



Annual Report

01 FEB 2018 – 31 JAN 2019

**Reducing Emissions from Deforestation and Forest
Degradation in the Yaeda Valley, Northern Tanzania**

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March 2019

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Our Vision and Theory of Change

Carbon Tanzania's vision is that forest communities value their environment because of the direct and global benefits they derive from it. The global community invests in intact tropical ecosystems that are a cornerstone of global ecological health.

Who We Are

Carbon Tanzania is an innovative conservation organisation, registered as a Tanzanian not-for-profit company based in Arusha, northern Tanzania, and as a company limited by shares in the UK. Founded by three dedicated conservation biologists, *Njano Mbilinyi, Marc Baker and St. John Anderson*, Carbon Tanzania's primary business focus is to provide unique skills, knowledge and experience-based services and interventions that lead to the production and delivery to market of forest-based carbon offsets. These offsets are generated through the actions of local Tanzanian communities conserving and managing their indigenous trees and forests.

Central to Carbon Tanzania's innovative conservation approach is a fundamental respect for local community land rights; this approach generates significant and sustained local economic benefits that incentivize and enable communities to conserve their immediate environment on which their way of life depends. It simultaneously contributes to preserving their traditional way of life and affords local communities increased options for how they manage their land.

Carbon Tanzania is a market leader in providing forest-based offsets to the Tanzanian tourism sector, as well as supplying an increasing number of offsets to the global voluntary carbon market. It provides a unique, tailored service to its clients including product support, institutional education and corporate social responsibility advice.

Our Track Record

Carbon Tanzania has proven its concept over the last 8 years through successfully developing its flagship community project in the Yaeda Valley in northern Tanzania. This avoided deforestation project focuses on an area of 20,790 hectares of dryland forest owned by the Hadzabe people. This project is now in its seventh year of generating internationally verified ex-post forest carbon offsets represented by 16,011 PVC (tCO₂e) per year in avoided emissions. In 2014 Carbon Tanzania expanded this project into the neighbouring village of Yaeda Chini to add a further 13,283 hectares of dryland forest, generating a further 4,600 PVCs (tCO₂e). The entire project area is now incorporated into a single Yaeda Valley REDD project covering 34,073 hectares. To date Carbon Tanzania has succeeded in selling the community-generated offsets at above average market price to both local and international buyers. This has resulted in a little over US\$300,000 being channelled to communities in the area in the first seven years of the project, with average annual income to communities from this single project set to exceed US\$70,000 going forward. Validated and Verified through the Plan Vivo Standard, this project is particularly noteworthy in that it is reinforcing the land and natural resource rights of two minority groups, the Hadzabe people, a unique hunter-gatherer community that has lived in the Yaeda Valley for some 40,000 years, and the Barabaig, a semi-nomadic pastoralist tribe who utilise the Yaeda Valley grasslands and savannah woodlands.

Our Theory of Change

We view our role as linking global environmental concerns with local economic and livelihood needs. It is now widely accepted that we need to better manage the impact of greenhouse gas emissions on

the global ecosystem in order to maintain and promote a healthy environment for human populations. Equally, rural communities in developing nations face daily challenges around managing their immediate environment that have wider consequences in the global context. Growing awareness of the critical role of tropical terrestrial ecosystems in regulating global climate systems means that there is a self-serving interest for actors in more developed countries (particularly in North America and Europe) to invest in the conservation of forest habitats in the tropics, predominantly located in developing nations. Local communities often keenly appreciate the benefits that they can derive from their natural resources, but these benefits are often intangible, non-fungible and are realised over the long-term. Immediate economic needs can lead communities to accept short-term economic benefits that are too often realised through resource exploitation or donor funded initiatives, neither of which guarantees long-term sustainable returns or safeguards for tradition livelihoods.

