



Loru Forest Project - Project Description (PD)

Part A: General Description

An avoided deforestation project at Loru, Santo, Vanuatu
D3.2a v1.0 20151009

The Nakau Programme:
An indigenous forest conservation programme
through Payment for Environmental Services (PES)



European Union



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Cover Photo: Weaver - view towards the coastal fringe of the Loru Project site from the sea, east Espiritu Santo, Vanuatu.

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1. General Requirements

1.1 SUMMARY INFORMATION

According to the most recent Plan Vivo PIN Template (p3) projects are required to supply key information as follows:

Project Title; Project Location (country/region/district); Project coordinator and contact details; Summary of proposed activities; Summary of proposed target groups.

The Plan Vivo 2012 PDD Template (p3) requires an Executive Summary (one page max) including the project location, objectives, activities, target communities, expected impacts, organisations involved and projected timeframe.

1.1.1 Project Title and PD Title Format

Loru Forest Project – Project Description Part A: General Description. An Avoided Deforestation project at Espiritu Santo, Vanuatu. D2.1a v1.0 20151009, Nakau Programme Pty Ltd.

1.1.2 Project Summary Information

Table 1.1.2 Vital Statistics for the Loru Forest Project

Project Name	Loru Forest Project
Project Location	Khole, Espiritu Santo, Vanuatu
Project Objectives	Avoided deforestation through forest protection and management. Rehabilitation of degraded forest.
Project Activities	Legally established Protected Area (Community Conservation Area) Land management plan including zoning Activities within zones such as area monitoring to deter poaching, invasive weed control, agroforestry (on degraded land)
Target Communities	Serakar Clan, subgroup of Khole Community
Project Owner	Ser-Thiac Business (landowner business entity)
Project Coordinator	Live and Learn Environmental Education Society Committee (Vanuatu). In this document this Project Coordinator entity is sometimes referred to as Live & Learn Vanuatu.
Programme Operator	The Nakau Programme Operator
Methodology	Nakau Methodology Framework D2.1 v1.0; Technical Specifications Module AD:DtPF Avoided Deforestation - Deforestation to Protected Forest
Scope	Avoided AFOLU GHG emissions from avoided land clearance; enhanced AFOLU GHG removals from forest protection
Activity Class	Carbon
Activity Type	Avoided Deforestation - Deforestation to Protected Forest

Standard	Plan Vivo Standard
Registry	Plan Vivo Registry (currently Markit Environmental Registry, London)
Product	Plan Vivo Certificates/VERs/Habitat Hectares
Benefits	Avoided AFOLU GHG emissions from avoided land clearance; enhanced AFOLU GHG removals from forest protection.
Co-Benefits	Community development, food security through Agroforestry, Income generation through tree nursery business and nut production business
Validator/verifier	Dr Misheck Kapambwe and Dr Noim Udidn
Project Period	30 years from project start date
Monitoring	Maximum 3 yearly from start date
Project Start Date	16 January 2013
Project Area	292.7 ha
Forest Area	165.6 ha
Protected Area	292.7 ha
Eligible Forest Area	147 ha
Original condition	Mix of intact and degraded forest area. Regular extraction of timber and wildlife. Cattle ranching within forest area.
Baseline Activity	Legally sanctioned forest clearing for Copra production or gardens
Project Activity	Legally binding forest protection
Legal Protection	Community Conservation Area as per <i>Environment Protection and Biodiversity Act 2010</i>
Validation	Carbon, biodiversity and community elements of Project Description validated under the Plan Vivo Standard
Verification	GHG assertions verified to the Plan Vivo Standard through verification audit of Project Monitoring Reports.
Buffer	610 tCO2 annually
Net Carbon Credits (Plan Vivo certificates)	2,442 VERs annually

1.2 PROJECT AIM AND OBJECTIVES

The Plan Vivo 2012 PDD Template (p3) requires a brief (under 250 words) description of the nature of the project and its key aims and objectives.

1.2.1 Project Aim

The Nakau Methodology Framework (NMF) states: *All projects shall state the social purpose of the project with specific reference to the affected community/ies. All projects shall state the ecological purpose of the project with specific reference to the targeted ecosystem service/s being delivered, and list (but not describe in this section) any co-benefits delivered.*

The aim of the project is to protect the Loru coastal rainforest (one of the last stands of lowland rainforest on the East Coast of Espiritu Santo) from deforestation and forest

degradation. It also aims to provide livelihood benefits for the Serakar Clan (landowners). Loru holds great cultural significance to the clan but they are under increasing pressure to develop the land for non-forest land uses common in the surrounding area such as coconut plantations and cattle grazing.

1.2.2 Project Objectives

The NMF states: *All projects shall state the specific objectives relating to the delivery of the project aim stated in 1.2.1 above. These objectives are the means by which the project purpose/s will be delivered. Project objectives shall include the general strategy applied for delivering on the project purpose, including the general activity types and the general difference between baseline and project scenario activities anticipated.*

The objective is to generate income through the sale of carbon offsets from the protected forest area. This income will replace the opportunity cost for landowners who have given up the right to log and clear their forests under this project. This will address a core economic driver for deforestation. The project employs the legal instrument of a Community Conservation Area to protect the tall coastal rainforest within the project boundary. The project seeks to manage the area through implementation of the Loru Area Management Plan, which includes the removal of cattle from the area. Surrounding degraded rainforest within the Project Area is to be actively managed to reduce the impact of invasive weeds.

The project will establish a tree nursery with the clan to generate revenue and promote forest conservation and increased planting of productive tree species. The project further aims to provide training in nut processing for women in the whole Khole community as an additional income source that relies directly on forest protection. These initiatives aim to address drivers of deforestation but are not currently included in carbon accounting.

The Project Area is divided into three management zones.

- **Zone A Avoided Deforestation.** Secondary forest to be rehabilitated through the removal of cattle and agreement not to clear the area for gardens or copra during project period. The landowners to receive carbon payments to compensate for lost income from deforestation. Zone A will be monitored by means of regular forest inspections to ensure that it remains protected in practice.
- **Zone B Enhanced Forest Regeneration.** Thicket to be weeded of aggressive herbaceous vines (*Merremia peltalta*) and managed to enhance natural regeneration. No harvesting of nut trees allowed (clan enforced decision). No carbon revenues from this zone but clan commitment to rehabilitate degraded areas.
- **Zone C Agroforestry.** Non-forest land currently infested with invasive vine *Merremia Peltalta*. Clan to actively develop land through agroforestry with a mix of tree crops (e.g. fruit, nuts), timber crops and root crops producing agroforestry cash crops,

timber and subsistence food. There are no carbon revenues from this zone but income is generated through sale of agroforestry crops.

1.3 ELIGIBILITY

1.3.1 General Eligibility

The NMF states: *All projects shall describe the way the project meets the eligibility criteria of the standard/s applied (including those specified in each Technical Specifications Module used) and the specific eligibility requirements of this methodology.*

To be eligible to participate in the Nakau Programme, projects must meet each of the criteria elaborated in Table 1.3.1 together with evidence.

This project meets all of the eligibility criteria specified in Table 1.3.1 as required in the same section of the Nakau Methodology Framework. We confirm compliance with each of these criteria with a 'Y' in the Y/N column of that table below:

Table 1.3.1: General Eligibility			
#	Eligibility criteria	Location	Y/N
1.3.1a	Projects must involve a sustained ecosystem management intervention that would not occur without PES financing.	Project aim and objectives in Part A Section 1.3 of PD.	Y
1.3.1b	The intervention outcome is quantitatively measured in relation to a baseline (BAU) scenario.	Application of technical specifications module presented in Part B of PD.	Y
1.3.1c	The quantity of ecosystem service delivered is based on the measurable net difference between ecosystem service delivery in the baseline and project scenarios.	Application of technical specifications module presented in Part B of PD.	Y
1.3.1d	Measured ecosystem service outcomes claimed for PES payments shall be independently verified by a third party.	Validation and verification specifications presented in Part A, Section 6 of PD; verification reporting.	Y
1.3.1e	The intervention outcome is quantitatively measured in relation to a baseline (BAU) scenario.	Application of Technical Specifications Module in Part B of the PD.	Y
1.3.1f	The quantity of verified ecosystem service outcomes delivered is rendered into tradable units (PES units, credits or certificates) consistent with a set of Technical Specifications (methodology) relevant to the Activity Type.	Application of Technical Specifications Module listed in Part A (Section 5.1), and Part B (Section 5.5.1) of the PD; verification reporting.	Y
1.3.1g	A proportion of PES units representing delivered ecosystem service outcomes shall be held in reserve as a buffer for a time period sufficient to cover non-permanence risk and be executed in a way that is consistent with the buffer requirements in the relevant technical specifications (methodology) and standard.	Application of buffer rules component of technical specifications in Part B (Section 5.4.1) of the PD; verification reporting.	Y

1.3.1h	Measures shall be applied to transparently avoid double counting and/or double (or multiple) selling of PES units.	Registry used for project units listed in Table 1.1.2 in Part A (Section 1.1.2) of PD.	Y
1.3.1i	There shall be sufficient demonstrated demand for and pricing of the particular PES units to enable trade to occur and payments to project owners sufficient to overcome the opportunity costs to the project owners.	Evidence of demand and actual or likely pricing for units presented in Part A, Section 1.3.1i of PD (below).	Y
1.3.1j	Projects shall meet all of the eligibility criteria specific to the Activity Type/s undertaken, and contained in each of the Technical Specification modules applied.	Part B, Section 1 of PD.	Y

The opportunity cost to the project owner has been factored into the pricing of the PES Units as a means to satisfy this requirement. This was determined by gathering data on income generated through copra from local people in Khole. The anticipated price of Loru carbon offsets are within the reasonable range of comparative units in the carbon offset market.

1.3.2 Eligible Project Intervention Areas And Participants

According to Section 1 of the Plan Vivo Standard (2013, p8):

1.1 Project interventions must take place on land where smallholders and/or community groups (collectively known as 'participants') have clear, stable land tenure, either via ownership, or user rights that enable them to commit to project interventions for the duration of the PES Agreement.

1.2 Land that is not owned by or subject to user rights of smallholders or communities may be included in the project area if it meets all of the requirements below:

- 1.2.1. It represents less than a third of the project area at all times*
- 1.2.2. No part of the area was acquired by a third party from smallholders or community groups for the purpose of inclusion in the project*
- 1.2.3. Its inclusion will have clear benefits to the project by creating landscape level ecosystem benefits such as biodiversity corridors, by making the project more economically viable, or by enabling surrounding communities to benefit*
- 1.2.4. There is an executed agreement between the owners/managers of such land and participants regarding the management of the area consistent with these requirements.*

The NMF states: *All projects must demonstrate that project interventions take place under conditions consistent with Section 1.1 and/or 1.2 of the Plan Vivo Standard (2013).*

Loru was surveyed and recognised as owned by the Serakar Clan through the Vanuatu Department of Lands in 1994. The Chief of the family at the time of the court's decision, Chief Caleb Ser, has since passed and as local custom determines, his five children now manage the land. Customary law in this part of Vanuatu works through a patrilineal system. As such the male descendants of Chief Caleb Ser are the landowners of Loru Area.

A further boundary marking was undertaken in 2014 with Government representatives present to witness agreement between the Serakar and neighbouring landowners to confirm customary land ownership of Loru Project Area. Ownership of the Loru Project Area by the Serakar Clan is not disputed.

1.3.2.1 Stable Land Tenure And/Or User Rights

The constitution of Vanuatu places land in the hands of the customary owners of Vanuatu. Customary land is the dominant form of land tenure in Vanuatu with 90% being un-leased and 9% being leased. Customary land is governed by Customary Law, which is highly decentralized changing between islands and clans. Land can be leased, taking it out of customary usage for up to 75 years. Despite efforts towards land reform, the leasing process remains disliked by custom landowners due to its misuse.

The land that is subject to the Loru Project Area has been recognised as Serakar clan land via a decision by the Department of Lands dated 14 November 1994. Area Chiefs signed their agreement to the ownership of Loru as sitting under Chief Kaleb Ser and his descendants.

In 2014, the boundary of the Protected Area, which falls within the Serakar clan boundary on all sides, was marked with a GPS. This boundary marking was undertaken with a representative from all neighbouring landowner groups. The Chiefs of the neighbouring clans nominated the representatives for boundary inspections. The Chief of the Serakar clan, a representative from the neighbouring clan, and two Government representatives walked the Project Area boundary. Statements were taken and witnessed to agree to the boundary of the Loru Project Area being within Serakar clan land.

To ensure no land disputes arise, Live & Learn Vanuatu and the Serakar clan are currently registering Loru as a Community Conservation Area (CCA) under the *Environmental Protection and Conservation Act* (2003). The Act was amended in 2010 including allowance for CCAs to be created to produce ecosystem services, including climate mitigation (s. 35(ba)). The process of registration has provided further strength to existing documentation regarding the Serakar ownership claim to Loru (surveyed boundaries and a declaration by the Lands Department). Extensive consultation with surrounding clans has occurred as part of the registration process.

1.3.3 Eligible Project Activities

According to Section 2 of the Plan Vivo Standard (2013, p9-10):

2.1 Projects must generate ecosystem service benefits through one or more of the following project intervention types:

- Ecosystem restoration
- Ecosystem rehabilitation
- Prevention of ecosystem conversion or ecosystem degradation
- Improved land use management

[Definitions for these intervention types are provided in Section 2.1 of the Plan Vivo Standard.]

The NMF states: Eligible project activities must demonstrate compliance with Section 2.1 of the Plan Vivo Standard, and must apply at least one of the Activity Classes specified in table 1.3.3a below.

The Loru Forest Project falls under the ‘Carbon’ Activity Class and is an Avoided Deforestation, Deforestation to Protected Forest (AD – DtPF) project.

The activity class applied in this project is highlighted in green in Table 1.3.3a. Co-benefits delivered in this project are highlighted in pink/orange:

Table 1.3.3a Nakau Programme Activity Classes			
Code	Activity Class	Description	Project Activity Examples
B	Biodiversity	Protection and enhancement of biological diversity	Protection or enhancement of forest habitat for biological diversity; Protected species recovery.
C	Carbon	Carbon benefits to the atmosphere	Prevention or reduction of deforestation or forest degradation; afforestation, reforestation.
CCR	Climate change resilience	Protection and enhancement of ecological infrastructures relevant to climate change resilience	Reforestation of water catchment areas; protection of forest; mangrove protection or restoration.
DRR	Disaster Risk Reduction	Protection and enhancement of ecological infrastructures that provide DRR services	Mangrove protection or restoration; forest protection; flood protection through forest protection or enhancement in riparian or catchment areas.
EI	Ecological Infrastructure	General activity class covering general ecological infrastructure activities not covered in any other activity class	Hydro power scheme water catchment management to reduce or prevent dam siltation through afforestation/ reforestation or forest protection
WQ	Water quality	Protection and enhancement of water quality in streams or coastal areas	Forest catchment protection sufficient to cause an increase in water quality or a prevention of water quality decline.

WS	Water security	Protection and enhancement of fresh water supply ecological infrastructures	Forest catchment management that causes the protection or enhancement of water supplies by aiding the hydrological cycle.
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The NMF states: Projects may be developed as 'carbon projects': activity class – Carbon (C); biodiversity (B), water quality (WQ), water security (WS), climate change resilience (CCR), disaster risk reduction (DRR), or other (approved) ecosystem service or ecological infrastructure (EI) outcomes.

Integrated projects are also permitted involving multiple activity classes (e.g. carbon, biodiversity, climate change resilience), or begin by applying one activity class, and then add subsequent activity classes through time.

The Nakau Programme will not allow double counting with respect to selling multiple units from the same area of land during the project period.

Each activity class shall be implemented through specific project interventions defined as Activity Types and implemented through the application of a Technical Specifications Module specific to that Activity Type.

The most developed Activity Class for the Nakau Programme for this version of the Nakau Methodology Framework is Carbon (C). Eligible projects within the Carbon Activity Class are restricted to those supporting at least one of the Activity Types specified in Table 1.3.3b.

The activity type/s applied in this project is highlighted in green shading in Table 1.3.3b below:

Forest Carbon Management Activity Types			
Activity Code	Activity Name	Baseline Activity	Project Activity
AD: Avoiding Deforestation			
AD-DtSFM	Avoiding Deforestation – Deforestation to Sustainable Forest Management	Deforestation	Low Impact Selective Logging/Sustainable Forest Management
AD-DtPF	Avoiding Deforestation – Deforestation to Protected Forest	Deforestation	Forest Protection
IFM: Improved Forest Management			
IFM-LtPF	Improved Forest Management – Logged to Protected Forest	High or Low Impact Selective Logging	Forest Protection
IFM-RIL	Improved Forest Management – Reduced Impact Logging	High Impact Selective Logging	Low Impact Selective Logging/Sustainable Forest Management
IFM-DtTF	Improved Forest Management – Degraded to Tall Forest	Degraded Forest	Tall Forest

AR: Afforestation, reforestation			
AR-Af	Afforestation, Reforestation - Agroforestry	Non-Forest Land Use	Agroforestry Forest Land Use
AR-NR	Afforestation, Reforestation – Natural Revegetation	Non-Forest Land Use	Regenerated Natural Forest Land Use
AR-CP	Afforestation, Reforestation – Commercial Plantation*	Non-Forest Land Use	Commercial Timber Plantation Forest Land Use

* AR activities using non-native species in the activity type AR-CP are permitted provided that this is clearly a component of a strategy to protect and/or enhance indigenous forest (e.g. a leakage-avoidance activity associated with indigenous forest protection elsewhere).

According to Section 5 of the Plan Vivo Standard (2013, p16):

5.8. Project intervention areas must not be negatively altered, e.g. deforested or cleared of other vegetation, prior to the start of project activities for the purpose of increasing the payments for ecosystem services that participants can claim.

The NMF states: *Eligible project activities shall comply with Section 5.8 of the Plan Vivo Standard (2013). This section of the PD shall provide information supporting compliance with this requirement.*

The Serakar Clan and/or no other party have negatively altered the Loru Project Area with the intention of increasing their claim to payments for ecosystem services. The last logging to occur in Loru happened without the clan's consent in 1988 (Tapisuwe, A. & Fraser, T.). This was well before awareness about PES reached the communities.

2. Describing The Project

Section B of the 2012 Plan Vivo PDD Template requires the presentation of the following project information:

- Project Location, land type and boundaries
- Description of the project area
- Description of the Plan Vivo Technical Specifications
- Duration of project activities and crediting period
- Carbon benefits of project activities
- Process and requirements for registering Plan Vivos.

2.1 TYPE OF PROJECT

2.1.1 Activity Type

The NMF states: *Each activity type applied in the project shall be described in detail.*

Deforestation to Protected Forest:

Zone A of the Project Area (see maps in section 2.4 below) constitutes the zone in which the Activity type is to be applied to generate PES Units. It is secondary forest to be rehabilitated through the removal of cattle and agreement not to clear the area for gardens or copra during project period. The area has been fenced and maintenance of the area is required in the Loru Management Plan. The Loru Management plan further specifies actions to be undertaken in the zone to ensure it is protected. This includes a full restriction on timber harvesting with monetary and customary penalties linked to any reversals. The clan will receive carbon payments to compensate for lost income from deforestation. Zone A will be monitored by means of regular forest inspections to ensure that it remains protected in practice.

2.2 PROJECT LOCATION AND LAND TYPE

Section B(1) of the 2012 Plan Vivo PDD Template requires Project Proponents to describe the location and initial size (in hectares) of the project area(s), including country, state and district (or national equivalent).

2.2.1 Description of Location and Project Size

The NMF states: *All projects shall provide a description of the project location and project size in hectares.*

The Loru Forest Project Crediting Area covers 165.6 hectares of coastal rainforest on the east coast of Espiritu Santo, Vanuatu's largest island. Santo (or Espiritu Santo) is 3677 km², with as few as 30,000 inhabitants supporting as many as forty languages. Santo is also the highest island in the Vanuatu archipelago, with a mountain range with four peaks above 1,700m. The last botanical survey of Santo in 1988, found 6 new orchid species. Vanuatu is ranked by BirdLife International as an "Endemic Bird Area" and, among invertebrates, levels of endemism, commonly 30 to 50%, peak up to 80% (land snails) (Expedition Santo 2006).

2.2.2 Project Location Maps

The NMF states: *All projects shall provide the following location maps:*

- a. *Location of the host country.*
- b. *Location of the project on a sub-national map image.*
- c. *Location of project site at a resolution sufficient to identify local relevant communities, and the initial size (in hectares) of the Project Area/s.*

All relevant maps are provided in section 2.4 below

2.2.3 Land Type

The NMF states: *All projects shall provide a description of the land types involved in the project, including land tenure, and status of the land and resource management of the project location.*

The Loru Forest Project Crediting Area comprises regenerating lowland rainforest, degraded thicket, degraded non-forest and coastal beach. The following habitats can be found within the Loru Community Conservation Area:

- Coconut crab habitat
- Incubator bird nesting sites
- Swiftlet roosting sites
- Caves
- Roosting sites (particular trees that flying fox regularly uses as their roosting sites e.g. Banyan trees in the PA)
- Coastal rocks or littoral areas are good habitats for the reef and blue-tailed skinks

- There is a coastal fringing reef in the ocean adjacent to the protected area.

The Project Area is on Customary Land belonging to the Serakar Clan (see 1.3.2 above).

In recent times the area has been used for hunting and gathering of natural resources by local people, it has also been accessible to cattle for grazing.

2.3 DESCRIPTION OF PROJECT AREA

2.3.1 Topography

The NMF states: *All projects shall describe (with reputable references) the topography of the Project Area and surrounding environs.*

Coastal Plateau leading to steep cliffs dropping directly onto reef and ocean (Ioan and Jackson 1997) – see Figures 2.4f and 2.4g below.

2.3.2 Geology and Soils

The NMF states: *All projects shall describe (with reputable references) the geology and soils of the Project Area and surrounding environs.*

Most of Vanuatu's islands are of volcanic origin and several are still active, including Mount Yasur on the island of Tanna. The highest peak, Mount Tabwemasana on Espiritu Santo, rises to an elevation of 1,879 m. Most of the islands have narrow coastal plains fringed by coral reefs.

Eastern Santo comprises mainly Limestone plateau:

"The Eastern Plateau Limestones comprises a reef complex coral-agal limestones and associated bioclastic deposits which make up a series of plateaux and below them terraces stepping down towards the south and east coasts, and westwards towards the Jordan/Lape valley. Three divisions within the limestones are recognised indicating a series of shallow water limestones related to a fluctuating but generally falling sea level; the older raised limestone, the younger limestone of the coastal platform, and the present fringing reef. The older raised limestones make up most of the plateau areas of eastern Santo and include all the limestones above the base of the generally prominent scarp at the back of the coastal plain. The lithology is porous, white to cream, partially recrystallised coral-agal biolithite which on weathered cliff exposures is typically hard and solution pitted. The limestones are generally massive but may display a weak horizontal or shallow dipping stratification" (Ioan & Jackson 1997).

2.3.3 Climate

The NMF states: *All projects shall describe (with reputable references) the climate of the Project Area and surrounding environs.*

Vanuatu has a tropical, humid oceanic climate, somewhat moderated by trade winds between May and October. Temperatures in the northern islands average about 27° C year around with an annual rainfall of about 3,000 mm. Temperatures in the southern islands range from about 19 to 31° C with a yearly rainfall of about 2,300 mm. There are occasional cyclones with a frequency of about 2.5 cyclones per year affecting some part of Vanuatu (Department of Forests 2001).

The climate of Santo is predominantly hot, humid and tropical, with year-round rainfall. There is a wet season, influenced by the northwest monsoon, between December and May; and a dry season, influenced by trade-winds from the southeast. The climate of this region is also affected by the El Nino/Southern Oscillation (ENSO) cycle (CEPF 2012). During an El Nino year, the East Melanesian Islands are subjected to drought and cooler temperatures, whereas during La Nina years higher than normal rainfall and warmer sea temperatures are prevalent.

2.3.4 Ecosystems

The NMF states: *All projects shall describe (with reputable references) the ecosystems and habitat types of the Project Area and surrounding environs.*

The project site is situated within the East Melanesian Islands (Biodiversity) Hotspot. The Vanuatu rainforest bioregion consists of more than eighty true oceanic islands, in two groups, at the edge of both the Australasian realm and the Pacific Basin. They contain 15 endemic bird species and several mammal species (CEPF 2012).

The Loru Project Area is one of the last areas of representative indigenous forest on the east of the island of Espiritu Santo and supports a surprisingly rich diversity of species, including a number of important endemic and restricted range animals, trees and plants. Bush walking and bird watching are popular visitor activities at Loru. The forest hosts about 24 bird species including 5 Vanuatu's endemic species mainly *Halycon (Trodiramphus) farquhari* (Vanuatu Kingfisher), *Megapodius freycinet layardii* (Namalao), *Neolalage banksiana* (Vanuatu Fly Catcher), and *Ptilinopus tannensis* (Bigfala grin pigeon). Loru also has a bat cave and is an important refuge for coconut crabs, which is a critically endangered species under the IUCN red list (Kalfatak 2014).

2.3.5 Environmental Values

The NMF states: *All projects shall provide a low-resolution description of the environmental and conservation values of the Project Area and surrounding environs, including:*

- *Rare or endangered species*
- *High conservation value habitats*
- *Protected Areas*

Include a description of how the implementation of the project will affect these environmental values. This will be a summary of information presented in Section 5.3.4 of Part A of the PD.

According to the Ecosystem Profile for the Eastern Melanesian Islands Hot Spot, created by the Critical Ecosystems Partnership Fund, Loru is considered a Key Biodiversity Area in Vanuatu (CEPF 2012). Through the establishment of Community Conservation Area, the project has legally protected a high conservation value habitat with rare and endangered species.

2.3.6 Current And Historical Land Use

The NMF states: *All projects shall describe current and historical land use in the Project Area and surrounding environs, and how this will be affected by the project.*

The Loru Project Area is bordered on one side by ocean and the other by coconut plantations and degraded forest. A large section of the East Coast was logged in the 1980s and has been used since for cash cropping, cattle ranching (silvicultural) and copra (coconut plantation).

In 1993, the Serakar Chief placed a custom tabu on Loru. This stopped it from further timber extraction. With the death of the old Chief in 2007, dropping copra prices and increasing costs as the Serakar clan move into a cash economy, pressure on the project area has increased, and manifest as economic drivers of deforestation.

2.4 GEOGRAPHIC BOUNDARIES

The NMF states: *Geographic Boundaries' refers to the areas covered by the project including land tenure, area covered by the project, area subject to PES unit crediting, and strata relevant to baseline and project ecosystem accounting.*

Project areas shall include the follow project area types:

- *Project Area*

- *Eligible Area*
- *Reference Area (where relevant)*

Forest projects will also include the following project area types:

- *Forest Area*
- *Non-Forest Area*
- *Logged Forest Area (where relevant)*
- *Unlogged Forest Area (where relevant)*

Each of these areas must be clearly defined and mapped for each project in the Nakau Programme, using aerial imagery that depicts the contemporary boundaries of these areas. The boundary of each land parcel must be clearly defined with a unique identifier for each land parcel, and geographic coordinates for each polygon vertex. Maps for project areas producing PES units must be mapped using aerial imagery to sub-10 meter accuracy.

The maps below show of the location of the Project Area and management zones within the Project Area.

Figure 2.4a shows the location of the Project Area in relation to the whole of Vanuatu and Santo.

Figure 2.4b shows the location of the Project Area on East Santo, in relation to the well known landmark 'Champagne beach.'

Figure 2.4c shows the Project Area (which is the same area as the Loru Community Conservation Area).

Figure 2.4d shows the Project Area together with project Management Zones.

Figure 2.4e shows the Project Area with Management Zones and the locations for forest carbon inventory sample plots.

Figure 2.4a Project Location Map (source: Google Maps)



Figure 2.4b Project Location Map (source Google Earth).



Figure 2.4b shows the Project Area located in a region dominated by coconut plantations and beef grazing lands, interspersed with small degraded patches of indigenous forest. One of the only remaining intact indigenous forest on the coastal fringe in this part of Vanuatu is located in the Project Area.

Figure 2.4c Project Area boundary (black line) showing forest and non-forest

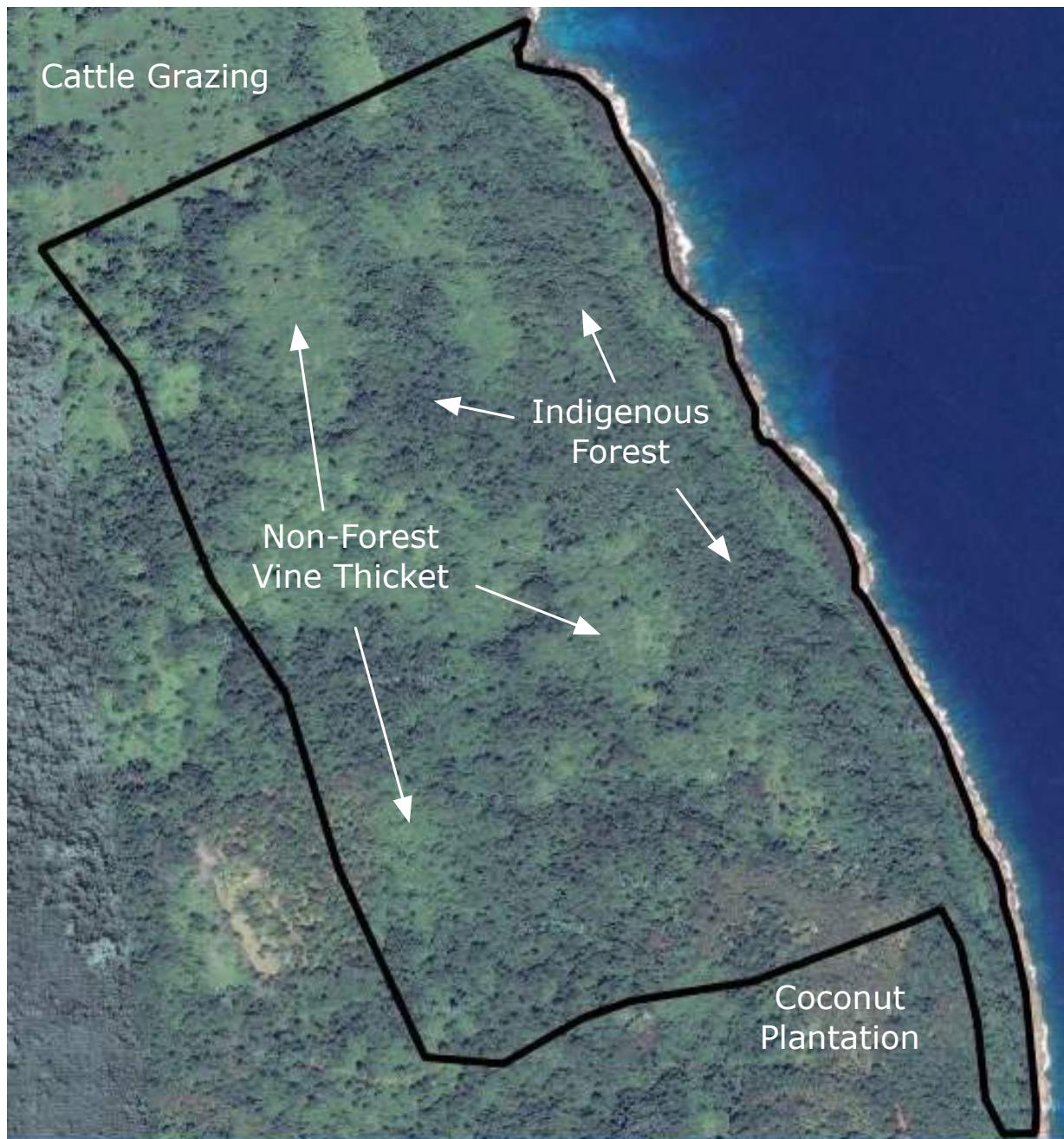
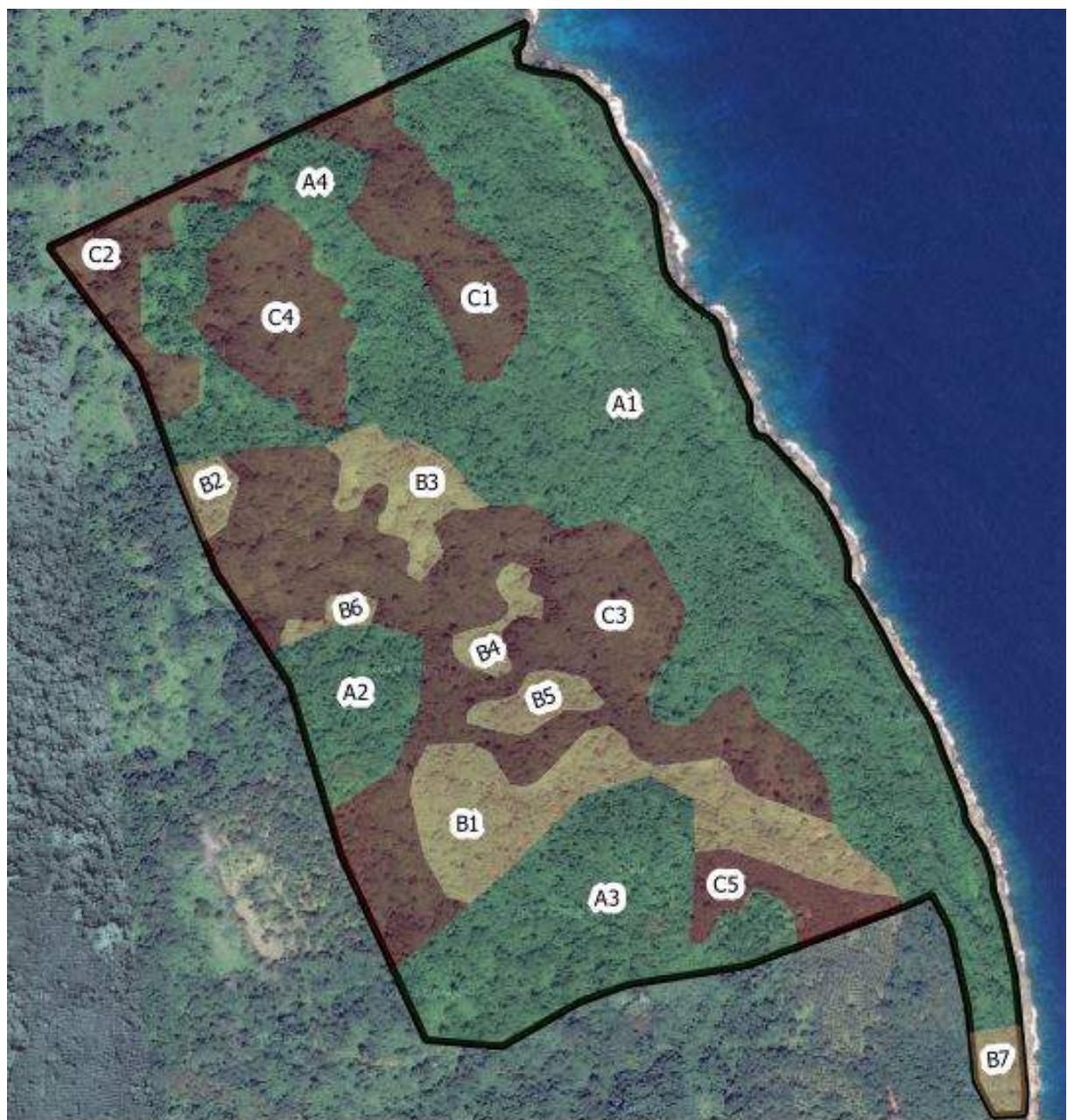


Figure 2.4d Project Area showing management zones



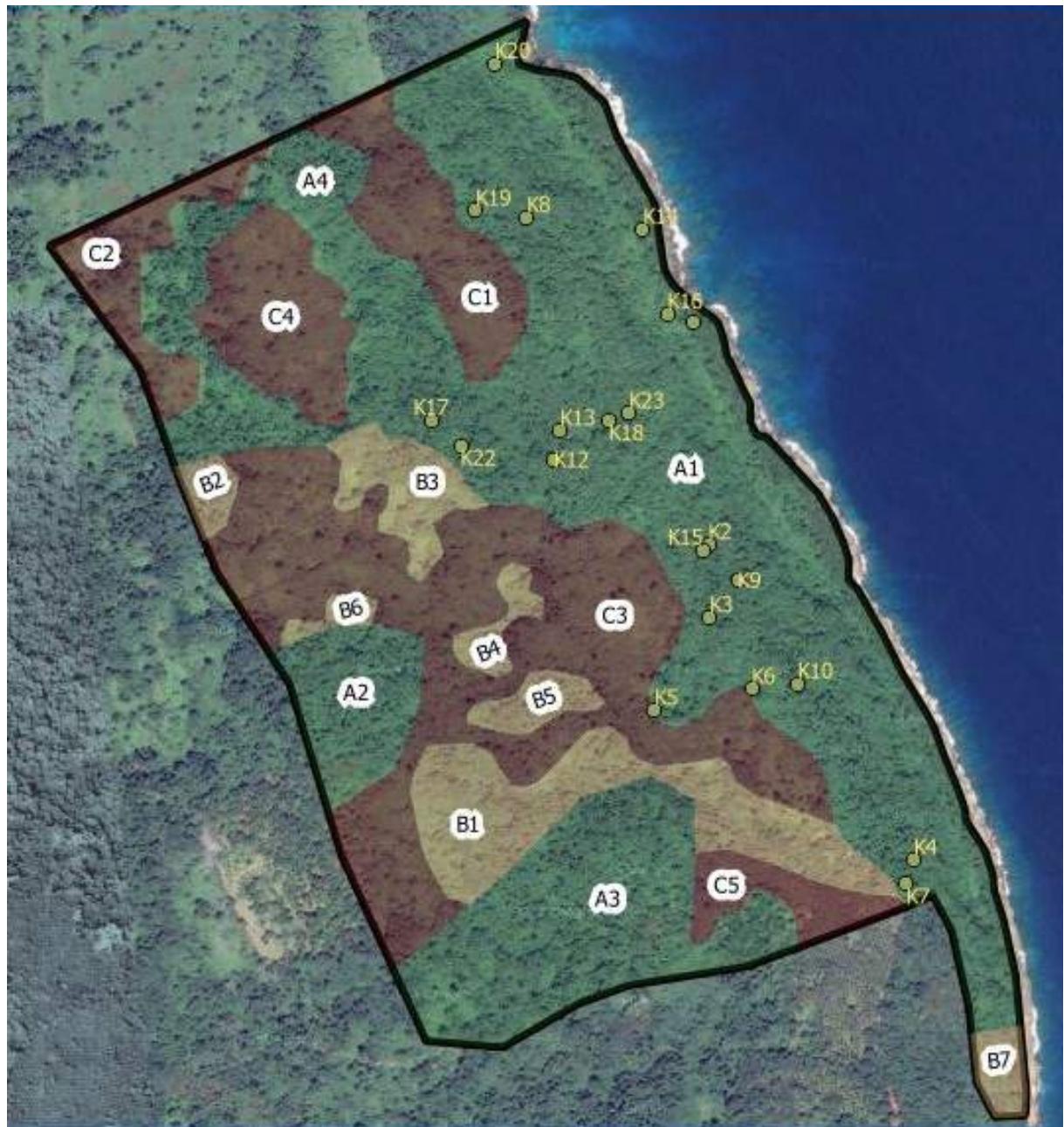
Black line = Project Area boundary and boundary of the Loru Community Conservation Area.

