Islands.

The source of these funds is a proposed voluntary conservation levy applied to tourism activities in the area. It is voluntary in the sense that tourism operators would be voluntarily adding the conservation levy to their prices (not that a visitor may or may not pay the levy). The aim of the levy would be to provide mutual benefits where environmental improvements benefit both the communities and the quality of visitor offerings in the area. The estimated annual levy revenue is between 850,000-1,320,000VT/year (see Appendix 2).

The key tourism activities that could impose such a levy include:

- Accommodation owners
- Attractions (e.g. caves at Siviri Village, Top Rock at Saama Village, Chief Roi Mata's Domain, Pele Island day tours, Nguna volcano hike)
- Yachts
- Farmer cooperatives on Nguna and Pele Islands (if the supply contracts are established; See Section 5.2)

5.1.1 Proposed format of the Conservation Funds

Outlined below is the proposed framework for how the funds would operate. The operational details will be refined during the implementation of the Fund and in conjunction with the environmental networks and the tourism associations.

- Two Conservation Funds would be established – one for North Efate (including Emae Island) and one for Nguna and Pele Islands.
- A levy (e.g. 10%) would be added to the pricing of all tourism activities in the area. For example, instead of the price of a night's accommodation being 3000VT it would be 3300VT, where 300VT would go to the Conservation Funds. Initially the levy would be imposed on accommodation and tourist attractions. Yacht mooring sites and the farmer cooperatives would be added once established.
- The Conservation Fund would be operated through a community trust mechanism, with the trustees coming from communities, the environmental networks and the tourism associations. The cost to

⁷ Taken from discussions with Kenneth Lango (chairman, Tasivanu Environmental Network) and Willie Kennent (Nguna-Pele Marine and Land Protected Area Network).

establish such as trust is estimated to be about 150,000VT⁸ (Mark Stafford, Barrett and Partners, pers. comm., 30 November 2016).

- Tourism operators would deposit the levy into the Conservation Fund Bank Account (there is a National Bank of Vanuatu branch in the village of Emua) where individual tourism operators have a specific ID that allows the tracking of funds into the account and could be used to cross-check against the accommodation/visitor records of each operation [note: it seems that only some tourism operations currently keep records of visitors so record-keeping would need to be improved].
- Development of a joint management plan by the environmental networks and tourism associations for conservation activities to be paid for by the Funds (see Section 5.1.2). This should be formalised through a Memorandum of Wishes/Understanding which would outline how the Trust would operate (which would include the development of Joint Management Plans) and how decisions are made. This would act as a guidance document should disagreements arise in the future.
- Development of a Tasivanua and Nguna-Pele story that could be placed in bungalows or at tourist attractions describing how the conservation funds are being used as well as telling some of the stories of why the area is so special. These stories could also be used to help with the marketing of the area and cooperative produce and developed along side community members. In some communities youth media training undertaken as part of RESCCUE, which focuses on using of smart phones to make short films (training undertaken 3 and 4 October 2016), might be leveraged to develop additional short films for this purpose.
- A future goal is the cooperation between the 2 networks to purchase materials and perhaps receive volume discounts for materials. This may or may not be realistic or necessary, depending on the volume of materials that may be needed for restoration activities.

5.1.2 Joint management plans

The ICM plan will provide overall guidance on key areas of conservation and conservation direction. However, to make these operational the plan must be translated into manageable and staged actions for government (e.g. Shefa Province), communities, and landowners. There are many plans and strategies in Vanuatu but most have not been implemented. Therefore, a key aspect of this initiative would be to develop pragmatic management plans to make the implementation of the ICM Plan achievable and tangible for the local communities. This may mean the management plans outline small but realistically achievable steps for the environmental networks and are developed by the networks themselves.

As part of the Conservation Fund we propose a jointly agreed management plan between the Tourism Associations and the Environmental Networks be developed. The purpose of these agreements would be to:

- identify the actual management activities that would be needed to improve the environment in line with the ICM Plan
- identify the suite of management activities whose implementation would also directly benefit the local tourism operations. These activities would need to be prioritised to insure a concerted effort with evident results
- provide the best opportunities for tangible evidence that the conservation levies from the tourism operators to the local conservation funds are being used effectively and are likely to produce beneficial results.

This management plan should be regularly revisited (e.g. every 5 years) to check progress and also to re-prioritise activities if other more pressing needs or better opportunities have arisen. Having a local management plan for the Conservation Fund could have a number of additional benefits including the identification of:

- Already agreed activities if other donors come to the area to support conservation action.
- Potential activities to which local high schools could contribute.

⁸ The establishment cost is an estimate as the actual cost will depend on the complexity of the trust and legal and accountancy time taken to set the trust up.

- Potential activities to which foreign visitors could donate time, either through resort-arranged activities (e.g. similar to the Reef Care Project at the Shangri La in Fiji) or through conservation volunteer initiatives (e.g. Projects Abroad⁹ and Gap Force¹⁰).

With time the joint management plans could be built on to engage investor/expat tourism operators. Some potential examples could involve resort owners contributing to the Networks through the provision of materials needed for restoration activities (e.g. trees for replanting, cement for artificial reefs, etc.).

