Drawa Rainforest Conservation Project: Issuance Request 2020

Submitted by: The Nakau Programme Pty Ltd (Programme Operator)

Date of submission: 06 May 2022

SUMMARY

Project overview	
Reporting period	6th September 2015 – 6th September 2020 (5 years)
Geographical areas	Drawa, Vanua Levu, Fiji
Technical specifications in use	TS Module (C) IFM-LtPF: Improved Forest Management – Logged to Protected Forest V.10 for the Nakau Program (D2.1.1 v2.0, 20151009)

Project indicators	Historical	Added/ Issued this period September 2015 - September 2020	Total
No. smallholder households with PES agreements	Not applicable	Not applicable	Not applicable
No. community groups with PES agreements (where applicable) by Dec 2014	1	0	1
Approximate number of households in these community groups	120	0	120
Area under management (ha) where PES agreements are in place	NA	1588.15 ha	1588.15 ha

Total PES payments made to participants from vintages (USD)	$145,671.91		$145,671.91
Total sum held in trust for future PES payments (USD)	$137,391.50		$137,391.50
Plan Vivo Certificates (PVCs) issued	56,400	75,880	132,280
Allocation to Plan Vivo buffer	14,100	18,970	33,070
Unsold Stock at time of submission (PVC)			299
Plan Vivo Certificates (PVCs) requested for issuance this reporting period			
6th of September 2015 to 6th of September 2016			15,176
6th of September 2016 to 6th of September 2017			15,176
6th of September 2017 to 6th of September 2018			15,176
6th of September 2018 to 6th of September 2019			15,176
6th of September 2019 to 6th of September 2020			15,176
Available for future issuance (REDD only)			0

PART A: PROJECT UPDATES

A1 Key events

- Please see Annual Report 2017, 2019 and Annual Report 2020 for key events and updates on project

A2 Successes and challenges

- Please see Annual Report 2017, 2019 and Annual Report 2020 for success and challenges in the monitoring period

A3 Project developments

Table 1: Document updates

PDD (including technical specifications) document version:		
PDD section	Date change	Short description of update
Not applicable	*Not applicable*	*No updates*

Table 2: Progress against corrective actions

Document	Corrective action	Activity against this
Drawa_Plan Vivo_validation_FINAL_14 9/1/22ec 2017	*No corrective actions to address*	*Not applicable*
Drawa CARs Plan Vivo TAC_30012018	*No corrective actions to address*	*Not applicable*

A4 Future Developments

- Please see Annual Report 2017, 2019 and Annual Report 2020 for future developments in the Drawa Project

PART B: PROJECT ACTIVITIES

B1 Project activities generating Plan Vivo Certificates

Table 3: Project activity summary

Name of technical specification	Area (Ha)	No smallholder households	No Community Groups
TS Module (C) AD-LtPF D2.2.1 v1.0 20150815	*1,588.15*	*0*	*1 (Drawa Block Communities represented by DBFCC Ltd)*

B2 Project activities in addition to those generating Plan Vivo Certificates

Not applicable

PART C: PLAN VIVO CERTIFICATE ISSUANCE SUBMISSION

C1 Contractual statement

- This issuance is based on signed PES agreement between the Project Owner (represented by the project owner community business – Drawa Block Forest Community Cooperative Ltd) and the Project Coordinator (Live and Learn Environmental Education Society Committee (Fiji) with participants complying with all the minimum requirements stated in this agreement.

C2 Issuance request for projects where issuance is made on the basis of ongoing activities on land already managed by the project (e.g. avoided deforestation, calculated *ex-post*)

Table 5: Statement of tCO2 reductions available for issuance as Plan Vivo Certificates based on activity for reporting period 6 September 2015 – 6 September 2020

Area ID	Total area (ha)	Tech. Spec	Saleable ER's (tCO_2) available from previous periods	Total ER's (tCO_2) achieved this period	% Buffer	No. of PVCs allocated to buffer from ER's achieved this period	Saleable ER's (tCO_2) from this period	Issuance request (PVCs)	ER's (tCO_2) available for future issuances
Eligible area 2015/16	*1,588.15*	TS Module (C) IFM-LtPF	*299 (from 2014/15)*	*18,970*	*20 %*	*3,790*	*15,176*	*15,176*	*0*
Eligible area 2016/17	*1,588.15*	TS Module (C) IFM-LtPF	*As above*	*18,970*	*20 %*	*3,790*	*15,176*	*15,176*	*0*
Eligible area 2017/18	*1,588.15*	TS Module (C) IFM-LtPF	*As above*	*18,970*	*20 %*	*3,790*	*15,176*	*15,176*	*0*
Eligible area 2018/19	*1,588.15*	TS Module (C) IFM-LtPF	*As above*	*18,970*	*20 %*	*3,790*	*15,176*	*15,176*	*0*
Eligible area 2019/20	*1,588.15*	TS Module (C) IFM-LtPF	*As above*	*18,970*	*20 %*	*3,790*	*15,176*	*15,176*	*0*
TOTAL	**NA**		**299**	**94,850**		**18,970**	**75,880**	**75,880**	**0**

C3 Allocation of issuance request

Nakau has received requests for PVC reservations from the above issuance as follows:

- 45,000 PVCs for ZeroMission
- 30,000 PVCs for Ekos
- 10,000 PVCs for COTAP

Table 6: Allocation of previous issuance request

Buyer name/ Unsold Stock	No. PVCs transacted	Registry ID (if available) or Project ID if destined for Unsold Stock	Tech spec(s) associated with issuance
Zeromission	*20,274*	*Markit Environmental Registry*	TS Module (C) AD-LtPF D2.2.1 v1.0 20150815
Ekos	*4206*	*Markit Environmental Registry*	TS Module (C) AD-LtPF D2.2.1 v1.0 20150815
Myclimate	*31,621*	*Markit Environmental Registry*	TS Module (C) AD-LtPF D2.2.1 v1.0 20150815
Unsold stock	*299*	*Markit Environmental Registry*	TS Module (C) AD-LtPF D2.2.1 v1.0 20150815

C4 Data to support issuance request

Monitoring data for areas of land and participants which support this issuance request is provided in the Drawa Monitoring Report 2 D3.3 v1.1 16122021.

PART D: SALES OF PLAN VIVO CERTIFICATES

D1: Sales of Plan Vivo Certificates

Table 7: Sales of Plan Vivo Certificates

Buyer / sale	Invoice date	Units	Wholesale Price*	Sale value*
ZeroMission (Opus)	06/04/2018	1300	Internal reporting only	Internal reporting only
ZeroMission (Opus)	06/04/2018	140		
ZeroMission (Opus)	06/04/2018	4,110		
ZeroMission (Opus)	06/04/2018	800		
Ekos	09/05/2018	484		

ZeroMission	27/07/2018	1000		
ZeroMission (Nordax bank)	27/07/2018	427		
Ekos	28/09/2018	1159		
ZeroMission	10/01/2019	4727		
ZeroMission	10/01/2019	417		
ZeroMission	09/05/2019	500		
ZeroMission	09/05/2019	500		
Ekos	28/06/2019	2563		
ZeroMission	09/05/2019	1352		
ZeroMission	24/06/19	5001		
Myclimate	11/07/19	31,621		
		56,101		
		Total units sold	Average price	Total value of sales (USD)

PART E: MONITORING RESULTS

E1: Ecosystem services monitoring

- Monitoring results that supports the request for new issuances is provided in Drawa Monitoring Report 2 D3.3 v1.1 16122021.
- All monitoring targets were met.
- No corrective actions remain outstanding.

E2: Maintaining commitments

- No participants have resigned or been removed from the project since the first monitoring report.

E3: Socioeconomic monitoring

- Results of monitoring of socioeconomic impacts according to our monitoring plan for the reporting period are provided in Drawa Monitoring Report 2 D3.3 v1.1 16122021.

E4: Environmental and biodiversity monitoring

- Results of monitoring of biodiversity impacts according to our monitoring plan for the reporting period are provided in Drawa Monitoring Report 2 D3.3 v1.1 16122021.

PART F: IMPACTS

F1: Evidence of outcomes

Please see Drawa Monitoring Report 2 D3.3 v1.1 16122021.

PART G: PAYMENTS FOR ECOSYSTEM SERVICES

G1: Summary of PES by year

Table 8: Summary of payments made and held in trust

1. Reporting years (mm/yy – mm/yy)	2. Total previous payments (previous reporting periods)	3. Total ongoing payments (in this reporting period)	4. Total payments made (2+3)	5. Total payments held in trust	6. Total payments withheld
09/12 – 09/13	$0	$0	$0	$0	$0
09/13 – 09/14	$0	$0	$0	$0	$0
09/14 - 09/15	$0	$0	$0	$0	$0
09/15 – 09/16	$0	$0	$0	$0	$0
09/16 - 09/17	$0	$0	$0	$0	$0
09/17 -09/18[1]	$0	$34,925	$34,925	$2,710.40	$0
09/18 – 09/19	$34,925	$27,869.62	$62,794.62	$220,268.79[2]	$0
09/19 – 09/20	$62,794.62	$82,877.29	$145,671.91	$137,391.50	$0
TOTAL	**$145,671.91**	**N/A**	**$145,671.91**	**$137,391.50**	**0**

PART H: ONGOING PARTICIPATION

H1: Recruitment

[1] *The first verification (2012-2015) was approved on 22nd February 2018 with the project period back-dated to 6th September 2012. Hence actual sales and payments only commenced after first issuance in 2018.*

[2] *Payments to the Project Owner (Drawa Cooperative) are made quarterly as per the PES agreement. There is a large balance in the Trust fund in this period due to a high volume of sales, including a single purchase of 31,621 credits.*

- No additional recruitment occurred during this monitoring period

H2: Project Potential

- There is no project waiting list at this stage.

Table 9: Details of potential project participants

Wider engagement	
No smallholder households with *plan vivos*	NA
No community groups with *plan vivos*	NA
Approximate number of households (or individuals) in these community groups (if known)	NA

H3: Community participation

- Please see Annual Reports 2017, 2019 and Annual Report 2020

PART I: PROJECT OPERATING COSTS

I1: Allocation of costs

Table 10: The below table shows the average annual expenditure from date or first issuance until the end of the current monitoring period (6 September 2020)

Project entity		Average Annual Expenditure ($USD)	Overall allocation of income received (USD)	Percentage allocation of income received
Project owner	DBFCC	$48,557.30	$283,063.41[3]	58%[4]
Project coordinator	Live & Learn	$31,333.67	$97,007.98	19.88%
	Nakau	$34,567.47	$108,003.78	22.12%
	TOTAL (average)	**($33,152.82)**	**$488.075.17**	**100%**

[3] Includes funds held in trust by Nakau for quarterly performance-based disbursements to DBFCC

[4] DBFCC were originally paid a proportion of the carbon income received based on a 'cost-based pricing model,' which applied to the first $149,649 received from carbon sales. During this period DBFCC received an average of 53.7% of carbon sales revenue. Commencing May 2019 (applying to the remaining $338,426 received), DBFCC was allocated exactly 60% of carbon sales revenue.

Table 11: Allocation of costs: DBFCC (Project Owner) annual budget

Note: Budget in FJD (Rate: 1 USD = 0.469 FJD)				
Income	**Unit**	**Unit income**	**Number of units**	**Annual**
Carbon (@ $8.71 USD av price)	Carbon credit	$ 10.9	18,800	$ 204,732
TOTAL				**$ 204,732**
Expenditure	**Unit**	**Unit cost**	**Number of units**	**Annual**
DBFCC board expenses				**$ 11,360**
Travel to Suva	Rtn Ferry trip	$ 120	4	$ 480
Accommodation in Suva	Nights	$ 50	12	$ 600
Travel & Transport (Local travel for DBFCC board / committee	Per month	$160	12	$ 1,920
Protocol for meetings @ 5 meetings per quarter	Per meeting	$ 30	20	$ 600
Catering (meetings and workshops) @ 5 meetings per quarter DBFCC + 4 x LMSC	Per meeting	$ 50	24	$ 1,200
Sitting fees (for DBFCC board)	Per person/day	$ 50	100	$ 5,000
Land management sub-committee (LMSC)	Per person/day	$ 20	32	$ 640
AGM cost	Per AGM	$ 500	1	$ 500
Telephone	Per month	$ 35	12	$ 420
Vehicle expenses				**$ 3,935**
Vehicle service	Per service	$ 270	2	$ 540
Fuel	Per 100km	$ 28	100	$ 2,750
Vehicle maintenance / tyres	Per year	$ 500	1	$ 500
Vehicle registration	Per year	$ 204	0.5	$ 102
Vehicle insurance	Per year	$ 85	0.5	$ 43
Human resources (staff)				**$ 24,816**
Ranger salaries (@ 4 rangers x 2 days per week)	Per day	$ 30	416	$ 12,480
Ranger FNPF (@10%)	Per year	$ 1,248	1	$ 1,248
Business operations manager (@ 2 days / week).	Per month	$ 840	12	$ 10,080
Business operations manager FNPF	Per year	$ 1,008	1	$ 1,008
Rents / leases / building costs				**$ 94,666**
Forest eligible area lease rent	Per year	$ 10,090	1	$ 10,090
DBFCC business centre annual rent	Per year	$ 500	1	$ 500
DBFCC business centre Compensation (one off payment @ 50% of total cost)	Bulk sum	$ 10,000	1	$ 10,000

Eligible area lease compensation (@$2 USD per credit) + catch up payment ($3,336 per quarter until July 2021)	Per credit	$ 4	18,800	$ 78,536
Electricity connection	One off	$ 300	1	$ 300
Monthly electricity	Per month	$ 20	12	$ 240
Materials & equipment				**$ 480**
Stationary & printing	Per month	$ 40	12	$ 480
Computers (donated)	Per computer	$ -	2	$ -
Ranger equipment (donated)				
Finance and administration				**$ 800**
Annual audit (Co-operative compliance)	Per audit	$ 400	1	$ 400
Bank charges	Per account	$ 100	4	$ 400
Other				**$ 500**
Buyer visit	Per year	$ 500	1	$ 500
TOTAL EXPENSES				**$ 141,557**
GROSS PROFIT[5]				**$ 63,176**

[5] 10% of profits are deposited into a DBFCC reserve fund as required by the Fiji Cooperatives Act. The remainder is allocated by the DBFCC to community projects or cooperative owner dividends at the discretion of the DBFCC board of directors.

Drawa Rainforest Conservation Project Monitoring Report 2, 2020

An Improved Forest Management project at Drawa, Vanua Levu, Fiji D3.3 (1) v1.1 06052022

The Nakau Programme: An Indigenous Forest Conservation Programme Through Payments for Ecosystem Services

NAKAU

Drawa Block Forest Communities Cooperative

LIVE&LEARN FIJI ISLANDS

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DRAWA RAINFOREST CONSERVATION PROJECT MONITORING REPORT 2

Document Prepared by Robbie Henderson and Michael Dyer
Nakau Programme Pty Ltd

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Project Title	*Drawa Rainforest Conservation Project*
Version	*1.1*
Report ID	*N/A*
Date of Issue	*2 December 2020*
Project ID	*N/A*
Monitoring Period	*6 September 2012 to 6 September 2043.*
Prepared By	*Live & Learn Fiji (Project Coordinator) and the Nakau Programme Pty Ltd (Programme Operator)*
Contact	*Robbie Henderson robbie.henderson@nakau.org* *M: +61(0)437683929*

1. Project Details

1.1 SUMMARY DESCRIPTION OF THE IMPLEMENTATION STATUS OF THE PROJECT

Provide a summary description of the implementation status of the project, including the following (no more than one page):

- *A summary description of the implementation status of the technologies/ measures (e.g. plant, equipment, process, or management or conservation measure) included in the project.*
- *The relevant implementation dates (e.g. dates of construction, commissioning, and continued operation periods).*
- *The total GHG emission reductions or removals generated in this monitoring period.*

Project implementation began on 1 January 2012. This is the second verification event.

1.2 SECTORAL SCOPE AND PROJECT TYPE

Indicate the sectoral scope(s) applicable to the project, the AFOLU project category and activity type (if applicable) and whether the project is a grouped project.

AFOLU Improved Forest Management – Logged to Protected Forest (AD-LtPF). First activity instance of a grouped project.

1.3 PROJECT COORDINATOR

Provide contact information for the project proponent(s). Copy and paste the table as needed.

