



Sirebe Forest Carbon Project

Babatana Region, Choiseul Province, Solomon Islands

Project Design Document

Part A: General Information

Version 1.3
28/04/2026



A project of the Nakau Programme in collaboration with the Natural Resources Development Foundation
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PDD prepared by Natural Resources Development Foundation and Nakau

Cover Photo: Wilko Bosma



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Document History

PDD Version	Version Details/Changes	Date
1.0	First PDD submissions	11/03/2021
1.1	Reviewed PDD Version	18/05/2021
1.2	Validated PDD	17/06/2021
1.3	<ul style="list-style-type: none"> Removal of references to the Babatana Rainforest Conservation Project (Grouped Project) and Sirebe as the inception project in the whole document Updated Carbon benefits (table 2.6) Update of Ecosystem Baseline and Monitoring in section 5.3 	28/04/2026

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 PDD Title Format

Sirebe Forest Carbon Project - Project Description Document (PDD) Part A: General Information v1.3, 28/04/2023

1.1.2 Project Summary

Table 1.1.2 General Information Sirebe Forest Carbon Project	
Project Name	Sirebe Forest Carbon Project
Project Location	Babatana Area, South-West Choiseul, Choiseul Province, Solomon Islands
Project Objectives	Conservation of mature indigenous rainforest through avoiding forest degradation, by means of legal protection of forest.
Project Activities	Avoidance of baseline logging activities and protecting the forest by placement of into a Protected Area.
Target Communities	Sirebe Tribal Community, Sasamunga, Choiseul
Project Owner	Sirebe Community Company Ltd (representing Sirebe Tribe)
Project Coordinator	Natural Resources Development Foundation (NRDF) – Solomon Islands
Programme Operator	Nakau Programme Pty Ltd
Methodology	Nakau Methodology Framework D2.1 v1.0; Technical Specifications Module (C) 1.1 (IFMLtPF): Improved Forest Management– Logged to Protected Forest V1.0
Scope	Forest-remaining-as-forest activities. Accounting for AFOLU GHG emissions and removals.

Table 1.1.2 General Information Sirebe Forest Carbon Project	
Activity Class	Carbon
Activity Type	Improved Forest Management – Logged to Protected Forest
Standard	Plan Vivo Standard v.4
Registry	Plan Vivo Registry (currently Markit Environmental Registry, London)
Product	Plan Vivo Certificates
Benefits	Avoided AFOLU GHG emissions from avoided log harvesting; enhanced AFOLU GHG removals from forest protection.
Co-Benefits	Biodiversity protection, improved community governance, community development, maintenance of healthy hydrological system, climate change resilience through reduced impact of extreme weather events
Validator/verifier	Aster Global
Project Period	30 years from project start date
Verification	3 - 5 yearly from project start date
Project Start Date	1 st January 2015
Protected Area	856 ha
Eligible Forest Area	806.19 ha
Original condition	Undisturbed rainforest areas with some small subsistence gardens (excluded from the project area)
Baseline Activity	Commercial logging
Project Activity	Legally binding forest protection
Legal Protection	Protected Area under the <i>Protected Areas Act 2010</i> Category: Resource Management Area
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	Annual Carbon Credit Buffer Rotation 1 (years 1-15) = 6,969 tCO ₂ e Annual Carbon Credit Buffer Rotation 2 (years 16-30) = 1,742 tCO ₂ e Averaged Annual Carbon Credit Buffer (years 1 – 30) = 4,355 tCO ₂ e
Net Carbon Credits (Plan Vivo certificates) p.a.	Net Carbon Credits Rotation 1 (years 1-15) = 27,877tCO ₂ e Net Carbon Credits Rotation 2 (years 16-30) = 6,969 tCO ₂ e Net Carbon Credits Annual Average (years 1–30) = 17,423 tCO ₂ e
Net Habitat Hectares p.a.	N/A

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 communities. All projects shall state the ecological purpose of the

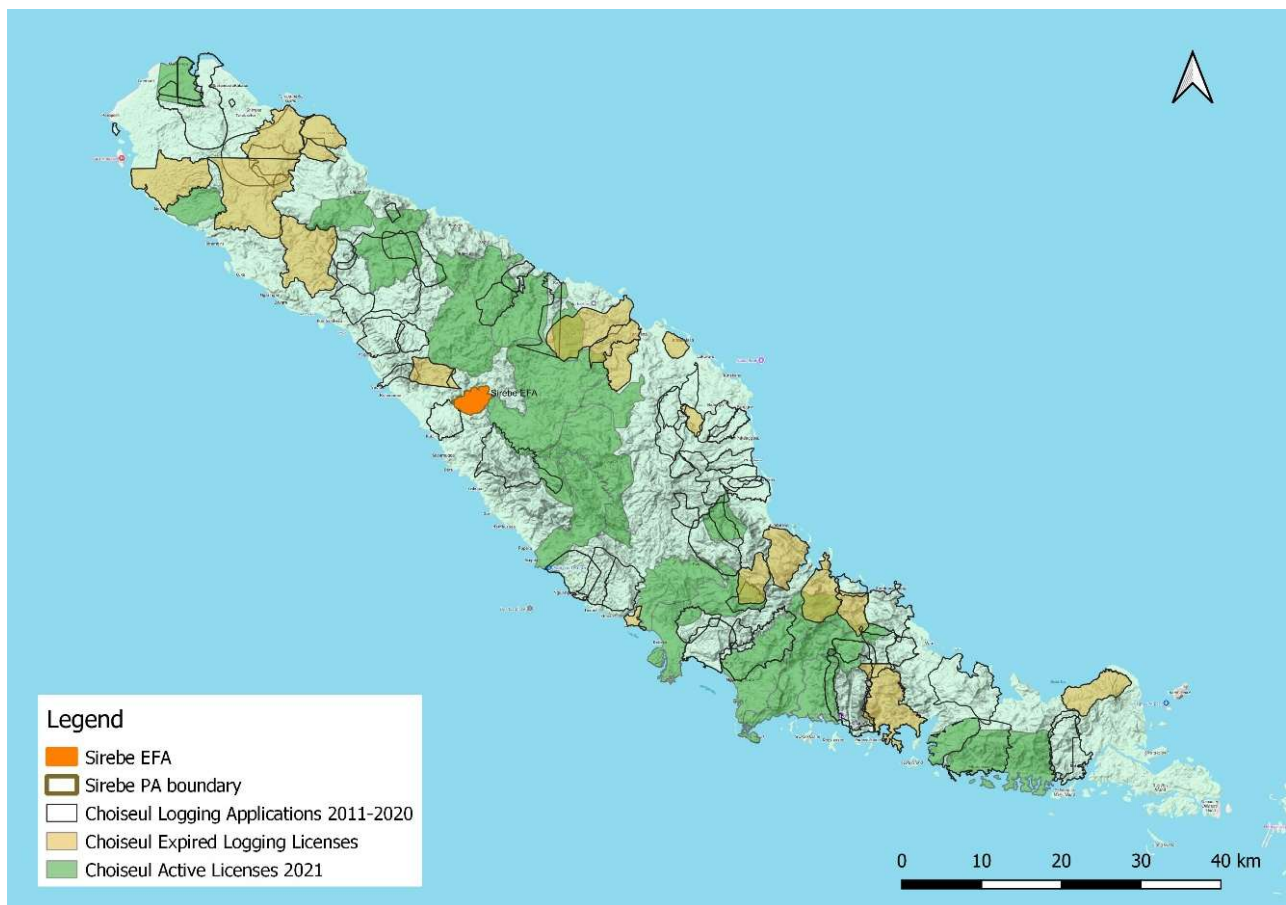
project with specific reference to the targeted ecosystem service/s being delivered, and list (but not describe in this section) any co-benefits delivered.

The Sirebe forest carbon project aims to deliver enduring benefits to participating tribal communities through the provision of payments (compensation) for the forgone income from baseline logging. The credibility of commercial logging as a baseline scenario is demonstrated by the numerous felling licenses issued over nearly all of the Choiseul province (see figure below) and is described in the Global Witness report “Paradise Lost”¹

As part of the project, community governance systems will be strengthened to effectively manage a community forest carbon project. This project will enable the Sirebe tribal association to manage carbon revenue in a manner that brings sustainable benefits for communities in the form of community development initiatives and through administering the distribution of member dividends.

The core project aim is to reduce carbon emissions to the atmosphere by changing forest management in the eligible forest area from commercial logging to forest protection. The project will also protect watersheds resulting in the maintenance of healthy river systems as a high-quality source of drinking water and as habitat for aquatic species. Forest protection will reduce the vulnerability of local communities to climate related risk through reducing the impact of extreme rainfall events on soil erosion and flooding, and the impacts of drought on water security.

Figure 1.2.1. Sirebe PA/EFA and logging activities in Choiseul Province: Active logging concessions (2021) are green, expired logging concessions yellow, and all other logging applications transparent with a black border.



¹ Global Witness. PARADISE LOST. How China can help the Solomon Islands protect its forests. October 2018

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 project creates a long-term change in land use from commercial logging to forest protection by establishing a Protected Area through the legal provision of the Solomon Islands *Protected Areas Act 2010* and Protected Area Regulations 2012. The Protected Area status covers lands that would otherwise have been subjected to commercial logging (the Eligible Area). The landowners will receive compensatory payments for giving up the right to logging for the duration of the project period with perpetual right of renewal. The Protected Area will be managed according to a Protected Area Management Plan which sets out permitted, restricted and prohibited activities within the Protected Area; and includes management actions and penalties to ensure compliance (See section 3.14 of this PDD for further details). Protected Areas will be monitored by means of regular forest inspections to ensure they remain protected in practice.

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 PDD Part A Section 1.3 of PDD.	Y
1.3.1b	The intervention outcome is quantitatively measured in relation to a baseline scenario.	Application of technical specifications module presented in PDD Part B.	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 PDD Part B.	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 PDD Part A, Section 6.	Y
1.3.1e	The intervention outcome is quantitatively measured in relation to a baseline scenario.	Application of Technical Specifications Module described in PDD Part B.	Y

Table 1.3.1: General Eligibility			
#	Eligibility criteria	Location	Y/N
1.3.1f	The quantity of verified ecosystem service outcomes delivered is rendered into tradable units (Plan Vivo certificates- PVCs) consistent with a set of Technical Specifications (methodology) relevant to the Activity Type.	Application of Technical Specifications Module listed in PDD Part A (Section 5.1), and Part B (Section 5.5.1).	Y
1.3.1g	A proportion of PVCs 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 PDD Part B (Section 5.4.1).	Y
1.3.1h	Measures shall be applied to transparently avoid double counting and/or double claiming of PVC units.	Registry used for project units listed in Table 1.1.2 in PDD Part A (Section 1.1.2).	Y
1.3.1i	There shall be sufficient demonstrated demand for and pricing of the particular PVCs 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 PDD Part A, Section 1.3.1.	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.	PDD Part B, Section 1.	Y

The PES Units (PVCs) from this project have been priced to cover the costs of project implementation and to compensate for the opportunity cost to landowners. The wholesale price is within the range of price for PVCs currently being transacted through resellers on the voluntary market. The demand for units from this project will be provided through a combination of wholesale sales (through resellers), retail sales (Solomon Islands, Pacific, other International companies and individuals) and potentially through market linked funding instrument/s.

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).

1.3.2.1 Stable Land Tenure and/or User Rights

All Participants in the Nakau Programme must have clear and stable land tenure and user rights. The *Constitution of the Solomon Islands 1978* states that 'the natural resources of our country are vested in the people and the government of Solomon Islands'². The vast majority of land (86%) is held under legally recognized customary tenure. The *Land and Titles Act Cap 133* preserves the system of customary land holding. The Act states that, "The manner of holding, occupying, using, enjoying and disposing of customary land shall be in accordance with the current customary usage applicable thereto, and all questions relating thereto shall be determined accordingly"³. Customary land is unregistered in Solomon Islands. There is currently no general legislation providing for the legal recognition or registration of landowning groups in Solomon Islands, apart from the *Customary Land Records Act*, which is not operating due to a lack of supporting regulations⁴.

Customary tenure is governed by customary laws, which differ from place to place and are generally not written down. However custom law is used to determine group membership and tribal land boundaries. This situation applies to the producer communities in this project.

1.3.2.2 Tribal land ownership

In Solomon Islands customary land is 'owned' at tribal level. In case of larger tribal lands, tribes are sometimes subdivided into clans. The Siporae Tribe has recently declared a protected area under the PA Act (with intent to create a carbon project). Other tribes in the Babatana region are still in the process to declare their protected areas and have commenced activities with the aim of creating their own carbon projects.

The Sirebe tribal land boundaries have been surveyed and confirmed by the Luru Land Conference of Tribal Communities (LLCTC), a native registered organization representing all the tribes within the Choiseul Province. As part of the Protected Area process, as determined by the Solomon Islands Government through the Protected Areas Act 2010, neighbouring tribes of Sirebe have signed a Memorandum Of Understanding in which they verify and confirm the land boundaries on the maps presented and agree upon the declaration of the area as a Protected Area under the Protected Areas Act 2010 (See Appendix 1).

Through genealogy research that was done together with the LLCTC in 2015, all individual landowners of the Sirebe Tribe were identified and registered as the true and rightful landowners (See Appendix 2). According to Choiseul custom these rightful landowners also own all the rights of the available resources on the lands, including the forest and forest carbon. In August 2017 the Protected Area was publicly announced by the Ministry of Environment through a public notice in the national newspapers and through notices displayed in all main settlements and centres in Choiseul Province. The Sirebe tribe was challenged by the Qoqopele tribe who claimed to have ownership of part of the proposed Protected Area. This led to a Customary Hearing

² Constitution of Solomon Islands 1978 Preamble. Accessed online: <http://www.parliament.gov.sb/files/business&procedure/constitution.htm>

³ Land and Titles Act s 239(1); accessed online: <https://www.lands.gov.sb/resources/related-legislation.html>

⁴ Corrin, J. (2012) REDD+ and Forest Carbon rights in SI, Background and legal analysis, (par 3.1.1). SPC/GIZ Regional Project. Accessed online: <https://www.pacificclimatechange.net/document/redd-and-forest-carbon-rights-solomon-islandsbackground-legal-analysis>

(inquiry), facilitated by the Babatana Council of Chiefs in March 2018. The outcome of this hearing was in favour of the Sirebe tribe, recognizing them as the rightful owners of the area (See Appendix 3).

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 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: 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.

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.

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he 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:

Table 1.3.3b Activity Class: Carbon (C)			
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 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 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).

The Sirebe Project will apply Activity Class (C) Carbon benefits to the atmosphere, through Activity Type Improved Forest Management - Logged to Protected Forest (IFM-LtPF).

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 PDD shall provide information supporting compliance with this requirement.*

The Sirebe Project Area and Eligible Areas therein, have not been negatively altered with the intention of increasing a claim to payments for ecosystem services by the members of the Sirebe Tribe or any other party.

2 Project Description

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 Project Documentation

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.

The Sirebe Project will apply the activity of Improved Forest Management - Logged to Protected Forest. This will be achieved through the establishment of legally sanctioned Protected Areas (under the Protected Areas Act 2010), covering land that would otherwise be logged through conventional logging practices (the Eligible Area). Multiple tribal lands will eventually join the Nakau Programme, with each tribal area having a separate Protected Area and carbon project. The Project Area will be managed according to Protected Area Management Plans which set out permitted, restricted and prohibited activities within different zones of the Protected Area; and includes management actions and penalties to ensure compliance (See section 3.14 of this PDD for further details). The Protected Area 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 Sirebe Project is embedded in the Babatana region of Sout-West Choiseul. The name Babatana refers to land belonging to several related tribes, whom are speakers of the Babatana language. The tribal lands that are or wish to become involved in the Nakau Programme are all located near the Kolombangara River and are part of the Mount Maetambe Kolombangara River Corridor; an area identified as a Key Biodiversity Area (KBA) by the International Union for the Conservation of Nature. Nakau aims to create a network of local tribes that want to conserve their forests as an alternative to large scale logging that threatens this area, thereby protecting a large part of the KBA. The Sirebe tribe is the pioneer in the Babatana region, and the first project owner to set up a forest carbon project in the Solomon Islands. The neighbouring Siporae tribe has also completed the process to declare their tribal land as protected Area under the Act. A further four Babatana tribes have started the process to declare their lands protected with the intention to start their own carbon-projects under the Nakau Programme. At least another two tribes in the region may join the Nakau Programme in the future. (See figure 2.2.1 and map 2.2.2b).

The Sirebe Tribal area and project is located at E 156° 06' 9" and S 6° 58' 47" and covers 856 hectares, including 806.19 hectares that are eligible for carbon crediting.

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.*

The map in figure 2.2.2a shows the location of host country, the Solomon Islands, Choiseul Province and the Babatana region. Figure 2.2.2b shows the location of the Sirebe tribal area and neighbouring potential project participants. The map also shows the status of Tribal commitments to establishing a protected area and developing a project PDD. Figure 2.2.2c (and figure 2.4.1) shows the Sirebe Project site with confirmed land boundaries being the first project under the Nakau Programme. All land boundaries of the Sirebe Project Site were recorded with GPS in the field in June 2015.

Figure 2.2.2a Location of the Solomon Islands, Choiseul Province and the Babatana region

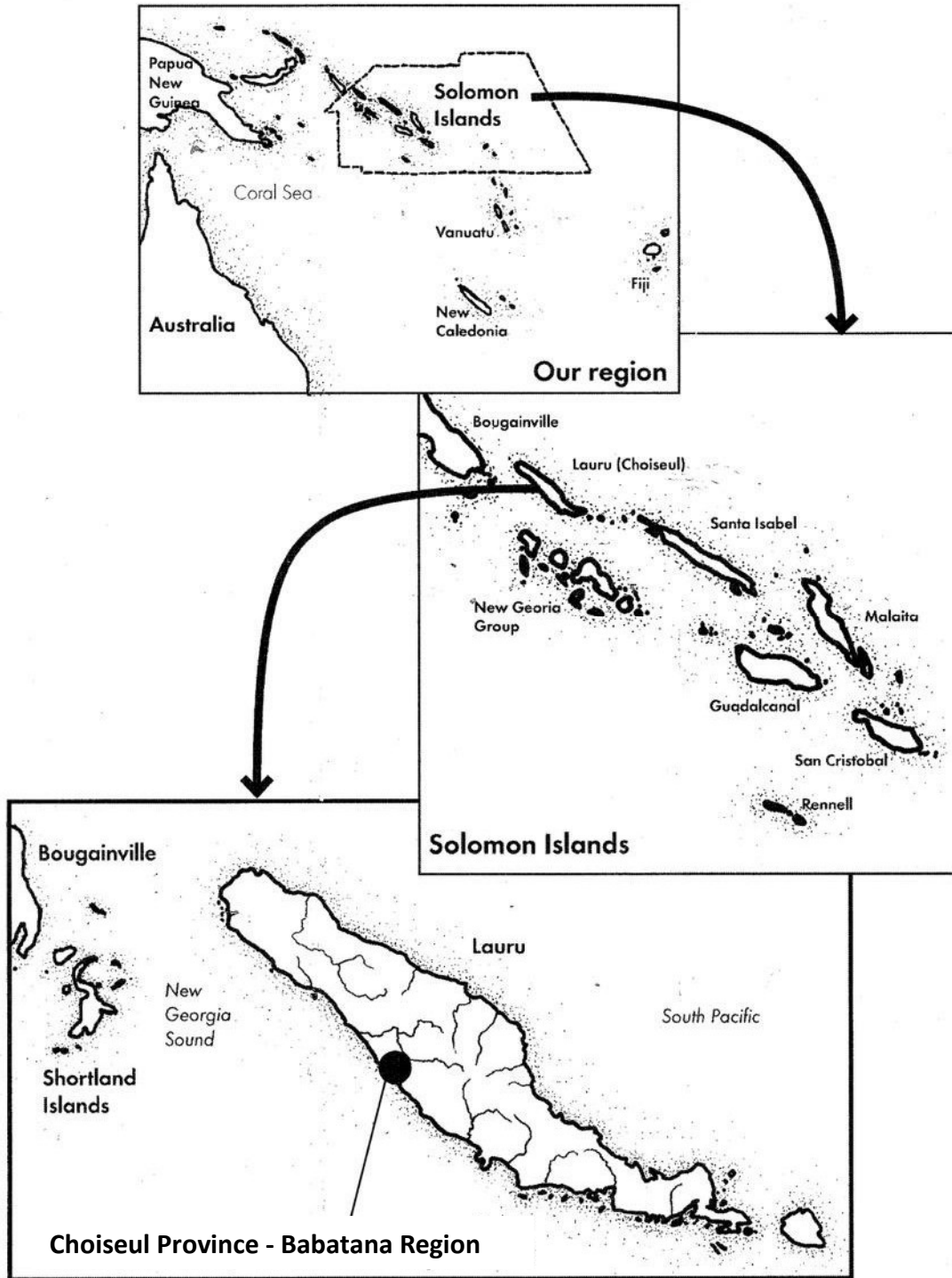


Figure 2.2.2b Location of the Sirebe tribal land and neighbouring areas in the Babatana region in south-west Choiseul