Zone A (165.6 ha) = Tall Forest Eligible Forest Area; Management Areas: A1-A4

Zone B (35ha) = Tall forest to be included in Eligible Forest Area following Zone B inventory; Management Areas: B1-B6

Zone C (91ha) = Non-forest allocated for agroforestry; Management Areas: C1-C5

Figure 2.4e Loru Forest Project management zones and inventory plots



K2-23 = randomly located forest inventory sample plots located in Zone A1, with results extrapolated to Zones A2-A4. Inventory to be undertaken in Zones A2-A4 prior to second verification.

Figure 2.4f Topography of Project Area – Espiritu Santo

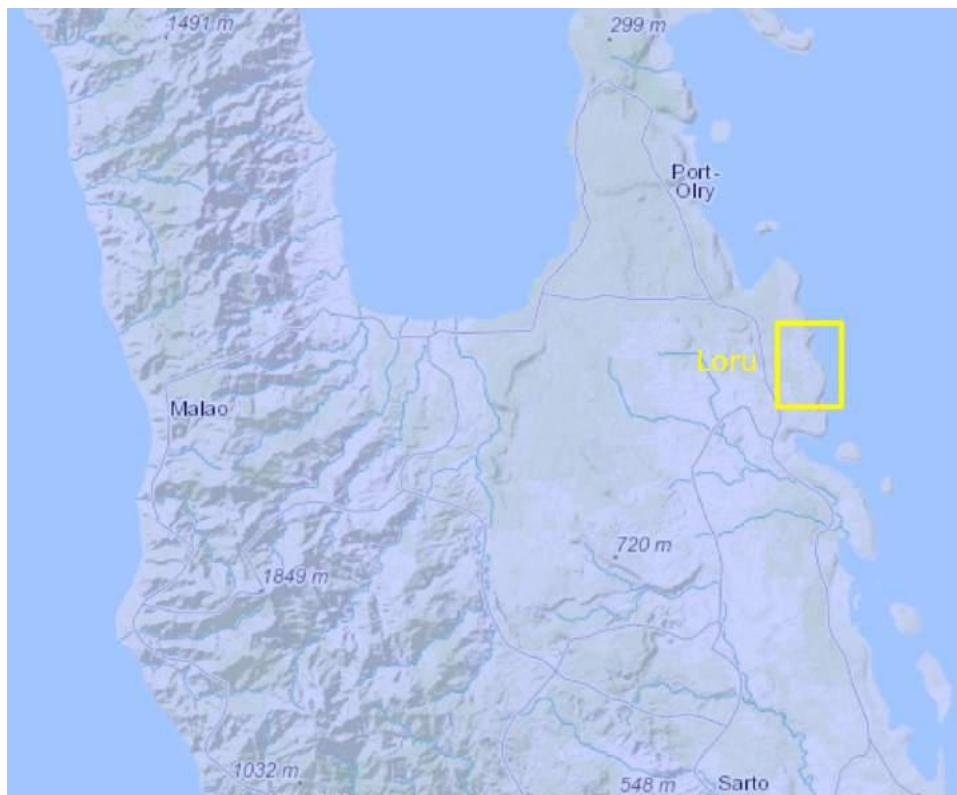


Figure 2.4g Topography of the Project Area – Loru



The Project Area topography is predominantly flat, located on a raised coral platform.

2.4.1 Project Area (PA)

The NMF states: *All projects shall define the Project Area (PA). The Project Area may be composed of more than one land parcel that are aggregated to form a single project. Each Project Area land parcel shall be depicted in a map image with land tenure boundaries.*

The Project Area encloses the land owned by the Serakar Clan and demarcated as a Community Conservation Area. This includes the Eligible Area (i.e. the crediting area) and land management zones outside the Eligible Area but within the overall conservation management project. Land management areas within the Project Area comprises the grave sites for the Serakar Clan, subsistence and cash crop gardens, a portion of an adjacent coconut plantation, cattle grazing non-forest and thicket, degraded weed-infested forest, and tall regenerating coastal rainforest.

The Project Area is comprised of a total of 293ha broken into three zones and 16 management areas as depicted in table 2.4.1.

Table 2.4.1 Project Area Management Zones			
Zone	Zone ID	Area	Total by Zone
A	1	102.5	
A	2	10.4	
A	3	30.2	
A	4	22.5	165.6
B	1	18.8	
B	2	1.8	
B	3	6.3	
B	4	2.4	
B	5	2.9	
B	6	1.3	
B	7	2.2	35.7
C	1	12.6	
C	2	8.3	
C	3	53.3	
C	4	12.3	
C	5	5	91.5
Total			292.8

2.4.2 Eligible Area (EA)

The NMF states: *The Eligible Area (EA) is the subset of the Project Area to be subject to PES crediting. It is also called the Crediting Area. The Eligible Area excludes any areas within the Project Area that do not meet baseline or additionality conditions.*

For example, in a project applying the Improved Forest Management (IFM-LtPF) activity type, the EA will not include any areas within the Project Area that are not commercially viable for timber extraction or are inaccessible to logging or fuel wood collection in the baseline scenario.

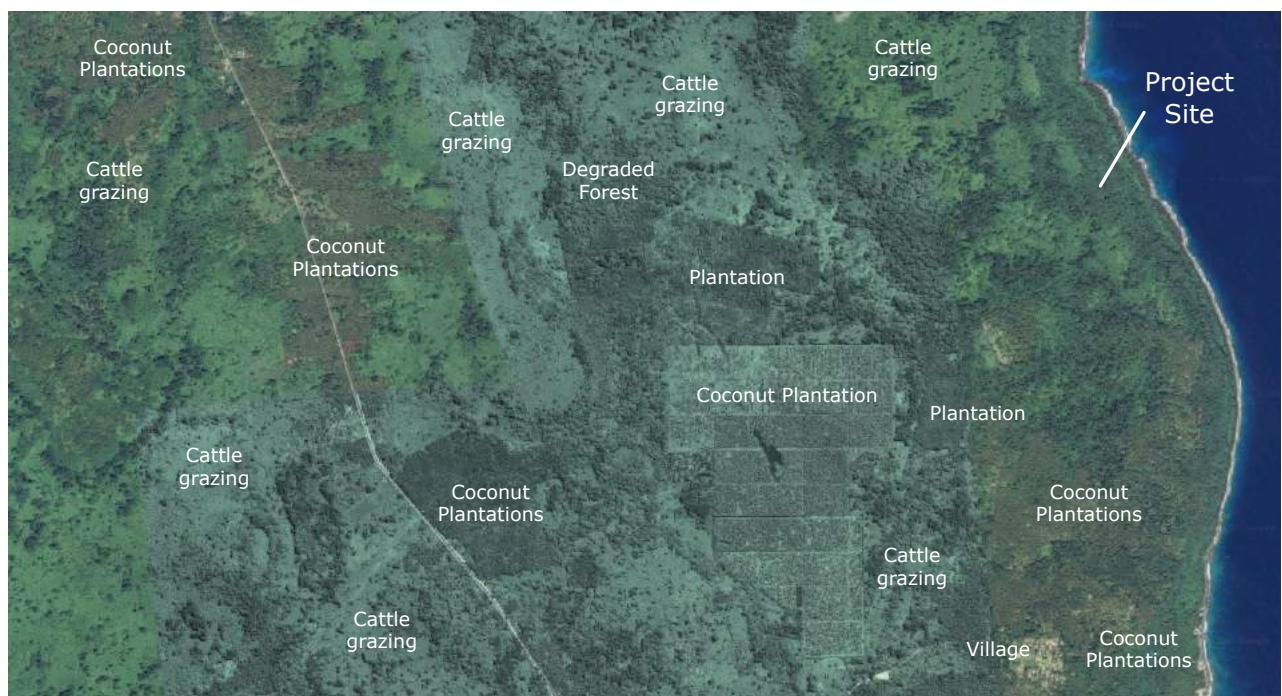
The eligible area of 165.6 ha of coastal regenerating rainforest occupies Zone A in the project land management zones (see Figure 2.4d and Table 2.4.1).

2.4.3 Reference Area

The NMF states: *It is optional for Project Coordinators to use one or more Reference Area (RA) in the project. A Reference Area is an area outside the Project Area but is used for project ecosystem accounting purposes in some way. For example, a project may involve avoiding timber harvesting. A Reference Area may include areas outside but relatively near to the Project Area whereby timber harvesting of the same character of the baseline activity is taking place. Such a reference area can be used for baseline ecosystem accounting purposes.*

No Reference Area formal reference area is applied in this project. An informal reference area is shown in Figure 2.4.3 below. This depicts the non-forest, coconut plantation, and degraded forest land use pattern surrounding the project site. The project baseline involves the extension of non-forest land use into the eligible area in the absence of compensatory payments for ecosystem services under the project scenario.

Figure 2.4.3 Reference Area



2.4.4 Forest Area (FA)

The NMF states: *For forest projects, the Forest Area (FA) is defined as the area of 'forest land' within the Project Area. 'Forest land' as defined using the FAO FRA 2010 definition¹ as presented in Appendix 1: Definitions (in this document). Each Forest Area land parcel must be depicted in a map image with land tenure boundaries. This definition applies unless the host country applies a different definition in its forestry regulations.*

The Forest Area located inside the Project Area includes Zones A and B as depicted in Figure 2.4d above. This comprises a total of 201 ha of both degraded forest and tall regenerating indigenous forest.

2.4.5 Non-Forest Area (NFA)

The NMF states: *The Non-Forest Area (NFA) is relevant to forest projects and defines the area of 'non-forest land' within the Project Area (where applicable). The Non-Forest Area may or may not be part of the Eligible Area (depending on the activity type). The Non-Forest Area is able to be included within the Eligible Area for afforestation/reforestation activity types where it is defined as the Afforestation Area (for afforestation projects) or the Reforestation Area (for reforestation projects).*

The Non-Forest Area is defined as land that may include 'other wooded land' or 'other land' as defined in the FAO FRA (2010) definition (see Appendix 1: Definitions in this document). Each Non-Forest Area land parcel must be depicted in a map image with land tenure boundaries.

NB: Afforestation and reforestation, deforestation and forest degradation are defined in this methodology according to the current FAO FRA (2010) definition for these terms (see Appendix 1: Definitions in this document).

The Non-Forest Area located inside the Project Area comprises Zone C as depicted in Figure 2.4d. This Non-Forest Area is designated for non-forest land use under the project scenario. This includes coconut plantations, subsistence and cash crop gardens, and agroforestry plots.

¹ See definitions in Appendix 1 of this document. See also FAO FRA 2010 p6.

2.4.6 Logged Forest and Unlogged Forest

The NMF states: *Logged Forest comprises regenerating forest that was logged during the time frame defined in the Technical Specifications applied.*

Unlogged Forest comprises primary forest that has not been logged or has been logged prior to the base year for the Logged Forest definition in the Technical Specifications applied.

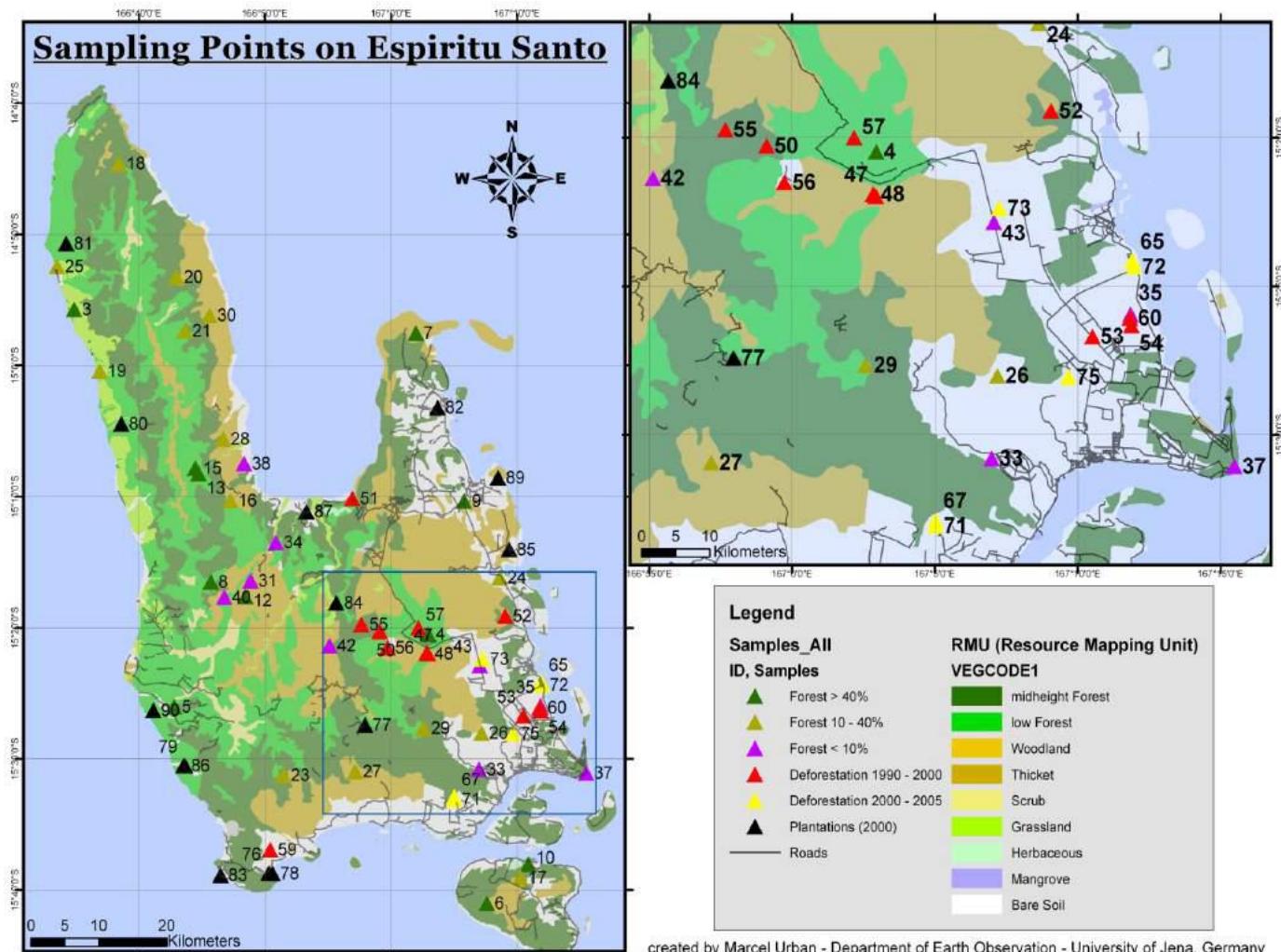
All of the forest inside the Project Area is deemed to be 'Logged Forest' for purpose of carbon accounting in this project. This includes Zones A and B as depicted in Figure 2.4d above.

2.4.7 Ecosystem Type Map

The NMF states: *All projects are required to provide an ecosystem type map covering the Project Area. This map will use existing published information where available. If existing published information is not available then the project shall provide a sketch map that describes the ecosystem types of the project area.*

The ecosystem type for the Project Area is defined as 'plantations' and 'thicket' - a term used to describe degraded land with tree cover and commonly infested with herbaceous weeds (see Figure 2.4.7). The surviving rainforest located at the project site is representative of an ecosystem type that is no longer prevalent in this part of Vanuatu.

Figure 2.4.7 Ecosystem Types on Espiritu Santo (Source – GOFC-Gold)



2.5 PROJECT ECOSYSTEM SERVICE STRATEGY

The NMF states: *Each project in the Nakau Programme must define the detailed ecosystem service strategy/ies capable of delivering ecosystem service outcomes asserted in the project purpose. The detailed ecosystem service strategy/ies shall include:*

- Interventions that terminate and/or avoid activities that cause the loss or degradation of ecosystem services relevant to the project purpose.*
- An ecosystem service management intervention (including any legal contracts) that addresses the cause of degradation or loss of ecosystem services relevant to the project purpose.*

In alignment with Section 2.4 of the Plan Vivo Standard (2013) any trees planted to generate

ecosystem services must be native or naturalised species, and must not be invasive. Naturalised species must only be planted if:

There are livelihood benefits that make the use of the species preferable to any alternative native species; AND

2.4.2. Use of the species will not have a negative impact on biodiversity or the provision of key ecosystem services in the project and surrounding areas.

Plan Vivo Standard (2013, p10).

2.6 CORE ECOSYSTEM SERVICE BENEFITS

The NMF states: *All projects in the Nakau Programme shall present in this section a low-resolution summary of expected core ecosystem service benefits to be rendered into PES units. This will briefly summarise the equivalent information presented in Part B of the PD.*

Part B of this PD will explain how carbon benefits have been quantified through the project. The core expected project benefit realised through this project is avoided carbon emissions from deforestation and enhanced removals from improved management of the forest by removing cattle from existing forest areas.

2,442 tCO₂ net carbon credits will be produced annually.

2.7 COMMUNITY BENEFITS

The NMF states: *All projects in the Nakau Programme shall present in this section a low-resolution summary of expected community benefits arising from the project. This will encompass a summary of more detailed (medium-resolution) information presented in Section 5.2 of Part A of the PD (i.e. responding to Section 5.2 of this document).*

The project has undertaken a Community Livelihoods Baseline to assess impacts of the project. The following impacts fall under the following 4 criteria:

Criteria 1: The landscape provides sufficient quality and quantity of food

The project is not expected to undermine the landscape around the village where gardens are currently located but agroforestry plots are expected to increase food security. As Loru will remain protected, the conservation area will continue to support occasional food extraction in the form of game and seafood. This will provide important nutritional benefits as well as sustain traditional knowledge.

Criteria 2: Access to clean water occurs all year round

It is expected that one of the first uses of any profit generated through the family business for community benefit will go to increasing the water storage capacity of the family.

Criteria 3: Household income and assets increase allowing for improved livelihood opportunities and quality of living.

It is expected that more children will have access to senior secondary and tertiary studies while access to pre and primary school should sit at 100%. Personal income is only likely to change should the family use Ser-Thiac to leverage further business opportunities.

Criteria 4: The Community REDD+ Enterprise contributes to the wellbeing of its members.

It is expected that REDD+ Enterprise will provide opportunities for the youth in the community to be up-skilled in business administration and land management through the project. This process has already begun through the project administration and nursery development.

2.8 BIODIVERSITY BENEFITS

Section 2.2 of the Plan Vivo Standard (2013, p10) states that:

Project interventions must be designed to maintain or enhance biodiversity and any threats to biodiversity caused by the project intervention must be identified and mitigated.

The NMF states: *All projects must demonstrate compliance with Section 2.2 of the Plan Vivo Standard (2013) by describing the biodiversity benefits intended by the project. This requires a low-resolution statement in this section of Part A of the PD and a more detailed (medium-resolution) description in Section 5.3 of Part A of the PD (i.e. responding to Section 5.3 of this document).*

The project provides multiple biodiversity benefits explained further in section 5.3. Benefits include:

- Maintain key productive and cultural resources for future generations,
- Protect habitat for native plant and animals, including priority species such as endemic birds, crabs and flying foxes
- Through the Loru Management Plan, reduce over harvesting pressure on priority species such as the endangered Vanuatu Flying fox (*Pteropus anetianus*) and the Incubator bird (Megapode) (*Freycinet layard*).
- Through the Loru Management Plan develop an improved understanding and practices for management of invasive species, which are a key threatening processes

impacting on endangered species present including the Vanuatu Imperial Pigeon (*Ducula bakeri*) and Santo Mountain Starling (*Aplonis santovestris*).

- Demonstrate how conservation can be incorporated into a diversified approach to resource management and livelihood generation, providing opportunities for replication and off site impact
- Contribute to global climate change mitigation which impacts on biodiversity globally.

2.9 CO-BENEFITS

The NMF states: *All projects shall describe the co-benefits associated with the project. These co-benefits are not subjected to formal measurement, reporting and verification, but are caused by the project activity. Examples of co-benefits include (but are not restricted to) any of the activity classes mentioned in Section 1.3.3 of this document.*

In addition to measured community and biodiversity benefits, the project provides the following co-benefits:

- Disaster Risk Reduction through the protection of inland agricultural plots by the coastal forest (cyclone protection).
- Income generation for surrounding communities who benefit from Loru acting as an ecosystem bank for birds and other species who may leave the Protected Area.
- As the only national demonstration site the project provides a replicable benefits sharing system for other PES projects as well as informing national REDD+ governance establishment.

2.10 ENVIRONMENTAL IMPACT ASSESSMENT

According to section 2.3 of the Plan Vivo Standard (2013):

Project interventions must not lead to any negative environmental impacts, e.g. soil erosion or reduction in water quality.

The NMF states: *All projects shall identify any potential negative environmental impacts arising from project activities, and incorporate measures to mitigate those negative impacts. If the project activity requires an Environmental Impact Assessment according to the laws and/or regulations of the host country, then projects must comply with such laws and/or regulations in this regard.*

Potential negative environmental impacts:

Rainforest protection: none identified

Agroforestry: possible encroachment of cattle into protected forest areas if cattle are used as a land management tool (i.e. for grazing agroforestry plots prior to agroforestry plantings).

The project will mitigate the potential impact of non-target cattle grazing by ensuring that fences for agroforestry plots are well maintained, with particular attention given during periods when cattle are used for grazing in pre-planted agroforestry plots.

2.11 PROJECT TIMESCALES

According to Section 4 of the 2012 Plan Vivo PD Template:

Projects are required to provide a description of the timescales for project establishment, pilot activities, anticipated scaling-up; crediting period used to calculate saleable PES units from ecosystem services delivered.

The NMF states: *All projects shall describe the following project temporal boundaries:*

- *Project Period (including Project Start Date and Project End Date)*
- *Project Crediting Period (if different from the Project Period)*
- *Project Monitoring Period*
- *Project Management Period*

Project Period: *The Project Period is the period in which the project is being undertaken as a PES project, whereby Baseline Activities are replaced by Project Activities. The duration of the Project Period will be determined by the Technical Specifications applied.*

Project Crediting Period (if different from the Project Period): *The Project Crediting Period is the period during which PES units will be claimed for the implementation of project activity. This may be the same as the Project Period, but there are times when the Crediting Period is a subset of the Project Period.*

Project Monitoring Period: *The Project Monitoring Period shall be determined by the Technical Specifications applied, but will normally comprise monitoring periods of no more than 5 years starting with the start of the Project Crediting Period and will continue until the End of the Project Period.*

Project Management Period: *The Project Management Period comprises each annual project management cycle, starting on the Project Start Date.*

Project Termination: *Project Termination is the date at which the project ends, and is not rolled over for subsequent Project Periods. Project Termination must be at the end of a Project Period.*

Table 2.11 Project Temporal Boundaries			
	Start	End	Notes
Project Period	2010	2043	
Crediting Period	16 January 2013	15 January 2043	
Monitoring Periods	16 January 2013	15 January 2043	3 yearly starting 16/01/2013
Project Termination		15 January 2043	Project can renew at this time.

2.12 PROJECT RISKS

According to Section 6 of the Plan Vivo Standard (2013, p19):

Projects must manage risks effectively throughout their design and implementation.

This includes core requirements for all project interventions:

- 6.1 *Risks to the delivery of ecosystem services and sustainability of project interventions must be identified and appropriate mitigation measures described.*
- 6.2. *Projects must review their risk assessment at least every 5 years and resubmit to the Plan Vivo Foundation.*

This also includes additional requirements for projects generating Plan Vivo Certificates:

- 6.3. *A proportion of expected climate services must be held in a risk buffer to protect the project from unexpected reductions in carbon stocks or increases in emissions, unless there is no risk of reversal associated with the project intervention.*
- 6.4. *The level of risk buffer must be determined using an approved approach and be a minimum of 10% of climate services expected.*

The NMF states: *The Nakau Programme requires all projects to undertake a risk assessment and identify risk mitigation measures as specified in the Technical Specifications applied in Part B of the PD.*

All risk assessments shall be reviewed in sync with the project monitoring cycle, and included in project monitoring reports.

The risk assessment for this project is supplied in Section 5.4 of Part B of this PD.

2.13 PROJECT COORDINATION AND MANAGEMENT

2.13.1 Project Legal Entities

According to Section 3.1 of the Plan Vivo Standard (2013, p11):

There must be an established legal entity acting as project coordinator that takes overall responsibility for the project, and meeting the requirements of the Plan Vivo Standard for its duration.

The NMF states: *All projects in the Nakau Programme are required to demonstrate compliance with Section 3.1 of the Plan Vivo Standard.*

Projects are required to describe (in the corresponding Section of the PD) the established legal entities acting in the project as:

- *Project Coordinator*
- *Project Owner*
- *Programme Operator*

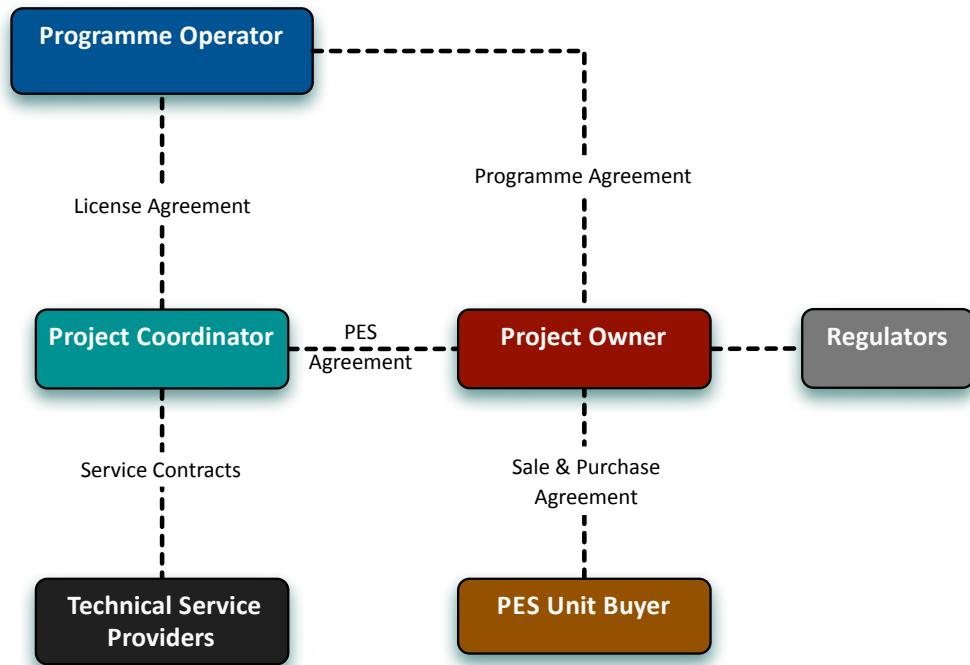
Table 2.1.3.1 Project Legal Entities

Project Coordinator	Live & Learn Environmental Education Society Committee (Vanuatu) (also referred to as 'Live & Learn Vanuatu' in this document).
Project Owner	Ser-Thiac
Programme Operator	The Nakau Programme Ltd: a Company Limited by Guarantee under the <i>Corporations Act 2001</i> (Commonwealth legislation administered by the Australian Securities and Investments Commission), wholly owned by two charities - Live and Learn International (Australia) and Ekos (New Zealand).

2.13.2 Project Structure

Projects in the Nakau Programme have the following Structure:

Figure 2.13.2 Nakau Programme Legal Structure



2.13.3 Roles and Responsibilities

According to Section 3.2 of the Plan Vivo Standard (2013, p11):

If coordinating functions are delegated or shared between the project coordinator and another body or bodies, the responsibilities of each body must be clearly defined and formalised in a written agreement, e.g. Memorandum of Understanding, which must be kept up-to-date as the project progresses.

Table 2.13.3: Project Roles And Responsibilities

Primary Participants		
Role	Responsibility	Agreement
Project Owner	Owner of PES rights	<ul style="list-style-type: none"> Programme Agreement with Programme Operator; PES Agreement with Project Coordinator.
	Owner of PES Unit sale profits	<ul style="list-style-type: none"> PES Agreement with Project Coordinator
	Counter-party (seller) to PES unit buyers in PES unit transactions	<ul style="list-style-type: none"> PES Unit Purchase Agreements with PES unit buyers and/or Brokerage Agreements with brokers
	Project governance	

	Project co-management	<ul style="list-style-type: none"> • PES Agreement with Project Coordinator
	Project co-monitoring	
Project Coordinator	Project designer and developer	<ul style="list-style-type: none"> • Licence Agreement with Programme Operator
		<ul style="list-style-type: none"> • PES Agreement with Project Owner
	Service provider	<ul style="list-style-type: none"> • PES Agreement with Project Owner
		<ul style="list-style-type: none"> • PES Agreement with Project Owner
	Facilitator project governance	<ul style="list-style-type: none"> • PES Agreement with Project Owner
	Project registry agent for PES units	<ul style="list-style-type: none"> • Registry Communications Agreement with Registry & subject to PES Agreement with Project Owner
	PES unit sales & marketing agent	<ul style="list-style-type: none"> • PES Agreement with Project Owner
	Project insurance facilitator	<ul style="list-style-type: none"> • PES Agreement with Project Owner
	Guardian of environmental and co-benefit integrity of Nakau Programme	<ul style="list-style-type: none"> • Licence Agreement with Project Coordinator • Programme Agreement with Project Owner
	PES unit sales & marketing agent	
Programme Operator	Project registry agent for pooled buffer account	<ul style="list-style-type: none"> • Programme Agreement with Project Owner • Licence Agreement with Project Coordinator
	Owner of PES buffer units	<ul style="list-style-type: none"> • Programme Agreement with Project Owner • Licence Agreement with Project Coordinator
	Owner of IP associated with Nakau Programme (including methodologies developed by the Nakau Programme)	<ul style="list-style-type: none"> • Licence Agreement with Project Coordinator
Project Standards	Dependent on the Technical Specifications applied	<ul style="list-style-type: none"> • Validation/Verification Service Agreement with Project Coordinator
Project Validator / Verifier	Validator and verifier	<ul style="list-style-type: none"> • Validation/Verification Service Agreement with Project Coordinator
Project Registry	PES Unit registry Issuance of PES Units	<ul style="list-style-type: none"> • Registry Terms and Conditions • Registry Communications Agreement with Project Coordinator • Registry Agent clause in Project Agreement between Project Coordinator and Project Owner • Registry Agent clause in Programme Agreement with Project Owner
PES Unit Buyer	Purchase PES Units	<ul style="list-style-type: none"> • PES Sale and Purchase Agreements with Project Owner
Secondary Participants		
Project Coordinator's subcontractors (as required)	Legal consultants	<ul style="list-style-type: none"> • Service Contracts with Project Coordinator
	Ecosystem inventory contractors	
	Mapping and remote sensing contractors	
	Economist	
	Sales and marketing agent	<ul style="list-style-type: none"> • Service Contracts with Project Coordinator and Project Owner
PES Unit Broker	PES unit sales intermediary	<ul style="list-style-type: none"> • Brokerage Agreement with Project Coordinator and Project Owner
Insurers	Commercial insurance	<ul style="list-style-type: none"> • Insurance Programme Operator

The NMF states: *All projects in the Nakau Programme shall provide (in the equivalent Section of the PD) a short bio for each of their key personnel corresponding to the roles and responsibilities assigned to individuals within the Project Coordinator and Project Owner, as well as any other key stakeholders.*

Project Coordinator - Live & Learn Environmental Education Society Committee (Vanuatu):

Led by Glarinda Andre, Live & Learn Environmental Education Society Committee (Vanuatu) (referred to Live & Learn Vanuatu in this document) REDD+ Project Coordinator. Glarinda has been engaged in REDD+ since 2012 and has worked in provincial planning involving landuse planning with clan groups. She has been the key contact point for the Loru Forest Project since 2012.

Project Owner - Ser-Thiac:

Board Members:

- Chief Stephen Ser – Serakar Clan Chief and Khole Village Chief
- Warakar Ser – Landowner and Agroforestry expert in Santo
- Kalsakau Ser – Landowner, Village Clerk and Ecotourism Operator
- Touli Ser – Female Landowner
- Oli Ser – Landowner
- Kalo Ser - Landowner

Finance Members:

- Clarence – community finance trainer
- Rose Ser – small business owner
- Rachel Ser – small business owner

Land Management Committee:

- Kaltapang Ser – Cattle Business Owner
- Kalsakau Ser – Ecotourism Officer and Village Clerk
- Anna Joe – Principal of Primary School
- John Ser – Cooperative Store Manager (previously)
- Alines Ser – undertaking Tertiary education

Staff:

- Rimau Ser – Operations Manager. Received training in biodiversity monitoring, agroforestry, carbon inventory, forest management.
- Rhonda Ser – Administration Officer.

Other key stakeholders

Nakau Programme Pty Ltd

Robbie Henderson, Co-Director. Robbie is based in Australia, but has lived and worked in Fiji, Vanuatu and PNG. Robbie also has previous experience in the Solomon Islands and has been with Live & Learn for 8 years.

Anjali Nelson, Co-Director. Anjali is based in Vanuatu where she works as Advisor to REDD+ project staff in Vanuatu, Fiji and the Solomon Islands. Anjali has been engaged in REDD+ since 2009 and has worked in climate change for the public, private and non-government sectors.

Dr. Sean Weaver, Co-Director. Sean is based in New Zealand and was the Lead Technical Consultant to Live & Learn's forest carbon projects. He is also Designer/Developer of the 'Rarakau Programme' - a forest carbon-crediting scheme for privately owned pre-1990 indigenous forests in New Zealand.