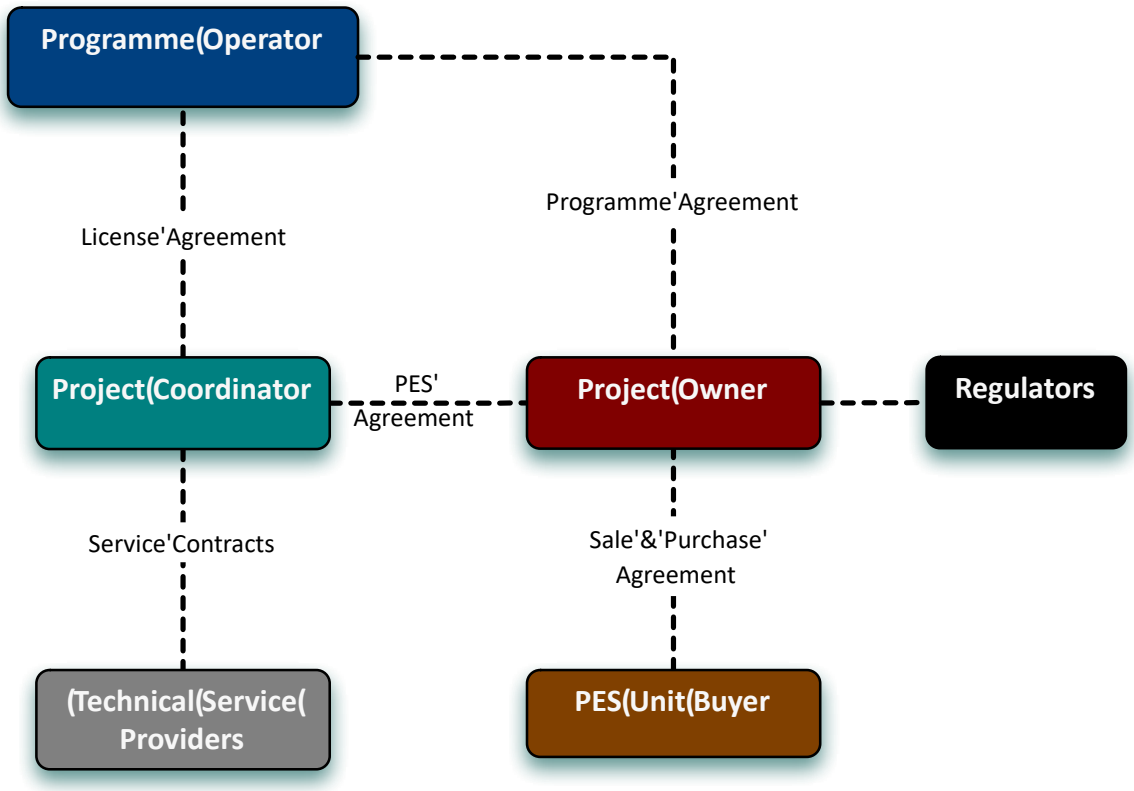
Organization name	Live and Learn Fiji
Contact person	Mr Beato Dulunaqio
Title	Manager PES & Forest Livelihoods Projects
Address	52 Imthurn Rd, Suva, Fiji
Telephone	Tel: +679 3315868, Fax: +679 3305868
Email	beato.dulunaqio@livelearn.org

1.4 OTHER ENTITIES INVOLVED IN THE PROJECT

Provide contact information and roles/responsibilities for any other project participant(s). Copy and paste the table as needed.

Organization name	The Drawa Block Forest Communities Cooperative Ltd.
Role in the project	Project Owner
Contact person	Mr. Peni Maisiri
Title	DBFCC Chairman
Address	24 Sagar Street, Naodamu, Labasa, Fiji Islands. P.O. Box 4641, Labasa
Telephone	
Email	drawablockcooperative@gmail.com

Figure 1.4 Nakau Programme Legal Structure (from Section 2.13.2 of the Drawa PD Part A)



1.5 PROJECT START DATE

Indicate the project start date, specifying the day, month and year.

6th September 2012

1.6 PROJECT CREDITING PERIOD

Indicate the project crediting period, specifying the day, month and year for the start and end dates and the total number of years.

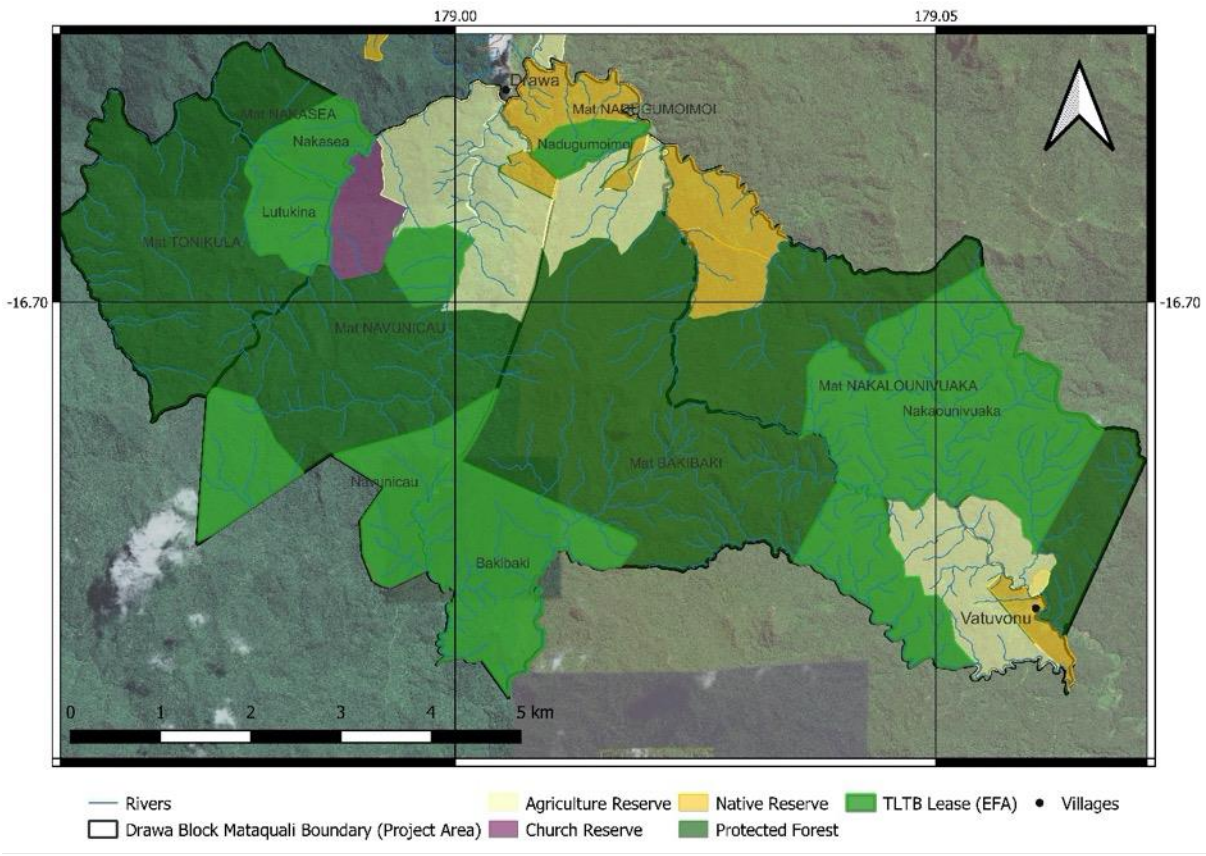
6th September 2012 to 6th September 2043 (30 years).

1.7 PROJECT LOCATION

Indicate the project location and geographic boundaries (if applicable) including geodetic coordinates. For grouped and AFOLU projects, coordinates may be submitted separately as a KML file.

Project Location: Drawa, Vanua Levu, Fiji. Project boundaries: Depicted in Figure 1.7 below:

*Figure 1.7 Map showing the Project Area, which is comprised of the Protection Forest (dark green shading) and the Eligible Forest Area (light green shading). *The map (below) has been updated from the map within the Project Description (PD). The Map in the PD contained mataqali Koroni which withdrew from the project prior to 1st verification. A full explanation of changes to the project area from the Project Description is provided in Appendix 1.*



Georeferencing data can be provided upon request.

1.8 TITLE AND REFERENCE OF METHODOLOGY

Provide the title, reference and version number of the methodology or methodologies applied to the project. Include also the title and version number of any tools applied by the project.

This project applies two Nakau Programme methodology elements:

1. Nakau Methodology Framework D2.1 v1.1 20150513
2. Technical Specifications Module (C) 1.1 (IFM- LtPF) D2.1.1 v2.0 20151009.

1.9 OTHER PROGRAMMES

Include the following information, as applicable:

- *Emission Trading Programmes and Other Binding Limits: Where the project reduces GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading (as identified in the project description, or where such programs or mechanisms have subsequently emerged) demonstrate that net GHG emission reductions or removals generated during this monitoring period have not be used for compliance under such programs or mechanisms. Examples of appropriate evidence are provided in the* VCS Standard*.*
- *Other Forms of Environmental Credit: Indicate whether the project has sought or received another form of GHG-related environmental credit, including renewable energy certificates, during this monitoring period. Include all relevant information about the GHG-related environmental credits and the related program. Additionally, provide a list of all and any other programs under which the project is eligible to create another form of GHG-related environment credit.*

Participation under Other GHG Programmes: Indicate whether the project is registered under any other GHG programs and, where this is the case, provide the registration number and details. Provide details of any GHG credits claimed under such programs.

The project has not sought or received another form of GHG-related environmental credit.

The project is not registered under any other GHG programs.

Since the inception of the Drawa Project in Fiji, the Fiji National REDD+ Program has commenced under the Forest Carbon Partnership Facility (FCPF). However, the Drawa Project is excluded from the Fiji National REDD+ Program. Please refer to the detailed explanation in section 4.1.2 below.

2.1 IMPLEMENTATION STATUS OF THE PROJECT ACTIVITY

Describe the implementation status of the project activity(s), include information on the following:

- *The operation of the project activity(s) during this monitoring period, including any information on events that may impact the GHG emission reductions or removals and monitoring.*
- *Where applicable, describe how leakage and non-permanence risk factors are being monitored and managed for AFOLU projects.*
- *Any other changes (e.g. to project proponent or other entities).*

The Drawa Rainforest Conservation Project was implemented starting on 6th September 2012. This monitoring report represents project implementation results for the second verification event, representing five vintages. The period for each vintage is from the 6th September to the 6th September in the following year, i.e. 2015/16, 2016/17, 2017/18, 2018/19, 2019/20.

This is the second Project Monitoring Report for this project.

2.2 DEVIATIONS

2.2.1 Methodology Deviations

Describe and justify any methodology deviations applied during this monitoring period. Include evidence to demonstrate the following:

- *The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.*
- *The deviations relates only to the criteria and procedures for monitoring or measurement, and do not relate to any other part of the methodology*

Deviations to Monitoring Methodology

The following deviations relate to how the project owners monitor the EFA and Total Activity Shifting Leakage.

Changes to the monitoring plan outlined in Section 3 are deviations to the monitoring plan from outlined in the PD (Section 8). Prior to 2019, (Years 2015 to 2018), the project owner was unable to complete the boundary and transect monitoring of the eligible forest area. The data was collected in an adhoc manner and without good data collection protocols, firstly, because the project had not been validated and secondly, the monitoring design had not been finalized. Further, the project was not validated on the carbon market until 2018 and the funding to support the forest rangers to conduct the monitoring was reliant on the sale of carbon credits. Once the project had been validated, the DBFCC rangers were able to begin systematically monitoring the eligible forest area.

After project validation in 2018, the boundary inspections for the EFA variable were completed over several months from August 2019 to January 2020. The project owner was unable to complete the boundary inspection and transect walk every six months. The reason for the deviation is because the eligible forest area is large and covers complex and difficult terrain, which makes the boundary inspection resource intensive and time consuming for the project owner (i.e. the original plan was good in theory but too difficult to achieve in practice). There are also safety concerns regarding undertaking the forest monitoring in the wet season, and this limits the time available. Moving forward, *annual* boundary and transect inspections are sufficient and more realistic to complete the monitoring required. Prior to the monitoring period, the inspections were informal, and no data was collected.

The second change is the access to remote sensed satellite and aerial imagery. The PD describes that sub-meter pixel spatial resolution data is required; however sub-meter pixel spatial resolution data was not available. We have used sub three-meter data and suggest that it is adequate to detect relevant forest change at this resolution.

The monitoring plan now includes mobile data collection and mentions the AVENZA application. Any mobile data collection application would suffice if the application can be robust and tailored to allow data collection around the EFA and Total Activity Shifting Leakage. Previously, the PD outlined handheld GPS devices would be used, however we are now using tablets and mobiles with inbuilt GPS capabilities. The key change in the monitoring description is removal of the sub-meter accuracy requirement for the GPS and mobile data collection devices. Achieving sub-meter accuracy with a handheld device is not achievable, especially in the remote and forest areas in Fiji. The devices we are working with are as accurate as possible, given the available financial resources and what is technologically appropriate for the community rangers to use in the field. Over the course of this monitoring period the project operator has trained staff in both the community project owner and coordinator, to use mobile data collection devices, rather than handheld GPS devices.

Moving forward, the training will continue, as to allow for robust and comprehensive monitoring for the carbon revenue purposes, as well as, for biodiversity and management of the protected area.

2.2.2 Project Description Deviations

Describe any project description deviations applied during this monitoring period and explain the reasons for the deviation. Identify whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and provide an explanation of the outcome.

Describe and report on any project description deviations applied in previous monitoring reports.

Project Area and Eligible Forest Area

This Monitoring report presents a change to the Project Area and 'Eligible Area' mapping and area calculation from the PD submitted at validation. A full explanation and rationale for the deviation is provided in Appendix 1.

The table below compares the Eligible Forest Areas from the PD (unchanged at first verification) with carbon accounting submitted at validation (1st verification), compared with the 2nd verification monitoring report (this report).

Table showing EFA area changes in hectares.

Mataqali	**Total coupe area as EFA (in PD Part B)**	**Total coupe area as EFA (at project validation/1st verification)**	**Total coupe area as EFA (at 2nd Monitoring report)**
Bakibaki	549.9	468.1	468.10
Koroni	236.2	0	0
Nadugumoimoi	47.9	47.9	45.93
Nakalounivuaka	634.1	588.2	580.20
Nakasea	66.5	66.5	73.098
Navunicau	401.8	279.5	320.878
Tonikula	101	101	101.84
Total	**2037.4**	**1551.2**	**1590.056**
Farm area within EA	Not recorded	2.740337	1.905312
Total minus farm area	**2037.4**	**1548.46**	**1588.15**

Habitat Hectares

Methodology for calculation of Habitat Hectares (HH) is described in the PD Part B Section 6. Due to the lack of available market for Habitat Hectares the project has discontinued their use. Habitat Hectares are no longer calculated for this project, and the project will not transact in habitat hectares.

Governance and financial management

PD A section 4.3.4 contained a highly prescriptive 'business money' account balance target. This has proven impractical. It has been determined that a more appropriate target (buffer amount) is equal to or greater than one quarter of annual operational costs. Where

appropriate similar adjustments will be made to other bank account balance targets where the prescribed amount is overly prescriptive or impractical.

Project management reports and meetings

The DBFCC (landowner cooperative) did not prepare written 'project management reports' to present at annual 'project management meetings.' This includes the once per verification cycle 'project monitoring meeting' that was to replace the usual project management meeting. In lieu of this the DBFCC held Annual General Meetings (AGMs) which is required under the Cooperative Act. These served to engage the DBFCC membership on a similar agenda as was intended for a management meeting. Formal project management reports were not prepared for 'approval.' However, the DBFCC executive tabled and presented financial and project management information at the AGMs.

Nakau considered the AGMs to be sufficient to achieve the project management meeting purpose with respect to engaging members on land use, governance, benefit sharing, transparency and accountability. However, we will work with the DBFCC to improve their capacity to produce project management reports in the future.

Financial reporting

The PD stated that the Programme Operator (Nakau) would prepare quarterly Profit and Loss, Balance Sheet and Cashflow Reports based on transactions in the Trust Account. The purpose of this activity was to ensure transparency and accountability of PES funds held in trust for the Project Owner. However, the frequency for reporting and the types of reports was deemed to be too rigid and unnecessary to achieve the outcome. It was determined that financial information could be shared with Project Coordinator and Project Owner parties in other formats more conducive for communication of financial concepts. Information such as trust account bank statements, presentations at DBFCC meetings and detailed sales information was frequently shared with the Project Owner on an ad hoc, or as required basis.

Logged forest strata

The information on logged over parts of the project areas presented in the previous version of the PD Part B (1036 ha) could not be verified, as we could no longer access the source data from the Department of Forestry.

In the updated version, information on historically logged-over parts of the project area was re-assessed using data from the forest inventory report of the Drawa Block (*De Vletter & Mussong, 2001: Evaluation of Forest Inventory Data Collected in the Drawa Block, Fiji*). The authors confirm that several coupes had undergone logging in the past, which is reflected in comparatively low standing volumes and basal areas. The coupes referred to by the authors are Vulavuladamu 01-03 and 07, which all have standing volumes >35cm dbh, below 70 m^3/ha and basal areas below 20 m^2/ha.

Low volume and BA are caused by a scarcity of large trees, which were removed during logging. These thresholds were applied to all coupes in order to identify the whole

previously logged area- revealing a total of 7 logged-over coupes covering 401 ha, or 22.3% of the total forest management area (1801 ha). The same percentage applied to the project area of 1588 ha results in an estimated logged-over area of 354 ha.

Correction of project removals calculations

Net Project removals (NPR) in the previous version of the PD part B were based on the logged-over area of 1036 ha, as well as a forest increment figure of 9 yr^{-1} ha^{-1}. In the updated PD, project removals were estimated by using a referenced default forest increment factor of 8.4 CO2 yr^{-1} ha^{-1}, as well as the reassessed logged-over areas. The calculation was carried out as follows:

AG+ BG Net Project Removals (CO2 yr^{-1} ha^{-1}) = (3.4 +(3.4*0.37)) * 0.49 * 3.66 = 8.4

AG+ BG Net Project Removals (CO2 yr^{-1}) = 8.4 *354 = 2970

Where:

Parameter	Value	Reference
Natural Forest (Above Ground) Increment for Tropical Insular Asia	3.4 t.d.m. yr^{-1} ha^{-1}	IPCC 2006 chapter 4, table 4.9
Ratio of Below ground Biomass to Above Ground Biomass	0.37	IPCC 2006 chapter 4, table 4.4
Carbon Fraction Tropical Wood	0.49	IPCC 2006 chapter 4, table 4.3
C to CO2 Conversion factor	3.66	
Logged Project Area	354 ha	

Monitoring report template

The PD states that we will use the VCS monitoring report template. However, we have elected to use an equivalent report structure suitable for Plan Vivo, which was determined by Plan Vivo feedback on previous reports. We suggest the change is justified given the Plan Vivo Standard is applied to this project.