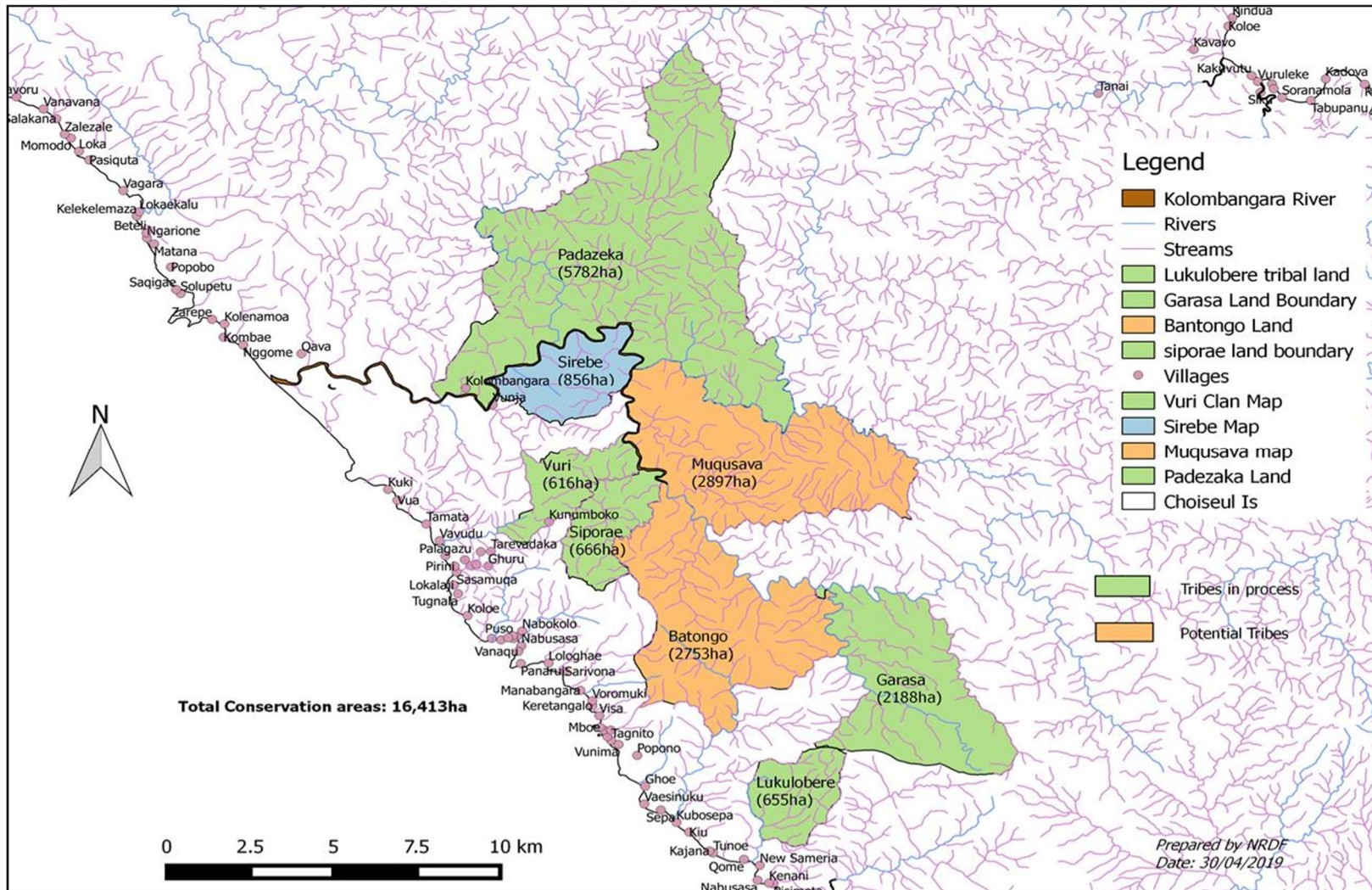
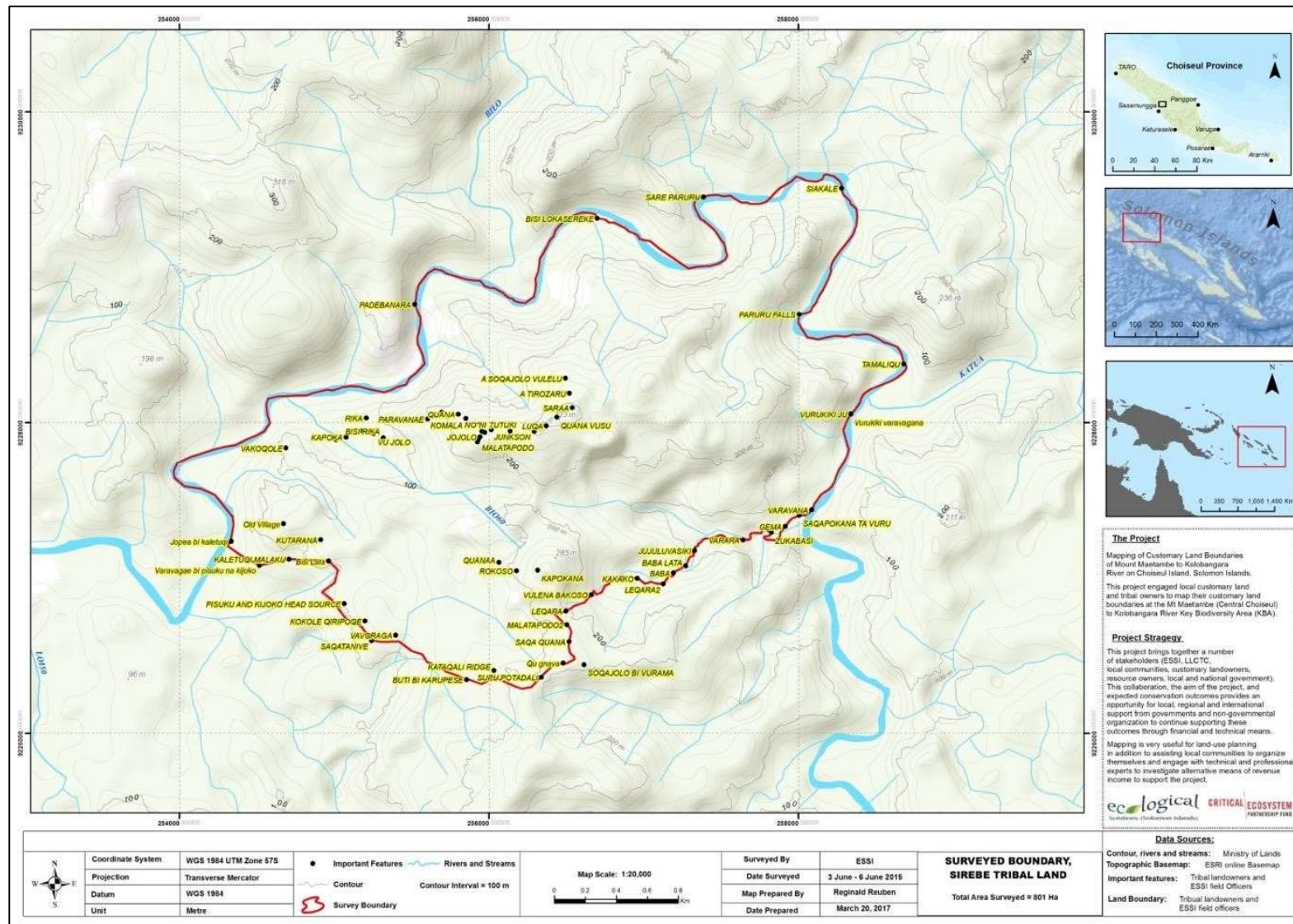


Figure 2.2.2c: Land boundary map of Sirebe tribal land



2.2.3 Land Cover

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 Sirebe Project site consists of customary land owned by the Sirebe Tribe. Most of the area is covered with natural forest, mainly tropical lowland rainforest with smaller areas of riverine forest along streams and swamp forest on poorly drained soils. A third forest type is a mixed composition of old growth and secondary growth vegetation. This secondary vegetation occurs in old garden sites and old human settlement⁵. There are some small garden areas (approximately 20 hectares in total) used irregularly by the Sirebe tribal members for food and cash crop production. Most of the forest area is declared Protected Area under the category of a 'Resource Management Area' (see Appendix 4). This legal protected status prohibits any commercial logging and mining activity as well as harvesting of forest products by landowners for commercial purposes. Under the Protected Area Act landowners are allowed to harvest forest products for domestic use, following the regulations and rules set by the Protected Area Management Committee and written in the Protected Area Management plan (Appendix 5).

2.3 Description of the 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.

The project area is covered in rugged terrain with steep slopes and narrow ridges, and elevations mostly between 100 to 300 meters above sea level, with the highest peak standing at of 323 meters. The hills have steep slopes (30 degrees) and gullies and terraces are common.⁵

2.3.2 Geology and Soils

The Babatana region including the Sirebe project site consists of three main geology and soil types domains: alluvial plains, sedimentary hills and schist and lava ridges. The alluvial plains include river valleys and terraces, unconsolidated stony alluvial areas and river channels, which are subject to flash floods. The sedimentary hills areas are characterised by dissected hills and ridges mainly occurring over sedimentary rocks. These environments contain moderately weathered and leached clay grounds. Schist and lava ridges cover much of the interior of Choiseul, including the Sirebe project site. The hill sedimentary have steep slopes (30 degrees) and gullies are common features.⁶

2.3.3 Climate

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

⁵ Sirikolo, M. & Pikacha, P. (2009) A report on the Biodiversity of three proposed protected Areas on South West Choiseul Island, Solomon Islands, WWF

⁶ Solomon Islands Government (1995). Solomon Islands National Forest Resources Inventory. Ministry of Forest, Environment & Conservation, February 1995

Choiseul, like the rest of the Solomon Islands has an equatorial maritime climate influenced by El Nino Southern Oscillation events, the South Pacific Convergence Zone and the West Pacific Monsoon. Choiseul has a tropical and generally hot (23-31° Celsius) and humid climate with only a slight seasonality being recognised as wet and dry seasons in November-April and May-October respectively. Rainfall on Choiseul is highly variable, where annual rainfall ranges from 1700-5000 mm with variation dependent upon altitude and the rain shadow effects of mountains and prevailing winds⁷.

Climatic features Taro, Choiseul weather station (1981-2010)

Temperature	Minimum: 23.9 C° Maximum: 31.1 C° Average: 28.1 C° (Increase 0.21 C° per decade)
Annual Rainfall	Minimum 1773 mm (2000) Maximum: 5132 mm (1993) Average: 3164 mm
Humidity	Average: 78.79 – 83.11 %

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 Sirebe Project Area is comprised of lowland rainforest ecosystems, that runs along the ridges and hillsides all the way to the coast. Palms and ferns dominate the valleys transacted by streams, whilst large trees including strangler figs are abundant on the slopes and the ridgelines. The small flat lands around the abandoned village sites are mostly gardens, former abandoned gardens, and beetle nut palm groves. The rainforest is very rich in commercial timber trees, small to medium size trees, shrubs, herbs, creepers and climbers. The tree flora is dominated *Pometia pinnata*, *Vitex cofassus*, *Calluphyllum peekellii*, *Flueggia flexuosa*, *Canarium salomonense* and *Syzygium* spp. However, the following timber trees are found to occur: *Alstonia scholaris*, *Amoora cucullata*, *Burkella obovata*, , *Camptosperma brevipetiolata*, *Canarium salomonense*, *Elaeocarpus sphaericus*, *Dysoxylum excelsum*, *Terminalia calamansanai*, and several other minor timber trees. The high timber stock per unit area is typical of undisturbed forest areas and highly sought after by logging companies, which is a great threat to biodiversity conservation endeavours.⁸

⁷ Jansen, T. & Siikolo, M. (2010) Petanigaki ta Siniqa ni Lauru—The Food of the Forest of Lauru, Kastom Gaden Association

⁸ Sirikolo, M. & Pikacha, P. (2009) A report on the Biodiversity of three proposed protected Areas on South West Choiseul Island, Solomon Islands, WWF

Figure 2.3.4 Typical riverine rainforest scenery in Babatana (photo by D. Boseto, 2010)



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 PDD.

The Sirebe Project Area is located within the Mt Maetambe to Kolombangara River Corridor, an area identified as a Key Biodiversity Area by IUCN. The Kolombangara river is the second largest river on the island of Choiseul and the freshwater ecosystem is amongst the most diverse in the South Pacific Islands.⁹

⁹ Boseto, D. et al. (2009) *A report on baseline Biodiversity inventory of Mount Maetambe to Kolombangara River Corridor, Choiseul Islands, Solomon Islands, 2014. CEPF*

A 2009 biodiversity assessment done in the Babatana area there mapped a total of 70 vertebrates identified during the course of the survey. This included 12 mammals, 31 birds, 13 frogs, 14 reptiles. Despite being a short and rapid survey, this study showed high levels of diversity of vertebrates in the area. There is presence of endemic species like *Solomys* rats, palm frogs (*Palmatorrapia solomonis*), and birds like White winged fantails (*Rhipidura cockerelli*), variable kingfishers (*Ceyxlepidus meeki*), and dusky myzomela's (*Myzomela larfargei*)¹⁰. A more recent and comprehensive biodiversity survey was carried out in 2014, identifying flora and fauna species within the Mount Maetambe to Kolombangara River Corridor. The survey found that the Kolombangara river corridor has one of the highest plant diversities in the Solomon Islands. A total of 156 species of plants were recorded, which included trees, ferns, orchids and herbaceous plants, belonging to seventy-one (71) families. Eighteen (18) plant species were endemic to Solomon Islands, and one, *Macaranga choiseuliana* from the family Euphorbiaceae is endemic to Choiseul Island, occurring in undisturbed primary forests. *Pterocarpus indicus*, a tree listed as a vulnerable species under the IUCN Red list is found in abundance in the area (Sirikolo, Pita & Qoloni 2014). A total of 58 species of birds were recorded of which 56 were found within the Sirebe project site. 50 species of fish from 31 genus and 13 families were recorded, as well as 18 species of crustaceans, and seven species of decapods. This high number of species is indicative of a healthy terrestrial and aquatic system. Many of the aquatic species are diadromous meaning they migrate and spend their life moving between freshwater and saltwater which clearly shows the connectivity value of this eco-system.¹¹ See Appendix 6a, 6b & 6c for detailed biodiversity survey data (2009 and 2015) from the Babatana region. On the 19th of October 2019 the project site was declared a Protected Area under the *Protected Area Act 2010*. It is the second declared Protected Area in the country and the first terrestrial area.

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 Sirebe project area is uninhabited as the population lives along the southern coastlines and in the large settlement of Sasamungga. Garden activities occur along the river sites (especially downstream) of the Kolombangara River, while upstream the human activity is limited to some small-scale subsistence agriculture and extraction of timber and non-timber forest products (NTFPs) for domestic use. Some locals use the rivers and streams for fishing (fish, eels and prawns) and sometimes wild pigs are hunted for special occasions. In the last decade more commercial logging activities have occurred in the surrounding areas of the project area, mainly upstream the Kolombangara River. Some negative environmental impacts have been observed since, especially an increase of sedimentation in the river system can be observed during rainy days. Within the Sirebe land some old village and garden sites can be found that were abandoned in the early 1900's. From historical records it was found that the Sirebe tribe was one of the last tribes to leave the area and to settle in coastal Sasamungga, which was around 1936.¹²

Under the project, protected areas will provide a safe haven for the diversity of species found on Choiseul. The project area covers rainforest ecosystems that are being threatened by large scale logging activities and which are important for biodiversity in the region. Being part of the Kolombangara river system catchment

¹⁰ Sirikolo, M. & Pikacha, P. (2009) A report on the Biodiversity of three proposed protected Areas on South West Choiseul Island, Solomon Islands, WWF

¹¹ Boseto, D. et al. (2009) A report on baseline Biodiversity inventory of Mount Maetambe to Kolombangara River Corridor, Choiseul Islands, Solomon Islands, 2014. CEPF

¹² Verbal communication with Tribes Spokesman Linford Jahjo Pitatamae, Sasamungga village, 2017.

area, the project site prevents erosion and will be important to sustain and safeguard a healthy aquatic ecosystem.

2.4 Geographic Project 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 PVCs must be mapped using aerial imagery to sub-10 meter accuracy.

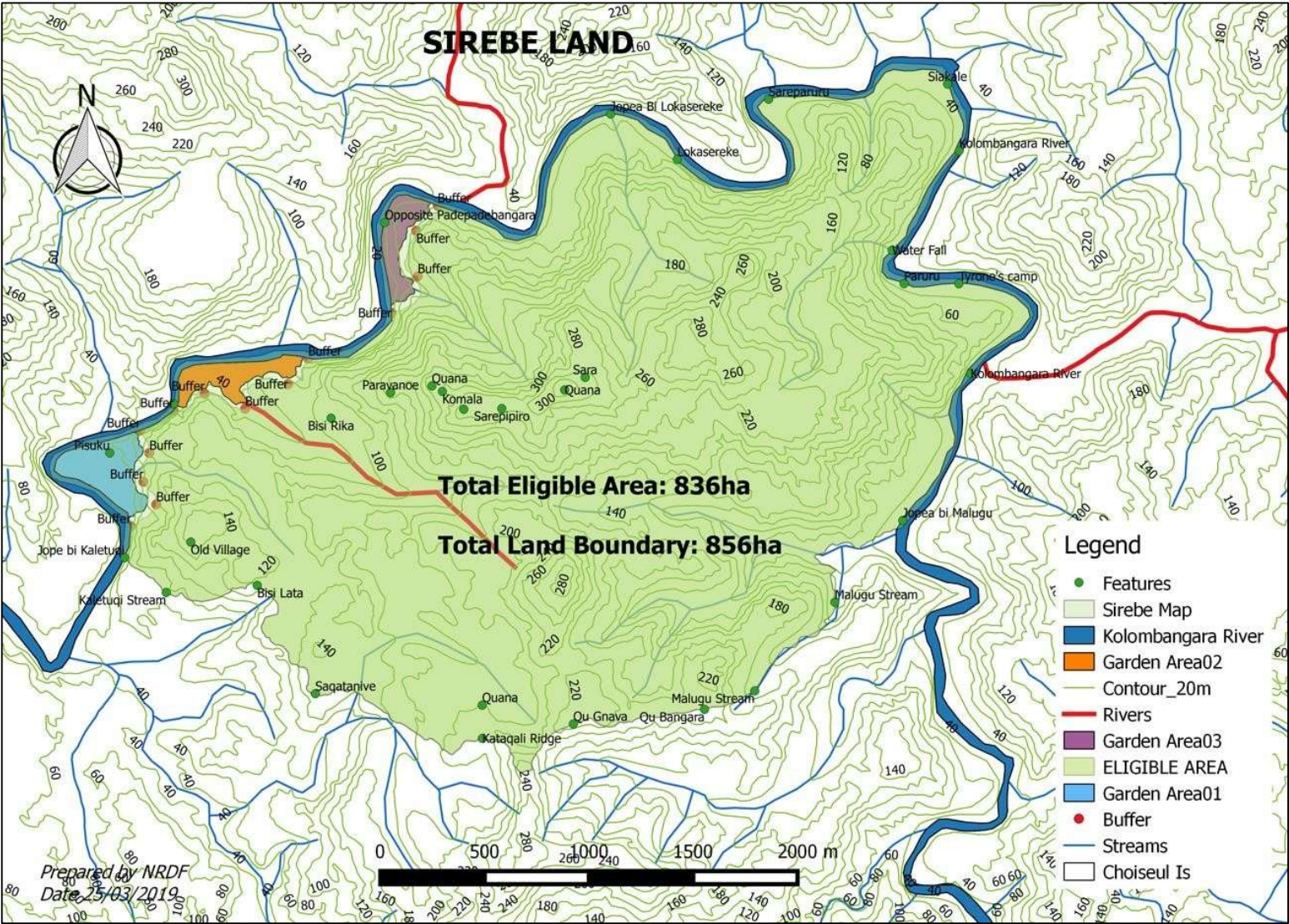
2.4.1 Project Area

The NMF states: *All projects shall define the Project Area. 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.*

2.4.1.1 Sirebe Project Area

The total area for the Sirebe Project is 856 hectares (See Figure 2.4.1), which constitutes the whole Sirebe tribal land. The Sirebe project area covers 856 ha, all of which is included into the Protected Area, therefore project area and protected area are the same.

Figure 2.4.1. Landuse map Sirebe Tribal Land (Source, NRDF 2019)



2.4.2 Eligible Forest Area (EFA)

The NMF states: The Eligible Forest Area (EFA) 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 in the baseline scenario.

The EFA within which the Technical Specification module (PDD Part B) is to be applied is 806.19 hectares (as shown in Figure 2.4.1). Without the project intervention the baseline activity (commercial logging) would take place throughout the eligible area. The EFA identified excludes garden areas and future gardens areas. The boundaries of the eligible site were GPS recorded and buffer zones of about 50 metres were created around the garden sites and demarcated with paint on trees. The Solomon Islands logging code of practise prohibits logging near rivers and streams and buffer zones should be established. In practice however, logging occurs at all those sites and regulations are not followed and enforced.¹³

2.4.3 Forest Area

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 definition¹⁴ as presented in 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 entire Sirebe eligible area is covered with closed rainforest.

2.4.4 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 Definitions in this document). Each NonForest 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 Definitions in this document).

The only non-forest areas occurring in the Sirebe project site are 3 small patches of land used for gardening by the landowners covering approximately 20 Hectares (see Figure 2.4.1). The largest site is situated near an old village site and in the future it is expected that some people will visit and live here more permanently. A small ranger house has been built in near garden site 2 to facilitate rangers and visitors to stay overnight. Buffer zones of approximately 50 metres have been demarcated around the 3 garden sites.

¹³ Katovai, E., Edwards, W. and Laurance, W. F. 2015 Dynamics of logging in Solomon Islands: The need for restoration and conservation alternatives. *Tropical Conservation Science* Vol. 8 (3): 718-731. Available online: www.tropicalconservationscience.org

¹⁴ See Definitions section in this document. See also FAO FRA 2010 p6.

2.4.5 Logged 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.

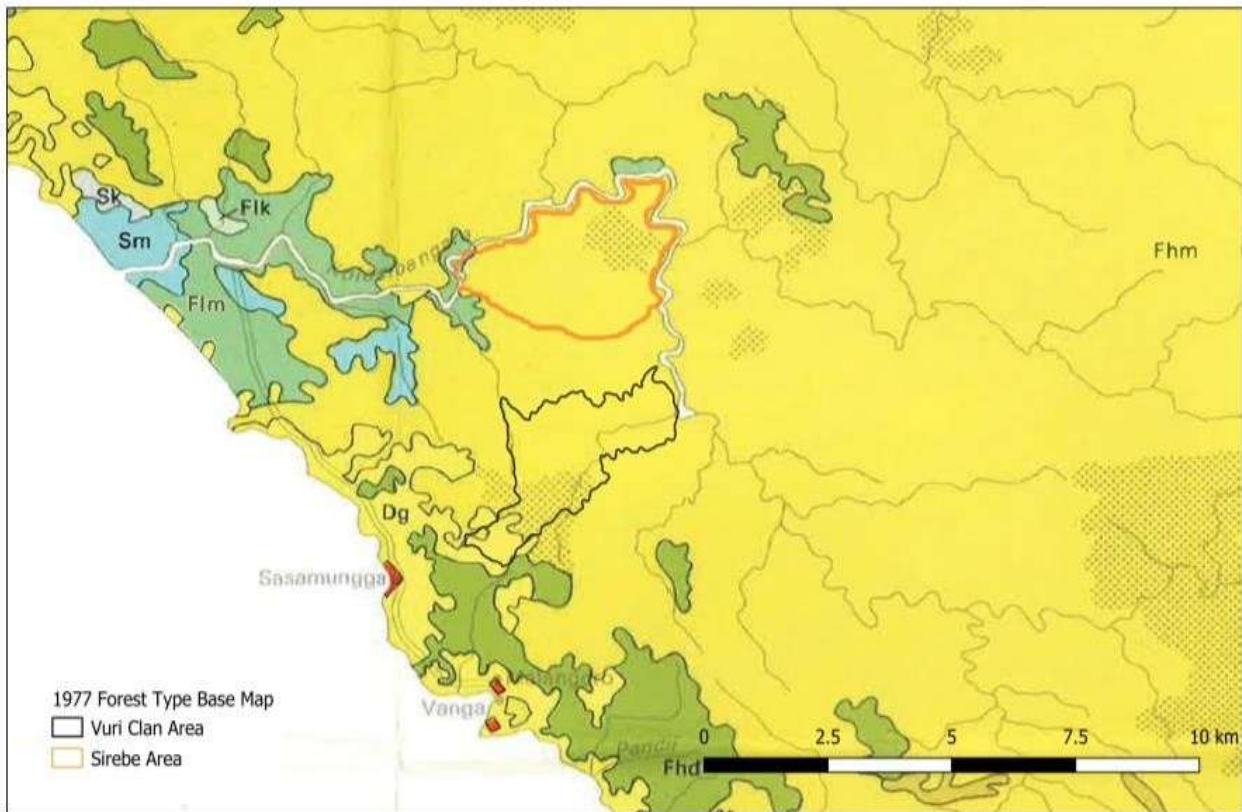
The Sirebe Eligible Forest Area comprises unlogged forest only.