2.13.4 Project Coordinator Capacity

According to Section 3.4 of the Plan Vivo Standard (2013, p12):

The project coordinator must have the capacity to support participants in the design of project interventions, select appropriate participants for inclusion in the project, and develop effective participatory relationships including providing ongoing support as required to sustain the project.

Section 3.5 of the Plan Vivo Standard (2013, p12) requires:

The project coordinator [to] have the legal and administrative capacity to enter into PES agreements with participants and to manage the disbursement of payments for ecosystem services.

The NMF states: *Project Coordinators must provide information demonstrating their capacity to meet the requirements of Sections 3.4 and 3.5 of the Plan Vivo Standard (2013).*

Live & Learn Vanuatu has ongoing engagement in East Coast Santo, allowing it to regularly engage with the Project Owner and access the project site. Live & Learn Vanuatu has developed strong relationships in Khole Village as it has been the face of project development for the last five years. Live & Learn Vanuatu has been administering community funds for the last 2 years and has administrative capacity and experience in such programs. The organisation undergoes a yearly audit.

2.13.5 Services Provided By The Project Coordinator

The NMF states: *The PES Agreement will define the services to be provided to the Project by the Project Coordinator. The scope of services will vary from project to project according to the capacity and preferences of the Project Owner, as negotiated with the Project Coordinator. The term 'preferences' indicates that the Project Owner may prefer to outsource certain activities for reasons other than capacity constraints. These could include avoiding local conflict, or commercial decisions to maximise efficiency or effectiveness.*

The Project Coordinator may sub-contract provision of services (e.g. technical carbon measurement capabilities, remote sensing and mapping), to other service providers in accordance with the PES Agreement.

Table 2.13.5 provides an indicative example of how the services to be provided by the Project Coordinator may vary in response to the capacity of the Project Owner.

Projects in the Nakau Programme are encouraged to use or develop capacity assessment tools to transparently establish capacity baselines, and as a measure against which to seek improvements.

In providing services for the project, the Project Coordinator must maintain a commitment to the participatory processes outlined in Section 3 of this Methodology. In this respect, outsourcing of technical and administrative capabilities must not reduce the level of Project Owner power with respect to participation in decision-making.

Table 2.13.5: Project Owner capacity & service provision by Project Coordinator		
Capacity / capability of Project Owner	Likely characteristics of Project Owner group	Examples of services outsourced to the Project Coordinator
Low	<ul style="list-style-type: none"> • Group is new / set up from scratch • Little or no experience in managing a group project • Many participants with low levels of formal education • Difficult operating environment. E.g. remoteness, poverty, post conflict or poor infrastructure access (e.g. power, communication, transport) 	<ul style="list-style-type: none"> • Project development • Assist to establish, facilitate & support good governance & decision making processes • Directly employ local staff (Project Owner to co-manage) • Project implementation (through local staff administered by the Project Coordinator and co-managed with the Project Owner) • Sub-contract management • Monitoring & Reporting • Facilitate sale & purchase agreements
Moderate	<ul style="list-style-type: none"> • New group established by participants who are / have been involved in other similar groups (e.g. cooperatives) • Significant prior experience in 	<ul style="list-style-type: none"> • Project development • Assist to establish, facilitate & support good governance & decision making processes

	<ul style="list-style-type: none"> managing a group project Significant number of participants with medium to high levels of formal education Reasonable operating environment and infrastructure access (e.g. power, communication, transport) 	<ul style="list-style-type: none"> Directly employ some local staff positions (e.g. administrative) while Project Owner directly employs others (e.g. Rangers) Support local project implementation Sub-contract management Support for Monitoring Reporting Facilitate sale & purchase agreements
High	<ul style="list-style-type: none"> Built upon an existing group with established governance administrative and management systems Significant prior experience in managing group projects High proportion of participants with high levels of formal education Favourable operating environment and good infrastructure access (e.g. power, communication, transport) 	<ul style="list-style-type: none"> Support project development Support good governance & decision making processes (as required) Support for Monitoring (as required) Support for Reporting (as required) Facilitate sale & purchase agreements (if required)

Project Owner capacity is currently Low. Live & Learn Vanuatu will continue to support the Project Owner over the next years. It is agreed that once sales are consistent, the project owner will directly pay their own staff and manage their own financial reporting.

2.13.6 Transfer Of Skills And Responsibilities

The NMF states: *The Project Coordinator must demonstrate a commitment to growing the capacity of the Project Owner group through time. This will include a commitment to participatory processes (Section 3) that enable the Project Owner group to learn through participation, and should also include specific training (e.g. in administration for financial management) where possible.*

The roles and responsibilities of the Project Coordinator and Project Owner must be examined annually at each Project Management Workshop (see 3.1.6) and at the conclusion of each monitoring period at the Project Monitoring Workshop (see 3.1.7). Agreed changes to any services provided by the Project Coordinator that can be transferred to the Project Owner should be adopted through a variation to the PES Agreement.

This project involves the transfer of skills from Project Coordinator to Project Owner in accordance with Table 2.13.6 below.

Table 2.13.6: Evidence Requirement: Roles and Responsibilities

#	Name/Description	Location
2.13.6a	Project Roles and Responsibilities	<p>Evidence for the assigning of roles and responsibilities must be provided in the PES agreement</p> <p>Short bio for each of their key personnel corresponding to the roles and responsibilities assigned to individuals within the Project Coordinator and Project Owner, as well as any other key</p>

		stakeholders.
2.13.6b	Project Coordinator Capacity	Project Coordinators must provide information demonstrating their capacity to meet the requirements of Sections 3.4 and 3.5 of the Plan Vivo Standard (2013). E.g. project management history, financial reports, policy manuals etc.
2.13.6c	Capacity building leading to transfer of skills and responsibilities	The Project Management Reports and Project Monitoring Reports must describe efforts towards capacity building and record decisions / actions relating to transfer of responsibilities

2.13.6.1 Project Roles and Responsibilities

The PES Agreement outlines the Project Coordinator's role to manage all tasks that require interaction outside of the community (i.e. sales, following legislation, submission of verification reports etc). The Project Owner will co-manage the project and all tasks required 'on the ground' (i.e. following land management plan, reporting reversals, financial management of business etc). For detailed explanation, please see PES Agreement at Appendix 2.

2.13.6.2 Project Coordinator Capacity

See 2.13.4

2.13.6.3 Capacity Building leading to transfer of skills and responsibilities

Live & Learn Vanuatu is already undertaking a process of capacity building and skills transfer with the Ser-Thiac employees. The PES Agreement explains that each year, during the Project Management Workshops, the Project Owner group may reduce the responsibilities and fees to the Project Coordinator as they become more capable of managing the project. The roles and responsibilities of the Project Coordinator and Project Owner will be examined annually at each Project Management Workshop (see Section 3.1.7) and at the conclusion of each monitoring period at the Project Monitoring Workshop (see Section 3.1.8). These points in the project provide the opportunity to change the roles and responsibilities of each Actor, with the intention to transfer greater responsibility to the Project Owner through time. Changes will be reflected through agreed amendments to the PES Agreement.

2.13.7 Project Agreements and Contracts

The NMF states: *Participation in the Nakau Programme by the key stakeholder entities is governed by agreements and contracts. All projects in the Nakau Programme shall provide signed copies of the following project-related contracts and agreements (completed by the time of validation) as an appendix to the PD:*

- *License Agreement*
- *Programme Agreement*
- *Project Development Agreement*

- *PES Agreement*

However inception (pilot) projects approved by the Programme Operator may be exempted from the above requirement, and may instead complete the aforementioned agreements at first verification.

Subsequent agreements and contracts (detailed below) shall be added to the Project Document Database when completed.

2.13.7.1 License Agreement

The NMF states: *The License Agreement is a contract between the Programme Operator and the Project Coordinator. The Programme Operator grants a Project Coordinator License to a Project Coordinator entity that meets the eligibility criteria for gaining such a license. The License Agreement safeguards the integrity of Project Coordinator entities operating in the Nakau Programme.*

The License Agreement between the Project Coordinator and the Programme Operator is provided in Appendix 3.

2.13.7.2 Programme Agreement

The NMF states: *The Programme Agreement is a contract between the Programme Operator and the Project Owner. The purpose of the Programme Agreement is to bind the Project Owner to the rules for participating in the Nakau Programme.*

The Programme Agreement between the Project Owner and the Programme Operator is provided in Appendix 4.

2.13.7.3 Project Development Agreement

The NMF states: *The Project Development Agreement is a service contract between the Project Owner and the Project Coordinator, where the Project Owner engages the Project Coordinator in project scoping and project development activities (PIN and PD development: activities up to but not beyond PD validation).*

The Project Development Agreement between the Project Owner and the Project Coordinator is provided in Appendix 5.

2.13.7.4 PES Agreement

The NMF states: *The PES Agreement (or 'Payment for Ecosystem Services Agreement') is a service contract between the Project Owner and the Project Coordinator, where the Project*

Owner engages the Project Coordinator in project coordination activities and responsibilities associated with PES unit production and sale (activities following PD validation and through the course of project management, monitoring and verification). The PES Agreement is also the legal foundation on which the Project Owner and Project Coordinator implement the project and distribute costs and benefits associated with the project.

The PES Agreement between the Project Owner and the Project Coordinator is provided in Appendix 2.

2.13.7.5 Instrument of Protection

The NMF states: *Each project is required to include an Instrument of Protection to safeguard the integrity of the project activity and prevent baseline activities. The Instrument of Protection will vary depending on the project type and the legal or customary circumstances in the host country. The Instrument of Protection must be finalised prior to first verification, however it is sufficient to provide a draft or description of the instrument that will be applied at PD validation stage.*

The Instrument of Protection for the forests protected under this project is registration of the Community Conservation Area under the Environment Management and Conservation Act 2010. Loru Community Conservation Area was registered with the Government of Vanuatu on 12 November 2015. A copy of the registration is provided Appendix 6.

2.13.7.6 Sale and Purchase Agreement

The NMF states: *The sale of PES units is based on a Sale and Purchase Agreement between the Project Owner and the PES Unit buyer. The Project Coordinator will often facilitate this agreement.*

The Sale and Purchase Agreement template for PES units generated by this project provided in Appendix 7. In practice, sales will be managed by the Nakau Programme Pty Ltd – the Programme Operator. This will include wholesale transactions with reseller entities, as well as retail sales directly with carbon offset consumers. When sales are managed by the Programme Operator, the sale and purchase agreement will be between the buyer and the Programme Operator with a dividend payment to the landowner according to the terms of the Programme Agreement and the PES Agreement.

Clause 3.1 (f) of the Programme Agreement grants permission for the Programme Operator to enter into a Sale and Purchase Agreement with purchasers for PES Units acting as Sales Agent on behalf of the Project Owners (Ser-Thiac). This is necessary to enable the Programme Operator to undertake sales and marketing effort outside of Vanuatu. For sales within Vanuatu, the Project Coordinator will work with the Programme Operator and Project Owners to facilitate development of the Sales and Purchase Agreement, however the Project

Owners will sign the Agreement directly. A separate Sales and Purchase Agreement will be tailored to each client. The first Sales and Purchase Agreement signed at the Programme Level with ZeroMission provides an example. (Refer to Appendix 7)

2.13.7.7 Subcontracts

The NMF states: *The Project Coordinator may need to undertake engage technical or other service providers with sub-contracts in order to deliver project coordination outcomes.*

Project implementation will be undertaken primarily by the Project Owner in collaboration with the Project Coordinator, as well as input from the Programme Operator. Subcontracted inputs may be required for aerial imagery associated with three-yearly monitoring reports. Such subcontracting will be arranged as required and a suitable technical service provider will be recruited as need be.

2.13.8 Long-Term Monitoring Commitment

The NMF states: *All projects in the Nakau Programme must demonstrate a commitment to long-term monitoring of project implementation outcomes.*

Live & Learn Vanuatu has grown continuously since inception in 2001. It has been engaged in Khole community since inception and has ongoing projects in the area that allow it to continue to engage at least cost with this project. The PES team at Live & Learn is committed to continuing its work. Please see 2.13.4 regarding the capacity of the organisation.

2.13.9 Stakeholder Analysis

According to Section 3.6 of the Plan Vivo Standard (2013, p12):

The project coordinator must undertake a stakeholder analysis to identify key communities, organisations, and local and national authorities that are likely to be affected by or have a stake in the project. This project coordinator must take appropriate steps to inform them about the project and seek their views, and secure approval where necessary.

The NMF states: *Project Coordinators must provide evidence of a stakeholder analysis undertaken of the Project Area to meet the requirement of Section 3.6 of the Plan Vivo Standard (2013).*

Key supply side stakeholders identified in our stakeholder analysis are:

- Serakar Clan (landowners)

- Live & Learn Vanuatu (LLV) (Project Coordinator)
- Department of Forests (MOU between Live & Learn and DoF undertaken in 2012)
- The Nakau Programme Pty Ltd (Programme Operator for the Nakau Programme)
- Neighbouring landowners and landless families adjacent to the project. These stakeholders have been involved in community consultations during project development.
- The Sanma Province (provincial government) – MOU signed between LLV and Sanma Province in 2012.
- The REDD+ National Technical Committee has endorsed the project and has supported the involvement of the Department of Forests in project forest inventory activities during project development.
- The National REDD+ R-PP through the World Bank Forest Carbon Partnership Facility has engaged the Project Coordinator in contract work on social and environmental impacts assessment for the National REDD+ Programme.
- Southern Cross University (providing agroforestry support to the project).

2.13.10 Laws And Regulations

According to Section 3.7 of the Plan Vivo Standard (2013, p12):

Relevant local, national or international laws and regulations that impact on the project design and management must be identified by the project coordinator and documented including, how the project design has taken them into account to ensure compliance with the law.

The NMF states: *All projects must demonstrate compliance with Section 3.7 of the Plan Vivo Standard (2013).*

1) Framework Convention on Climate Change (Ratification) [CAP 218].

This Convention was ratified by the Vanuatu Parliament in 1992. The objective of this Convention as stated under its Article 2 is to “achieve ...stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”; The Loru Project seeks to align with the sentiment of this Convention.

2) Environmental Protection and Conservation Act [CAP 283].

The purpose of this Environmental Protection and Conservation Act [CAP 283] (“CAP 283”) is to provide for the conservation, sustainable development and management of the environment of Vanuatu. This Act provides for procedures to follow when making an application for the conservation of an area of land.

Section 35 (b)(a) (as amended) states that:

This Director may after acquiring consent of the custom landowners, negotiate with the applicant for the protection and registration of any site as a Community Conservation Area where he or she is satisfied that the site...provides critical ecosystem services such as (but not limited to) watershed management and climate mitigation;

The Loru Forest Project is the first project in the country to exercise this piece of legislation for the above stated purpose.

4) Employment Act [CAP 160].

The Employment Act is the principal legislation regulating employment in Vanuatu. It provides for, among other matters, employment of women and young persons.

The Act provides for different working ages for different types of works including agricultural works. These are provided for from section 38 through to section 42. Live & Learn Vanuatu complies with all regulations as per the Act.

2.13.11 Regulatory Permissions

According to Section 3.8 of the Plan Vivo Standard (2013, p12):

The project coordinator must assist participants to identify and secure any legal or regulatory permissions required to carry out project interventions, e.g. authorisation or a license for a community forest management plan from the local authority).

The NMF states: *All projects must demonstrate compliance with Section 3.8 of the Plan Vivo Standard (2013).*

No regulatory permissions have been required. While not regulated, the project has been endorsed by the REDD+ National Technical Committee on 23 June 2014. A copy of the minutes of the meeting can be found in Loru Forest - Project Idea Note (PIN) D3.1 v1.0, 20150602 (Appendix 12).

2.13.12 Revenue Disbursement Procedures

According to Section 3.9 of the Plan Vivo Standard (2013, p12):

A transparent mechanism and procedures for the receipt, holding and disbursement of PES funds must be defined and applied, with funds intended for PES earmarked and managed through an account established for this sole purpose, separate to the project coordinator's general operational finances.

The NMF states: *All projects must demonstrate compliance with Section 3.9 of the Plan Vivo Standard (2013). This requirement is cross-referenced to the Benefit Sharing arrangements presented in Section 4.2 of this document (i.e. detailed information to be provided in Section 4.2 of the PD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).*

Please refer to section 4.2 of this document.

2.13.13 Project Budgeting

According to Section 3.10 of the Plan Vivo Standard (2013, p12):

A project budget and financial plan must be developed by the project coordinator and updated at least every three months, including documentation of operational costs and PES disbursed, and funding received, demonstrating how adequate funds to sustain the project have been or will be secured.

The NMF states: *All projects must demonstrate compliance with Section 3.10 of the Plan Vivo Standard (2013). This requirement is cross-referenced to the Benefit Sharing arrangements presented in Section 4.2 of this document (i.e. detailed information to be provided in Section 4.2 of the PD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).*

A Project Budget has been developed by Live & Learn Vanuatu and forms part of the Project Owner Business Plan. This budget was also used to determine break-even pricing for the project PES units. This budget is provided in Schedule 4 of the PES Agreement in Appendix 2.

2.13.14 Project Records

According to Section 3.11 of the Plan Vivo Standard (2013, p12):

The project coordinator must keep records of all plan vivos submitted by participants, PES agreements, monitoring results and all PES disbursed to participants.

The NMF states: *All projects must demonstrate compliance with Section 3.11 of the Plan Vivo Standard (2013). This requirement is cross-referenced to the Project Documentation arrangements presented in Section 6.1 of this document (i.e. detailed information to be provided in Section 6.1 of the PD to cover this requirement, but noted as a cross-reference in*

this section for transparency and ease of auditing).

See Section 6.1 of this document.

2.13.15 Data Security

According to Section 3.12 of the Plan Vivo Standard (2013, p12):

Project records kept under requirements 3.10 and 3.11 must be backed up regularly (at least every 3 months unless there has been no activity) and held in an independent location from the primary source, to protect against data loss.

The NMF states: *All projects must demonstrate compliance with Section 3.12 of the Plan Vivo Standard (2013). This requirement is cross-referenced to the data security arrangements presented in Section 7.2 of this document (i.e. detailed information to be provided in Section 7.2 of the PD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).*

See Section 7.2 of this document.

2.13.16 Inclusiveness

According to Section 3.13 of the Plan Vivo Standard (2013, p12):

Community members, including women and members of marginalised groups, must be given an equal opportunity to fill employment positions in the project where job requirements are met or for roles where they can be cost-effectively trained.

The NMF states: *All projects must demonstrate compliance with Section 3.13 of the Plan Vivo Standard (2013). This requirement is cross-referenced to the inclusiveness arrangements presented in Section 3.4.2, 3.4.3, and 3.4.4 of this document (i.e. detailed information to be provided in Sections 3.4.2, 3.4.3, and 3.4.4 of the PD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).*

Employment within Ser-Thiac has been determined by Ser-Thiac itself. With encouragement from Live & Learn Vanuatu, positions have been filled based on gender equity (one male and one female) and selection is based on available time and attitude. Training has been provided to both individuals:

- Riman Ser, Operations Manager; Inventory training and Biodiversity monitoring training.
- Clarence Dan, Administration Officer; One on One Business and financial Management training.

2.13.17 Employment Relations

According to Section 3.14 of the Plan Vivo Standard (2013, p13):

Where participants or other community members are given employment opportunities through the project, the project coordinator must identify relevant laws and regulations covering workers' rights in the host country and ensure the employment arrangements meet or exceed those requirements.

The NMF states: *All projects must demonstrate compliance with Section 3.14 of the Plan Vivo Standard (2013). This requirement is cross-referenced to the community benefit sharing arrangements presented in Section 4.3 of this document (i.e. detailed information to be provided in Sections 4.3 of the PD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).*

The relevant employment laws are outlined in the PES Agreement at Appendix 2 Section 2.2.

2.13.18 Minimum Employment Age

According to Section 3.15 of the Plan Vivo Standard (2013, p13):

Persons employed as part of the project must not be below the age of 15.

The NMF states: *All projects must demonstrate compliance with Section 3.15 of the Plan Vivo Standard (2013). This requirement is cross-referenced to the employment arrangements presented in Section 4.3 of this document (i.e. detailed information to be provided in Sections 4.3 of the PD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).*

Relevant employment laws are outlined in the PES Agreement at Appendix 2 Section 2.2.

2.13.19 Transferring Coordinating Functions

According to Section 3.16 of the Plan Vivo Standard (2013, p13):

If coordinating functions are to be transferred at any time, it requires the approval of the Plan Vivo Foundation. For this, in addition to the new project coordinator meeting all requirements set out in this document, a plan for execution of transfer needs to be submitted, which sets out how the transfer will be managed, including by providing necessary capacity building for new organization(s) and by gaining support of stakeholders including participating communities.

The NMF states: *All projects must demonstrate compliance with Section 3.16 of the Plan Vivo Standard (2013).*

The project has no plans to transfer project coordinator functions. If this is required at any stage during the project period the Project Coordinator will inform the Programme Operator and both will engage with a process of recruitment of a suitable alternative project coordinator entity. Once an alternative project coordinator entity has been selected a plan for the execution of transfer will be developed jointly between the parties.

2.13.20 Permanence

The NMF states: *The Nakau Programme methodology requires all projects to undertake a form of legal protection of the ecosystem supporting the ecosystem services used to generate PES units within the Project Area. The duration of the legal protection is to be no less than the duration of the Project Period.*

The Loru Community Conservation Area requires that the Loru Management Plan is upheld and provides custom and administrative penalties (i.e. fines) for violation of any section of the plan. The CCA is currently the strongest legal mechanism in Vanuatu for landowners wishing to keep land in custom ownership and adhere to the requirements of this project (e.g. avoiding baseline activities for the duration of the project).

3. Participatory Process

The Plan Vivo Standard (2013) is guided by eight principles, including the following:

Principle 1: Project interventions directly engage and benefit smallholders and community groups.

Principle 4: Projects demonstrate community ownership - communities participate meaningfully through the design and implementation of Plan Vivos (land management plans) that address local needs and priorities.

The NMF states: *The Nakau Programme operates on a governance and management model based on the 'Citizen Power' level in Arnstein's Ladder of Participation. This involves a combination of citizen control, delegated power and partnership/co-management between Project Owner and Project Coordinator. Citizen Power is provided through a bottom-up project governance and management model designed to safeguard community empowerment, free, prior informed consent (FPIC), indigenous people's rights, gender balance, and inclusiveness of marginal groups.*

3.1 PROJECT PARTICIPATION PROTOCOL

3.1.1 Summary Of Process

The NMF states: *The Nakau Methodology Framework defines a voluntary and participatory planning process (Section 4.1 Plan Vivo Standard 2013) by means of the Project Participation Protocol (PPP). The PPP is required to provide a transparent process for addressing social and cultural safeguards associated with project development and implementation including those listed in Sections 4.1.1-4.1.6 of the Plan Vivo Standard (2013). The PPP is also required as a means of reducing internal risk and enabling Project Owner decisions concerning project development, implementation and management to be consistent with the principles of free, prior and informed consent (FPIC).*

At the broadest level, projects will demonstrate support for Decision 1 from UNFCCC Cancun COP16 with respect to ensuring "the full and effective participation of relevant stakeholders, in particular, indigenous peoples and local communities."

All projects in the Nakau Programme shall apply the PPP to:

- Enable participants (project owners) to grant or withhold their free, prior informed consent for key aspects of project design, development and implementation, in*

particular for decisions that create continuing commitments, responsibilities or have potential for future impacts on local livelihoods and land use.

- *Enable participants to develop ownership of and meaningful input into project design, implementation, and management.*
- *Ensure that representatives of Project Owner groups have a mandate from group members, including people who may be disadvantaged based upon gender, age, income or social status.*
- *Ensure that the process of undertaking a PES project is transparent, empowering, and community-building for the Project Owner.*
- *Ensure that costs associated with project development and on-going management are transparently understood and agreed by the Project Owner.*
- *Ensure that the benefits of any PES project are equitably and transparently distributed between the Project Owner, the PES unit buyer, the Programme Operator, and the Project Coordinator.*
- *Ensure that the benefits of any PES project are equitably and transparently distributed within the community of the Project Owner.*
- *Ensure that project design, development, implementation and monitoring are undertaken with due adherence to necessary safeguards associated with PES project development as required by the standard/s applied and as stated in international good practice relevant to the activity type.*

The PPP prescribes a participatory process of project development and management and is considered a minimum requirement for project engagement. Significant further education, consultation and engagement with the Project Owners may be necessary to ensure equitable and sustainable outcomes. The Programme Operator will assess each project independently to ensure that the PPP has been followed...

The PPP requires a process of community engagement, typically involving meetings/workshops between the Project Owner and the Project Coordinator (facilitated by the latter) throughout the project cycle. Other key/relevant stakeholders should be engaged where appropriate.

3.1.2 Locally Informed Design

According to Section 4 of the Plan Vivo Standard (2013, p14):

- 4.1. *A voluntary and participatory planning process must take place to identify project interventions that address local needs and priorities and inform the development of technical specifications, taking into consideration:*
 - 4.1.1. *Local livelihood needs and opportunities to improve existing or diversify*

livelihoods and incomes

- 4.1.2. Local customs
- 4.1.3. Land availability
- 4.1.4. Food security
- 4.1.5. Land tenure
- 4.1.6. Practical and resource implications for participation of different groups including marginalised groups
- 4.1.7. Opportunities to enhance biodiversity including through use of native species

The NMF states: Required Process

Participation fostering locally-informed design is a crosscutting requirement spanning the project. The Project Coordinator will facilitate a process of local participation using highly engaging techniques (such as Participatory Rural Appraisal, PRA) and consultative techniques as required.

In determining the level of participation that will be implemented, the Nakau Methodology Framework refers to the 'Public Participation Spectrum' developed by the International Association for Public Participation (iap2)².

Table 3.1.2a Public Participation Spectrum

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PARTICIPATION GOAL	To provide participants with balanced and objective information to assist them in understanding the problems, alternatives and/or solutions.	To obtain participant feedback on analysis, alternatives and/or decision.	To work directly with participants throughout the process to ensure that issues and concerns are consistently understood and considered.	To partner with participants in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
PROMISE TO PARTICIPANTS	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and provide feedback on how participant input influenced the decision.	We will work with you to ensure that your concerns are directly reflected in the alternatives developed and provide feedback on how your input influenced the decision.	We will look to you for direct advice in formulating solutions and incorporate your recommendations into the decisions to the maximum extent possible.	We will implement what you decide.
EXAMPLE TOOLS	Fact sheets Websites Open houses	Participant comment Focus groups Surveys Meetings	Workshops Deliberate polling	Advisory committees Consensus-building Participatory decision-making	Citizen juries Ballots Delegated decisions

² Adapted from the iap2 table: <http://www.iap2.org.au/documents/item/84> Accessed on 16th September 2013.

The NMF states: *The Project Coordinator will apply the following levels of participatory engagement when delivering the key project activities or outcomes listed in Table 3.1.2b (below):*

This project has followed the requirements of Table 3.1.2b of the Nakau Methodology Framework. A description how each element of Table 3.1.2b has been fulfilled is provided in Table 3.1.2c.

Table 3.1.2b Level of Participation required for key project activities or outcomes

KEY ACTIVITY / OUTCOME	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
1. Education about PES activities					
2. Formation of a Project Owner group (Project Steering Committee) to participate in project design					
3. Establish legal Project Owner group (to act on participants behalf)					
4. Determine respective roles and responsibilities of Project Owners and Project Coordinator					
5. Development of benefit sharing arrangements (within PES Agreements)					
6. Development of Conservation/Land Management Plan (or equivalent)					
7. Development/application of technical specifications to measure PES benefits					

Table 3.1.2c Level of Participation Facilitated by the Project Coordinator

KEY ACTIVITY	INVOLVE
1. Education about PES activities	<p>The Education Programme Report (supplied in Appendix 9) describes activities that Live & Learn Vanuatu undertook to inform and educate the Ser-Thiac Family on Climate Change and REDD+. Live & Learn Vanuatu ended up training key members of the clan to provide education through storytelling to others.</p> <p>Please refer to this report as it describes steps used to achieve capacity benchmarks for informed participation and also materials that were used to achieve learning outcomes on Climate Change & REDD+, Governance, Land Use Planning and Business Planning.</p>
COLLABORATE	
2. Formation of a Project Owner group (Project Steering Committee) to participate in project design	The Project Owner Entity Participation Report (supplied in ER 3.1.6.1b) describes the process used to establish the Formation Group. Participatory workshops assisted the community to identify an equitable way to establish fair representation within the group of all five families within the clan. Space was allowed also within the workshop for custom decision-making processes. Please refer to that report for evidence.
3. Establish legal Project Owner group (to act on participants behalf)	A Business Planning meeting took place with the Formation Members in May 2014 and during that meeting the Formation Group members decided to establish Ser-Thiac, a family business responsible for representing Family Serakar in all developments of the REDD+ Project. Please refer to the Project Owner Entity Participation Report (supplied in ER 3.1.6.1b).
4. Determine respective roles and responsibilities of Project Owners and	The PES agreement between Live & Learn Vanuatu and Ser-Thiac clearly describes the role of Ser-Thiac and of Live & Learn Vanuatu and has been informed by decisions by Ser-Thiac regarding the structure of their organisation and their benefits sharing preferences. A

Project Coordinator	simplified version of the PES agreement has been translated to Bislama (the national language used in Vanuatu) and has been reviewed by a Ni-Vanuatu Lawyer to ensure it aligns/complies with International and Vanuatu Law. Please refer to Loru Forest Project PES Agreement (Appendix 2) & Ni-Vanuatu Lawyers Report (supplied in ER 3.1.2c4).
5. Development of benefit sharing arrangements (within PES Agreements)	The Benefit Sharing Plan was described to the Formation Group members during the Business Planning meeting in May 2014 and agreed that the Ser-Thiac Business plan uses the Financial model of the Nakau Methodology Framework. The group gave feedback as to how they would like the Community Benefit Fund to operate. This preference is recorded in ER 3.1.6.1.
6. Development of Nakau Management Plan	The development of the Nakau Management Plan was created as an outcome of the involvement of the community through Land Use Planning workshops and activities during 2013 and 2014. Please refer to Loru Management Plan-Participation Report for evidence of collaboration (supplied in Appendix 8)
	INVOLVE
7. Development /application of technical specifications to measure PES benefits	In April and May 2015, the Serakar Clan joined Live & Learn Vanuatu and the Department of Forests to undertake an inventory of Loru as per the Technical Specifications. The Serakar clan members assisted and supported the inventory process providing insight into how the Technical Specifications translated on the ground.

3.1.2.1 Tools and Activities

The NMF states: *The Project Coordinator shall use tools (such as those referred to in Table 3.1.2a), to implement the process of participation with respect to the activities and outcomes identified above (Table 3.1.2b). However, in recognition that a broad range of such tools exists, and to allow innovation, the Project Coordinator may select other tools that can deliver equivalent participation outcomes.*

Apart from using the resources created for the development of the Loru Forest Project, the Live & Learn Vanuatu team had also developed 2 additional resources to educate the Serakar clan:

1. Picture resource guide which describes the impacts of climate change in our society and also a description of what land use rules will occur in the project area and what the consequences are of not following the land use rules once contracts are signed.
2. A calendar of 2013 with inset pictures and information about what REDD+ is, possible REDD+ activities and where to seek independent advice for REDD+.

3.1.2.2 Scope And Reach

Section 4 of the Plan Vivo Standard (2013, p14) states that:

- 4.2. *Smallholders or community groups must not be excluded from participation in the project on the basis of gender, age, income or social status, ethnicity or religion, or any other discriminatory basis.*
- 4.3. *Barriers to participation in the project must be identified and reasonable measures taken to encourage participation of those who experience barriers.*

The NMF states: *The Project Coordinator shall ensure that participation includes an appropriate cross-section of project participants and reflects Project Owner community diversity.*

The Project Coordinator shall ensure adequate participation from groups identified in documentation describing the participating community, including participation of the following groups at a minimum:

- *Representatives from each group with resource user rights relevant to the project.*
- *Customary leaders (clan and/or tribal level as appropriate).*
- *Women.*
- *Youth.*
- *People living or reliant on the project site who do not have secure resource user rights relevant to the project.*

Project Coordinators are required to identify potential barriers to participation among the Project Owner community and identify reasonable measures to overcome these barriers.

Representatives from each group with resource user rights relevant to the project

Individuals with resource user rights came were engaged through open invitation to workshops, targeted meetings (e.g. Chiefs) and through information shared at Sunday Church Services (the main avenue for communicating with Khole village). Those with resource user rights were eventually determined and this group was then engaged directly.

Please refer to Loru Forest Project Education Report that describes barriers to participation and any measures taken to address barriers to participation.

Customary leaders (clan and/or tribal level as appropriate)

The Project Coordinator worked through the Chief of the Serakar, Chief Skip. Live & Learn Vanuatu took the Chief's direction on how to engage his clan and used representatives selected by him for specific tasks.

Women

The Project Coordinator engaged with women within the Project Owner Group by delivering additional meetings on Sunday afternoon when women are also free. The Live & Learn Vanuatu REDD+ field reports show that around 50% of women attended project meetings, the outcome of which was that women were chosen by the clan as representatives on the Formation Group and after that, as employees and Finance Board Members of Ser-Thiac. Please see field reports provided as Evidence Requirement 3.1.2.2.

Youth

Live & Learn Vanuatu engaged with youth within the Project Owner Group by allocating different management responsibilities to the youth of the Serakar clan. Part of these

activities included clearing and planting the agroforestry plot in Zone C, measuring tree heights and tree diameters during the Loru carbon inventory and receiving training in Biodiversity monitoring. Live & Learn Vanuatu have also employed 1 youth to manage the operations of the Ser-Thiac business. Once Ser-Thiac is fully operational in 2016, it will cover the salaries of this youth.

People living or reliant on the project site who do not have secure resource user rights relevant to the project

The Project Coordinator engaged with people living or reliant on the project site who do not have secure resource user rights relevant to the project by educating them through several activities listed below:

- A workshop took place in 2012 informing the entire community of Khole on what is Climate Change & REDD+ and the importance of protecting Loru. Please see evidence requirement 3.1.2.2.
- A meeting held with the Chiefs in 2013 to brief the other leaders in Khole on the status of the development of the project in Loru. Please see evidence requirement 3.1.2.2.
- A consultation meeting held in Khole in July 2015 for the leaders and community members to give their support in Loru becoming a Community Conservation Area under the Vanuatu Environment, Protection and Conservation Act. Please see evidence requirement 3.1.2.2.
- Also the other woman in Khole will have the opportunity to be part of the Khole woman's Value-added Canarium Nut production training which will be in October 2015 and will have access to value add their own nuts and sell at the outlets in Luganville. Please see evidence requirement 3.1.2.2.

3.1.3 Transparent Participation

According to Section 4.4 of the Plan Vivo Standard (2013, p14):

4.4. *Community groups participating in the project must have a governance structure in place whereby they have the capacity to develop a plan vivo collectively and make a decision to participate in the project and enter into a PES Agreement as a group, e.g. participate via an established community structure and nominate representatives to sign the PES Agreement on behalf of the group.*

The NMF states: *The Project Owner is required to establish a governance structure enabling compliance with Section 4.4 of the Plan Vivo Standard (2013). This includes:*

1. *The establishment of a 'Formation Group' to initiate the project co-design and co-development process*

2. *The registration of a legally constituted ‘Project Owner’ group with a mandate to co-manage the project (with the Project Coordinator) on behalf of the land/resource rights holders.*
3. *The legally constituted ‘Project Owner’ group must be owned by or accountable to the land/resource rights holders of the project area (i.e. the land/resource rights holders must become its members or shareholders).*
4. *The establishment of a Project Governing Board/Committee within the legally constituted ‘Project Owner’ with a mandate to govern the project on behalf of the land/resource rights holders.*

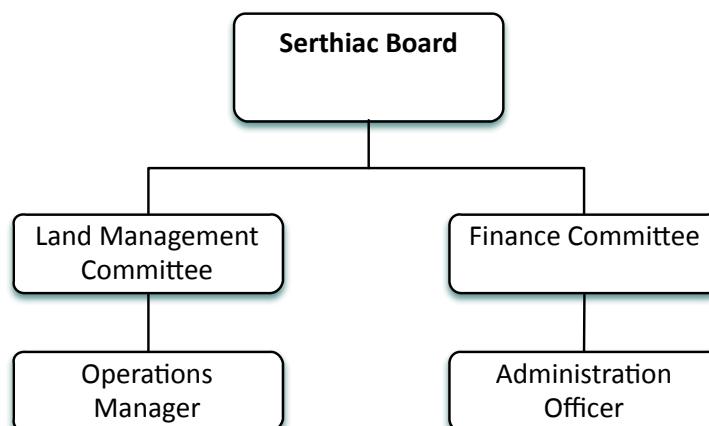
3.1.3.1 Formation Group

The Formation group consisted of two representatives from each of the five children of the old Chief, Chief Serakar. Below is the list of Formation group members as listed in the Formation Group TOR's. The Formation Group was elected using a mix of democratic and customary decision making procedures. The community agreed through activities with Live & Learn Vanuatu to allow for equal representation of each of the five families. Within each family, however, it was for the matriarch or patriarch to decide how to elect their representatives. This satisfied the needs of both Live & Learn Vanuatu and customary law.