Carbon Tanzania seeks to combine elements of conventional integrated conservation and development projects (ICDP) with a “payments for ecosystem services” (PES) approach. In some quarters, REDD has been conceived more narrowly as simply a system of conditional performance-based payments (PES)¹. Projects developed by Carbon Tanzania are similarly premised on performance-based payments, but we have gone further in developing an approach to project implementation that recognizes the part that can be played by tried and tested interventions. These include participatory land use mapping, boundary determination, development of village land use plans, clarification of tenure, and introduction of alternatives to, or improved technology for, firewood and charcoal (e.g. energy efficient stoves).

Carbon Tanzania is the only private sector initiative in Tanzania that has successfully partnered with forest-adjacent communities to develop and implement an internationally accredited avoided deforestation project in natural forest, resulting in payments to communities from the voluntary carbon marketplace. In this regard, Carbon Tanzania has developed a clear understanding, well-regarded track record and proof of concept of how avoided deforestation projects can be successfully developed and implemented in Tanzania, despite the complexity of the operating environment. We have pioneered a business approach to meeting biodiversity conservation goals that simultaneously delivers reduced GHG emissions, improved livelihoods, localised economic development and support for traditional cultural values



¹ Sills *et al.* (2009), The evolving landscape of REDD projects.

Summary of Yaeda Valley REDD project for 2018

In this project cycle, 1st February 2018 to 31st January 2019, the fourth year of the Yaeda extension was completed, with the entire Yaeda Valley REDD project remaining under a single management structure. The Project Development Document (PDD) remains under the newest version of the Plan Vivo standard (Version 2013) and incorporates two technical specifications, Yaeda I validated in 2012 and verified in 2017 and Yaeda II validated in 2017. We have continued to equip our community monitoring teams, improving data collection and increasing the use of technology such as the SMART²/Cybertracker³ monitoring app, run on Caterpillar S31 GPS/Camera/Phone units. Full training on SMART/Cybertracker was undertaken during this project cycle, and new types of dynamic data was generated. Data collection and response has been improved by increased capacity among uniformed and trained Village Game Scouts⁴ (locally known as VGS). In 2018 more VGS attended the Community Based Conservation Training Centre (CBCTC), a government run training academy where they receive training and certification as official Village Game Scouts (VGS), granting them recognition under a government system of village law enforcement and therefore more strength to enforce the village by-laws. The placement of VGS at the training centre has been found to be a useful exercise and more will continue to be enrolled there in forthcoming project cycles.



The activity-based monitoring system implemented in 2014 forms the basis for annual ex-post issuance of Plan Vivo Credits (see appendix) and was last updated in 2016 to include specific Sustainable Development Goal (SDG) targets that are being monitored and delivered by this project. This activity based-monitoring system incorporates all the community monitoring data, tracks institutional arrangements, conflicts, land security as well as financial flows to communities, the latter

² www.smartconservationtools.org

³ www.cybertracker.org

⁴ Terminology 'community scouts' has been previously used, we now use Village Game Scout (VGS) to conform with government terminology based on training at CBCTC.

being critical to ensure this payment for ecosystem service project continues to deliver on its promises. In 2018, we gathered the first large dataset from the SMART monitoring system for the Yaeda Valley. This innovative software contains a module we designed specifically for our needs, including an app (Cybertracker) that incorporates all our monitoring requirements, is in Swahili, and is primarily pictorial, allowing for use even among illiterate team members who are some of the best community guards. The data generated improved our specific understanding of patrol events in the valley and was easily adopted by the guards.