2.4.6 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.

According to the forest type map (Land resources study 18, Land Resources of the Solomon Islands Volume 1, 1977) the main forest type found in the Sirebe area (and in the Babatana area as a whole) is Hill forest, characterized by: Medium-height, medium crowned, closed canopy hill forest with large-crowned trees, occurring along some valleys (See figure 2.4.7 and Appendix Forest Type Map of Solomon Islands)

In the more detailed botanical description of the Sirebe area, the Director of the Solomon Islands National Herbarium, Botanist Myknee Sirikolo (Department of Herbarium and Botanical Garden, Ministry of Forestry and Research, pers. comms 2020) described two types of forest within the Sirebe area: Hill Rainforest and Lowland rainforest, based on a more up-to-date forest type classification compared to the 1995 Solomon Islands National Forest Inventory. However, he noted that "both forest types surrounding the gentle and steep ridges overlap so often that their variations species compositions, canopy structure and even their general appearance cannot be easily distinguished" (Appendix 6b page 7). As such, we classify the forest in the project area, as one forest stratum. Some small parts of forest, alongside the Kolombangara river, are converted into gardens. Most of the area however is undisturbed forest Figure 2.4.7 Forest type map (with boundary Sirebe area)



Fhm Medium-height, medium-crowned, closed-canopy hill forest with large-crowned trees, occurring along some valleys (2508 km²)

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:*

- a. *Interventions that terminate and/or avoid activities that cause the loss or degradation of ecosystem services relevant to the project purpose.*
- b. *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:

2.4.1 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).

The ecosystem service strategy applied under this project is forest protection under the Solomon Islands Protected Areas Act 2010, and active forest conservation management under a Protected Areas Management Plan (see section 3.1.4, and PDD Part A appendix 5).

2.6 Core Ecosystem 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 PVCs. This will briefly summarise the equivalent information presented in PDD Part B.

PDD Part B will explain how carbon benefits have been quantified for the Sirebe Project using the IFM-LtPF technical specifications. The core ecosystem service benefit realised through this project is avoided carbon emissions achieved by protecting the forest from commercial logging activities. The net volume of Carbon Credits issued to the project annually for the Project Period are outlined in Table 2.6 below.

The Sirebe landowners have opted for a constant credit issuance of the annual average throughout the 30 years project period.

Table 2.6 Sirebe Net Carbon Benefits			
	Rotation 1 (years 1-15)	Rotation 2 (years 16-30)	Average (years 1–30)
Annual Net Carbon Credits (PVCs)	17,896	6,388	12,142
Annual Risk Buffer	4,474	1,587	3,036
Annual Net Carbon Benefits	22,370	7,985	15,178

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 this PDD.

The Expected community benefits include the following:

- Increased financial capital from carbon sales. These funds will be used to finance conservation initiatives and economic development for the landowner communities involved.
- Increased social capital from upgraded community business governance and management capacity building (enhanced ability to run community businesses efficiently and transparently)
- Increased natural capital from the protection of ecological infrastructure capable of delivering a broad range of benefits including flood protection, water quality, climate resilience reef protection, biodiversity protection, non-wood forest products.

The project will result in a range of benefits for participating tribes and clans due to employment directly related to implementation of the project; payments received from the sale of PVCs; the strengthening of community governance arrangements; and an intact forest providing timber (within allowable harvesting parameters), non-timber forest products and ecosystem services.

Community governance has been strengthened through the formation of the Sirebe Tribal Association (STA) and Sirebe Community Company (SCC), and delivery of associated capacity building activities. This will enable the SCC to manage funds received as a result of the project in a manner that brings sustainable benefits for the community in the form of community development initiatives, such as infrastructure improvements;

supporting further income generating activities for tribal members; and administering a process of distributing member dividends. Funds will be managed according to the Sirebe Community Company Project Business Plan (see Appendix 7) of which further details can be found in section 4.3 of this PDD. The short, medium and long-term benefits of the project are summarized in Table 2.7 below.

Table 2.7 Direct Project Benefits to Landowners	
Short Term Benefit (1-5 years)	How the Sirebe Project will positively impact
Employment	Creation of jobs directly related to the implementation and management of the Sirebe Project Jobs growth due to increased livelihood opportunities
Capital for community and family economic development	Financial capital made available from sales of PES units and through benefit sharing.
Capacity building	Increased capacity of members in community business governance, administration, financial discipline, and management
Intact indigenous forest as a supply of wood and non-wood forest products and ecosystem services	Intact indigenous forest as a source of high-quality timber for local house building and harvestable non-timber forest products Intact river catchments with high water quality to support freshwater ecosystems High water quality as a source of local drinking water
Resilience to climate related natural hazards	Intact indigenous forest cover to reduce impact of extreme rainfall events on soil erosion and flooding Intact indigenous forest cover to reduce impact of drought on water security
Medium Term Benefit (5-15 years)	How the Sirebe Project will positively impact
Thriving rural community economy	Increased employment opportunities in the community. Local labour force available for community projects, housebuilding & maintenance, customary and church events. Reduced risk of community health problems due to increased access to clean water, sanitation and financial resources associated with health services. Increase of secondary/tertiary graduated student amongst tribal members
Climate Change Resilience	Enhanced resilience to extreme weather events associated with climate change (warming and drying, plus increased intensity of cyclones, heavy rainfall events, and drought)
Long Term Benefit (15-50 years)	How the Sirebe Project will positively impact

Table 2.7 Direct Project Benefits to Landowners

Enhanced resilience to global challenges	Social and natural capital retained due to thriving rural community economy and access to abundant local rainforest resources reduces vulnerability to global shocks including escalating global oil prices, associated global financial market fluctuations, resource-related conflict, and climate change.
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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 section 2.8 and a more detailed (medium-resolution) description in Section 5.3 of this PDD.

The Sirebe Project will result in the conservation management of 856 ha of rainforest habitat that will be protected from logging. This area will be actively protected and managed to maintain or enhance the biodiversity of the area, with particular emphasis on reducing the impact of industrial logging on the significant species identified in Section 5.3 of this PDD. Actions to conserve biodiversity are outlined in the Sirebe Protected Area Management Plan (Appendix 5). This will include conservation of habitats and measures to protect significant species (including endemic and threatened species).

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.

The protection of forests as part of the project will result in the maintenance of a healthy river catchment system within the Mount Maetambe to Kolombangara River Corridor, a key biodiversity area (KBA) in the Solomon Islands. It will also protect the habitat for aquatic species, including freshwater fish, prawns and eels important for local consumption. Forest protection will reduce the vulnerability of local communities to climate related risk through reducing the impact of extreme rainfall events on soil erosion and flooding, and the impacts of drought on water security. The project will also generate significant community benefits, described in Section 2.7 (above).

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.

The project does not involve interventions such as land disturbance, or planting that could result in negative environmental impacts. An Environmental Impact Assessment is not required for this project under the *Solomon Islands Environment Act 1998* and *Regulations 2008* as it does not involve any of the described developments listed in the Second schedule, section 16, of the Act. It was therefore determined that an Environmental Impact Assessment was not relevant for this project.

2.11 Project Timescales

According to Section 4 of the 2012 Plan Vivo PDD 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 gives an overview of the timescales of the Sirebe Project

Table 2.11 Sirebe Project Temporal Boundaries			
	Start	End	Notes
Project Period	2015	2044	30 years
Crediting Period	1st January 2015	31st December 2044	30 years
Monitoring Period	1st January 2015	31st December 2044	(Verification report prepared every 3-5 years; first report September 2020) Annual reports prepared annually throughout the project period

Table 2.11 Sirebe Project Temporal Boundaries

	Start	End	Notes
Management Period	1st January 2015	31st December 2044	Management meetings held annually
Project Termination		31st December 2044	Project can be renewed 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 PDD.

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

Section 5.4 of this PDD provides the approach to non-permanence risk and buffer determination. A detailed project risk management framework that includes social and project sustainability risks is provided in Appendix 8.

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 PDD) the established legal entities acting in the project as:

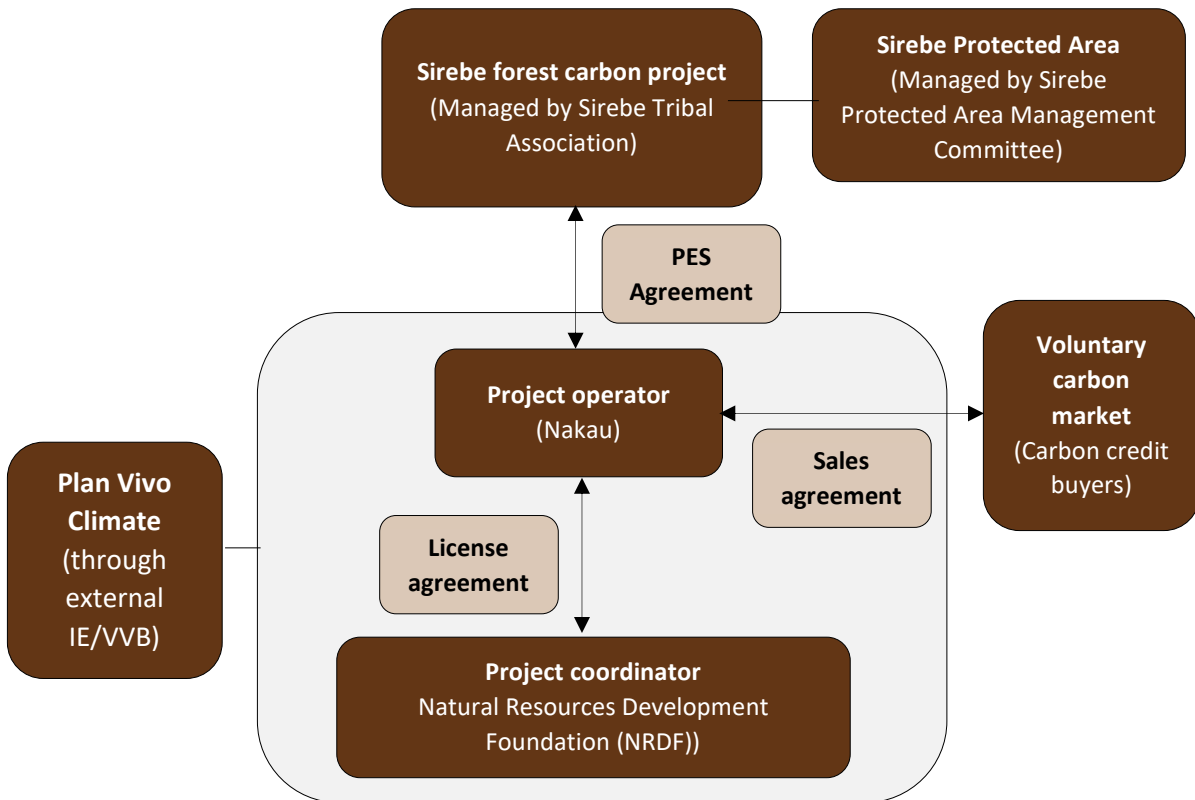
- Project Coordinator
- Project Owner
- Programme Operator

Table 2.1.3.1 Project Legal Entities	
Project Coordinator	Natural Resources Development Foundation (NRDF) (Appendix 9)
Sirebe Project Owner	Sirebe Tribal Association (Appendix 12) Sirebe Community Company Ltd (representing the Sirebe Tribe) (Appendix 10)
Programme Operator	The Nakau Programme Pty Ltd: a Company Limited by Shares under the <i>Corporations Act 2001</i> (Commonwealth legislation administered by the Australian Securities and Investments Commission), wholly owned the charity-Live and Learn Environmental Education Australia (Appendix 11)

2.13.2 Project Structure

Projects in the Nakau Programme have the following Structure:

Figure 2.13.2 Nakau Programme operating 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		
Role	Responsibility	Agreements
Project Owner	Owner of PES rights	PES Agreement with Project Coordinator & Programme Operator (tri-party agreement)
	Owner of PES Unit sale profits	
	Project governance	
	Project co-management	
	Project co-monitoring	
Project Coordinator	Project designer and developer	Licence Agreement with Programme Operator
	Service provider Project co-monitoring and Project co-management	PES Agreement with Project Coordinator & Programme Operator (tri-party agreement)
	Facilitator project governance	
Programme Operator	Guardian of environmental and co-benefit integrity of Nakau Programme	<ul style="list-style-type: none"> • Licence Agreement with Project Coordinator • PES Agreement with Project Owner & Project Coordinator (tri-party agreement) • Sale and Purchase Agreements with PES unit buyer
	PES unit sales & marketing agent	
	Project registry agent	<ul style="list-style-type: none"> • PES Agreement with Project Owner & Project Coordinator (tri-party agreement) • Licence Agreement with Project Coordinator
	Owner of IP associated with Nakau Programme (including methodologies developed by the Nakau Programme)	Licence Agreement with Project Coordinator
Project Standard (Plan Vivo)	Project Validator / Verifier	Validation/Verification Service Agreement with Project Coordinator
Project Registry (Markit)	PES Unit registry Issuance of PES Units	<ul style="list-style-type: none"> • Registry Terms and Conditions • Registry Communications Agreement with Project Operator • Registry Agent clause in PES Agreement
PES Unit Buyer / reseller	Purchase PES Units	<ul style="list-style-type: none"> • PES Sale and Purchase Agreements with Programme Operator

Table 2.13.3: Project Roles And Responsibilities		
Role	Responsibility	Agreements
Project subcontractors (as required)	E.g. Legal consultants, Ecosystem inventory contractors, mapping and remote sensing contractors, Anthropologist	Service Contracts

The NMF states: All projects in the Nakau Programme shall provide (in the equivalent Section of the PDD) a short bio for each of their key personnel corresponding to the roles and responsibilities assigned to individuals.

Project Owner

Each tribal group participating in the Nakau Programme will form a Tribal Association and a Community Company. The Sirebe Tribe owns the Sirebe project and has established the Sirebe Tribal Association (STA) (Appendix 12) to hold the land management rights associated with the Project Area determined through the declaration of a Protected Area. The Sirebe Tribal Association is the sole shareholder in the Sirebe Community Company Ltd, which is mandated by the Tribe to represent them in business activities and be party to the PES Agreement. The Sirebe Tribal Association is operated by the Executive Committee and Trustees. The members, their roles and responsibilities and the overall objectives and powers of the Association are set out in the Sirebe Tribal Association Constitution 2017 (Appendix 13). The STA has registered the Sirebe Community Company under the Solomon Islands Companies ACT 2009 to enable the tribe to run and manage the Forest Carbon Project under the Nakau Programme. The STA is the sole shareholder of the Sirebe Community Company.

Project Coordinator: Natural Resources Development Foundation (NRDF)

The Natural Resources Development Foundation (NRDF) undertakes the role of project coordinator for the Sirebe project and has been supporting their PA and carbon project development since 2014. In its role, NRDF directly engages with the Sirebe Tribal Association, PA management committee and the broader community to support and guide project design and development, including land use planning, forest monitoring, setting up the project governance structures, ensure participatory processes and FPIC, and provide capacity building and training. For more information, see the section on project coordinator capacity below

Programme Operator: Nakau Programme Pty Ltd

Nakau is a social purpose company based in Melbourne, Australia, and a leading developer of community-led forest carbon projects in the Melanesian Pacific region. Nakau's projects protect and restore natural forests and enhance community livelihoods and resilience in the Solomon Islands, Vanuatu, Fiji and Papua New Guinea. Nakau's engagement with forest conservation and PES began in 2012 with the Loru project in Vanuatu. Since then, Nakau has developed and refined its project development methodology. Nakau comprises a team of ten staff that are highly experienced in forest carbon project development with indigenous communities in the Pacific.

Nakau undertakes the role of project operator for the Sirebe-project and has been supporting their PA and carbon project development since 2014. Nakau is the owner of the intellectual property rights over all projects applying the Nakau methodology, and provides oversight and capacity building for project design and implementation for the Sirebe Tribal Association and the project coordinator. Nakau ensures project compliance with the requirements of the Plan Vivo Standard, and coordinates project validation and verification. Nakau further acts as the sales and project registry agent for Plan Vivo credits on behalf of the Sirebe project.

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).

Legal Status

The Natural Resources Development Foundation Trust Board is incorporated under the Charitable Trusts Act (CAP 67) on the 28 July 2004, as a local non-government organization (Appendix 9).

Organizational background

NRDF is a local NGO registered under the Charitable Trusts Act (Appendix 9). NRDF was founded by long-term Solomon Islands resident Wilko Bosma in 2004 to address the problem of increasing forest degradation and habitat loss caused by commercial logging through Payment for Ecosystem Services (PES). NRDF is built on the core values that natural resources are fundamental to the wellbeing of local people and they provide sustainable resource management and climate resilience opportunities to communities — protecting natural resources for current and future generations. NRDF has been in partnership with the Sirebe tribe since 2007, implementing forest management and conservation activities as well as livelihood development projects. NRDF's engagement in forest conservation with carbon market activities in Sirebe began in 2012, in partnership with Nakau Programme and Live and Learn Environmental Education, and the inception of carbon project development in Sirebe occurred in 2014. Since the inception of the partnership, NRDF has been building its position and capacity as a leading forest conservation organisation in the Solomon Islands. Today, NRDF is one of the main project coordinator organisations responsible for establishing carbon projects under the Nakau Programme in the Western and Choiseul Provinces of the Solomon Islands. Apart from the Sirebe project, NRDF currently supports seven other projects in development (Siporae, Padezaka, Garasa, Lukolobere, Miquisava, Zoko, Viru Harbour). Due to the successful development of the Sirebe project, NRDF has demonstrated the management skills and expertise to bring Nakau forest carbon projects to market. NRDF today has 11 local staff that are highly experienced in PES project development work. NRDF's head office is in Gizo, the provincial capital of Western Province. A field office is operated from Sasamungga village in Choiseul. Despite being a small organisation, NRDF is recognised and trusted by communities, national and international NGOs, and the Solomon Islands Government as a key stakeholder in PES and forest conservation activities and programs in the Solomon Islands. The NRDF team is particularly qualified at setting up project governance and community development components at the community level. This includes community engagement and participatory processes, establishing project governance groups and developing benefit-sharing systems. Throughout these processes, NRDF is guided by the principles of inclusion, fairness and transparency — and by free, prior and informed consent.

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 community 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
	<ul style="list-style-type: none"> Significant prior experience in managing a community 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
Moderate	New group established by participants who are / have been involved in other similar groups (e.g. Executives)	<ul style="list-style-type: none"> Assist Project development Assist to establish, facilitate & support good governance & decision-making processes

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
High	<ul style="list-style-type: none"> Built upon an existing group with established governance administrative and management systems Significant prior experience in managing community 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)

The Project Coordinator (NRDF) has determined that the Project Owner, being the Sirebe Tribal Association and the Sirebe Community Company, has *moderate* capacity for project implementation (as per table 2.13.5 above). This is based on the recognition that many of its members having been involved in activities related to forest conservation and sustainable forest management during recent years, through which they have developed some understanding of what is involved in managing a community project.

A significant number of members have completed high school and have prior experience in small-scale project management. All office bearers are literate and speak and write in English. However, STA and its newly registered Community Company are still relatively new entities and will require some time to develop strong administrative and management systems (e.g. for employment of staff), while its governance structure is quite strong. The operating environment of the Association and the Company also presents some challenges with limited access to electricity, communications and transport infrastructure. Refer to section 3.1.2 for further information.

The capacity of the Project Owner is a key consideration when determining the roles and responsibilities that must be fulfilled by the Project Coordinator to ensure the project is properly implemented. The roles and responsibilities for the Project Coordinator are clearly articulated within the PES Agreement. In regard to those roles and responsibilities, NRDF will continue to support the STA and SCC to increase and strengthen its capacity to manage their project in the long term.

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.

The Sirebe project has been co-developed with the Project Owners and implementation will continue to be undertaken through a collaborative and participatory approach. Nakau and NRDF intend to transfer skills to the Project Owner on an ongoing basis. The roles and responsibilities of the Project Coordinator and Project Owner will be re-examined annually at each Project Management Meeting (see 3.1.7) and at the conclusion of each monitoring period at the Project Monitoring Workshop (see 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, as their capacity increases. 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 PDD:

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

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 (NRDF) and the Programme Operator (Nakau) has been signed, and reflects agreed roles and responsibilities.

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 has been merged with the PES Agreement (see 2.13.7.4).

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 PDD development: activities up to but not beyond PDD validation).

NRDF has been in partnership with the Sirebe tribe since 2007, implementing forest management and conservation activities as well as livelihood development projects. Activities on REDD+ and Nakau started in 2014 in collaboration with Live and Learn Solomon Islands. The latest partnership agreement was signed on

the 22nd of March 2016 and will lapse in 2021. The tribe already agreed with NRDF to proceed with the process to establish a protected area (PA) and with the Nakau programme activities. A copy of the agreement signed with the Sirebe tribe can be found in Appendix 14.

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 PDD 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 has been established as a 3-party agreement between the Project Owner, the Project Coordinator and the Programme Operator. Refer to the PES Agreement as a supporting document to this PDD.

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 PDD validation stage.

The Instrument of Protection to prevent baseline activities under the Sirebe Project is the *Protected Areas Act 2010* and *Protected Area Regulations 2012*. The Sirebe project area was declared Protected Area (PA) under the Act and Regulations on the 19th of November 2019 (Appendix 4). There is a prohibition on industrial or commercial logging or mining in a Protected Area, or to harvest any forest products from a protected area for commercial purposes. Outside of commercial resource extraction, the laws allow landowners to decide how their protected area will be managed.

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.

Clause 3.2 (f) of the PES 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. This is necessary to enable the Programme Operator to undertake sales and marketing effort outside of Solomon Islands. For sales within Solomon Islands, 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.

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.

The Project Coordinator has engaged the Nakau Programme Operator – technical support for preparation of PDD Parts A and B, and preparation of verification monitoring report. Other organizations provide specialized services (i.e. biodiversity surveys done by ESSI)

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.

The Project Coordinator's commitment to long term provision of support and monitoring services to the project is set out in Clause 4.2 of the PES Agreement.

The capacity of the Project Coordinator to deliver these services is evidenced in Section 2.13.4 of this PDD. The Project Coordinator will receive technical inputs from the Nakau Programme Operator in the delivery of these services as set out in the License Agreement.