2.3 GROUPED PROJECT

For a grouped project, provide relevant information about new instances of the project activity(s) and demonstrate and justify how each new instance of the project activity(s) meets the eligibility criteria set out in the project description. Address each eligibility criteria separately.

This is the first activity instance for a grouped project under the activity type: Improved Forest Management - Logged to Protected Forest for the Nakau Programme.

3. Monitoring Plan

Describe the process and schedule followed for monitoring the data and parameters, set out above, during this monitoring period, include details on the following:

- *The organizational structure, responsibilities and competencies of the personnel that carried out the monitoring activities.*
- *The methods used for generating/measuring, recording, storing, aggregating, collating and reporting the data on monitored parameters.*
- *The procedures used for handling any internal auditing performed and any non-conformities identified.*
- *The implementation of sampling approaches, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures. Where applicable, demonstrate whether the required confidence level or precision has been met.*

Where appropriate, include line diagrams to display the GHG data collection and management system.

This section near replicates Section 8 in the Drawa PD Part B D3.2b v1.0 20151009. To compare this document to the PD, numbering in this section replaces 8.x with 3.x. We have made some small changes to the monitoring for the Drawa project, namely, in carbon monitoring, we use AVENZA to monitor the area boundaries and we have updated the satellite imagery requirements.

The purpose of the project monitoring was to measure, report, and verify ecosystem service outcomes delivered by the project. While the project generates multiple ecosystem services and social outcomes, the scope of project monitoring is restricted to the specific outcomes represented by PES units.

One PES unit type is produced by this project: Carbon Offsets. The core PES unit for purposes of project monitoring is carbon offsets. The particular type of carbon offset produced by this project is a Plan Vivo Certificate issued as a Verified Emission Reduction unit (VER) but imbued with biodiversity and community co-benefits as required by the Plan Vivo Standard. These co-benefits are integral attributes of the carbon offsets produced under this standard and for this reason, project monitoring requires measurement, reporting and verification of the following project outcome attributes:

- Carbon benefits
- Community benefits
- Biodiversity benefits

Project measurement requirements set out in the PD are broken down into these three categories. Similarly, the project monitoring is broken down into the same three categories.

The Project Monitoring Plan is the annual standard operating procedure for measuring project outcome delivery according to these three project benefit types.

3.1 CARBON MONITORING

Carbon offsets are issued to this project as a result of 3rd party verification of each Project Monitoring Report, which contains data sufficient to provide evidence to support a GHG assertion for the Project Monitoring Period in question.

Project Monitoring reports are produced at a maximum of 5-yearly intervals covering each Project Monitoring Period. The Project Monitoring Report was produced in the year following the final year of the Project Monitoring Period.

3.1.1 Monitored And Non-Monitored Parameters - Carbon

Some data parameters are derived from default values or are measured at one time only. These are non-monitored parameters. Other data parameters are monitored during each Monitoring Period.

Monitored and non-monitored data are listed in Table 3.1.1 below, and presented in the sequence in which measurement of GHG emissions and emission reductions are calculated.

Table 3.1.1 Monitored and Non-Monitored Parameters (monitored parameters in green)

Notation	Parameter	Unit	Equa-tion	Origin	Monitored
EFA	Eligible Forest Area	Ha	-	PD	Monitored
LF/ULF	Forest stratification (logged/unlogged forest)	Ha	-	PD	Area calculated in PD
HR	Harvest Rate	$m^3\ yr^{-1}$	4.1.1	Calculated from inventory	Not monitored Updated each Baseline Revision
TWH	Total Wood Harvested	$m^3\ yr^{-1}$	4.1.2	Default factor applied	Not monitored Updated each Baseline Revision
CD	Collateral Damage	$m^3\ yr^{-1}$	4.1.3	Root-shoot ratio (proportion of AGBE)	Not monitored Updated each Baseline Revision
AGBE	Above Ground Biomass Emitted	$m^3\ yr^{-1}$	4.1.4	Sum of TWH and CD	Not monitored Updated each Baseline Revision
BGBE	Below Ground Biomass Emitted	$m^3\ yr^{-1}$	4.1.5	Root-shoot ratio (proportion of AGBE)	Not monitored Updated each Baseline Revision
TM3	Total Emissions in m^3	$m^3\ yr^{-1}$	4.1.6	Sum of AGBE and BGBE	Not monitored

					Updated each Baseline Revision
GTCO2	Gross Total Emissions in tCO^2e	$tCO_2e\ yr^{-1}$	4.1.7	Conversion factors from wood volume to emissions	Not monitored Updated each Baseline Revision
GBER1	Gross Baseline Emissions Rotation 1	$tCO_2e\ yr^{-1}$	4.1.8	Conversion factors from wood products calculation	Not monitored Updated each Baseline Revision
ltWP	Long Term Wood Products	$tCO_2e\ yr^{-1}$	4.1.9	Calculated through conversion factors based on volume of wood harvested.	Not monitored
NBEARx	Net Baseline Emissions Avoided	$tCO_2e\ yr^{-1}$	4.1.10	Default factors based on GBE	Not monitored Updated each Baseline Revision
ER	Enhanced Removals	$tCO_2e\ yr^{-1}$	5.1.1	Default values derived from mean sequestration rates for relevant forest types and subsequently derived from project-specific data	Not Monitored Updated each Monitoring Period
TAL	Total Activity Shifting Leakage	$tCO_2e\ yr^{-1}$	5.2.1	Derived from Activity Shifting Leakage Analysis	Monitored Updated each Monitoring Period

3.1.2 Monitored Parameters – Carbon

Monitored data and parameters are summarized in the tables below.

Data Unit / Parameter:	**Eligible Forest Area (Eligible Forest Area)**
Data unit:	Ha
Description:	Forest area included in baseline and project scenario, and area upon which crediting is based (EFA_{LF} &/or EFA_{ULF})
Source of data:	Satellite imagery and Project Boundary Inspection
Description of measurement methods and procedures to be applied:	Aerial imagery (sub-meter accuracy) to define Eligible Forest Area boundary; boundary survey inspections (sub-meter accuracy) using mobile data collection, e.g. the AVENZA map application. Measure any reversals occurring in the Eligible Forest Area. Monitored by means of Eligible Forest Boundary Inspections that record any reversal incident occurring within the Eligible Forest Area. The area of any reversal above and beyond the *de minimis* threshold is measured using mobile data collection devices and measuring tapes. Area subject to reversal is removed from the Eligible Forest Area until the reversal has recovered the carbon volume lost in the reversal. This is calculated by means of sequestration rates and the estimate of the forest age for the area subject to the reversal. Forest age of the area subject to the reversal is calculated by: • Dendrochronology on stumps in the case of a timber harvest reversal

	• Dendrochronology on adjacent living trees of equivalent size of burnt stumps
Frequency of monitoring/recording:	Aerial imagery: Once every monitoring period Eligible Forest Boundary inspections: annually
Value monitored:	Area
Monitoring equipment:	Aerial imagery/satellite data with sub-meter pixel resolution and Mobile data collection e.g. the AVENZA application, photography
QA/QC procedures to be applied:	Maximum periodicity of 5-yearly 3rd party verification of Project Monitoring Reports.
Calculation method:	Subtract reversal area from the Eligible Forest Area and recalculate the Net Carbon Credits by means of the Buffer Account Rules (Section 5.5.2 this document).

Data Unit / Parameter:	**Total Activity Shifting Leakage**
Data unit:	tCO_2e/yr
Description:	Leakage caused by activity shifting
Source of data:	Project Area Inspection (outside Eligible Forest Area)
Description of measurement methods and procedures to be applied:	Site visit of indigenous forest lands owned and controlled by the Project Owner to assess commercial timber harvesting activity in comparison with the Baseline Activity and Project Activity as stated in the PD. Where commercial indigenous timber harvesting is occurring on lands owned and controlled by the Project Owner but lying outside the Eligible Forest Area, and where such harvesting has been declared in the PD, the following assessment will be undertaken: • Records of timber harvesting activity are inspected and verified against the timber harvesting plan stated in the PD. • Timber harvesting sites are inspected to verify that they are occurring in the areas specified in the PD. Where commercial indigenous timber harvesting is occurring on lands owned and controlled by the Project Owner but lying outside the Eligible Forest Area, and where such harvesting has not been declared in the PD (i.e. and thereby constitutes Activity Shifting Leakage), the following assessment will be undertaken: • Records of timber harvesting activity are inspected and annual timber harvesting volumes and species are recorded. • Timber harvesting sites are inspected to determine area of harvesting activity. • Calculations are made using the baseline GHG emissions measurement methodology in the Technical Specifications Module 2.1 (C) (AD-DtPF), to determine the volume of Activity Shifting Leakage. • Net Carbon Credits are recalculated to account for Total Activity Shifting Leakage (TAL)

	• The Project Owner is notified of the consequence of any continuation of Activity Shifting Leakage in terms of the reduction in Net Carbon Credits for the Project. The Project Owner is instructed to terminate Activity Shifting timber harvesting or risk suspension or termination from the Nakau Programme.
Frequency of monitoring/recording:	Annual Leakage Inspection and results incorporated into the annual Project Management Report. 5-yearly 2nd party verification of Project Management Reporting by the Programme Operator.
Value monitored:	m^3 yr^{-1}
Monitoring equipment:	Mobile data collection, measuring tape, photography
QA/QC procedures to be applied:	Maximum periodicity of 5-yearly 3rd party verification of Project Monitoring Reports.
Calculation method:	Activity Shifting Leakage method specified in Section 5.2.1 of the Technical Specifications Module (C) 2.1 (AD-DtPF): D2.2.1 v1.0, 20150815.

3.1.3 Monitoring Roles And Responsibilities - Carbon

Specific project monitoring roles for projects applying this Technical Specifications Module are summarised in Table 7.1.3. Project Owners and Project Coordinators are required to assign specific roles to specific stakeholders in the PD, and use this convention in the implementation and monitoring of the Project Activity.

Specific project monitoring roles for this project is presented in Table 3.1.3 below:

Table 3.1.3 Project Monitoring Roles/Responsibilities	
Task	Responsibility
Eligible Forest Area Boundary Inspections	Project Owner with assistance from the Project Coordinator where needed
Eligible Forest Area Inspections	Project Owner with assistance from the Project Coordinator where needed
Project Management Reporting	Project Owner with assistance from the Project Coordinator
Aerial imagery/mapping	Project Coordinator
Project Monitoring data management	Project Coordinator

3.1.4 Information Management Systems - Carbon

This project uses the information management system described in Section 7.1 of the Nakau Methodology Framework.

3.1.5 Simplified Project Monitoring Report Methodology - Carbon

Not applicable. A simplified monitoring report was provided for first issuance. However, a full monitoring report is provided for the second issuance in line with the PDD.

3.1.6 Standard Operating Procedure: Project Monitoring – Carbon

All projects applying this Technical Specifications Module are required to develop a Standard Operating Procedure (SOP) for Monitoring. Projects have the option to submit a simplified SOP for Monitoring when submitting the PD for validation and/or for first verification. Projects electing to supply a simplified SOP for Monitoring for PD and first verification are required to establish a simplified SOP for Monitoring for first verification and then follow the full monitoring SOP thereafter. The simplified SOP for Monitoring requires the Project Coordinator to prepare the first Project Monitoring Report based on the requirements of the Nakau Methodology Framework and this Technical Specifications Module.

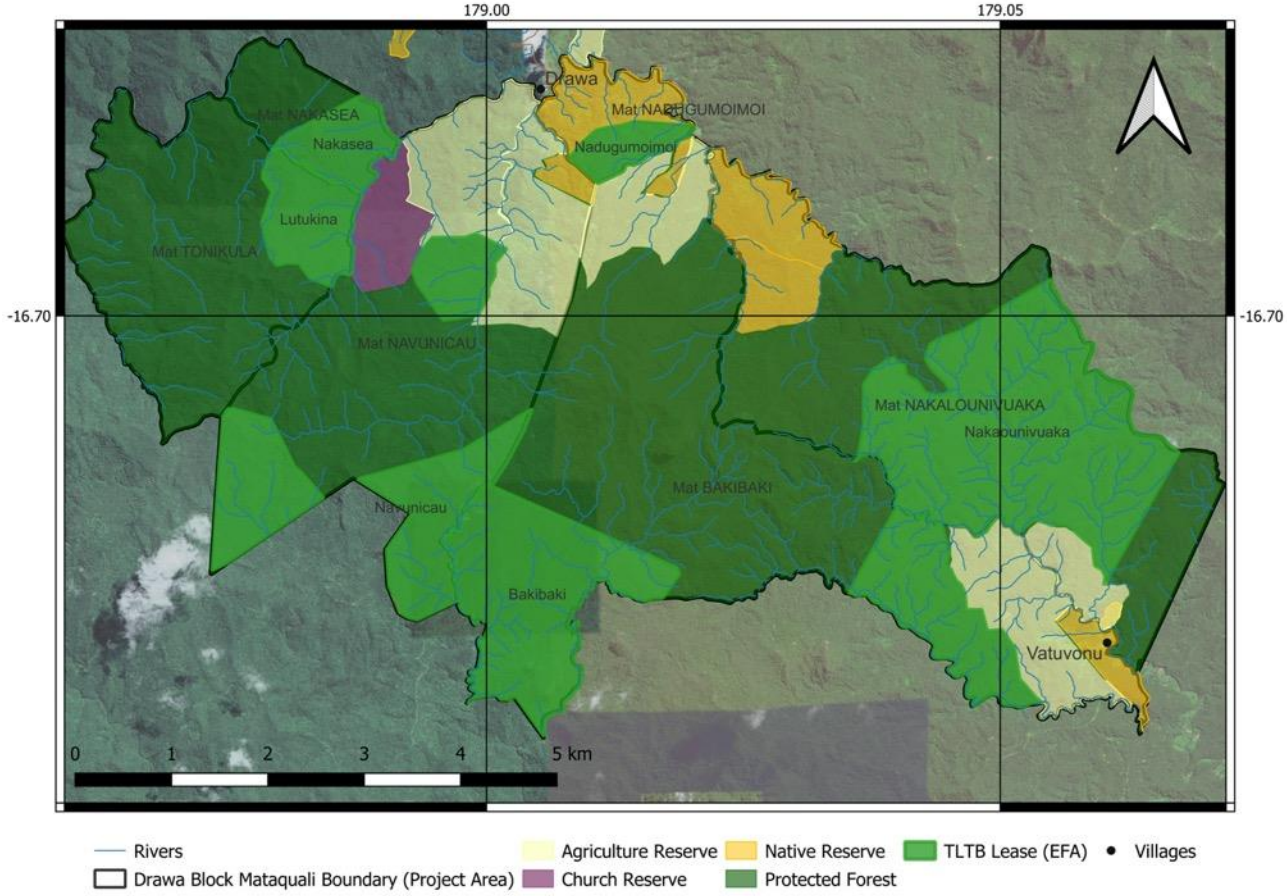
The Standard Operating Procedure (SOP) for Monitoring Carbon benefits is presented below.

Table 3.1.6 Monitoring Schedule - Carbon				
Carbon				
Activity	Frequency	Responsibility	Human Resources	Financial Resources
Eligible Forest Area	Annual inspection Aerial imagery once per monitoring cycle (3-5 yearly)	Landowner (rangers); Project Coordinator	Rangers employed by the project from the landowner community; Project Coordinator staff	PES unit price accounts for employment of rangers and Project Coordinator staff
Eligible Forest Boundary	Annual inspection Aerial imagery once per monitoring cycle (3-5 yearly)	Landowner (rangers); Project Coordinator	Rangers employed by the project from the landowner community; Project Coordinator staff	PES unit price accounts for employment of rangers and Project Coordinator staff
De minimis timber harvesting inspections	Annual inspection Aerial imagery once per monitoring cycle (3-5 yearly)	Landowner (rangers); Project Coordinator	Rangers employed by the project from the landowner community; Project Coordinator staff	PES unit price accounts for employment of rangers and Project Coordinator staff
Activity Shifting Leakage	Annual inspection 3-5 yearly calculation	Project Coordinator and Landowner	Rangers employed by the project from the landowner community; Project Coordinator staff	PES unit price accounts for employment of rangers and Project Coordinator staff

3.1.6.1 Forest Management Areas

The Eligible Forest Management Areas for the Drawa Rainforest Conservation Project are presented in Figure 3.1.6.1 (in the solid green shading).

Figure 3.1.6.1 Drawa Rainforest Conservation Project management zones



The Eligible Forest Area management zones are depicted in Figure 3.1.6.1 above.

3.1.6.2 Eligible Forest Boundary Inspections

Description: The Eligible Forest Area boundary is inspected annually to record the status of this boundary.

Purpose: Monitor and manage any reversals occurring at the boundary.

Method:

During this monitoring period the project owner conducted boundary inspections of the Eligible Forest Area once annually, due to the geographic size and complex terrain of the project area. In the future monitoring periods, the boundary inspection will be conducted annually (previously bi-annually). This is conducted during the walking of line transects from one side of an Eligible Forest Area boundary to another, and by viewing the Eligible Forest Area boundary in both directions along the boundary from the point on each transect line as it meets the Eligible Forest Area boundary. If reversals at the Eligible Forest Area boundary

are observed at points along the boundary that do not coincide with the line transect then the reversal is recorded using the Eligible Forest Boundary Inspection Template (Appendix 6 of Drawa PD Part B D3.2b v1.0 20151009). *Note that the AVENZA application has replaced use of the hard copy monitoring template.*

Recurrence: Annual inspections

Responsibility: Project Owner with supervision support from the Project Coordinator until such time as Project Coordinator supervision support not required (as determined by Project Owner and Project Coordinator by mutual agreement). Project Coordinator to supervise Eligible Forest Boundary Inspection at least once during each 3-yearly monitoring period.