5.1.3 Enabling environment

There are a number of barriers and enablers to establishing conservation levies, including:

- Members of the Tourism Associations as well as a range of tourism operations/accommodations have indicated their willingness to apply a conservation levy to their prices.
- The chairs of the Tasivanua Environmental Network and Nguna Pele Marine and Land Protected Area Network support the approach and the proposal to work with the Tourism Associations on conservation priorities in the area.
- There are a relatively small number of tourists currently visiting North Efate and Nguna, Pele, Emae, Moso, and Lelepa Islands. Therefore, along with the establishment of a conservation fund there should also be initiatives to increase the number of tourists visiting the area. Section 6 outlines some initial ideas on how this could be achieved. At present visitor numbers are small and won't make a large contribution to conservation. However, increased marketing and the development of linkages between Vanuatu Tourism Office, Vanuatu Tourist Information Centre, tour operators e.g. Adventures in Paradise, Evergreen and Tamarra, and entries in printed/online travel guides e.g. Trip Advisor, Lonely Planet, Rough Guide, Frommers etc. should result in increased visitation to the area. With over 80% of US travellers saying that the most useful sources of information for researching and planning a trip are web-based sources (Tripadvisor 2013), this highlights the importance of this form of marketing. Combined with better in-country marketing, it is reasonable to expect an increase in tourists visiting the area.
- Cooperation between communities and between the environmental networks and tourism associations may take some time to develop. It may also be that tourism operators from specific communities may only be willing to see the conservation levy funds from their operations spent within their communities. Given the relatively small amount of money coming into the fund (at least initially; see Appendix 2), this may be counterproductive as the amounts per community may be too small to achieve any effective conservation. Increasing the willingness to cooperate on conservation efforts will be important.
- There is a current lack of confidence and capacity to engage in tourism marketing or breaking the conservation needs into manageable components. RESCCUE participation will assist with building this capacity and developing the conservation and management priorities for the area (as part of the ICM plan development).
- No legal barriers to establishing a voluntary conservation levy were identified (Kate McPherson, pers. comm., 7 October 2016).

5.1.3 Supply and demand

The funding for the Conservation Funds is via tourism operations. Therefore, when considering supply and demand this assessment considers the supply of tourism activities that can attract or accommodate tourists while demand reflects the flow of tourists.

Supply:

Appendix 1 outlines the accommodation in the area and given these places are not at full occupancy (see Section 6) there is currently sufficient availability of tourist accommodation in the area as well as room to accommodate a growth in tourist numbers. Estimates based on tourism attractions were not included given the current low visitation rates. Therefore, these estimates are conservative estimates.

⁹ <http://www.projects-abroad.org/about-us/>

¹⁰ <http://gapforce.org/gb/gap-year-programs/program/fiji-marine-conservation>

Demand:

Tourism numbers have decreased by about 18% since Cyclone Pam and some airlines stopping flights to Vanuatu (Vanuatu National Statistics Office 2015) but these numbers are expected to increase and campaigns are underway to attract more visitors to Vanuatu (Janet Samuel, Department of Tourism, pers. comm., 9 October 2016) and some airlines (e.g. Air New Zealand) will be resuming flights toward the end of 2016. Shefa Province has also recently completed their tourism plan based on a vision for sustainable tourism and a quality visitor experience (Tourism Department 2016). Therefore, it is reasonable to assume that visitor numbers will return at least to pre-cyclone rates.

Of the visitors that come to Vanuatu, only a portion of these visitors are likely to visit North Efate (numbers are unknown as these statistics are not collected unlike for islands that involve internal flights). The knowledge and marketing of tourism activities and accommodation in the area is quite sparse, as reflected by the low visitation rates to existing attractions and accommodation occupancy. Therefore, there is opportunity to grow visitation rates (See Section 6) which will, in turn, provide additional revenue for a Conservation Fund.

5.1.4 Risks and opportunities

1) Operational risks and opportunities:

Inputs

There are two key inputs for the success of the Conservation Funds.

One is people to undertake the conservation activities laid out in the joint management plan and to administer the fund, and the other is sufficient funds to undertake the conservation activities. The existence of two environmental networks in the North Efate area provides a mechanism through which to organise community members from the various villages. One people risk is capacity to manage to Fund. This, however, will be addressed through RESCCUE's assistance with establishing the governance structure and the hiring of specialised staff (if sufficient funds flow through the Fund) for different functions such as writing funding proposals, managing finances or specific technical skills related to the conservation activities, e.g. through the establishment of a ranger network which Live and Learn is discussing with the environmental networks.

The other input is visitors to pay the levy and accommodation/tourist activities that agree to participate. We estimate the occupancy rate to be approximately 2800¹¹ bed nights (i.e. number of nights a bungalow is occupied). This represents a relatively low occupancy rate and the actions in Section 6 are aimed at increasing tourism rates in North Efate.

Output and/or productivity

The biggest risk is around governance structures and/or institutional capacity which may be a barrier to the effective establishment and operation of the Conservation Levy. As noted above (in inputs), RESCCUE plans to work with the environmental organisations and tourism associations to develop an effective governance structure and develop the necessary capacity.

One opportunity for increasing the value of the Conservation Levy is to increase tourist numbers to the area (see inputs above and Section 6). Potential activities to which foreign visitors could donate time, either through resort/bungalow-arranged activities could attract additional tourists to the area as well as improve conservation efforts in the area.