Project summary and request for issuance

Project overview	
Reporting period	1st February 2018 – 31st January 2019
Geographical area	Yaeda Valley, Mbulu Distict. 34.3E/03.30S
Technical specifications in use	Reducing Emissions from Deforestation and Forest Degradation in the Yaeda Valley. Updated June 2016.
Area under management (ha)	34,073ha Project area
Areas put under management since last report (ha)	(13,283ha added under updated PDD June 2016)
Project indicators to date	
Community groups with plan vivo and PES agreements (total)	Three village communities, Mongo wa Mono, Domanga and Yaeda Chini following the CCRO / land use plan outlined in the technical specifications of the PDD.
Total PES payments made to communities to date (USD)	303,732USD
Total PES in trust to be paid in May 2019	6,840 USD based on sales commitments
Plan Vivo Certificates issued to date	105,266
Allocation to buffer to date	26,316
Unsold stock / vintage (as of Jan 31)	
2012	40
2013	16
2014	112
2015	11
2016/17	200
2017/18	16,008
Project activity this reporting period	
Community groups with PES agreements signed	Three village communities, Mongo Wa Mono, Domanga and Yaeda Chini following the CCRO / land use plan outlined in the technical specifications of the PDD.
Approximate number of people	6,019 with seasonal variation
Area under management	34,073ha
PVCs Issued to Date	105,266
Total Emissions Reductions achieved in this reporting period	25,764
Allocation to PV buffer account in this reporting period	5,153
Submission for PVC Issuance (tCO ₂)	20,611
PVCs available for future issuance (REDD only)	0
Total PVCs issued (including this issuance)	125,877

Part A. Project updates

A.1. Key Events in chronological order from February 2018 to January 2019

February 2018 - Quality assurance visit to Yaeda which included a finance meeting with some community leaders to ensure that current and future revenue sources were well understood and that their use is planned for.

March 2018 - SMART/Cybertracker training was conducted with full Village Game Scout (VGS) groups from Mongo Wa Mono, Domanga and Yaeda Chini, including learning and practical assessment. After this exercise the SMART/Cybertracker monitoring system became fully operational and replaced the previous paper-based system.

April 2018 - The second group of six Village Game Scouts were sent to the Community Based Conservation Training Centre (CBCTC) for a three-month course.

May 2018 - Bi-annual finance meetings were conducted in Mongo Wa Mono, Domanga and Yaeda Chini villages. The project received full validation and verification from Plan Vivo following the report of EPIC Sustainability who had conducted a visit in the previous project cycle.

August 2018 - The first of many planned mobile health clinics was conducted in Mongo Wa Mono, Domanga and Yaeda Chini. The clinic saw hundreds of people and provided free treatment for eye problems which was the most prolific ailment. The clinic was undertaken by Carbon Tanzania with the close consultation of a team from the Regional Hospital and an American doctor (Dr. James Lace)⁵ with 15+ years' experience operating mobile clinics in Tanzania.

July 2018 - Carbon Tanzania conducted a management training with leaders and project employees in Mongo Wa Mono, Domanga and Yaeda Chini. The goal was to reinforce the roles and responsibilities of all members and to improve workflow. The Mbulu district also independently undertook a major operation in which they relocated illegal settlers who had settled in and around the protected areas in the Yaeda Valley. The district cited the benefits that the communities and the district were getting from the carbon project as one of the factors that led them to begin the initiative.

September 2018 - Carbon Tanzania presented at the MJUMITA (a national network of community groups involved in participatory forest management) conference, where the Yaeda project was highlighted as an example of successful community forest conservation.

November 2018 - Bi-annual finance meetings were conducted in Mongo Wa Mono, Domanga and Yaeda Chini villages.

January 2018 - Carbon Tanzania visited the Yaeda Valley with a social research specialist in order to conduct background research aimed at informing a future economic inclusion survey, which will allow Carbon Tanzania to assess and improve the systems used to make sure project revenue is equitably accessible to all members of the community.

A.2. Successes and challenges

Project implementation activities

Land use and ownership rights to the forest resources remain secure. Ensuring by-laws are followed depends on project operations and revenue generated for communities and local governance structures by both this project and through the tourism products offered by Dorobo Tours and Safaris.

⁵ Childhoodhealth.com

Carbon Tanzania fully understands that this essentially means being able to continue the current sales levels so that we can meet financial expectations and commitments (see sales section below). Ensuring some of the neighbouring pastoralist communities follow seasonal patterns within the overall land use plan continues to be a challenge, however this does not lead to deforestation but does increase disputes between the Hadza and neighbouring cultural groups. In 2018 sufficient rains meant that the area designated for grazing was not depleted early so cattle grazing was not displaced into the Hadzabe protected area, which had been an issue in previous years.

