



Drawa Rainforest Carbon Project Annual Report 2019

An avoided deforestation project at Drawa, Vanua Levu, Fiji.

The Nakau Programme:
An indigenous Forest Conservation Programme
through Payments for Ecosystem Services



Drawa Forest Conservation Project

Annual Report 2019

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Summary

Report overview

Reporting period	January 2017 – August 2019
Geographical areas	Drawa Block, Vanua Levu, Fiji
Technical specifications in use	TS Module (C) 1.1 (IMF – LtPF) D2.1.1 v2.0 20151019

Project indicators	Historical	Added/ Issued this period 2018 - 2019	Total
No. smallholder households with PES agreements	Not applicable	Not applicable	Not applicable
No. community groups with PES agreements (where applicable)	1	0	1
Approximate number of households (or individuals) in these community groups	120 ¹	0	120
Area under management (ha) where PES agreements are in place	1,548.45 ha	0	1,548.45 ha
Total PES payments made to participants (USD)	\$0	\$62,794.62	\$62,794.62
Total sum held in trust for future PES quarterly payments (USD)	\$0	\$220,268.79	\$220,268.79
Plan Vivo Certificates (PVCs) issued	0	56,400	56,400
Allocation to Plan Vivo buffer to date	0	14,100	14,100
Unsold Stock at time of submission (PVC)			299

¹ Households

Introduction

The 2019 Drawa Forest Conservation Project Annual Report (this report) is the first annual report produced since the project was verified under the Plan Vivo Standard (verification finalised and project registered on the 27th February 2018).

The report covers the main activities and outcomes achieved since the project was verified, however also provides an update on activities that were delivered during 2017 prior to verification.

The report does not provide detailed data from forest monitoring activities (e.g. transect inspections). However this data will be assessed at verification prior to further issuance of PVCs, and provided in future annual reports.

Background

The Drawa Forest Conservation Project is an improved forest management type project where the core activity is moving from a baseline activity of commercial scale logging to a protected forest. The Table in Annex 1 provides an overview of project data, including project area size, participants and project period. The project objectives are described at annex 2.

Development of the Drawa Forest Conservation Project commenced in 2011 led by regional and locally registered NGO Live & Learn Environmental Education. The European Commission provided the main source of project development funding, and additional support was provided by GIZ and ADB. A timeline for the development for the Drawa project is provided in Figure 1 (below).

The Drawa project site was selected in August 2011, and project development activities were undertaken in close collaboration with the indigenous landowners from eight Drawa Block clans (mataqali), whom reside within 5 villages within and surrounding the project area. The landowners formed a project development steering committee and took the formal decision to conserve the project area in September 2012, with a signed mandate by community leaders. September 2012 henceforth became the 'project start-date,' and represents the date from which the landowners agreed to manage their forests for conservation and exclude logging activities. The steering committee formed the Drawa Block Forest Communities Cooperative (DBFCC) as the entity to manage the carbon business on behalf of the land owning mataqali.

The first annual report was prepared in 2016 along with the first project monitoring and verification report to meet Plan Vivo Stand requirements. The first report outlined the project management, governance and carbon accounting and monitoring systems that had been put in place, and provided the first assertion of greenhouse gas abatement achieved by the project through forest protection. The independent auditor and Plan Vivo determined that the project had met all certification standard requirements, however the final verification was held off until the project could formally receive formal approval from the Fiji Government.

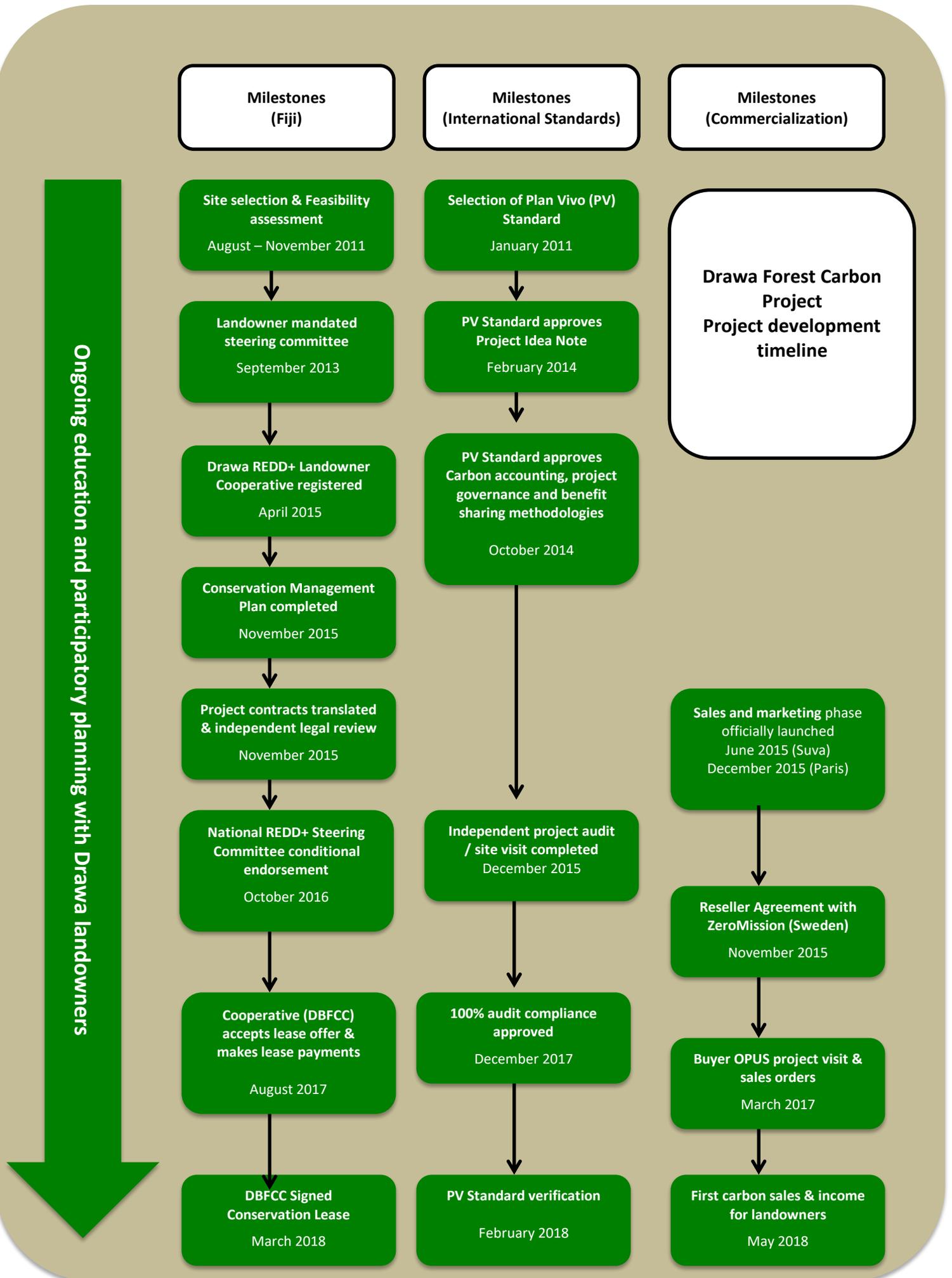
The Fiji National Government provided conditional endorsement for the project in October 2016. However endorsement was contingent upon completion of two activities, being;