Conversely, a deterioration of the environment, accommodations or tourist attractions may also deter visitors from coming to the area.

Disruption to operation

Any disruption to tourist numbers will affect the effectiveness of the Conservation Fund. This may include events like cyclones or potential disease risks that interrupt the flow of tourists. For instance, there was severe damage to the area from Cyclone Pam which damaged by infrastructure (e.g. bungalows) but also the reef in certain areas.

¹¹ Estimated from occupancy numbers provided by a number of different bungalow operators and is consistent with Huber (2016).

Technologies

Many villages in North Efate are not yet electrified, but there are works in progress to electrify the villages on Efate Island in the next 6 months (Kenneth Lango, 6 October 2016). This will enable additional options (e.g. fridges, fans, etc) for bungalows, making these bungalows more attractive accommodation options.

2) Regulatory and legal risks and opportunities:

There is no identified regulatory or legal risks to the Conservation Fund. Of the two vehicles to set up the Conservation Fund – community company and community trust – the community trust is the most appropriate approach (Mark Stafford, pers. comm., 30 November 2016) and will establish the necessary legal status for the Fund. There are also no other barriers related to conservation-related legislation (Kate McPherson, pers. comm., 7 October 2016).

3) Reputational risks and opportunities:

One reputational risk that may arise is if conservation activities (supported by the Conservation Fund) are not effective and there is a decline in the state of the resources targeted by the conservation activities. This can, to some extent, be tracked by the environmental networks by monitoring their activities and also the response to those activities. This will be hindered by the lack of good baseline data for some activities, e.g. invasive species. This current deficiency around invasive species is planned to be addressed for some species by RESCCUE. Surveys have also been carried out by RESCCUE for coral health and fish abundance.

A related opportunity is that visitors to the area may be supportive of funds being used for conservation purposes and preferentially visit the area for that reason.

4) Market and product risks and opportunities:

The Conservation Fund relies on visitors coming to the area. Increasing the number and quality of tourist offerings (for both domestic and international visitors) provides a market opportunity for the area while also providing a greater revenue source for the Conservation Fund (see Sections 5.1.2 and 6 for options for increasing tourism and conservation-related offerings in the area).

Given there is current low visitation, there are likely more opportunities than risks.

5) Financing risks and opportunities:

As noted in the risks and opportunities above, the long-term success of the Conservation Fund is visitor numbers to North Efate as they will provide the revenue stream for the Fund. A solicitation to the RESCCUE funding to initiate trusts will be considered by the networks.

5.2 SUPPLY CONTRACTS

This is a newly emerging opportunity identified during the October 2016 field visit. As part of the SPC-GIZ funded 'Coping with Climate Change in the Pacific' project, three farmer cooperatives have been established on Nguna (2) and Pele (1) Islands. Currently, the farmers and the cooperatives are focused around egg production but they have aspirations to expand the variety of produce they may funnel through the cooperative (Tatu Whitely, pers. comm., 10 October 2016).

As part of this project 90 farmers were given equipment grants and will automatically be part of the newly formed cooperatives. The farmers were provided with 10 layer hens with the final hens being delivered to farmers in October 2016. The cooperatives have only just been established and their governance structures and constitution (including bylaws) are currently being developed. The aim of the cooperatives is to organise the collection and sale of the produce (Tatu Whitely, pers. comm., 10 October 2016).

The RESCCUE project, leveraging the work from SPC-GIZ, is proposing to further explore the establishment of supply contracts with resorts and restaurants. This would be undertaken in partnership with SPC-GIZ and the Cooperatives. Given this is a newly emerged opportunity there is some additional information required to establish the supply and demand for the eggs.

Part of this proposal was that a portion of the egg sales would be paid into the Conservation Fund (Section 5.1). Both establishing a supply contract and also a portion of the sales being paid into the Fund was raised with community members on 11 October 2016. The conservation activities could target areas that would benefit the

cooperative, e.g. invasive species control that may allow additional types of produce to be grown on the island or increase yields as well as benefit biodiversity. There is also scope to consider moving to organic certification in the future as the systems are organic at the moment. This would be a longer term goal once the cooperatives are operating well and their supply contract agreements are functioning efficiently.

The aspects that require further consideration to establish supply contracts include:

- From farmers
 - Supply of eggs and other products that the cooperatives could reliably supply on a regular basis (egg calendars were supplied to SPC-GIZ to provide to the farmers in October 2016)
- From resorts/restaurants
 - Whether resorts/restaurants already have these types of agreements in place (and so would not be interested in the offering from Nguna and Pele cooperatives)
 - Whether resorts/restaurants are willing to enter into such an agreement
 - How much produce would the resort/restaurant require each week (or relevant time period)
 - Whether a 'Nguna-Pele Story' would be a compelling angle for resorts/restaurants (this may be something to which some guests may respond) as part of their marketing. This would involve the drafting of a Nguna-Pele Story. [Note: this could be the part of the 'story' that bungalows owners and visitor attractions might also like to tell]. This option was raised with a person in the tourism sector who supported this concept based on her knowledge of the tourist sector and also local resorts and restaurants (Carrisa Jacobe, pers. comm., 11 October 2016). It was also tested with the SPC-GIZ project technical advisor who also supported this concept (Chris Bartlett, 23 October 2016).