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).

A stakeholder analysis has been developed for Nakau projects in the Babatana region and is attached as Appendix 15. Key stakeholders identified in our stakeholder analysis are:

- Sirebe Tribal Association (project owners of the Sirebe project)
- Sirebe Community Company Limited (managers of the Sirebe project)
- The Nakau Programme Pty Ltd (Programme Operator for the Nakau Programme)
- Live and Learn Pacific and Australia (Project coordinators of the Nakau projects in Fiji and Vanuatu)
- Ministry of Environment, Climate Change, Disaster management and Meteorology (supervises the legal process of the Protected Areas establishment)
- EKOS (Marketing of PES units to international markets)
- Critical Ecosystem Partnership Fund (Donor)
- Bread for the World – Germany (Donor)
- Ecological Solutions Solomon Islands (provider of biodiversity assessment expertise)
- FAO Integrated Forest Management Programme SI (Technical and Financial assistance)

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).

The Sirebe project has been designed to be compliant with the following relevant Solomon Islands laws and regulations:

- Solomon Islands Protected Areas Act 2010 and Protected Area Regulations 2012: The Sirebe project complies with this ACT and Regulations by following the right steps and procedures during the process of creating a Protected Area as well as implementing the management of the PA. The PA status of Sirebe is prove that the project has complied with this ACT.
- Solomon Islands Forest Resources and Timber Utilisation Act 2000: Although this ACT is mainly linked to the harvest of forest on commercial bases (prohibited under the PA ACT) some timber harvesting will take place and the Protected Area Management Plan will comply to this ACT where applicable.
- Solomon Islands Charitable Trust Act 1996: Governs the formation of associations such as the Sirebe Tribe Association. The registration of STA is evidence of being compliant with this Act.
- Solomon Islands Companies Act 2009: Provides Tribes and Tribal Communities to incorporate and operate local community businesses. The registration of the Sirebe Community Company is evidence of being compliant with this Act.
- Solomon Islands Labour Act 1996: The project applies the legal minimum age of employment and will respect any rules or regulations that applies to employer and/or employees within the organizational structures of the project.

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).

Participants in the Sirebe Project are supported by the Project Coordinator to register a legal entity to have the authority to run an enterprise on behalf of the Project Owners. NRDF supported the Sirebe project owners (Sirebe Tribe) to develop a Business Plan and register itself as an Association in 2017, and as a Community Company under the Solomon Islands Companies ACT 2009. This Act was purposely created by the Government to provide local communities with a simple and inexpensive way to incorporate and operate small for-profit companies. Other than developing the Association, the Community Company and registering a protected area as per the *Protected Areas Act 2010*, the project owners have no other legal or regulatory permissions required of them.

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 PDD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).

The procedures to ensure transparent financial management and revenue distribution are set out in Section 5 and Schedule 2 of the PES Agreement and section 5 and 6 of the Business Plan (Appendix 7). A full description can be found in section 4.2 of this PDD.

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 PDD to cover this requirement but noted as a cross-reference in this section for transparency and ease of auditing).

Section 4.2.2 of this PDD describes the project budgeting and financial plan. A Project Budget has been developed by the Project Coordinator and forms part of the Project Owner Business Plan (Appendix 7).

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 project documents 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 PDD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).

Section 6.1 of this PDD provides a list of all the key documents that provide the basis of this project. Section 7.2 describes the Standard Operating Procedure- Data Storage and Security, which outlines that the Project Owner, Coordinator and Operator are all to store copies of these key project documents, both as a hard copies and electronic copies. The Project Coordinator is to store all data that contributes to project design, management and monitoring. All documents and data are also to be stored on the online Project Information Platform.

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 PDD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).

As is described in section 7.2 of this PDD, all documents and data will be stored according to the Standard Operating Procedure - Data Management (Section 7.2 of this document). Security measures including storing all key documents in electronic and hard copy format with the Project Owner, Coordinator and Operator, and being backed up on office hard disks and servers. All documents and supporting data also to be stored on the online Project Information Platform to protect against data loss.

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 3.1.2.2 of this document (i.e. detailed information to be provided in Sections 3.1.2.2 of the PDD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).

Community members, including women and members of marginalised groups will be given an equal opportunity to fill employment or leadership positions in the project where job requirements are met or for roles where they can be cost-effectively trained. However, where necessary cultural protocols will be acknowledged, for example in filling ranger positions that must undertake work at sites or undertake activities that are subject to custom. The participant groups will be activity engaged in education and planning processes designed to build consensus for expanding traditional gender roles, and hence the project will have a transformative impact.

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 PDD to cover this requirement, but noted as a cross-reference in this section for transparency and ease of auditing).

All employment administered through this project will be in compliance with the laws as regulated by the Solomon Islands Ministry of Commerce, Industries, Labour & Immigration. Employment under the Project Coordinator will all follow the NRDF policies and procedures which meet or exceed the minimum requirements established under Solomon Islands labour laws.

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 PDD to cover this requirement but noted as a cross-reference in this section for transparency and ease of auditing).

The parties to this project have committed not to employ persons who are under the age of 15.

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).

Clause 4(s) of the PES agreement describes that the Project Coordinator shall: “Not assign or transfer project coordination functions, other than to sub-contract services outlined in this agreement, without first obtaining your consent and the consent of the Nakau Programme Operator”.

It is foreseen that this would only occur due to insolvency of the Project Coordinator. There is a very low risk that the Project Coordinator would become insolvent, hence it is not planned for coordination functions to be transferred at any time.

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 Instrument of Protection of the forests supporting the ecosystem services used to generate PES units for the Sirebe Project Area is the *Protected Areas Act 2010* and *Protected Area Regulations 2012*. The Sirebe project area was declared Protected Area (PA) under this ACT and regulations on the 19th of November 2019 (Appendix 4). There is a general prohibition on industrial or commercial logging or mining in a Protected Area, or to take any forest products from a protected area for commercial purposes. As a result, no logging or mining licenses can be issued over a PA, while the PA status is active, effectively protecting the areas from extractive industries. The laws allow landowners to decide how their protected area will be managed. The duration legal protection is indefinite but according to the Protected Area regulations (21a) the landowner or PA Management committee may apply to the Minister of Environment to voluntarily revoke the declaration of the area as a protected area after a period of 10 years.

Section 11 of the PES Agreement outlines the procedure if reversals of the ecosystem service eventuate. If reversals have been unavoidable, then a request can be made to the Programme Operator to *‘retire a quantity of Buffer Credits from the Pooled Buffer Account equivalent to the negative net change in the GHG Reduction Balance, capped at the number of PES units issued in respect of the Project, including Buffer Credits.* If the Project Coordinator determines the reversal was avoidable the Project Owner will be required to:

- Deliver to the Nakau Programme Operator for retirement, a quantity of Eligible Units equivalent to the negative net change in the GHG Reduction Balance, capped at the number of PES Units issued in respect of the Project, including Buffer Credits; and
- Reimburse the Project Coordinator and the Nakau Programme Operator on demand for all reasonable costs incurred in enforcing these commitments.

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 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:

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)¹⁵.

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

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					

¹⁵ Adapted from the iap2 table: https://iap2.org.au/wp-content/uploads/2019/07/IAP2_Public_Participation_Spectrum.pdf with permission.

Table 3.1.2b Level of Participation required for key project activities or outcomes					
Key Activity / Outcome	Inform	Concult	Involve	Collaborate	Empower
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/Outcome	
1. Education about PES activities	<p>Education for and about PES activities was an ongoing process implemented throughout the project development period. This commenced with the Research of Aspirations and Perceptions (RAP) activities done in 2011 by Live and Learn Solomon Islands. The RAP was highly effective in documenting and acknowledging community perceptions of a range of relevant topics and issues, including forest uses and values, existing knowledge and strengths, risks and opportunities.</p> <p>After this many other visits were conducted and meetings were held in 2014, 2016 and 2017 with the Sirebe tribe to discuss the Nakau PES programme and give further updates on the progresses made towards the starting of the project. Samples of education activities and meeting reports are provided in ER 3.1.2.2.</p>
2. Formation of a Project Owner group (Project Steering Committee) to participate in project design	<p>The first committees in Babatana area to deal with forest conservation work were established as far back as 2009 as part of a forest conservation program supported by the European Union. Those committees were not formalized until the groups started the Protected Area process in 2016, establishing official recognized PA committees and the forming of the Tribal Associations in 2017.</p>

Table 3.1.2c Level of Participation Facilitated by the Project Coordinator	
Key Activity/Outcome	
3. Establish legal Project Owner group (to act on participants behalf)	Protected Area Management Committees were formed following the steps required by the Ministry of Environment and following the process set out in the Protected Area Toolkit. From these early-established management committees some of the Babatana tribes decided to establish legal entities, formed as Tribal Associations, registered under the <i>Charitable Trust Act of the Solomon Islands 1996</i> . At time of PDD preparation three associations have been registered (Sirebe, Vuri, Garasa) and two in process (Siporae, Padezaka). The Sirebe Tribal Association was registered on the 23th of August 2017. A report providing evidence of the process and mandate from tribal members is provided in Appendix 16. To enable for the Tribe to run a carbon project and generate profits the Sirebe Association registered a Community Company under the SI Company Act 2009 (Appendix 10).
4. Determine respective roles and responsibilities of Project Owners and Project Coordinator	The PES agreement clearly describes the role of the Project owner and Project Coordinator and has been informed by decisions by the Associations regarding the structure of their organisation and their benefits sharing preferences. The first PES agreement introduction meeting with Sirebe representatives was held on the 25 th and 26 th of August 2018. Draft copies were handed over to the groups for further discussion. Follow-up meeting was held on the 29 November 2019 and the final agreements were signed in September 2020. The process undertaken to determine roles and responsibilities is described in the PES Agreement Report in Appendix 17.
5. Development of benefit sharing arrangements (within PES Agreements)	The development of benefits sharing arrangements took place over two years of education and participatory decision-making. Details are described in the Report on development of benefit sharing arrangements Appendix 18. Evidence that the benefits sharing arrangements are agreeable to all parties is seen in the signing of the PES Agreement.
6. Development of Nakau Management Plan	A participatory process was undertaken for the Sirebe Protected Area Management Plan, which led to its registration under the Protected Areas Act 2010 in 2019. The details of participative consultation on this are detailed in ER 3.1.6.1.3 and the Management Plan Participation Report in Appendix 19.
7. Development/ application of technical specifications to measure PES benefits	Staff from Live & Learn, NRDF and Ministry of Forestry facilitated the forest inventory fieldwork and utilised the expertise of local community members as guides and as assistants to collect survey data (under supervision). The inventory was designed to generate data and information on the commercial timber resource potential in the forest that is designated for protection. The data obtained enabled the baseline emissions from logging to be estimated (See PDD Part B). The forest inventories involving landowners were carried out in 2014, 2017 and 2019.

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.

The participatory approaches or ‘tools’ used to foster the participation of the landowner group in each stage of project development process are summarised in Table 3.1.2.2 (below):

Key activity / outcome	Participatory approach or tools used.
1. Education about PES activities	<p>Research of Aspirations and Perceptions (RAP) tool. Process (similar to PRA) developed by Live & Learn.</p> <p>Climate Change & REDD+ Education manual (CCRE). Developed specifically for the Nakau Programme and published by Live & Learn https://livelearn.org/what/resources/climate-change-andcommunity-based-redd-education-manual</p> <p>Animated film: “Climate Change: Everyone’s Business” In English and Solomon Islands an. Developed specifically for the Nakau Programme and published by Live & Learn: https://www.youtube.com/watch?v=roKlfqvJPQO</p> <p>Animated film: “Ready for REDD+?” In English and Solomon Islands Pidgin. Developed specifically for the Nakau Programme and published by Live & Learn: https://www.youtube.com/watch?v=kUGyZnAhdmw</p>
2. Formation of a Project Owner group (Project Steering Committee) to participate in project design	Protected Area Toolkit 2010 by Landowners’ Advocacy and Legal Support Unit (LALSU) of the Public Solicitor’s Office (PSO).
3. Establish legal Project Owner group (to act on participants behalf)	Protected Area Toolkit 2010 by Landowners’ Advocacy and Legal Support Unit (LALSU) of the Public Solicitor’s Office (PSO). Solomon Island Charitable Trust ACT 1996 Solomon Islands Companies ACT 2009
4. Determine respective roles and responsibilities of Project Owners and Project Coordinator	Meetings held to go through the PES Agreements and applicable chapters of the Nakau Methodology Framework Document
5. Development of benefit sharing arrangements (within PES Agreements)	Participatory planning meetings such as the business and benefit sharing planning workshop of 11-14 October 2017. Further meetings with Tribe members in 2017 and 2018 using copies of PES agreements and Programme agreements Money story Tools used in the Money story workshop from 22 to 26 July 2019.
6. Development of Conservation/Land Management Plan (or equivalent)	Participatory planning meetings following the process as described in the Protected Area Toolkit 2010. Guidelines for writing a Protected Area Management Plan, August 2013.
7. Development/application of technical specifications to measure PES benefits	<ul style="list-style-type: none"> NRDF Technical Specifications Module document. Survey conducted with help from NRDF and the Ministry of Forestry and Research.

During all awareness meetings, tribal meetings and technical training sessions, Solomon Islands Pidgin was used. If needed, coordinators translated in Babatana language. The Babatana language is not a written language and not many people are able to read Babatana and likewise, for Solomon Islands Pidgin. Most project documents cover many technical terms that are hard to translate in both Babatana and Pidgin. It is for that reason that English was used in all documents to make sure the content of the documentation is understood by all people involved in the project, and also so that it is legally sound.

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.

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

For the project owner group, genealogy research was carried out to identify all tribal members and potential beneficiaries of the project (see Appendix 2). Although most members from Sirebe live near the project area, some tribal members reside outside the Babatana region, as far as other Provinces. The project has engaged tribe members who live away from the tribal area by keeping them updated on any project updates and meeting outcomes.

All meetings held with the project owner group were announced well in advance and if needed members were transported by canoe to the meeting venues. All meetings, gatherings and workshops were open for every member and associates. Children were only invited when the programme was more appropriate for them, for example when awareness movies or pictures were shown. Mothers were encouraged not to bring small children to avoid distractions. Regarding the fieldwork: for the plot surveys youth from both groups were engaged and for the boundary survey knowledgeable men were selected to assist.

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

Communication with tribes and clans should always go through the clan or tribal chiefs and or elders. In the Solomon Islands, chiefs are generally titled through paternal or maternal lineage however in some instances,

chiefs are selected because the person in question is seen as the most appropriate leader for the tribe or clan. Chief Asa of Sirebe, a chief determined through line of Chiefs, was always consulted independently and also joined most meetings and gatherings. If not attending, his assistant Linford Jahjo Pitatamae was authorized to represent the chief.

3.1.2.2.3 Women

Some of the barriers to women's participation in project education and planning education activities are listed below:

- Many women are very busy with household and garden activities making it sometimes hard to attend meetings and gatherings.
- Traditionally men are decision makers in regard to clan and village matters and are allowed to voice their opinions in public consultations. Engagement of women requires the support of the men to increase women's participation.
- Women who marry into the villages are not entitled to land ownership, which also impedes their ability to put forward their views and opinions with project activities that relate to land.

To address these barriers meetings were organized at best times possible for women to attend such as early morning or evenings. To ensure women's participation in the Associations some prominent roles were given to females such as the treasurer and trustees.

In 2017 NRDF assisted the Sirebe women to establish a Women's Savings Club. The purpose of the Women's Savings Club is to provide the women who do not have access to formal banking services, or are not comfortable using these services, with a tool for savings and loans for small business development. The women's saving club is linked to the project through the benefit sharing system. It also empowers women to be represented through a body with financial management interests and beneficiary of the Nakau project.

3.1.2.2.4 Young people

Young people are defined in the project as 18-20-year old. The most common barrier for youth to engage in projects is their interest in typical youth things, exploring life and not committing themselves to long term work or engagements. Many youth in the village find ways to explore the world outside their own village and try to leave for work, study or move to different villages. Short engagement in the project is therefore more applicable/desirable for youth.

NRDF engaged with youth within the Project Owner Group by giving them casual jobs such as boundary mapping, establishing permanent sample plots and measuring tree heights and tree diameters during the carbon inventory. Many young people also joined in Biodiversity assessments and boundary surveys. Some rangers appointed to manage the Protected Area are between the age of 18 to 20.

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

People reliant on the project site who are not landowners include women and men who marry into the tribe. These groups are usually granted resource use rights (e.g. areas for gardening or space for building a house). The community in which the Sirebe Tribe are mostly located is outside of the Sirebe Protected Area boundary and is therefore not used by these people anyway. Current custom rules require people to request permission from tribal chiefs prior to entering the Sirebe tribal land for any hunting or resource extraction activities. These access rules for community members without resource-ownership rights have existed long before the project and will not be changed by the project. These groups are invited to participate in community education and planning sessions, a significant proportion of benefits from the project will go to 'group benefit,' such as improving community water supply infrastructure. In this manner non-landowners will derive benefit from the project.

Table 3.1.2.2: Evidence Requirement: Participation	
#	Name/Description
3.1.2.2	Sample reports from participatory education & planning activities (See ER 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 carbon project 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:*

- *The establishment of a 'Formation Group' to initiate the project co-design and co-development process*
- *The registration of a legally constituted 'Project Owner' group with a mandate to manage the project (with the Project Coordinator) on behalf of the land/resource rights holders.*
- *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).*

The establishment of a Project Governing Executive/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

Initial discussions for forest conservation and carbon (previously under an umbrella project named 'Sasaboe') occurred with various communities in the Babatana area starting in 2012. The Sirebe tribe was one of the first to form a committee, to manage the PA process. In 2016. Field activities were mostly planned with the committee. In 2017 the tribe decided to establish the Sirebe Tribal Association, and subsequently a Community Company under the Companies ACT 2009 on the 4th of April 2020 (owned by the STA).

3.1.3.2 Project Owner Group

The Sirebe landowners have registered the Sirebe Tribal Association (STA); under the Solomon Islands Charitable Trust Act 1996 and the Sirebe Community Company under the Companies ACT 2009. Although NRDF was involved in establishing early management groups to manage the protected areas, the tribal members themselves undertook the process of forming the legal entities. The appointment of STA office bearers and the writing and endorsement of the constitution was undertaken through a process of consultations and meetings amongst the Sirebe tribe members. The Sirebe Tribal Association is the sole shareholder of the Sirebe Community Company.

3.1.3.3 Mandate of Project Owner Group

The custom landowners of Sirebe were involved in business development and planning throughout the project. All the mandates of the Association are captured in the *Constitution of the Sirebe Tribal Association* (Appendix 13). During a meeting at Tanabo Village on the 14/6/17 the members agreed that the Association should be responsible for the coordination and management of the forest carbon project. However, as

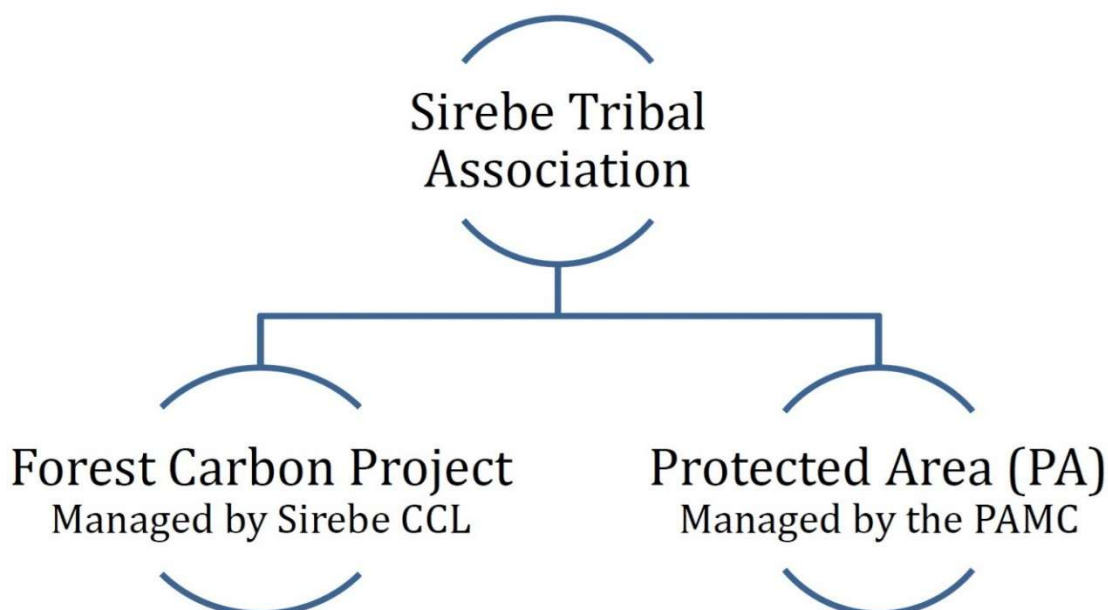
charitable organization the STA is not allowed to run activities that generate profits, even if those profits are used for community development. For this reason, the Sirebe Tribe and Association decided to register a Community Company under the Companies ACT 2009. This will enable the Tribe to run the carbon project legally and income from carbon sales. The company is guided by model rules for a Community Company set by the Schedule 5 (Section 15(4)) by the Companies ACT 2009.

3.1.3.4 Project Governing Executive

Three main governance bodies that are looking after the management of the Forest Carbon Project:

1. **Sirebe Tribal Association Trust Board Inc:** This association was registered under the Charitable ACT of the Solomon Islands and functions as the overall decision-making body of the project guided by the Association’s Constitution. In the context of the Project the Association can be regarded as the “Board” of the Forest Carbon Project, representing the tribe and all its members. According to the Constitution of the Sirebe Tribal Association, the running of the association rests with the Executive Committee consisting of 12 members including 4 women (Appendix 13).
2. **Sirebe Community Company Ltd:** The Sirebe CCL is responsible for the day to day management of the Project including looking after the financial management of the accounts. The Company was set up because the Charitable ACT does not allow Associations to run projects and businesses that generate profits. At this stage the Company has only two staff: the Financial Manager and the Operational Manager. The Operational manager is also the formal Director of the Company. Further staff (assistants) may be appointed in a later stage when the need arises. Besides day-to-day project management the Managers are also responsible to implementing and coordinating the activities described in the Sirebe Business plan and the Benefit sharing plan. The four directors of the Company are the four heads of the primary family lines of the Sirebe Tribe.
3. **Protected Area Management Committee:** The management of the Protected Area (PA) is in the hands of the legally established (under the Protected Area Regulations 2012) Protected Area management Committee. This committee is comprised of six (6) Committee members, six (6) Rangers and two (2) Inspectors. The committee is guided by the PA Committee Constitution and the PA Management Plan. All three governance bodies are working closely together and progress reports and financial reports are submitted to the Association quarterly bases and presented during the quarterly Project meetings.