A more detailed description of the process and members elected is in the Project Owner Entity Participation Report (supplied in ER 3.1.6.1b).

3.1.3.2 Project Owner Group

Ser-Thiac was formed in 2014. The Ser-Thiac Board consists of a representative from the five children of the old Chief Serakar who was the custom landowner of Loru. As per local custom law, land passes through patrilineal lines. Chief Serakar's grandson, Chief Stephen Skip, is the current landowner of Loru. He has mandated Ser-Thiac to manage the land and is also one member of the board. The Land Management Committee and Finance Committee are made up of representatives of the clan, not necessarily the landowners. Paid positions are the Operations Manager and Administration Officer. Please refer to Project Owner Entity Participation Report (ER 3.1.6.1b) that details structures decided upon by the formation group during the Business Planning Meeting in May 2015.



Nominations for Board members & committee members every 2 years and they are elected in family meetings.

Board Members

- Chief Stephen Ser
- Warakar Ser
- Touli Viran Dan
- Oli Fred
- George Kalo Moses

Finance Committee Membership

- Kaltapang Fred
- Rose Moses
- Rachel Ser
- Helen Toto
- Leilang Ser

Land Management Committee Membership

- Kalsakau Ser
- Anna Joe
- John Moses
- Alines Dan

Operations Manager

- Rimau Ser

Administration Officer

- Clarence Dan

Clan

Clan members sit at the bottom of the structure and the Board will hold meetings with the clan every 3 months to notify them on Land Management & Finance issues.

3.1.3.3 Mandate of Project Owner Group

The Custom landowner of Loru Community Conservation Area was involved in Business development and planning through out the project. The May 2015 Field Report highlights that the custom landowner mandate Ser-Thiac to manage Loru Community Conservation Area on his behalf. A formal letter stating as much was signed in September 2015 (ER 3.1.3.3).

3.1.3.4 Project Governing Board

According to the Governance structure outlined in 3.1.3.2, the Board is the overall decision maker and represents family in all decision making.

Within the Finance structure, the Administration officer reports all finance reports through money stories to the finance committee and head of finance reports to the Board. Finance procedures have also been drafted for the finance committee and to date the Serakar clan is following these procedures.

Within the Land Management Structure the Operations Manager reports to the Land Management Committee, and the head of the Land Management Committee reports to the Ser-Thiac Board. The Land Management Committee meet every month to discuss and approve activities to be done by family members in line with the Loru Land Management Plan.

3.1.4 Nakau Management Plan

Section 4.5 of the Plan Vivo Standard (2013, p14) states that:

4.5. *The project coordinator must assist each participant to develop a plan vivo³ which is clear, appropriate to their land and livelihoods, and comprehensible to the participant, his/her family members, and the project coordinator.*

The NMF states: *All projects in the Nakau Programme are required to develop a 'Nakau Management Plan', which is equivalent to the Plan Vivo as defined by the Plan Vivo Foundation. The purpose of the Nakau Management Plan is to guide implementation of land management activities within the PES Project Area, including defining activities that are prohibited or restricted. While the Nakau Management Plan may vary in complexity, the intention is for the Project Owner and members (landowners) to be equipped with a simple, accessible and understandable document capable of providing practical guidance about land use and management within the project area.*

Project Coordinators shall work collaboratively with Project Owner groups to develop a Nakau Management Plan that must include all land within the PES Project Area boundary, but may also cover additional areas of relevance to the project.

The Nakau Management Plan must comply with requirements of Sections 4.5 - 4.10 of the Plan Vivo Standard (2013), and is a key performance indicator for informed participation, enabled by an education and learning process.

The participatory process required in development of the Plan is described in Sections 3.1.2

³ A Plan Vivo in the Nakau Programme is defined as the Nakau Management Plan.

and 3.1.3 above, and includes participatory educational processes defined in this section (below). The decision by the project owners / land owners to accept (or otherwise) the Nakau Management Plan is a key decision that triggers the FPIC process, detailed in Sections 3.1.6.1 and 3.1.6.2.

During 2013 and 2014 Live & Learn Vanuatu undertook participative land use planning workshops with the Serakar clan. The Clan made key decisions regarding the future management of their entire land, not just Loru Community Conservation Area (of interest to the project). This was to ensure that the project did not negatively impact their need for productive land. The Loru Management Plan Participation Report, in evidence requirement 3.1.6.1 FPIC 3 highlights the participative process used.

3.1.4.1. Nakau Management Plan Committee

The NMF states: A Nakau Management Plan Committee must be established by the Project Owner Governing Board to oversee implementation of the Nakau Management Plan.

The Project Owner Committee will assume the role and responsibility as the Nakau Management Committee unless at its discretion a sub-committee of the Project Owner Committee is appointed. If appointed, a sub-committee may include other Project Owner members and/or external individuals (e.g. non-landowners or technical partners).

Overall accountability for the implementation of the Nakau Management Plan must reside with the Project Owner Committee. The Nakau Management Plan Committee is expected to be involved in the preparation and presentation of the Project Management Report during the annual Project Management Workshops (see 3.1.7).

The Nakau Management Plan Committee can be seen as the Loru Management Committee described in 3.1.3.2. The Land Management Committee not only has responsibilities under the project but also legally via the registration of Loru as a Community Conservation Area. They must report annually to the Department of Environmental Protection and Conservation on the status of management of Loru.

3.1.4.2 Essential Content

The NMF states: The Nakau Management Plan must include as minimum requirements the essential key elements defined in Table 3.1.4.2 of the Nakau Methodology Framework.

The Loru Management Plan (the Plan Vivo for this project) has been developed as a hybrid of Nakau Methodological Framework requirements and the requirements of a management plan under the *Environmental Protection and Biodiversity Conservation Act (2010)*.

The Nakau Management Plan (Loru Management Plan) for this project contains all elements required in Section 3.1.4.2 of the Nakau Methodology Framework as indicated by the check

list in the right hand column of Table 3.1.4.2 below. The Loru Management Plan (LMP) is presented in Appendix 8.

Table 3.1.4.2: Essential Content of Nakau Management Plan (NMP)		
Section	Nakau Management Plan must contain:	Location in NMP
Location and Boundaries	A digitally created map or maps containing accurate coordinates for location, boundaries and size of the area under management. Maps created as per 2.2.2 <i>Project Location Maps</i> , and 2.4.1 – 2.4.6 <i>Geographic Areas</i> will be suitable for this requirement.	Section 3: Loru PA CCA Map
Prohibited Activities	A concise list and description of any activity that is prohibited within the area under management.	Section 5A: Zone A
Restricted Activities	A concise list and description of any activity that is restricted within the area under management. Restricted activities include those that may be allowed, but are subject to management limitations or special permissions. For example, restricted activities could be subject to seasonal closures, size limits on harvesting (e.g. tree diameter or tree species), or limits to quantity of resource harvested. Where management conditions apply these should be clearly explained.	Section 5B: Zone B
Penalties	If relevant, any penalty for not complying with prohibited or restricted activities should be clearly articulated. This should include penalties under customary law, or penalties if applicable under a legal instrument applied to the project such as by-laws or regulations. Where relevant, this section should also include a description of the process for determining a penalty or for a dispute resolution process.	Section 6
Permitted Activities	Various local, customary and potentially commercial uses of land may be allowable within the crediting area boundary subject to the project type and technical specifications. The Plan should identify any locally significant activities that may occur within the areas under management. For example: hunting, food and medicine collection, collection of non-timber forest products and eco-tourism.	Section 5C: Zone C
Management Zones	The area under management may include separate management zones with differing management objectives applicable to each zone. Where this applies the boundary of each management zone should be clearly defined on a map, and the objectives for each zone explained.	Section 4A
Action Plan	A basic action plan, identifying the main activities that will be implemented: <ul style="list-style-type: none"> Basic description of land management or related activities to be undertaken (e.g. weed removal, boundary monitoring, tree planting, fencing, biodiversity monitoring, community education) Group or persons responsible for carrying out the activities Area (e.g. zone) where activity is to be undertaken (if relevant) 	Annex 1B

3.1.4.3 Recommended Content

The NMF states: *The Nakau Programme recommends developing a comprehensive Nakau Management Plan document that can be used to communicate land management objectives and activities to a range of stakeholders. However the Programme allows this to be developed gradually through the course of the project (included in socio-economic elements of Project Monitoring Report at verifications going forward). A comprehensive Nakau Management Plan may include the following or similar content headings:*

- Vision
- Acknowledgments (e.g. donors & supporters)
- Location (Maps)
- Description of the natural features of the area (soil, climate, habitats, ecosystems, biodiversity)
- History of the site
- Use by local people
- Description of threats
- The Law/policy applying to the area
- Management Objectives
- Link to PES / Technical Specifications
- Roles and responsibilities
- Protecting the Values and Achieving the Vision
- Benefits and Opportunities
- Community Participation and Awareness
- Management Zones
- Rules and Regulations
- Action Plan
- Monitoring, Evaluation and Review of the Plan

Where relevant and possible, the requirement for a Nakau Management Plan can be satisfied through development of plans with equivalent content under National Legislation for Protected Areas, leasing or licensing. For example, in the Solomon Islands a Protected Area Management Plan developed according to requirements of the Protected Area Act 2010 can be used to satisfy the requirement for a Nakau Management Plan, provided the essential content is covered.

The Nakau Management Plan for this project contains the following content:

Table 3.1.4.3: Recommended Content of Nakau Management Plan (NMP)	
Recommended content headings	Location in NMP
Vision	Section 1A
Acknowledgements (donors, supporters, partners, collaborators)	Refer to LMP Participation Report
Locations (Maps)	Section 3
Description of the natural features of the area (soil, climate, habitats, ecosystems, biodiversity)	Section 2 (2A & 2B)
History of the site	Section 1C
Use by local people	Section 5C
Description of threats	Section 2C
The Law/policy applying to the area	Section 5
Management Objectives	Section 4
Link to PES / Technical Specifications	Section 4A
Roles and responsibilities	Section 4C
Protecting the Values and Achieving the Vision	Section 5
Benefits and Opportunities	Section 4C
Community Participation and Awareness	Annex 2

Management Zones	Section 4A
Rules and Regulations	Section 5
Action Plan	Annex 1B
Monitoring, Evaluation and Review of the Plan	Annex 1B

3.1.5 Informed Participation

The NMF states: *The Nakau Programme recognises the need to address a significant power imbalance between the Project Coordinator and the Project Owner that exists because of differences in capacity and education levels, and the fact that PES is a new and foreign concept for indigenous people. Correcting the power imbalance requires a commitment to education and learning by Project Coordinators and Project Owners, thus fostering a better understanding of where the ‘worlds’ of local custom and culture meet that of PES and international business and development. A strong commitment to learning and understanding by all participants is essential to enabling genuine and effective participation.*

All Project Coordinators developing projects in the Nakau Programme shall commit to a process of education with participants to ensure and enable informed planning decisions throughout the project cycle.

Informed participation is a crosscutting requirement spanning project activities and outcomes. Local participants (and in particular Project Owner group representatives) must be able to make informed decisions concerning project design, planning, development and implementation. In most situations this will necessitate a process of education, which shall be implemented prior to and throughout the decision-making and planning process. The Project Coordinator shall undertake the following activities to enable local participants to understand PES activities to a level where their participation is genuinely informed and effective:

- a. *Assess participant’s prior knowledge of the PES activity to determine perceptions, misconceptions and knowledge gaps, and establish a baseline for monitoring change in understanding. Investments in community education by the Project Coordinator shall be tailored to participant needs.*
- b. *Implement a PES education programme (e.g. series of participatory workshops) to increase understanding and address any misconceptions or knowledge gaps noted in the assessment of prior knowledge.*
- c. *Create opportunities for ‘both ways’ learning, whereby the Project Coordinator also increases their understanding of local governance, culture and ecological knowledge that could benefit the project*
- d. *Enable opportunities for customary / local processes of information exchange and learning to occur.*
- e. *Assess learning outcomes to measure against capacity benchmarks (see details below on capacity benchmarks).*
- f. *Provide opportunities for ongoing ‘informal’ (non-structured) learning to occur, throughout the project, as required.*

3.1.5.1 Assessment of Prior Knowledge

The Serakar clan has proved that through the stages of project development their knowledge on Climate Change has increased. Through an agreement of implementing the REDD+ project they have participated in all levels of REDD+ educational activities (detailed in section 3.1.5.2 below) and participated in the development of the management zones within the Loru Community Conservation Area. The CCRE report with baseline self assessment is in ER 3.1.5.1.

3.1.5.2 Educational Programme

Educational activities begun in 2012 and continued through 2015. During 2012 and 2013 the focus was on educational activities such as climate change and REDD+ and land use planning. In 2014 the focus was on governance, Money story training and Business Planning workshops. Later in 2014 through to 2015, the focus has been on identifying gaps and undertaking capacity building activities relating to implementing the LMP, managing financial procedures and nursery development training.

3.1.5.3 Both-Ways Learning

The Education and Participation reports demonstrate that participative approaches were taken to all meetings, especially in educational activities. See Appendix 9 and ER 3.1.6.1.

3.1.5.4 Customary Learning

Educational programme activities also involved the participants presenting their customary knowledge into the development of the land use plan and methods used to create the agro forestry plot and developing the Ser-Thiac nursery.

Part of this included their participation and traditional knowledge on bio-diversity surveys identifying the different flora, fauna and cultural sites within the different zonings and also applying their techniques of planting roots crops like kumala and watermelon within the agro forestry plot.

3.1.5.5 Capacity Benchmarks for Informed Participation

Section 4 of the Plan Vivo Standard (2013, p15) states that:

4.6. *Plan vivos approved by the project coordinator must show which project interventions are to be adopted, aligned and consistent with the project's technical specifications, and include any specific information that is not common to all plans under the relevant technical specification, e.g. specific species-mix selected for planting where the technical specification provides a range of options, or selection of a specific baseline scenario where there are multiple scenarios set out in the technical specification.*

4.7. *The project coordinator must not approve plan vivos where implementation would*

undermine the livelihood needs and priorities or reduce the food security of participants.

- 4.8. *There must be a system for accurately recording and verifying the location, boundary and size of each plan vivo using GPS, where boundary coordinates are recorded for all plan vivos above 5 hectares, and at least a central point coordinate recorded for plan vivos under 5 hectares.*
- 4.9. *Participants must have access to their plan vivo in an appropriate format and language.*
- 4.10. *Evidence must be provided demonstrating the participatory methods used to assist the participants to develop their plan vivo, e.g. photographs or videos of group planning activities, hand-drawn maps or other outputs of community discussions.*

The NMF states: *The Project Coordinator shall conduct an assessment / survey to determine capacity for informed participation, targeting key knowledge areas (benchmarks). The approach will be 'learner-centered' and will allow a participant to self assess from his or her perspective. However the Project Coordinator will also objectively verify a sample of self-assessments to ensure findings are accurate.*

The self-assessment will be conducted by asking participants about their capacity to undertake the following:

- *Describe opportunity costs (lost opportunities) due to the project.*
- *Describe the benefits to be gained from the project and how these would be shared.*
- *Describe the project interventions and/or activities in the Project Area*
- *Describe any project-specific information not common to all projects.*
- *Explain how project interventions impact on livelihood needs and priorities including food security*
- *Define project boundaries where boundary coordinates are recorded for all Project Area land parcels (as a minimum for those above 5ha and at least a central point for all Project Area land parcels below 5ha).*
- *Access Nakau Management Plans⁴ in a format and language that they comprehend.*
- *In general, make informed decisions about if or how they would like to be involved in the project.*

The above is a minimum requirement. Project Coordinators are encouraged to assess a range of locally relevant learning outcomes and address locally relevant issues for informed participation.

⁴ A 'plan vivo' using the language of the Plan Vivo Standard. See definitions in the Plan Vivo Standard (2013) for 'plan vivo' definition.

This section presents the results of participant self-assessment and objective assessment of the capacity benchmark themes listed in bullet points in the grey box above. This section also presents results from capacity benchmark themes included by the Project Coordinator team.

Steps	Live & Learn Tasks	Landowner Outcomes
Prior Knowledge Assessment	<ul style="list-style-type: none"> Delivered climate change & REDD+ awareness workshops in 2012 Trained landowners on REDD+ project issues 	<ul style="list-style-type: none"> Landowners signed agreement to establish Loru Forest Project in January 2013
Medium Knowledge Assessment	<ul style="list-style-type: none"> Trained landowners in land use planning Developed and delivered community business planning workshops Developed and delivered community project governance workshops 	<ul style="list-style-type: none"> Landowners developed land use planning maps and decided on what areas to include inside project boundary Landowners defined project management activities Established the first agroforestry plot in November 2013 Elected the Project Governing Board, and appointed the Management Committee and the Finance Committee in 2014
In Depth Knowledge Assessment	<ul style="list-style-type: none"> Identified knowledge gaps and created additional educational materials to fill these gaps (2014) Capacity building exercises with Board, Management and Finance Committees Continuous support and liaison visits on project management, governance and financial discipline 	<ul style="list-style-type: none"> Management Committee developed rosters for monthly meetings Finance Committee developed project benefit sharing plan The Board developed the Ser-Thiac Business Plan The Board developed the Nakau Management Plan The Board signed the PES Agreement

Please see Appendix 9 and ER 3.1.5.1 for more information.

3.1.6 FPIC and Decision Mandates

Section 4 of the Plan Vivo Standard (2013, p15) states that:

- 4.12. *Participants must be provided with a forum, or facilitated to use existing forums, to periodically discuss the design and running of the project with other participants in their community, and raise any issues or grievances with the project coordinator over the PES period.*
- 4.13. *Where smallholders or community members may be affected by the project, even though they are not participating, the project coordinator must ensure there is a mechanism for any concerns or issues to be raised with the project coordinator, e.g. through local meetings or via an appointed local representative.*

Section 8 of the Plan Vivo Standard (2013, p22) states that:

8.3 *Participants must enter into PES agreements voluntarily according to the principle of free, prior and informed consent, where sufficient information, in an appropriate format and language, is available to potential participants to enable them to make informed decisions about whether or not to enter into a PES Agreement.*

The NMF states: *The Nakau Programme operates under the principles of Free, Prior and Informed Consent (FPIC). FPIC is defined within this programme by reference to the United Nations Declaration on the Rights of Indigenous People (UNDRIP) (United Nations 2008), where:*

- *Free means no force, bullying or pressure.*
- *Prior means (Indigenous peoples) have been consulted before the activity begins.*
- *Informed means (Indigenous peoples) are given all of the available information and informed when that information changes or when there is new information. If people don't understand this information then they have not been informed.*
- *Consent means (Indigenous peoples) must be consulted and participate in an honest and open process of negotiation that ensures:*
 - *All parties are equal, neither having more power or strength*
 - *Indigenous group decision-making processes are allowed to operate*
 - *Indigenous peoples right to choose how they want to live is respected.*

3.1.6.1 FPIC Triggers

The NMF states: *The Nakau Programme requires Project Coordinators to recognise key points in project design, development and implementation that trigger the need for a mandate or decision by the Project Owner participants. These triggers are identified in Table 3.1.6.1. When FPIC or a mandating step is triggered, the decisions by the Project Owner participants could be:*

- a. *A mandate to continue the project (accept a decision or plan);*
- b. *Delay a decision or plan pending further information;*
- c. *A request to change the decision or plan before continuing; or*
- d. *The Project Owner opts out of the project.*

Project Coordinators shall produce evidence that the Project Owner participants have given their free, prior and informed consent or provided a mandate (described in Table 3.1.6.1).

However, prior to triggering the FPIC or a mandating decision, the Project Coordinator will ensure that a process has been undertaken as a lead up to the decision, and that various pre-requisite conditions have been met.

The key FPIC triggers identified for projects are listed in the left hand column in Table 3.1.6.1.

Table 3.1.6.1: Decisions that trigger FPIC and/or require a mandate

Decision	Evidence requirement
1. Register a legally constituted Project Owner entity to act on behalf of land/resource user rights holders.	<ul style="list-style-type: none"> Project Owner entity / business registration⁵ (including documents tendered to gain registration). Or the following 3 steps: <ul style="list-style-type: none"> Signed letter from the recognised land and resource user rights holders or their representatives (e.g. clan leaders) mandating Project Owner entity / business registration and its purpose Project Owner Entity Participation Report. This report must describe how the Project Owner committee and broader Project Owner membership participated in establishing the Project Owner entity, including how the pre-requisite conditions for decision 1 (see below) were adequately met. Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee
2. Agreement with the terms and conditions of project PES Agreement ⁶ and Programme Agreement. Note: the PES Agreement encompasses points 4.1.1.1 to 4.1.1.16 (see section below)	<ul style="list-style-type: none"> PES Agreement and Programme Agreement Participation Report. This report must describe how the Project Owner committee and broader Project Owner membership were adequately informed and consulted (with supporting evidence) in developing the agreements, including how the pre-requisite conditions for decision 2 (see below) were adequately met. Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee Letter or meeting minutes signed/accepted by the Project Owner committee accepting the PES agreement and Programme Agreement Signed letter from the recognised land and resource user rights holders or their representatives (e.g. clan leaders) mandating the Project Owner committee to sign the PES agreement and Programme Agreement PES agreement and Programme Agreement signed by Project Owner committee
3. Agreement to Nakau Management Plan ⁷ (land management plan or 'plan vivo') including project boundaries and management regime for the project area	<ul style="list-style-type: none"> Nakau Management Plan Participation Report. This report must describe how the Project Owner committee and broader Project Owner membership were informed and consulted (with supporting evidence) in developing the plan, including how the pre-requisite conditions for decision 3 (see below) were adequately met Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee Signed letter from the recognised land and resource user rights holders or their representatives (e.g. clan leaders) mandating the Project Owner committee to sign the PES agreement PES agreement signed by Project Owner committee (where the PES agreement includes the Nakau Management Plan as an appendix)
4. Agreement for the Project Description (PD) to be submitted for validation	<ul style="list-style-type: none"> Project Description Summary Report (written or presentation) describing the PD document and delivered in a format that Project Owners can understand. Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee Letter / minutes signed by Project Owner committee agreeing to submit the PD for validation.

⁵Registration requirements vary from country to country and according to the specific organization type (e.g. Cooperative or Trust). Registration documentation may be accepted as the evidence requirement for FPIC if therelevant regulations require a FPIC process and this can be demonstrated. The process musthave required that all or a large majority of members endorse the goals of the organization and accept its by-laws or constitution.

⁶ The PES Agreement will include the Nakau Management Plan (plan vivo) as an appendix.

⁷ FPIC may be applied to the material content of the Nakau Management Plan rather than the entire document.

Table 3.1.6.1b shows the activities undertaken to fulfil the FPIC requirements of the Nakau Methodology Framework.

Table 3.1.6.1b: Decisions that trigger FPIC and/or require a mandate		
Decision	Evidence Requirement	Location in PD
1. Register a legally constituted Project Owner entity to act on behalf of land/resource user rights holders.	Project Owner entity / business registration ⁸ (including documents tendered to gain registration). [Or the following 3 steps:] Signed letter from the recognised land and resource user rights holders or their representatives (e.g. clan leaders) mandating Project Owner entity / business registration and its purpose.	Evidence requirement 3.1.6.1 / FPIC 1 Evidence Requirement 3.1.3.3
	Project Owner Entity Participation Report. This report must describe how the Project Owner committee and broader Project Owner membership participated in establishing the Project Owner entity, including how the pre-requisite conditions for decision 1 (see below) were adequately met.	Evidence Requirement 3.1.6.1/FPIC 1
	Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee.	Evidence Requirement 3.1.6.1/FPIC 1
	PES Agreement and Programme Agreement Participation Report. This report must describe how the Project Owner committee and broader Project Owner membership were adequately informed and consulted (with supporting evidence) in developing the agreements, including how the pre-requisite conditions for decision 2 (see below) were adequately met. Note: the PES agreement encompasses points 4.1.1.1 to 4.1.1.16 (see section below)	Evidence Requirement 3.1.6.1 / FPIC 2
	Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee.	Evidence Requirement 3.1.6.1 / FPIC 2
	Letter or meeting minutes signed/accepted by the Project Owner committee accepting the PES agreement and Programme Agreement.	Evidence Requirement 3.1.6.1 / FPIC 2
	Signed letter from the recognised land and resource user rights holders or their representatives (e.g. clan leaders) mandating the Project Owner committee to sign the PES agreement and Programme Agreement.	Evidence Requirement 3.1.3.3
	PES agreement and Programme Agreement signed by Project Owner committee.	Evidence Requirement 3.1.6.1 / FPIC 2

⁸Registration requirements vary from country to country and according to the specific organization type (e.g. Cooperative or Trust). Registration documentation may be accepted as the evidence requirement for FPIC if therelevant regulations require a FPIC process and this can be demonstrated. The process musthave required that all or a large majority of members endorse the goals of the organization and accept its by-laws or constitution.

⁹ The PES Agreement will include the Nakau Management Plan (plan vivo) as an appendix.

3. Agreement to Nakau Management Plan ¹⁰ (land management plan or 'plan vivo') including project boundaries and management regime for the project area	Nakau Management Plan Participation Report. This report must describe how the Project Owner committee and broader Project Owner membership were informed and consulted (with supporting evidence) in developing the plan, including how the pre-requisite conditions for decision 3 (see below) were adequately met.	Evidence Requirement 3.1.6.1 / FPIC 3
	Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee.	Evidence Requirement 3.1.6.1 / FPIC 3
	Signed letter from the recognised land and resource user rights holders or their representatives (e.g. clan leaders) mandating the Project Owner committee to sign the PES agreement.	Evidence Requirement 3.1.3.3 / FPIC 2
	PES agreement signed by Project Owner committee (where the PES agreement includes the Nakau Management Plan as an appendix).	Appendix 2
4. Agreement for the Project Description (PD) to be submitted for validation	Project Description Summary Report (written or presentation) describing the PD document and delivered in a format that Project Owners can understand.	Evidence Requirement 3.1.6.1 / FPIC 4
	Letter or meeting minutes accepting the above report must be signed/ accepted by the Project Owner committee.	Evidence Requirement 3.1.6.1 / FPIC 4
	Letter / minutes signed by Project Owner committee agreeing to submit the PD for validation.	Evidence Requirement 3.1.6.1 / FPIC 4

3.1.6.2 Required Process

The NMF states: *The processes identified in Sections 3.1.2 and 3.1.5 are crosscutting (apply to all decisions identified in Table 3.1.6.1).*

Project Coordinators are required to ensure pre-requisite conditions are met prior to concluding decisions that trigger FPIC or require a local or Project Owner mandate.

The FPIC Decisions (1-4) (below) are described in the order that they would arise within a project. They are, however, not mutually exclusive. Therefore some decisions and associated activities may be implemented concurrently or in a different order than prescribed below. What remains important is that the decisions are made in a transparent manner creating the necessary mandate for the project to advance from one stage to another.

The fulfilment of each requirement in this section is presented in the form of evidence requirements for each FPIC Decision, along with the completion of the Decision itself. This evidence or reference to the location of an evidence requirement is provided below each FPIC Decision.

¹⁰ FPIC may be applied to the material content of the Nakau Management Plan rather than the entire document.

Decision 1. Register a legally constituted Project Owner Entity to act on behalf of land/resource user rights holders

Pre-requisite conditions:

- Initial project scoping work has been conducted by the Project Coordinator to determine project feasibility (e.g. a desktop feasibility study).
- The proposed Project Owner Entity membership (or shareholders) includes the legally recognised landowners or resource rights holders.
- Proposed Project Owner Entity members understand that a legally constituted Project Owner Entity could act on their behalf in the implementation of a PES project, and decisions made by this group can affect their land and livelihoods.
- Project Owner Entity representatives have a good understanding of the opportunity to undertake a PES project and the responsibilities this entails.
- A process of participatory education & planning has been implemented in the design of the legally constituted Project Owner Entity, or a suitable legally registered Project Owner Entity already exists.
- All legal requirements for Project Owner Entity / business registration can be met.
- If registration requires a constitution or by-laws to be developed, these must have been developed through a collaborative process (Involving Project Owner members and the Project Coordinator)

Recommended Activities:

- Feasibility study
- Participatory (collaborative) education & planning process to design the legally constituted Project Owner entity
- Broad participant consultation
- Establishment of a steering committee or formation group
- Formation meeting
- Facilitate the process for the recognised land and resource user rights holders to sign a letter providing the mandate for the Project Owner entity
- Submit documents for registration

The decision to legally register a Project Owner Entity on behalf of the resource owner was a decision that was taken after over one and a half years of education and consultation with the community. The Project Owner Entity Participation Report (located in ER 3.1.6.1b) explains this process and in what way pre-requisites were satisfied prior to decisions.

Decision 2. Agreement with the terms and conditions of project PES Agreement(s) and Programme Agreement

Pre-requisite conditions:

Project Owner committee transparently and effectively consult with their members on the PES and Licence agreements (including meeting the requirements listed below):

- Sufficient information, in an appropriate format and language, made available to potential participants to enable them to make informed decisions about whether or not to enter into a PES Agreement
- Project participants have a good understanding of key elements of the PES agreement, in particular:
 - a. Estimated number of PES units to be produced

- b. Roles and responsibilities of Project Owner and Project Coordinator
- c. Fees for the Project Coordinator
- d. Commitments to management & monitoring tasks in order to produce PES units
- e. Rules concerning benefit distribution
- f. Obligations and possible penalties for reversals
- g. Limitations to withdrawing from the project in the future

- Project participants aware of potential buyers and/or options for PES unit sales and marketing, and how sales can impact on income / profitability.
- All impacted land owners with land or use rights within the Project Area aware of the Nakau Management Plan and the PES Agreement (see Decision 3)

Recommended Activities:

- Development and presentation of a realistic project cost / benefit analysis
- Project Coordinator to facilitate preparation of draft agreements
- Project Owner (with support from Project Coordinator as required) transparently and effectively consult with their members regarding the draft Agreements
- Prepare PES Agreement and Project License Agreement Consultation Report
- Facilitate the process for the recognised land and resource user rights holders to sign a letter providing the mandate for the Project Owner entity to sign the PES Agreement and Programme Agreement
- Project Owner committee meet to consider the report (above) and draft agreements, and sign acceptance (if agreed)

Consultation regarding the PES Agreement was initiated early in the project when reversals and impermanence were discussed during community education workshops. The PES Agreement has been translated into Bislama and provided in a simplified format. The signed PES Agreement will be presented at first verification.

Decision 3 Agreement to Nakau Management Plan (land management plan or ‘plan vivo’) including project boundaries and management regime for the project area

Pre-requisite conditions:

- Project Owner and Project Coordinator have consulted available land and resource use information (e.g. maps, tenure boundaries, ecosystem attributes).
- Project Owners and Project Coordinator can demonstrate that the Project Area falls within land ownership boundaries of the Project Owner group
- All impacted land owners with land or use rights within the Project Area aware of the Nakau Management Plan
- Project Owner participants have collaborated with the Project Coordinator through a process of participatory planning to design the Nakau Management Plan.

Recommended Activities:

- Participatory (collaborative) process to design land use and management plans.
- Produce accurate land use maps (including procurement of required data).
- Project Owner (with support from Project Coordinator as required) transparently and effectively consult with their members regarding the draft Nakau Management Plan
- Preparation of a Nakau Management Plan Consultation Report
- Project Owner committee meetings to consider the report (above) and sign acceptance (if agreed)

As per the Nakau Management Plan Participation Report, extensive consultation occurred with both the resource owner and surrounding communities. The Government of Vanuatu assisted with the consultations. Agreements to the conditions of the management plan were received from nine surrounding communities, the Provincial Government and East Santo Council of Chiefs and are attached to the Loru Management Plan (located in Appendix 8).

Decision 4. Agreement for the Project Description (PD) to be submitted for validation/verification

Pre-requisite conditions:

- Project Owner participants understand key project components including:
 - a. Likely PES unit volumes including buffer.
 - b. Realistic estimation of PES pricing.
 - c. Potential buyers and/or options for PES unit sales and marketing strategy.
 - d. Time frames for validation/verification/implementation/monitoring.
 - e. Project registration requirements and costs associated with credit issuance.
 - f. Project net costs and benefits and financing strategy.
- Project Owners have thoroughly reviewed the Project Description.

Recommended Activities:

- Preparation of Project Description Summary Report (written or presentation) that includes points (a-f) above.
- Consultation with Project Owners (e.g. workshop) on the Project Description Summary Report and draft Project Description.
- Facilitate a Project Owner meeting to seek a decision on submitting the PD for validation / verification.

Many elements of the PD are well known by the Project Owner group. As consultations on the PD are ongoing, this agreement (in the form of a minuted decision of the Ser-Thiac Board) will be provided at first verification.

3.1.7 Project Management Workshops

The NMF states: *The purpose of Project Management Workshops is to provide an annual update on project progress pursuant to the requirements of the PES agreements and PD. Project Management Workshops take place within six months of the end of each (annual) Project Management Period.*

Key outputs of Project Management Workshops are approval of Project Management Reports and Project Business Reports. The authors of the Project Management Report and Project Business Report (e.g. Project Coordinator and individuals within the Project Owner community) shall send these reports to the Project Owner committee no less than 8 working days prior to the Project Management Workshop.

The Project Management Workshop will take place at a venue and date agreed to mutually by the Project Coordinator and the Project Owner committee and will follow an agenda sequence as follows:

Agenda: Project Management Workshops (minimum annually)

Part 1 - Administration

- a. Agree the agenda for the Project Management Workshop.
- b. Record the names, affiliation and contact details of all participants.

Part 2 – Project Update

- a. Presentation of Project Management Report (including community and biodiversity impact monitoring updates as specified in the PD).
- b. Presentation of Project Business Update Report (linked to Project Finance Model and Project Owner Business Plan)

Part 3 – Mandating Next Steps

The Project Governing Board presides over decisions required as follows:

- a. **Decision 1:** Approve (or other) Project Management Report
- b. **Decision 2:** Approve (or other) the Project Business Update Report
- c. **Decision 3:** Assign roles, responsibilities, and resources to address issues arising from the Project Management Report or the Project Business Update Report.
- d. **Decision 4:** Approve (or other) proposed changes to the Community Benefit Sharing Plan (if any)
- e. **Decision 5:** Review any Project Disputes and assign roles and responsibilities for dispute resolution under the Project Dispute Resolution Framework.

Part 4 – Evaluation and Reporting

- a. A draft version of the minutes of the meeting (referring to decisions made) are provided to the Project Coordinator.
- b. Project Owner participants to complete an evaluation of each Project Management Workshop prior to departing from the workshop in closed session in the absence of any personnel of the Project Coordinator or sub-contractors. The evaluation to be placed in the document database of the Project Owner, Project Coordinator and the Programme Operator.
- c. Project Coordinator to prepare a draft Project Management Workshop Report that describes the workshop and contains a record of all decisions made.
- d. Project Owner committee to review the Project Management Workshop Report to check for accuracy, edit, and either approve or make recommendations for changes/amendments. If approved without changes, the report is finalized by formal approval by the Project Governing Board. This decision is recorded in the minutes of a Project Owner committee meeting with a copy of these minutes forwarded to the Project Coordinator. A copy of the Project Management Workshop Report and approval minutes is lodged in the project document database and a copy forwarded to the Programme Operator.

This agreement will be provided in the form of a minuted decision of the Ser-Thiac Board at first verification.

3.1.8 Project Monitoring Workshops

The NMF states: *The purpose of Project Monitoring Workshops is to evaluate and approve Project Monitoring Reports at the conclusion of each Project Monitoring Period (as specified in the Technical Specifications applied). Project Monitoring Workshops take place within one year of the end of each Project Monitoring Period.*

The current Project Monitoring Report shall be sent to the Project Governing Board no less than 8 working days prior to the Project Monitoring Workshop.

The Project Monitoring Workshop will take place at a venue and date agreed to mutually by the Project Coordinator and the Project Governing Board and will follow an agenda sequence as follows:

Agenda: Project Monitoring Workshop

Part 1 - Administration

- a. Agree the agenda for the Project Monitoring Workshop.
- b. Record the names, affiliation and contact details of all participants.