Carbon Tanzania and our partners, including the Ujamaa Community Resource Team (UCRT), are constantly communicating and working with district government to ensure transparency. The Tanzanian Government takes the poaching of mega-fauna seriously but poaching in the region is a concern for communities. Due the distances involved and resource challenges, responses to poaching can be limited but Carbon Tanzania and its partner communities continue to work with district officials to meet these challenges. The Yaeda based project manager has already increased our capacity to be more responsive to community needs and improve our communication and information gathering from the communities. In 2018 we continued the process of sending VGS to the Community Based Conservation Training Centre (CBCTC)⁶ for further training on conducting patrols and wildlife management. This will continue with the aim that all scouts will be trained and certified. Furthermore, the ones who had already attended received official documentation from the district.



Sales

Bringing credits to market at a value that reflects expectations and project operations means Carbon Tanzania has continued to work towards diversifying and increasing its sales of PVCs. We continue to sell directly to local Tanzanian clients, predominantly ecotourism operations, but also airlines and

⁶ <https://www.tnrf.org/en/node/6937>

other small businesses, and we also sell PVC's in the form of gift certificates to individuals and small companies. For these sales we control the price and command between USD [redacted] and USD [redacted] per PVC.

Sales continue through several resellers in both Europe and America, where occasional orders for credits are received and processed. Prices for such sales vary between USD [redacted] and USD [redacted]

A challenge faced by our sales team in the past has been selling all annual issued credits within the calendar year. This has meant that not all potential revenue has been realised for the project and the volumes sold year on year have fluctuated. The consequence is an unpredictable revenue flow to the communities which, while manageable, has been somewhat confusing to the members of the communities. This challenge has been largely mitigated through an agreement, signed in May 2017, with US-based reseller Native Energy to buy 20,000 PVCs, the vast majority of unsold stock at USD [redacted] per PVC. This means that we are able to realise the remaining revenue from issued PVCs, and pass on the requisite share to the communities. In order to satisfy the purchasing requirements of the end client in this deal, the revenue from this stock sale will be allocated to activities which have already been agreed by the communities, but which fall into the following three categories: 1) education provision both for school children, college students and adults, 2) increasing the capacity of the VGS through sending them to formal government ranger training courses, and 3) improving governance and financial management capacity in the community administrative structures through supporting training events, facilitating meetings and developing better systems for accountability.

As well as this sale of stock PVCs, in March 2019 we signed with the same reseller, Native Energy, a 5 year forward buying deal for PVCs generated by the project. This agreement began with the sale of 16,000 of the 2016 PVCs from the first phase of the Yaeda Valley REDD Project in March 2018, and will continue with the sale of 16,000 PVCs over the next 4 years of issuance.

With the above deal in place, the robust sales of the remaining PVCs to local Tanzanian clients, and continued demand for the Yaeda credits from international resellers, we are in a position where we do not have enough credits to fulfil all requests.

A.3. Project Developments

REDD in the Yaeda Valley

Since 2016, Yaeda I and Yaeda II have been under the same management structure, characterised as one greater Yaeda Valley REDD project area. Carbon Tanzania has continued to build its capacity to better manage the project, this includes the continued employment of the Yaeda Valley manager, who lives in Yaeda Chini and manages a Carbon Tanzania office there as well. His role includes district level engagement, mentoring and working with VGS conducting surveys, collecting and collating data, as well as organizing and leading trainings and meetings. The manager also provides the link between community and village governance structures. The manager has continued to improve in his management capacity and operational independence as well as his integration in the community at a leadership level. Improved mobile network development including mobile data has also allowed for increased and easier communication between the manager and the core staff based in Arusha.

A.4. Future developments

Our future project developments are represented in Table 2. It describes the activities/areas on which we will be focussing, as well as the future outcomes we expect to see. The baseline is included for

comparison, though this is not a without project baseline, but a current baseline without new future initiatives. These future developments include measurable targets/indicators and a schedule for implementation that can be used for future monitoring and internal certification.