3.1.6.3 Eligible Forest Area Inspections

Description: Descriptive survey of forest condition within Eligible Forest Area boundary.

Purpose: Monitor any reversals occurring within Eligible Forest Area, and ensure that any timber harvesting lies within the *de minimis* limit imposed by the Technical Specifications Module applied.

Method:

Large Area Transect Method: For each Forest Management Area, permanently mark a Transect Base Point with a boundary peg (this can be a boundary peg used for forest inventory and/or permanent sample plots). Define a Transect Datum Line using a compass bearing and orient the transect datum line along the long axis of the Forest Management Area (see Figure 8.1.6.3). Use the last two digits from random numbers and convert to meters, to select a transect starting point along the Transect Datum Line. Use a compass bearing to mark out parallel transect lines through the Forest Management Area, with transects located between 100m and 500m intervals and orientated perpendicular to the Transect Datum Line.

Medium Area Transect Method: For forest management areas that are too small to undertake two or more transects using the Large Area Transect Method, use the same method as the Large Area Transect Method but select the last single digit from the random numbers to locate the first transect line, and locate the transects between 20m and 100m intervals along the transect datum line.

Small Area Transect Method: For forest management areas less than 100m long, start with the Transect Base Point, then locate a single transect running through the longest axis of the forest patch (and curving the transect where necessary in order to keep the transect within the forest boundary).

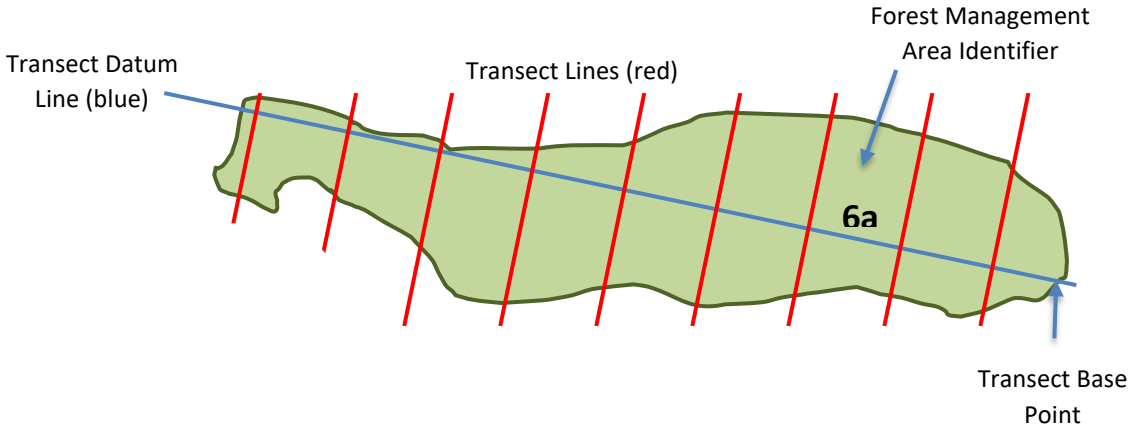
Transect Survey Procedure: Walk the full length of each transect line and on the Project Area Inspection Template (Appendix 7, Drawa PD Part B D3.2b v1.0 20151009) record the following Reversal Events: (*Note that the AVENZA application has replaced use of the hard copy monitoring template.)*

a. Evidence of timber harvesting

b. Evidence of fire
c. Evidence of detrimental changes in forest health (e.g. browsing, pest infestation, disease, snow-break, dieback)

For each Reversal Event record the location with a GPS unit and describe the event using the Eligible Forest Area Inspection Checklist. For each timber harvesting Reversal Event record the stump diameter, the species of harvested tree where possible, any evidence of on-site timber processing, log hauling, and collateral damage.

Figure 3.1.6.3 Eligible Forest Area Inspection Transect Location



Recurrence: Annually.

Responsibility: Project Owner with supervision support from the Project Coordinator until such time as Project Coordinator supervision support not required (as determined by Project Owner and Project Coordinator by mutual agreement). Project Coordinator to supervise Eligible Forest Boundary Inspection at least once during each 3-yearly monitoring period.

Note: Use a different random number to generate the transect starting point along the transect datum line for each subsequent annual monitoring cycle.

3.1.6.4 *De Minimis* Timber Harvest Inspection

De minimis timber harvesting inspections will be undertaken 6-monthly in conjunction with the 6-monthly Eligible Forest Area Inspections described in Section 3.1.6.3.

The *de minimis* timber harvesting volume for the Drawa Rainforest Conservation Project is 407m^3 per year. This amounts to <5% of the total allowable annual commercial timber harvest in the Baseline Scenario in the Eligible Forest Area as provided for in the Technical Specifications Module applied.

There has been no *de minimis* timber harvesting in this monitoring period.

3.1.6.5 Activity Shifting Leakage Inspection

Activity Shifting Leakage Inspections will be undertaken annually following first verification. These inspections will be undertaken in conjunction with annual Eligible Forest Area Inspections described in Section 3.1.6.3.

The project will record Activity Shifting Leakage events using the template supplied in Appendix 9 Drawa PD Part B D3.2b v1.0 20151009. *Note that the AVENZA application has replaced use of the hard copy monitoring template.*

3.1.7 Monitoring Resources and Capacity - Carbon

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:

5.9.6. Resources and capacity required

According to the Technical Specifications Module (C) 2.1 (AD-DtPF): D2.2.1 v1.0, 20150815:

The Project Monitoring Plan must identify (and provide evidence for) the resources available to undertake monitoring, including:

- *Financial resources and the source of such finance (e.g. unit pricing, grants, fees)*
- *Human resources and capability required.*

The financial and human resources allocated to project monitoring are presented in Table 3.1.6 above.

3.1.8 Community Monitoring - Carbon

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:

5.9.7. How communities will participate in monitoring, e.g. by training community members and gradually delegating monitoring activities over the duration of the project

5.9.8. How results of monitoring will be shared and discussed with participants

5.10. Where participants are involved in monitoring, a system for checking the robustness of monitoring results must be in place, e.g. checking a random sample of monitoring results by the project coordinator.

According to the Technical Specifications Module (C) 2.1 (AD-DtPF): D2.2.1 v1.0, 20150815:

The Project Monitoring Plan must include:

- *A description of how the Project Owner and/or other local people will participate in monitoring in compliance with the Project Participation Protocol specified in Section 3.1 of the PD (applying Section 3.1 of the Nakau Methodology Framework).*
- *A description of how the results of monitoring will be shared and discussed with participants with reference to the Project Monitoring Workshops specified in Section 3.1.7 of the PD (applying Section 3.1.7 of the Nakau Methodology Framework).*
- *A description of the quality controls used to safeguard the integrity and accuracy of data gathered from monitoring activities involving Project Owners and/or other local people.*

Community involvement in monitoring is set out in Table 3.1.6 above.

3.1.8.1 Community Participation In Monitoring

The Project Owner will recruit rangers with responsibilities to undertake project monitoring tasks described in Table 3.1.6. The Project Owner will be responsible for recruitment and management of rangers for this project. The Project Coordinator will provide supervision and support for ranger activities with this role scaling downwards through time at a rate determined by mutual agreement between the Project Coordinator and the Project Owner.

3.1.8.2 Sharing Results of Community Monitoring

Community monitoring outputs are recorded in annual Project Management Reports prepared and approved by the Project Owner with the assistance of the Project Coordinator. Project Management Reports are submitted for approval to the Project Coordinator and the Programme Operator on an annual basis. The Project Coordinator collates the content of annual Project Management Reports into three-yearly Project Monitoring Reports. The Project Owner and the Project Coordinator approves each Project Monitoring Report before being submitted to the Programme Operator for approval. Once approved by the Programme Operator the Project Monitoring Report is submitted for a verification audit.

3.1.8.3 Quality Controls for Community Monitoring

Quality controls for community monitoring are described in Section 3.1.8.2.

3.2 COMMUNITY IMPACT MONITORING

Carbon offsets are issued to this project as a result of 3rd party verification of each Project Monitoring Report, which contains data sufficient to provide evidence to support a community impact assertion for the Project Monitoring Period in question. This is a requirement for the carbon offsets to be issued as Plan Vivo Certificates under the Plan Vivo Standard.

3.2.1 Monitored And Non-Monitored Parameters – Community

Monitored and non-monitored community impact data are listed in Table 3.2.1 below.

Table 3.2.1 Monitored and Non-Monitored Parameters – Community Impacts				
Notation	Parameter	Unit	Origin	Monitored
FA	Food & Agriculture	Various	Community Impact Survey	Monitored
W	Water accessibility	%	Community Impact Survey	Monitored
H	Household Income	Fiji dollars (FJD)	Community Impact Survey	Monitored
P	Participation	Number & %	Community Impact Survey	Monitored

3.2.2 Monitored Parameters – Community

Monitored data and parameters are summarized in the tables below.

Data Unit / Parameter:	**Food & Agriculture**
Data unit:	Various
Description:	We want to know: • If the forest products continue to be used indicating the continuation of traditional practices • If access to land for gardens diminishes to a point that it affects access to food • If project owners begin to purchase food more often indicating increased income but also creating possible negative unintended impacts (i.e. health) • If income is still sought through the sale of food and how this income changes over time.
Source of data:	Community Impact Survey
Description of measurement methods and procedures to be applied:	Structured interviews pursuing the following questions: 1.1 How often do you buy food? 1.2 How big is your family garden? 1.3 How often do you eat free food from your garden? 1.4 How often do you run out of food? 1.5 How often do you eat food from the forest? 1.6 How much do you make selling food?
Frequency of monitoring/recording:	Once per monitoring cycle (3-5 years)
Value monitored:	Various
Monitoring equipment:	Social survey equipment
QA/QC procedures to be applied:	3rd party verification of Project Monitoring Reports.
Calculation method:	Compare responses with previous survey

Data Unit / Parameter:	**Water Accessibility**
Data unit:	Various

Description:	Access to water has been a key issue for project owners in Drawa. We want to know if improved access to water results from the project. Further, access to water being such a basic need, is another indicator of overall wellbeing. The impact of this on women deserves special attention by interviewers.
Source of data:	Community Impact Survey
Description of measurement methods and procedures to be applied:	Structured interviews pursuing the following questions: 1.1 Do you run out of water? 1.2 Are there days when you can use as much as you like?
Frequency of monitoring/recording:	Once per monitoring cycle (3-5 years)
Value monitored:	Various
Monitoring equipment:	Social survey equipment
QA/QC procedures to be applied:	3rd party verification of Project Monitoring Reports.
Calculation method:	Compare responses with previous survey

Data Unit / Parameter:	**Household Income**
Data unit:	Various
Description:	Increased income can demonstrate increased wellbeing although it can also be damaging. While we measure income over time, we also measure changes in livelihoods or time spent on activities every day such as housework, gardening etc. This will help us to see if project owners have more time to give to non-core activities and therefore, perhaps their lives are made easier by the project. We will also monitor if the money is causing social decay via its use for negative pursuits (i.e. alcohol). Education is also used to determine whether increased income is creating greater wellbeing.
Source of data:	Community Impact Survey
Description of measurement methods and procedures to be applied:	Structured interviews pursuing the following questions: 1.1 Access to Education 1.2 Personal Monthly Income (VUV) 1.3 Travel to town (times per week) 1.4 Hours spent cooking (per day) 1.5 Hours spent Gardening (Per day) 1.6 Hours spent resting
Frequency of monitoring/recording:	Once per monitoring cycle (3-5 years)
Value monitored:	Various
Monitoring equipment:	Social survey equipment
QA/QC procedures to be applied:	3-yearly 3rd party verification of Project Monitoring Reports.
Calculation method:	Compare responses with previous survey

Data Unit / Parameter:	**Project Participation**
Data unit:	Various
Description:	We want to use this monitoring as a chance to assess how well the 'REDD+ Enterprise' (i.e. the cooperative or family business) is doing at engaging the

	project owners and earning local trust. This indicates resilience and overall wellbeing if the faith in this institution is high.
Source of data:	Community Impact Survey
Description of measurement methods and procedures to be applied:	Structured interviews pursuing the following questions: 4.1 How many youth do you know that are engaged with the REDD+ Enterprise? 4.2 Are you given the opportunity to access information about the REDD+ Enterprise's finances and activities? 4.3 Do you trust the REDD+ Enterprise?
Frequency of monitoring/recording:	Once per monitoring cycle (3-5 years)
Value monitored:	Various
Monitoring equipment:	Social survey equipment
QA/QC procedures to be applied:	3rd party verification of Project Monitoring Reports.
Calculation method:	Compare responses with previous survey

3.2.3 Monitoring Roles And Responsibilities - Community

Specific project monitoring roles for projects applying this Technical Specifications Module are summarised in Table 7.1.3. Project Owners and Project Coordinators are required to assign specific roles to specific stakeholders in the PD, and use this convention in the implementation and monitoring of the Project Activity.

Community Impact Monitoring surveys are the responsibility of the Project Coordinator. Surveys are to be conducted with the consent of the Project Owner (landowner participants).

3.2.4 Information Management Systems - Community

This project uses the information management system described in Section 7.1 of the Nakau Methodology Framework.

3.2.5 Simplified Project Monitoring Report Methodology - Community

This project submitted a simplified Project Monitoring Report for its first verification. This is not applicable for the second verification.

3.2.6 Standard Operating Procedure: Project Monitoring – Community

The Standard Operating Procedure (SOP) for Monitoring Community Impacts is presented below.

Table 3.2.6 Monitoring Schedule – Community Impacts				
Community				
Activity	Frequency	Responsibility	Human Resources	Financial Resources
Food, consumption, agriculture	Once per monitoring cycle (3-5 years)	Project Coordinator	Project Coordinator staff	PES unit price accounts for employment of Project Coordinator staff*
Water accessibility	As above	Project Coordinator	Project Coordinator staff	PES unit price accounts for employment of Project Coordinator staff
Household income	As above	Project Coordinator	Project Coordinator staff	PES unit price accounts for employment of Project Coordinator staff
Participation	As above	Project Coordinator	Project Coordinator staff	PES unit price accounts for employment of Project Coordinator staff

3.2.6.1 Baseline Community Impacts

Baseline community impacts were measured during project development and have been measured and presented in Section 5.2.2.2 of the Drawa Rainforest Conservation Project PD Part A D3.2a v1.0 20151009.

3.2.6.2 Project Community Impacts

Project community impacts were measured by means of a follow up community impact survey to quantify change in the community impact indicators described in Section 3.2.2 above. Project Community impacts presented in this second verification Monitoring Report are compared with the baseline (above).

3.2.6.3 Net Community Impact Enhancements

Tabulation of baseline and project community impacts, and net community impact enhancements will be presented in summary using the following format.

	Baseline community impacts	Project community impacts	Net community impact enhancements
Impact 1			
Impact 2…			

3.3 BIODIVERSITY MONITORING

Carbon offsets are issued to this project as a result of 3rd party verification of each Project Monitoring Report, which contains data sufficient to provide evidence to support a biodiversity impact assertion for the Project Monitoring Period in question. This is a requirement for the carbon offsets to be issued as Plan Vivo Certificates under the Plan Vivo Standard.

3.3.1 Monitored And Non-Monitored Parameters – Biodiversity

Monitored and non-monitored community impact data are listed in Table 3.2.1 below.

Table 3.3.1 Monitored and Non-Monitored Parameters – Community Impacts				
Notation	Parameter	Unit	Origin	Monitored
SSA	Significant species - Animals	Presence/absence	Biodiversity Survey	Monitored
SSP	Significant species - Plants	Presence/absence	Biodiversity Survey	Monitored

3.3.2 Monitored Parameters – Biodiversity

Monitored data and parameters are summarized in the tables below.

Data Unit / Parameter:	**Significant Species - Animals**
Data unit:	Presence/absence
Description:	
Source of data:	Biodiversity Survey
Description of measurement methods and procedures to be applied:	Record significant species during Eligible Forest Area Inspections.
Frequency of monitoring/recording:	Ongoing / opportunistic
Value monitored:	Presence/absence
Monitoring equipment:	Animal identification table, binoculars, mobile phone, AVENZA software
QA/QC procedures to be applied:	3rd party verification of Project Monitoring Reports.
Calculation method:	Compare responses with previous survey

Data Unit / Parameter:	**Significant Species - Plants**
Data unit:	Presence/absence
Description:	
Source of data:	Biodiversity Survey

Description of measurement methods and procedures to be applied:	Record significant species during Eligible Forest Area Inspections.
Frequency of monitoring/recording:	Ongoing / opportunistic
Value monitored:	Presence/absence
Monitoring equipment:	Plant identification table, binoculars, mobile phone, AVENZA software
QA/QC procedures to be applied:	3rd party verification of Project Monitoring Reports.
Calculation method:	Compare responses with previous survey

3.3.3 Monitoring Roles And Responsibilities - Biodiversity

Specific project monitoring roles for projects applying this Technical Specifications Module are summarised in Table 7.1.3. Project Owners and Project Coordinators are required to assign specific roles to specific stakeholders in the PD, and use this convention in the implementation and monitoring of the Project Activity.

Biodiversity Monitoring surveys are the responsibility of the Project Owner with support and supervision of the Project Coordinator. Surveys are to be conducted with the consent of the Project Owner.

3.3.4 Information Management Systems - Biodiversity

This project uses the information management system described in Section 7.1 of the Nakau Methodology Framework.