Part 2 – Project Update

- a. Presentation of Project Monitoring Report by its authors to the Project Governing Board.

Part 3 – Mandating Next Steps

The Project Governing Board presides over decisions required as follows:

- a. **Decision 1:** Approve (or other). Project Monitoring Report
- b. **Decision 2:** Assign roles, responsibilities, and resources to address issues arising from the Project Monitoring Report (if any).

Part 4 – Evaluation and Reporting

- a. A draft version of the minutes of the meeting (referring to decisions made) are provided to the Project Coordinator.
- b. Project Owner participants to complete an evaluation of each Project Monitoring Workshop prior to departing from the workshop in closed session in the absence of any personnel of the Project Coordinator or sub-contractors. The evaluation to be placed in the document database of the Project Owner, Project Coordinator and the Programme Operator.
- c. Project Coordinator to prepare a draft Project Monitoring Workshop Report that describes the workshop and contains a record of all decisions made.
- d. Project Governing Board to review the Project Monitoring Workshop Report to check for accuracy, edit, and either approve or make recommendations for changes/amendments. If approved without changes, the report is finalized by formal approval by the Project Governing Board. This decision is recorded in the minutes of a Governing Board meeting with a copy of these minutes forwarded to the Project Coordinator. A copy of the Project Monitoring Workshop Report and approval minutes is lodged in the project document database and a copy forwarded to the Programme Operator.

This requirement will be fulfilled in the form of a minuted decision of the Ser-Thiac Board at first verification.

3.2 DISPUTE RESOLUTION

Section 4 of the Plan Vivo Standard (2013, p15) states that:

4.14. A robust grievance redressal system should be part of project design, and should ensure that participants are able to raise grievances with the project coordinator at any given point within the project cycle, and that these grievances are dealt with in a transparent, fair, and timely manner. A summary of grievances received, the manner in which these are dealt with, and details of outstanding grievances must be reported to the Plan Vivo Foundation through the periodic reporting process.

The NMF states: *Each project in the Nakau Programme is required to prepare a Standard Operating Procedure (SOP) for Dispute Resolution to guide the process of dispute resolution should it occur during the course of the project. Project Coordinators are required to co-design the 'SOP: Dispute Resolution' together with Project Owners based on principles of conflict resolution and non-violent communication, in addition to local customary procedures.*

Project Owners and Project Coordinators are required to incorporate the 'SOP: Dispute Resolution' into the Project Description (PD) (as an appendix). Any revisions of the 'SOP: Dispute Resolution' shall be noted in Project Monitoring Reports and PD revisions.

The 'SOP: Dispute Resolution' may be based on the Nakau Programme Dispute Resolution Framework (see Appendix 3 [of the NMF]).

The Dispute Resolution Framework component of the PES Agreement is presented in Appendix 2.

4. Benefit Sharing

The NMF states: *All projects within the Nakau Programme shall apply the benefit sharing mechanism described within this Methodology Framework. The benefit-sharing mechanism is sufficiently flexible to accommodate local differences in capacity, preferences, needs and opportunities for Project Coordinators and Project Owners. However, specific conditions on benefit sharing arrangements have been identified which provide safeguards to ensure benefit sharing is equitable, and to mitigate risks that cash benefits lead to un-intended negative social outcomes for local communities. The mechanism also seeks to ensure sustainability of the Nakau Programme, and where possible provide financing opportunities for programme strengthening.*

The benefit sharing mechanism is divided into three components:

- a. *The Payment For Ecosystem Services (PES) Agreement*
- b. *The Project Finance Model*
- c. *The Project Owner Business Model*

The PES Agreement is a legal contract between the Project Coordinator and the Project Owner. The Project Finance Model describes the systems for sale of PES units and defines protocols for financial discipline in the project. The Project Owner Business Model defines how funds shall be managed by the Project Owner Business to keep the project viable and transparently deliver financial benefits at the group and individual level.

This Methodology does not and cannot override national legislation that may prescribe benefit-sharing arrangements under certain business structures. In circumstances where this applies, the national legislation will be met as a minimum requirement, and where allowable by law the project must still meet the requirements of this Methodology Framework in respect to benefit sharing.

4.1 PES AGREEMENT

Section 8 of the Plan Vivo Standard (2013, p21) states that:

8.1. *Transaction of ecosystem services between the project coordinator and participants must be formalized in written PES Agreements, where participants agree to follow their plan vivo in return for staged, performance-related payments or benefits.*

The PES Agreement is presented in Appendix 2.

4.1.1 Scope

Section 8 of the Plan Vivo Standard (2013, p21, 22) states that:

- 8.2. *Procedures for entering into PES agreements with participants must be defined and followed, where PES agreements specify:*
 - 8.2.1. *The quantity and type of ecosystem services transacted*
 - 8.2.2. *The project interventions to be implemented*
 - 8.2.3. *The plan vivo the PES Agreement relates to and its date of approval and implementation*
 - 8.2.4. *Performance targets that must be met to trigger the disbursement of payments or other benefits, with reference to monitoring methods, frequency and duration*
 - 8.2.5. *The amount of payment or benefit to be received (or what the process is for determining this)*
 - 8.2.6. *Consequences if performance targets are not met, e.g. withholding of some or all payments and how corrective actions will be agreed*
 - 8.2.7. *The PES period (period over which monitoring and payments will take place) and overall duration of commitment to the plan vivo*
 - 8.2.8. *Any impacts of the agreement on rights to harvest food, fuel, timber or other products*
 - 8.2.9. *Deduction of a risk buffer where applicable*
 - 8.2.10. *Agreed upon mechanism to resolve or arbitrate any conflict arising from the implementation of the project, following established community practices or legal rules in the country.*
- 8.4. *PES agreements must not remove, diminish or threaten participants' land tenure.*

The NMF states: *The PES Agreement is a contract between the Project Coordinator and Project Owner and must comply with all sub-sections of Section 8.2 of the Plan Vivo Standard (2013). Projects shall clarify this by providing a copy of the PES Agreement in the Appendix to the PD, and presenting the necessary information contained in the PES Agreement in the sub-sections of the PD defined below:*

- 4.1.1.1 *Quality and Type of Ecosystem Service Transacted*
- 4.1.1.2 *Project Interventions*
- 4.1.1.3 *Relevant PD*
- 4.1.1.4 *Performance Targets (linked to Nakau Management Plan)*
- 4.1.1.5 *Process for Determining Volume of PES Units Transacted*
- 4.1.1.6 *Non-Performance Penalties*
- 4.1.1.7 *PES Period*
- 4.1.1.8 *Impacts of PES Agreement on Rights to Food, Fuel, Timber*
- 4.1.1.9 *Buffer*
- 4.1.1.10 *Agreement on roles and responsibilities of the Project Owner*

- 4.1.1.11 Agreement on services to be provided by the Project Coordinator and other services providers*
- 4.1.1.12 Agreement on payment milestones and payment schedule for services provided by the Project Coordinator*
- 4.1.1.13 Agreement on disbursement of income from PES sales to the Project Owner*
- 4.1.1.14 Agreement on management of income from PES sales by Project Owner according to the Project Owner Business Plan*
- 4.1.1.15 Process of PES Agreement review*
- 4.1.1.16 Project SOP Dispute Resolution*

The Loru PES Agreement outlines the roles and responsibilities for Live & Learn Vanuatu (the Project Coordinator) (LLV) and the Ser-Thiac Business. This Agreement is compliant with Vanuatu law (Varkaran, L. 2015).

The notes below state the necessary information contained in the PES Agreement defined in the PD subheadings 4.1.1.11-4.1.1.16 below:

- 4.1.1.11 Agreement on services to be provided by the Project Coordinator and other services providers*

Refer to Section 2; Mutual relationships and Section 3, Our Roles and Responsibilities. LLV will also charge a fee for service to be paid out of revenue from any sales.

- 4.1.1.12 Agreement on payment milestones and payment schedule for services provided by the Project Coordinator*

Refer to Schedule 4 of the Loru PES Agreement that states the agreement on payment breakdown for services provided by the Project Coordinator. Schedule 2 provides the Disbursement Schedule that is the same for all parties within the project (i.e. quarterly payments based on sales volumes). The project budgets are also detailed in the Ser-Thiac Business Plan.

- 4.1.1.13 Agreement on disbursement of income from PES sales to the Project Owner*

Refer to Loru PES Agreement; Section 5 and Schedule 2 that outline agreement on the Disbursement of income from PES sales to the Project Owner.

- 4.1.1.14 Agreement on management of income from PES sales by Project Owner according to the Project Owner Business Plan*

Refer to Loru PES Agreement; Section 5 which outlines agreement that the Project Owner will manage income as per the Community Benefits Sharing Plan within the Nakau Methodology Framework and as per the Ser-Thiac Business Plan.

- 4.1.1.15 Process of PES Agreement review*

Refer to Section 7 of the Loru PES Agreement that states review must occur during every Project Management Meeting.

4.1.1.16 Project SOP Dispute Resolution

Section 9 of the Loru PES Agreement refers to the Dispute Resolution Framework that is in Appendix of this document A.

The NMF states: *Disbursement of payments shall comply with section 8.2.4 of the Plan Vivo Standard (2013). The disbursement arrangements shall be consistent with the Project Finance Model (as per Section 4.2 of this document).*

The Disbursement of payments to Project Owners complies with the requirements of the Project Finance Model of the NMF and as specified in the Loru PES Agreement. Please refer to the following contractual obligations by parties:

1. Section 5 of the Loru PES Agreement for detailed information on Disbursement of payments to Project Groups.

The NMF states: *A concise Project Owner Business Plan shall be developed and incorporated into the PES Agreement and described in this section of Part A of the PD. The Project Owner Business Plan shall clearly describe how the Project Owner group will allocate money derived from PES unit sales for the benefit of the Project Owner group members and community. The arrangement shall be consistent with and comprise the Project's application of the Project Owner Business Model (defined in Section 4.3 of this document and presented in Section 4.3 of the PD) and must include:*

- a. *A target for Business Money (money needed to keep the business running)*
- b. *A target for Safety Money;*
- c. *Rules determining allocation of money for (i) Group Benefit and (ii) Individual Benefit*
- d. *Identification of priority investments / activities capable of delivering sustained group or community benefits (linked to budgets where possible)*
- e. *Rules for financial discipline and governance*

Business Money Target

The Business Money Target is described in Section 5.2 of the Ser-Thiac Business Plan outlining targets for all bank accounts (other than Community Benefit Fund which requires no target).

Safety Money Target

The Project Owner Safety Money Target is 1,000,000 valu for the first monitoring period and will be reviewed at each verification.

Allocation Rules For Group and Individual Benefit

Allocation rules for group benefits are defined in section 6.1 of the Ser-Thiac Business plan. Ser-Thiac has decided that the Board will decide how to utilise funds that reach the Community Benefit Fund.

Priority Investments

Refer to details of priority investments also outlined in section 6.1 of the Ser-Thiac Business plan which states that community benefits will used to fund education, women's empowerment in small business enterprises and requests for investment in the clan, by the clan based on merit.

Rules For Financial Discipline and Governance

The Ser-Thiac Business Plan also describes the financial management, book keeping and finance reporting procedures currently being used by the Project Owner. Please Refer to section 5.4 of the Ser-Thiac Business Plan.

4.1.2 Voluntary Process for PES Agreements

Section 8 of the Plan Vivo Standard (2013, p22) states that:

8.3. Participants must enter into PES agreements voluntarily according to the principle of free, prior and informed consent, where sufficient information, in an appropriate format and language, is available to potential participants to enable them to make informed decisions about whether or not to enter into a PES Agreement.

The NMF states: *The process of negotiating a PES Agreement is incorporated into the FPIC process specified in Section 3.1.5 of this document, in particular – the process leading to Decision 3 in Table 3.1.5.1 (the decision sequencing presented in that section). This section of the PD will summarise the process leading to the PES Agreement.*

Please refer to 3.1.5.3 which demonstrates the activities being undertaken leading to both parties signing the PES Agreement in September 2015.

4.1.3 Conditions and Safeguards

Section 8 of the Plan Vivo Standard (2013, p22) states that:

8.5. Project Coordinators must have the capacity to meet the payment obligations in PES Agreements entered into with communities, by one or more of the following:

8.5.1. Secured upfront funding or purchase commitments sufficient to guarantee an

agreed minimum payment to participants

8.5.2. *A proven track record in identifying funders or buyers in ecosystem markets or from other sources*

8.5.3. *Demonstrable capacity to meet PES obligations from their own funds should a buyer or funder not become available¹*

¹*NB: There are limitations on the volume of Plan Vivo Certificates that may be issued at one time in the absence of secured funding or buyers, details of which are contained in the Procedures Manual.*

8.6. *Where a greater number of smallholders or community groups wish to enter PES agreements than the project coordinator is able to engage, e.g. because of lack of resources, a fair process for selecting participants must be defined. The process should take into consideration the potential for tensions or disputes being created within or between communities.*

8.7. *Where the project coordinator enters into PES Agreements in advance of securing the necessary buyers or resources to fund payments, any risk of non-payment must be communicated to, and agreed by, participants.*

The NMF states: *All projects must, in this section of the PD, demonstrate compliance with Sections 8.5, 8.6, and 8.7 of the Plan Vivo Standard (2013).*

4.1.3.1 Project Coordinator Capacity For PES Payment Obligations

This section describes the capacity and strategy of the Project Coordinator and the Programme Operator for sales and marketing support to projects, and the terms in the PES Agreement for meeting Project Owner payment obligations.

Section 5.1 of the Loru PES Agreement states that the Project Coordinator makes no representations and gives no guarantees of income from sales of carbon units.

Section 5.3(c)(ix) of the Loru PES Agreement states that the Nakau programme Operator and Project Coordinator commit to a sales and a marketing effort intended to secure the sale of all units produced annually by the project at the recommended price agreed in the PES Agreement (Schedule 2).

4.1.3.2 Eligibility Criteria for Enrolling Projects in the Nakau Programme

This section describes how the Project Coordinator limits enrolment in the Nakau Programme or local project through the application of criteria specified in the PES Agreement.

Projects enter the Nakau Programme by means of a Programme Agreement between project owners and the Nakau Programme Pty Ltd (the Nakau Programme Operator).

The Project Coordinator is working with the landowners of Loru Forest Project and their families. The project governing board (the Ser-Thiac Board) determines how community

benefits are distributed. LLV will have no role in distributing benefits or altering rules for participation as this is the responsibility of the Project Owner business.

4.1.3.3 PES Payment Conditions

This section describes the contractual arrangement in the PES Agreement relating to situations where PES Units are issued prior to a contractual purchase arrangement with a buyer.

Section 5.4 of the Loru PES Agreement specifies the payment obligations of the Nakau Programme.

4.2 PROJECT FINANCE MODEL

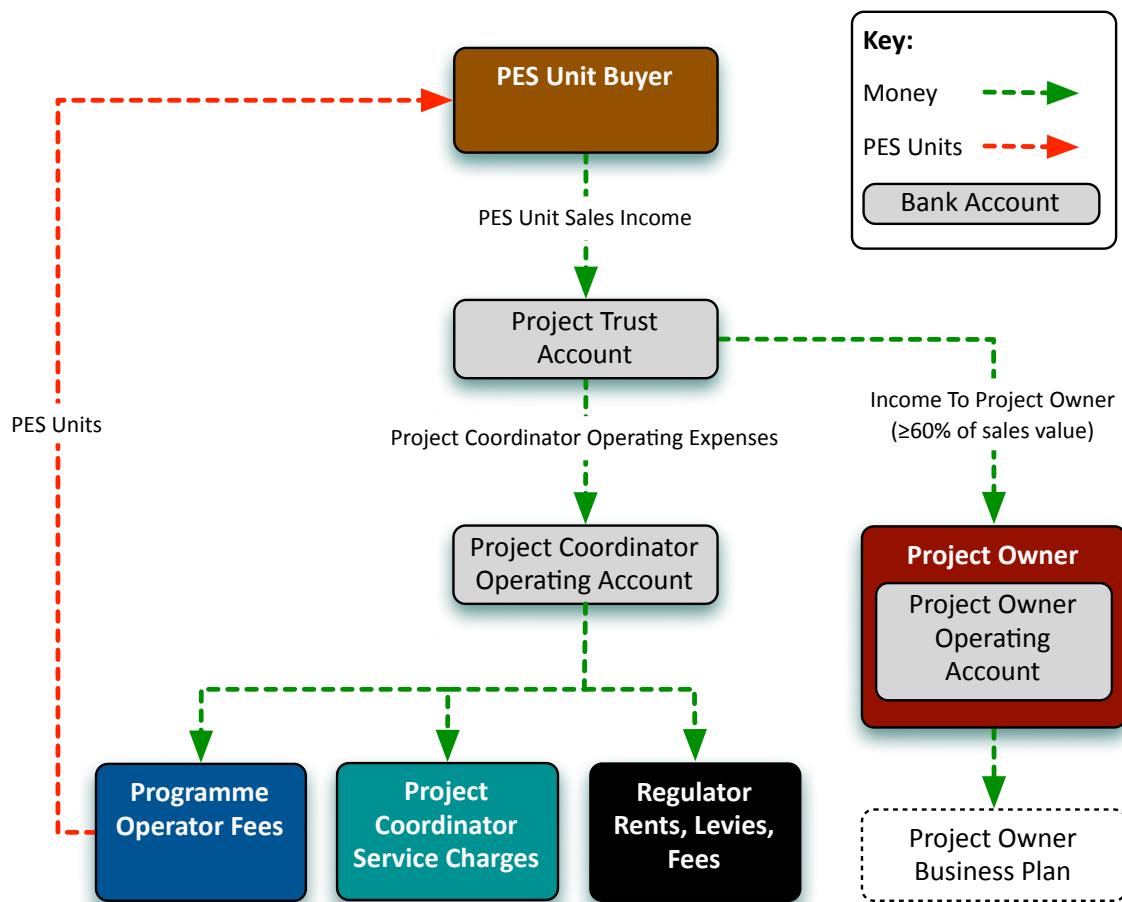
Section 3 of the Plan Vivo Standard (2013, p12) states that:

3.9. *A transparent mechanism and procedures for the receipt, holding and disbursement of PES funds must be defined and applied, with funds intended for PES earmarked and managed through an account established for this sole purpose, separate to the project coordinator's general operational finances.*

4.2.1 Overview

The NMF states: *The Project Finance Model defines the transactional relationships between key project stakeholders.*

Figure 4.2.1: Project Finance Model



4.2.2 Project Budget And Financial Planning

Section 3 of the Plan Vivo Standard (2013, p12) states that:

3.10. *A project budget and financial plan must be developed by the project coordinator and updated at least every three months, including documentation of operational costs and PES disbursed, and funding received, demonstrating how adequate funds to sustain the project have been or will be secured.*

The NMF states: *All projects must establish and maintain a project budget and financial plan in a way compliant with Section 3.10 of the Plan Vivo Standard (2013).*

The project budget and financial plan is presented in sections 4.2.3-4.3.9 below.

4.2.3 PES Unit Sales

The NMF states: *The Programme Operator holds a PES Unit Master Account for each unit type held in trust on behalf of Project Owners, and a Pooled Buffer Account for each buffer unit type for buffer credits owned by the Programme Operator. The PES Unit Master Account is sub-divided into Project-Specific Sub-Accounts for each unit type.*

PES Unit sales will take place according to a Sale and Purchase Agreement (relevant to the unit type) between the buyer and Project Owner.

The parties to a Sale and Purchase Agreement are the PES Unit Buyer and the Project Owner. The PES Unit Buyer deposits 100% of agreed funds into the Project Trust Account.

Sales ≥ USD\$50,000 shall be administered through an escrow arrangement.

The Programme Operator and/or the Project Coordinator will develop Sales and Purchase Agreements tailored to the circumstances of each particular sales transaction. In very case the Sales and Purchase Agreement will adhere to the conditions of the NMF (see box above) and the Project Agreements between project proponents (PES Agreement, Programme Agreement and License Agreement). The Clause 3.1 (f) of the Programme Agreement grants permission for Programme Operator to enter into a Sale and Purchasing Agreement with purchasers for PES Units acting as Sales Agent on behalf of the Project Owners (DBFCC). This is necessary to enable the Programme Operator to undertake sales and marketing effort outside of Fiji. For sales within Fiji, the Project Coordinator will work with the Programme Operator and Project Owners to facilitate development of the Sales and Purchase Agreement, however the Project Owners will sign the Agreement directly.

The Programme Agreement Clause 5.3 (a) and the PES Agreement Clause 5.3 (a) both state that the Programme Operator shall maintain a 'Project Trust Account' for this project. PES unit buyers shall deposit of funds from PES unit sales into the Project Trust Account.

In the case of small volume sales that accumulate (e.g. crowd funds or small scale retail sales), the funds from PES sales may be held in a separate account until there is sufficient to justify a transfer into the Project trust Account. This is to avoid excessive transaction fees.

4.2.4 Project Trust Account

The NMF states: *The main purpose of the Project Trust Account is to ensure a viable long-term PES project for the Project Owner, reduce the risks of income leading to unsustainable or unintended negative social outcomes, and optimise the flow of benefits to meet Project Owner aspirations.*

The Programme Operator shall open a Project Trust Account for each individual project to

receive PES sales income (from the PES buyer). The Project Trust Account shall be established entirely for the purpose of financial administration of the PES project and be separate from the Project Owner's and Project Coordinator's other accounts.

Alternatively, if agreed by the Project Coordinator and Project Owner, and approved by the Project Operator, projects in the Nakau Programme may nominate a trusted 3rd party to administer the Project Trust Account on their behalf. In this event, the account must also be established entirely for the purpose of financial administration of the PES project and be separate from the 3rd parties other accounts.

The PES Agreement will define how income received into the Project Trust Account will be disbursed as; (a) fees for services required to operate the PES project; (b) taxes and levies (if required), and (c) net income for Project Owners. Further details are provided below:

The Project Trust Account will be established in time to receive the first payments from unit sales.

4.2.5 Fees for Services Delivered by the Project Coordinator

The NMF states: *The Project Coordinator may receive payments from the Project Trust Account for provision of agreed services to the project, such as ongoing project development services, monitoring, reporting, and administration (together with a contingency percentage if specified in the PES Agreement). Payments to the Project Coordinator must be based upon delivery of agreed services and achievement of performance milestones, which must be specified in the PES Agreement.*

The services to be provided by the Project Coordinator and specified in the PES Agreements are expected to vary between different projects in the Nakau Programme. The main variables will be the capacity of the Project Owner to undertake certain activities by themselves, and Project Owner's individual preferences regarding outsourcing of activities for other reasons, such as for increased efficiency etc. Further information about project roles and responsibilities is provided in the PPP sections 2.13.4 and 2.13.5.

The Project Trust Account may also be used to directly pay other sub-contractors (e.g. third party verification auditors) if required, subject to the PES Agreement conditions.

Sections 2, 3 and 4 of the Loru PES Agreement outline the roles and responsibilities of the two parties within the project.

4.2.6 Limit to Project Coordinator Payments

Section 8 of the Plan Vivo Standard (2013, p22) states that:

8.12. Projects selling Plan Vivo Certificates should aim to deliver at least 60% of the proceeds of sales on average to communities as PES, meaning project coordinators should not draw on more than 40% of sales income for ongoing coordination, administration and monitoring costs. Where less than 60% is delivered projects must justify why this is not possible, why the benefits delivered to communities are fair and that they are able to effectively incentivise activities.

The NMF states: *The Project Coordinator may receive funding from grants, or other third parties to support their role in the project. However, payments to Project Coordinators that derive directly from PES Unit sales are subject to the following conditions:*

- a. *Payments are made according to the PES Agreement between the Project Coordinator and the Project Owner, where the PES Agreement is subject to the FPIC / mandating steps.*
- b. *The payments received by the Project Coordinator should aim to not exceed 40% of the total value of PES Unit sales income received by the project.*
- c. *The income received by the Project Coordinator directly from the Project Trust Account is intended to enable the Project Coordinators to deliver services as required under the PES Agreement. The Project Coordinator should not charge the Project Owner any further fees for services, unless they are for services requested outside of the scope of the PES Agreement.*

The Loru Forest Project is an inception (pilot) project and covers a very small land area. The carbon revenues are very small for a forest carbon project and therefore the cost of project coordination is greater than 40% of the wholesale unit price. In order to keep the carbon unit price within the saleable margin, the 60/40 guidelines cannot be followed at this stage of the project but all costs not borne by the landowner have been kept to a minimum. Ser-Thiac has been made aware of this issue through PES Agreement consultations and have given their approval to proceed.

Section 5.7 of the Loru PES Agreement states that the Project Coordinator will not charge fees outside the scope of what has been determined within the PES Agreement unless agreed to by both parties.

4.2.7 Programme Operator Fees

The NMF states: *Project Coordinators shall pay a license fee to the Programme Operator. The fee is required to cover administrative costs incurred by the Programme Operator relating to quality controls and support of Project Coordinators, and sustaining the integrity of the Nakau Programme.*

Project Coordinators may seek additional services from the Programme Operator on a fee for service basis.

The Programme Operator charges service fees to Project Coordinators for validation audits, registry account administration, and other forms of project support as required by the Project Coordinator.

Fees charged (at cost) by the Programme Operator are specified in the Carbon Budget and Pricing Spreadsheet (Appendix 10).

4.2.8 Project Taxes and Levies

The NMF states: *Regulatory taxes, fees, or rents etc associated with the project will be paid directly from the Project Trust Account, subject to the PES Agreement conditions.*

The Government of Vanuatu does not tax income in Vanuatu. LLV has charitable status and is therefore VAT exempt. It is unlikely Ser-Thiac will need to pay VAT unless it begins importing goods into the country that it is not doing currently.

4.2.9 Net PES Sales Income to the Project Owner

The NMF states: *The income remaining in the Project Trust Account (after services fees and taxes etc are allocated) will be disbursed to the Project Owner's operating account according to an agreed payment schedule defined in the PES Agreement. The Programme Operator will only approve of disbursement schedules that provide an ongoing incentive for the Project Owner to continue with project implementation (i.e. achieve permanence objectives). Hence the Programme Operator will not approve disbursement schedules that have the majority of payments at an early stage and little towards the end of the project period (unless this can be justified by the Project Coordinator in agreement with the Project Owner).*

Projects involving an opportunity cost to the Project Owner (e.g. when the project owner foregoes the right to commercial timber harvests) shall disburse ≥ 60% of total PES sales income received to the project to the Project Owner (unless justified by the Project Coordinator in line with Section 8.12 of the Plan Vivo Standard 2013).

Net sales income paid from the Project Trust Account to the Project Owners Operating Account shall be managed by the Project Owner group in adherence to the Project Owner Business Model and Project Owner Business Plan (see section 4.3).

The amount paid to the Project Owner from the sale of each PES unit will be calculated at the rate that would be required to; a) contribute to income diversification and other benefits that the landowner participants receive in exchange for giving up the right to deforest and undertake cash crop agriculture on cleared forest lands (the 'opportunity cost'); plus, b) cover the costs incurred by the Project Owner in implementing the project as specified in the PD. Note that income and employment provided for under b), in turn, contribute to the benefits listed in a). We note that income diversification activities also act (in general) as leakage avoidance activities, and permanence incentives.

In pursuit of a) above, the Project Coordinator has helped to diversify income streams for the landowner and in so doing address the main driver of deforestation - the need for localized economic development. Income diversification activities embedded into this project are:

1. **Carbon Offset Sales:** annual revenue of US\$16,902 (opportunity cost component plus employment in project management and monitoring).
2. **Value-added Nut Production:** *Canarium indicum* (Nangai) is a tall indigenous tree that grows throughout the South Pacific and produces edible nuts as well as timber. Live & Learn Vanuatu has coordinated training for the Serthiac business (Loru landowners) on how to enhance their position in the canarium nut value chain (26th - 30th November 2015). As a result of this training the Loru landowners increased the value of canarium nut sales from 50vt (~US\$0.58) per unit to 850vt (~US\$10) per unit (a 17-fold increase). Work on canarium sales will continue through the Loru Forest Project.
3. **Nature Tourism:** Loru landowners had previously generated a very small revenue stream through taking bird watching tours in the Loru coastal rainforest. Note that this forest is home to the critically endangered Vanuatu Megapode (flightless bird) (*Megapodu freycineti layardi*). These tours were ad hoc and infrequent and were typically organised through a travel company in Luganville in response to occasional customer demand. The formal protection of the Loru coastal rainforest provides the opportunity to market Loru as a tourist destination located sufficiently close to hotels and cruise ship portages to enable a tour operation upgrade. This will include increasing the position of the landowners in the tourism value chain.
4. **Agroforestry:** The management plan for Loru Conservation Area includes establishment of agroforestry plots in currently degraded areas (Zone C in Figure 2.4d). The first one-hectare plot (a trail plot) has been fenced and planted. Cash crop revenue from these agroforestry plots will provide a further opportunity to offset opportunity costs through cash crop sales and/or subsistence foods (offsetting the need to purchase them).

On their own, each of these activities are insufficient to address the main deforestation driver, but in aggregate act to make forest protection an attractive proposition. This is particularly due to the fact that Project Coordinator support for these income diversification activities is conditional upon rainforest protection, and is provided in the form of performance-based local economic development support.

Please see the Loru PES Agreement for compliance with this section:

- See Loru PES Agreement Schedule 5: Disbursement Schedule for details on the release of funds from the Trust Account to the Project Owner.
- See 4.2.6 of this document regarding the 60/40 guidelines.
- See Section 4.3 of this document for alignment with the Ser-Thiac Business Plan.

The opportunity cost calculation was used to help determine the break-even wholesale carbon offset unit price, based on a cost-based pricing model. This opportunity cost calculation was based on the following principles/assumptions (applying a 2015 scenario):

- The purpose of the opportunity cost component in the carbon offset unit price for this project is to yield annual revenues sufficient to make a meaningful contribution to income diversification for community economic development at Loru, that in their aggregate address the local deforestation drivers.
- Timber revenues are sufficient to cover the costs of timber extraction, and land clearance in preparation for agriculture/coconut plantation establishment.
- Adult population = 50, and 50% of the adult population participates in baseline copra production earning VUV\$12,000 per month due to capacity constraints among local labour force (based on copra revenue rates in eastern Santo provided by the landowners).
- Serakar clan unlikely to invite external labour to work their land under the baseline scenario thus constraining the labour pool to Serakar clan adults.
- This yields a baseline copra annual gross revenue (not profit) of VUV\$3,600,000 (US\$33,442) assuming all costs of forest conversion to copra plantation establishment have been covered through timber sales. Coconut plantation establishment costs that need to be factored into this opportunity cost calculation include:
 - ~6-8 year time lag between land clearance and full commercial production rates (i.e. 6-8 years with zero or very low copra revenues during copra establishment phase).
 - Opportunity costs from lost cash crop gardening revenues, associated with redirecting limited labour pool to convert land to copra production.
 - Opportunity costs associated with losing access to forest products including *de minimis* timber harvesting opportunities, custom materials and medicines, and ecosystem services provided by tall coastal rainforest (e.g. protection from cyclones).
 - Opportunity costs associated with losing employment in forest carbon project valued at US\$6,902 annually.

Factoring in these copra plantation establishment costs reduces the real opportunity cost to a level well below the gross US\$33,442 annually but not modelled in detail due to lack of sufficient accurate data. In addition, the value of the combined income diversification activities needs to match the approximate value (not necessarily price) of the net opportunity cost, which we assert is significantly lower than US\$33,442 annually.

The next consideration is realism with respect to carbon offset wholesale pricing from a project that applies a cost-based pricing model, but seeks to monetize these units in a buyers wholesale market with significant price sensitivity above US\$10.00/tCO₂e. If the opportunity cost component of 2015 project implementation costs were set at the gross opportunity cost rate of US\$33,442 annually, this would push the carbon offset break-even wholesale price to US\$25.95/tCO₂e. This high break-even wholesale price is predominantly a product of a small project lacking any economy of scale. Such a price would sit well above the net opportunity cost and fail a justification test.

The Loru landowners in consultation with the Project Coordinator agreed that it was important to arrive at a break even wholesale carbon offset price that was a) realistic in the context of the actual carbon market whilst b) made a meaningful contribution to local community economic development sufficient to address the net opportunity costs. When taking account of the costs of coconut plantation establishment together with the need for realism with respect to price sensitivity in the global carbon market, this project generated an "Assigned Opportunity Cost" rate of US\$10,000 + US\$6,902 (employment in forest carbon project) = US\$16,902 annually, which in turn enabled the carbon offset break even wholesale price to drop to a more realistic (but still challenging) US\$16.19. Note that the Loru landowners were involved in discussions on this issue and agreed to the pricing model based on the US\$10,000 annual rate for opportunity costs. This is because (as a result of extensive community consultations) the landowners understand the need for commercial realism in the carbon market.

We note also that there is considerable uncertainty in baseline revenue flows for copra production in Vanuatu mainly due to the risk of cyclone damage to plantations that commonly get severely damaged in tropical cyclone events. The risk of localized copra and crop damage is reduced in the project scenario because of the beneficial effects of rainforest providing protection from high winds during cyclones. Note that Cyclone Pam that struck Vanuatu in 2015 left 24% of the nation's population homeless and destroyed coconut plantations across the cyclone path. So a positive cash flow in the baseline is not guaranteed and the landowners understand this very well. This uncertainty in baseline revenue flows, we believe, further justifies the US\$10,000 Assigned Opportunity Cost. This also underscores the benefits of the project scenario, which provides a potentially more resilient revenue flow compared with baseline because rainforests are more resilient systems than coconut plantations in the presence of tropical cyclones (which are projected to increase in intensity in global climate models).

4.2.10 Financial Discipline and Transparency

The NMF states: *Project Coordinators shall establish a system to maintain records of all PES Unit sales income, and project-related transactions from the Project Trust Account, including amounts transacted, transaction dates, conditions and contact details of parties involved.*

The Project Coordinator must produce the following reports every quarter based upon Project Trust Account activity:

- a. Cash Flow
- b. Profit & Loss
- c. Balance Sheet

The reports (above) must be provided to the Project Owner every quarter in a format that ensures Project Owner executive committee or board members can understand.

The Project Coordinator shall also document any further operational costs of the project that are financed separately from the Project Trust Account.

The Nakau Programme Operator has established a sales register to record all PES unit sales income and project related transactions (evidence requirement 4.2.10). A record of cash flow, profit and loss and the project financial balance sheet will be incorporated into the Annual Project Management Reports once the project begins trading.

Table 4.2.10 Evidence requirement: Financial management	
#	Name/Description
4.2.10a	The Nakau Sales Register held by the Programme Operator records all PES Unit sales income, and project-related transactions from the Project Trust Account, including amounts transacted, transaction dates, conditions and contact details of parties involved. Template provided – see ER 4.2.10a.
4.2.10b	Evidence that (a) Cash Flow, (b) Profit & Loss, and (c) Balance Sheet reports of Project Trust Account activity are provided to the Project Owner quarterly in a format that ensures Project Owner executive committee or board members can understand.
4.2.10c	Signed PES Agreement (Appendix 2).

4.3 PROJECT OWNER BUSINESS MODEL

Section 8 of the Plan Vivo Standard (2013, p22) states that:

8.8. *A fair and equitable benefit-sharing mechanism must be applied that has been agreed with the participation of communities involved, identifying how PES funding will be distributed among participants and other stakeholders, including the project coordinator. This should include consideration of how benefit-sharing might change over time as the project progresses.*

- 8.9. *Details of the benefit-sharing mechanism must be made available to participants in an appropriate format and language.*
- 8.10. *The project coordinator must provide justification for any payments for ecosystem services delivered in kind or in the form of equipment or resources other than money.*
- 8.11. *The benefit-sharing mechanism must be equitable, i.e. represent a fair and locally appropriate distribution of benefits, taking into consideration the rights, resources, risks and responsibilities of different stakeholders over the PES period.*
- 8.12. *Projects selling Plan Vivo Certificates should aim to deliver at least 60% of the proceeds of sales on average to communities as PES, meaning project coordinators should not draw on more than 40% of sales income for ongoing coordination, administration and monitoring costs. Where less than 60% is delivered projects must justify why this is not possible, why the benefits delivered to communities are fair and that they are able to effectively incentivise activities.*
- 8.13. *The process by which the benefit-sharing mechanism is decided must be recorded including a record of any concerns or objections raised.*

The NMF states: *Projects in the Nakau Programme shall develop a Project Owner Business Plan that is consistent with Sections 8.8 to 8.13 of the Plan Vivo Standard, and based on the Project Owner Business Model described in this section. The Community Benefit Sharing Plan (which could be a section of the Project Owner Business Plan or a stand-alone document) shall also comply with Sections 3.13 to 3.15 of the Plan Vivo Standard.*

The Project Owner Business Model (presented in Figure 4.3 and Table 4.3) is modelled on graphical financial information systems developed by Little Fish PTY Ltd¹¹. With respect to Section 8; item 8.12 of the Plan Vivo Standard, the Nakau Programme defines all income delivered to the Project Owner group from PES Unit sales as constituting part of the minimum 60% delivered to communities. The Project Owner group will use a proportion of their income for local level administration and employment costs associated with project management or monitoring. However Project Owner income will not be used to pay the Project Coordinator for any services required by the Coordinator under the PES agreement. The expenditure incurred by the Project Owner on local level administration and management will normally constitute a community benefit through local employment.