- (i) Establishment of a conservation lease over the eligible forest areas, requiring the mandate and signature of 60% of all clan members over the age of 18, and;
- (ii) Delivery of a biodiversity survey and biodiversity-monitoring plan.

Finalisation of the conservation lease for a carbon project was a complex undertaking; especially given it was the first of its kind in Fiji. After extensive consultation and negotiations (including FPIC process), the lease agreement was finalised in March 2018 with the required mandate. The biodiversity survey was undertaken in April 2018. Delivery of the biodiversity survey and finalisation of the lease paved the way for full Government endorsement, and for Plan Vivo verification to be completed. Credits were subsequently issued and the first carbon sales from the Drawa Project were transacted in May 2018. The first credit issuance was for three vintages 2012/13, 2013/14 and 2014/15, dating back to September 2012, as per the official project start date.

This report is the first annual report since the project has moved from a 'project development' phase to a 'project implementation' phase. The project development phase was characterised by donor-funded activities focusing on designing and establishing systems such for project governance, land management, carbon measurement and monitoring. The implementation phase is primarily funded by payments from sales of PVCs and is focused on putting the governance and land management systems in to action.

Figure 1: Drawa Project Development Timeline



Key project activities and events

First carbon sale celebration

An official celebration was held in Drawa village on the 10th May 2018 to mark the first sale of Plan Vivo Certificates (carbon credits) and payment of carbon sale proceeds to the landowning clans.

Over 200 people made their way to Drawa village to hold the traditional celebration. This included landowners who travelled from Suva from the separate Island of Vanua Levu. The celebration involved a traditional *sevusevu* ceremony, during which the Commissioner of the Northern Division (highest level public servant appointed by the Prime Minister) received a welcome from the senior chiefs. As the honourable guest the Commissioner was presented with *yaqona* (kava), a pig, woven mats, and *tabua* (whale tooth).

The DBFCC chairman, chiefs and Live & Learn's country director, made speeches about the project and thanked the *mataqali* (clan) leaders and members for their patience and commitment to the project and forest protection, as it had taken a long time (2011 – 2018) to get the project to the stage where payments were received.

The celebration ended with a feast prepared for all 200 guests and *meke* (dancing). The event was a good opportunity to build the profile and raise awareness of the project with clan members, especially those who are not involved in day-to-day management or governance of the cooperative. The event and also received significant media attention at the national level in Fiji, and on ABC Pacific news in Australia.



Above: Chief and DBFCC advisor presents tabua (sperm whale tooth) to the Commissioner of the Northern Division at the Drawa project celebration

Capacity building for project governance and management

The Drawa project participants have attended regular capacity building activities and support visits. The project coordinator (Live & Learn) delivered the capacity building training to project participants through workshops and support meetings. Some meetings and workshops were also attended by the Nakau Programme and external stakeholders and training providers. The table in Annex 3 provides a detailed list of workshop and field support activities delivered to the DBFCC board and members (the project participants).

Highlights

- Six phases of business and financial literacy training was delivered to the cooperative board and members involved in carbon and bee keeping activities. The training was effective in improving financial bookkeeping practices for the carbon business, and for the beekeeping businesses also running under the DBFCC structure.
- A series of cooperative governance / planning support visits were conducted for the DBFCC board and for Cooperative participants separately in Batiri, Dreketi, Labasa and Drawa.
- The DBFCC was supported by Live & Learn to plan and deliver their AGMs in 2017, 2018 and 2019 with each meeting held in Batiri village.
- The DBFCC established their land management sub-committee in June 2019. The sub-committee contains one member nominated from each participating mataqali. The land management sub-committee is responsible for supervising and advising work of the DBFCC rangers, including setting their work plans and approving timesheets. The subcommittee is also responsible for putting together quarterly land management activity reports and reporting to these to the DBFCC board.



Above: DBFCC board member leading discussions about ranger priorities

Biodiversity survey

The Nakau Programme and Live & Learn commissioned a multi-taxa biodiversity assessment and archaeological survey of the Drawa project area, with funding support provided by GIZ. This work was carried out in April 2018, led by staff of the Institute of Applied Science (University of the South Pacific), Ministry of Forestry and the Fiji Museum.

In order to better understand the richness of the biodiversity in the area, a Rapid Biodiversity Assessment was carried out, with specialists focusing on making species inventories of vascular plants, avifauna (birds and bats), terrestrial vertebrates (mammals, reptiles and amphibians), and freshwater fish.

The Rapid Assessment approach was developed by Conservation International and has been implemented in over 80 sites worldwide over the last 25 years. IAS has already carried out several of these Rapid Assessments in Fiji as well in other countries in the Pacific region. It is a pragmatic methodology designed to provide a species-driven basis for the formulation of conservation policies and action.

The Rapid Biodiversity Assessment was carried out in conjunction with an archaeological survey, which focused on documenting sites of archaeological and cultural significance located within the project area. The survey team spent a total of ten days in the field, operating from Drawa settlement or from a high-elevation base camp closer to the cloud forest areas within the site. Specimens that were collected in the field were curated and lodged with the South Pacific Regional Herbarium for further taxonomic work and/or reference. A summary of results is provided under taxonomic sub-headings, below.

Flora and Vegetation

A total of 385 taxa were recorded for the Drawa area. The vascular plants were comprised 293 angiosperm (217 dicots and 76 monocots), 85 ferns and fern allies and seven gymnosperm taxa. These plants were assigned to 115 families, 247 genera, 351 species and 34 undetermined. 351 determined native taxa (197 dicots, 65 monocots, 82 ferns and fern allies, and 7 gymnosperms) comprising of 141 (36% vascular plant flora) endemic species (127 angiosperms, 14 fern and fern allies) and 191 (54% vascular plant flora) indigenous species (115 angiosperms, 69 ferns and fern allies and 7 gymnosperms) were documented.