This information will be solicited after some initial information on egg production has been collected. The community members from some villages were unsure of their production levels and whether the current aggregate supply would be all sold within their villages. The uncertainty around the amount of eggs surplus to village needs arises from the full quota of layer hens only being delivered in October 2016.

- From cooperatives
 - Price of produce sold (including shared discounts for guaranteed market and potentially reduced transport costs) and ensuring the cooperatives receive a fair and reasonable price for the produce
 - Terms of any agreements (including amount of produce supplied, price, how often price gets reviewed, consequences of non-delivery of the agreed amount). This agreement will be based on similar agreements established in Fiji by USP.

5.2.1 Enabling environment

There were a number of barriers and enablers to establishing conservation levies, including:

- It is currently unclear how many eggs would be available to sell as part of a supply contract. Currently, the eggs are used for household consumption and also sold within their own and neighbouring communities. It seems that eggs have become a substitute protein source for the lower fish stocks around the islands (Nguna and Pele islanders at community meeting, pers. comm., 11 October 2015). The change from fish to eggs over the longer term may also have implications for dietary health (Dr Dawn Gibson, pers. comm., 11 October 2016). This highlights the importance of marine restoration to increase fish stocks. The egg initiative does, however, relieve the pressure on the heavily fished inshore fishery around these islands, assisting the fishery recover.
- A lack of confidence and capacity to engage with resort or restaurant owners to begin discussions around supply contracts.

5.2.2 Supply and demand

As noted above, there is additional information that is required to establish the supply of eggs available for sale through a supply contract and the demand for these eggs from resorts/restaurants (target customer) in Port Vila

and other areas of Efate Island. Names and contact numbers for a number of key resorts and restaurants have been obtained and these will be the initial focus for engaging potential customers.

5.2.3 Risks and opportunities

1) Operational risks and opportunities:

Inputs

Eggs are the key input for this initiative. While it is estimated that approximately 720 eggs (assuming a 20% non-lay per day) could be available each day, however, farmers at a community meeting on 11 October 2016 indicated that the number of eggs being laid was quite variable. The farmers were unsure, at that point of time, what their supply may be over a longer timeframe.

Effective cooperatives are another key input. The governance structure for the cooperative should resolve this through the constitution currently being developed. The constitution will cover how they manage themselves, how they pay a wage and to whom, how they price their products as well as bylaws that address how they resolve disputes and what the requirements are for the cooperative members (Willie Kennet, pers. comm., 5 October 2016).

Output and/or productivity

Egg production is also biggest risk in terms of productivity of the supply contract. Without a stable egg production it will not be possible to reliability meet the requirements of supply contracts. Egg loss will need to be monitored over time and rectified where possible. For example, rats were noted as a problem in villages and may also predate on eggs (Charley Manua and Willie Kennet, pers. comm., 5 October 2016).

Disruption to operation

Any disruption to egg production or to tourist numbers (which will affect demand via the resorts/restaurants) will affect the supply contract. This may include events like cyclones, potential disease or invasive species risks that interrupt the flow of tourists or affect the hens.

Technologies

Eggs are a fairly durable commodity as they don't need refrigeration. While they may break easily there is packaging available to reduce breakage.

Should the supply contract be extended to other commodities in the future, especially perishable commodities, then the ability to refrigerate the goods may be necessary. The villages on Nguna and Pele Islands do have access to ice but are not yet electrified (electricity comes from solar sources and generators).

2) Regulatory and legal risks and opportunities:

There is no identified regulatory or legal risks to supply contracts as long as the agreement is legally binding and both parties meet their legal obligations.

3) Reputational risks and opportunities:

One reputational risk that may arise is the non-delivery of the agreed number of eggs (or other commodities should the commodities covered by the supply contract expand). The establishment of the cooperative, however, should mitigate this risk as they can aggregate the eggs from the farmers within their cooperative.

Should a Nguna-Pele story be attached to these products under the supply contract then any activities that jeopardise these stories will be a risk. Conversely, these stories may also enhance the value of the commodities being sold.

4) Market and product risks and opportunities:

Enhancing the eggs being supplied with a Nguna-Pele story could provide added leverage in the market. Anecdotally, there is often a supply shortage of free range eggs (Carrisa Jacobe, pers. comm., 11 October 2016) in Port Vila and the eggs being produced on Nguna and Pele Island are free range.

5) Financing risks and opportunities:

No external financing is needed for this mechanism. The supply contract does, however, rely on having sufficient external demand for the eggs (and potentially other products) which is the revenue source back to the cooperatives and farmers. There is also some risk around the cooperatives not agreeing to contribute part of the revenue to a conservation fund. This would be alleviated, to some extent, through conservation activities being mutually beneficial to the aims of the Fund and the needs of the farmers (e.g. control of species that may steal eggs or damage other crops).

5.3 LAND LEASING GUIDANCE

A growing portion¹² of Efate Island is being leased to expats or investors. In Vanuatu any custom owned rural land, which means it is owned by communities or individuals within communities, can be leased by the custom landowner for periods up to 75 years. At the end of a lease period leases can be renewed. If a landowner wishes to take the land back at the end of the lease period they are typically required to pay for any land improvements made by the lessee (MOL 2016). This, in all likelihood, means the land lease is renewed as the landowner does not have sufficient funds to pay for these improvements.