The Project Owner Business Model is presented in Figure 4.3 below.

¹¹www.littlefish.com.au/web/home.html

Figure 4.3: Project Owner Business Model

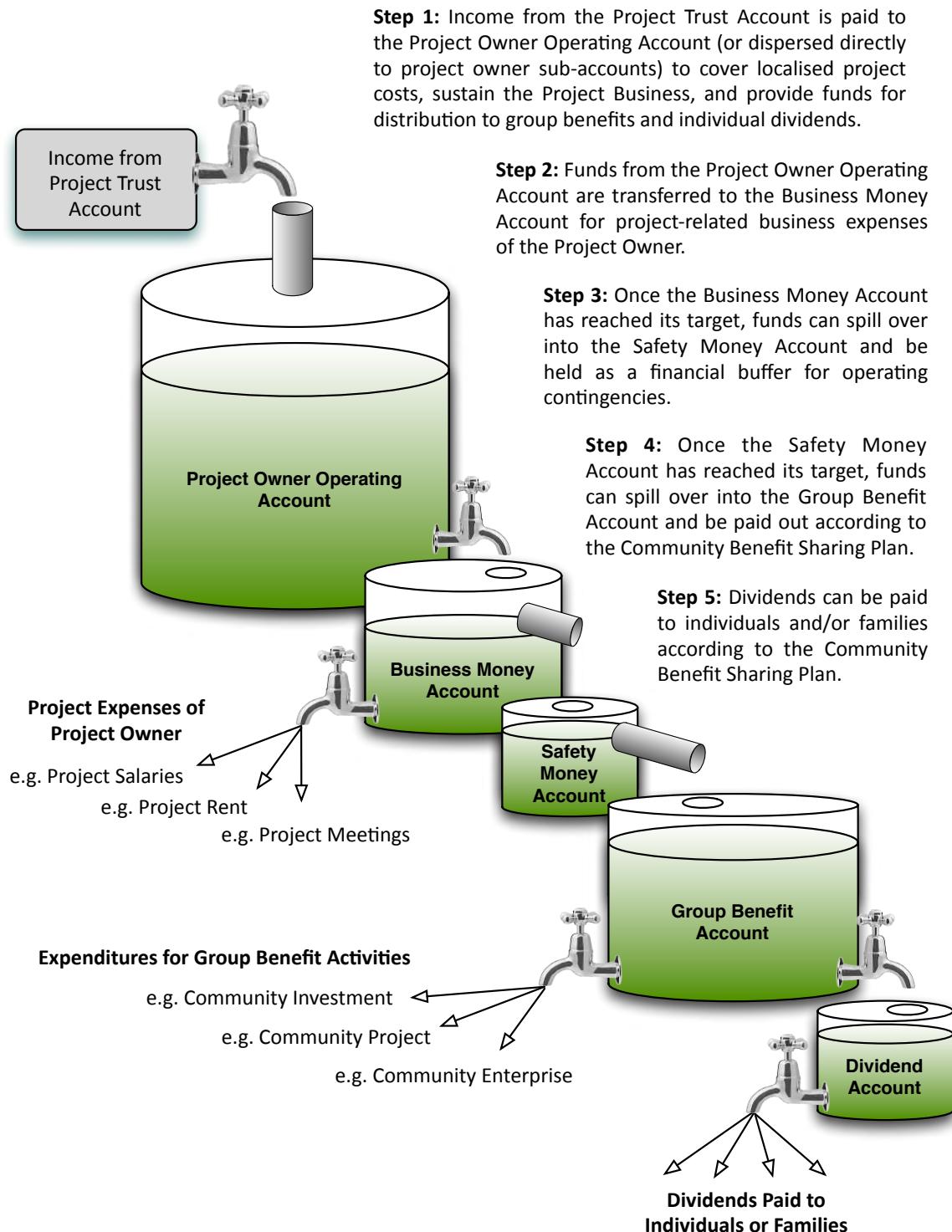


Table 4.3 Rules for allocation of funds

Allocation	Priority	When available	Explanation
Project Owner Operating Account	1	After project costs have been paid to parties other than the Project Owner	Where all income from PES unit sales is received from the Project Trust Account. In some projects it is appropriate to by-pass the Project Owner Operating Account and instead allocate funds directly from the Project Trust Account to the Business Money Account, Safety Money Account, Group Benefit Account, and Dividend Account
Business Money Account	1	When income is received	The Business Money Account is used to pay for expenses related to managing the business and implementing the project. A target is established for the level of the 'Business Money' to be maintained in this account.
Safety Money Account	2	If Business Money target is exceeded (there is a profit)	Safety Money transferred into a separate Safety Money Account for business resilience (in case emergency funds are needed. A target is established for the level of 'Safety Money' to be maintained in this account.
Group Benefit Account	3	If Safety Money target is exceeded (a profit beyond the safety money target)	Money transferred into a Group Benefit Account that can be used for expenditures or investments that have group benefit, as determined by the Project Owner Group
Dividend Account	4	If Group Benefit target is exceeded (a profit beyond the Group benefit target)	The Dividend Account contains an allocation of the profit that can be used to pay individual owners (or families) in cash dividends.

The Ser-Thiac Business Plan states the different bank accounts to be opened by the Ser-Thiac Finance committee. To date one bank account has been opened with the National Bank of Vanuatu in Santo. Further bank accounts as per the Community Benefits Sharing Plan will be opened once PES Unit sales begin to avoid unnecessary bank fees.

The table below specifies the different bank accounts that will be used by the Ser-Thiac Business:

Rules for Allocation of Ser-Thiac Bank Accounts			
Bank Accounts	When Available	Explanation	Target Amount (VUV)
Income/Sales Account	Paid in by the Project Coordinator	Income is received from Project Trust Account and Distributed from this account to below accounts depending on targets.	0
Expenses Account	When income is received from Trust Account	Day to day business operating costs.	700,000
Safety Account	If Expenses Money target is exceeded, 60% of excess income is transferred to this account	Money left unspent which can be used for unforeseen costs.	1,000,000
Community Benefit Account	If Expenses Target exceeded, 40% of all excess funds should be transferred to this account.	Up to 40% of income which reaches the Community Benefit Sharing Account is to go to	No target

	<p>If Safety Money target is exceeded, 100% of excess funds from Expenses Account should be transferred to this account.</p>	<p>landowner, Chief Stephen Skip as the landowner. Whether he takes the full 40% is left at his discretion. The remaining money can be spent according to the needs and desires of the Ser-Thiac Clan as determined by the Ser-Thiac Board.</p>	
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4.3.1 Project Owner Business Plan (Overview)

The NMF states: *Projects in the Nakau Programme shall develop a Project Owner Business Plan based on the Project Owner Business Model described in this section (i.e. Figure 4.3). The Project Coordinator must collaborate through a participatory process with the Project Owner to design the Project Owner Business Plan. The plan must include the following elements, which are described in further detail in this section:*

- a. A target for Business Money (money needed to keep the project running)
- b. A target for Safety Money
- c. Rules determining allocation of money for (i) Group Benefit and (ii) Individual Benefit
- d. Community Benefit Sharing Plan
- e. Rules for financial discipline and governance

The Project Owner Business Plan must form a condition (appendices) of the PES Agreement signed between the Project Coordinator and Project Owner.

A workshop was held in May 2014 to define the rules of the Ser-Thiac business, membership, elect management committee and educate formation group members on project finances and also to present imaginary money story reports for how money will be yearly project management costs. The Serakar clan agreed to target at this time. The group requested that some money reach the Community Benefit fund with relative speed to retain community interest in the project. Ser-Thiac have since discussed the disbursement of any excess funds between the Safety Money Account and Community Benefit Account once the Expense Account Target has been reached. In September 2015, Ser-Thiac made some adjustments and gave its approval for the Community Benefits Sharing Plan.

4.3.1.1 Community Benefit Sharing Plan

The NMF states: *The Project Owner Business Plan must include a Community Benefit Sharing Plan, which must identify priority investments or activities capable of delivering sustained group or community benefits. The Community Benefit Sharing Plan can begin as a simplified plan and increase in complexity through time as a living document. The Project Coordinator is encouraged to provide support, and where appropriate assist to facilitate a process to identify group benefits in a strategic way.*

The Ser-Thiac Business plan states the following priorities to be developed for clan members if money is generated into the Community Benefit account:

- Priority 1: Investment in children's education to be able to reach universities
- Priority 2: Investment in livelihood opportunities especially creating avenues for mamas' business
- Priority 3: Individual payments.

4.3.2 Project Owner Income

The NMF states: *The Project Owner Business Plan framework is designed to increase the capacity of the project owner to manage income in a way that sustains the project and project benefits. Project Owner Income refers to the income received by the Project Owner from sale of PES Units. The amount of income received will depend upon a) the value of PES unit sales, and b) the balance of the sale provided to the Project Owner after other project-related service fees have been subtracted (refer to the Project Finance Model).*

The Project Owner may develop other income streams independent of PES Unit sales and may manage this through the Project Owner Business Plan and associated accounts (E.g. income from eco-tourism or agro-forestry activities).

Managing project funds in different project accounts provides financial transparency. This enables account statements to be provided by the bank that transparently documents transactions, and enables these statements to be used as evidence of financial discipline required in the Nakau Programme. Rules for operating these accounts are provided in section 4.3.7 of this document.

In May 2014 the Project Owners were trained on different expenses they will encounter in their carbon business. The Money Story system was used to explain the difference between income and profit (see Business Planning Report, May 2014).

Ser-Thiac has been developing other business ideas to support the carbon business and vice versa. To date they have established a Ser-Thiac Nursery Business and will also develop a Nut processing business in October 2015. The Ser-Thiac Administrator and Finance Committee have discussed how the carbon business can support these two businesses through salaries for the Operations Manager and Administration Officer. In exchange, all profits from the nursery and nut businesses will be treated as carbon business income and deposited into the Expenses Fund. Please refer to Ser-Thiac Business Plan for supporting evidence.

4.3.3 Managing 'Business Money' Account

The NMF states: *Within their Project Owner Business Plan, all Project Owners within the Nakau Programme must adopt a strategy to 'isolate' and safeguard income needed to keep the business running. Maintaining sufficient Business Money is critical because the Project Owner business needs sufficient cash to keep running (to meet its obligations for project implementation) from one crediting period to the next.*

This strategy requires that:

- a. *A percentage (determined by the formula below) of Project Owner income from PES unit sales must be placed into the Business Money Account to pay for local project implementation and administration costs (if any). Income received beyond this level may be transferred into separate accounts for Safety Money, or Group or Individual benefit, furthermore:*
- b. *A minimum target for the balance (determined by the formula below) of the Business Money Account must be achieved before money can be allocated elsewhere. Subject to (a) above, income received beyond this target can be transferred into a separate account for Safety Money, or Group or Individual benefit.*

Note that strategy (a) will apply even when the minimum operating account balance is exceeded. Under strategy (b) up to 100% of income may be allocated to the Business Money Account until the minimum operating account balance is achieved, and henceforth strategy (a) will apply.

LLV has engaged Ser-Thiac to develop the Project Owner Operating Budget and both agreed to an annual project operating budget of 738,968vt. Please refer to the Ser-Thiac Business Plan (Appendix 11) that clearly states the annual project budget. This budget is also presented in Appendix 10 (Loru Carbon Budget & Pricing spreadsheet).

4.3.3.1 Expenses of running the Project Owner Business (Operating Expenses)

The NMF states: *Operating expenses refer to the costs incurred by the Project Owner in project implementation. These are the costs of activities that the Project Owner agrees to undertake in order to produce PES Units. The obligations of the Project Owner must be described as activities / responsibilities within the PD and specified in the PES Agreement. They may include expenses such as employment (e.g. administration staff, rangers etc) and operational costs (such as travel, equipment, consumables etc). However where the Project Owner agrees to outsource the majority of project services to the Project Coordinator, the expenses may be few initially, but may grow over time as the Project Owner takes on more responsibilities and grows in capacity. Further information about project roles and responsibilities is provided in 2.13.5 and 2.13.6.*

See Appendix 10, sheet Loru LO Budget, and sheet Loru Budget, cells D8-D17.

4.3.3.2 Calculating the Business Money target

The NMF states: *The formula for calculating the percentage of income allocated to the Business Money Account can be applied to various different income and Project Owner scenarios, as described 4.3.3 and 4.3.3.1. However, in all scenarios the Project Owner business must retain sufficient cash to enable it to keep performing its roles and responsibilities (defined in the PES agreement) until further income is received.*

The Business Money strategy shall be designed using the following calculation:

1. *Estimate the expenses of running the business / project (operating expenses) for the crediting period. (Create an annual expense budget and multiply this by the number of years in the crediting period).*
2. *Estimate the net income to the Project Owner from credit sales by using 60% of gross credit sales income as the default value (this is the minimum percentage that the Project Owner will receive). A conservative PES unit sales price must be used for this calculation.*
3. *Divide the operating expenses (#1) by the net income (#2) and multiply by 100. This figure tells you the costs to profit ratio or percentage.*

The Project Owner Business must allocate the percentage (#3) of all income received from credit sales to Business Money to be managed within the Business Money Account. In addition, a minimum target balance of the Business Money Account must be equal to or greater than one years operating expenses. This balance must be achieved before money can be allocated for other uses.

See Appendix 11 – Ser-Thiac Business Plan.

4.3.4 ‘Safety Money’ Account

The NMF states: *‘Safety Money’ refers to the portion of the profit (i.e. after Business Money is removed) that must be set-aside in a separate bank account as a financial buffer to ensure that the registered Project Owner Group remains financially viable. This includes having sufficient cash reserves to cover unforeseen costs, losses or delays in receiving payments.*

Subject to availability of funds Project Owners shall deposit an agreed amount of Safety Money into a separate account. If agreed by the Parties, the Safety Money may be held in trust by the Project Coordinator for use for contingencies.

If drawn upon during the course of project implementation, the Safety Money pool will need to be replenished by applying the rules within the Project Owner Business Plan.

The Project Coordinator must collaborate through a participatory process with the Project Owner to determine an appropriate target for Safety Money. This target may vary from project to project, as it is dependent upon project scale, project type, project location and other factors. The Project Coordinator and the Project Owner may change the Safety Money target from time to time subject to mutual agreement.

The Safety Money target amount of 1,000,000 vatu was assigned in the project in the Ser-Thiac Business Plan. Excess money from expenses account will be taken into the safety money account. Please refer to section 5 of the Ser-Thiac Business Plan (Appendix 11).

4.3.5 Group Benefit Account

The NMF states: *Once the Safety Money Account has reached its target, funds can 'spill over' (if available) into the Group Benefit Account and be used according to the Community Benefit Sharing Plan. The money in this account is the portion of profit (i.e. after Business Money and Safety Money are removed) set-aside to provide collective rather than individual benefits to the local community (in contrast to individual dividends).*

Group Benefit funds may be used at the discretion of the Project Owner Board in consultation with their shareholders/ members, and uses may include (but are not limited to) the following:

- *Community infrastructure (e.g. water supply, sanitation, health post or school);*
- *Investment in new business activities that return group benefits (e.g. tourist bungalows, agro-forestry business development, employment opportunities);*
- *Activities that increase access to markets (e.g. transportation infrastructure, tourism, agricultural developments);*
- *Funding to support community savings and loan services (micro-finance);*
- *Grants or loans for cultural ceremonies (weddings, funerals etc);*
- *Investments that grow the Project Owner business (e.g. shares, property);*
- *Household infrastructure (e.g. solar panels, sanitation systems, or rainwater tanks), but only where benefits are equitably shared among households represented within the Project Owner group;*
- *School fees (where paid directly to the school and at a community scale rather than for individual families).*

Ser-Thiac members have agreed to 3 priorities for their group benefit account as stated in Section 4.3.1.1 of this document. Any spending within this account otherwise is at the discretion of the Ser-Thiac Board.

4.3.6 Dividend Account

The NMF states: *Dividends can be paid to individuals and/or families according to the Community Benefit Sharing Plan. The disbursement of dividends is optional for Project Owners, but shall not normally exceed 30% of the amount available for Community Benefits unless the project can justify a variation to this rule depending on local circumstances. Dividends include cash distributed at the level of individuals, families, or clans. The Project Owner group may determine how the dividends are allocated. For example, dividends may be allocated on a one-member one-share basis (cooperative model), or may be distributed according to relative contribution to the project (e.g. land size or owned by each family or clan).*

There is no dividend account in the Loru Forest Project.

4.3.7 Financial Controls

The NMF states: *Project Owners participating in the Nakau Programme are required to establish transparent and accountable systems for financial controls. This must include:*

- a. *Establishment of 5 accounts:*
 - i. *Project Operating Account*
 - ii. *Business Money Account*
 - iii. *Safety Money Account*
 - iv. *Group Benefit Account*
 - v. *Dividend Account*
- b. *Minimum of 3 signatories on each Account.*
- c. *Signatories on all accounts approved by the Project Governing Board.*
- d. *Establishment of a daily transfer limit for each account.*

These accounts will be established in time for handling sales revenues. It would be inefficient to open them prior to any sales because of the bank fees they incur.

4.3.8 Book Keeping And Reporting

The NMF states: *A suitably skilled bookkeeper must be appointed by the Project Owner to maintain accurate and up-to-date records of expenditure from the Project Operating Account. The bookkeeper must create an expenditure and cash flow report that must be provided to the Project Governing Board and the Project Coordinator at least quarterly (although more frequent reporting is encouraged).*

The Ser-Thiac Business has employed Rhonda Ser as their Administration Office and she is trained by LLV on Financial management and book keeping records. Refer to Section 1.6 of the Business plan that states the training undertaken by LLV and Rhonda Ser.

4.3.9 Informing Project Owner Membership

The NMF states: *All projects shall develop a system for effectively communicating the information within each expenditure and cash flow report (for each account) transparently to the members (participants) of the Project Owner group. This must occur at least quarterly.*

The Nakau Programme highly recommends that projects use the Money Story® system developed by Little Fish (www.littlefish.com.au/web/home.html). The system uses graphics to clearly communicate financial information, which increases transparency and enables more members of the community to understand the activities of the business.

Ser-Thiac Finance Committee is responsible for providing quarterly money story presentations for all Ser-Thiac clan members.

Table 4.3.9: Evidence Requirement: Project Owner Business Plan

#	Name/Description
4.3.9	Project Owner Business Plan that is compliant with the minimum requirements of this Methodology Framework and is linked to the PES Agreement. (Appendix 2).

5. Project Measurement

5.1 CORE PES ACTIVITY IMPACT MEASUREMENT

According to Section 5 of the Plan Vivo Standard (2013, p16):

Principle 5: Projects generate real and additional ecosystem service benefits that are demonstrated with credible quantification and monitoring.

- 5.1. *The project must develop technical specifications for each of the project interventions, describing:*
 - 5.1.1. *The applicability conditions, i.e. under what baseline conditions the technical specification may be used*
 - 5.1.2. *The activities and required inputs*
 - 5.1.3. *What ecosystem service benefits will be generated and how they will be quantified. (NB Technical specification templates can be provided by the Plan Vivo Foundation)*
- 5.7. *An approved approach must be used to quantify ecosystem services generated by each project intervention compared to the baseline scenario.*

The NMF states: *Each project in the Nakau Programme shall deliver at least one core ecosystem service in a manner enabling the generation of verified PES units. This requires the detailed measurement of ecosystem service attributes comparing a baseline and a project scenario. Such measurement must be undertaken through the application of a Nakau Programme Technical Specifications Module specific to the Activity Class and Activity Type. Each Nakau Programme Technical Specifications Module shall be validated to a reputable standard prior to its application to a project.*

Project Proponents are required to list the Technical Specifications Module/s applied to the project. This shall be stated in summary in this section of Part A of the PD, with the relevant Technical Specifications populated with project data and presented in Part B of the PD.

Technical Specifications applied to the project shall be listed in an equivalent of the example provided in the following table (one line per Technical Specifications applied):

Core PES activity measurement is provided in the Loru PD Part B D3.2b v1.0 20151009.

The Technical Specifications Module applied to the project is presented in the table below:

Table 5.1 Technical Specifications Applied				
Title	Type of activity	Objectives	Brief description	Target areas / groups
<i>TS Module (C) 2.1 (AD-DtPF) Avoided Deforestation - Deforestation to Protected Forest, D2.2.1 v1.0 20150815</i>	Avoided Deforestation and enhanced removals	Forest protection and associated avoided emissions and removal enhancements	Establish community protected area in lieu of clearing for agriculture. Remove cattle from forest area	Serakar Clan, Vanuatu

5.2 COMMUNITY IMPACT MEASUREMENT

According to the Plan Vivo Standard (2013) Guiding Principle 7:

Projects demonstrate positive livelihood and socioeconomic impacts

7.1. The project must demonstrate clear plans to benefit the livelihoods of participants. The definition of what constitutes a benefit will be defined by local participants.

According to the CM1 Net Positive Community Impacts of the Climate Community and Biodiversity Project Design Standards second edition (2008):

CM1: The project must generate net positive impacts on the social and economic well-being of communities and ensure that costs and benefits are equitably shared among community members and constituent groups during the project lifetime.

5.2.1 Description Of Community Context

According to the Plan Vivo Standard (2013) Section 7:

7.2. A project socioeconomic baseline scenario must be defined, including information on the socioeconomic context in participating communities at the start of the project, and describing how these conditions are likely to continue or change in the absence of the project. Basic information must be included on:

- 7.2.1. Demographics and population groups*
- 7.2.2. Access to and main uses of land and natural resources*
- 7.2.3. Access to and use of energy sources for light and heat*
- 7.2.4. Typical assets and income levels*
- 7.2.5. Main livelihood activities*
- 7.2.6. Local governance structures and decision-making mechanisms*
- 7.2.7. Cultural, religious and ethnic groups present*
- 7.2.8. Gender and age equity*

According to the general community requirements of the Climate Community and Biodiversity Project Design Standards second edition (2008): project proponents must

provide a description of the project zone, containing the following information:

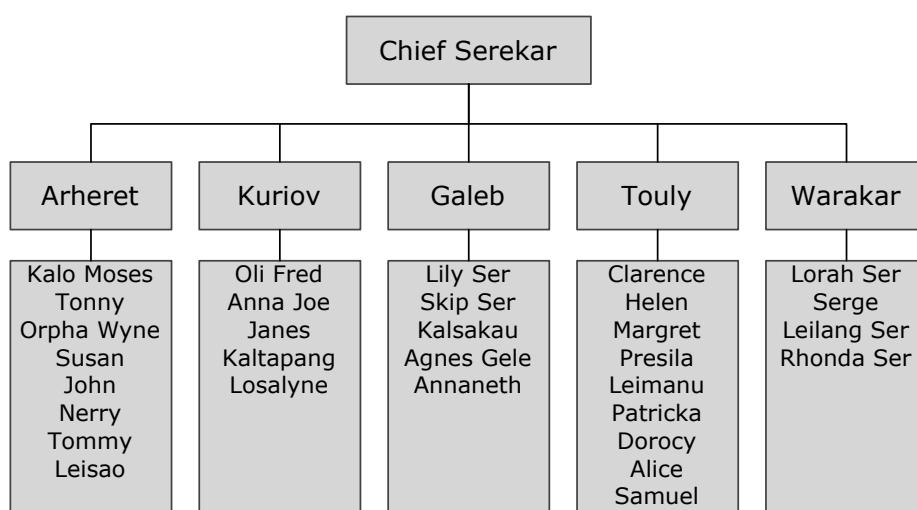
G5. A description of communities located in the project zone, including basic socio-economic and cultural information that describes the social, economic and cultural diversity within communities (wealth, gender, age, ethnicity etc.), identifies specific groups such as Indigenous Peoples and describes any community characteristics.

The NMF states: *Project Coordinators shall describe the Project Owners and nearby communities, including information on the following:*

- 5.2.1.1 Demographics and population groups*
- 5.2.1.2 Access to and main uses of land and natural resources*
- 5.2.1.3. Access to and use of energy sources for light and heat*
- 5.2.1.4. Typical assets and income levels*
- 5.2.1.5. Main livelihood activities*
- 5.2.1.6. Local governance structures and decision-making mechanisms*
- 5.2.1.7. Cultural, religious and ethnic groups present*
- 5.2.1.8. Gender and age equity.*

5.2.1.1 Demographics And Population Groups

The target group for the Loru Forest Project is the members of the Serakar Clan. This clan group consists of the five children of Chief Serakar (1913 – 1997) who was the sole living landowner of the Loru area. His five children were gifted a portion of the Serakar Clan land. Loru sits with the customarily-titled landowners following the patrilineal line (currently four adult males and four boys).



The population of current landowning and non-landowning adult clan members is approximately 50.

The Serakar clan are mainly based in the village of Khole, East Coast Santo. Khole has a population of approximately 500 people made up of various clan groups. Khole community members outside of the Serakar family are expected to benefit indirectly from the project.

Traditional (customary) ways of living remain important in Vanuatu, intermixed with Christianity. For the community of Khole, modern life has brought the pressures of a cash economy although some clans in Santo remain within traditional non-cash economies. Vanuatu is very diverse culturally with over 115 local languages. People in Khole speak Bislama (national pidgin), English or French and a local language.

The chiefly system remains strong in Vanuatu and custom plays a role in most ceremonies and celebrations. Land rights and chiefly title are passed down generations through a patrilineal system.

5.2.1.2 Access To And Main Uses Of Land And Natural Resources

The East Coast of Santo is low lying, relatively flat providing accessible, fertile land for agricultural development. The predominant land use in the area is mixed livestock and copra plantations and subsistence agriculture.

A recent 2014 assessment of the area indicated that there is a diverse flora and fauna species of plants, birds and reptiles present in the protected area (Kalfatak, D. 2014). The Social impact assessment survey indicates that more men than woman enter the Project Area every month. Particularly to harvest coconut crabs and hunt for wild pigs, flying foxes and wild chickens to complement their Sunday meals.

5.2.1.3 Access To And Use Of Energy Sources For Light And Heat

Most family members use Solar Panels as energy sources for lights during night time while generators are mainly used on important occasions due to high cost of fuels.

Heat is used for cooking and drying copra. However these two activities use low-grade timber sourced from nearby plantations rather than from trees within the Conservation Area.

5.2.1.4 Typical Assets And Income Levels

According to the Alternative Indicators of Well Being for Melanesia Report, it is estimated that the average income of the rural communities, per family group (sub clan), on Santo is about 25,000vt to 100,000vt per month (approx. US\$250 – US\$1,000) (SPC & National Council of Chiefs, 2012). The main income sources for the Serakar are copra, beef and the sale of local crops at nearby markets.

5.2.1.5 Main Livelihood Activities

The main source of income for the Serakar is copra. The entire clan is engaged in copra farming to provide a source of revenue for local economic development. Limited food crops are sold in Luganville (the capital of Santo). The clan, consisting of approximately 50 adults,

relies on subsistence agriculture, cash cropping, copra and the forest resources for their livelihoods.

5.2.1.6 Local Governance Structures And Decision-Making Mechanisms

Local governance is determined by chiefly practices with the role of the church being important regarding interaction outside of the village. An Area Secretary is a locally-elected representative for the area who will represent a group of villages at the Provincial level. Connection between the provincial level and national level governance systems is weak and many rural communities have little interaction with national governance processes except during the time of national elections.

5.2.1.7 Cultural, Religious And Ethnic Groups Present

Traditional (customary) ways of living remain important in Vanuatu, intermixed with Christianity. For the community of Khole, modern life has brought the pressures of a cash economy although some clans in Santo remain within traditional non-cash economies.

Vanuatu is very diverse culturally with over 115 local languages and more than 10 different religions. People in Khole speak Bislama (national pidgin), English or French and a local language and have 3 different religions, Presbyterian, SDA and CMC church.

The chiefly system remains strong in Vanuatu and custom plays a role in most ceremonies and celebrations. Land rights and chiefly title are passed down generations through a patrilineal system.

5.2.1.8 Gender And Age Equity.

Vanuatu is a traditional society with clearly determined roles between gender and age. The country still suffers from high rates of domestic violence and child abuse.¹²

The women in the Serakar family appear to be given certain decision-making power and are respected. Despite cultural limitations, the family has allocated 5 women to be represented across the 3 Ser-Thiac management committees, with 4 of these on the finance committee. While landownership is patrilineal, the family has agreed that the families of the maternal side of the Serakar clan also have representation within the business.

5.2.2 Description Of Community Baseline

According to the Plan Vivo Standard (2013) Section 7:

7.3. The expected socioeconomic impacts of the project must be described in comparison with the socioeconomic baseline scenario, including consideration of expected impacts

¹² Ending Violence against Women and Girls: Literature Review and Annotated Bibliography. UNIFEM Pacific, August 2010.

on participants, and consideration of any likely 'knock-on effects on non- participating communities living in surrounding areas.

According to the CM1 Net Positive Community Impacts and CM2 Offsite Stakeholder Impacts, of the Climate Community and Biodiversity Project Design Standards second edition (2008):

CM1: The project must generate net positive impacts on the social and economic well-being of communities and ensure that costs and benefits are equitably shared among community members and constituent groups during the project lifetime.

Projects must maintain or enhance the High Conservation Values (identified in G1) in the project zone that are of particular importance to the communities' well-being.

CM2: The project proponents must evaluate and mitigate any possible social and economic impacts that could result in the decreased social and economic well-being of the main stakeholders living outside the project zone resulting from project activities. Project activities should at least 'do no harm' to the well-being of offsite stakeholders.

The NMF states: *The Project Coordinator shall provide a description of the community baseline including:*

5.2.2.1 Description of project indicators to be measured

5.2.2.2 Evidence of project owner consultation on determination of project indicators

5.2.2.2 Community baseline scenario

5.2.2.3 Expected impacts from the project

5.2.2.4 Expected impacts for nearby community members who are not Project Owners.

It is optional for Project Coordinators to define how they seek to maintain or enhance the High Conservation Values in the project zone that are of particular importance to the communities' well-being. Should Project Coordinators choose to address High Conservation Values they can use the most recent version of the CCB Standard guidance in CM1.

5.2.2.1 Description of Project Indicators To Be Measured

Criteria	Indicators	Justification
The landscape provides a sufficient quality and quantity of food	<ul style="list-style-type: none"> • Food sources • Consumption patterns • Agricultural production 	<p>We want to know:</p> <ul style="list-style-type: none"> • If the forest products continue to be used indicating the continuation of traditional practices • If access to land for gardens diminishes to a point that it affects access to food • If project owners begin to purchase food more often indicating increased income but also creating possible negative unintended impacts (i.e. health) • If income is still sought through the sale of food and how this income changes over time.

Access to clean water occurs all year round	Accessibility of water Water use	Access to water has been a key issue for project owners in Loru. We want to know if improved access to water results from the project. Further, access to water being such a basic need, is another indicator of overall wellbeing. The impact of this on women deserves special attention by interviewers.
Household income and assets increase allowing for improved livelihood opportunities and quality of living.	<ul style="list-style-type: none"> Access to education Daily schedule Income Drug and alcohol use 	Increased income can demonstrate increased wellbeing although it can also be damaging. While we measure income over time, we also measure changes in livelihoods or time spent on activities every day such as housework, gardening etc. This will help us to see if project owners have more time to give to non-core activities and therefore, perhaps their lives are made easier by the project. We will also monitor if the money is causing social decay via its use for negative pursuits (i.e. alcohol). Education is also used to determine whether increased income is creating greater wellbeing.
The Community REDD+ Enterprise	Level of youth engagement Accessibility of information	We want to use this monitoring as a chance to assess how well the 'REDD+ Enterprise' (i.e. the cooperative or family business) is doing at engaging the project owners and earning local trust. This indicates resilience and overall wellbeing if the faith in this institution is high.

5.2.2.2 Evidence Of Project Owner Consultation On Determination Of Project Indicators

Live & Learn Vanuatu facilitated meetings with the Serakar Clan between 1 and 4 July 2014. The Serakar Clan at this time gave their approval for the Community Livelihoods Assessment to go ahead and endorsed the indicators to be used. See Supporting Evidence 3.1.2.2c.

5.2.2.3 Community Baseline

Criteria 1: The landscape provides sufficient quality and quantity of food			
Question	Measure	Average	Comments
1.1 How often do you buy food?	Days per week	4.6	Respondents are buying basic foodstuffs from local cooperative store such as rice, sugar and oil.
1.2 How big is your family garden?	Hectares	0.7	Garden plot sizes are relatively small but allow food for consumption and sale.
1.3 How often do you eat free food from your garden?	Days per week	5.3	This question was misunderstood as respondents thought they were being asked how often they ate from their large garden rather than home garden. Observations are that some of the food eaten every day is food they have grown.
1.4 How often do you run out of food?	Times Per Month	0	Respondents spoke about eating simply some days (rice and green veg only).
1.5 How often do you eat food from the forest?	Times Per month	2.5	Food from Loru was mainly sourced by men who went to shoot wild game for special events.
1.6 How much do you make selling food?	Vatu Per Month	9750 VUV	Women only sell food at market in town. This works on a roster system and they go twice a month to market.

Criteria 2: Access to clean water occurs all year round			
Question	Measure	Average	Comments
2.1 Do you run out of water?	% 'yes'	100%	Respondents noted that in dry season they regularly run out of water for weeks at a time as they rely purely on rainwater and their storage is not large.
2.2 Are there days when you can use as much as you like?	% 'yes'	100%	Respondents noted that in wet season their tanks were full all the time as storage capacity was low and rainfall high.

Criteria 3: Household income and assets increase allowing for improved livelihood opportunities and quality of living.					
	Female Adult	Male Adult	Female Youth (<25yrs)	Male Youth (<25yrs)	Comments
3.1 Access to Education					Of those surveyed with children of school age, 95% were attending school. Generally children attend school from 4 - 15 years. Only 2 respondents noted their children were in tertiary education.
3.2 Personal Monthly Income (VUV)	17750	11591	8143	400	Women sell food, men make money from Copra mainly
3.3 Travel to town (times per week)	1.2	1.7	1.7	0.2	n/a
3.4 Hours spent cooking (per day)	2.7	0.4	1.9	0	n/a
3.5 Hours spent householder chores (per day)	2	0.8	2	0	n/a
3.6 Hours spent Gardening (Per day)	4.6	7.5	5.9	4.5	n/a
3.7 Hours spent resting	1.8	3.6	2.6	9.3	n/a

Criteria 4: The Community REDD+ Enterprise contributes to the wellbeing of its members.		
	Measure	Across all groups
4.1 How many youth do you know that are engaged with the REDD+ Enterprise?	Number of Youth	Average of 10 youth identified by respondents
4.2 Are you given the opportunity to access information about the REDD+ Enterprise's finances and activities?	Percentage yes"	72%
4.3 Do you trust the REDD+ Enterprise?	Percentage "yes"	90%

5.2.2.4 Expected Impacts From The Project

Criteria 1: The landscape provides sufficient quality and quantity of food

The project is not expected to encroach upon land around the village where gardens are currently located. It is expected that as the family generates more disposable income from the project they will purchase more meat and higher cost items than just basic items such as oil, sugar and flour. If increased disposable income occurs, there may be less need to grow food for sale at market. This could also have a negative impact on food security and traditional knowledge.

As Loru will remain protected, the conservation area should continue to support occasional food extraction in the form of game and seafood. This will provide important nutritional benefits as well as sustain traditional knowledge.

Criteria 2: Access to clean water occurs all year round

It is expected that one of the first uses of any disposable income generated through the family business for community benefit will go to increasing the water storage capacity of the families.

Criteria 3: Household income and assets increase allowing for improved livelihood opportunities and quality of living.

It is expected that more children will have access to senior secondary and tertiary studies while access to pre and primary school should sit at 100%. The family has stated that paying school fees is their single greatest financial burden so any increase in disposable income is likely to support school fees. Improved access to education will have a wide range of benefits but may push the family more rapidly away from traditional ways of living.