Figure 3.1.3.4: Sirebe Project Governance Structure



3.1.4 Conservation 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 land management plan 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 Conservation Management Plan, which is equivalent to the Plan Vivo as defined by the Plan Vivo Foundation. The purpose of the Conservation Management Plan is to guide implementation of land management activities within the Project Area, including defining activities that are prohibited or restricted. While the Conservation 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 Conservation Management Plan that must include all land within the Project Area boundary, but may also cover additional areas of relevance to the project. The Conservation 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 and 3.1.3 above, and includes participatory educational processes defined in this section (below). The decision by the project owners / landowners to accept (or otherwise) the Conservation Management Plan is a key decision that triggers the FPIC process, detailed in Section 3.1.6.

The Sirebe Protected Area Management Plan is provided in Appendix 5. It was developed as part of the 12 step Protected Area process as described in the Protected Area toolkit 2010. The management plan template that was used is also provided in the toolkit. Information for the plan was obtained from research and studies done in the area in 2009 and 2014.

The first steps are focussed on awareness and consultation with landowners and members of neighbouring tribes, to create an understanding and awareness of the PA process and the implications that a PA declaration has on the use of the proposed area. These consultations are the first steps in determining the management activities and rules/regulations in and around the Protected Area.

As the Protected Area Act and Toolkit outlines, the Protected Area Management Committee drafted a Conservation Management Plan which included activities that are permitted, restricted and prohibited in the Protected Area, and management actions for monitoring and implementing the plan. During the writing process drafts were shared with the community, where the community was consulted on the rules and regulations. The final draft was then presented to the community at meetings with members of the Sirebe Tribe. The Sirebe Tribe management plan was submitted to the Ministry of Environment in January 2017 and was adjusted by the Tribe after a review and verification visit by staff of the Ministry of Environment in February 2018. The final management plan was submitted and approved by the Ministry in June 2018.

The process towards declaring a protected area is as shown in the figure 3.1.4.¹⁶: The fact that Sirebe was declared a Protected Area by the Ministry of Environment is evidence that all the steps in the process were followed properly and verified by the Ministry.

¹⁶ Landowners' Advocacy and Legal Support Unit (LALSU), (2010) Protected Area Toolkit. Public Solicitor's Office (PSO).



Figure 3.1.4: Steps in Protected Area declaration process

3.1.4.1 Nakau Management Plan Committee

The NMF states: A Nakau Management Plan Committee must be established by the Project Owner Governing Executive 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 Sirebe Tribal Association has formed a subcommittee to function as the Protected Area management committee responsible for the implementation of the Protected Area Management Plan. The committee members were appointed during the first official protected area consultation meeting on the 9th of March 2015. The PA management committee will retain ultimate accountability for implementation of the Protected Area Management Plan. The minutes from this meeting are provided in ER 3.1.6.1.3. The PA Management Plan participation is also provided (appendix 19).

3.1.4.2 Essential Content

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

The Sirebe Tribe Protected Area Management Plan (contains all elements required in Section 3.1.4.2 of the Nakau Methodology Framework as indicated by the checklist in the right-hand column of Table 3.1.4.2 below. The Management Plan is presented in Appendix 5.

Section	Protected Area Management Plan contains:	Location in PAMP
Location and Boundaries	Digitally created maps containing accurate coordinates for location, boundaries and size of the area under management.	Page 1 and 2
Prohibited Activities	A concise list and description of any activity that is prohibited within the area under management.	Page 19
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.	Page 19
Penalties	This plan includes a description of the process for determining a penalty for not complying with prohibited or restricted activities and includes a dispute resolution process. This includes penalties under customary law, or penalties if applicable under the legal instruments applied to the project.	Pages 21 and Appendix 1
Permitted Activities	Various local, customary and potentially commercial uses of land are allowable within the crediting area boundary subject to the project type and technical specifications. The Plan identifies 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.	Page 20
Management Zones	Not applicable. The management plan only covers the area within the protected area boundaries. Garden areas are excluded from the Protected Area.	Na
Action Plan	A basic action plan, identifying the main activities that will be implemented is included	From page 22

The Sirebe Protected Area Management Plan has been written in English. The English language is understood by most (if not all) members of the Sirebe Tribe. Whilst members are encourage to read through the entire management plan, a one page management plan has been developed and must be read and understood as a requirement of the PA Declaration process. This one-page management plan consists of a PA area map, a list of rules & regulations and some brief background information on the PA. It is printed as a poster and displayed on a village notice board and will also be available as a handout.

3.1.4.3 Recommended Content

The NMF states: *The Nakau Programme recommends developing a comprehensive Conservation 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 socioeconomic 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 recommended content for the Protected Area Management Plan from the Protected Area Toolkit was used as guidance in developing the first complete version of the Sirebe Protected Area Management Plan. As stated above the Conservation Management Plan can be satisfied through development of plans with equivalent content under National Legislation for Protected Areas, leasing or licensing. A Protected Area Management Plan developed according to requirements of the Protected Areas Act 2010 can be used to satisfy the requirement for a Conservation Management Plan, provided the essential content is covered (see Appendix 5).

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:

- 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.
- 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.
- 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
- Enable opportunities for customary / local processes of information exchange and learning to occur.
- Assess learning outcomes to measure against capacity benchmarks (see details below on capacity benchmarks).
- Provide opportunities for ongoing 'informal' (non-structured) learning to occur, throughout the project, as required.

3.1.5.1 Assessment of Prior Knowledge

An initial series of workshops were held with community members to assess their aspirations and perception of concepts related to the project, including REDD+, climate change, sustainable forest management and forest governance (see the Solomon Islands REDD+ RAP Report, Appendix 20).

3.1.5.2 PES Educational Programme

A series of education activities were undertaken at different stages of the project to enhance participation of community members in project design and enable informed decision-making. PES Educational activities covered a broad range of topics including those relating to climate change, REDD+ and biodiversity conservation, organisational governance and financial management. The Climate Change and REDD+ Education (CCRE) manual was developed and used to guide the education activities. Refer to Table 3.1.2c (above) for further information about learning outcomes covered.

3.1.5.3 Two-Way Learning

The Research in Aspirations and Perception (RAP) activities were designed to enable a two-way flow of learning (between Project Coordinator and landowners). They include both the educational activities described above to enable to full participation of community members, as well as an opportunity for the Project Coordinating team to gain knowledge about the local communities to incorporate into project design and delivery. As well as this formal knowledge exchange, the project team visiting regularly and staying in the village for the duration of the visits enabled ample opportunity for knowledge exchange in informal settings. Key learning outcomes for the Project Coordinator team include:

- Approaches to engaging with communities such as identifying key people in the village, best times to conduct meetings to enable maximum participation, factors that may be a barrier to the participation of certain groups or other stakeholders

- Community perspectives about what did and didn't work from past projects such as the FSC SFM and milling project and community/project governance structures. The lessons learned were incorporated into the approach for this project.
- Important information that was an input into land-use planning such as culturally significant sites, customary land management practices and the traditional values of forest resources.

Refer to the Solomon Islands REDD+ RAP Report, Appendix 20.

3.1.5.4 Customary Learning

Customary learning refers to local and traditional practices of information exchange and learning outside of the formal education process. The project has made an effort to encourage opportunities for this type of learning to occur as it enhances ownership and opportunities for participation. Customary learning has been incorporated into the project structure in the following ways:

- Meetings and awareness sessions were announced in advance so that there was enough time for the tribe to communicate with members that were not readily available or are residing outside the target areas.
- Meetings and gatherings were organized during times that were not conflicting with any cultural activities or when certain groups like women and youth were unavailable.
- Meetings and gatherings were chaired and led by the tribal members as much as possible. Or, in case NRDF took the lead, mandated by the spokespeople of the tribe.
- Local knowledge was used and obtained during the biodiversity surveys and Permanent Sample plot surveys. Custom sites were always respected and not visited if restricted by the Chief.
- In the benefit sharing planning cultural learning was integrated and the tribal members were given the full freedom to determine a culturally agreeable plan.

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 mandate to continue the project (accept a decision or plan)
- Delay a decision or plan pending further information;
- A request to change the decision or plan before continuing; or
- 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	Evidence & location
1. Register a legally constituted Project Owner entity to act on behalf of land/resource user rights holders.	Project Owner entity registration (including constitution and certificates).	Report on process and participation; Appendix 16
2. Agreement with the terms and conditions of project PES Agreement. Note: the PES agreement encompasses points 4.1.1.1 to 4.1.1.16 (see section below)	PES Agreement Report including mandate for signing.	PES Agreement Report; Appendix 17(a) and 17(b)
	PES agreement signed by Project Owner committee.	PES Agreement
3. Agreement to Conservation/Land Management Plan (or equivalent) including project boundaries and management regime for the project area	Conservation/Land Management Plan (or equivalent) Participation Report.	ER 3.1.6.1.3 FPIC 3 Appendix 19

Table 3.1.6.1: Decisions that trigger FPIC and/or require a mandate		
Decision	Evidence Requirement	Evidence & location
4. Agreement for the Project Description Document (PDD) to be submitted for validation	Project Description Summary delivered in a format that Project Owners can understand.	Presented to landowner group over successive meetings (planning meetings)
	Letter / minutes signed by Project Owner committee agreeing to submit the PDD for validation.	Appendix 21

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 PDD. 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:

Project management reports will be combined with the Plan Vivo requirement for an annual project report. These reports will be completed and presented through a project management workshop to landowner participants annually, commencing one year after validation and first verification of each project within Nakau Programme. If practical, the project management reports and/or workshops may be combined for the projects, or presented separately. The Project Management Workshops will progress according to the following agenda (or similar):

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 PDD).
- 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 Executive 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.

The Project Owner committee is 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 Executive. 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.

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 Executive 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 Executive and will follow an agenda sequence as follows:

The Sirebe Project will prepare a monitoring report at the end of each monitoring period (for verification and credit issuance). The requirement for a 'formal' project-monitoring workshop will be waived for first verification (as leading up to first verification participant groups are already meeting regularly and engaged in project development activities). The project monitoring workshop will be conducted annually after the first verification event.

The Project Monitoring Workshop will progress according to the following agenda (or similar):

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 Executive.

Part 3 – Mandating Next Steps

The Project Governing Executive 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.

Project Governing Executive 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 Executive. This decision is recorded in the minutes of a Governing Executive 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.

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 codesign 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 (PDD) (as an appendix). Any revisions of the ‘SOP: Dispute Resolution’ shall be noted in Project Monitoring Reports and PDD revisions.*
- *The ‘SOP: Dispute Resolution’ may be based on the Nakau Programme Dispute Resolution Framework (see Appendix 3 [of the NMF]).*

The procedure for dispute resolution is set out in section 10 of the PES Agreement, which refers to the Dispute Resolution Framework in the Nakau Methodology Framework (Appendix 3 therein.). The Dispute Resolution Framework intends to ensure that any grievances that may arise between the Project Owners and Project Coordinators be dealt with in a transparent, fair and timely manner.

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:*
- *The Payment For Ecosystem Services (PES) Agreement*
- *The Project Finance Model*
- *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 conservation management plan and project design documents in return for staged, performance-related payments or benefits.

All projects in the Nakau Programme will have separate PES Agreements (see separate document). The Specifications of the Sirebe PES Agreement are detailed in the sections that follow. All PES Agreements are subject to the process of free, prior and informed consent and agreement of Parties.

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.

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 PDD, and presenting the necessary information contained in the PES Agreement in the sub-sections of the PDD defined below:

4.1.1.1 Quality and Type of Ecosystem Service Transacted *4.1.1.2 Project Interventions*

4.1.1.3 Relevant PDD

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 content of the PES Agreement is summarised below

4.1.1.1 Quality and Type of Ecosystem Service Transacted

The PES Agreement states that the Project will produce verified Plan Vivo Certificates determined through the Technical Specifications Module (C) 1.1 (IFM-LtPF): Improved Forest Management – Logged to Protected Forest V1.0. The Project is expected to generate an average of 12,142 net tradable carbon offsets every year for the 30 years of the project (excluding the 20% buffer).

4.1.1.2 Project Interventions

The PES Agreement indicates that the project interventions are defined by this PDD, the Nakau Methodology Framework and the Technical Specifications Module applied. The project interventions are specified in section 2.1 of this PDD.

4.1.1.3 Relevant PDD

The PES Agreement Schedule 1 “Definitions and interpretations” links the PES Agreement with this PDD (part A and B).

4.1.1.4 Performance Targets (linked to Conservation/Land Management Plan (or equivalent))

Clause 5.2 (e) of the PES Agreement requires the Project Owner to implement the project according to the Sirebe Protected Area Management Plan and the performance targets contained therein.

4.1.1.5 Process for Determining Volume of PES Units Transacted

Schedule 2 of the PES Agreement ‘disbursements of sales revenue’ states that agreements for sales volume, pricing, and sharing of payments, and includes full disclosure of pricing data and the project sales register by the Nakau Programme Operator.

4.1.1.6 Non-Performance Penalties

Non-performance penalties are outlined in Section 11 of the PES Agreement, where non-performance is described as a Reversal. Following a Reversal, The Nakau Programme Operator will determine whether the Reversal was Avoidable or Unavoidable. If it is determined that the Reversal was Unavoidable, the Nakau Programme Operator will be requested to retire a quantity of Buffer Credits from the Buffer Account equivalent to the negative net change in the GHG Reduction Balance, capped at the number of PES units issued in respect of the Project, including Buffer Credits. If it is determined that the Reversal was Avoidable, then the Project Owner must:

- a. Deliver to the Nakau Programme Operator for retirement, a quantity of Eligible Units equivalent to the negative net change in the GHG Reduction Balance, capped at the number of PES Units issued in respect of the Project, including Buffer Credits; and
- b. Reimburse the Project Coordinator and the Nakau Programme Operator on demand for all reasonable costs incurred by them in enforcing their commitments under this clause.

Following a reversal, the Project Owner must take all action necessary to re-establish, restore or maintain the project’s GHG emission reductions or enhanced removals.

4.1.1.7 PES Period

A PES period of 30 years from starting date will be applied to all projects in the Nakau Programme. The start date for projects must be on or after the 1st January 2015, and be based on evidence that determines the date landowners switch from pursuing baseline activities to agreeing to undertake a PES project. Each project in the Nakau Programme will have a separate PES Agreement that specifies its project start date. The start date and project period for the Sirebe Project is specified in Clause 1.5 of the PES Agreement as from 1st January 2015 until 31st December 2044 (30 years).

4.1.1.8 Impacts of PES Agreement on Rights to Food, Fuel, Timber

The Project will not impact the right of landowners to harvest resources for their needs outside of restrictions noted in the Sirebe Protected Area Management Plans (Appendix 5) and the Technical Specifications Module (C) 1.1 (IFM-LtPF): Improved Forest Management – Logged to Protected Forest V1.0.

4.1.1.9 Buffer

Clause 3.2 (d) of the PES Agreement states 20 % of the PES Units from the Project, as calculated in the PDD and under the Buffer Account Rules, will be set aside and provided to the Plan Vivo Foundation Buffer Account, as a security for Reversals.

4.1.1.10 Agreement on roles and responsibilities of the Project Owner

The roles and responsibilities of the Project Owner are set out in section 5 of the PES Agreement. They are detailed in section 2.13.6.1 of this PDD.

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

The roles and responsibilities of the Programme Operator (Nakau) and Project Coordinator (NRDF) are set out in sections 3 and 4 of the PES agreement, and are described above in section 2.13.5 of this PDD.

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

The agreement for disbursement of income from PES unit sales to the Project Coordinator (NRDF) and Programme Operator (Nakau) is set out in the License Agreement Schedule 2. The amount paid to the Project Coordinator (NRDF) shall be 20% of the sale price per unit sold, disbursed quarterly. The amount paid to the Programme Operator (Nakau) shall be 20 % of the sale price per unit sold, disbursed at the discretion of the Nakau Programme. The amount paid to the Nakau Programme Operator and/or the Project Coordinator is subject to the safeguards imposed by the Plan Vivo Standard, designed to ensure fairness for equitable sharing of project benefits. Project and Programme related costs borne by the Nakau Programme Operator and/or the Project Coordinator can be altered according to need, but will not exceed 40% of total sales income received at the wholesale price, unless justified to the satisfaction of the Plan Vivo Standard, and only where such adjustment is necessary for covering direct project-related costs.

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

The agreement on disbursement of income from PES unit sales to the Project Owner is set out in section 7.3 and Schedule Two of the PES Agreement. Revenue will be disbursed to the Project Owner will be evenly distributed across each 15-year baseline rotation, to ensure, as best as possible, a steady and predictable income. Payments shall be made quarterly and shall not exceed one quarter of the value of one year's volume of units, unless agreed by both parties. Any balance of income owed will be held in trust until subsequent quarterly payments are due. The disbursement amount paid quarterly to Project Owners will be the number of units sold in the previous quarter multiplied by the rate agreed to pay per unit sold (60% of sale price). Further information about disbursements to project Owners is described 4.2.9 of this PDD (below).

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

Clause 5.2(i) of the PES Agreement states that the Project Owner will manage income from the sales of PES units according to the Sirebe Association Nakau Business Plan (See Appendix 7) and this PDD, as described below in Section 4.1.1.18.

4.1.1.15 Process of PES Agreement review

PES Agreements may be reviewed at the project-monitoring meeting at the end of each monitoring period, or anytime at request of the Parties. Unless otherwise provisioned under this Agreement, a review does not convey the right of individual parties to change the contract. Any alterations to the contract require the agreement and signature of all contracting parties.

4.1.1.16 Project SOP Dispute Resolution

Section 10.1 – 10.5 of the PES Agreement sets out the procedure for dispute resolution, which intends to ensure that any grievances that may arise between the Project Owners and Project Coordinators be dealt with in a transparent, fair and timely manner. This refers to the Standard Operating Procedure for Dispute Resolution that can be found in the Nakau Methodology Framework.

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).*

4.1.1.17 Project finance disbursement compliance with the Project Finance Model

As is set out in section 7.3 of the PES Agreement PES unit sales income will be disbursed in a manner that complies with the Nakau Methodology Finance Model, as described in section 4.2 of this PDD.

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 PDD. 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 PDD) and must include:*

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

4.1.1.18 Allocation of project income by the Project Owner

As stated in section 5.2(h) & (i) of the PES Agreement, the Project Owner will manage income from the sales of PES units according to the Nakau Methodology Framework Business Model (see section 4.3 of this PDD) and as detailed in the Sirebe association's Nakau Business Plan. An explanation of the Business Plan is described in section 4.3.1 of this PDD.

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 PDD will summarise the process leading to the PES Agreement.

The process of leading to signing of the PES Agreement is voluntary for all participant groups in the Nakau Programme. The PES agreement triggers the Free, Prior and Informed Consent (FPIC) process described in Section 3.1.6 of this PDD as Decision 2: “Agreement with the terms and conditions of project PES Agreement(s) and Programme Agreement.” Table 3.1.6.1(b) refers to the location of supporting evidence that FPIC was met.

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 available¹⁷*

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 PDD, 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

The Project Coordinator and the Nakau Programme Operator will co-operate on PES payment obligations in accordance with the PES Agreement. The Nakau Programme complies with Plan Vivo Standard (2013) clause 8.5.2 of having a – proven track record in identifying PVC buyers, having secured buyers for all credits issued in the first issuances of previous projects.¹⁸ At present the Nakau Programme has established sales and purchase agreements with seven carbon resellers.

¹⁷ 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.

¹⁸ First issuances from Nakau Programme Drawa (Fiji) and Loru (Vanuatu) projects

4.1.3.2 PES Payment Conditions

Projects under the IFM-LtPF Intervention will only produce ex-post carbon credits, which are to be issued by the Plan Vivo Standard upon acceptance of a Monitoring Report, which is to be verified by an approved 3rd party. Section 7 'Finance' of the Inception Project PES Agreement states:

The Sirebe Community Company enters into this agreement understanding that the Nakau Programme may not be able to sell all of the project credits or guarantee that credits can be sold for the asking price. The Nakau Programme makes no representations and gives no guarantees of income from sales of PES Units and accepts no liability for payment in the event that PES Units are unable to be sold.

And requires that the Project owner acknowledges:

- a) PES Units will only be issued by the Registry after the independent validation and registration of the Project and submission of an independently verified PES assertion with supporting documents, which complies with the Nakau Methodology Framework, the Nakau Programme Technical Specifications Module/s applied and Registry requirements;
- b) 20% of the PES Units from the Project, as calculated in the PDD and under the Buffer Account Rules, will be set aside and held by the Nakau Programme Operator in the Pooled Buffer Account to mitigate against the risk of Reversals, and;
- c) PES Units from this project are not currently tradable in any compliance emissions trading scheme, but are currently tradable in international voluntary PES markets.

4.2 Project Finance Model

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

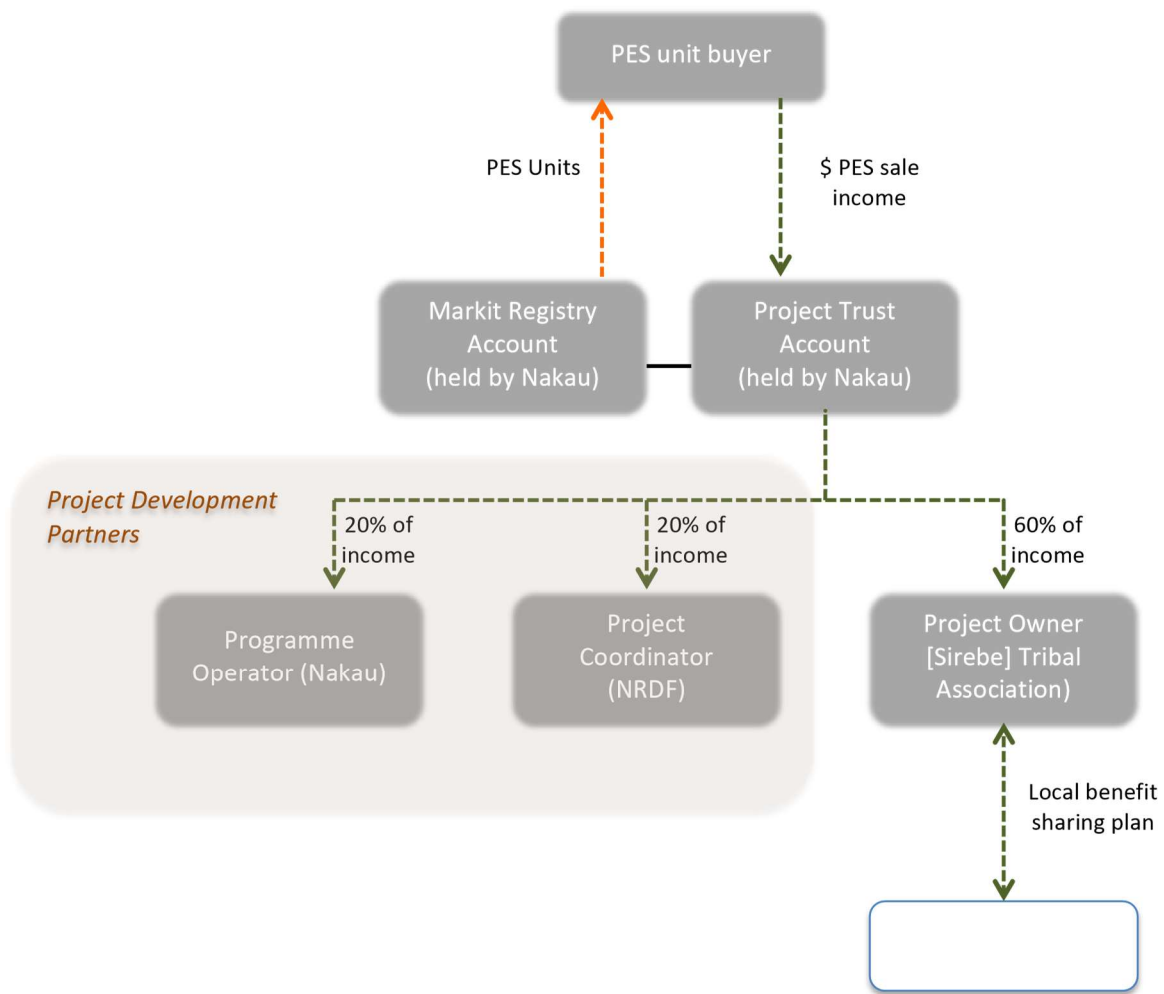
3.9. A transparent mechanism and procedures for the receipt, holding and disbursement of PES funds must be defined and applied, with funds intended for PES earmarked and managed through an account established for this sole purpose, separate to the project coordinator's general operational finances.