The three largest families were Orchidaceae (16 genera and 26 species) followed by Rubiaceae (18 genera and 26 species) followed by Euphorbiaceae (10 genera and 14 species). A total of ten exotics (nine dicots and one monocot) were recorded, of which six were recognized invasive species. There were fifteen species of vascular plants with new documented distributions into Vanua Levu. Also, fourteen taxa encountered were considered important due to their rarity or threatened status,

botanical significance and inclusion in the IUCN Red List (2012), CITES List (2017) and the Fiji Endangered and Protected (Amendment) Species Act (2017).

Three of the nine principle vegetation types recorded for Fiji, were encountered in the study area: lowland rainforest, upland rainforest and cloud (or quazi montane) forest. The lowland rainforest and the associated riparian vegetation were the most heavily impacted, indicated by the neglected gardens or fallow land, aboriginal introduced tree crops and logged tree stumps. The upland rainforest and cloud forest were the least disturbed except for the tracks into the cloud forest. Also, the upland and cloud forests had higher tree species diversity and density compared to the lowland forest.



*Above: Orchids were the most diverse family recorded in the Drawa forest. 26 species of orchid were recorded in 2018 biodiversity survey. Pictured is an indigenous epiphytic orchid "varavara", *Grammatophyllum* sp.*

Invertebrates

The target taxa Coleoptera (beetles) recorded 25 families in total and there was a high diversity within the family Formicidae (ants). These taxa provide critical ecosystem services in forests systems such as soil processing, decomposition, herbivory, pollination and seed dispersal. Insects of conservation value recorded from Drawa included: *Hypolimnas inopinata* (a rare and endemic butterfly), *Cotylosoma dipneusticum* (rare and endemic stick insects) and possibly three new species within the Odonata endemic genus *Nesobasis*. These findings suggest that the Drawa forest areas that were assessed, particularly the upland forests and the ridge top forested areas, harbor a good diversity of insects and some endemic and rare insects of Vanua Levu. The conservation value therefore for the Drawa assessed forest areas can be considered as good (i.e. through the presence of rare and endemic species and ecosystem service provision) and forested systems within its upland and ridge top forests intact.



Left: Several species of giant millipede are abundant in the Drawa forest

Freshwater vertebrates

The freshwater assessment was undertaken to build capacity within the Drawa community and increase freshwater fauna knowledge for an area that has not been previously surveyed. The freshwater survey was conducted by electrofishing and underwater visual observations aided with spearfish for larger mobile fish. A total of 112 fish was caught across the ten sites sampled. Nine species from three families were caught during the survey. The recently described goby, *Redigobius lekutu*, was the only endemic species found. Overall, the fish fauna observed is characteristic of inland communities of high volcanic islands of the South Pacific. The abundance of important food fish such as *Kuhlia rupestris* and *Kuhlia marginata* is a good indication of the quality of the freshwater environment and surrounding forest that make up the Drawa Block Area.

Terrestrial vertebrates

The terrestrial vertebrate survey targeted land-birds, herpetofauna (reptiles, amphibians) and mammals present in the Drawa Block Area. The three main habitats surveyed were the primary lowland rainforest, secondary lowland rainforest and upland-cloud forest. The bird survey was carried out using the Variable Circular Plot method. The herpetofauna survey used the Active Night Search and Sticky Trap methods. Rat traps (cages), 1 hour dusk counts and opportunistic surveys were carried out for the mammal survey. Sixty-six count stations were surveyed recording 520 birds belonging to 36 species of land-birds. In addition, eight herpetofauna species and five mammal species was recorded during the survey. Eight species of conservation significance were recorded. However there is a need for follow up surveys to compile good baseline data, which will be the basis for long-term monitoring.

Archaeology

The Archaeology and Gazetting Section of the Fiji Museum carried out the archaeological studies of the Drawa forest reserve with the assistance of the field guides/rangers from the villages of Drawa and Vatuvonu. The terrestrial vertebrates team also assisted in the identification and recording of some of the cultural sites that were encountered in the survey of birds, reptiles, amphibians and mammals.

The ten-day survey yielded an enormous amount of information and survey of cultural features that littered the project area. The sites documents consisted of hill fortifications, old villages, cemetery, mythical/sacred objects, monuments and historical sites.



Left: this stone, located near Drawa village, has a hole that can be blown through to create a resonating horn sound. It is traditionally blown to signify preparation of food to bring people together in the village for celebration

Land management & monitoring activities

The DBFCC board, in consultation with mataqali (clan) members, identified the rangers to undertake land management activities in the Drawa project area. Rangers were selected from each of the mataqali with people available for such work, therefore contributing to a fair distribution of project benefits.

Drawa Block Rangers	
Name	Mataqali
Jeremaia Lotawa	Navunicau
Ropate Dagia	Navunicau
Tomasi Rakawai	Nakase
Tekini Nairibiuli	Nakase
Mosese Vulawalu	Tonikula
Sireli (Jurnior)	Tonikula
Esala Penitiko	Nakalounivuaka
Sevanaia Curuvale	Nakalounivuaka
Nemani Naqase	Vatucucu

Initially the work of rangers was on a volunteer basis, however they were also paid an allowance for participation in specific funded activities, such as the Drawa Biodiversity assessment (see above).

Ranger activities are guided by the *Drawa Forest Conservation Management Plan*. From June 2019 the DBFCC land management sub-committee commenced the role of supervising rangers work. Prior to this date DBFCC and Live & Learn coordinated the voluntary ranger activities. However, Live and Learn will continue to provide hands on support to the rangers and land management subcommittee until such time as capacity is built and good systems and procedures are established.

Boundary marking

Rangers erected signs and undertook boundary marking adjacent to the eligible forest areas (EFAs). The purpose of signage and boundary marking is to alert villagers to the location of the boundary of the protected area. Under the project and management plan, clearing land for gardening or harvesting of trees is 'tabu' (prohibited) from the EFAs. Boundary marking is undertaken by cutting a small patch of the outer layer of bark from a tree to reveal the wood beneath, and spray painting the wood with red spray paint. The boundaries are strategically marked where they are in close proximity to villages or garden areas where there is a risk of people unknowingly encroaching into the EFA. Boundary marking initially focused on the Nadugumoimoi EFA, which is south west of Drawa Village. The trees are marked approximately 50m from the actual edge of the EFA patch to provide a buffer.



Right: DBFCC Ranger coordinator & board member records the location of a tree painted red to indicate the 'buffer zone' to the eligible forest area.