3.3.5 Simplified Project Monitoring Report Methodology - Biodiversity

This project submitted a simplified Project Monitoring Report for first verification. This is not applicable to the second verification.

3.3.6 Standard Operating Procedure: Project Monitoring – Biodiversity

The Standard Operating Procedure (SOP) for Monitoring Biodiversity is presented below.

Table 3.3.6 Monitoring Schedule – Biodiversity				
Community				
Activity	Frequency	Responsibility	Human Resources	Financial Resources
Biodiversity Survey - Animals	Ongoing / opportunistic	Project Owner	Project Rangers	PES unit price accounts for employment of Project Coordinator staff*

Biodiversity Survey - Plants	Ongoing / opportunistic	Project Owner	Project Rangers	PES unit price accounts for employment of Project Coordinator staff

* Evidence to support the assertion of the unit price accounting for monitoring costs can be found in Appendix 2 (Sheets 'Drawa Pricing' and 'Drawa Budget').

3.3.6.1 Baseline Biodiversity Impacts

A baseline biodiversity survey is optional under the Plan Vivo standard minimum requirements for biodiversity; however, a baseline biodiversity survey was conducted since the first verification report. This will enable comparison between baseline and project biodiversity indicators and generate a biodiversity impact assertion. However, this is limited to presence / absence data because insufficient data or resources are available to determine species distribution and abundance.

3.3.6.2 Project Biodiversity Impacts

Project biodiversity impacts will be measured by means of ongoing / biodiversity impact survey to observe change and/or maintenance of site biodiversity.

3.3.6.3 Net Biodiversity Impact Enhancements

Tabulation of baseline and project biodiversity impacts, and net biodiversity impact enhancements will be presented in summary using the following format.

	Baseline biodiversity observations	Project biodiversity observations	Net biodiversity impact enhancements
Impact 1			
Impact 2…			

3.4 MONITORING RESOURCES

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:

5.9.6. Resources and capacity required

The Project Monitoring Plan must identify (and provide evidence for) the resources available to undertake monitoring, including:

- *Financial resources and the source of such finance (e.g. unit pricing, grants, fees)*
- *Human resources and capability required.*

A summary of financial resources for project monitoring is presented in Tables 3.1.6, 3.2.6, and 3.3.6 above. Human resource and capability for monitoring is sourced from three key project stakeholder entities:

Project Monitoring Stakeholder	Capability
Project Owner	**Carbon and Biodiversity Monitoring** Project rangers have been trained by the Project Coordinator and the Programme Operator during project development and in particular, during the Project Owner participation in the carbon stock inventory. Rangers have supervision support from the Project Coordinator and the Programme Operator.
Project Coordinator	**Community Impact Monitoring** Community impact monitoring will be undertaken by the Project Coordinator. The capability of the Project Coordinator to undertake community impact monitoring has been demonstrated during project development and the completion of the community impact baseline survey with results presented in Section 5.2.2 of the PD Part A. The Project Coordinator has supervision support from the Programme Operator, whose supervision was applied during project development. Training of new Project Coordinator staff will be undertaken by both incumbent Project Coordinator staff and the Programme Operator. The capability of the Project Coordinator is sumarised in Section 2.13.4 of the Drawa PD Part A D3.2a v1.0 20151009.
Programme Operator	The Programme Operator has demonstrated its capability in providing supervision and guidance to Project Coordinators during the course of programme design and project development.

3.5 COMMUNITY MONITORING

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:

5.9.7. How communities will participate in monitoring, e.g. by training community members and gradually delegating monitoring activities over the duration of the project

5.9.8. How results of monitoring will be shared and discussed with participants

5.10. Where participants are involved in monitoring, a system for checking the robustness of monitoring results must be in place, e.g. checking a random sample of monitoring results by the project coordinator.

The Project Monitoring Plan must include:

- *A description of how the Project Owner and/or other local people will participate in monitoring in compliance with the Project Participation Protocol specified in Section 3.1 of the PD (applying Section 3.1 of the Nakau Methodology Framework).*
- *A description of how the results of monitoring will be shared and discussed with participants with reference to the Project Monitoring Workshops specified in Section 3.1.7 of the PD (applying Section 3.1.7 of the Nakau Methodology Framework).*

- *A description of the quality controls used to safeguard the integrity and accuracy of data gathered from monitoring activities involving Project Owners and/or other local people.*

The Drawa Block Forest Community Cooperative (DBFCC) will play a central role in project monitoring, including participating in annual eligible forest area inspections, continuous biodiversity survey, and annual activity shifting inspections jointly with the Project Coordinator. The DBFCC will be surveyed in 3-5 yearly community impact surveys (minimum once per monitoring cycle).

3.5.1 Community Participation In Monitoring

The Project Owner has recruited rangers with responsibilities to undertake project monitoring tasks described in Table 3.1.6. The DBFCC (the landowner community business entity responsible for this project) is responsible for recruitment and management of rangers for this project. The Project Coordinator has provided supervision and support for ranger activities during project development and for this simplified version of the Project Monitoring Report. The Project Coordinator has already started delegating responsibilities to the Project Owner.

3.5.2 Sharing Results of Community Monitoring

Community monitoring outputs have been recorded in the PD and this document prepared and approved by the Project Owner with the assistance of the Project Coordinator. Project Management Reports are submitted for approval to the Project Coordinator and the Programme Operator on an annual basis. The Project Coordinator collates the content of annual Project Management Reports into three-yearly Project Monitoring Reports. The Project Owner and the Project Coordinator approves each Project Monitoring Report before being submitted to the Programme Operator for approval. Once approved by the Programme Operator the Project Monitoring Report is submitted for a verification audit.

3.5.3 Quality Controls for Community Monitoring

Quality controls for community monitoring are described in Section 8.1.8.2 of the Drawa PD Part A D3.2a v1.0 20151009 and have been fulfilled for this Monitoring Report.

4. Quantification of GHG Emission Reductions and Removals

4.1 MONITORING OF BASELINE EMMISSIONS

The EFA was monitored with boundary inspections and transects in 2019 and 2020. The monitoring between 2019 and 2020 were only able to be completed once, due to the large size of the EFAs and the difficult terrain, as such the inspections could not occur bi-annually.

In the future, the Live & Learn Fiji and DBFCC rangers aim to improve the monitoring procedures and data collection. In the years prior (2015, 2016, 2017 and 2018), monitoring was conducted on an ad hoc basis with minimal and low-quality data recorded. The project was not validated until 2018 and the funding for the rangers to conduct the monitoring was reliant on the carbon credit sales. In 2018, at 1st verification, a simplified monitoring report was completed. The simplified monitoring report is a sufficient requirement and in line with the PD Part B Section 8.1.5 "Simplified Project Monitoring Report - Carbon."

Most importantly, the recent monitoring (2019, 2020) demonstrates the forest remained intact, and the baseline scenario of commercial logging did not occur. The EFA boundary and transects were carried out on the dates shown in the table (below).

The EFA boundary and forest area was also inspected with satellite imagery, as described in MR plan and PD. The remote sensing forest inspection used data from between, 2015 and 2020, following a systemic review of the area. No commercial logging was observed in the area. See Appendix 3 of this report for a comprehensive report of forest monitoring activities and results.

Year	Monitoring activities
2015	Simplified monitoring procedures (management monitoring without data collection)
2016	Simplified monitoring procedures
2017	Simplified monitoring procedures
2018	Simplified monitoring procedures

Year	Location	Survey date	Boundary inspection	Transect
2019	Tonikula	30th of August 2019 to the 9th of September	Completed	Completed

	BakiBaki	10th of October 2019	Completed	Completed
	Nakasea and Nadugumoimoi	8th of October 2019 (farm inspections)	Completed	Completed
	Nadugumoimoi	9th of October 2019	Completed	Completed
2020	Bakibaki and Navunicau	14th of October 2019 to the 17th of January 2020	Completed	Completed
	Bakibaki and Nakalounivuaka	22nd of January 2020 to the 29th of January 2020 (from Vatuvonu village)	Completed	Completed

4.2 BASELINE EMISSIONS

As described in PD Part B, all projects are required to undertake a baseline revision every 5 years. This baseline revision will include revision of the technical data used to create the Baseline and Project Scenarios from an ecosystem service accounting perspective. It will also be based on documentation of any changes in project circumstances or any changing conditions in the Fiji national REDD+ programme that materially affect this project.

Documents consulted to assess potential impacts of the national REDD+ programme to the baseline included:

- Fiji Forest Policy of 2007 (and any subsequent policy amendments under the Forest Act 2016, Cap 32.). Future changes to policy could impact the baseline timber-harvesting scenario, for example due to changes to buffer zones, protected species, or allowable logging intensity.
- Fiji Forest Act 2016 (under ministerial review / not yet in force).
- Fiji Forest Harvesting Code of Practice 2010
- Fiji Forest Harvesting Code of Practice 2013 (current version)
- Fiji's Emissions Reduction Program Document (ER-PD); describing the National REDD+ Program under the Forest Carbon Partnership Facility

Specific parameters to be reviewed for potential updating shall include:

- Eligible forest area (data source: monitored).
- Carbon sequestration rate should local data become available sufficient to warrant an update (data source: review of recent literature and/or permanent sample plots in situ).

- Harvested wood products data from international sources (data source: review of recent literature).
- Baseline timber harvesting rate (data source: review of impact of any laws or regulations change that impact on the selected baseline rate of timber harvesting).

Some data parameters are derived from default values or are measured at one time only. These are non-monitored parameters. Other data parameters are monitored during each Monitoring Period.

4.2.1 Fiji Forest Policy and legislation

Since the establishment of the baseline, there has been no relevant changes between the Fiji National Code of Logging Practise 2010 and the Fiji Forest Harvesting Code of Practice Second Edition 2013 (see table below). As such the baseline timber harvesting rate for the project remains the same, as the previous monitoring period.

Table: Comparison of relevant aspects of Fiji Forest Harvesting Code of Practice 2010 to 2013 (current version)

Parameter	**Harvesting code 2010**	**Harvesting code 2013**	**Finding**
Buffer	Section 9, page 12.	Section 9, page 11-12.	No change
Buffer width >20 m stream	30 m	30 m	
Buffer width 10-20 m stream	20 m	20 m	
Buffer width 0-10 m perennial stream	10 m	10 m	
Buffer width 0-10 m intermittent stream	10 m	10 m	
Slope	Section 11, page 22.	Section 11, page 22	No change
Maximum average slope (over 100 m) where felling is allowed	Areas above 25^{o} in slope excluded from commercial logging.	Felling should not occur where average slopes exceed 25^{o} over a distance of a 100 metres.	
Pre-harvest inventory	Section 4, page 4.	Section 4, page 4.	No Change.

	Is the responsibility of the licence applicant and should be carried out after the determination of harvest boundaries. Must be carried out in accordance with the guidelines and standards issued by the Forestry Department so as to provide reliable stand information for calculating the allowable harvest volume.	Is the responsibility of the licence applicant and should be carried out after the determination of harvest boundaries, buffer strips and other protected areas. Must be carried out in accordance with the guidelines and statistical standards issues by the Forestry Department so as to provide reliable stand information (species composition, basal area, standing volume, log quality) for calculation the allowable harvest volume and information on the regeneration potential of the forest.	
Allowable cut	Section 4, page 4. Section 5, page 4.	Section 4, page 4. Section 5, page 4.	No change
	Allowable cut is determined in advance, using pre-harvest inventory data and diameter limit table, in accordance with guidelines issued by the Forestry Department. Stated in the FMP - Minimum removal of 15 m^3/ha and maximum removal of 40 % of trees above > = 35 cm dbh.	Allowable cut is determined in advance with Pre-harvest inventory data and Diameter Limit Table, in accordance with guidelines issued by the Forestry Department.	

4.2.2 National REDD+ Program

The Fiji Government have been a participant in the Forest Carbon Partnership Facility (FCPF) readiness program since 2013, and registered their formal letter of intent to participate in the FCPF Carbon Fund on the 21st December 2016.

The Fiji FCPF Emissions Reduction Program Document[1] (ER-PD) was submitted in June 2019. The initial accounting period implementation of REDD+ interventions is for 5 years from 2020 to 2024 (inclusive). Therefore the accounting period for the FCPF ER-PD overlaps with the current Drawa project monitoring period from the 1st January 2020 until the 7th September 2020.

However, provision was made in design of the Fiji ER-PD to account for the Drawa project and allow it to continue to operate in the voluntary market, and to ensure double counting is avoided.

The following references are provided from the Fiji ER-PD to support this assertion (see table):

ER-PD reference	**Statement from ER-PD**
P.14 "Nesting of Projects"	*The Drawa project has completed validation and verification under the Plan Vivo standard and issued credits during 2018. Government of Fiji is expected to approve the nesting guidelines during 2020. Until such time the Drawa project complies with the nesting guidelines of Government of Fiji, it is proposed to exclude the Drawa Project Area from the ER program accounting area to avoid double counting. This project is expected to operate independently until the MOF approves nesting guidelines for REDD+ projects. Therefore, Drawa project has been excluded from the ER program accounting area for the program period.*
P. 126 "Treatment of Private Projects"	*Within Fiji there is one private project which has completed validation and verification under the Plan Vivo standard and has issued credits. This project is known as "the Drawa Project". This project estimated net annual emissions removals represents only 1.5% of the annual emissions reductions expected under the ER Program. representing a very small proportion. As an early mover, the Drawa Rainforest Conservation Project made its first sale of carbon credits in 2018. There are other REDD+ pilot sites in Fiji however these sites are not eligible for issuance of carbon credits under any standard (see Section 18.1).* *Fiji is currently working on a nesting guideline that will outline the process for all projects to nest in the National System. This Nesting Guideline is scheduled to be completed by the end of 2020 (see Chapter 18.1). In the absence of this nesting guideline being operational combined with the small contribution that the Drawa Project makes to the ER Program,* ***this project will operate independently for the period of the ER-PA. As such its spatial extent (i.e. approximately 4,120ha) has been excluded (i.e. masked) from the ER***

[1] Forest Carbon Partnership Facility (FCPF) Carbon Fund Fiji Emission Reductions Program Document (ER-PD) Revision: June 14, 2019. Accessed online: https://www.forestcarbonpartnership.org/country/fiji on 6/11/2020

	program accounting area to avoid double counting. *The Drawa project will be expected to align with the national methodology by 2025 in accordance with the yet to be finalised Nesting Guidelines.*
P. 253 "Carbon Registry"	*Double counting (or double claiming) is a term used to describe the use of a single emission reduction unit more than once. If Fiji's nested system allocates finance or ERs generated at the higher scale, there is no risk of double counting because the allocations are designed to fit within the envelope of jurisdictional performance. However, where jurisdictions and projects or sub-units with the jurisdictional area are accounting simultaneously (such as the Drawa and Nakauvadra projects), a mechanism to avoid double counting is required, including the system to manage liabilities (through buffer or another mechanism) that may occur when 'truing up' the accounting. Regardless of the mechanism agreed it needs to ensure that REDD+ projects report any issuance and sale of ERs are accounted for in national registry to avoid double counting. The Government of Fiji plans to consider these aspects in the adoption of its national registry.*

At the completion of monitoring period, the Forest Act 2016 had been drafted and was under review by the Ministry of Forestry and Government. The Forest Act 2016 has yet to be gazetted in parliament and as such it has not come into force nor has the act repealed the Forest Decree 1992. Hence there are no changes to legislation that change the ongoing implementation of the Drawa Rainforest Carbon Project during this monitoring period.

4.2.3 Fiji's Intended Nationally Determined Contribution (INDC)

The scope of Fiji's INDC[2] for the period 2020 – 2030 was limited to the energy sector, and level of commitment as follows (INDC p.4):

"Sector specific reduction focusing on a renewable energy target for electricity generation. In addition a general emissions reduction by improvements in energy efficiency economy wide. The target is for the renewable energy share in electricity generation to approach 100% by 2030 from around 60% in 2013. In addition an indicative reduction of 10% CO2 emissions for energy efficiency improvements economy wide will be sought."

Hence there are no changes to Drawa project baseline or issues regarding double counting arising from Fiji's INDC commitments during the second verification reporting period.

4.2.4 Changes to 'non-monitored parameters'

[2] Fiji's Intended Nationally Determined Contribution. Accessed at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Fiji%20First/FIJI_iNDC_Final_051115.pdf on 6th November 2020

During this monitoring period, no new or local carbon storage or carbon sequestration data became available nor was collected in the eligible area that would change the project baseline. The carbon sequestration rates for the project were based on the pre-harvest inventory data collected in the 18,068 main sample plots (3313 ha) from the Drawa Block forest area[3]. Nakau determined it would be too resource intensive and unreasonable to collect new carbon sequestration data from the plots, especially given the eligible area has not changed nor has there been any forest loss. Nakau also engaged with networks and conducted a literature search of carbon sequestration rates for tropical forests in the Western Pacific and the only results were the original carbon inventory data collected for Drawa and the other projects under the Nakau portfolio.

Table 8.1.1 Monitored and Non-Monitored Parameters (monitored parameters in green)						
Notation	Parameter	Unit	Equa-tion	Origin	Monitored	Second verification
EFA	Eligible Forest Area	ha	-	PD	Monitored	
LF/ULF	Forest stratification (logged/unlogged forest)	ha	-	PD	Area calculated in PD	Remained the same.
HR	Harvest Rate	$m^3\ yr^{-1}$	4.1.1	Calculated from inventory	Not monitored Updated each Baseline Revision	Remained the same.
TWH	Total Wood Harvested	$m^3\ yr^{-1}$	4.1.2	Default factor applied	Not monitored Updated each Baseline Revision	Remained the same.
CD	Collateral Damage	$m^3\ yr^{-1}$	4.1.3	Root-shoot ratio (proportion of AGBE)	Not monitored Updated each Baseline Revision	Remained the same.
AGBE	Above Ground Biomass Emitted	$m^3\ yr^{-1}$	4.1.4	Sum of TWH and CD	Not monitored Updated each Baseline Revision	Remained the same.
BGBE	Below Ground Biomass Emitted	$m^3\ yr^{-1}$	4.1.5	Root-shoot ratio (proportion of AGBE)	Not monitored	Remained the same.