Most of the southern half of Efate Island has been leased or is state/public land¹³ (Vanessa Organo, pers. comm., 7 October 2016; Fingleton et al, unknown). In North Efate, much land is still under custom ownership. However, increasing amounts of land on the North East and North West of Efate is under leasing pressure. Most of the coastal area between Port Vila and Port Havannah is now leased for residential or resort development. There are also leases for cattle grazing in the Northeast and Northwest which have been in place for many years.

Under Section 38 of the Land Lease Act, there is an opportunity to attach conditions to the lease agreement when the land is leased. These conditions could include access agreements or management requirements. However, conditions that are based on customary community uses or values are not commonly attached to lease agreements (Jimmy Sauo, pers. comm., 4 October 2016). Lease agreements are made directly between the landowner and potential lessee with little oversight from government in terms of the type of development, amount the land is being leased for or the conditions that may (or may not) be attached to a lease. For a lease to be approved for registration by the Land Management Planning Committee, negotiations must be undertaken by a registered negotiator, custom owners have to have agreed to the lease mechanism and the proposed lease must have been publicly notified (Part 4 Section 6 of the Land Reform Act). It was noted by Department of Land Valuation staff that even in situations where the ownership of the land is disputed, these are often 'resolved very quickly once money is on the table' (Jimmy Sauo, pers. comm., 4 October 2016).

There is increased risk to the environmental condition of the land and marine space with leases, which once agreed, are challenging to change or have any management influence over. There is an opportunity, though, to assist custom owners with leasing agreements.

The RESCCUE project proposes to develop of a short guide in Bislama for landowners to help them understand the implications of leasing their land and what sort of conditions could be negotiated within a lease. This would apply to new leasing arrangement only. It would not directly affect existing leases unless the lessor was willing to voluntarily amend lease conditions.

¹² One study has noted that 80 percent of Efate is leased (Garret 2012). In another report, Stephanova et al. (2012) estimate that 69.5 per cent of urban Efate and 43.6 per cent of rural Efate are under lease in 2010, including 56.5 per cent of coastal Efate or 121.5 kilometers; however, they caution that these are indicative figures only and the data quality is questionable.

¹³ In Vanuatu there is custom and state or public land. Public land is where the Government holds a perpetual lease with the custom owners of the land. This entitles custom owners to a continuing share of the revenue from the land, continuing ownership of certain areas of urban land to develop or lease themselves, and continuing representation on statutory bodies managing the land. Custom land is owned according to custom, and companies or nonindigenous citizens can lease it directly from its custom owners, subject to Government consent (Lunnay et al. 2007; Land Reform Act 2013).

Some potential conditions could include:

- access to the marine space for fishing, land for domestic gardens, water for domestic use
- management of invasive species or vegetation for erosion control
- payment in addition to the lease agreement to one of the environmental networks

In addition, there appears to be little knowledge that the lease price can be re-negotiated every 5 years (under Section 39 of the Land Lease Act) or that variations can be made to the agreement and the conditions of a lease (under Section 47 of the Land Lease Act) (Jimmy Sauo, pers. comm., 4 October 2016). The variations can be initiated by the lessee or lessor by serving a written notice to review. Raising awareness on these aspects will also be useful to landowners with existing leases.

While the legal mechanisms (Land Lease Act and Land Reform Act) enable the ability to state lease conditions (Section 38 of the Land Lease Act) and there should be due diligence with lease negotiations, it appears that there are implementation aspects of these Acts that are lacking.

5.3.1 Enabling environment

There is increasing pressure by investors to lease land in North Efate. For instance, in July a Chinese consortium approached the chiefs on Pele Island to lease half the island. This offer was subsequently turned down (Willie Kennet, pers. comm., 5 October 2016). It can be expected that over time and given the proximity to an international airport and the natural beauty of this area that this pressure will continue over time. There is also an increased awareness of the repercussions of leasing land, including stories from community members of leases that have significant and negative outcomes for the custom owners.

Land legislation has been amended to provide better protection for customary land owners in the leasing of land (McDonnell 2014; Wilson 2014), e.g. lease negotiation process (by a registered negotiator) must consider custom owner access to foreshores, gardens etc (Part 4 Section 6 of Land Reform Act) and more restricted powers of the Minister to create leases (Part 6B Section 10 of the Land Reform Act). While this doesn't address the actual implementation of leasing conditions, it does indicate willingness by the government to improve and prioritise the rights of customary landowners. Discussions with landowners/communities and government representatives from Department of Livestock and Land Valuation indicated that this type of 'lay' guidance for custom landowners would be beneficial.

5.4 OTHER POTENTIAL OPPORTUNITIES FOR RESCCUE RELATED TO ELMA

Relatively little is known about the existing and past use or type, state and condition of biodiversity in the area proposed for ELMA. To assist with progressing discussions on the establishment of ELMA, an ecosystem services assessment could be undertaken with communities to determine the existing and past benefits derived from that area. Once this is known, it will be clearer what restoration and conservation activities would be beneficial for the area and what, if any, economic and financial mechanisms maybe applicable. It is unlikely that an economic or financial mechanism will be established for the ELMA area under RESCCUE. RESCCUE can assist, through a targeted training session, to develop the capacity for Shefa Province staff to establish the base information needed to determine the management needs for the area and what opportunities exist for economic or financial mechanisms or tourism opportunities to finance conservation efforts.