Table 2. Future Activities

Activity	Outcome	Business-As-Usual (Baseline)	Target	Date
Activity Area 1: Education & Employment				
Community Scout Apprentice Program (Youth Employment)	50% increase in apprentices trained over the five-year period 30% of which are female	Professional ranger training at community-based conservation training centre continues: 6 in 2017, 6 in 2018, and 18 in 2019	4 youth per year (Youth Employment)	4 youth trained by November each year (2019-2022)
Professional management training for field personnel	Increased capacity for local Yaeda based and sourced team to manage Yaeda Project Clear understanding of expected roles and responsibilities among management team	Trained local management team in place but much room for improvement in higher level management techniques and communication abilities	Management Team (8 people, 4 male / 4 female)	June – July (2019-2022)
Activity Area 2: Health Care Services				
Eye and TB assessment and treatment Clinics	Identification and treatment of trachoma and removal of cataracts where appropriate coupled with TB assessment and treatment	Eye related and TB related issues prevalent with little recourse available to community	Hadza Community (1000 + People) & Neighbouring Groups (Tatoga)	Two visits per year followed by treatment scheduled where needed
Activity Area 3: Economic Inclusion				
Economic inclusion assessment and undertaking	Introduction of economic inclusion concept and survey. Consensus building exercises to design a system according to social context and applicability. Payments are linked to natural resource management (NRM)	All payments continue as usual, less of an understanding of economic inclusion	All community members have better access to project revenue	Jan 2019: Background research 2019: Economic Inclusion Survey aimed at creating improved system 2020 -2022 Possible full-scale implementation

Operational management and planning

Carbon Tanzania has continued its operational management and training exercises to clearly identify gaps and needs within the organisation. Carbon Tanzania has identified the need to engage with the Paris Agreement policy environment where it relates to REDD and is continuing to engage with the Tanzanian government through the National Carbon Monitoring Centre (NCMC) and other government agencies. Carbon Tanzania has conducted a strategy planning and human resource exercise. In 2018 Carbon Tanzania promoted the monitoring and reporting manager to general project operations manager, after the successful development and introduction of the SMART/Cybertracker monitoring system across all of Carbon Tanzania's project areas the operations manager is now overseeing all daily operations activities for Carbon Tanzania.

Sales and Marketing

As reported in section A.2 above, in 2018 Carbon Tanzania signed a 5-year agreement for the sale of 16,000 PVCs per year to Native Energy. The remaining credits (approx. 4600) are now oversubscribed. We will sell a proportion to our established local Tanzanian market, as well as reserving some for our smaller re-seller partners in Europe and the US.

Part B. Project activities, total project size and participation

This project works with hunter-gatherer Hadza (or Hadzabe) and Barabaig pastoralist communities in Mongo Wa Mono, Domanga and Yaeda Chini villages. By working in conjunction with traditional leaders, the elected village governments and a team of community members, Carbon Tanzania has established a system of results-based payments for ecosystem services through the sale of *ex-post* Plan Vivo Certificates (PVCs). This REDD project strengthens land tenure, management capacity and local natural resource management, enhances and diversifies local incomes, and contributes to local, national and global environmental conservation aims.

Table 3. Project Activity Summary

Name of Technical specification	Area (ha)	No households	No communities
REDD in Yaeda Valley updated June 2016	34,073 ha	n/a	3

Successful avoided deforestation is being achieved through a series of interventions including reinforcing the implementation of the approved village land use plan (see below) and associated village by-laws, improving forest conservation and management activities and addressing the primary driver of deforestation, slash and burn agriculture.

The community members are achieving these aims by patrolling and reporting any land use change and / or poaching activities, which are occurring illegally within the designated project area. This data, with support from external government agencies, is being used to tackle illegal land intrusion and resulting land conversion at both a local and district level.

Farmers are supported through designated areas within the villages that have been identified based on best fit for agriculture; analysis of aspect and soil type allow for improved agricultural conversion but are external to the project area (see Land use plan map B1) and any counted carbon.