4.2.1 Overview

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

All projects in the Nakau Programme will employ the same project finance model. The proceeding sections specify specific clauses in the Sirebe PES Agreement.

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 Coordinator (NRDF) has developed and maintains annual budgets for its activities, which includes provision of services to the Sirebe Project.

The Project Owner annual budget is contained within the Project Owner Business Plan (Appendix 7). The Project Owner annual budget must be reviewed every three months, after project verification, to reflect operational costs, PES units disbursed and funding received.

4.2.3 PES Unit Sales

The NMF states: The Programme Operator holds a PES Unit Sub Account for each unit type held in trust on behalf of Project Owners.

PES Unit sales will take place according to Sale and Purchase Agreements.

The parties to a Sale and Purchase Agreement are the PES Unit Buyer and the Programme Operator acting as Sales Agent for the Project Owner. The PES Unit Buyer deposits 100% of agreed funds into the Project Trust Account.

The Programme Operator will develop Sales and Purchase Agreements with buyers, whom may be resellers. Each agreement may be tailored to the circumstances of each particular sales transaction, which may include sales from multiple projects. In every 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 and License Agreement). Section 3.2 (f-h) and schedule 4 of the PES Agreement appoints the Programme Operator (Nakau) to enter into a Sale and Purchase Agreement with purchasers for PES Units acting as Sales Agent on behalf of the Project Owners.

The PES Agreement sections 7.3 (a-c) 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.

An exception to the above may occur if an approved reseller makes small volume sales, or if the Nakau Programme raises funds through crowd funding or other method where sales accumulate gradually. In such cases the funds may be held in a separate account by the reseller or other party until there is sufficient funds to justify a transfer into the Project Trust Account. This is to avoid excessive transaction fees.

The Sirebe project has a methodology deviation and has not set up an ESCROW service between Nakau, project owners and the buyers. This methodology deviation is justified because Plan Vivo no longer offers an ESCROW service. The Markit Registry, which Nakau operates under, offers sufficient buyer and seller safeguards for the project. There are no ESCROW services mentioned in the PES agreement. This methodology deviation has been highlighted with Plan Vivo at validation.

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 Nakau Programme Operator Executive has opened a Project Trust Account entirely for the purpose of receipt and disbursement of funds from project PES unit sales, and this account is separate from the Project Operators other accounts. A PES unit sales register (template) has been prepared to record PES transactions for the Nakau Project Trust Account.

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.

The services to be provided by the Project Coordinator to Project Owners in the Sirebe Project are outlined in Section 3 and 4 of the License Agreement. Schedule 2 of the License Agreement determines that the Project Coordinator (NRDF) will receive 20 % of the income from credit sales.

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 agreement for disbursement of income from PES sales to the Project Coordinator (NRDF) and Programme Operator (Nakau) is set out in the License Agreement Schedule 2. The amount paid to the Project Coordinator (NRDF) shall be 20% of the sale price per unit sold, disbursed quarterly.

Section 7.3(c) of the PES Agreement determines that the Project Owner will receive 60% of the income from Credit sales, and the Project Coordinator and Programme Operator (combined) may receive 40%.

The amount paid to the Nakau Programme Operator and/or the Project Coordinator is subject to the safeguards imposed by the Plan Vivo Standard, designed to ensure fairness for equitable sharing of project benefits. Project and Programme related costs borne by the Nakau Programme Operator and/or the Project Coordinator can be altered according to need but will not exceed 40% of total sales income received at the wholesale price, unless justified to the satisfaction of the Plan Vivo Standard, and only where such adjustment is necessary for covering direct project-related costs.

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.

The agreement for disbursement of income from PES sales to the Project Coordinator (NRDF) and Programme Operator (Nakau) is set out in the License Agreement Schedule 2. The amount paid to the Programme Operator (Nakau) shall be 20% of the sale price per unit sold, disbursed at the discretion of the Nakau Programme. The amount paid to the Nakau Programme Operator and/or the Project Coordinator is subject to the safeguards imposed by the Plan Vivo Standard, designed to ensure fairness for equitable sharing of project benefits. Project and Programme related costs borne by the Nakau Programme Operator and/or the Project Coordinator can be altered according to need, but will not exceed 40% of total sales income received at the wholesale price, unless justified to the satisfaction of the Plan Vivo Standard, and only where such adjustment is necessary for covering direct project-related costs.

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 PES Agreement stipulates that each Party to the PES agreement is separately responsible for payments of fees, taxes or rents that are levied upon them individually. As the registry agent, the Nakau Programme Operator has agreed to pay for carbon registry issuance fees. The Project Owner will be responsible for payment of any fees or taxes relating their management of land, for example in relation to registration as a Protected Area.

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 $\geq 60\%$ 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).

Funds received into the Project Trust Account as a result of the sale of PES units will be disbursed to the Project Owner according to Section 7.3(c) and Schedule 2 of the PES Agreement. Project owners will receive 60% of income from carbon sales. The disbursement procedures for PES income to the Project Owners is also described in section 4.1.1.13 of this PDD (above).

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:

- Cash Flow
- Profit & Loss
- Balance Sheet

The reports (above) must be provided to the Project Owner every quarter in a format that ensures Project Owner executive committee or Executive 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 PES Agreement commits the Programme Operator to financial discipline and transparency through Schedule 2 “The quarterly disbursement of sales income (if any) to the Project Owner (the Sirebe Tribal Association) shall include full disclosure of resale pricing data and the project sales register by the Nakau Programme.”

However, this is limited to the sale of credits by the Nakau Programme and will not include sales data of any subsequent trading by other parties. The Nakau Programme Operator has established the Project Trust Account at the Bendigo Bank (Australia), and has prepared a PES sales registry spreadsheet to record sales income and disbursements. Live & Learn International will undertake administration of the account under a service agreement to the Nakau Programme Operator. As part of this service NRDF will maintain up-to-date records of all transactions and disbursements using accounting software. Reports that fully disclose all income and disbursements to all parties will be produced quarterly and made available to all parties.

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 Ltd¹⁹. 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. The Project Owner may make minor amendments to the model (such as to account names), provided the model is not materially changed. The Nakau Programme recognises that project bank accounts may not be established until first payments are received (i.e. in the case that minimum bank account balances are required).

¹⁹ www.littlefish.com.au/web/home.html

Figure 4.3: Project Owner Business Model

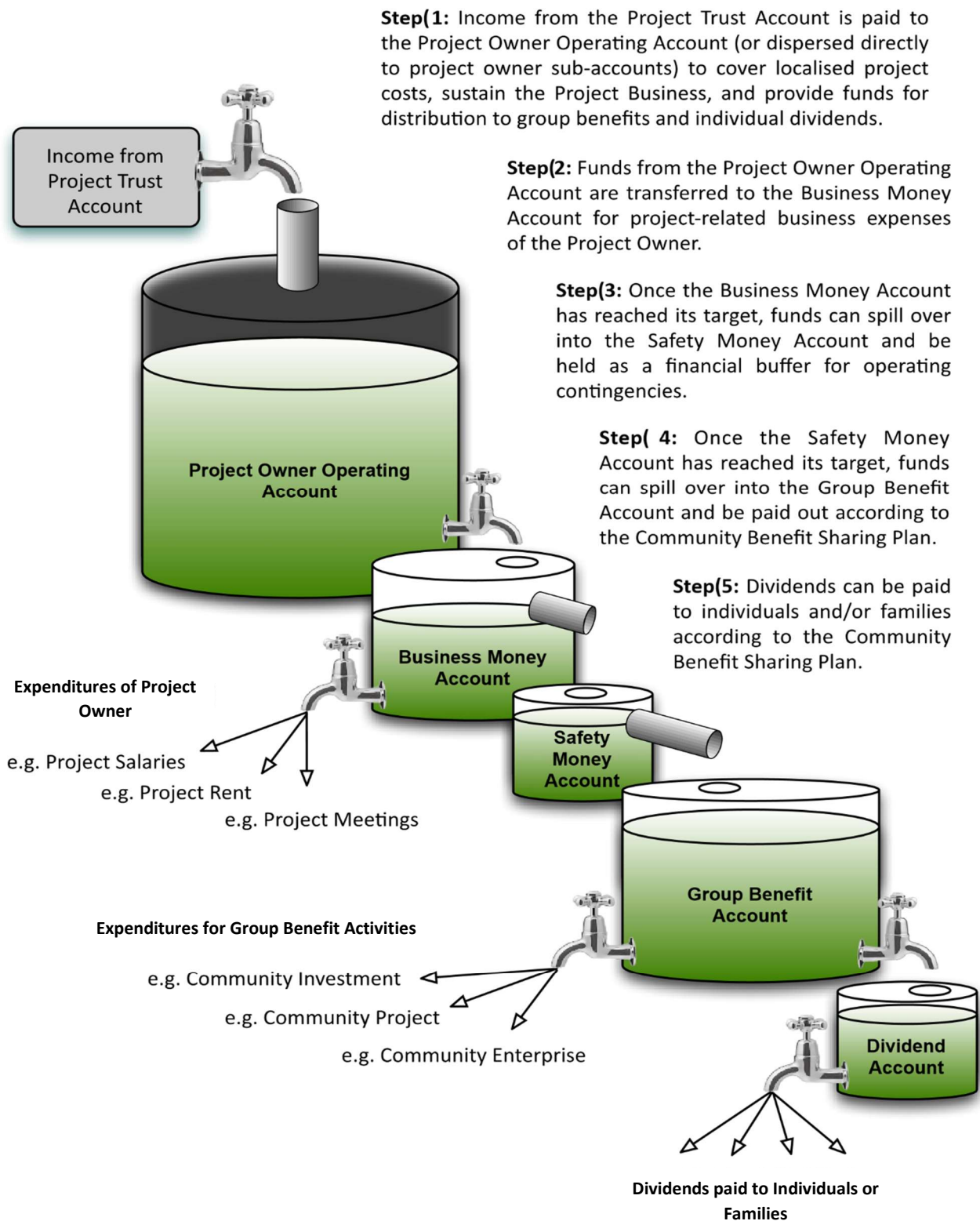


Table 4.3a: Rules for allocation of funds			
Allocation	Priority	When available	Explanation
Project Owner Income receiving account	1	When sales income is received (quarterly)	Where all income from PES unit sales is received from the Project Trust Account. In some projects it is appropriate to by-pass the Project Owner income receiving 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 Operation Account	1	When sales 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 Operation Account 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. NB: it is also acceptable to combine the group benefit account and dividend account into one account managed for the dual purpose.

The Project Owner Business Model is set out in the Sirebe Association Business Plan (Appendix 7) and is described in section 4.1.1.18 of this PDD. The Business Plans establish a system for managing income from sales of PES units consistent with the NMF business model (as per Figure 4.3 above).

The Sirebe Business Plan states the different bank accounts to be opened by the Associations. To date one bank account has been opened with the Bank of South Pacific in Gizo. 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 4.3b specifies the different bank accounts that will be used by the Association:

Table 4.3b: Application of Project Owner Business Model in the Sirebe Project		
STA Account Name	Equivalent in Business Model	Notes (where applicable)
Associations Project Account	Project Owner Income Receiving Account	

STA Account Name	Equivalent in Business Model	Notes (where applicable)
Operations Account	Business Operation Account	
Reserve Account	Safety Money Account	
Project Benefit Account	Group Benefit Account	The Sirebe Association has combined this account with the Dividend Account (as per Business model in 4.3(a)).

Bank Accounts	When Available	Explanation	Target Amount
Associations Project Account	Paid in by the Nakau Programme from the Sirebe Project Trust Account (quarterly dependent upon sales)	Income is received from Project Trust Account and Distributed from this account to below accounts depending on targets.	All income paid to SCC (60 % of sales income)
Operations Account	Immediately after income is received from the Sirebe Project Trust Account into the STA Project Account	Day to day business operating costs.	One-year operational budget)
Reserve Account	If Operations account target is reached (or on track to be reached)	Money left unspent which can be used for unforeseen costs.	Gradually build to one-year operational budget
Group Benefit Account	If Reserve Account target is reached (or on track to be reached). Represents a profit beyond the reserve account target.	To be disbursed for landowner benefits according to benefit sharing plan and includes possible dividend benefits	Remaining of funds after allocation of the above costs

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

The process in developing a project business plan started with meetings and sessions explaining the overall requirements of the Nakau programme process and the need for proper planning and financial management of a carbon project. The Sirebe tribe has been active in other small tribal businesses and projects such FSC certified timber down processing and beekeeping. However those activities were very small scale and sometimes only operational at family level.

To obtain more knowledge on how to develop a business plan (and manage a Carbon business) under the Nakau Programme, a representative from the LORU Nakau project in Vanuatu Ms Glarinda Andre was invited to hold a workshop on business and benefit sharing planning. Ms Andre is Country Manager of Live & Learn Vanuatu, and led local coordination of the Plan Vivo validated Loru Forest Conservation Project in Vanuatu. The 2 days workshop was held from 11-12 October 2017 and introduced the Sirebe tribal members to Nakau project governance, organizational structures, annual budgeting, benefits sharing and setting development priorities. Templates from the Projects in Vanuatu and Fiji were shared with the participants and Project Coordinator. After the workshop it was decided that Sirebe would use the Drawa Business plan template as it was found to be closest to the context of the Sirebe project.

From that time on (2018- Feb 2019) short meetings were held with members of the Tribal Association to draft the business and benefit sharing plans. Draft versions were shared amongst the Association and Tribal members for amendments and revisions. Also the annual operational budgets and the projected cashflow were drafted and discussed during the sessions, using information from the 2014 Nakau demonstration activities (potential available credits) and the PA operational budget (PA Process).

Both plans were again discussed with the tribal members during the “Money Story” workshop facilitated by FORCERT PNG from 22 to 26 July 2019 at Sasamungga village (see report, Appendix 23). Part of the workshop was the use of “Money Story Tools” which involved participants learning simple systems to transparently manage and communicate flow of income within a business, with emphasis on establishing account ‘targets,’ agreeing on account management rules, and clearly differentiating income from profit. Both the Business and Benefit sharing plans were used as a basis to discuss the bank account set-up and the internal financial procedures. Some small adjustments were made in the benefit sharing model, confirming the shares for primary and secondary family lines.

The Sirebe Project has enacted a methodology deviation regarding the Sirebe Company business plan and project owner business model. The PES agreement section 5.2 (a) explicitly refers to the business plan and states the Sirebe Company is “Responsible for covering the costs of the meet the Sirebe Communities Company’s obligations under this agreement, including but not limited to expenses listed in the Sirebe Business Plan budget”. The Sirebe Business plan is not herein attached as an appendix and the PES agreement does not have to be resigned every time the business plan is updated. The business plan is a living document and is to be updated periodically and continuously, as the project continues. The methodology requirement of meeting and re-signing the PES agreement with each update to the business plan is not practical. Each party is aware of their responsibilities in the agreement, which will be adhered to through other means and safeguards. Changes to the PES agreement will follow the protocols outlined within the agreement, signed by all project parties, achieving the methodology intent.

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 Benefit Sharing Plan for Sirebe is outlined in the Sirebe Community Company's Business Plan. The Benefit Sharing Plan was developed in participation with the Sirebe Community Company and STA, over several workshops (See above). The Benefit sharing plan will be used to guide the expenditure from the Project Benefit Accounts on such things as community development projects, and projects that stimulate further income earning opportunities and investments. It will also guide the identification of the proportion of dividend benefits and the appropriate timeframe for distribution of dividends to the members. The Community Benefit Sharing plan is a living document that will evolve and adapt to the changing needs and opportunities for the members. See also section 4.1.1.18 of this PDD.

The Sirebe Community Company, identified three main priorities for group benefit expenditures, as outlined in the Benefit Sharing Plan:

Priority 1: Infrastructure (Section 6.2.1)

The Association and tribal members will identify opportunities for investing in improvements to infrastructure that will benefit our members. In particular they will focus on infrastructure that can improve our members' health and wellbeing. The initial priority is to improve accessibility of safe drinking water and provision of effective sanitation (toilets) for members. They will engage with our members to further identify needs and prioritize investments in this area.

At this stage, 3 priorities were identified:

- Electrification (Solar)
- Water and Sanitation (water tanks, water supplies, toilets)
- Housing (building materials, services)

Priority 2: Entrepreneurship (Section 6.2.2)

The Association will seek to identify opportunities for the members to take part in other income earning activities that are complementary to our Project objectives and to the objectives of protecting our forests. This may include assisting members with start-up capital and/or providing a micro-finance service (i.e. loans to members).

The first priority for stimulating new Projects is to assist the members and their families to undertake family run Livelihood projects such as: Agricultural and (Agro)-forestry projects (e.g. piggery, cash crops, furniture making, forestry plantations, kava, fruit and nut trees); Fisheries (e.g. prawn farming, small scale commercial fishing and Commercial Projects (e.g., trade stores, bakery, second hand clothes).

Priority 3: Education (Section 6.2.3)

The Association wants to assist members in providing support in paying their school fees, and other school support needs such as school materials and travel. On annual bases the Association will try to pay up to 25-50 % of the annual fees of children and youth engaged in primary and secondary education, if the income allows this. Special arrangements and rules apply for students engaged in tertiary education.

The Executive will work closely with members to identify the most appropriate way to allocate payment of cash dividends. This will include determining the proportion of profit or 'surplus' that may be given as dividends (with the other portion going to group benefit).

The STA will consider the most appropriate timing for making such payments, for example to coincide with the times that households require money to pay for school supplies or school fees etc.

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.

Several consultation and training sessions were undertaken with the SCC members and the broader community to foster an understanding of the relationship (and difference) between income and profit in the context of the SCC Business Plan (see Appendix 23).

With respect to the Business Plan, tribal members recognise that funds within the Operation Account, and Reserve Account are not profit and are retained for covering costs of implementation. These funds are kept in different accounts (following the Money Story System) to prevent their use for other purposes. Funds are only allocated to the Project Benefit Account if the target cash levels are on track to be reached in aforementioned accounts. At this point the STA members understand that the funds are now profit that can be used in accordance with their community benefit sharing plan.

The Project Coordinator will provide ongoing assistance in identifying opportunities for Project Owners to take part in other income earning activities that are complimentary to the Forest Conservation Project business objectives, as described in Business Plan Section 6.2.

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.

The Operation Account (equivalent of 'business money account') will receive funds transferred from the Project Account (equivalent of 'Income Receiving Account'). The purpose of this account is to pay for business activities; its use for any other purpose is strictly disallowed. The target minimum balance for the Sirebe project operation account is SBD \$60,500 at project commencement. Therefore, sufficient income from the Project Account must be transferred into the Operation Account to reach the target balance. This is to ensure that there is always sufficient balance to allow the Executive to operate its essential business activities (SBD \$60,500 = one year's operating budget).

The annual operating budget for the SCC is contained in Section 4 the SCC Business Plan, and will be updated every three months, after project verification (see Appendix 7).

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 PDD 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.

The SCC annual operating budget (including operational costs) is contained in Section 4 in the SCC Business Plan, see Appendix 7. The operating budget will be regularly updated after project verification.

4.3.3.2 Calculating the Business Money target

The NMF states: 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 minimum target balance of the Business Money Account must be equal to or greater than one years operating expenses (i.e. the project owners annual operating budget). This balance must be achieved before money can be allocated for other uses.

The Project Owner must develop a budget for operating expenses, i.e. to cover 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 PDD 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).

If the Project Owner was to sell greater than one year's volume of units within a 12-month period, provision must be made to increase the business money target to ensure that the business can remain viable until the following monitoring period and unit issuance.

The Business Money target is provided in 4.3.3 (above).

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 account will be opened under the name 'reserve account.' The target balance for the reserve fund is one year's operating budget for the Sirebe Community Company, which is SBD \$60,500 at project commencement. The operational budget will be reviewed regularly after project verification, and adjustments to the reserve account target made accordingly. If drawn upon during project implementation, the reserve account will need to be replenished.

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 Executive 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).

The management of Project Owner profits from sale of PES units is defined in Section 6 of the SCC Business Plan. Profits received by Project Owners will flow into the Project Benefit Account to fund the tribes' priorities for community development initiatives and investments in member-initiated income-generating opportunities. The account will also be used to pay members dividends. The Executive will work closely with members to identify the most appropriate way to allocate payment of cash dividends. This will include determining the proportion of profit or 'surplus' that may be given as dividends (with the other portion going to group benefit).

The ratio of disbursement between these two funds will be determined by the STA / SCC, guided by the Benefit Sharing Plan and the recommendation (guidance only) of the Nakau Methodology that profits are shared according to a 70:30 ratio between the Group Benefit Account and Member Dividend Account.

The SCC Business Plan identifies priority investments being:

- Infrastructure
- Entrepreneurship
- Education

Refer to 4.3.1.1 (above) for further detail on the Community benefit Sharing Plan.

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 (Executive model), or may be distributed according to relative contribution to the project (e.g. land size or owned by each family or clan).

Does not apply to the Sirebe 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 the establishment of 5 accounts:

- a) Project Operating Account
- b) Business Money Account
- c) Safety Money Account
- d) Group Benefit Account
- e) Dividend Account

The establishment of the project accounts is described in Section 4.3. As is stated in Section 5 of the SCC Business Plan as well as the above fund management regime, the following rules will support financial discipline:

- Minimum of 3 signatories on each account.
- Signatories on all accounts approved by the Association Executive and tribal members during general meeting
- A daily transfer limit for each account is to be established.