[3] GIZ/SPC (2012) The Drawa Model Area Forest Management Plan 2003-2012

					Updated each Baseline Revision	
TM3	Total Emissions in m^3	$m^3\ yr^{-1}$	4.1.6	Sum of AGBE and BGBE	Not monitored Updated each Baseline Revision	Remained the same.
GTCO2	Gross Total Emissions in tCO^2e	$tCO_2e\ yr^{-1}$	4.1.7	Conversion factors from wood volume to emissions	Not monitored Updated each Baseline Revision	Remained the same.
GBER1	Gross Baseline Emissions Rotation 1	$tCO_2e\ yr^{-1}$	4.1.8	Conversion factors from wood products calculation	Not monitored Updated each Baseline Revision	Remained the same.
ltWP	Long Term Wood Products	$tCO_2e\ yr^{-1}$	4.1.9	Calculated through conversion factors based on volume of wood harvested.	Not monitored	Remained the same.
NBEARx	Net Baseline Emissions Avoided	$tCO_2e\ yr^{-1}$	4.1.10	Default factors based on GBE	Not monitored Updated each Baseline Revision	Remained the same.
ER	Enhanced Removals	$tCO_2e\ yr^{-1}$	5.1.1	Default values derived from mean sequestration rates for relevant forest types and subsequently derived from project-specific data	Not Monitored Updated each Monitoring Period	Remained the same.
TAL	Total Activity Shifting Leakage	$tCO_2e\ yr^{-1}$	5.2.1	Derived from Activity Shifting Leakage Analysis	Monitored Updated each Monitoring Period	Updated. No leakage occurred.

4.3 PROJECT EMISSIONS

Quantify the project emissions and/or removals, providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results.

Please refer to Appendix 2, Sheet 'Drawa Carbon'

4.4 LEAKAGE

Quantify leakage emissions providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results.

There has been no activity shifting leakage and no market leakage in this monitoring period. The zero result for market leakage was justified at project validation due to the insignificant volume of baseline timber harvesting in relation to the national domestic timber market).

The 'Protection Forest' is monitored to assess shifting activity leakage, because it is the only other land controlled by the Project Owners where leakage is possible. See map 1.7 (above). The other land use zones (e.g. agricultural and church reserves) are set aside for uses that include clearing for gardening. Hence forest change may occur in these zones in the baseline scenario.

The Protection Forest was inspected using opportunistic observations in combination with Remote sensing. The methodology and results of remote sensing assessment for leakage detection is provided in Appendix 3, Drawa Forest Change Monitoring Report 2020. The results of leakage monitoring found no evidence of conventional logging or timber harvesting.

Community rangers identified several risk areas (small in size) where some forest change was visible. The forest rangers identified these changes are due to farming and gardening occurring with the Project Area, along the boundary of the EFA and outside of the EFA (See Appendix 3, Drawa Forest Change Monitoring Report 2015-2020). The forest change area inside the EFA is below the di minimis threshold.

Through the spatial monitoring and the forest ranger inspections, forest change was observed outside the EFAs inside the boundary of the agricultural reserve area as described in the baseline scenario (Fig. 3.1.6.1). These forest changes are adjacent to Vatuvonu and Drawa Villages. The gardening activity aligns with the baseline scenario, that being these (agricultural reserve) areas are dedicated to gardening and agriculture, and as such they do not represent shifting activity leakage.

Total Leakage (TKL) for this monitoring period is 0 tCO2e (Appendix 2, Sheet 'Drawa Carbon' Cell D14).

4.5 NET GHG EMISSION REDUCTIONS AND REMOVALS

Quantify the net GHG emission reductions and removals, summarizing the key results using the table below. Specify breakdown of GHG emission reductions and removals by vintages.

For AFOLU projects, include quantification of the net change in carbon stocks. Also, state the non-permanence risk rating (as determined in the AFOLU non-permanence risk report) and calculate the total number of buffer credits that need to be deposited into the AFOLU pooled buffer account. Attach the non-permanence risk report as either an appendix or a separate document.

Net Carbon Credits (NCC) for the monitoring period have been calculated as follows:

Net Carbon Credits								
Year	Net Baseline Emissions Avoided (NBEA) (tCO_2e)	Buffer NBEA (tCO_2e)	Net Project Removals (NPR) (tCO_2e)	Buffer NPR (tCO_2e)	Gross Carbon Credits (NBEA + NPR) (tCO_2e)	Buffer total (tCO_2e)	Leakage emissions (tCO_2e)	Net Carbon Credits (tCO_2e)
6th Sep 2015 to 7th Sep 2016	16,000	3,200	2,970	594	18,970	3,794	0	15,176
2016/2017	16,000	3,200	2,970	594	18,970	3,794	0	15,176
2017/2018	16,000	3,200	2,970	594	18,970	3,794	0	15,176
2018/2019	16,000	3,200	2,970	594	18,970	3,794	0	15,176
2019/2020	16,000	3,200	2,970	594	18,970	3,794	0	15,176
Total	**80,000**	**16,000**	**14,850**	**2,970**	**94,850**	**18,970**	**0**	**75,880**

For due diligence on the above calculations see Drawa Carbon Budget & Pricing Spreadsheet (Appendix 2, Sheet 'Drawa Carbon' Cells D4-D35). Note that the annual accounting periods for this Monitoring Report are:

- 6th of September 2015 to 6th of September 2016
- 6th of September 2016 to 6th of September 2017
- 6th of September 2017 to 6th of September 2018
- 6th of September 2018 to 6th of September 2019
- 6th of September 2019 to 6th of September 2020

5. Quantification of Habitat Hectare Units

Habitat Hectare units were not assessed or marketed in the monitoring period aforementioned in this report. In future monitoring periods, habitat hectares will not be monitored or assessed in the Drawa Rainforest Conservation Project.

5.1 BASELINE HABITAT HECTARES

Quantify the baseline hectares of protected rainforest. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results.

Not applicable.

5.2 PROJECT HABITAT HECTARES

Quantify the project hectares of protected rainforest. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results.

Not applicable.

5.3 LEAKAGE

Quantify hectare leakage.

Not applicable.

5.4 NET HABITAT HECTARE UNITS

Quantify the net Habitat Hectare units produced by vintages arising from the quantification of the net change in hectares protected. Also, state the non-permanence risk rating (as determined in the AFOLU non-permanence risk report) and calculate the total number of buffer credits that need to be deposited into the AFOLU pooled buffer account. Attach the non-permanence risk report as either an appendix or a separate document.

Not Applicable.

6. Quantification of Community Impacts

6.1 BASELINE COMMUNITY IMPACTS

Quantify the baseline community impacts, providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results. Present community impacts measured and for each quantify the baseline as modeled.

The Community Livelihood Assessment (CLA), baseline data was collected in 2015, with the aim of evaluating the direct and indirect socio-economic impacts from the Drawa Rainforest Conservation Project. During this monitoring period, the CLA was repeated in the Drawa Block communities. The aggregated result of the CLA monitoring from this monitoring period and the comparison to the project baseline are available in table 6.1.1. The raw data and narrative from the CLA conducted in Drawa is available in Appendix 4 – Drawa 2nd Verification Socio Economic Survey. The results of the baseline community monitoring are presented in Section 5.2.2.2 of the Drawa Rainforest Conservation Project – Project Description Part A D3.2a v1.0 20151009. Survey participant data and sample size is provided in 6.2.1 (below).

6.2 PROJECT COMMUNITY IMPACTS

Quantify project community impacts providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results. Present community impacts measured and for each quantify project performance for that impact.

At the second verification event, the CLA has been compared and quantified from the baseline monitoring survey. Over the course of several weeks, the team from Live & Learn International interviewed households from the mataqali involved in the project. All interviewees were aged above 18 and during the interviews, not all family members were present to remove bias. For the full socio-economic survey, see Appendix 4 – Drawa 2nd verification Socio Economic Survey.

6.3 NET COMMUNITY IMPACT ENHANCEMENTS

Quantify the net community impact enhancements summarizing the key results using the table below. Specify breakdown of community impact enhancements.

Participants in the Drawa Rainforest Conservation Project experienced a positive change across the four impact criteria over the second monitoring period. However, some

participants experienced a negative change against some criteria. For example, despite households having larger gardens, more income and a greater ability to save money, households ran out of food more often. While it is useful to track the experience of participants it is difficult to attribute causality to the project, for example the decline in food security is likely associated with external environmental conditions (e.g. rainfall).

The proportion of participants reporting trust in the project remains high (over 80%), however there was a small decrease in the number of respondents reporting having access to project information, which corresponded with some participants reporting distrust the project.

Overall the results suggest the net impact of the project is positive, however the decline in availability of information needs to be addressed. This was observed in some households in the remote and least visited communities.

The table below summarizes the net impact of the project across the four criteria. Section 6.3.1 outlines and compares the social and economic livelihoods of the households in Drawa in 2020 to the Baseline. For a full summary of the project positive impacts, see Appendix 4 – Drawa 2nd verification Socio-economic report.

	Baseline community 2015	Project community impacts 2020	Net community impact enhancements
Criteria 1: Food Security			
Food Security Impact 1.	Households purchased food from the store 3.4 days of the month, typically purchasing basic supplies.	Households purchased food from the store 2.2 days of the month, typically purchasing basic supplies.	Households in the community typically purchased less goods from the stores. There is no evidence that the protected area is causing people to switch diets from local produce to bought produce.
Food Security Impact 2.	The average size of the household garden was 1.3 hectares.	The average size of the household garden was 1.8 hectares.	The average size of household gardens is estimated, and may have increased slightly. Households typically grew the same vegetables but had more available for their household.
Food Security Impact 3.	The average income for a household was 311 FDJ.	The average household income was 537.7 FJD.	Households reported higher incomes, including from their garden, with 13 households earning more than average.
Food Security Impact 4	7% or two households indicated that they ran out of food.	31.25% or ten households indicated that they ran out of food.	Alarmingly, more households have ran out of food during this monitoring period. However, this is not attributed to impacts of the project.

	Baseline community 2015	Project community impacts 2020	Net community impact enhancements
Criteria 2: Water security			
Water Security Impact 1	68% of households run out of clean drinking, namely during the dry season and during drinking water.	59% of households run out of clean drinking water, namely during heavy rainfall events.	There was been a 11% reduction in the number of households that reported running out of clean drinking water, mainly in the heavy rain events which causes a blockage in pipes.
Water Security Impact 2	64% of households feel they can use as much clean/tap water as they like.	72% of households feel like they can use as much tap water as they like.	Slightly more community members reported feeling like they can use as much tap water as they like.
Criteria 3: Financial Security: Household income and improved livelihoods			
Financial Security and Livelihood Impact 1	The average monthly income was $287 FJD	The average monthly income was $490.69	The household average income reported increased by approximately $200 FJD.
Financial Security and Livelihood Impact 2	57% of households are able to save money from their earnings.	75% of households are able to save money from their earnings.	There has been an 18% increase in the number of households who reported being able to save their money from their household income.
Financial Security and Livelihood Impact 3	46% of households used solar, generators were used rarely and 21% of households did not have access to power. Only two households had access to the main grid.	56% of households used solar and 13% of households use a generator. 19% of the community now has access to the national grid.	There has been a reduction in the number of households who reported not having access to electricity.
Financial Security and Livelihood Impact 4	43% of households used a flush toilet. 29% have pour toilets, 39% have septic tanks.	63% of households reported used flush toilets. 25% of households use pour toilets. 13% use open pit toilets and 16% use septic tanks.	There has been a 20% increase in the number of households reporting using flush toilets and a decrease in the number of septic tanks and open pit toilets.

	Baseline community 2015	Project community impacts 2020	Net community impact enhancements
Financial Security and Livelihood Impact 4	25% of the households where aware of others consuming marijuana.	38% of households indicated they were aware of others consuming marijuana.	There has been a rise in the number of people aware of others consuming marijuana.
Criteria 4: Community perception towards REDD+ project			
Positive perception and transparency of community REDD+	82% of the community reported being able to access information about the PES project and 89% trusted the PES project.	63% of the community reported being able to access information about the PES project and 81% trusted the PES project.	There has been a net decrease in positive perception towards the community REDD+ project.

6.3.1 Community Social impact survey

The survey data was collected through formal standardised questionnaires (see ER 5.2.2.2) consisting of both, open-ended as well as close-ended questions. The interviews were conducted at 31 households in all 5 participating villages in the Drawa block cooperative. The village and gender ratio of respondents was as follows:

Interviewees			
Baseline		Second Verification event 2020	
Mataqali (clan)	Number interviewed (households)	Mataqali (clan)	Number interviewed (households)
Vatuvonu	3	Vatuvonu	2
Batiri	6	Batiri	6
Drawa	7	Drawa	7
Lutukina	9	Lutukina	9
Navaralagi	7	Navaralagi	7
Total	32	Total	31

Criteria 1: Food Security

In criteria 1, food security, the Drawa project has made a neutral impact. Households in the community typically purchase less food and supplies from stores, with an average reduction in 1.2 days per month that households go to stores to purchase food. The households typically purchase basic household supplies such as sugar, salt, rice, soap and toilet paper. The average size of household gardens has increased by 0.5 of a hectare and the same type of vegetables are being grown in the baseline. Similarly, the average household income generated from the gardens has increased by over 200 FJD, with over 13 households earning far greater than the average majority. Households eat food from their garden daily and still depend on food harvested from the forest, approximately 16 days a month however, there has been an increase in the number of houses that run out of food, from two households to ten.

Criteria 1: Food security: Quality and quantity of food			
Question	**Measure**	**Baseline (2015)**	**Second Verification (2020)**
		Results	**results**
1.1. How often do you buy food from the store/market?	Days per month	3.4 Households rather buy in bulk a few days of the month as they mostly rely on the food supply from their own garden or the forest.	Batiri= 4.33 Lutukina= 1.22 Nayarailagi= 2.43 Vatuvonu= 1.33 Drawa= 1.71 Average = 2.2 Drawa, Lutikina and Vatuvonu are more remote and have less access to stores
1.2. What goods do you purchase at the store/ market?	Type of good	Sugar, salt, flour, rice, noodles, canned tuna, dhal, soap, clothes, fresh produce Basic supplies are being bought from local cooperative stores by most households. In addition, fresh produce such as freshwater fish, prawns, mussels or vegetables are also purchased by a large number of households.	Soap, toothpaste, toilet paper, canned meat, cooking oil, mosquito coil, deodorant, potatoes, onion, sugar, salt, flour, rice, noodles, canned tuna, and tea
1.3. How big is your family (household?) garden?	Hectares	1.3 Garden plot sizes are relatively small but allow food for consumption and sale.	1.84
1.4. What types of crops do you grow at your family garden?	Type of crop	Tavioka (Cassava), Yaqona (Kava), Dalo (Taro), Vudi (Plantain), Uvi (Yam), Jaina (Banana), Bele (Kale), Kumala (Potatos) Most households grow more or less the same kinds of vegetables. Only a few indicated different varieties such as cabbage, egg plant, or watermelon.	Tavioka (Cassava), Yaqona (Kava), Dalo (Taro), Vudi (Plantain), Uvi (Yam), Jaina (Banana), Bele (Kale), Kumala (Sweet Potatos), Eggplant, Bean, Pawpaw, corn, pumpkin, melon, chillies
1.5. Which of these crops are used for sale?	Type of crop	Yaqona, Dalo, Tavioka Besides the 3 most common crops, vudi and jaina are also sold by some households. Only 5 out of 28 households don't sell their produce at all.	Yaqona (Kava), Dalo (Taro), Tavioka (Cassava), Bananana, Kumala (Sweet Potatoes), Ginger, Rourou (Taro leaves), Vudi (Plantain), corn, pumpkin, Uvi (Yam), melon, chillies The most common crops sold by most of the households are Yaqona, Dalo

			and Tavioka. Also, only 2 out of 31 household don't sell their produce at all.
1.6. How much do you make from the sale (household or individual?)?	FJD per month	311 Only two households earned far more than the average. The majority earns between FJD300-400.	Batiri= $452.5 Lutukina= $322.78 Nayarailagi= $789.86 Vatuvonu= $683.33 Drawa= $572.86 Total= $537.78 Thirteen households earned far more than the average. The majority earns between FJD300-600.
1.7. How often do you eat food from your garden?	Days per week	6.6 Households consume the food they grown at home almost every day of the week.	Batiri= 7 Lutukina= 7 Nayarailagi= 7 Vatuvonu= 7 Drawa= 6.43 Average = 6.88
1.8. Do you ever run out of food?	Percentage 'yes'	7% Only 2 households indicated that they ran out of food. The majority does not run out of food since they can either gather goods from the forest or buy them at the store.	Batiri= 16.67% Lutukina= 55.56% Nayarailagi= 14.29% Vatuvonu= 33.33% Drawa= 28.57% Average = 31.25% Ten households indicated that they ran out of food during bad times
1.9. How often do you harvest food from the forest?	Days per Week	4.1 Large varieties of vegetables are being harvested from the forest, which shows the communities' dependence on the natural resources that surround them.	4.4 Majority of the households still depend on the Forest to harvest food.
1.10. What goods do you collect from the forest?	Type of good	Yams, ota, rourou, duna, bele, herbs, wild pig, firewood Various items are being gathered from the forest by the communities.	Yams, ota, rourou, duna, bele, herbs, wild pig, firewood, wild fruits, prawns, freshwater fish

Criteria 2: Water Security

During the monitoring period, the water security of the project has improved. At the project baseline, 68 % of communities ran out of clean treated water during the dry season and during heavy rain events. In the 2020 period, 59% of households ran out of clean water and mainly during heavy rain events. At the project baseline 64% of the community felt like they could use as much clean water as they liked and this has increased to 72%. All households still

continue to access water sources that are untreated, including from rainwater tanks, springs and rivers.