Personal income is only likely to change should the family use Ser-Thiac to leverage further business opportunities. Otherwise it is likely that cash crops and copra sales will remain about the same. Should school fees be covered through project income, other surplus funds will become available for other uses by family members. Female family members have noted aspirations for improved homes with gas cookers, fridges, kitchens and flush toilets. Access to 'modern utilities' will dramatically reduce the amount of time they spend on household chores, cooking and gardening.

Any increase in disposable income will also likely increase opportunities to go to town (Luganville).

Criteria 4: The Community REDD+ Enterprise contributes to the wellbeing of its members.

It is also hoped that youth will remain highly engaged in the project business, by taking on leadership roles as this provides a promise of sustainability.

5.2.2.5 Expected Impacts For Nearby Community Members Who Are Not Project Owners.

It is expected that the project will provide various positive impacts for surrounding communities. Firstly, the protected Loru coastal rainforest will continue to provide a source of food and indigenous plants for traditional activities. While extraction will be heavily restricted, Loru will act like an ecological bank improving access to these resources in surrounding areas (i.e. fish breeding ground, increased population and therefore spread of wild food animals such as wild pig, wild chicken, fruit bat).

Ser-Thiac intends to establish a food production business of local nuts and fruit to sell to the cruise ship tourists nearby. Women from outside the family group but dwelling in surrounding communities will be invited to join as suppliers and will receive monetary benefit from this.

As Vanuatu's first PES site, Loru is likely to generate interest from Vanuatu's tourism industry. Loru has been a place of interest to bird watchers, particularly as this forest supports the critically endangered megapode bird. As interest increases, livelihood opportunities in ecotourism for surrounding communities will increase.

Jealousy is very common in Vanuatu and surrounding communities may feel that they should be entitled to the benefits the Serakar clan are enjoying. It is important that the Serkar clan, engage surrounding communities wherever possible to ensure they realise some benefits also from the project.

5.2.3 Community Impact Assessment Plan

According to the Plan Vivo Standard (2013) Section 7:

- 7.4. *A socioeconomic impact assessment/monitoring plan must be developed in a participatory manner to measure advances against the baseline scenario, within one year of the project validation, that:*
 - 7.4.1. *Is based on locally relevant and cost effective indicators*
 - 7.4.2. *Takes into consideration the potential for differentiated impacts on different groups of participants*
- 7.5. *The project must strive to avoid negative impacts on participants and non-participants, especially those most vulnerable. Where negative socioeconomic impacts are identified, these must be reported to the Plan Vivo Foundation and a participatory review of project activities undertaken with the participants/communities to identify steps to mitigate those impacts.*

According to CM3 Community Impact Monitoring of the Climate Community and Biodiversity Project Design Standards second edition (2008):

CM3. The project proponents must have an initial monitoring plan to quantify and

document changes in social and economic well-being resulting from the project activities (for communities and other stakeholders). The monitoring plan must indicate which communities and other stakeholders will be monitored, and identify the types of measurements, the sampling method, and the frequency of measurement.

Since developing a full community monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being validated against the Standards. This is acceptable as long as there is an explicit commitment to develop and implement a monitoring plan.

The NMF states: *The Project Coordinator shall provide an assessment plan to measure community impacts against the baseline scenario. This plan must include:*

- 5.2.3.1 *Criteria or performance target*
- 5.2.3.2 *Locally relevant and cost effective indicators*
- 5.2.3.3 *Methods of measurement*
- 5.2.3.4 *Monitoring schedule*
- 5.2.3.5 *How to ensure that differentiated impacts on different groups are considered in the design of the monitoring programme*
- 5.2.3.6 *A plan to address negative impacts as they arise.*

5.2.3.1 Criteria Or Performance Target

See Section 5.2.3.3.

5.2.3.2 Locally Relevant And Cost Effective Indicators

See Section 5.2.3.3.

5.2.3.3 Methods Of Measurement

A community impact measurement framework has been developed for this project. This includes a community impact survey instrument as follows:

Criteria 1: The landscape provides sufficient quality and quantity of food		
Indicator	Measure	Performance Target/Action
1.1 How often do you buy food?	Days per week	Monitoring should ask what kind of food as well as frequency to compare against baseline
1.2 How big is your family garden?	Hectares	If decreasing, PC to address negative impacts
1.3 How often do you eat free food from your garden?	Days per week	If decreasing, PC to address negative impacts
1.4 How often do you run out of food?	Times Per Month	If increases, PC to address negative impacts
1.5 How often do you eat food from the forest?	Times Per month	If increases, PC to address negative impacts of overharvesting. Monitor if gender imbalance remains

		with men hunting mainly
1.6 How much do you make selling food?	Vatu Per Month	If decreasing, PC to address negative impacts

Criteria 2: Access to clean water occurs all year round		
Indicator	Measure	Performance Target/Action
2.1 Do you run out of water?	Percentage 'yes'	Expected to decrease
2.2 Are there days when you can use as much as you like?	Percentage 'yes'	Expected to increase

Criteria 3: Household income and assets increase allowing for improved livelihood opportunities and quality of living.		
Indicator	Measure	Performance Target/Action
3.1 Access to Education	Qualitative	More than 2 youth in tertiary education and 100% access to primary and secondary (to year 10)
3.2 Personal Monthly Income	VUV	Expected to increase
3.3 Travel to town	Times/week	Expected to increase
3.4 Hours spent cooking (per day)	Hours/day	Expected to decrease, focus on female population
3.5 Hours spent householder chores (per day)	Hours/day	Expected to decrease, focus on female population
3.6 Hours spent Gardening	Hours/day	Expected to decrease
3.7 Hours spent resting	Hours/day	Expected to increase, focus on female population

Criteria 4: The Community REDD+ Enterprise contributes to the wellbeing of its members		
Indicator	Measure	Performance Target/Action
4.1 How many youth do you know that are engaged with the REDD+ Enterprise?	Number	If decreasing, PC to address negative impacts
4.2 Are you given the opportunity to access information about the REDD+ Enterprise's finances and activities?	Percentage "yes"	If decreasing, PC to address negative impacts
4.3 Do you trust the REDD+ Enterprise?	Percentage "yes"	If decreasing, PC to address negative impacts

5.2.3.4 Monitoring Schedule

Data is collected through interviews with individuals. LLV will use the same respondents where possible (list of respondents below). Interviewers will apply a similar ratio of respondents to match the baseline survey. This being:

Total Interviewed	39
Total Adult Females	13
Total Adult Males	13
Total Female Youth (<25yrs)	7
Total Male Youth (<25yrs)	6

Name	#	Gender	Adult/ Youth	Name	#	Gender	Adult/ Youth
Anna Joe	100	F	A	Tony Moses	120	M	A
Riman Ser	101	M	A	Lora Ser	121	F	A
Kates Fred	102	M	A	May Ser	122	M	A
Kaltabas Sam	103	M	A	Lina John	123	F	A
May Ser	104	F	A	Oli Fred	124	M	A
Warakar Ser	105	M	A	Kalsakau Ser	125	M	A
John Lus	106	M	A	Toli Dan	126	F	A
Kaltapang Fred	107	M	A	Angela Wayne	127	F	Y
Stephen Ser	108	M	A	Nelly Peter	128	F	Y
Viran Claren	109	M	A	Jenny Kaltapas	129	F	A
Leilang Ser	110	F	Y	Roy Ser	130	M	Y
Leipakoa Gele	111	F	Y	Linet Kaltapas	131	F	Y
Faina Ser	112	F	A	Clarence Viran	132	M	A
Kuriov Fred	113	F	A	Alines Clarence	133	F	Y
Rachel Ser	114	F	A	Losaline Rii	134	F	A
Leisale Fred	115	F	A	Kalros Ser	135	M	Y
Rhonda Ser	116	F	A	Georgy Moses	136	M	Y
Vicki	117	F	Y	Alick Viran	137	M	Y
Rose Kalorip	118	F	A	William Sam	138	M	Y
Lazario Ser	119	M	Y				

5.2.3.5 How To Ensure That Differentiated Impacts On Different Groups Are Considered In The Design Of The Monitoring Programme

By undertaking individual surveys and differentiating based on age and gender, the project will be able to compare differentiated impacts on different groups. As shown in baseline, livelihood activities and income vary across the four groups identified in the survey.

5.2.3.6 A Plan To Address Negative Impacts As They Arise.

In many cases negative impacts may present as gradual shifts in ways of living within the clan. LLV will monitor this and provide education and awareness to mitigate negative impacts around food security and erosion of tradition. Other interventions will involve LLV increasing its presence and support to *Ser-Thiac* to work through issues of business management, financial management and transparency.

Criteria One:

Should the monitoring show a dramatic decrease in planted gardens and increase in purchases of processed, imported food, LLV will undertake training and awareness with the community around health and nutrition, food insecurity in the face of climate change and the role of food and custom for food security.

In the face of extreme hazards and disasters, of which Vanuatu is particularly vulnerable, there may be increased pressure on food sources within Loru. If this becomes evident, LLV will work closely with the Land Management Committee to ensure that local resources are managed to ensure sustainability.

Criteria Two, Three and Four:

The risk of jealousy and conflict within the clan and from surrounding communities is a risk should *Ser-Thiac* not operate transparently. Survey results from Criteria Two and Three of Section 5.2.3.3 may highlight that some family members are benefitting more than others. Criteria Four may indicate that conflict is present. If noted, LLV will increase its presence with *Ser-Thiac* to ensure that it is operating in a transparent way. LLV can provide conflict mediation although in most cases custom will determine how to resolve the conflict. LLV will carefully monitor any distrust in *Ser-Thiac* as this is likely to be the greatest risk to project sustainability. LLV has invested significant time in establishing clear reporting and financial management arrangements with *Ser-Thiac* to mitigate this risk. Regular business management support will further mitigate this risk.

Table 5.2.3 : Evidence Requirement: Community impacts	
#	Name/Description
5.2.3a	Description of Community Baseline (Section 5.2 of this PD)
5.2.3b	Community impact monitoring plan (component of Project Monitoring Plan) Section 8.1.8 of Part B of this PD.

The NMF states: *Project Coordinators are required to incorporate the Community Impact Assessment Plan into the Project Monitoring Plan (with Project Monitoring Plan detail following the requirements for project monitoring laid out in the relevant Technical Specifications Module/s). Any revisions of the Community Impact Assessment Plan will be incorporated into PD revisions. Projects have up to one year after project validation to complete the Community Impact Assessment Plan.*

The Community Monitoring Plan as per above requirements is incorporated into the Project Monitoring Plan presented in Section 8.1.8 of Part B of the PD.

5.3 BIODIVERSITY CO-BENEFIT IMPACT MEASUREMENT

Section 5.13 of the Plan Vivo Standard (2013, p17) states that:

5.13. *The technical specifications must describe the habitat types and main species present in project intervention areas including any areas of High Conservation Value or IUCN red list species present (or more locally defined important areas of biodiversity or lists of vulnerable species if applicable), with a description of how they are likely to be*

affected by project interventions, and how these effects will be monitored.

Measuring the impact the Loru Forest Project on biodiversity requires a comparison between a biodiversity baseline survey and a biodiversity project survey.

The baseline activity for this project is deforestation. The biodiversity baseline survey therefore needs to be undertaken in a relevant reference area where baseline scenario vegetation is present (e.g. coconut plantations in adjacent lands outside the Project Area). At the time of PD completion this biodiversity baseline survey had not been undertaken.

The Loru Forest Project has however, completed the first biodiversity project survey with results presented in Section 5.3.1 below.

5.3.1 Significant Species

The NMF states: *As a minimum requirement, all projects within Nakau Programme will describe the historic occurrence and monitor ongoing presence of significant species known to occur within or in close proximity to the project site.*

Significant species are defined as either:

- a. *IUCN Red List species (classified as VU, EN or CR)*
- b. *Endemic species*
- c. *Priority species listed by CEPF according to the relevant bio-geographic biodiversity hotspot and ecosystem profile*
- d. *Species with special cultural or use values as defined by the landowners.*

The following species of animals and plants were identified in within the project boundary during the forest and biodiversity inventory undertaken in 2015.

IUCN Classification: VU = Vulnerable; EN = Endemic; CR = Critically Endangered (see Explanatory Notes in Appendix 1 of this document).

CEPF = Critical Ecosystem Partnership Fund. CEPF Priority sites for investment are listed for the East Melanesian Islands Biodiversity Hotspot can be accessed here:

http://www.cepf.net/SiteCollectionDocuments/east_melanesian_islands/EMI_ecosystem_profile.pdf

Endemism = whether endemic to the country (C), or to the island (I) or site (S).

Table 5.3.1a: Significant Animal Species Located With The Project Area						
Taxonomic Group: insects						
Common Name	Taxonomic Name	IUCN	CEPF	Endemism	Cultural Significance	Reference
Sacco's Emperor	<i>Polycon sacco</i>					D. Kalfatak
Taxonomic Group: mammals						
Common Name	Taxonomic Name	IUCN	CEPF	Endemism	Cultural	Reference

					Significance	
Vanuatu Flying Fox	<i>Pteropus anetianus</i>	EN	Priority (Control of over exploitation)	C	Food / hunting	D. Kalfatak
Taxonomic Group: Birds						
Common Name	Taxonomic Name	IUCN	CEPF	Endemism	Cultural Significance	Reference
Incubator Bird	<i>Megapodius freycineti layardi</i>	CR,EN		C		D. Kalfatak
Vanuatu Kingfisher	<i>Halycon farquhari</i>	EN		C		D. Kalfatak
Vanuatu Flycatcher	<i>Neolalage banksiana</i>	EN	Y/N	C		D. Kalfatak
Vanuatu Fruit Dove	<i>Ptilinopus tannensis</i>	EN		C		D. Kalfatak
Vanuatu White-eye	<i>Zosterops flavifrons</i>	EN		C		D. Kalfatak
Santo Mountain Starling	<i>Aplonis santovestris</i>	EN	Priority (Control of invasive species)	I		EMI Ecosystem Profile
Vanuatu Imperial Pigeon	<i>Ducula bakeri</i>	EN	Priority (Control of invasive species)	C		EMI Ecosystem Profile
Golden Whistler,	<i>Pachycephala pectoralis</i>	EN		C		D. Kalfatak
Taxonomic Group: Crustaceans						
Common Name	Taxonomic Name	IUCN	CEPF	Endemism	Cultural Significance	Reference
Coconut Crab	<i>Birgus latro</i>	EN/C R		C		D. Kalfatak

Table 5.3.1b Indigenous plant species identified in the Conservation Area (non-endemics)

Scientific name:	Family name:	Common name:	Language name:	Plant Form
Macaranga indica	Euphorbiaceae	Navenue	None	Tree
Macaranga tannarius	Euphorbiaceae	Navenue	None	Tree
Codeaum variegatum	Euphorbiaceae	Nahahali	None	Shrub
Antiaris toxicaria	Moraceae	Melektri	None	Tree
Dysoxylum arborecense	Meliaceae	Wael stingwud	Netpo	Tree
Micromelum minutum	Rutaceae	None	None	Tree
Murraya paniculata	Rutaceae	None	None	Shrub
Micropiper latifolia	Piperaceae	Wael kava	None	shrub
Piper astro caledonicum	Piperaceae	None	Nvulkoha	Shrub
Hemigraphis reptans	Acanthaceae	None	Naiettiet	Herb
Selaginella durvilei	Selaginellaceae	None	Natwal	Herb
Christella dentata	Telypteridaceae	None	Thavthav	Herb
Desmodium ormocarboides	Fabaceae	None	Natiwarkar	Shrub
Cordyline fruticosa	Agavacece	Nagarria	None	Shrub

<i>Pometia pinnata</i>	Sapotaceae	Nadao	Neseri	Tree
<i>Stephania japonica</i>	Menispermaceae	None	None	Liane
<i>Cayratia trifolia</i>	Vittata	None	None	Lian
<i>Pueraria lopata</i>	Fabaceae	None	Nwehea	Creeper
<i>Epipremnum pinnatum</i>	Araceae	Nawalu	None	Climber
<i>Entada phasilooides</i>	Fabaceae	Snekrop	None	Liane
<i>Pycnarrhena ozanta</i>	Menispermaceae	None	None	Liane
<i>Dendrocnide latifolia</i>	Urticaceae	Nagalat	Noclath	Tree
<i>Dendrocnide harvyii</i>	Urticaceae	Nagalat	Noclath	Tree
<i>Dendrocnide moroides</i>	Urticaceae	Nagalat	Noclath	Tree
<i>Dracontomelon vitiense</i>	Anarcadiaceae	Nakatapol	Natbol	Tree
<i>Gatus</i>	Zingerberaceae	None	Nreter	Shrub
<i>Geophila repens</i>	Rubiaceae	None	Nmuthmuthvra	Herb
<i>Adenanthera pavonina</i>	Fabaceae	None	Nthera	Tree
<i>Semecarpus tannaensis</i>	Anarcadiaceae	Green nawalas	Nle	Tree
<i>Semecarpus vitiensis</i>	Anarcadiaceae	Red nawalas	Nle	Tree
<i>Barringtonia edulis</i>	Lecythidaceae	Navele	Naruth	Tree
<i>Ervatamia obtusifolia</i>	Apocynaceae	Lastic tri	Nabangbang	Shrub
<i>Elatostema beccarii</i>	Urticaceae	None	Naskehro	Herb
<i>Pteorocarpus indicus</i>	Fabaceae	Bluwota	Nula	Tree
<i>Endospermum medullosum</i>	Euphorbiaceae	Waetwud	Nocmac	Tree
<i>Pisonia umbellifera</i>	Nyctaginaceae	None	Nene	Tree
<i>Acalypha forsteriana</i>	Euphorbiaceae	None	Nkas	Tree
<i>Bischofia javanica</i>	Euphorbiaceae	Nakoka	Noukar	Tree
<i>Burckella obovata</i>	Sapotaceae	Naduledule	Nenget	Tree
<i>Canarium indicum</i>	Burseraceae	Nagai	Nanga	Tree
<i>Planchonella</i> sp.	Sapotaceae	None	Namsem	Tree
<i>Pongamia pinnata</i>	Fabaceae	None	Ntorula	Tree
<i>Cleidion</i>	Euphorbiaceae	None	Nlahare	Tree
<i>Bampusa vulgaris</i>	Graminea	Bampu	Nerienkar	Tree
<i>Dysoxylum bijucum</i>	Meliaceae	Stingwud	Naspu	Tree
<i>Mimosop elengi</i>	Sapotaceae	Natariu	Ner	Tree
<i>Garuga floribunda</i>	Burseraceae	Namalaus	Naleu	Tree
<i>Inocarpus fagifer</i> ae	Fabaceae	Namambe	Namav	Tree
<i>Tectaria</i>	Aspleniaceae	None	None	Fern
<i>Pteris pacifica</i>	Adiantaceae	None	None	Fern
<i>Vaavea amicorum</i>	Meliaceae	None	None	Tree
<i>Trophis scandens</i>	Moraceae	None	None	Liane
<i>Diospyros samoensis</i>	Ebenaceae	Blakwud	Nrues	Tree
<i>Instia bijuca</i>	Fabaceae	Natora	Ntor	Tree
<i>Gyrocarpus americanus</i>	Hernandiaceae	Kenutri	Nene	Tree
<i>Fluggea flexuosa</i>	Euphorbiaceae	Namamao	Nvacer	Tree
<i>Terminalia cataba</i>	Combretaceae	Natapoa	Ntau	Tree
<i>Alphitonia phasilooides</i>	Rhamnaceae	Navasvas	Nwerie	Tree
<i>Pipturus argenteus</i>	Urticaceae	None	Elwe	Tree

<i>Premna serratifolia</i>	Verbenaceae	None	Nvenven	Tree
<i>Castanospermum australe</i>	Fabacece	Bintri	Nas	Tree
<i>Erythrina variegata</i>	Fabaceae	Narara	Nrur	Tree
<i>Spondias dulcis</i>	Anacardiaceae	Naus	Neu	Tree
<i>Cananga odorata</i>	Annonaceae	Tiare	Nares	Tree
<i>Metroxylon warburgii</i>	Palmae	Natagura	Ndalo	Tree
<i>Alpinia pacifica</i>	Zingerberaceae	Wael zinger	None	Shrub
<i>Alpinia popurea</i>	Zingerberaceae	Wael Zinger	None	Shrub
<i>Hornstedtia lycostoma</i>	Zingerberaceae	Wael Zinger	None	Shrub
<i>Graptophyllum pictum</i>	Acanthaceae	None	Naro	Shrub
<i>Ficus septica</i>	Moraceae	None	Nworworo	Tree
<i>Ficus wassa</i>	Moraceae	Nabalango	None	Tree
<i>Kleihovia hospita</i>	Sterculiaceae	None	Nedal	Tree
<i>Myristica fatua</i>	Myristicaceae	Nadaedae	None	Tree
<i>Ventilago neo ebudicum</i>	Rhamnaceae	None	None	Tree
<i>Hibiscus tiliacues</i>	Malvaceae	Burao	None	Tree

Table 5.3.1c Endemic plant species identified in the Conservation Area

Scientific name:	Family name:	Common name:	Language name:	Plant Form:
<i>Meryta neo ebudicum</i>	Araliaceae	None	None	Tree
<i>Calamus vanuatuensis</i>	Arecaceae	Wael ken	None	Climber
<i>Smilax vitiense</i>	Smilaxaceae	None	None	Liane
<i>Anodendron paniculata</i>	Apocynaceae	None	Nwenuk	Liane
<i>Pseuderanthemum sp</i>	Acanthaceae	None	None	Shrub
<i>Ground orchid</i>	Orchidaceae	Ground Orchid	None	Herb
<i>Graptophyllum pictum</i>	Acathanceae	None	None	Shrub
<i>Pandanus tannaensis</i>	Pandanaceae	Wael Pandanus	None	Shrub
<i>Sterculia banksiana</i>	Sterculiaceae	None	None	Tree
<i>Corynocarpus similis</i>	Corynocarpaceae	None	Nethov	Tree
<i>Claoxylon falax</i>	Euphorbiaceae	None	Nvaoe	Tree
<i>Phaleria pentecostalis</i>	Thymelaeaceae	None	None	Shrub
<i>Dysoxylum aneityensis</i>	Meliaceae	Stingwud	Napuven	Tree
<i>Dysoxylum arborecne</i>	Meliaceae	Wael stingwud	Netpo	Tree
<i>Palaquium neo ebudicum</i>	Meliaceae	None	Nwalmav	Tree
<i>Litsea aneityensis</i>	Lauraceae	None	Nowthroloc	Tree
<i>Osmoxylon orientale</i>	Araliaceae	None	Navarku	Tree
<i>Polycias samoensis</i>	Araliaceae	Wael nalalas	Nesthul	Tree
<i>Glochidion ramiflorum</i>	Euphorbiaceae	Wael Namamao	Nelakar	Tree
<i>Celtis paniculata</i>	Cannabaceae	None	Nousokar	Tree
<i>Cythandra efatensis</i>	Gesneriaceae	None	None	Shrub
<i>Psychotria milnei</i>	Rubiaceae	None	Nkerkeraroth	Shrub

<i>Psychotria fosteri</i>	Rubiaceae	None	Nkerkeraroth	Shrub
<i>Psychotria sp</i>	Rubiaceae	None	Nkerkeraroth	Shrub
<i>Nothonoides repada</i>	Urticaceae	None	None	Climber
<i>Sysygium gracilipes</i>	Myrtaceae	None	Naskar	Shrub
<i>Evodia hortensis</i>	Myrtaceae	Nabwagi	None	Shrub

Table 5.3.1d Invasive plant species identified in the Conservation Area

Scientific name:	Family name:	Common name:	Language name:	Plant Form:
<i>Urennia lopata</i>	Fabaceae	None	None	Shrub
<i>Merremia peltata</i>	Convolvulaceae	Big leaf	None	Vine
<i>Mikania micrantha</i>	Asteraceae	Mael-minit (Mile-a-minute)	None	Vine
<i>Solanum torvum</i>	Solanaceae	Biko	None	Shrub
<i>Sida rhombifolia</i>	Malvaceae	Broom wed (broom weed)	None	Shrub
<i>Mimosa pudica</i>	Fabaceae	Grass nil	None	Herb
<i>Achyranthes aspera</i>	Amaranthaceae	None	None	Herb

5.3.2 Biodiversity Baseline

The NMF states: *A literature review must be undertaken to develop an inventory of significant species known to occur within or in close proximity to the project site. The species inventory may be in the form of a table and must include the following elements:*

- a. *Subheadings to group species according to an appropriate taxonomic level (e.g. mammals, birds, angiosperms etc)*
- b. *Common name (where possible)*
- c. *Taxonomic name (essential)*
- d. *IUCN classification (VU, EN or CR)*
- e. *Specify if a priority species for CEPF Investment*
- f. *Specify if endemic and at what scale (e.g. Island or country)*
- g. *Provide concise remarks on abundance, distribution or other information (if possible and relevant)*
- h. *Provide concise remarks for species deemed significant based upon special cultural or use values as defined by the landowners*
- i. *Include source of data (references).*

Data relevant to this requirement are provided in Table 5.3.1 above.

5.3.3 Project Impacts on Biodiversity

The NMF states: *The expected impacts of project interventions on biodiversity should be*

described, such as:

- a. *Expected beneficial impacts to significant species gained by avoiding baseline activities*
- b. *Expected beneficial impacts to significant species from project interventions (where different from a.*
- c. *Expected negative impact to any native species from project interventions.*

The expected project impacts on biodiversity is presented below:

5.3.3.1 Expected Beneficial Impacts from Avoiding Baseline Activities

Copra, cattle grazing, logging and agricultural activities are the main common drivers of deforestation across all communities in the South Santo area. However avoiding those baseline activities would actually support or benefit local communities and individual landowners through number of ways; for example by protecting remaining forest, we can:

- Maintain key productive and cultural resources for future generations.
- Protect habitat for native plant and animals, including priority species such as endemic birds, crabs and flying foxes.
- Through the Loru Management Plan (Appendix 8), reduce over harvesting pressure on priority species such as the endangered Vanuatu Flying fox (*Pteropus anetianus*) and the Incubator bird (Megapode) (*Megaodius freycineti lloydii*).
- Through the Loru Management Plan develop an improved understanding and practices for management of invasive species, which are a key threatening processes impacting on endangered species present including the Vanuatu Imperial Pigeon (*Ducula bakeri*), and the Santo Mountain Starling (*Aplonis santoensis*).
- Demonstrate how conservation can be incorporated into a diversified approach to resource management and livelihood generation, providing opportunities for replication and off site impact.
- Contribute to global climate change mitigation which impacts on biodiversity globally.

5.3.3.2 Expected Beneficial Impacts from Other Project Activities

Control of the highly invasive vine *Merremia* sp. (big leaf rope) and actions taken through the Loru Management Plan (Appendix 8) are all expected to provide beneficial impacts for biodiversity. These include:

- Monitoring for illegal harvesting of wildlife.
- Maintaining fence for Zone A to keep out cattle allowing for understory regeneration.
- Prohibit harvesting of nut tree timber in Zone C.
- *Merremia* control in Zone B through active management.

5.3.3.3 Expected Negative Impacts from Project Activities

Project Activities are not expected to create any negative impacts for biodiversity.

5.3.4 Biodiversity Monitoring

The NMF states: *The biodiversity plan must be developed to record (at a minimum) the presence of significant species within the project site boundary. Recorded observations of significant species should include:*

- *Date observed*
- *Name and role of observer*
- *Location of observation (description or GPS location)*
- *Remarks on abundance, distribution or other information (if possible and relevant).*

As per the Loru Management Plan (Appendix 8), the Land Management Committee will undertake a biodiversity surveys at the project site. The Land Management Committee will undertake random transect walks through the Protected Area and count sightings of flora and fauna identified within the baseline. Sightings must be tallied together and reported on at Project Management Meeting. Survey forms are to be developed by the Land Management Committee. These forms must state:

- Date species observed
- Name and role of observer
- Location of observation (description satisfactory)
- Remarks on abundance, distribution or other information (if possible and relevant).

5.3.5 Biodiversity Monitoring Exceeding Minimum Requirements

The NMF states: *Project Coordinators and owners are allowed to implement methodologies such as flora and fauna surveys and mapping exceeding the minimum requirements of the Nakau Methodology Framework, subject to capacity constraints and availability of funding. Project Coordinators that make a commitment (i.e. within a PD) to rigorous biodiversity monitoring systems must also demonstrate capacity to sustain the activity for the entire project period.*

At this stage capacity does not allow monitoring to exceed minimum requirements. Further funding (and potentially PES unit sales revenues) may make this possible at a later time.

Table 5.3.5: Evidence Requirement: Biodiversity impacts

#	Name/Description
5.3.5a	Significant species inventory (in PD)

5.3.5b	Description of expected project impacts on biodiversity (in PD)
5.3.5c	Biodiversity monitoring plan (component of Project Monitoring Plan)

5.4 PROJECT MONITORING PLAN

The NMF states: *All projects in the Nakau Programme are required to prepare a Project Monitoring Plan as part of the Project Description. The Project Monitoring Plan is submitted in Part B of the PD but contains monitoring elements required in Sections 5.2 and 5.3 of this document, and elements required in the relevant Technical Specifications Module/s applied.*

The Project Monitoring Plan is presented in Section 8.1 of Part B of this PD.

6. Project Reporting & Verification

6.1 DOCUMENTATION

According to section 5.11 of the ISO 14064-2 Standard (2006):

The project proponent shall have documentation that demonstrates conformance of the GHG project with the requirements of this part of ISO 14064. This documentation shall be consistent with validation and verification needs

According to section A.3.8 of the ISO 14064-2 Standard (2006):

This part of ISO 14064 refers to documenting in the context of internal needs linked to auditing and validation and/or verification. It is a complement to reporting that should serve external purposes.

Documentation is linked to the GHG information system and information system controls of the GHG project, as well as to the GHG data and information of the GHG project. Documentation should be complete and transparent.

The NMF states: *Projects in the Nakau Programme will generate reports with the following naming convention:*

The core project documents for this project are:

Project Idea Note: Loru Forest Project D3.3 v1.0, 20140606

Nakau Methodology Framework: General Methodology for the Nakau Programme.
D2.1 v1.0 20150513

Technical Specifications Module (C) 2.1 (AD-DtPF): Avoided Deforestation –
Deforestation to Protected Forest v1.0 20140815

Loru Forest Project – Project Description (PD): Part A – General Description D3.2a v1.0
20151009 (this document)

Loru Forest Project – Project Description (PD): Part B – PES Accounting Description
D3.2b v1.0 20151009

Loru Forest Project – Simplified Project Monitoring Report No. 1 Part A & B 2015. D3.3
(1) v1.0 20151009

Loru Forest Project - Programme Agreement. D1.2 v1.0 20151009

Project Coordinator Licence Agreement D1.4 v1.0 20151009

Project Development Agreement

Loru Forest Project - PES Agreement. D1.5 v1.0 20151009

Reseller Licence Agreement

6.1.1 Project Database

The NMF states: *Project Documents and technical data shall be stored electronically and in hard copy and in duplicate as described in Section 7.2 of this document.*

This project complies with the requirements specified in Section 7.2 of this document.

The Project Database has the following structure:

Table 6.1.1 Document Database			
Database Name	Status	Detail	Access
Nakau Information Platform	Public Information	Final pdf version of all Methodologies, PDs, PD Appendices, Evidence Requirements, PINs, TS Modules, Monitoring Reports, Agreements	Programme Operator Project Coordinators Plan Vivo Auditors Files to be uploaded to website
Nakau Project Data - Loru	Project Development & Implementation Data	All operational documents and files (including drafts, supporting information, correspondence) relating to project development and implementation	Programme Operator Executive Project Coordinator Loru
Nakau Board Information	Programme Governance Data	Company and board documents, compliance, financials, agendas, minutes, correspondence	Programme Operator Executive Programme Operator Board

This project will update the document database with revisions of technical data in sync with the 5-yearly (max) Project Monitoring Periods. This will include PD revisions, issued as updated PD versions and validated as PD elements through a second party validation audit by the Nakau Programme Operator. Each Project Monitoring Report is required to include any PD revisions, with such revisions subjected to a validation audit (of the revised PD element) as the first step in a combined two-phase, third-party validation/verification audit process. Phase 1: an audit is undertaken by a Plan Vivo-approved auditor nominated by the Nakau Programme; Phase 2: the updated (and validated) PD, and (verified) Project Monitoring Report will then subjected to technical review by the Plan Vivo TAC prior to new credit issuance and uploading updated PD to the Plan Vivo website and Plan Vivo project documentation register.

6.2 REPORTING AND VERIFICATION

According to section 5.13 of the ISO 14064-2 Standard (2006):

The project proponent shall prepare and make available to intended users a GHG report. The GHG report

- *Shall identify the intended use and intended user of the GHG report, and*
- *Shall use a format and include content consistent with the needs of the intended user.*

If the project proponent makes a GHG assertion to the public claiming conformance to this part of ISO 14064, the project proponent shall make the following available to the public:

a) An independent third-party validation or verification statement, prepared in accordance with ISO 14064-3, or

b) A GHG report that includes as a minimum:

- 1) The name of the project proponent;*
- 2) The GHG program(s) to which the GHG project subscribes;*
- 3) A list of GHG assertions, including a statement of GHG emission reductions and removal enhancements stated in tonnes of CO₂e;*
- 4) A statement describing whether the GHG assertion has been validated or verified, including the type of validation or verification and level of assurance achieved;*
- 5) A brief description of the GHG project, including size, location, duration and types of activities;*
- 6) A statement of the aggregate GHG emissions and/or removals by GHG sources, sinks and reservoirs for the GHG project that are controlled by the project proponent, stated in tonnes of CO₂e, for the relevant time period (e.g. annual, cumulative to date, total);*
- 7) A statement of the aggregate GHG emissions and/or removals by GHG sources, sinks and reservoirs for the baseline scenario, stated in tonnes of CO₂e for the relevant time period;*
- 8) A description of the baseline scenario and demonstration that the GHG emission reductions or removal enhancements are additional to what would have happened in the absence of the project;*
- 9) As applicable, an assessment of permanence;*
- 10) A general description of the criteria, procedures or good practice guidance used as a basis for the calculation of project GHG emission reductions and removal enhancements;*

11) The date of the report and time period covered.

According to section 5.12 of the ISO 14064-2 Standard (2006):

The project proponent should have the GHG project validated and/or verified.

If the project proponent requests validation and/or verification of the GHG project, a GHG assertion shall be presented by the project proponent to the validator or verifier.

The project proponent should ensure that the validation or verification conforms to the principles and requirements of ISO 14064-3.

6.2.1 MRV Overview

The NMF states: *The Nakau Programme is an integrated programme of activities applying payments for ecosystem services to environmental protection and enhancement, covering a range of activity types implemented over a range of geographical areas. The core measurement, reporting and verification (MRV) procedures of the Nakau Programme function by means of ecosystem service measurement methodologies, Project Idea Notes (PIN), Project Descriptions (PD), and Project Monitoring Reports.*

The ecosystem service measurement methodologies include the Nakau Methodology Framework (a generic methodology) in combination with Technical Specification Modules for each activity type (hereafter referred to as 'Nakau Programme methodologies').

Each Project Document¹³ shall be presented in two parts:

- A. *Part A: General Description (applying the Nakau Methodology Framework).*
- B. *Part B: Technical Description (applying the relevant Technical Specification Module).*

Each Project Monitoring Report shall present evidence to support an ecosystem service outcome assertion consistent with the standard and methodology applied.

The PD is presented in two parts:

Loru Forest Project – Project Description (PD): Part A – General Description D3.2a v1.0 20151009 (this document)

Loru Forest Project – Project Description (PD): Part B – PES Accounting Description D3.2b v1.0 20151009

¹³ Project Documents are those listed under the heading 'Project Documents' in Table 5.1 of this Nakau Methodology Framework.

6.2.2 Validation And Verification

According to Section 5 of the Plan Vivo Standard (2013. P17):

5.9. *A monitoring plan must be developed for each project intervention which specifies:*

5.9.5. *How the validity of any assumptions used in technical specifications are to be tested*

The NMF states: *The Nakau Programme methodologies shall be third-party validated to an internationally recognised standard covering the scope of the activity, and applying the validation rules of that standard.*

The Project Description (PD) for the first activity instance of an activity type shall be third-party validated to the same standard as the relevant Nakau Programme methodology applied, covering the scope of the activity, and applying the validation rules of that standard.