Forest area inspections

The Drawa Rangers commenced forest areas inspections following the methodologies in the monitoring plan located within the Drawa Project PD, Part B. The methodologies are also repeated in the management section of the Drawa Forest Conservation Management Plan.

Live & Learn provided technical support by preparing geo-referenced maps that contain EFA boundaries, transect lines for forest inspections and location of 'risk areas' such as tracks or garden areas. Nakau and Live & Learn also provided training on the monitoring methodology, use of GPS and reporting requirements. Rangers used the maps and handheld GPS to undertake the forest inspections commencing with Nadugumoimoi EFA. Nadugumoimoi EFA was the initial focus of monitoring activities because it is close to human settlement and hence most likely to be impacted. Other EFA patches are relatively remote from villages and very unlikely to be disturbed by illegal logging or gardening activities.

In August 2019, Nakau and Live & Learn trialled the *Avenza Maps* application to replace handheld GPS for forest monitoring. The rangers found hand held GPS difficult to use, and hence presented a barrier to less experienced or less educated members of the ranger team to engage in data collection. Avenza maps application was used on tablets and android phones, and provided a much simpler user interface

than the handheld GPS. It also provided a simple system for collection of point data observations, such as locations of boundary markers, or biodiversity records. The Department of Forestry assisted Live & Learn to produce geo-referenced PDF maps of the project area suitable for Avenza. This system will be used and further refined for future monitoring work.

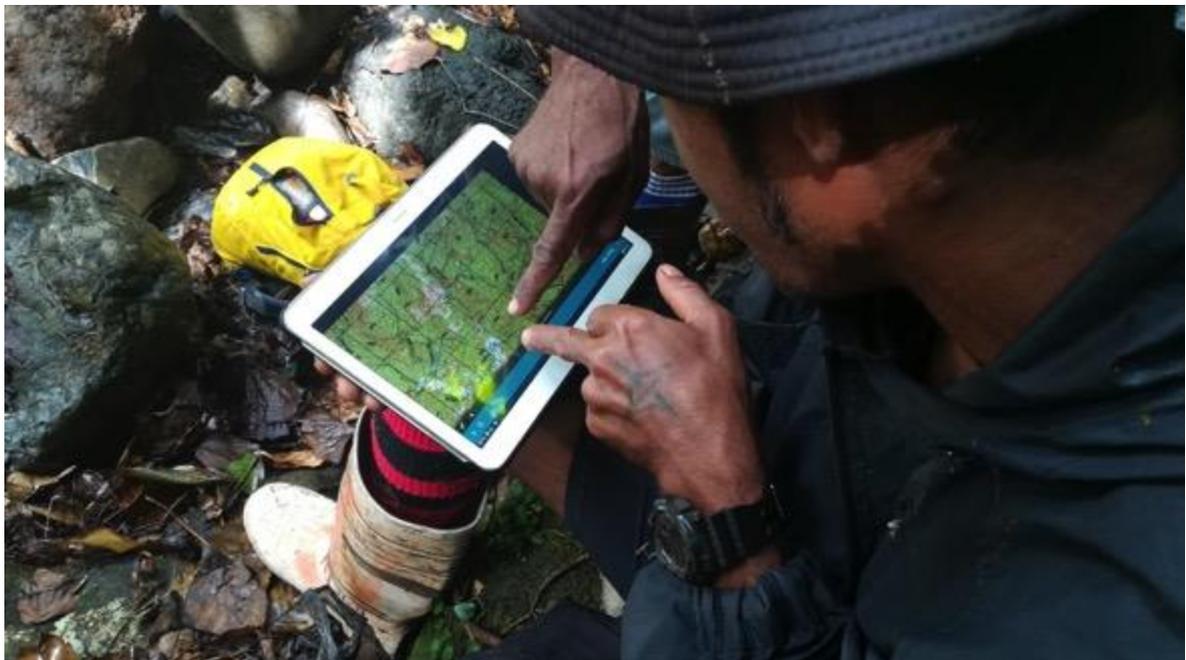


Left: Drawa rangers undertaking forest inspections in the Nadugumoimoi EFA, August 2019

Biodiversity monitoring

The biodiversity survey led by the Institute of Applied Science (University of the South Pacific) established a baseline inventory of flora and fauna species present at the Drawa project site (see above). The biodiversity-monitoring plan located within the *Drawa Forest Conservation Management Plan* was updated to include a list of 'significant species' for monitoring. The species were determined to be 'significant' if they were rare or threatened (locally or in general terms), endemic, unique, or of particular cultural value. Species were not selected for monitoring if they are cryptic and hard to observe (e.g. rare canopy epiphytes). Such species would be surveyed in occasional comprehensive surveys, such as the one carried out by IAS.

The Drawa Rangers commenced biodiversity monitoring through two field trips (6 field days), undertaken in June and August 2019, and established a work program for ongoing monitoring. Biodiversity records were collected when Rangers undertook forest inspection surveys, including the transect walks, boundary inspections and 'risk area' inspections. In June 2019 fieldwork, data was collected on paper forms and location recorded using hand held GPS. In August 2019, the rangers used *Avenza Maps* to record point data location and information on the significant species observed, including taking geo-referenced photographs of species recorded.



Above: Rangers use Avenza Maps to record location and observations of significant species of flora and fauna.

Plan Vivo Certificate (PVC) issuances and sales

Total sales

A total of 56,400 PVCs were issued into the Markit Registry for the first monitoring period from 6th September 2012 to the 6th September 2015. The total issuance is comprised of three annual vintages of 18,800 PVCs. A reserve buffer of 4,700 was issued for each vintage, totalling 14,100.

As the project sales agent, the Nakau Programme was successful in selling 99% of issued PVCs for the period. Annex 5 shows PVC sales data for the total first issuance to August 2019. Sensitive sale price data is 'commercial in confidence' and is omitted from the publically available version of this report.