Criteria 2: Water security: Access to clean water			
Question	**Measure**	**Baseline (2015)**	**Second verification (2020)**
		Results	**Results**
2.1. Do you ever run out of clean (tap) water?	Percentage 'yes'	68% The actual number of households running out of clean water is expected to be much higher. During the first round of interviews the type of water source was not defined so most people indicated that they do not run out of water. During the second round, respondents noted that during the dry season or after heavy rain they regularly run out of clean water. During that time, they rely on rain and river water.	Batiri= 83% Lutukina= 44% Nayarailagi= 29% Vatuvonu= 33% Drawa= 100% Average = 59.38% Majority of the Households run out of water during heavy rain which results in blockage of their water pipes (especially in Drawa)
2.2. Which water sources does your household use and is it available all year round?	Type of source	Spring, river and rainwater Even though most households are connected to a communal spring through a piped system, some villages still rely on river (individual collection) and/or rainwater tank supply as their springs do not carry enough water.	Spring, river and rainwater One hundred percent of the water sources are untreated.
2.3. Do you feel you can use as much tap water as you like? (I.e. through piped system)	Percentage 'yes'	64% The majority feels they can use as much tap water as they like.	Batiri= 16.67% Lutukina= 88.89% Nayarailagi= 85.71% Vatuvonu= 100% Drawa= 71.43% Average = 71.88%

Criteria 3: Financial Security and Livelihoods

The Financial Security and Livelihoods of the community members of participating in the Drawa project has improved. Compared to the baseline, the average household monthly income has increased by over $200 FJ and a further 20% of households are now able to make savings from their monthly income. Further, the access to electricity has improved, with more houses now using solar or a mixture of solar and generators for their primary source of electricity. Further, more houses now have access to the national power-grid. In the baseline, 19% of households had no access to power and this has reduced to 0%. The sanitary conditions of the community have improved, with a 20% increase in the number of houses using flush toilets, with a 23% decrease in septic tanks being used and a slight decrease in pour toilets. There have been no significant changes in the amount of time spent on daily activities. Further, there has been no significant changes in the consumption of alcohol, suki, cigarettes and marijuana. There has been a slight decrease in the consumption of kava. Overall, there has been a slight positive change in the financial and livelihood security of the households in the Drawa Block.

Criteria 3: Financial security: Household income and assets, and livelihood opportunities			
Question	**Measure**	**Baseline (2015)**	**Second verification (2020)**
		Results	**Results**
3.1. Access to education	Education	Of those surveyed with children of school age, 90% were attending school. 13 children attended secondary schools and only 6 were in tertiary education. Out of all the villages, 57% of men and 43% of women graduated from secondary schools. 18% of men and 14% of women graduated from a tertiary school.	Majority of the children of school age attended school. 18 children attended primary school, 16 attended secondary school and only 7 were in tertiary institutions. 21% of men and 23% of women graduated from secondary school. 11% of men and 8% of women graduated from tertiary institutions.
3.2. What is your household's average monthly income?	FJD per month	$287 Income varies greatly. The majority earns around FJD400 a month. The average household consists of 6.5 members.	Batiri= $450 Lutukina= $326.67 Nayarailagi= $621.71 Vatuvonu= $583.33 Drawa= $565.71 Average = $490.69
3.3. Are you able to save money from your earnings in a typical month?	Percentage 'yes'	57%	75% Majority of the households had the ability to save a certain amount of money every month

Question	Measure	Baseline (2015)	Second verification (2020)
		Results	**Results**
3.4. Which sources of electricity are used in your home?	Type of source	Solar 46% of all household use solar power as their main source of electricity. Generators were used very rarely and not regularly. Only 2 households were connected through power lines and 21% didn't have any access to electricity at all.	Solar, Generator and Electricity from the main source/power line (EFL) 19% of the households use electricity from the main power source (EFL). 56% of the households use solar as their main source of electricity. 13% of the households use generator as their main source of electricity. 13% of the households use both generator and solar as their main source of electricity.
3.5. What type of toilet is your household using?	Type of toilet	43% of households reported using a flush toilet. Others have pour-flush toilets (29%) and only 2 households indicated using an open pit toilet. Overall, 39% were using septic tanks.	63% of the households reported using flush toilets. 25% of the households reported using Pour Flush Toilets. 13% of the households reported using open pit toilet. Overall, 16% were using septic tanks.
3.6. Hours spent for daily activities:			
Cooking	No. of adults	Female adults: 3.5 Male adults: 1.8 Traditionally women take care of the family while men usually take care of the farm.	Female adults: 1.1 Male adults: 0.7
Household chores	No. of adults	Female adults: 2.5 Male adults: 1.2	Female adults = 0.8 Male adults = 0.6
Gardening/ farming	No. of adults	Female adults: 1.6 Male adults: 4.6	Female adults: 0.7 Male adults: 2
Resting	No. of adults	Female adults: 2 Male adults: 1.8	Female adults: 1.5 Male adults: 1.1
Leisurely activities	No. of adults	Female adults: 1.6 Male adults: 1.4	Female adults: 1.1 Male adults: 0.7

Question	Measure	Baseline (2015)	Second verification (2020)
		Results	**Results**
3.7. Substance consumption (days/week)			
Kava	Days/week	Female adults: 1.4 Male adults: 2.2 Only 9 women indicated that they were drinking kava for mostly 1 day per week.	Female adults: 1 Male adults: 0.3
Alcohol	Days/week	Female adults: 0 Male adults: 1.5 None of the women reported consuming alcohol.	Female adults: 0.1 Male adults: 0.3
Cigarettes	Days/week	Female adults: 2 Male adults: 5.8 Only 2 women indicated they smoked occasionally, compared to 50% of men who usually smoke more regularly. For this study, commercial cigarettes and local tobacco leaves were considered as one.	Female adults: 0.2 Male adults: 0.9
Marijuana	Days/week	Female adults: 0 Male adults: 0 No one reported personal use of marijuana.	Female adults: 0.1 Male adults: 0.07 1 female and 2 male consume Marijuana
Others (Suki)	Days/week	Female adults: 0 Male adults: 0	Female adults: 0.6 Male adults: 0.9
3.8. Are you aware of anyone in the community using marijuana?	% of people aware	75% of all respondents indicated that they are not aware of anyone in the community consuming marijuana. Surprisingly, 25% said that they are aware of a few people that rarely consume it. This response was not expected as it was assumed that (due to its level of acceptance) marijuana would not be consumed in the communities.	38% of the respondents indicated that they are aware of people consuming marijuana.

Criteria 4: Engagement with REDD+ and community perceptions.

The community perception towards the project remained relatively stable at above 80%, however an increase of householders reported lack of access to project information. The decrease in access to information can be attributed DBFCC reducing the size of their board (resulting in less clan participants), which has resulted in more efficient decision making but slightly less community participation. Reduced access to information can also be attributed to

project coordinator staff turnover, and the project coordinator having reduced presence due to covid-19 travel restrictions. Moving into the next monitoring period, DBFCC and the project coordinator has a new emphasis on strengthening the governance arrangement and information sharing, particularly with regards to financial management.

Criteria 4: Resilience of the PES project			
Question	**Measure**	**Baseline (2015)**	**Second verification (2020)**
		Results	**Results**
21. Can you access information about the REDD+ Enterprise's finances and activities?	Percentage "yes"	82% Most people have access. Others usually have not tried to access the information.	63%
22. Do you generally trust the REDD+ Enterprise?	Percentage "yes"	89% Respondents generally trust the REDD+ Enterprise and appreciate the training and involvement.	81% A small number of respondence reported reduced trust due to lack of information and perceptions of lack of transparency

7. Quantification of Biodiversity Impacts

7.1 BASELINE BIODIVERSITY IMPACTS

Quantify the baseline biodiversity impacts, providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results. Present biodiversity impacts measured and for each quantify the baseline as modeled.

During the monitoring period for the second verification the Drawa Rainforest Conservation Project undertook a Biodiversity Rapid Assessment Survey in accordance with Fiji national policy to establish a protected area and biodiversity monitoring during EFA inspection. These results are reproduced below.

At the third verification event, the Drawa Rainforest Conservation Project:

a. Aspires to present the third Biodiversity Monitoring.
b. Aspires to present improved biodiversity monitoring, conducted by the forest rangers

7.2 PROJECT BIODIVERSITY IMPACTS

Quantify project biodiversity impacts providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results. Present biodiversity impacts measured and for each quantify project performance for that impact.

The Drawa Rainforest Conservation Project has completed the second biodiversity impact monitoring survey recording significant species present inside the project boundary, in accordance with the second verification request. The results of the biodiversity monitoring of the project has been reproduced below:

7.2.1 Drawa Rainforest Conservation Project Biodiversity Monitoring 2015 to 2020

The following species of animals and plants were identified in within the project boundary during the forest the Drawa Block Biodiversity Rapid Assessment 2018 by the Institute of Applied Science at the University of the South Pacific in April 2018 and are compared against the first (project scenario) desktop biodiversity inventory undertaken in 2015 (table below). For the full Biodiversity Rapid Assessment Report see – Appendix 5 - Drawa Block Biodiversity Rapid Assessment.

Flora

In 2018, a total of 385 taxa were recorded in the Drawa Block area. Of the vascular plants, there were 293 angiosperms, 85 ferns and fern allies, and seven gymnosperm taxa. These plants come from 115 families, 247 genera and 351 species, with an additional 34 species that were undetermined.

There were fifteen flora species recorded in the Drawa area, that were not previously recorded on Vanua Levu. Further 14 species of botanical significance were recorded and are listed on the IUCN Red List (2012), CITES List (2017) and are protected under the Fiji Endangered and Protected Species Act 2017.

Entomology

During the biodiversity assessment 25 families of Coleoptera (beetles) were recorded and there was a high diversity within the Formicidae (ants) family. Two insect species of important conservation value were recorded, including the *Hypolimnas inopinata* (a rare and endemic butterfly) and *Cotylosoma dipneusticum* (rare and endemic stick insects). There were also three species with the Odonata genus *Nesobasis,* that have never been recorded. The conservation value of Drawa forest are can be considered high.

Terrestrial vertebrates

The rapid biodiversity survey targeted land-birds, herpetofauna (reptiles, amphibians) and mammals present in the Drawa Block area. Of the birds, 520 individuals were counted from 36 species. Eight herpetofauna and five mammals were recorded. A total of eight vertebrate species of conservation significance were recorded.

To review the biodiversity rapid assessment method and the full species list, see Appendix 5 Drawa Block Biodiversity Rapid Assessment 2018.

Biodiversity survey – Forest Rangers

During the EFA and boundary inspection, the forest rangers also recorded areas of biodiversity importance and began recording species of significance on an opportunistic basis during their boundary inspection. As this was the first time that the forest rangers had conducted the opportunistic survey, the data and results were considerably low and the observations were often at a low resolution level. We anticipate that in future monitoring periods, that the inclusion of the biodiversity monitoring in the EFA and boundary inspection will improve. Over the course of the monitoring (See Appendix 3 - Drawa Forest Change Monitoring Report), the forest rangers recorded 13 locations of biodiversity importance, including native palm trees and areas of pristine forest. It is the intention of the community to improve their biodiversity methods during the third verification event.

In the table 7.2.1 we present the presence of significant flora and fauna species from a botanical survey undertaken by the South Pacific Regional Herbarium in 1999 and compare the results, with the significant flora and fauna observed in 2018 and remain present through the monitoring period.

IUCN Classification: VU = Vulnerable; EN = Endemic; CR = Critically Endangered, CEPF = Critical Ecosystem Partnership Fund. CEPF Priority sites for investment are listed for the East Melanesian Islands Biodiversity Hotspot can be accessed here:
http://www.cepf.net/SiteCollectionDocuments/east_melanesian_islands/EMI_ecosystem_profile.pdf

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

Table 7.2.1 Significant Species						
Taxonomic Group: Plants						
Common Name	Taxonomic Name	IUCN Red List	Fiji NBSAP	Endemism	References	Present in 2018
Vono	*Alyxia bracteolosa*	-	Data deficient	Indigenous	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
-	*Tectaria menyanthidis*	-	Threatened	Indigenous	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
Makita	*Atuna elliptica*	-	Threatened	Endemic	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
Logologo	*Cycas seemannii*	Vulnerable	Critically threatened	Indigenous	IUCN (2015) GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
Balabala	*Cyathea affinis*	-	Threatened	Indigenous	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
Vaivai ni veikau	*Serianthes melanesica*	-	Data deficient	Endemic	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
-	*Malaxis platychila*	-	Threatened	Endemic	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Not observed but likely present
Wame	*Freycinetia vitiense*	-	Threatened	Endemic	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
-	*Tmesiripteris truncata*	-	Threatened	Indigenous	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
Ceketuawa	*Squamellaria imberbis*		Endangered	Endemic	GIZ, SPC (2003) Eco-Consult Fiji (1998)	Present

					SPRH (1999)	
Niuniu	*Physokentia thurstonii*		Data deficient	Endemic	GIZ, SPC (2003) Eco-Consult Fiji (1998) SPRH (1999)	Present
Taxonomic Group: Animals						
Common Name	Taxonomic Name	IUCN Red List	Fiji NBSAP	Endemism	References	
Fiji Ground Frog*	*Platymantis vitiana*	Endangered		Endemic	IUCN (2015) WCS	Present
	Hypolimnas inopinata	Rare		Endemic		Present
	Cotylosoma dipneusticum	Rare		Endemic		Present
Fijian mastiff bat	*Chaerephon bregullae*	Endangered			IUCN (2019)	Present
Fijian Green tree skink	*Emoia concolor*	Near Threatened		Endemic		Present
Fiji Forest Skink	*Emoia mokosarinveukau*	Endangered		Endemic		Present
Fijian-copper headed skink	*Emoia parkeri*	Vulnerable		Endemic		Present
Barred tree skink	*Emoia trossula*	Endangered		Endemic		Present

References:

- SPRH (South Pacific Regional Herbarium) (1999) Floristic Survey of the Native Forest in the Drawa Catchment in Cakaudrove Province, Vanua Levu, Fiji. South Pacific Regional Herbarium, a division of the Institute of Applied Sciences University of the Soutn Pacific.
- Eco-Consult Fiji (1998). Botanical Biodiversity in Fiji. PGRFP Technical Report Bot.01.98
- GIZ, SPC (2003) The Drawa Model Area Forest Management Plan (2003- 2012)
- IUCN RED List accessed online 15Oct15 http://www.iucnredlist.org/search
- Appendix 5, Drawa Block Biodiversity Rapid Assessment 2018.

7.3 NET BIODIVERSITY IMPACT ENHANCEMENTS

Quantify the net biodiversity impact enhancements summarizing the key results using the table below. Specify breakdown of biodiversity impact enhancements.

During the monitoring period, no negative changes in biodiversity were detected but about significant advancements in knowledge about the Drawa area has been achieved. There is now a greater depth and understanding about the project area's biodiversity and how the area is critical habitat for many species. The data collected during the 2018 Rapid Biodiversity Assessment, has demonstrated that there are more significant species present in the Drawa Block area, including the EFAs than the previous literature review demonstrated. As such, the biodiversity value of the area has increased and however, the significant species were likely to present at the baseline.

During the next monitoring period, the understanding of the biodiversity value is expected to increase, as more forest rangers are now proficient in the biodiversity monitoring methods and Nakau in partnership with the project coordinator and owner, is investigating ways to improve the monitoring systems in order to efficiently collect more representative biodiversity data.

Over the course of next monitoring period, it is also the intention of the project, for management activities to be implemented, in order to create a biodiversity enhancement and to improve the biodiversity value of the areas that are potentially degraded due to previous logging or invasive species. As such, during the second verification event it is difficult to quantify biodiversity enhancements or impacts, but the forest remains protected and numerous significant species are continuously observed within the project boundary. For a summary of the net biodiversity enhancements from this monitoring period, review the table below.

	Baseline biodiversity observations	Project biodiversity observations	Net biodiversity impact enhancements
Impact 1	Biodiversity baseline based on desk review.	Rapid biodiversity assessment conducted	New biodiversity assessment has been conducted, with new baseline data.
Impact 2	12 Species of significance presumed to occur and recorded in nearby locations in 2015	18 Species of significance recorded in 2018	6 additional species of significance were listed.
Impact 3	Minimal information on invertebrates.	Two endemic invertebrates recorded that rare	Two endemic invertebrates recorded
Impact 4	Minimal information on herpetofauna but recordings nearby.	Four significant herpetofauna were identified.	Four endemic species were identified.
Impact 5		Three species that have never been identified before have been recorded.	Three species never recorded to science, identified in Drawa.
Impact 6	No rangers monitoring the forest.	10 rangers, now with the basic skills to monitor the forest.	Ten additional community members now monitoring the forest with a basic understanding of biodiversity monitoring.