5.4.1 Enabling environment

There are a number of issues that affect the establishment of ELMA and use of an ecosystem services approach to assist its establishment, including:

- Need by Shefa Province staff to understand the 'value' of the ELMA area and what benefits the area provides
- Request by Shefa Province staff to learn what an ecosystem service assessment entails and to undertake an assessment for the ELMA area to fill some of the information gaps
- Many land disputes in the area which will make it challenging to determine who to negotiate with and who has to agree to conservation agreement
- Illegal land settlement is occurring in the area, mostly by people from outer islands in Vanuatu and also a desire by some customary landowners to re-establish settlements in the area.

5.5 TOURISM OPPORTUNITIES (COMMUNITY-BASED AND INVESTOR)

Tourism opportunities are an interest for a number of the communities in North Efate and underpin the success of the Conservation Fund, which is financed through a levy on tourism attractions and accommodation. Section 5.1 outlines the details of Conservation Fund and its reliance on tourism.

Compared with the southern part of Efate, the tourism options are far less sophisticated and under-developed. Investors, however, have opened tourism operations in the area particularly those close to Port Vila such as Port Havannah. Efate, being a relatively small island, is reasonably easy to get around and has a number of natural and cultural attractions that can be capitalised on, e.g., coral reefs, coralline beaches, caves, extinct volcanoes, surf spots, WWII relics, and Chief Roi Mata's domain. There are also a number of bungalows available for overnight stays (see Appendix 1) and some restaurants. However, there are relatively few visitors to the area though (Table 2).

Table 2. Number of visitors at a select number of accommodation, restaurants and tourist attractions in North Efate

Attraction/accommodation/restaurant	Number of visitors	Person contacted
Vatupau Bungalow, Emau	~ 6-10 guests/month	Kenneth Lango (owner)
Serety Sunset Bungalow, Pele Island	~ 2 or 3 guests/month	Charley Manua (owner)
Orovy Beach Restaurant, Emau	~ 50 guests per week that were not part of pre-arranged tour groups.	George (owner)
Chief Roi Mata Domain, Lelepa Island	~ one group/month	Helen (community member/guide)
Top Rock, Saama	~ 50 visitors/month	Charles (community member)
Caves, Sirivi	Only a few per month	Rachael (community member)

Some options to increase tourism in North Efate include:

- Increasing the ease for independent travellers to make their way to North Efate and smaller islands, e.g.
 - The destination/routes of buses from Port Vila are clearly marked. Currently, there is no labelling of buses to identify where a bus goes to, no clearly defined bus stop and no estimated timetable available.
 - Better signage for accommodation, restaurants and attractions.
- Engage with Port Vila Tourist Office to provide walk-in visitors with accurate information on the tourism offerings in the area and with Shefa Travel website to provide more updateable information (<http://shefatravel.weebly.com/>). One approach could be to create a tourist trail. This trail would list the tourist offerings, restaurants, and accommodation. Rental car companies are another audience.
- Using better signage for attractions. This could involve having an agreed signage design for a tourist trail and all attractions, restaurants and accommodation use the same design for easy recognition by visitors (domestic and international).
- Developing a visitor survey to help identify type of tourist, where they are from, how long they are staying, how they got there, what they thought was special/fun/different about the place, whether they would visit again or recommend to their friends, interest in cultural experiences including local food, what they think would be a good addition to the attraction/accommodation. This would be to help improve the tourism offerings in the area. At least one of the bungalow operators has been changing his offering based on what guests are saying, and has led to reactionary responses and actions based on the

latest suggestions. A wider understanding and more strategic assessment of a range of suggestions will provide better guidance on what improvements are needed for existing (and new) accommodation offerings and tourist attractions.

- Initiate discussions with *Adventures in Paradise* for the tourism offerings in North Efate. *Adventures in Paradise* are the agency that puts together tours for the cruise ships. Part of their service is to determine if an attraction will meet cruise company standards. This is more likely viable for those attractions closer to Port Vila and who have the infrastructure to cater for large numbers.

5.5.1 Enabling environment

There are some key resources needed for successful tourism operations including:

- Water and toilets. These are important for visitors and will constrain the number of visitors for which an area or establishment can feasibly cater. On islands such as Pele, where all water comes from rain collected from rooves or underground sources, this could be a major constraint. SPC-GIZ do have composting toilets initiative.
- Good quality guides for attractions are also important to ensure that visitors enjoy their experience and pass on their recommendations.
- Financial management and marketing skills to ensure the financial sustainability of an enterprise. The Department of Cooperatives does provide financial literacy training.
- Food experience. Visitors enjoy tasty local/traditional food, which provides them with a unique experience. Based on the Fiji experience, visitors are after a mix of food, cultural experience and natural environment (Dawn Gibson, pers. comm., 11 October 2016).

Poor experiences can provide poor reviews (e.g. in Tripadvisor). In turn, poor reviews can result in potential visitors being discouraged from visiting or staying.

The South Pacific Tourism Organisation (SPTO) offers specialised tourism training which can be requested through the Vanuatu Tourism Office and Shefa Province and provide some the relevant training needed. Alternative training is also offered by the Department of Tourism, Office of the Registrar of Cooperatives and Business Training Services, The Australia Pacific Technical College (APTC) and Vanuatu TVET.