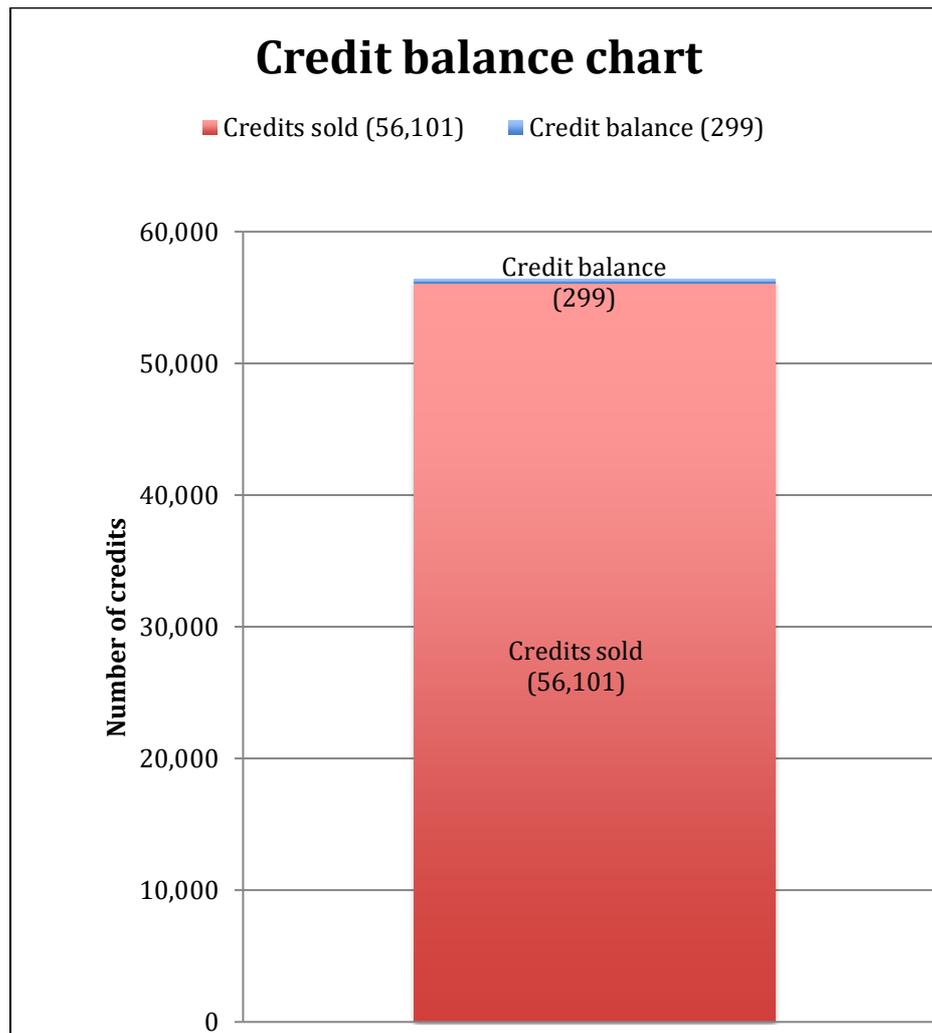
Table 3 PVC sales data

Buyer / sale	Invoice date	Units	Wholesale Price	Sale value
ZeroMission	06/04/2018	1300	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	06/04/2018	140	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	06/04/2018	4,110	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	06/04/2018	800	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
Ekos	09/05/2018	484	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	27/07/2018	1000	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	27/07/2018	427	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
Ekos	28/09/2018	1159	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	10/01/2019	4727	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	10/01/2019	417	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	09/05/2019	500	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	09/05/2019	500	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
Ekos	28/06/2019	2563	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	09/05/2019	1352	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
ZeroMission	24/06/2019	5001	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
Myclimate	11/07/2019	31,621	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
		56,101	Data provided to Plan Vivo (confidential)	Data provided to Plan Vivo (confidential)
		Total units sold	Average price	Total value of sales (USD)

Balance of credits remaining unsold

54,600 credits were issues, of which 56,101 were sold and 299 remain unsold from the first issuance of vintages 2012/13, 2013/14 and 2014/15 (see chart 1). The 299 credits remaining are from the 2014/15 issuance.

Chart 1 PVC stock that has been sold and remains unsold from the first monitoring period issuance.



Distribution of sales income

Income from sales is distributed according to the system and proportions outlined in the project PD and PES agreement. Actual distribution of sales income received during the reporting period to project parties is provided in Table 4.

Nakau undertakes the role of sales agent for the project. Income is initially received into the *Drawa Project Trust Account* held by the Nakau Programme. Nakau then undertakes an ESCROW function to pay each party, including payment of Nakau's portion of the income into its own 'operating account.'

The portion of income due to the Project Owner (DBFCC) is disbursed quarterly. The amount due quarterly is calculated by the total value of 12 months of credits sold divided by four. Project payments are triggered by receipt of a) project owner quarterly land management report, b) project owner finance report, and c) an invoice. Payments to the Project owner were delayed for several months while DBFCC established their bank account and money story operating and reporting systems as required under the PD and PES agreement. The main reason for delaying payments was to reduce risks of financial mismanagement and to ensure a high level of financial discipline and accountability was in place prior to payments.

In 2019 Nakau and Live & Learn provided support visits to DBFCC to get the financial systems properly established, and recommenced payments in June 2019. The DBFCC systems are now in operation and payments are expected to proceed every quarter.

At July 2019 USD \$62,794.62 had been paid to DBFCC. A balance of \$220,268.79 was held in trust for future quarterly disbursements (based on a disbursement plan).

Table 4. Distribution of sales income

Project entity		Income (\$USD)	Percentage
Project owner	DBFCC	\$283,063.41*	58%
Project coordinator	Live & Learn	\$97,007.98	20%
	Nakau	\$108,003.78	22%
TOTAL		\$488,075.17	100%

**Includes income held in trust for future quarterly disbursement*

Alternative livelihood activities - Bee keeping

Bee keeping was introduced to Drawa as part of the suite of activities identified by project participants to provide alternative sources of income to logging and clearing of land for agriculture. Hence Beekeeping complements the carbon project by further addressing the main driver for deforestation.

The beekeeping activities also support the carbon business by providing an avenue for distributing the benefits from forest conservation, and are particularly valuable in supporting women's livelihoods. The training activities and social capital built to maintain beekeeping also supports the carbon business.

Live & Learn worked in collaboration with the Drawa Block Forest Communities Cooperative (DBFCC) to develop the Beekeeping business and agreed system of operation with the 5 target communities. Implementation approach focused on integrating good governance and business management practices to ensure sustainability and increase levels of participation and ownership. The Drawa Block Forest Communities Cooperative (DBFCC), originally established for the carbon project, plays the central role in managing the beekeeping enterprise.



Above: Drawa women involved in beekeeping and collection of honey that is purchased and on-sold by the forest cooperative.