Impact 7	The EFA remained intact.	The EFA remained intact.	The EFA and project area continues to remain as a critical habitat area for many species.
Impact 8	Literature review for biodiversity.	Rapid biodiversity assessment held in 2018.	The project is beginning plans to improve the biodiversity condition in areas that are disturbed.
Impact 9	No rangers trained in biodiversity monitoring.	Several forest rangers trained in biodiversity monitoring and mobile data collection.	Several forest rangers have been trained in biodiversity monitoring and the biodiversity monitoring will likely improve in future monitoring periods.

APPENDICES

APPENDIX 1. REVISION OF EFA BOUNDARIES AND AREA

Introduction

The following document provides an explanation and rationale for a revision of the Drawa Eligible Forest Areas (EFAs) that are used for the project scenario as reported in the monitoring report as a deviation to the PD. The changes include revision (confirmation) of EFA boundaries, subsequent adjustment to the area within the EFAs (in hectares), and adjustment to the carbon accounting.

Background

Drawa Rainforest Project validation and first verification commenced in 2015 but was not completed until 2018. The initial validation finding (in 2016) included a Major Corrective Action Request (MCAR) that the Conservation Lease be completed and executed. Execution of the conservation lease was also a condition for Fiji Government endorsement.

In the intervening period between 2015 and 2018 Mataqali (Clan) Koroni withdrew from the project. The Conservation Lease was completed in 2018 and allowed for the MCAR to be closed and project validation to be finalised.

The Area subject to lease, based on the maps and calculation of areas (Ha) provided by the Trustee of native lands the iTaukei Land Trust Board (TLTB), was slightly smaller than the EFA areas originally included in the PDD. A note was added to the PDD document maps regarding the withdrawal of Mataqali Koroni. Otherwise the PDD was not changed to reflect the EFA areas under lease, however the updates were made to the first verification monitoring report. This included changing the areas within the EFAs from 1,723 Ha to 1,548.45 Ha and subsequent changes to carbon accounting. This change explains the discrepancy between version 1 of the 2nd verification monitoring report and the PDD. We suggest that as first verification and validation happened simultaneously, that the first monitoring report should be accepted as the original eligible forest area (EFA) in lieu of the PD having been updated.

Corrections to the Monitoring Report for 2nd verification

This version of the 2nd verification monitoring report contains a further correction to the EFA boundaries and area. On the 21st of October 2021 Nakau obtained the shape files from TLTB held in relation to the leased EFA areas. Prior to this time the project team only held a PDF copy of the EFA lease area maps which included the calculation of land area for each land portion (the areas were calculated by TLTB). The project team had not previously obtained a copy of the EFA boundary shape files from TLTB, in part because there was no capacity within the project team to conduct our own GIS mapping.

The project team has since established GIS capacity. Analysis of the EFA shapefiles shows that they cover an area of 1590.041 hectares. This is larger than the area originally calculated by TLTB (on the PDF lease version) of 1549.29 ha. (Note that the area of 1,548.45 reported above accounts for removal of a small garden area). Current TLTB personnel were unable to explain why the areas stated in the PDF version of the conservation lease were different and were unable to provide information about how it was calculated. A comparison of the lease maps (PDF copy) and the lease shapefiles shows that they cover the same area, however the PDF version has a thick border line used to emphasise the boundary. Our conclusion is that the Shapefiles represent the true area, and hence the calculation of EFA areas is based on these shapefiles.

Final EFA area to be applied.

The final EFA area used in the 2nd verification Monitoring report is based on the lease area *shapefiles* provided by TLTB. We justify using the lease area shapefiles rather than the hardcopy lease and TLTB calculations for the EFA due to the errors mentioned above. The Shapefile areas have been checked independently by two Nakau staff and current TLTB personnel who arrived at the same result (within less than 1 hectare). These areas can be verified by the Auditor, while it is not possible to verify the EFA area using the PDF lease maps.

Updates to the monitoring report and carbon accounting

To ensure a transparent and verifiable EFA area, the project team have elected to update the EFA area maps, total EFA area (in hectares), and carbon accounting in relation to the EFA areas. We have updated the maps displayed in PD Part A figures 241 through to 244. In the sections below, we describe the differences in the new maps from the originals presented in the PD. Moving forward, these maps should be used to describe the project area.

PD Section 2.4.1 Project Area

Section 2.4.1 describes the Project Area for the Drawa project, which has changed since the Project Description was submitted. Mataqali Koroni land has been removed from the Project Area to reflect their withdrawal from the project. The updated map (below) replaces figure 2.4.1a in the Project Description Part A page 29. The map displays the tribal boundaries all the land owned by the communities, as designated in the orange area.

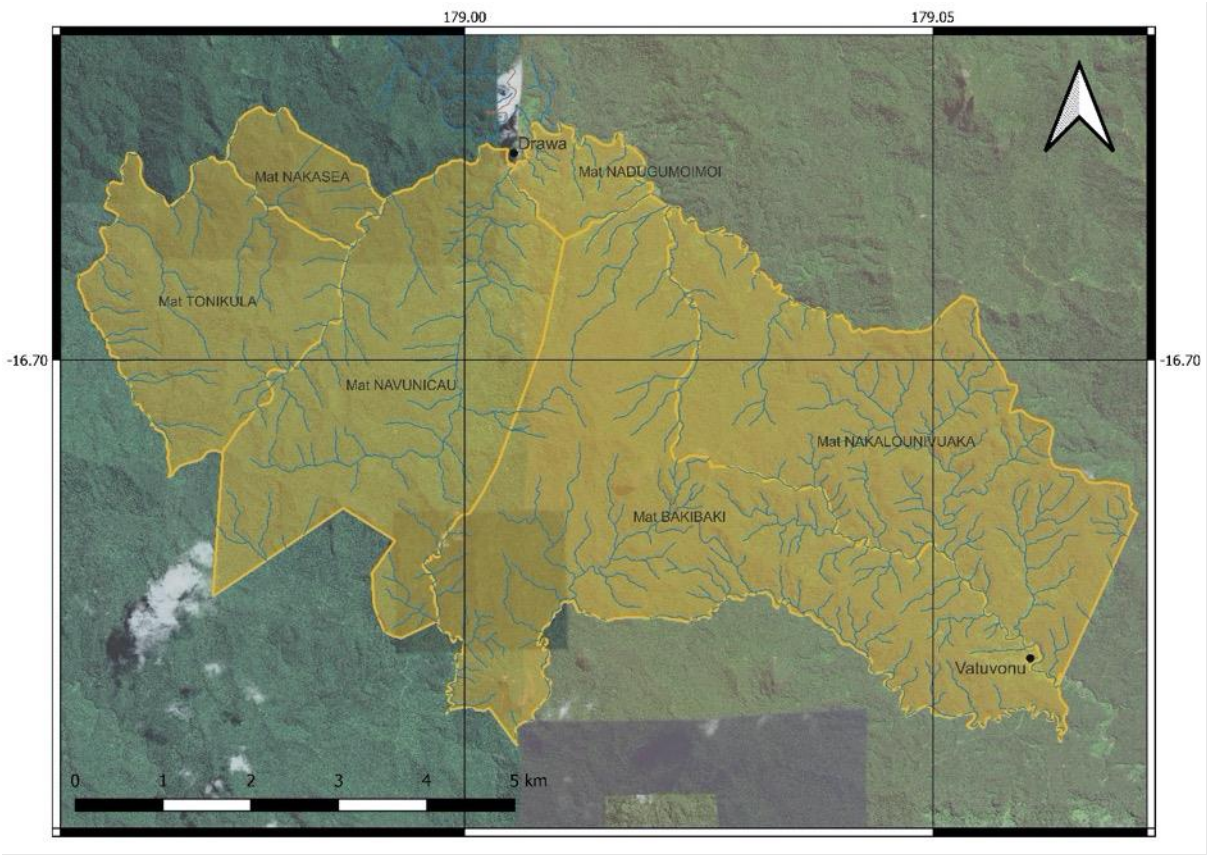


FIGURE 1 THE UPDATED MAP, REPLACING THE MAP THAT IS DISPLAYED IN FIGURE 2.4.1A IN THE PROJECT DESCRIPTION PART A, PAGE 30.

Land use zones within the Project Area

The overall land use zones within the project area have not changed significantly, other than those that were within the Koroni Mataqali boundary. The land use and management zones slightly changed with the updated boundaries (TLTB lease shape files), which more accurately define EFA boundaries from the lease agreement. The areas of land dedicated to Agricultural Reserve, Native Reserve and the Church Reserve have remained as previously. Figure 2 below outlines the updated management zones and land use with the Project Area. Figure 2 is the update for the map displayed in figure 2.4.1b in the Project Description Part A, page 30.

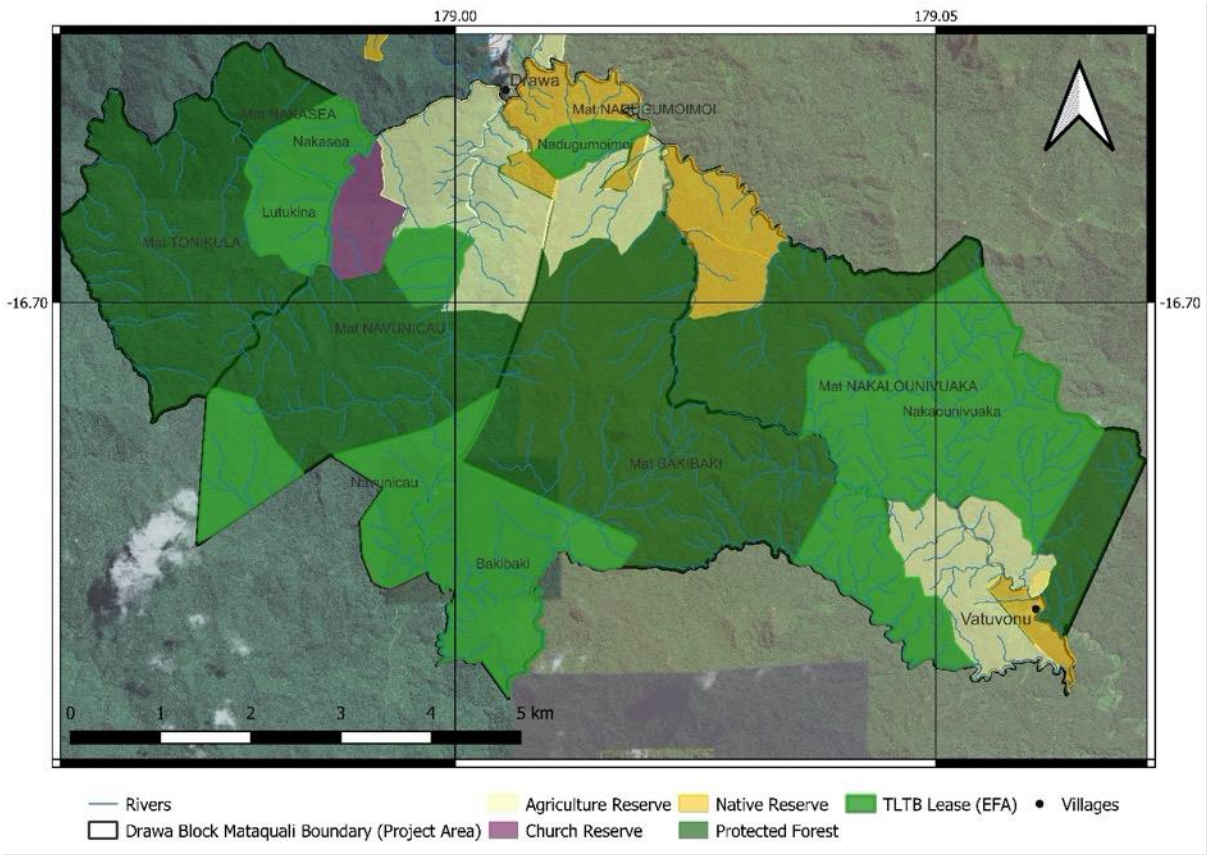


FIGURE 2 THE UPDATE FOR THE MAP DISPLAYED IN FIGURE 2.4.1B IN THE PROJECT DESCRIPTION PART A, PAGE 30.

Protected area & Eligible Forest Areas (EFA) Map

The Protected Area comprises the 'Protection forest' (protected from logging under forestry regulations) and the EFAs (protected under the conservation lease). The overall Protected Area of the project did not change, other than the removal of Mataqali Koroni land. The lease agreement area did change slightly, from 1549.29 hectares, as stated in the Lease Agreements to 1590.041 hectares, as calculated by the lease boundary shape files provided by TLTB. As neither the Protection Forest or the Eligible Area are able to be logged, the slight change has no significant bearing on the project outcomes. Protection Forest is a category of forest in the Fiji Forestry regulations, referring to forest that is not permitted to be logged due to its location e.g. steep slopes. The updated Protected Area in the participating tribal lands is displayed in Figure 3 below. Figure 3 is the update for the map displayed in figure 2.4.1c in the Project Description Part A, page 31.

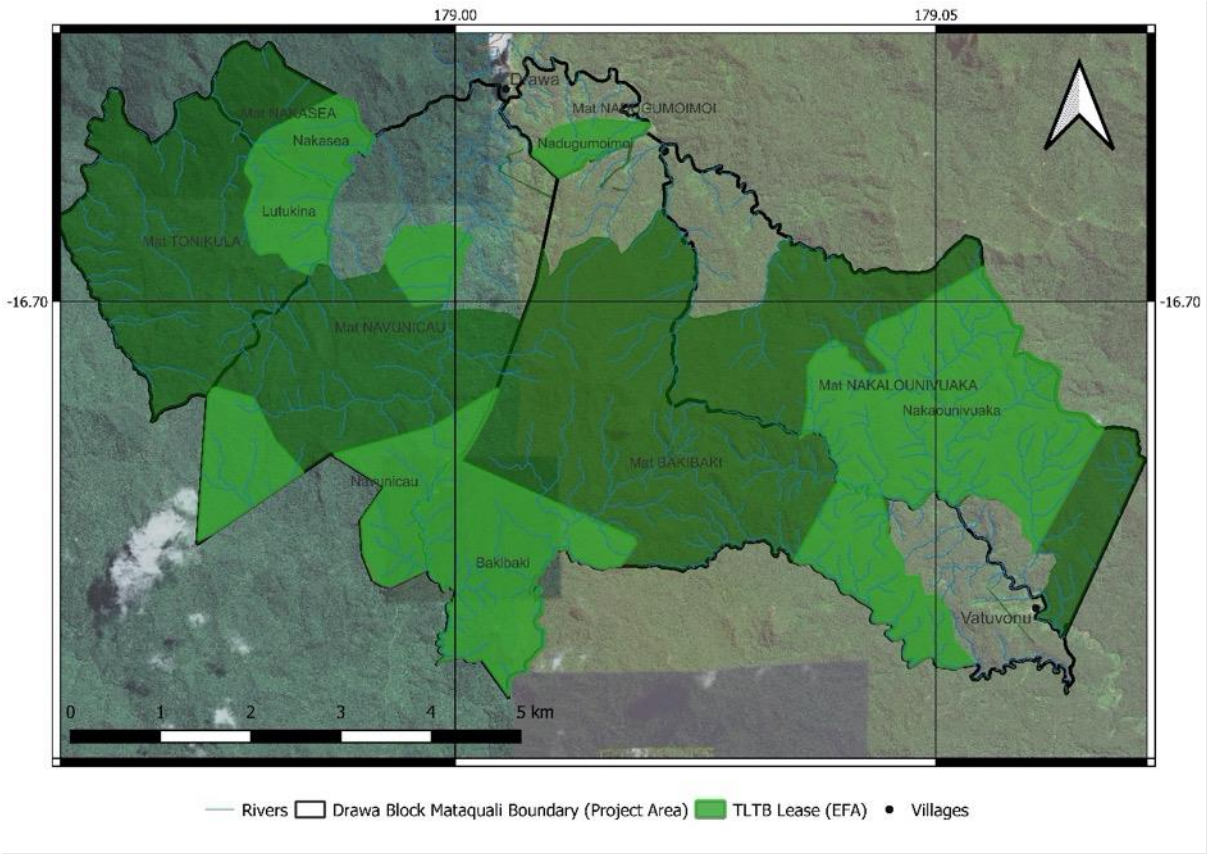


FIGURE 3 THE UPDATE FOR THE MAP DISPLAYED IN FIGURE 2.4.1B IN THE PROJECT DESCRIPTION PART A, PAGE 31.

Revised Eligible Forest Areas (in Hectares)

To ensure a transparent and verifiable EFA area, the project team have elected to update the EFA area maps, total EFA area (in hectares), and carbon accounting in relation to the EFA areas.

The table below is comparing the area described in the Project Description during the 2015 Validation Event and the area verified during the 2021 verification event. The area has been provided by TLTB and cross-checked by the project team. Overall the Eligible Area for the project is 1588.135 Hectares. The carbon accounting has also been updated to reflect the updated EFA area values.

Mataqali	Area in 2015	Area in 2021
Koroni	0	0
Bakibaki	468.1	468.1
Nadugumoimoi	47.9	45.931
Nakalounivuaka	588.2	580.2
Nakasea	66.5	73.1
Navunicau	279.50	320.8778987
Tonikula/Lutikina	101	101.84
Total	1551.2	1590.041
Farms area within EA	1.905	1.905
Total minus farm area	1548.459663	1588.135

APPENDIX 2. DRAWA BUDGET & PRICING SPREADSHEET

Supplied as a separate file.

APPENDIX 3. DRAWA FOREST CHANGE MONITORING REPORT 2020

Supplied as a separate file.

APPENDIX 4. DRAWA SECOND VERIFICATION SOCIO-ECONOMIC SURVEY

Supplied as a separate file.

APPENDIX 5. DRAWA BLOCK RAPID BIODIVERSITY ASSESSMENT

Supplied as a separate file.