4.3.8 Bookkeeping 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 Executive and the Project Coordinator at least quarterly (although more frequent reporting is encouraged).

As described Section 5.3 of the SCC Business Plan (Appendix 7), the Association will receive support from NRDF to undertake bookkeeping and reporting in the first year. However capacity to transfer this function will be assessed during Project Monitoring meetings (one year after project verification), with the goal that responsibilities are transferred to the STA and the project management committee in the future.

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 Litle Fish, a consultancy. 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.

As described in Section 5.3 of the STA Business Plan (Appendix 7), financial reports will be developed quarterly, initially by the Project Coordinator and then by the Executive Coordinator or Administrator. The financial reports will be shared in the annual project report as, well as in the quarterly reports. The report. The Money Story system will be used to communicate financial information to the association executive and with members of the tribe. 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 Executive.

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 PDD, with the relevant Technical Specifications populated with project data and presented in Part B of the PDD.

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 PDD Part B. 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
Technical Specifications Module (C) 1.1 (IFM-LtPF) D2.1.1 v1.0 20140409	Improved forest management through avoiding timber harvesting	Forest protection and associated avoided emissions and removal enhancements	Establish a protected area under the Protected Area ACT 2010 and a forest carbon project in lieu of logging	Sirebe Tribe at Choiseul Solomon Islands

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 socioeconomic 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

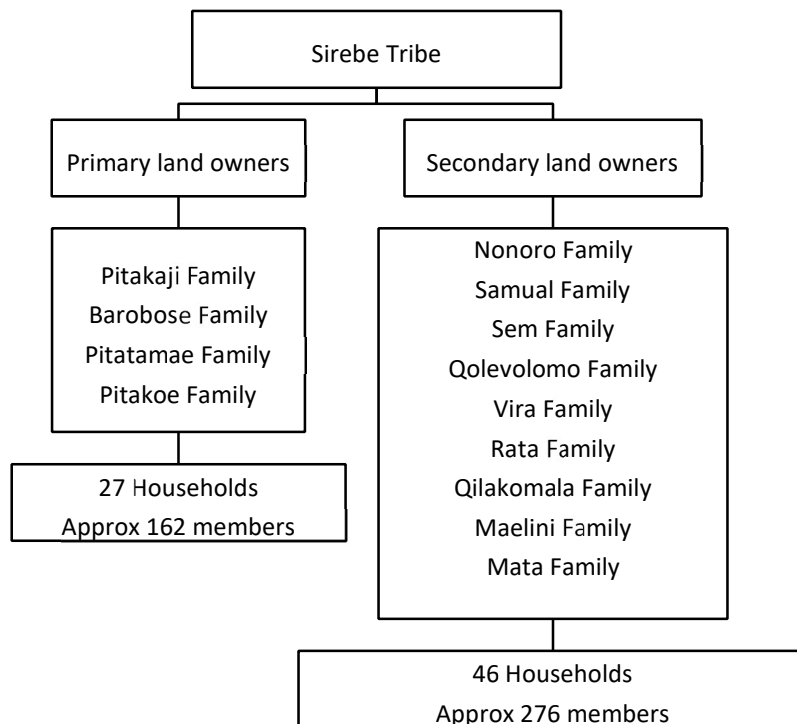
5.2.1.8. Gender and age equity.

5.2.1.1 Demographics and Population Groups

The Project site is owned by members of the Sirebe Tribe. Most of the members reside in and around the village of Sasamungga. The Sirebe tribe is formed out of 2 main clans comprised of 13 family lines. The total population (tribal members) is estimated to be 438 with an almost 50:50 ratio male/female. The Tribe differentiates the families and households in two groups: the Primary and Secondary Right Owners (See figure 5.2.1.1 below). Primary right owners are those people who have primary rights to the land and resources and who are living in and from the Sirebe tribal land. Secondary right owners are those people who have left the tribe through marriage and have settled in different places and to become part of different tribes. In Choiseul the primary landowning rights follow patrilineal lines. It is also the custom that when women of the tribe (primary lines) marry out to another tribe she will become part of her husband's tribe and will lose some of her primary rights of her father's land (become secondary). In Babatana custom this is called "Vavaraoto". The other way around, women who marry into the "project tribe" become part of the tribe and will benefit from her husband's rights. It is well known that women leaving the tribe through marriage are left out by the tribe in means of benefits when starting development such as logging. The Sirebe tribe however has decided to include this group of women and has allocated a portion of the income from the project as a token of appreciation. The project's main target group and beneficiaries are within the primary right owners comprised of 4 families and 27 households. The Secondary right owners are comprised of 9 families and 46 households²⁰.

²⁰ Sirebe Genealogy Research by Ecological Solution Solomon Islands, 2016

Figure 5.2.1.1: Sirebe tribe’s Primary and Secondary landowners



5.2.1.2 Access to and main uses of Land and Natural Resources

The predominant land use in the Babatana area is subsistence agriculture, cash cropping and extraction of timber and non-timber forest products (NTFPs). The Babatana communities depend on natural resources from the forest and its freshwater ecosystems. The land ecosystems provide water, shelter, medicinal and nutritional needs for the local population as well as linking to customary practices. Although most garden areas are located close to the main settlements, access to the resources is sometimes restricted as some garden areas and forest sites are located far upstream the Kolombangara River. The primary forest areas are accessible by traveling the river by canoe or going from the villages by foot. The Sirebe project site and protected area is located about 5-6 km from Sasamungga and is best accessible by traveling the Kolombangara river by outboard canoe. Sirebe members have established a small semi-permanent settlement in the area to provide for overnight accommodation while working their small gardens, harvesting forest products and do some fishing & hunting. There is also a newly build ranger house where rangers, NRDF staffs, researchers and tourists can stay and visit the protected area. The Sirebe PA conservation management plan has clearly determined and mapped areas for gardening within the Protected Area. Members of the Sirebe tribe further have access to other garden areas near the settlements and the gardens sites in the protected areas are not the primary source of garden products and food supplies. If members decide to reside near the Protected Area then the allocated garden sites are more than sufficient.

5.2.1.3 Access to and use of energy sources for light and heat

The Sirebe community members have no access to a permanent 24-hour electricity source. All households rely on other sources of energy such as solar power, open fire, kerosene lamps, batteries, or generators. Most cooking is done on wood fires and sometimes on gas. There are plans to build a hybrid electricity unit providing 24-hour power to households in and around Sasamungga village.

5.2.1.4 Typical Assets and Income Levels

In the Solomon Islands 80% of the people live in rural areas and use natural resources for their daily living. Cash money and formal employment is not the “standard” required to maintain a living. People look for cash when in need of certain goods or services. Income levels vary from household to household. People who put effort in earning cash (market, employment, own businesses) can earn considerable incomes, even in the most rural settings. Primary schools and most secondary schools (except for boarding and national Schools) are free and clinics and hospitals don’t charge people for their services. The main source of income of the people of the Babatana Area is agriculture and fishing. Food products are sold at close by local markets in and around the main villages. Agricultural products such as copra are being sold to local agents around the Province. A product gaining popularity is locally grown Kava, which is sold to buyers in Honiara, for export. Formal employment is also a main source of income as Sasamungga is a major settlement in Choiseul Province with primary and secondary schools, hospital and some Government stations located nearby. Many people are also engaged in running small village stores. Conventional logging is also a common means whereby people find income, mostly by engaging in casual work. Minimum wages in the Solomon’s are SBD 400-500/fortnight (800-1000 SBD/Month). Income levels in the villages vary from household and in time. Households with members that are formally employed or are active in income generating activities have considerable higher and more frequently income. A household survey in the Babatana area showed average income of around 880 SBD/month for a household without income from employment²¹.

Having a registered nurse in the family, working at the Sasamungga hospital could gain the household 4,000 SBD/Month. Primary teachers earn 1,400-1,600 SBD/Month and Secondary Teachers 2,400-3,000 SBD/Month. Being active in marketing of cash crops, fish or livestock goods gain households income up to 4,000 SBD/Month²². In the Solomon Islands it is expected that the wealthier family members support the less wealthy members, especially in times of great need. This even applies further into family lines. This of course can be a blessing for many but also become a burden for the members who are employed or generate their own income. It has very much a cultural background and it is widely accepted. Most people live in houses build from timber or sago palm leaves (or combinations). Permanent timber houses with iron roofs have increased considerably as housing hardware is obtained through handouts from chosen Constituency Members and the implementation of donated building projects. Especially after the 2007 tsunami, Sasamungga has undergone an extensive rebuilding process.

5.2.1.5 Main Livelihood Activities

The main livelihood activities in the Babatana area are subsistence and cash crop gardening, fishing and formal and informal employment. Households with unemployed members spend much time in their gardens for the necessary food supplies and to harvest produce for market. Some of the employed members of the Sirebe tribe have full time jobs at the hospital and government departments. Some of the young men and boys search for some casual work at nearby logging companies or building projects in the Provincial Capital of Taro. Two or Three Sirebe members run a small store. Some members were active in beekeeping but due to severe invasion of Asian bees the honey industry has more or less collapsed in Choiseul. Although most households rely on foods from gardens and sea, money is also spent on food products from stores. Besides household needs income is spend on school fees, church tithing and traveling.

5.2.1.6 Local Governance Structures and Decision-Making Mechanisms

Choiseul Province is officially governed by the Provincial Government. The Provincial Capital is Taro, a settlement in the North-West tip of the island. The Province is divided in 3 Constituencies and subdivided in 8 Wards. The Babatana area (and the Sirebe project site) are part of the South Choiseul Constituent and ward 7. Provincial and National elections are held every 4 years. All Ministries have their Provincial headquarters

²¹ Mataki, M. et al. (2013) Climate Change Vulnerability and Adaptation Assessment Report, Choiseul Province, Solomon Islands. SPC, GIZ & SPREP.

²² Verbal conversation with Sirebe Project Coordinator Linford Jahjo, March 2019.

in Taro but also work from so called substations in each Constituency. The Malangolo Provincial Government Substation looks after the Babatana region. Villages have village committees responsible for planning and development at village level. Churches have also authority in local policy making. The Sirebe tribe has established a Tribal Association to undertake the governance role and to manage the business and land management aspects of the carbon project. The Association has been established with the participation and mandate of the tribal members of Sirebe. Refer to section 3.1.5 of this PDD for further details regarding the Associations. Besides the Association the tribe also has a Tribal Chief, Chief Asa. Tribal Chiefs culturally look after the tribal members especially related to social and cultural matters. Choiseul is patrilineal society and men make most decisions regarding resources and land. The entire Babatana Area consist of many Tribes and clans with their own respected Chief lines and structures.

5.2.1.7 Cultural, Religious and Ethnic Groups Present

Prior to European or foreign contact and the introduction of Christianity (Methodism in 1905), the cultures of Choiseul (Lauru) existed as isolated tribal groups in defendable upland villages in the interior. These villages were located on hilltops, ridge saddles and other higher areas in the forest. In these situations, the people of Choiseul depended upon the forest resources for bush food — their primary sustenance — but also maintained small forts and canoe sheds along rivers and seas for fishing and warfare purposes.²³ People living in and around the area belong to tribes and clans. Babatana tribes speak their own language (“Babatana”) and have their own Chief Council represented by Chiefs from the tribes included within the Babatana Area. The Christian denominations found in Choiseul include: United Church (being the biggest), Seventh Day Adventists, Catholics, South Seas Evangelical Church, Anglican Church and, recently, a breakaway group from the Rhema Family Church, known as the Church of the Living Word. The ethnicity in the area is Melanesian.

5.2.1.8 Gender and Age Equity.

Since most rural Solomon Islands communities are based on a patriarchal society, women are seldom consulted in decision-making processes. However, they play a very important role in the development process. In the Babatana area, men and women still live according to certain traditional roles. While men are usually expected to farm and harvest the food and act as the decision maker of the family, women are mostly responsible for the household and children. Domestic violence is still a problem in most rural areas in Solomon Islands. Especially women and children are suffering from the use of violence and intimidation. Women can lose part of their tribal land rights when they marry out from the tribe as they become part of the tribe of their husband.

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 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 wellbeing of communities and ensure that costs and benefits are equitably shared among community members and constituent groups during the project lifetime.

²³ Jansen, T. & Siikolo, M. (2010) Petanigaki ta Siniqa ni Lauru—The Food of the Forest of Lauru, Kastom Gaden Association

*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

The criteria, indicators and their justification outlined in Table 5.2.2.1 below were chosen to assess wellbeing and changes in development within the target communities.

Table 5.2.2.1 Community Baseline Indicators		
Criteria	Indicators	Justification (why are we looking at this?)
1. Food Security. The landscape provides sufficient quality and quantity of food	<ul style="list-style-type: none"> • Food sources • Consumption patterns • Agricultural production 	We want to know: if the forest products continue to be used indicating the continuation of traditional practices, if use and access to land for gardens diminishes to a point it affects access to food, if project owners begin to purchase store 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.
2. Water Security. The access to clean water	<ul style="list-style-type: none"> • Accessibility of water • Water use 	Access to water is not a major problem at this time but could be due to climate change impacts. Given improved access to water is highly desired, any changes may indicate a positive impact resulting from the project. Sanitation was identified as major concern for the Sirebe people. We want to see if the project helps to improve sanitation for the households and further improvements in clean water sources.

Table 5.2.2.1 Community Baseline Indicators		
Criteria	Indicators	Justification (why are we looking at this?)
3. Financial Security & impact of money	<ul style="list-style-type: none"> • Access to and level of education • Proportion of time dedicated to various activities • Household income and assets • Level of employment and businesses developments as sources of income • Potential negative impacts of access to money 	Increased income can demonstrate increased wellbeing; however it can also create negative impacts. Social impact assessment will investigate positive and negative aspects of money. We will measure income over time, and 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 investigate if 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.
4. Resilience of the Carbon Project	<ul style="list-style-type: none"> • Level of people engaged in project • Accessibility of information • Perceptions of trust in the project and its management 	We want to use this monitoring as a chance to assess how well the Carbon Project (i.e. Associations, management) is doing at engaging the project owners and earning local trust. This indicates overall wellbeing if the faith in this project and entity is high.

5.2.2.2 Evidence of Project Owner Consultation on Determination of Project Indicators

The indicators (above) were informed during the Business and benefits sharing planning workshop in October 2017 during which the tribal members established their priorities (and expectations from the project). By discussing how the project is expected to impact the livelihoods of people the project indicators were determined so actual changes could be measured to see if those expectations are being met or not. Also possible negative impacts were determined such as alcohol and drug use and possible changes in diet due to increase spending on store foods such as rice and tin foods.

During the Business and Benefit sharing workshop members were introduced to the survey forms used in the Nakau projects in Fiji and Vanuatu. It was decided to use those templates in the Sirebe project but make changes so its fits the localized context in Choiseul and reflects the indicators applicable for Sirebe. Before the surveys took place, trials were carried out with several versions of questionnaires to see where changes were needed and preferred.

5.2.2.3 Community Baseline Scenario

The baseline data was collected through formal standardised questionnaires consisting of both, open-ended as well as close-ended questions (see sample questionnaire, Appendix 24). The baseline was established through interviews conducted at 13 households and taken from the 4 families lines that have the primary rights over the Sirebe land. The total number of households under this group is 27 and thus the survey covered 48% of the households within this group. In the future the community baseline may be expanded to include participants from other Tribal groups.

The selection of the 13 households was limited by availability of householders and location. All selected household members are residing in Sasamungga, in the sub-settlements of Tabusaru and Tanabo. The survey mostly focused on the household as a whole, differentiations were made between male and female occupants when appropriate. In most of the cases the interviewees were both the men and females from the households. 6 of the interviewees were female, 8 were men.

Criteria 1: Food security: Quality and quantity of food			
Question	Measure	Average	Comments
1.1. How often do you buy food from the store/market?	Days per month	15 days	Households buy mostly small number of products from stores. Sometimes they buy in bulk a few days of the month as they mostly rely on the food supply from their own garden or the forest.
1.2. What goods do you purchase at the store/market?	Type of good	Rice, Noodles, Tuna, Sugar, Salt, Soap, Biscuits, Fresh produce (fruits, root crops), clothes, flour, oil	Basic supplies such as sugar, salt, flour, rice, noodles, canned tuna, and tea are being bought from local stores by most households. In addition some fresh produce such as vegetables and fruits are also purchased if available.
1.3. How big is your family (household?) garden?	Hectares	0.21 ha	Garden plot sizes are relatively small but allow food for consumption and sale.
1.4. What types of crops do you grow at your family garden?	Type of crop	Potato, Taro, Cassava, Yam, Pana, Cabbage, Banana, Bean	Only few indicated cucumber, sugarcane and Calvera. The main crops that are sold for money are Potato, Cassava, Cabbage and Bananas
1.5. How often do you eat food from your garden?	Days per week	5 days	People eat almost everyday food from the gardens
1.6. Do you ever run out of food?	Percentage 'yes'	0%	No one ever run out of food (if no garden food than store food available and vice versa)
1.7. How often do you harvest food from the forest?	Days per month	1 day (0.86)	Very limited due to distance and need. Garden areas also have some patches of secondary growth forest nearby with some forest products available similar to those available in primary forest sites.
1.8. What goods do you collect from the forest?	Type of good	Fern, Rope/Loyar Cane, Sago Palm, Firewood, Wood for house, Leaves, Wild Pandanus, Wild Yam, Wild Pig, Tree bark, Bamboo	Various items are being gathered from the forest by the communities but mostly near garden sites in secondary forest growth.

Criteria 2: Water security: Access to clean water			
Question	Measure	Average	Comments
2.1. Do you ever run out of clean (tap) water?	Percentage 'yes'	31%	Sometimes tap water not available due to blockage of pipes due to heavy rain (sediment). Alternative sources used are rainwater tanks (Private or Public) and small streams.
2.2. Which water sources does your household use and is it available all year round?	Type of source	Tap/pipe water (from Reserve/Catchment), Rainwater from private and public installed rainwater tanks, small streams near settlements	All sources are normally available year-round except during dry seasons when rainwater tanks might run empty or during rainy season when supply stops due to blockage. But in any case, water is always available. However there is potential for some water sources to be contaminated (e.g. streams near settlements)
2.3. Do you feel you can use as much tap water as you like? (I.e. through piped system)	Percentage 'yes'	100%	Everyone feels they can use as much tap water as they like as most of the time the taps are running strong. Except in times of heavy rains when leaves or sediment blocks the source.

Criteria 3: Financial security: Household income and assets, and livelihood opportunities			
Question	Measure	Average	Comments
3.1. How many children/youth (under 20 years) in your household are currently in primary, secondary or tertiary?	No. of current student	From the 24 kids in the age of 7 to 20 yr: Primary 12 Secondary 12 Tertiary 2 (9 in Kindy)	All children of interviewees of school age are going to school
3.2 How many household members graduated secondary/tertiary school	No of graduated students	Secondary Male 2 Tertiary: Male 1 Female 3	Female 5 Male 3
3.3. What is your household's average monthly income?	SBD per Month	SBD\$ 1965	Income varies from minimum of SBD\$ 500 to maximum SBD\$ 4,000
3.4 What are your main sources of income	Sources of income	Cash crops, Informal employment, Formal employment	Others are involved in small businesses such as selling betel nut, timber, body oil, honey and running a guesthouse as other means of income. People are formally employed at the hospital, school and Provincial forestry department.

Criteria 3: Financial security: Household income and assets, and livelihood opportunities			
Question	Measure	Average	Comments
3.5 What is your household's average Monthly expenditure	SBD per Month	\$ 500.00	Expenditures varied from \$300 to \$800
3.6 What are your main expenditures	Expenditure items	Food, Clothes, School fees, household goods	Other expense items include donations possible to Church, schools or clubs. Very few also spend on tobacco/alcohol
3.7. Are you able to save money from your earnings in a typical month?	Percentage 'yes'	100%	
3.8. Which sources of electricity are used in your home?	Type of source	Solar, generator	99% of all households use solar power as their main source of electricity. One household uses a generator from time to time.
3.9. What type of toilet is your household using?	Type of toilet	72% of households reporting using flush/pour flush toilet. 38% is using open pit/bush/seaside.	
3.10. Hours spent for daily activities:	Female Adults	Male Adults	Comments
<i>Cooking</i>	2.75	0.83	Women spend more time than men in every activity group.
<i>Household chores</i>	1.66	1.02	
<i>Gardening/ farming/Fishing</i>	4.36	3.30	
<i>Community/Church activities</i>	1.90	1.96	
3.11. Are you aware of anyone in the community using marijuana or other drugs (incl homebrew)	Multiple choice	31% observed "often used by a few people", 46 % observed "rarely used by few people" and two household (15%) felt that there was "continues use of drugs by many people" and one house (8%) felt no use was taking place.	

Criteria 4: Engagement with and trust of the PES project*			
Question	Measure	Average	Comments
4.1 (Q24) Can you access information about the REDD+ Enterprise's finances and activities?	Percentage "yes"	92%	One female did response with no. She indicated that she did not participated in any activities yet

Criteria 4: Engagement with and trust of the PES project*			
Question	Measure	Average	Comments
4.2 (Q25) Do you generally trust the REDD+ Enterprise?	Percentage "yes"	92%	
4.3 (Q26) Is any of your household directly Involve in PES activities (Employed, committee member etc).	Percentage "yes"	62%	62% of the households have somebody joining the project through committee membership.
4.4 (Q27). Do you generally feel the PES Enterprise contributes to the wellbeing of the tribe/community members?	Percentage "yes"	92%	Same female as 4.1 responded with no, due to the same reason. Other said yes but keeping in mind that project has not started yet and no benefits have been received or field.

* Because the project has not started implementation phase, members could not answer most of the above questions with certainty. However, they put much trust and hope that the project will be successful.

5.2.2.4 Expected Impacts from The Project

Criteria 1: Food security: Quality and quantity of food

The project is not expected to affect the environment or landscape around the villages where the most subsistence gardens are currently located. The Protected Area is located far away from the areas used for gardening and food supplies. Near the Protected Area the tribe has set aside some small areas for existing and possible future gardens. It is anticipated that as the families generate more wealth from the project they will purchase more foods and items from the local stores and markets. If increased wealth occurs, there may be less need to grow food for own use or sale at markets. This could have a positive impact, if less land is needed for cultivation (and forest conversion) and time spent on gardening is reduced. However, reduced subsistence gardening could also have a negative impact on food security, traditional knowledge and the possible increase of non-communicable diseases arising from an unhealthy diet. The likelihood of these negative impacts occurring is low but the Project Coordinator and the Project Owner will monitor the project, as outlined in 5.2.3.6. Forest foods and other nontimber forest products can still be harvested from the Protected Area, following the rules and restrictions mentioned in the Management plan, reducing the likelihood of the negative impacts.