Most significant beekeeping achievements 2017-2019

Successful establishment of an operating community owned and managed honey business:

- The Cooperative Business was licenced to sell honey
- A honey storage and Business Operating Center for the Cooperative was built
- Established agreement between the DBFCC and the five villages on honey production standards, costs and management of the Beehives
- 5 community beekeeping business achieved a sales total of \$22,425 contributing to village activities, church maintenance, women and youths activities, educational expenses, operational expenses and allowance for beekeepers
- Provision of technical and financial services to 5 community beekeeping business enabling economies of scale and larger profit margin
- DBFCC has the ability to negotiate honey price to a higher value through it's unique brand label of 'Pure Tropical Rainforest Honey' from \$15/kg to \$20/kg

Sustained increase in engagement of women & youths in village council meetings and economic participation

- 44 youths and 29 women are participating in beekeeping and earning allowance (\$10-\$20/day) with an additional 18 committing to participate by early 2019
- Women and youths participate in village council meeting to present, raise concerns and seek support from members

Identified avenue for engagement of marginalized women in the community

'Rotational participation' and an open invitation to participate in the Community Beekeeping business provides an opportunity for marginalized women in the community to earn money to support household grocery shopping. Also, opportunity through the Women's Group business enables these women exposure to have more engagement in group activities that boosts their self-esteem and confidence to be more involved in village activities and most importantly in economic activities.

Opportunity to access additional grants by the Cooperative and business ventures by the womens group in each of the 5 communities

- DBFCC successful in attaining \$5000 TLTB grant and purchased fencing, equipment, and office assets that will support business growth and improve production and income
- 5 community women's groups empowered through financial literacy training each granted \$2000 donation from ANZ bank that has since established 2 pandanus farming business and 3 canteen business in October 2018.

Change in mindset from cultural norm to entrepreneurship

- Change in mindset from traditional cultural values/norm of giving' ('*kerekere*') to entrepreneurship mindset through adopting and practicing budgeting and usage of expenditure/benefit sharing charts
- Village council meetings now understand expenditure, usage of honey income and how much is available for use towards village activities

Stories from beekeeping participants

“We women are really happy about this beekeeping business because for some of us, only our husband earns money and beekeeping has enabled us to earn money in participating that supports the family to buy tea stuff. In beekeeping, we learn not only to take care of bees but also to be business minded and it has boost our confidence and self-esteem to engage more in income generating activities, so we want to keep our business alive.”

– Mrs. Ani Matamosi (Female Beekeeper, Batiri village)

“The system of collecting honey from the village and providing an easy means of payment really makes the business work for us. It saves us the cost of around \$50 to transport our buckets of honey to Seaqaqa to sell to Chute, who buys at a lower price (\$12/kg)”.

– Mr. Inoke Waqawaqa (Apiary Manager, Lutukina in October 2018)

“We (beekeeping committee) were asked during the village council meeting to contribute towards the village vehicle maintenance but I had raised my hand and informed them that we have our budget and currently cannot commit to village activities but have allocation only for operational expenses. If we give it out, we won’t be able to afford paying the beekeepers and buying sugar to feed and maintain healthy hives. The other members were then satisfied with our explanation because we explained based on our knowledge of budgeting and training.”

- Laisenia Rokoua (male beekeeper from Nayarailagi village in May 2017)

Communication and visibility

Media

Date	Topic	Media	Reach
09/04/2019	News story: <i>Benefits of conserving forest</i>	Fiji Sun newspaper	Fiji (national)
16/10/2018	News story: Villages harvest \$15k worth of honey	Fiji Times newspaper	Fiji (national)
08/07/2018	News story: <i>Co-operatives a boost to economic development</i>	Fiji Sun news paper	Fiji (national)
11/05/2018	News story: Carbon trade pays off	Fiji Times newspaper	Fiji (national)
10/05/2018	News story: Drawa landowning units receive carbon sale proceeds	Fiji Times newspaper	Fiji (national)
28/3/2017	<i>Pacific Community offsets flight carbon dioxide emissions</i>	SPC website / press release	SPC Pacific networks (regional)

Facebook

Measure	Data
Nakau Facebook followers @ 23/09/2019	1,326
Number of Drawa Facebook posts (2017- September 2019)	19
Largest post reach (05/10/2018)	37k (05/10/18) 7.1k (14/09/19) 5.3k (12/08/19)

DBFCC sustainability and assets

The Drawa Block Forest Communities Cooperative (DBFCC) is responsible for managing the forest carbon project and distributing benefits from the project at the community level. DBFCC governance and business management capacity and financial position improved during the reporting period 2017-19.

The cooperatives assets were built through carbon sales and funds received from NZ MFAT for the bee keeping enterprise. Table 5 provides a summary of the current non-cash assets of the DBFCC.

Table 5. DBFCC non-cash assets

Non cash assets	Value (\$USD)
DBFCC Business Centre and honey storage facility	\$53,624.94
Computers & software	\$3,691.47
240 double bee hive boxes	\$84,866.47
Beekeeping equipment	\$7,854.60
Vehicle (Toyota Hilux)	\$46,303.45

DBFCC budget

Live & Learn / Nakau personnel facilitated workshops with the DBFCC board to update their annual budget. The updated budget is attached as Annex 4.

Challenges and opportunities

Challenges

Delay in first issuance, sales and project finance

Project development commenced in 2011, landowners formally agreed to pursue a forest carbon project instead of logging in September 2012, and the project audit took place in December 2015. However the audit was not finalised until February 2018 due to delays in finalising the conservation lease. The conservation lease provides legal protection for the forest, and although not strictly a requirement of the Plan Vivo Standard, it was a requirement to gain Fiji Government endorsement. The lengthy process to finalise the lease was due in part to the need to obtain signatures from 60% of listed clan members. In practice this was difficult because many clan members live outside of the project area, and the official list has not been updated, meaning that a number of listed members were deceased. The delay was also due to slow bureaucratic administrative processes within the agency responsible for leases. The impact of the delay was that the landowners did not receive credits or income from credit sales until May 2018. Nakau and Live & Learn assisted the communities to maintain their commitment to forest protection through this period by focusing on beekeeping activities.

Coordination with national REDD+ program

The Fiji Government is operating a National REDD+ Programme under the World Bank Forest Carbon Partnership Facility (FCPF). There has been ongoing consultation between the Drawa Project proponents and the Fiji Government as the national scheme has developed. The Nakau Programme undertook respectful advocacy on behalf of the project, including development of four policy position papers on matters that affect the project and its potential replication in Fiji. Furthermore Live & Learn attend multiple national REDD+ Steering committee meetings as an NGO representative. Consultation outcomes included Fiji Government excluding the Drawa Project Area from the national program area to avoid double counting, which is recorded in the Fiji FCPF Emissions Reduction Program document. However, the Fiji Government has indicated that they would like the Drawa project to 'nest' within the national scheme by the beginning 2022. The primary requirement for nesting is to apply the national Reference Emissions Levels (REL) as the methodology to measure emissions reductions, required for consistency with the future national

approach to measuring and reporting Nationally Determined Contributions (NDCs). Therefore there is a significant chance that the project will not be able to continue under Plan Vivo post 2022, however it will be able to transition to a different arrangement without impacting the permanence of emissions reductions achieved prior to 2022. We note that all Drawa project proponents would prefer to maintain the Project independently from the national program, and will continue to explore the possibilities for this to occur.