As noted in the Marine Diagnosis and Action Plan (Johnson et al. 2016) the development of new tourism operations and management of existing operations should preserve the value of the marine resources in the area and awareness needs to be raised about the impacts of tourism on coastal and marine habitats.

6 PROPOSED MONITORING INDICATORS

Outlined below are some of the key activities that can be used to monitor both establishment progress and also the performance of the mechanism itself.

Conservation Fund

Tracking establishment

- Governance structure agreed by environmental networks and tourism associations including
 - Agreed levy rate
 - Process for accommodation establishments/tourist attractions to deposit funds and record contributions (same process would be used for other contributions such as mooring fees as they were developed)
- Community Trust agreement drawn up
- Trustees appointed
- Bank account established
- Joint implementation plan agreed
- Time taken to establish conservation fund
 - RESCCUE partners time
 - Stakeholder time
- Direct costs of establishing conservation funds (e.g. legal cost of establishing the community trust)

Tracking performance

- Number of bungalows/tourist attractions participating
- Number of visitors staying in bungalows/tourist attractions
- Levy contribution to the funds
- Activities that conservation funds have supported

Lease guidance

Tracking establishment

- Draft guidance completed in English
- Feedback on guidance provided by selected stakeholders (e.g. Department of Land Valuation)
- Draft guidance translated in Bislama
- Focus groups hosted with community representatives
- Revised version of guidance is completed
- Guidance is distributed

Tracking performance

- Number of communities using the guidance (this would require a survey of community members or equivalent to gauge usage)

7 PROPOSED ACTION PLAN

Actions	Timeline	Who
<p>Local Conservation Fund</p> <p>The primary mechanism for seeding this fund would be a conservation levy.</p> <p><i>Conservation levy-accommodation/tourist attraction</i> Continue discussions with the Tourism Associations on the proposal for a voluntary levy on tourism activities (e.g. guest nights at bungalows). Proposed format is outlined in Section 5.1.</p> <p>Begin fund establishment process through a community trust mechanism. This includes the:</p> <ul style="list-style-type: none"> • Legal establishment of a community trust • Memorandum of Wishes/Understanding for how the trust will operate, identifying trustees and setting parameters around the powers of the trustees (e.g. restrictions on spending size). The details will need to be negotiated between the environmental networks and tourism associations. <p>Establish bank accounts</p> <p>Assist with developing joint management plans (this will be in concert with ICM Plan development)</p> <p><i>Conservation levy-mooring fees</i> This initiative is to increase contributions to the conservation funds (as well as decrease reef damage)</p> <p>Assist with establishment of mooring sites including identifying possible funding sources for construction of mooring sites and process for fee collection</p> <p>(Note: funding may be through conservation levy funds so this initiative may have a longer timeline. Should funding become available through RESCCUE then the timeline would be significantly shorter and driven by the availability of mooring contractors to design and build the moorings).</p>	<p>Discussions began in October 2016 and will continue</p> <p>Establishment initiated in February 2017</p> <p>Once community trust mechanism is established and trustees appointed (anticipated March-April 2017)</p> <p>Aligned with ICM Plan development and implementation (anticipated between June and August 2017)</p> <p>Discussions began for Pele Island in October 2016 and will continue.</p>	<p>L&L to lead establishing the governance structure LCR to support establishment Tourism operators/ Environmental Networks to participate in negotiations</p> <p>L&L to oversee LCR to support Trustees to establish</p> <p>L&L to facilitate initial discussions (Trustees will have to manage this moving forward) Tourism Association/ Environmental Networks to participate in discussions</p> <p>If funding becomes available through RESCCUE to build moorings then: LCR to initially engage with yacht mooring developers L&L/ NPMLPAN to oversee the construction.</p> <p>If funding is via the Conservation Fund then NPMLPAN will oversee the construction.</p>

<p><i>Supply contracts</i> This initiative is to increase contributions to the conservation funds.</p> <p>This is a newly identified opportunity and additional information is needed to verify supply and demand for cooperative products (initially eggs) including:</p> <ul style="list-style-type: none"> • Egg production calendars • Verifying resort/restaurant demand (note: given the number of eggs likely available for sale the contracts could only service a small number of resorts/ restaurants) <p>(Note: if resorts/restaurants are unwilling to enter into supply contracts this initiative will not move ahead)</p>	<p>Calendars provided to SPC-GIZ in October 2016 by LCR</p> <p>February-March 2017 (once more is known about volume of eggs that could be sold through supply contracts)</p>	<p>LCR to provide template SPC-GIZ to manage data collection</p> <p>LCR to undertake initial engagement with restaurants</p> <p>USP to provide contract template</p> <p>SPC-GIZ to finalise contracts</p>
<p>Land Leases</p> <p>Develop draft guidance in Bislama on conditions that could be included in a leasing agreement.</p> <p>Test with community members how well they understand the draft guidance.</p> <p>Finalise guidance</p>	<p>By October 2017</p> <p>November to December 2017</p> <p>By April 2018</p>	<p>L&L to lead development & translation</p> <p>LCR to support</p> <p>L&L to facilitate workshops</p> <p>L&L to lead revisions</p> <p>LCR to support</p>

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9 APPENDIX 1: APPROXIMATE ACCOMMODATION ESTABLISHMENTS

A number of existing community tourism operations in North Efate includes accommodation, restaurants and tours.