The Sirebe tribe has a long history of running small agricultural development projects. One of the initiatives was the registration and running of a Community Learning Centre (CLC) which provides advice and practical assistance to local farmers to start any agricultural (e.g. cash crop, poultry) family projects. The Forest Carbon Project is expected to strengthen the CLC and support new activities, which could improve the food security of the Tribe and the whole community in the future. One of the activities is to look into the introduction of climate resilient crops or farming techniques in relation to the changing climate events currently experienced. Overall, the project is expected to have a neutral to positive impact for food security, with the potential likelihood for negative impacts low, which will be closely monitored.

Criteria 2: Water security: Access to clean water

The Sirebe members and the Sasamungga population has a reasonably reliable water supply and most people have access to clean water whole year round. Drinking water is also not a main issue for the household as many people have access to or own water tanks or have access to clean water streams and wells. Most of the time, tap water from supplies is suitable as drinking water. Some of the families run out of water when their sources have dried up during long dry spells or when supplies are blocked by debris. Although this does not happen often, climate change and changing weather patterns could increase the number of times these events occur. It is expected that due to the project the number of water tanks for the members will increase

so that they have alternative water sources available and increase their capacity to catch and store clean water. If the Sirebe tribe decides to be involve in additional activities and use project benefits for community development initiatives (See business plan) improving the community water supplies in and around Sasamunga is a high priority. Another priority of the Sirebe tribe members is to improve their sanitation and shift from bush/seaside (open defecation) to pour-flush toilets and/or flush toilets. This will be a main investment when the Carbon project benefits start to flow in. The project is not expected to have any negative impacts towards project participants regarding water security and sanitation.

Criteria 3: Financial security: Household income and assets, and livelihood opportunities

It is expected that household income will increase though the project directly resulting from revenues from carbon sales (e.g. dividends to members) and related employment. Direct employment will include a local finance manager, operations manager and rangers, who will undertake forest monitoring and activities from the management plan. The project is also expected to have a ‘multiplier effect’ by providing social and financial capital that can be used to stimulate and diversify income-earning opportunities. Increased income will likely lead to an increase in household assets. Common aspirations from families regarding their homes include access to solar electricity, gas cookers and flush-toilets. Income earned through sales of commercial agricultural products is likely to increase as well as more investments are made in creating cash crop projects for members.

The project is not expected to create a positive impact by increasing the number of youths starting a tertiary education. However, there is the potential positive impact in education, in that the extra project income may provide additional income for families to pay for their children’s primary and secondary costs and contributions (but will not likely influence the number of school going children). However, tertiary education is still too expensive for many families in the participating communities. An average year in university would cost a household around 15,000 SBD. To achieve a positive impact through improved tertiary education, families could plan and support students through combined investments from project incomes over the long term. Furthermore, the forest conservation activity itself has already attracted more and more visitors to the Babatana area. The demand for rest houses, training facilities and catering services has increased considerably over the years, providing extra income and employment to the tribal and community members. It is expected that this positive growth will continue in the years to come. The project has not identified any financial security or livelihood impacts that are negative.

Criteria 4: Resilience of the PES project

It is expected that there will be a gradual building of support and trust for the Carbon and Forest Protection Project from the respective families of the Sirebe tribe. This is due to the commitments to financial discipline and transparency, and to the fact that the Association will provide the benefits to its members including new project opportunities and employment.

5.2.2.5 Expected Impacts for nearby community members who are not project owners.

Although the benefit sharing plan determines that benefits will directly become available to the Sirebe family lines and households it is expected that the project will have a positive effect for nearby community members as new businesses might be established and new markets created that can benefit local producers and suppliers. The project basically supports an increase of cash-flow into the communities and creates a ‘spill over’ effect. Sirebe members will spend their money, which will benefit local salesmen/women, formal and informal. The project is also expected to bring in more visitors to the area such as researchers, tourists, and project stakeholders, supporting the local hospitality (e.g. rest houses, catering) sector. Furthermore, the project intends to invest in community development initiatives such as support to schools, Church, water supplies & sanitation, tourism and community climate change adaptation and resilience activities (See Business plan). All these activities will benefit nearby community members. Also, the increase of employment

opportunities is not exclusively limited to Sirebe members. There were not negative impacts identified for nearby community members who are not project owners.

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

The community impact assessment plan will use the same criteria (see criteria 1-4 above) that were used to assess baseline conditions. They are detailed in Section 5.2.2.1. Referring to those indicators we expect the following changes (performance target):

Table 5.2.3.1 Performance targets		
Criteria	Indicators	Performance Targets
1. Food Security The landscape provides sufficient quality and quantity of food	a) Food sources b) Consumption patterns c) Agricultural production	a) No significant change in food sources, i.e. traditional food sources maintained. (If more food is bought from stores and a decline in use of garden foods then this need to be monitored). b) No significant switching from traditional foods to unhealthy alternatives c) Small increase of agricultural crop production, especially in cash crops.
2. Water Security Access to clean water	a) Accessibility of water b) Water use	a) Increased number of rain water tanks b) Improvement/investment in community water supply to increased reliability
3. Financial Security	a) Access to and level of education b) Proportion of time dedicated to various activities c) Household income and assets d) Level of employment and businesses developments as sources of income	a) 100% access to primary and secondary is maintained and an increase in tertiary students due to increased income levels. b) No major change. (If less time is spend in gardens this has to be picked up during monitoring). c) Small increase in household incomes. All (primary) households should reach an income level of more than 1,000/Month d) Increase of the number of income generating activities, employment and small businesses
4. Resilience of the Carbon Project	a) Level of people engaged in project activities b) Accessibility of information c) Perceptions of trust in the project and its management	a) Increase in project activity participation b) >70% of people report satisfaction with access to information c) >80% report high level of trust in the project

5.2.3.2 Locally Relevant and Cost-Effective Indicators

The community impact assessment plan will use the same indicators (see Table 5.2.2.1) that were used to assess baseline conditions.

5.2.3.3 Methods of Measurement

The same survey methodology will be used for ongoing monitoring. The respondents to the survey will be expanded to include new tribal group participants. Qualitative and quantitative measurements were applied in the survey. The survey may be changed over time to in response to local conditions or to improve the quality of the data produced. If possible, opportunities to involve social researchers from Universities (e.g. PhD or Masters students) will be sought to improve the survey or data quality. In the initial stage the Project Coordinator (NRDF) will be responsible for carrying out the social impact survey and later on surveys may be conducted by the STA depending upon their capacity.

5.2.3.4 Monitoring Schedule

To ensure adequate monitoring of the project, the survey shall be replicated every verification. Ideally, the same household members surveyed during the baseline should be included subsequent interviews, however new respondents can be added to the survey. The number of respondents used for the baseline should be

the minimum standard for further surveys, however the Project will aim to increase in the number of respondents.

5.2.3.5 How to Ensure That Differentiated Impacts on Different Groups Are Considered In the Design of The Monitoring Programme

The Sirebe tribe is the first “project owner” in the Nakau Programme Solomon Islands. The Sirebe project was guided by methodologies used in the existing Nakau projects in Vanuatu and Fiji. It is recognized that the current household survey methodology is inclusive of different groups (gender/age) but that it does not strongly differentiate impacts. Many data such as income, expenses, water sources and assets relate to all members of the households, however men and women are provided the opportunity to answer separately on livelihood activity indicators. Future surveys will seek to further differentiate respondents on the basis of age and gender, and as such will improve the baseline data as well as monitoring longer-term change.

5.2.3.6 Plan to Address Negative Impacts as They Arise.

Results from the community impact monitoring will be included in the Project Management and Project Monitoring Reports, as is stated in the clause 4 of the PES Agreement. They will be presented for consideration by the Project Coordinator and Project Owner at the annual Project Management or Monitoring Workshop and will inform any adjustments to the implementation of the project to address any negative impacts. Negative impacts will be discussed at Project Management meetings and the Project Coordinator and Project Owner, will seek to implement negative impacts as they arise.

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 PDD revisions. Projects have up to one year after project validation to complete the Community Impact Assessment Plan.

The Community Impact Monitoring Plan has been incorporated into the Project Monitoring Plan. See Section 8.2 of Part B of this PDD.

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.

Nakau projects will measure biodiversity impact by recording the presence of significant (key) species (from survey and / or literature review) and monitoring for their persistence within the project sites. The project assumes that populations of many species will decline or disappear under the baseline scenario of conventional logging. Evidence for the impact of logging on biodiversity is taken from published literature and will not be established through biodiversity surveys of logged forest undertaken by project proponents.

5.3.1 Key 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.*

Data of existing biodiversity and species counts in the area was obtained through two relevant biodiversity assessments done in 2009 (Appendix 6b) and 2014 (Appendix 6a).

The 2009 survey involved a rapid biodiversity assessment, covering a brief forest vegetation inventory and a species inventory in the main taxonomic groups of birds, mammals, frogs and reptiles. The survey was carried out in the Sirebe site.

The second survey in 2014 involved a 2-week research expedition over a larger area, covering main forest sites within the Babatana area. Sirebe was selected as one of the sites to do a comprehensive bird species count.

All the data from both surveys are representative for the Babatana rainforest landscape and reflects the flora and fauna species found in the Sirebe Tribal land. In addition, information was gained from a report on Fresh Water Fish (Appendix 6c).

A summary of key species is provided in table 5.3.1 below. The criteria for the selection of key species were:

- Vulnerable or higher status as per the IUCN red list, and/or
- Endemism/limited geographical range, and/or
- Potentially under threat from human activities (hunting, wildlife trade)
- Potentially under threat from exotic invasive or feral animal species (rats, cats, dogs, wild boar)

Table 5.3.1 List of Key Species						
Taxonomic group: Plants						
Common Name	Scientific Name	IUCN Status	Endemic Island/Country	Distribution	Cultural Significance	References*
Rosewood	<i>Pterocarpus indicus</i>	VU	Native	Throughout Solomon Islands	Significant for timber	WWF Report Biodiversity of southwest Choiseul
Taxonomic group: Mammals						

Table 5.3.1 List of Key Species						
Bougainville Giant Rat	<i>Solomys Salebrosus</i>	EN	Endemic to Choiseul & Bougainville	Bougainville and Choiseul	Sometimes Hunted by the Locals for food	WWF Report Biodiversity of south West Choiseul
Poncelet's Giant Rat	<i>Solomys Ponceleti</i>	VU	Endemic to Choiseul & Bougainville	Bougainville and Choiseul	Sometimes Hunted by the Locals for food	WWF Report Biodiversity of south West Choiseul
Solomon Flying Fox	<i>Pteropus rayneri</i>	NT	Endemic to Choiseul & Bougainville	Solomon Islands, Bougainville and Buka. Found in hollow fig trees and overhang beneath Pandanus palms.	Sometimes Hunted by the Locals for food	Choiseul expedition 2014 final Report
Admiralty Flying Fox	<i>Pteropus admiralitatum</i>	VU	Endemic to Solomon Islands	Solomon Islands. Individually in the forest canopy	Sometimes Hunted by the Locals for food	WWF Report Biodiversity of south West Choiseul, Choiseul expedition 2014 final Report
Taxonomic group: Birds						
Sanfords Sea Eagle	<i>Haliaeetus sanfordi</i>	VU	Endemic to Solomon Islands	All major islands of the Solomon Islands		Choiseul expedition 2014 final Report
Blyth's Hornbill	<i>Aceros plicatus</i>	LC	Native (Resident Species in SI)	Solomon Islands and New Guinea	Sometimes Hunted by the Locals for food, distinguished forest bird (tourism)	Choiseul expedition 2014 final Report
Papuan Eclectus parrot	(<i>Eclectus polychloros</i>)	LC	Native (Resident Species in SI)	Solomon Islands and New Guinea	Threatened by pet trade	Choiseul expedition 2014 final Report
Crested Cuckoo dove	<i>Reinwardtoena crassirostris</i>	NT	Native but not Endemic in Solomon Islands	Solomon Islands	distinguished forest bird (sound)	Choiseul expedition 2014 final Report
Taxonomic group: Reptiles and Amphibians						
Solomon Islands eyelash frog	<i>Cornufer guentheri</i>	LC	Endemic to Solomon Islands	All major islands of the Solomon Islands	distinguished forest frog	Choiseul expedition 2014 final Report
Solomon Wrinkled ground frog	<i>Platymantis Solomons</i>	LC	Endemic to Solomon Islands	All major islands of the Solomon Islands	distinguished forest frog	Choiseul expedition 2014 final Report
Solomon Islands skink	<i>Corucia zebrata</i>	NT	Endemic to Solomon Islands	All major islands of the Solomon Islands	Threatened by hunting and pet trade	Choiseul expedition 2014 final Report
Western crocodile skink	(<i>Tribolonotus pseudoponceleti</i>)	LC	Native but not Endemic in Solomon Islands	All major islands of the Solomon Islands	Threatened by pet trade	Choiseul expedition 2014 final Report

* References refer to data from reports in Appendices 6(a)(b)(c)

5.3.2 Ecosystem 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 and Appendix 6 a, b, c

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.*

5.3.3.1 Expected Beneficial Impacts From Avoiding Baseline Activities

The project will result in a Protected Area (category: Resource Management Area) with a total of 806.19 hectares, combining *Eligible Area* and *Protection Forest*. The Sirebe Protected Area, and other project areas in the Babatana region will be actively managed to maintain or enhance the biodiversity, according to the measures set out in the Protected Area Management Plan (Appendix 5). The protection of this area will benefit biodiversity by avoiding the impacts of unsustainable logging.

The avoided impacts include:

- Reduced habitat quality for fauna (e.g. birds, reptiles, insects) due to tree removal and damage from tree felling, logging tracks etc.
- Reduced abundance and potential local extinction of rare/vulnerable plant species (see table 5.3.1)
- Increased erosion and siltation of creeks and rivers, which reduces habitat quality for native fish and aquatic invertebrates within the Kolombangara river systems
- Forest disturbance leading to increased impacts of invasive species both plant and animals.

5.3.3.2 Expected Beneficial Impacts from Other Project Activities

Due to increased awareness of key species and their habitats, planning for agricultural activities will take into consideration impacts on native flora and fauna.

5.3.3.3 Expected Negative Impacts from Project Activities

Project activities are not expected to cause any negative impacts to biodiversity. The areas designated as Protected Areas under the *Protected Areas Act 2010*, and eligible area for carbon trading will be subject of frequent monitoring to make sure the project does not affect biodiversity by allowing overharvesting of forest products or an increase of gardening activities. The Protected Area Management Plan (Appendix 5) and land use map will clearly guide the tribal members on suitable management and use their tribal land. The project areas have never been under high stress of overuse of tribe members. But with the expected future population increase the project will help to better regulate use and management of the project areas in the future.

5.3.4 Ecosystem 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).*

Details of the ecosystem monitoring are supplied in Section 6.3 of Part B of the Sirebe PDD. As per the Protected Area Management Plan (see Sirebe Protected Area Plan in Appendix 5), project biodiversity impacts will be measured by means of opportunistic biodiversity observations, conducted in parallel with the Boundary and EFA inspection. The approach is semi-quantitative, as to determine any potential change and/or trends in site biodiversity. Given the challenging nature and resource intensive action of conducting biodiversity surveys and inventories, the method is simple and opportunistic. That being, it seeks to investigate the presence and absence of key species present in the project area, which are opportunistically sighted, or the community owners can verify that they are present.

Specifically, on the boundary inspections and during the transects, if the opportunity arises the community rangers will seek to confirm the presence of the key species. However, the project coordinator seeks to access funding to conduct biodiversity surveys and inventories for the listed species, with special emphasis on establishing partnerships and training the community rangers

The project will meet the minimum requirement for ecosystem monitoring for the first monitoring period. The Project Coordinator will actively seek partnerships with universities, local institutions, and other NGOs to improve understanding of biodiversity on the site. Potential partners include Ecological Solutions Solomon Islands (ESSI), Ministry of Forestry and the Ministry of Environment. As part of the implementation of the project rangers will be trained in specific monitoring techniques using the Solomon Islands Ranger Skills Guide 2016²⁴ as reference. The project coordinator seeks to access funding or develop partnerships to conduct more in-depth biodiversity research with the aim of detecting improvements over time, especially given the area is a declared Key Biodiversity Area.

²⁴ Pikacha, P. et.al. (2016) Solomon Islands Ranger Skills Guide: Lukaftaren pipol, ples wetem lae blo animol A reference guide and training manual for Protected Area Rangers in Solomon Islands. University of Queensland.

Table 5.3.5: Evidence Requirement: Biodiversity impacts

#	Name/Description
5.3.5a	Key species inventory (in PDD)
5.3.5b	Description of expected project impacts on biodiversity (in PDD)
5.3.5c	Biodiversity monitoring plan (In PDD Part B)

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 PDD 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 PDD.

6 Project Reporting and 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 core project documents for this project are:

- Nakau Methodology Framework: General Methodology for the Nakau Programme. D2.1 v1.0 20150513
- Technical Specifications Module (C) 1.1 (IFM-LtPF): Improved Forest Management – Logged to Protected Forest v2.0 20151009 and 2023 update
- Sirebe Forest Carbon Project – Project Description Document (PDD): Part A
- Sirebe Forest Carbon Project – Project Description Document (PDD): Part B
- Sirebe Monitoring Report 1 D3.3 (1) v1.2 17062021
- Nakau NRDF License Agreement, v1.0 22112019
- Nakau NRDF Sirebe PES Agreement, v1.0, 22112019

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 Nakau Information Database is located on Dropbox and has the following structure:

Table 6.1.1 Nakau Information Database			
Database Name	Status	Detail	Access
Nakau Information Platform -Sirebe	Completed project document archive	Final pdf version of all Methodologies, PDDs, Appendices, Evidence Requirements, PINs, TS Modules, Monitoring Reports, Agreements	Programme Operator (Nakau) Executive Project Coordinator (NRDF) Plan Vivo (on request) Auditors (temporary access for auditing purpose)
Nakau Business Folder	Programme Governance Data	Company and Executive documents, compliance, financials, agendas, minutes, correspondence, plans, etc.	Programme Operator Executive

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 Description Document (PDD), 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 Monitoring Report shall present evidence to support an ecosystem service outcome assertion consistent with the standard and methodology applied.

The PDD is prepared in two parts:

- Sirebe Forest Carbon Project – Project Design Document: Part A – General Information
- Sirebe Forest Carbon Project – Project Design Document Part B – PES Accounting Description

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 (PDD) 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 (PDD) for all subsequent activity instances of an activity type shall be consistent with the validated PDD 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 PDD applies the Nakau Programme activity class (C - carbon), activity type (IFM-LtPF) Improved Forest Management – Logged to Protected Forest. This involves the second application of the validated Technical Specifications Module that has been applied previously (Drawa Forest Carbon project).

The validation of the Sirebe project is to occur concurrently with a verification audit of the first monitoring report.

6.2.3 Integrated Projects

The NMF states: Integrated projects applying more than one activity type shall submit a Project Document Part B and Monitoring Report for each activity type.

Only one Technical Specification is currently applied to this project.

The NMF states: The PIN and PDD 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 PDD have been third party validated) shall be validated by the Programme Operator of the Nakau Programme.

Not applicable to this project.

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 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 PDD as specified in the Nakau Methodology Framework (this document).

Part A and Part B of this PDD, along with appendices and evidence requirement documents are stored in the Nakau Information Platform, in the Sirebe Project Information Platform (folder). This consists of data stored electronically in the following locations:

- Local computers of three Nakau Programme Pty Ltd Executive members
- Dropbox (cloud storage) folders used by:
 - Three Nakau Programme Pty Ltd Executive members
 - The Project Coordinator (NRDF) office in Gizo
- Plan Vivo Foundation information platform (web-based document database for project documentation).
- Portable hard drive located in the Nakau Programme Pty Ltd office in Lismore.

Hard copies of these PDD documents will be stored in the following locations:

- Project Owner office, Sasamunga, Choiseul province.
- Project Coordinator office, Gizo, SI.
- Programme Operator office, Lismore, Australia.

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 PDD, as specified in the relevant Technical Specifications Module/s applied.

Data will be stored as per 7.1.1 (above)

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 (equivalent to Plan Vivo annual report) are completed annually, providing transparent details of project management activities and issues.

Project Monitoring Reports are completed every 3-5 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

Data will be stored as per 7.1.1 (above)

7.2 Data Storage and Security

The NMF states: *All data collected associated with Parts A and B of the PDD 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 PDD 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 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*

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 have been fulfilled pursuant to information provided in Sections 7.1.1 above.

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9 Appendices

Note: All appendices are provided on the Nakau *Project Information Platform*.

Appendix 1: MOU's Neighbouring tribes_Siebe

Appendix 2: Sirebe geneology

Appendix 3: Sirebe Tribe Custom Hearing Decision Report

Appendix 4: Protected Area Certificate of Registration Sirebe

Appendix 5: Sirebe Protected Area Management Plan

Appendix 6(a): Choiseul Expedition 2014 Final Report

Appendix 6(b): WWF Report – Biodiversity of Southwest Choiseul

Appendix 6(c): Report of Freshwater fishes, 2009

Appendix 7: Sirebe Community Company Business Plan

Appendix 8: Sirebe Risk Management Framework_04032020

Appendix 9: NRDF Registration Certificate 2014

Appendix 10: Sirebe Community Company Ltd Registration

Appendix 11: Nakau Registration ASIC

Appendix 12: Sirebe Tribal Association Registration Certificate

Appendix 13: Sirebe Tribal Association Constitution

Appendix 14: Project Development Agreement

Appendix 15: Stakeholder analysis

Appendix 16: FPIC mandate for establish project owner entity

Appendix 17(a): FPIC mandate for signing PES Agreement

Appendix 17(b): FPIC Report on process and participation for PES agreement consultations

Appendix 18: FPIC Report on process and participation in Project Owner Business Plan and Benefit sharing Plan Development

Appendix 19: Management Plan Development Report Sirebe signed

Appendix 20: SI REDD RAP Report

Appendix 21: Letter mandating submission of PDD

Appendix 22: Choiseul Pre-feasibility Assessment

Appendix 23: Money Story Workshop Report, July 2019

Appendix 24: Sample social impact questionnaire

10 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)
Conservation/Land Management Plan	The Protected Area Management Plan
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 Forest 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.
FPIC	Free prior and informed consent

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 Project Coordinator services to Project Owners and 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’
NRDF	Natural Resources Development Foundation
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 Executive/committee members.
PDD	Project Design Document (formerly Project Description 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 Executive	Subset of the Project Owner community appointed by the Project Owner community to govern the project in the interests of the Project Owner community.

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.
Protected Forest	Halting or avoiding activities that would reduce carbon stocks and managing a forest to maintain high and/or increasing carbon stocks
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
SCC	Sirebe Community Company
SFM	Sustainable Forest Management
STA	Sirebe Tribal Association
UNFCCC	United Nations Framework Convention on Climate Change
Validation	Independent audit of Project Description (PDD) 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:

The definition above has two options:

1. 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.
2. 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.
3. 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.
4. 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 $\geq 50\%$, 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 $\geq 50\%$ 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 ac:
 - 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.