Opportunities

Donor funding

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) have offered to provide funding support to help maintain and strengthen the Drawa project in 2019 / 20. The funding will be used to improve the quality of mapping and spatial data (e.g. satellite imagery) for monitoring and reporting. Improved mapping will be available for the 2nd monitoring report and verification scheduled for February 2020.

The European Commission has approved a 3-year funding proposal to replicate the Drawa Project in Fiji (2020-2023). The projects will need to 'nest' within the national programme, and hence are not likely to fall under the Plan Vivo Standard. The nesting guidelines for the national program, however, are still in development.

Research

The Drawa Forest Conservation project is currently host to two Phd students. One student is conducting social research into the project participants, including project coordinators through the University of Melbourne. Live & Learn's Fijian project coordinator is undertaking the other Phd study to be integrated with her work, under the University of the South Pacific. The research will provide opportunities to assess, monitor, and evaluate various aspects of the project to foster continuous improvement, while also providing an opportunity to share lessons learned from the projects.

Annexes

Annex 1. Summary data for the Drawa Forest Conservation Project

Vital Statistics	
Project Name	Drawa Forest Conservation Project
Project Location	Drawa, Vanua Levu
Project Objectives	Conservation of mature indigenous rainforest through avoiding forest degradation, by means of legal protection of forest.
Project Activities	Termination of baseline logging activities and placement of Project Area into a reserve.
Target Communities	Drawa, Navunica, Nadugumoi, Bakibaki, Nakalounivuaka, Vatucuca, Tonikula, Nakase <i>mataqali</i> (landowning clan groups), of the Drawa, Vatuvonu Keka, Lutukina, Batiri and Nayarailagi villages
Project Owner	Drawa Block Forest Communities Cooperative Ltd
Project Coordinator	Live and Learn Environmental Education – Fiji
Programme Operator	Nakau Programme Pty Ltd
Methodology	Nakau Methodology Framework D2.1 v1.0; Technical Specifications Module (C) 1.1 (IFM-LtPF): Improved Forest Management– Logged to Protected Forest V1.0
Scope	Forest-remaining-as-forest activities. Accounting for AFOLU GHG emissions and removals.
Activity Class	Carbon
Activity Type	Improved Forest Management – Logged to Protected Forest
Standard	Plan Vivo Standard
Registry	Plan Vivo Registry (currently Markit Environmental Registry, London)
Product	Plan Vivo Certificates/VERs
Benefits	Avoided AFOLU GHG emissions from avoided timber harvesting; enhanced AFOLU GHG removals from forest protection.
Co-Benefits	Biodiversity protection, improved community governance, community development, maintenance of healthy hydrological system, climate change resilience through reduced impact of extreme weather events
Validator/verifier	Plan Vivo
Project Period	30 years from project start date
Monitoring	3 yearly from project start date
Project Start Date	6 th September 2012
Project Area	5,686.65 ha
Forest Area	3,945.45 ha within the Protected Area
Protected Area	3,945.45 ha made up of 2 main 'zones;' 1,548.45 ha as the Eligible Forest Area, and 2,397 ha of protected forest that would not be logged under the baseline
Eligible Forest Area	1,548.45 ha made up of 7 forest patches
Original condition	Mixture of logged and primary forest, taro and kava plantations, subsistence gardens and secondary forest in fallow areas where subsistence gardens existed in the past.
Baseline Activity	Legally sanctioned timber harvesting
Project Activity	Legally binding forest protection
Legal Protection	Conservation Lease
Validation	Carbon, biodiversity and community elements of Project Description validated under the Plan Vivo Standard.

Verification	GHG assertions verified to the Plan Vivo Standard through verification audit of Project Monitoring Reports.
Buffer	Annual Carbon Credit Buffer Rotation 1 (years 1-15) = 4,700 tCO ² e Annual Carbon Credit Buffer Rotation 2 (years 16-30) = 2,574 tCO ² e Annual Habitat Hectare Buffer Rotation 1 (years 1-15) = 310 ha Annual Habitat Hectare Buffer Rotation 2 (years 16-30) = 310 ha
Net Carbon Credits (Plan Vivo certificates) p.a.	Net Carbon Credits Rotation 1 (years 1-15) = 18,800 tCO ² e Net Carbon Credits Rotation 2 (years 16-30) = 10,294 tCO ² e
Net Habitat Hectares p.a.	Net Habitat Hectares Rotation 1 (years 1-15) = 1,238 ha Net Carbon Credits Per HH Rotation 1 = 15.1 Net Habitat Hectares Rotation 2 (years 16-30) = 1,238 ha Net Carbon Credits Per HH Rotation 2 = 8.31

Annex 2. Project objectives

The Drawa Forest Carbon Project aims to deliver enduring benefits to participating communities through the provision of payments (compensation) for the loss of income from timber harvesting that has been avoided. As part of the project community governance has been strengthened through the formation of the Drawa Block Forest Communities Cooperative and undertaking associated capacity building activities. This project aims to enable the Cooperative to manage funds received in a manner that brings sustainable benefits for the community in the form of community development initiatives, such as infrastructure improvements; supporting further income generating activities for cooperative members; and administering a process of distributing member dividends.