Some of the accommodation in North Efate (see Table A1 for more details):

- Pele Island has approximately 14 locally owned bungalows (6 in Worearu, 4 Laonamoa, 2 in Piliura and 2 in Warosiviu).
- Nguna Island has approximately 12 locally owned bungalows (9 in Taloa, 1 in Unakap, 1 in Utanlang; 1 in Mere Sauwia).
- Emae Island has seven locally-owned bungalows and guesthouses.
- Efate Island has approximately 8 locally owned bungalows (5 in Emua, 1 in Paunangisu, 1 in Onesua, 1 in Havannah), The Havannah Vanuatu (high-end resort) and Le Life (mid-range accommodation).
- Moso Island has an eco-resort (Tranquillity Island Dive Eco Resort)

TableA1. Bungalows in North Efate (Source: Huber 2016; Positive Earth 2015)

Location	Bungalows
Nguna Island	
Unakap	Paunvina Guesthouse
Utanlang	Siloa Guesthouse
Taloa	Jalom Guesthouse; Nakie Women's Guesthouse; Valea Guesthouse; Vat-Vaka; Juboes Bungalows, Uduna Cove Beach Bungalows; Mangamus Bungalows; Island Breeze Bungalows; Jupoi
Mere Sauwia	Mere Sauwia Village Homestay
Pele Island	
Launamoa	Pele Sunrise Bungalows; Wora-Namoa Sunrise Bungalows; Sandy's Rest House; Vanmarua Bungalow (Tarips)
Warasiviu	Napanga Bungalows; Seahorse Bungalow
Pilliura	Serety Sunset Bungalow; Lillie's Guesthouse (Nagisu)
Worearu	Senapapa Beach Bungalow; Simoa Bungalow; Takau's Bungalows (Sunset Frangipani Bungalows); Jowi Bungalow; JJ's Bungalow; Bella Bungalow
Emae Island	
Emae	Namarou Paradise Bungalows; Freshwind Guesthouse; Mango Guesthouse
Finonge	Nampauwia Guesthouse
Marae	Emae Sunset Bungalow
Sesaka	Chief Barry Obed
Sangafa	Jaytee Homestay
Moso Island	Tranquillity Island Dive Eco Resort
Efate Island	
Havannah Harbour	Havannah Eco Lodge; The Havannah Vanuatu
Emua	Vatupau Beach Bungalow; Emua Sunset Guesthouse; Raymond's Bay View; Nicky's Homestay; Orovy Bungalow
Paunangisu	Malowia Guesthouse
Onesua	Bamboo Beach Bungalows
Epule	Le Life

10 APPENDIX 2: ESTIMATED CONSERVATION LEVY REVENUE

An estimate of the conservation levy revenue is outlined in Table A2. The estimate assumptions are:

- Occupancy rates for Scenario 1 are based on the approximate current occupancy for Vatupau Beach Bungalows (Emau) and Serety Sunset Bungalows (Pele Island) (as estimated by bungalow owners) and the overall average occupancy rate is consistent with Huber (2016)
- Stated (from website or owner) or estimated number of bungalows per accommodation establishment
- Stated (from website or owner) or estimated per person per night prices for accommodation (same for all scenarios) and rates are consistent with Huber (2016)
- A levy of 10% on per person per night accommodation price, being applied by all bungalows and guest houses in North Efate (same for all scenarios)

The ex-pat and/or upmarket resorts (The Havannah Vanuatu, Tranquility Island Eco Dive Resort, Le Life) have not been included in these estimates. Efforts to engage these resorts will be made to either participate in the conservation levy or contribute to environmental conservation in other ways, e.g. provision of materials for conservation activities (e.g. herbicides for weed control or materials for artificial reef construction). It should be noted that Tranquility Island Eco Dive Resort has been managing a turtle rookery for the last 15 years and are looking at ways to increase their funding to support the rookery. They are interested in the initiative from the perspective on providing a funding source for the rookery but not to contribute to the conservation fund. This is primarily due to a portion of their revenue already being used to fund the rookery activities.

These estimates also do not include a levy being placed on attraction visits. However, there have been some initial discussions with the attraction managers (such as caves at Siviri Village, Top Rock at Saama Village, Chief Roi Mata's Domain) about applying the levy. They have indicated their willingness to participate in a conservation levy.

Table A2. Estimated conservation levy revenue

	No. accommodation establishments	No. bungalows	Estimated ave price per night ^a (vatu/night)	Scenario 1: estimated current occupancy (vatu/yr)	Scenario 2: 18% increase in occupancy ^b (vatu/yr)	Scenario 3: 40% increase in occupancy (vatu/yr)	Scenario 4: 10% decrease in occupancy (vatu/yr)
Nguna & Pele Island	26	45	3327	587,400	693,915	822,360	528,660
North Efate & Emae	15	24	3300	353,400	417,483	494,760	318,060
Total	41	69	3401	940,800	1,111,398	1,317,120	846,720

a: Average room rate is consistent with Huber (2016)

b: After cyclone Pam and the decrease in international flights (due to airstrip problems) there has been an 18% decrease in visitors coming to Vanuatu (Vanuatu National Statistics Office 2015). Therefore, this scenario is based on visitor numbers returning to 2013-2014 visitor rates.