The Project Description (PD) for all subsequent activity instances of an activity type shall be consistent with the validated PD of the first activity instance (and the relevant Technical Specifications Module), and validated by the Programme Operator of the Nakau Programme.

Project Monitoring Reports shall be third-party verified to the same standard as the validated methodologies applied.

This PD is the first activity instance for the Nakau Programme activity class (C - carbon), activity type (AD-DtPF) Avoided Deforestation – Deforestation to Protected Forest. This involves the first completed application of a Technical Specifications Module that has not been applied previously. As such this document shall be validated by a third party through the Plan Vivo validation system. The validation of this document is occurring concurrently with a verification audit of the first monitoring report for this project.

6.2.3 Integrated Projects

The NMF states: *Integrated projects applying more than one activity type shall submit a Project Document for each activity type. For example, an integrated project combining three different activity types within the 'Carbon' activity class (C) would submit three separate Project Documents for each document type as follows:*

PIN Documentation

- *Loru Agroforestry Carbon Project: Project Idea Note (PIN) Part A Overview. D3.1*

v1.0, 20140428.

- *Loru Agroforestry Carbon Project: Project Idea Note (PIN) Part B (i) (C) 2.1 (AD-DtPF). D3.1.C.2.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Idea Note (PIN) Part B (ii) (C) 3.1 (AR-Af). D3.1.C.3.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Idea Note (PIN) Part B (iii) (C) 3.2 (AR-NR). D3.1.C.3.2 v1.0, 20140428.*

PD Documentation

- *Loru Agroforestry Carbon Project: Project Description (PD) Part A. D3.2.C.2.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Idea Note (PIN) Part B (i) (C) 2.1 (AD-DtPF). D3.1.C.2.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Description (PD) Part B (ii). (C) 3.1 (AR-Af). D3.2.C.3.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Description (PD) Part B (iii). (C) 3.2 (AR-NR). D3.2.C.3.2 v1.0, 20140428.*

Project Monitoring Reports

- *Loru Agroforestry Carbon Project: Project Monitoring Report 1 Part A. D3.3.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Idea Note (PIN) Part B (i) (C) 2.1 (AD-DtPF). D3.1.C.2.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Monitoring Report 1 Part B (ii). (C) 3.1 (AR-Af). D3.3.C.3.1.1 v1.0, 20140428.*
- *Loru Agroforestry Carbon Project: Project Monitoring Report 1 Part B (iii). (C) 3.2 (AR-NR). D3.3.C.3.2.1 v1.0, 20140428.*

To avoid unnecessary duplication, Project Coordinators have the option to provide detailed PIN information in one of the three PIN documents and refer to that document in the other two for data elements consistent throughout. This approach also allows projects to evolve greater integration through time, where initially implemented with one activity type, and subsequently upgraded by adding further activity types.

Only one Technical Specification is currently applied to this project, but a second activity type is potentially anticipated: Afforestation, Reforestation – Agroforestry (AR-AF).

The NMF states: *The PIN and PD for the first activity instance for each activity type shall be third party validated to the most recent version of the Plan Vivo Standard. All subsequent activity instances for validated activity types (i.e. where both PIN and PD have been third party validated) shall be validated by the Programme Operator of the Nakau Programme.*

N/A.

7. Managing Data Quality

According to section 5.9 of the ISO 14064-2 Standard (2006):

The project proponent shall establish and apply quality management procedures to manage data and information, including the assessment of uncertainty, relevant to the project and baseline scenario.

The project proponent should reduce, as far as is practical, uncertainties related to the quantification of GHG emission reductions or removal enhancements.

According to the Verified Carbon Standard (2011):

The project proponent shall ensure that all documents and records are kept in a secure and retrievable manner for at least two years after the end of the project crediting period.

For validation, the project proponent shall make available to the validation/verification body the project description, proof of title and any requested supporting information and data needed to support statements and data in the project description and proof of title.

For verification, the project proponent shall make available to the validation/verification body the project description, validation report, monitoring report applicable to the monitoring period and any requested supporting information and data needed to evidence statements and data in the monitoring report.

7.1 DATA MANAGEMENT PROCEDURES

7.1.1 Project Description Information Platform

The NMF states: *This methodology requires that project description data input fields correspond to all project description elements required for Part A of the PD as specified in the Nakau Methodology Framework (this document).*

All data from Part A and Part B of this PD is stored in the Nakau Programme Information Platform. This consists of data stored electronically in the following locations:

- Local computers of three Nakau Programme Pty Ltd board members (with continuous offsite backups)
- Intranet of Live & Learn International (cloud storage)
- Dropbox (cloud storage) folders used by:
 - Three Nakau Programme Pty Ltd board members
 - The Project Coordinator office in Vanuatu

- Plan Vivo Foundation information platform (web based document database for project documentation).
- Portable hard drive located in the Nakau Programme Pty Ltd office in Alice Springs.
- Portable hard drive located in the Nakau Programme Pty Ltd office in Takaka, New Zealand.

Hard copies of these PD documents will be stored in the following locations:

- Project Owner office, Loru, Santo, Vanuatu
- Project Coordinator office, Port Vila, Vanuatu
- Programme Operator office, Alice Springs, Australia
- Programme Operator office, Takaka, New Zealand.

7.1.2 Project Ecosystem Service Information Platform

The NMF states: *This methodology requires that project description data input fields correspond to all ecosystem service measurement elements required for Part B of the PD, as specified in the relevant Technical Specifications Module/s applied.*

Electronic copies of all data used in Part B of this PD has been stored in the following locations:

- Local computers of three Nakau Programme Pty Ltd board members (with continuous offsite backups)
- Intranet of Live & Learn International (cloud storage)
- Dropbox (cloud storage) folders used by:
 - Three Nakau Programme Pty Ltd board members
 - The Project Coordinator office in Vanuatu
- Portable hard drive located in the Nakau Programme Pty Ltd office in Takaka, New Zealand.

7.1.3 Project Monitoring Information Platform

The NMF states: *This methodology requires project monitoring to be conducted in two forms:*

- *Project Management Reporting*
- *Project Monitoring Reporting*

Project Management Reports are completed annually, providing transparent details of project management activities and issues.

Project Monitoring Reports are completed every 5 years and are used for verification reporting and crediting purposes. Project Monitoring Reports shall contain information and

data inputs as specified in the Project Monitoring section of the relevant Technical Specifications Module/s applied.

Electronic copies of all project monitoring data has been stored in the following locations:

- Local computers of three Nakau Programme Pty Ltd board members (with continuous offsite backups)
- Intranet of Live & Learn International (cloud storage)
- Dropbox (cloud storage) folders used by:
 - Three Nakau Programme Pty Ltd board members
 - The Project Coordinator office in Vanuatu
- Portable hard drive located in the Nakau Programme Pty Ltd office in Takaka, New Zealand.

7.2 DATA STORAGE AND SECURITY

The NMF states: *All data collected associated with Parts A and B of the PD and Monitoring Reports will be archived electronically and be kept at for at least 2 years after the end of the Project Period.*

Data archiving will take both electronic and paper forms, and copies of all data shall be provided to and held by the Project Owner, Project Coordinator, and Programme Operator.

All electronic data and reports will also be copied on durable media such as CDs and copies of the CDs are to be stored in multiple locations. Data storage media (e.g. portable hard drives, CDs) shall be updated (renewed) at 10-year intervals.

The archives will include:

- *Copies of all original field measurement data, laboratory data, data analysis spreadsheets;*
- *Estimates of all ecosystem service outcome changes and corresponding calculation spreadsheets;*
- *GIS products; and*
- *Copies of project PD and monitoring reports.*

Data security for project documentation and data files is provided by means of multiple site electronic data storage as described in sections 7.1.1, 7.1.2 and 7.1.3 above.

The NMF states: *All projects in the Nakau Programme shall prepare a Standard Operating Procedure (SOP) for data storage and security arrangements. At a minimum the SOP - Data Storage shall have the following attributes:*

Project Owner

- *Hard copy of all final documents*
- *Hard copy off-site backup of all final documents*
(It is recommended that Project Owners also have access to electronic copies of all final documents where possible and practicable)

Project Coordinator

- *Electronic master copy of all final documents*
- *Electronic copy of all project-related technical data*
- *Electronic on-site back up of all project-related technical data*
- *Electronic off-site backup of all final documents*
- *Electronic off-site back up of all project-related technical data*
- *Hard copy master of all final documents*
- *Hard copy off-site backup of all final documents*

Programme Operator

- *Electronic master copy of all final documents*
- *Electronic off-site backup of all final documents*
- *Hard copy master of all final documents*
- *Hard copy off-site backup of all final documents.*

The data security requirements of this section has been fulfilled pursuant to information provided in Sections 7.1.1, 7.1.2, and 7.1.3 above.

8. Adding Subsequent Projects To The Nakau Programme

According to the VCS Standard v3, 2011:

A grouped project shall be described in a single project description, which shall contain the following (in the content required for non-grouped projects):

- 1. A delineation of the geographic area(s) within which all project activity instances shall occur. Such area(s) shall be defined by geodetic polygons as set out in Section 3.11 [of the VCS Standard V3, 2011].*
- 2. One or more determinations of the baseline for the project activity in accordance with the requirements of the methodology applied to the project.*
- 3. One or more demonstrations of additionality for the project activity in accordance with the requirements of the methodology applied to the project.*
- 4. One or more sets of eligibility criteria for the inclusion of new project activity instances at subsequent verification events.*
- 5. A description of the central GHG information system and controls associated with the project and its monitoring.*

Note – Where the project includes more than one project activity, the above requirements shall be addressed separately for each project activity, except for the delineation of geographic areas and the description of the central GHG information system and controls, which shall be addressed for the project as a whole.

8.1 NEW ENTRANT CRITERIA

8.1.1 New Entrant Project Owners

The NMF states: *New projects entering the Nakau Programme are required to apply to the Programme Operator for enrolment in the Programme. The enrolment application must contain the following:*

- Signed Project Development Agreement between Project Owner and a licensed Project Coordinator (i.e. Project Coordinator entity that holds a License Agreement with the Programme Operator).*
- Project Idea Note (PIN) using the Nakau Programme PIN Template.*

This project has a Project Development Agreement and PIN and complies with all new entrant criteria of the Nakau Programme. This project is a pilot project initiated by the Nakau Programme.

8.1.2 New Entrant Project Coordinators

The NMF states: *Project Coordinator entities seeking to enrol in the Nakau Programme are required to apply to the Programme Operator for enrolment in the Programme. The enrolment application must contain the following:*

- *Evidence of experience in undertaking projects of a similar nature.*
- *Evidence of capacity to meet the requirements of the Nakau Programme including the technical and community elements of the Nakau Methodology Framework and the relevant Technical Specifications to be applied.*

This project is a pilot project initiated by the Nakau Programme and is in compliance with all elements of this requirement.

The NMF states: *There is an option for prospective Project Coordinators to undertake a brief training course on the Nakau Programme, to help them build capacity in the delivery of project coordination services to Project Owners.*

In some situations the Project Owner and the Project Coordinator may be the same entity. This may occur in projects that involve provision of environmental management services (e.g. riparian habitat enhancement) to be financed through PES sales, but where there is no opportunity cost to a resource owner.

This project is a pilot project initiated by the Nakau Programme and is in compliance with all elements of this requirement.

8.1.3 Project Eligibility Criteria

The NMF states: *All new entrant projects shall fulfil the following:*

- *Meet the eligibility criteria of the Nakau Programme including the Nakau Methodology Framework and the relevant Technical Specifications Module/s.*
- *Apply the Nakau Methodology Framework and any relevant Technical Specifications Modules for the development of the PD.*
- *Submit the PD for 3rd party validation for the first project for each activity type.*
- *Submit the PD for 2nd party validation by the Programme Operator for projects that are not the first project for that activity type.*
- *Submit all Monitoring Reports for 3rd-party verification.*

This project is a pilot project initiated by the Nakau Programme and is in compliance with all elements of this requirement.

8.2 AVOIDING DOUBLE COUNTING

The NMF states: *Nakau Programme activities shall be additional to regulatory requirements in the host jurisdiction. Should a host jurisdiction elect to undertake a new compliance or voluntary payment for ecosystem service activity, and if that activity overlaps with the activity/ies of the Nakau Programme, a project enrolled in the Nakau Programme affected by such jurisdictional activity would either:*

- a. *Continue as an activity under the Nakau Programme where the jurisdiction makes a declaration that it will not claim the same PES units for the jurisdictional level PES activity, either by cancelling an equivalent number of jurisdictional units (if jurisdictional units have already been issued) or not issuing equivalent jurisdictional units, or*
- b. *Cease as an activity under the Nakau Programme and yet continuing the long-term environmental protection obligations originally encumbered under the Nakau Programme, but doing so under the jurisdictional instrument, or*
- c. *Continuing as an activity under the Nakau Programme, and being issued special off-registry units by the Nakau Programme Operator requiring a declaration to the buyer that such units represent ecosystem service outcome delivery that will also be claimed by the jurisdiction. Option C is applicable only where the Programme Operator judges that a situation exists whereby the ecosystem service outcomes represented by units claimed by the jurisdiction would not have occurred without the operation of the Nakau Programme (e.g. where the jurisdiction participates in an intergovernmental PES mechanism without instituting a domestic incentive mechanism capable of causing behaviour change relevant to the ecosystem services in question).*

Vanuatu is undertaking a process of REDD+ Readiness but has not yet established a mechanism for national GHG accounting. LLV is working closely with the Government of Vanuatu to avoid any double counting.

8.3 ACTIVITY TYPE

The NMF states: *New or existing projects in the Nakau Programme have the option to add activity types to the project at any time by supplying to the Programme Operator a PD (Part B) for the new activity type using the relevant Technical Specifications Module. Each additional PD (Part B) will be subject to a 2nd-party validation by the Programme Operator except for the first activity instance for that activity type where 3rd party validation is required. Once validated the new activity type may be implemented and monitored as with*

all activity types.

This project may elect to add an additional activity type (Afforestation, Reforestation – Agroforestry). This project may also revise the project baseline at second verification to include lands intended for inclusion inside the eligible forest area for avoided deforestation activity, but which was not subjected to an inventory survey during project development of this pilot project. This specifically refers to Zone B shown in maps in Section 2.4 of this document.

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Appendices

APPENDIX 1: DEFINITIONS

A/R	Afforestation/Reforestation
Activity Type	Specifically defined carbon project activity combining a reference activity and a project activity to generate carbon benefits
Afforestation	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not classified as forest (FAO 2010). See Explanatory Note below.
AFOLU	Agriculture, Forestry and Other Land Uses
Baseline Scenario	Carbon balance arising from baseline (BAU) activities
BAU	Business-as-Usual
Carbon balance	Sum of carbon in a system into account carbon stored in reservoirs, emissions of carbon from sources, and sequestration of carbon into sinks
Carbon benefits	Net CO ₂ e benefits arising from total net avoided emissions and net enhanced removals
Carbon flux	Movement of carbon through different carbon pools
Carbon pool	Component of the earth system that stores carbon
Carbon reservoir	Carbon pool that stores carbon for long time scales
Carbon sink	Carbon pool that absorbs/sequesters carbon dioxide by transforming gaseous CO ₂ e into a carbon-based liquid or solid
Carbon source	Carbon pool that emits carbon from a liquid or solid form into a gas
CCB	Climate Community and Biodiversity Standard
CDM	Clean Development Mechanism
CO ₂ e	Carbon dioxide equivalent: translation of non-CO ₂ GHG tonnes into equivalent CO ₂ tonnes through conversion using global warming potential of non-CO ₂ GHG
Compliance Space	What is contained within the GHG accounting boundary of a compliance GHG accounting regime (e.g. Kyoto Protocol, NZ ETS)
CSR	Corporate Social Responsibility
Deforestation	The conversion of forest to other land use or the long-term reduction of the tree canopy cover below the minimum 10 percent threshold (FAO 2010). See Explanatory Note below.
Eligible Area	Subset of Forest Area comprising area of forest eligible for crediting
Enhanced removals	Carbon sequestration assisted by management intervention to a level above what would occur naturally
Ex ante	Before the event (referring to future activities)
Ex post	After the fact (referring to past activities)
Forest Area	Subset of Project Area comprising forest land within Project Area
Forest Degradation	The reduction of the capacity of a forest to provide goods and services.
Forest Land	Land spanning more than 0.5 hectares with trees higher than 5 meters and a

	canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use (FAO 2010). See Explanatory Note below.
GHG	Greenhouse Gas
GIS	Geographical Information System
GPG	Good Practice Guidance
HWP	Harvested Wood Products
IFM	Improved Forest Management
IFM-LtPF	Improved forest management – logged to protected forest activity type
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standards Organisation
License Agreement	The License Agreement is a contract between the Programme Operator and the Project Coordinator defining the terms and conditions for <ul style="list-style-type: none"> a. Project Coordinator services to Project Owners and b. Project Coordinator responsibilities to the Programme Operator.
LULUCF	Land Use, Land Use Change and Forestry
MRV	Measurement/Monitoring Reporting and Verification
Non-Forest Land	All land that is not classified as Forest or Other wooded land (FAO 2010). See Explanatory Notes for 'Other Land' below). Same definition as 'Other Land'.
Operational Forest Area	Term used in sustainable forest management plans delimiting area eligible for timber harvesting
Other Land	All land that is not classified as Forest or Other wooded land (FAO 2010). See Explanatory Notes below). Same definition as 'Non-Forest Land'.
Other Wooded Land	Land not classified as Forest, spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use (FAO 2010). See Explanatory Note below.
Participants	The adult land/resource rights holders involved in the project – including, but not limited to the project owner group board/committee members.
PD	Project Description
PDD	Project Design Document (synonymous with PD in this document)
PES	Payment for Ecosystem Services
PES Agreement	The PES Agreement is a contract between the Project Coordinator and the Project Owner defining the terms of project development and project coordination services provided to the Project Owner, and specifying rights and responsibilities of the parties over a specified duration. The PES Agreement is also the legal foundation on which the Project Owner and Project Coordinator implement the project and distribute costs and benefits associated with the project.
<i>plan vivo</i>	An electronic or handwritten spatial land management plan, voluntarily produced and owned by a community, community sub-group or individual smallholder, which can form the basis of an agreement to provide payments or other forms of assistance for ecosystem services. See also: Conservation/Land Management Plan (or equivalent)

Project Area	Land ownership boundary within which carbon project will take place
Project Coordinator	The entity assisting the Project Owner to develop and implement the forest carbon project.
Project Governing Board	Subset of the Project Owner community appointed by the Project Owner community to govern the project in the interests of the Project Owner community.
Conservation/Land Management Plan (or equivalent)	The Conservation/Land Management Plan (or equivalent) is the <i>plan vivo</i> for the project
Project Management Workshop	Project Management Workshops are held annually between the Project Coordinator and the Project Owner and involve an ex post review and of completed project management activities undertaken in the previous calendar year of the project.
Project Monitoring Workshop	Project Monitoring Workshops are held periodically (maximum every 5 years) between the Project Coordinator and the Project Owner. They involve a review and approval (by the Project Owner) of the Project Monitoring Report (including PES Unit assertion) covering the Project Monitoring Period subject to the Project Monitoring Report.
Project Scenario	Carbon balance arising from project activities
Programme Operator	The entity that owns and administers the Nakau Programme. This entity is responsible for safeguarding the integrity of the Nakau Programme and its role is to a) govern the Nakau Programme; b) own the IP associated with Nakau Programme methodologies and protocols; c) be the beneficiary of any covenant on the land title of the Project Owner that protects the forest; d) own the buffer credits of the Nakau Programme; e) administer the buffer account with the registry; and f) act as the guardian of the Nakau Programme.
Project Owner	The owner of the forest and forest carbon rights subject to the project
Project Proponent	The Project Owner and Project Coordinator combined.
Project Scenario	Carbon balance arising from Project activities (carbon project change from BAU)
Protected Forest	Halting or avoiding activities that would reduce carbon stocks and managing a forest to maintain high and/or increasing carbon stocks
RED	Reducing Emissions from Deforestation
REDD	Reducing Emissions from Deforestation and Degradation
Reforestation	Re-establishment of forest through planting and/or deliberate seeding on land classified as forest (FAO 2010). See Explanatory Note below.
REL	Reference Emission Level: rate of GHG emissions under BAU
Removals	Carbon sequestered from the atmosphere into a carbon sink
SFM	Sustainable Forest Management
UNFCCC	United Nations Framework Convention on Climate Change
Validation	Independent audit of Project Description (PD) and/or Methodology
VCS	Verified Carbon Standard
Verification	Independent audit of Project Monitoring Reports

Explanatory Notes:

Forestry Definitions

All definitions and explanatory notes relating to forest and non-forest land, afforestation, reforestation, deforestation, forest degradation are taken from the FAO Global Forest Resources Assessment 2010.

Forest Land:

1. Forest is determined both by the presence of trees and the absence of other predominant land uses. The trees should be able to reach a minimum height of 5 meters in situ.
2. Includes areas with young trees that have not yet reached but which are expected to reach a canopy cover of 10 percent and tree height of 5 meters. It also includes areas that are temporarily unstocked due to clear-cutting as part of a forest management practice or natural disasters, and which are expected to be regenerated within 5 years. Local conditions may, in exceptional cases, justify that a longer time frame is used.
3. Includes forest roads, firebreaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of specific environmental, scientific, historical, cultural or spiritual interest.
4. Includes windbreaks, shelterbelts and corridors of trees with an area of more than 0.5 hectares and width of more than 20 meters.
5. Includes abandoned shifting cultivation land with a regeneration of trees that have, or is expected to reach, a canopy cover of 10 percent and tree height of 5 meters.
6. Includes areas with mangroves in tidal zones, regardless whether this area is classified as land area or not.
7. Includes rubber-wood, cork oak and Christmas tree plantations.
8. Includes areas with bamboo and palms provided that land use, height and canopy cover criteria are met.
9. Excludes tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations and agroforestry systems when crops are grown under tree cover. Note: Some agroforestry systems such as the "Taungya" system where crops are grown only during the first years of the forest rotation should be classified as forest.

Other Wooded Land

1. The definition above has two options:
 - The canopy cover of trees is between 5 and 10 percent; trees should be higher than 5 meters or able to reach 5 meters in situ.
 - The canopy cover of trees is less than 5 percent but the combined cover of shrubs, bushes and trees is more than 10 percent. Includes areas of shrubs and bushes where no trees are present.
2. Includes areas with trees that will not reach a height of 5 meters in situ and with a canopy cover of 10 percent or more, e.g. some alpine tree vegetation types, arid zone mangroves, etc.

3. Includes areas with bamboo and palms provided that land use, height and canopy cover criteria are met.

Other Land

1. Includes agricultural land, meadows and pastures, built-up areas, barren land, land under permanent ice, etc.
2. Includes all areas classified under the sub-category "Other land with tree cover".

Afforestation

1. Implies a transformation of land use from non-forest to forest.

Reforestation

1. Implies no change of land use.
2. Includes planting/seeding of temporarily unstocked forest areas as well as planting/seeding of areas with forest cover.
3. Includes coppice from trees that were originally planted or seeded.
4. Excludes natural regeneration of forest.

Deforestation

1. Deforestation implies the long-term or permanent loss of forest cover and implies transformation into another land use. Such a loss can only be caused and maintained by a continued human-induced or natural perturbation.
2. Deforestation includes areas of forest converted to agriculture, pasture, water reservoirs and urban areas.
3. The term specifically excludes areas where the trees have been removed as a result of harvesting or logging, and where the forest is expected to regenerate naturally or with the aid of silvicultural measures. Unless logging is followed by the clearing of the remaining logged-over forest for the introduction of alternative land uses, or the maintenance of the clearings through continued disturbance, forests commonly regenerate, although often to a different, secondary condition.
4. In areas of shifting agriculture, forest, forest fallow and agricultural lands appear in a dynamic pattern where deforestation and the return of forest occur frequently in small patches. To simplify reporting of such areas, the net change over a larger area is typically used.
5. Deforestation also includes areas where, for example, the impact of disturbance, over utilization or changing environmental conditions affects the forest to an extent that it cannot sustain a tree cover above the 10 percent threshold.

IUCN Definitions

All definitions for IUCN categories are taken from IUCN RED List:

http://www.iucnredlist.org/static/categories_criteria_3_1#categories

Critically Endangered (CR)

A taxon is Critically Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing an extremely high risk of extinction in the wild:

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of $\geq 90\%$ over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following:
 - (a) direct observation
 - (b) an index of abundance appropriate to the taxon
 - (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
 - (d) actual or potential levels of exploitation
 - (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.
2. An observed, estimated, inferred or suspected population size reduction of $\geq 80\%$ over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.
3. A population size reduction of $\geq 80\%$, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.
4. An observed, estimated, inferred, projected or suspected population size reduction of $\geq 80\%$ over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence estimated to be less than 100 km², and estimates indicating at least two of a-c:
 - a. Severely fragmented or known to exist at only a single location.
 - b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.
 - c. Extreme fluctuations in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) number of locations or subpopulations

(iv) number of mature individuals.

2. Area of occupancy estimated to be less than 10 km², and estimates indicating at least two of a-c:

- a. Severely fragmented or known to exist at only a single location.
- b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.
- c. Extreme fluctuations in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) number of locations or subpopulations
 - (iv) number of mature individuals.

C. Population size estimated to number fewer than 250 mature individuals and either:

1. An estimated continuing decline of at least 25% within three years or one generation, whichever is longer, (up to a maximum of 100 years in the future) OR
2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):
 - (a) Population structure in the form of one of the following:
 - (i) no subpopulation estimated to contain more than 50 mature individuals, OR
 - (ii) at least 90% of mature individuals in one subpopulation.
 - (b) Extreme fluctuations in number of mature individuals.

D. Population size estimated to number fewer than 50 mature individuals.

E. Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or three generations, whichever is the longer (up to a maximum of 100 years).

Endangered (EN)

A taxon is Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a very high risk of extinction in the wild:

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of $\geq 70\%$ over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following:
 - (a) direct observation
 - (b) an index of abundance appropriate to the taxon
 - (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
 - (d) actual or potential levels of exploitation
 - (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.
2. An observed, estimated, inferred or suspected population size reduction of $\geq 50\%$ over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have

ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

3. A population size reduction of ≥50%, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.

4. An observed, estimated, inferred, projected or suspected population size reduction of ≥ 50% over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence estimated to be less than 5000 km², and estimates indicating at least two of a-c:

- a. Severely fragmented or known to exist at no more than five locations.
- b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.
- c. Extreme fluctuations in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) number of locations or subpopulations
 - (iv) number of mature individuals.

2. Area of occupancy estimated to be less than 500 km², and estimates indicating at least two of a-c:

- a. Severely fragmented or known to exist at no more than five locations.
- b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.
- c. Extreme fluctuations in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) number of locations or subpopulations
 - (iv) number of mature individuals.

C. Population size estimated to number fewer than 2500 mature individuals and either:

1. An estimated continuing decline of at least 20% within five years or two generations, whichever is longer, (up to a maximum of 100 years in the future) OR

2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):

- (a) Population structure in the form of one of the following:

- (i) no subpopulation estimated to contain more than 250 mature individuals, OR
- (ii) at least 95% of mature individuals in one subpopulation.

(b) Extreme fluctuations in number of mature individuals.

D. Population size estimated to number fewer than 250 mature individuals.

E. Quantitative analysis showing the probability of extinction in the wild is at least 20% within 20 years or five generations, whichever is the longer (up to a maximum of 100 years).

Vulnerable (VU)

A taxon is Vulnerable when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a high risk of extinction in the wild:

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of $\geq 50\%$ over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are: clearly reversible AND understood AND ceased, based on (and specifying) any of the following:

- (a) direct observation
- (b) an index of abundance appropriate to the taxon
- (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
- (d) actual or potential levels of exploitation
- (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

2. An observed, estimated, inferred or suspected population size reduction of $\geq 30\%$ over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

3. A population size reduction of $\geq 30\%$, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.

4. An observed, estimated, inferred, projected or suspected population size reduction of $\geq 30\%$ over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence estimated to be less than 20,000 km², and estimates indicating at least two of a-c:

- a. Severely fragmented or known to exist at no more than 10 locations.
- b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.

c. Extreme fluctuations in any of the following:

- (i) extent of occurrence
- (ii) area of occupancy
- (iii) number of locations or subpopulations
- (iv) number of mature individuals.

2. Area of occupancy estimated to be less than 2000 km², and estimates indicating at least two of a-c:

- a. Severely fragmented or known to exist at no more than 10 locations.
- b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.
- c. Extreme fluctuations in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) number of locations or subpopulations
 - (iv) number of mature individuals.

C. Population size estimated to number fewer than 10,000 mature individuals and either:

- 1. An estimated continuing decline of at least 10% within 10 years or three generations, whichever is longer, (up to a maximum of 100 years in the future) OR
- 2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):
 - (a) Population structure in the form of one of the following:
 - (i) no subpopulation estimated to contain more than 1000 mature individuals, OR
 - (ii) all mature individuals are in one subpopulation.
 - (b) Extreme fluctuations in number of mature individuals.

D. Population very small or restricted in the form of either of the following:

- 1. Population size estimated to number fewer than 1000 mature individuals.
- 2. Population with a very restricted area of occupancy (typically less than 20 km²) or number of locations (typically five or fewer) such that it is prone to the effects of human activities or stochastic events within a very short time period in an uncertain future, and is thus capable of becoming Critically Endangered or even Extinct in a very short time period.

E. Quantitative analysis showing the probability of extinction in the wild is at least 10% within 100 years.

APPENDIX 2 – PES AGREEMENT

Supplied separately

APPENDIX 3 – LICENSE AGREEMENT

Supplied separately

APPENDIX 4 – PROGRAMME AGREEMENT

Supplied separately

APPENDIX 5 – PROJECT DEVELOPMENT AGREEMENT

Supplied separately

APPENDIX 6 - CCA REGISTRATION

Supplied separately

APPENDIX 7 – SALES AND PURCHASE AGREEMENT

Supplied separately

APPENDIX 8 – LORU MANAGEMENT PLAN

Supplied separately

APPENDIX 9 – EDUCATION PROGRAMME REPORT

Supplied separately

APPENDIX 10 – LORU CARBON BUDGET & PRICING

Supplied separately

APPENDIX 11 – SER-THIAC BUSINESS PLAN

Supplied separately

APPENDIX 12 – EVIDENCE OF PARTICIPATION

Figure 12.1 Loru landowners participating in Loru Forest Project business management consultation workshop, 2014.



Figure 12.2 Loru Forest Inventory team comprised of Loru landowners and Nakau Programme staff & consultants.



Figure 12.3 Loru Forest Project Community Planting Day. Landowners and Live & Learn staff.



Figure 12.4 Nakau Programme Team 2015 with Nakau Staff and landowners from the Loru (Vanuatu) and Drawa (Fiji) projects.



Figure 12.5 Loru landowner presenting community understanding of business governance and financial management protocols required for the Loru Forest Project.

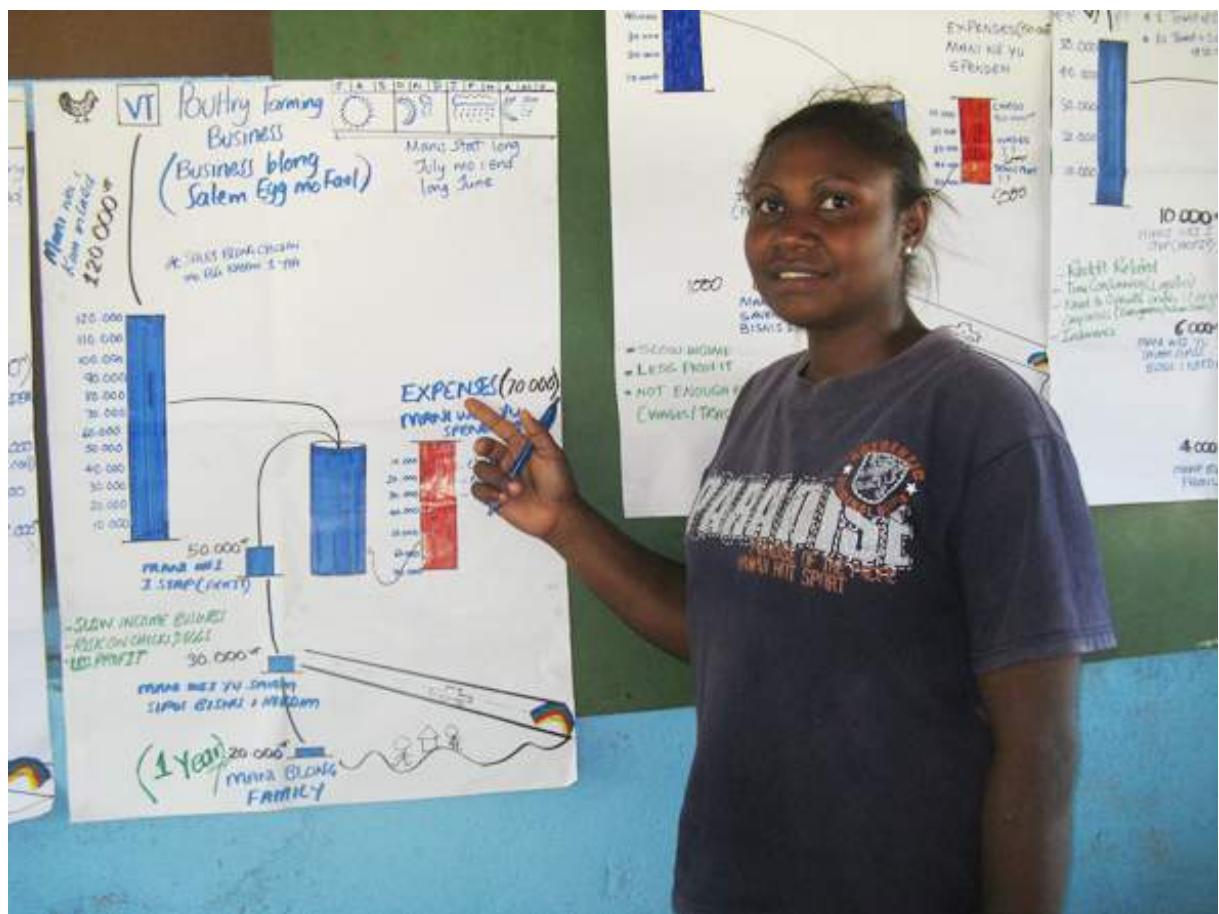


Figure 12.6 Building the community agroforestry nursery 2015.



Figure 12.7 Loru Forest Project workshop on community business management and governance 2015.



Figure 12.8 Loru landowner participation in community business management and governance workshop 2014.



APPENDIX 13 – PROJECT DATABASE TEMPLATE

The Nakau Programme has an internal and external (public) project database located on Dropbox with the following structure:

Internal Project Database

Dropbox Parent Folders:

- ▶  Nakau Project Data – Drawa
- ▶  Nakau Project Data – Loru
- ▶  Nakau Project Data – Sasaboe

Subfolders in Nakau Project Data – Loru:

Name
▶  Loru Accounting
▶  Loru Agreements
▶  Loru Audit Reports
▶  Loru Correspondence
▶  Loru Mapping
▶  Loru Methodologies
▶  Loru Monitoring Reports
▶  Loru PD Part A
▶  Loru PD Part A Appendices
▶  Loru PD Part A Evidence Requirements
▶  Loru PD Part B
▶  Loru PD Part B Appendices
▶  Loru PD Part B Evidence Requirements
▶  Loru PIN

Access to the 'Nakau Project Data – Loru' dropbox folder is provided to:

- Nakau Project Owner
- Nakau Project Coordinator
- Nakau Programme Operator
- Technical service providers where necessary

External Project Database

The Loru Forest Project also has an external (public) database located on Dropbox to facilitate transparency to Plan Vivo, auditors, and buyers.

The external project database (accessible to Plan Vivo, auditors, and buyers) has the following structure:

►  **Nakau Information Platform**

Subfolders in the Nakau Information Platform:

Name
►  Loru Audit Reports
►  Loru Monitoring Reports
►  Loru PD
►  Loru PD Part A Appendices
►  Loru PD Part A Evidence Requirements
►  Loru PD Part B Appendices
►  Loru PD Part B Evidence Requirements

This dropbox database acts as a backup to the Internal Project Database.

APPENDIX 14 – FUNDING SOURCES

The project has been funded by a grant from the European Union. This is part of the development of the Pacific regional Nakau Programme in the framework "Pilot effective governance models and implementation of REDD in Small Islands Development States to provide equitable benefits for forest dependent local and indigenous people."