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

Annex 3. Workshops and capacity building activities delivered

DBFCC/Community Consultations & Capacity Building		
1	Project Coordinator - stakeholder meetings and finalizing work plans with DBFCC Board	23rd January, 2017
2	Meeting/ workshop with DBFCC and Bee Specialists and travel cost to Sigatoka	8th August, 2017
3	DBFCC Board meeting to discuss Annual Work Plan and other business matters and DBFCC Special General Meeting	18th to 20th February, 2017
4	Community consultation to discuss Annual Work Plan and Special General Meeting agenda	10th February, 2017
5	DBFCC Special General Meeting	10th February, 2017
6	Pre-Community consultation for consulting communities as a whole in strengthening DBFCC business organization and bee hive health assessment	10th March, 2017
7	Fieldwork #4 - Phase 1 Financial Literacy (Mango Training) and Hive Inspection	1st May, 2017
8	Fieldwork #4 - Phase 2 Financial Literacy (Book Keeping) and Hive Inspection	1st May, 2017
9	Fieldwork #4 - Consolidated community consultation at Drawa and site assessment	1st May, 2017
10	Fieldwork #5 - Community consultation for June honey harvest, apiary assessment, asset tagging and strengthening beefarmers link to DBFCC	14th June, 2017
11	Fieldwork #6 - Community consultation for Money minded training by ANZ, apiary assessment and honey harvest and strengthening beekeepers link to DBFCC	10th June, 2017
12	Fieldwork #6 - Money-Minded training by ANZ	10th July, 2017
13	Fieldwork #7 - Community consultation for nursery and bee-garden establishment and storage facility planning	21st September, 2017
14	Fieldwork #8 - Community consultation, hive assessment and bee garden assessment	27th October, 2017
15	Fieldwork #9 - Community consultation to assist DBFCC in conducting intra-Member AGM and DBFCC AGM	21st November, 2017
16	Beekeepers and DBFCC Board Members to attend Lessons Learnt Workshop at Live & Learn	17th October, 2017
17	Lessons learnt workshop with Bee Specialist post-attachment period	29th November, 2017
1	Fieldwork #1 - Community Consultation	Feb-18
2	Fieldwork #1 - Phase 4 Financial Literacy training at Batiri	Feb-18
3	Fieldwork #1 - DBFCC Workshop in Labasa for Value-Added Services and honey Storage Facility construction planning	Feb-18
4	Fieldwork #2 - Basic Beekeeping Training and DBFCC Planning meeting at Batiri	Mar-18
5	Fieldwork #2 - DBFCC Strategic Planning and Business Administration Mentoring Workshop at Dreketi	Mar-18
6	Fieldwork #3 - Community consultation intra-member SGM	Apr-18
7	Fieldwork #5 - Workshop meeting with DBFCC in Labasa Business Mentoring by LLEE Finance Manager	July to Aug 2018
8	Fieldwork #5 - Community consultation	Aug-18
9	Fieldwork #6 - Community consultation for ANZ donation, monitoring, handover preparation	Oct-18

10	<p>Fieldwork #7 – Community Monitoring visit (funded through ANZ Bank donation activity)</p> <p>Emissions Reduction Programme Document Review by Nakau Programme Team-Robbie</p> <p>Benefit Sharing and Carbon Accounting awareness training-Live & Learn was part of this awareness workshop organised by the Government</p> <p>A Meeting between the CSO and the REDD+ National Programme Team- This was a meeting of all invited CSO partners with the National REDD+ Team. Live & Learn was also part of this meeting</p>	Dec-18
1	<p>Fieldwork #1 - ANZ Donation Planning Consultation with Drawa Block Communities Women's Groups: Lutukina</p> <p>Fiji Emissions Reduction Program – Document (ERPD) World Bank and Technical Advisory Panel (TAP) Review Meetings (21st – 26th Jan 2019). The Drawa Landowners and Live & Learn were part of these meetings. This was a review meeting on the ERPD document being drafted by the Fiji Government.</p>	Jan-19
2	<p>Fieldwork #2 - Socio Economic Valuation (18th Feb)</p> <p>Fieldwork #3 - Stakeholder Analysis (Market Analysis) by Live & Learn Socio Economic Survey Data Analysis</p>	Feb-19
3	<p>Fieldwork #4 - Socio Economic Survey for the 5 villages: Nayaralagi, Batiri, Drawa, Vatuvonu and Lutukina, Dates (7th – 9th March)</p> <p>Meetings (Nakau & LLEE with other Stakeholders)</p> <ul style="list-style-type: none"> • Meetings with Conservation International • Meeting with Deputy Conservator Forest • Meeting with the key people with the Ministry of Forestry <p>Fieldwork #5 - Annual General Meeting-Drawa Block Forest Communities Cooperative (DBFCC)</p>	Mar-19
4	Eligible Forest Area Maps revision and correspondence between Live & Learn and WCS	Apr-19
5	Continued correspondence and support between Live & Learn & DBFCC Follow up on the Stakeholder analysis on the markets for the DBFCC honey products	May-19
6	Honey Markets Consultation with the Business Owners in Labasa (Phone consultation)	Jun-19
7	<p>Fieldwork #6 – Drawa village, both Nakau and Live & Learn organized a capacity building meetings with both the DBFCC Board Members and Land Management Committee.</p> <p>-Assist the DBFCC to run their first land management sub-committee meeting</p> <p>-Run a support session on finances with DBFCC board</p> <p>-Undertake 'eligible area' site visits and transect walks (transect = straight line walk across the forest patches).</p>	Jul-19
8	<p>Fieldwork #7 – Meeting with the DBFCC Board and Land Rangers Recruitment of the DBFCC Business Manager Discussion and Selection Eligible Forest Monitoring Surveys on the 3 Mataqalis (Navunicau & part of Nakase & Tonikula)</p>	Aug-19
9	Fieldwork #8 - Eligible Forest Monitoring Surveys on the 2 Mataqalis	Sep-19

	(Nakase & Tonikula) REDD+ National consultation with the Drawa Landowners in Batiri Village	
10	Workplan for the next 3 months: Fieldwork #9 - Completion of the Eligible Forest Areas Surveys (Nadugumoimoi, Navunicau, Nakalounivuaka & Bakibaki) Support DBFCC on the Recruitment of the Business Manager Support DBFCC on the writing and submission of their Money story and Land management reports	Oct-19
11	Fieldwork #10 – Socio Impact Assessment Surveys on the 5 villages (Batiri, Nayarailagi, Drawa, Vatuvonu & Lutukina) Fieldwork #11 – Women in Business Monitoring surveys on the 5 villages (Batiri, Nayarailagi, Drawa, Vatuvonu & Lutukina)	Nov-19
12	Compiling of all information, Writing of quarterly reports	Dec-19

Annex 4. DBFCC annual operating budget for carbon project (\$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	18800.0	\$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	Per computer	\$-	2	\$-
GPS				
Ranger equipment				
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				\$136,557
NET PROFIT				\$68,176

Annex 5

Plan Vivo Certificate Sales Data (confidential)

Buyer / sale	Invoice date	Units	Wholesale Price	Sale value
ZeroMission	06/04/2018	1300		
ZeroMission	06/04/2018	140		
ZeroMission	06/04/2018	4,110		
ZeroMission	06/04/2018	800		
Ekos	09/05/2018	484		
ZeroMission	27/07/2018	1000		
ZeroMission	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	24/06/2019	5001		
Myclimate	11/07/2019	31,621		
		56,101		
		Total units sold	Average price	Total value of sales (USD)