Part D. Sales of Plan Vivo Certificates

D1. Sales of Plan Vivo Certificates

As described in detail in section A.2 above, we now have a buyer committed to purchasing 16,000 PVCs each year, which began with the sale in 2018 of 16,000 PVCs from the 2016-17 vintage. A further 16,000 PVCs issued in 2018 for the reporting period 2017-18 are still held for the same buyer and will be delivered in March 2019. Going forward payments will be made annually for each subsequent issuance (the payment will be divided into two instalments to coincide with our annual revenue disbursement events in the project area).

The remaining credits will be sold to our local market of tour operators and small businesses, as well as used to satisfy smaller orders from our Europe and US based resellers who regularly submit orders for between 300 and 1000 PVCs for their clientele. Some orders have already been placed and we have one VERPA in place for the purchase of 1500 PVCs.

Historical sales data – 6-year consolidation

A full reconciliation of issuance, retirements, transfers and sales has been made, which reflects the situation as recorded on our Markit Registry account as of the 12th March 2019. Some re-allocations of ex-ante sales have been affected to match our stock situation to our Markit account.

Table 6a below shows that Carbon Tanzania has issued 105,266 PVCs to date. We hold unsold stock of **16,388 PVCs, of which 16,000 are reserved for transfer to a reseller in March 2019**. This results in a total of 88,877.55 transfers or retirements shown in our Markit account. We have received payments for a total of 81,859.1 PVCs, which is a net deficit of 7,018.5 PVCs. The difference is explained by the fact that we have received revenue for credits that will be issued in 2019 (a total of 2,695 PVCs from the forthcoming 2018-19 Vintage). The credits allocated to these sales can be deducted from a combination of the 9,500 PVCs already transferred to resellers, but for which payment was not received in the current reporting period, added to a small number of credits (213.5PVCs) that have been allocated from the forthcoming vintage but for which payment has been received within the subsequent reporting period (Feb and March 2019). This situation is summarised in Table 6b below).

Table 6a. Consolidated figures for Carbon Tanzania sales and corresponding Market Registry retirements and transfers, project start to January 2019

Reporting period	Total tonnes sold in reporting period	Vintage on registry	Tonnes issued	Total retirements / transfers from vintage	Unsold stock (balance)
to Jan 2013	5153.8	2012	18,012	17,972	40
2013-14	5529	2013	14,010	13,994	16
2014-15	9754.4	2014	16,011	15,899	112
2015-16	9343.8	2015	16,011	16,000	11
2016-17	13579	2016-17	20,611	20,410	201
2017-18	8670	2017-18	20,611	4603	16,008
2018-19	29,829				
Totals	81,859	n/a	105,266	88,878	16,388

Table 6b. Summary of ex-ante sales and out-of-reporting-period sales, retirements and transfers

1	Transferred credits - not yet paid for	9,500.0
2	Credit sales transacted after reporting period	213.50
3	Total post reporting period commitments (1 + 2)	9713.5
4	Credits for which pre-payment was received within reporting period	2,695.00
5	Net difference in allocated credits at end of current reporting period (3 – 4)	7,018.5

Currently Carbon Tanzania has two sales channels for its offsets: *direct sales and re-sellers.*

Direct Clients: Direct sales are the primary means of distribution with the highest retail price at USD [REDACTED] per PVC. Carbon Tanzania has developed a unique customer base in the Tanzanian tour operator sector that initially relied on the personal relationships of its founders with the target customers, and has subsequently evolved to include tourist outfitters and lodge and hotel owners seeking to enhance their eco-travel credentials. The local credibility of Carbon Tanzania combined with the relevance of the project activities to customer priorities means that new customers are being added in this segment regularly.

International Resellers: In 2018 four resellers have continued to sell offsets on behalf of Carbon Tanzania. Due to the large volumes requested by one individual reseller, a lower level of USD [REDACTED] per unit selling price was accepted on some of these sales, although USD [REDACTED] was obtained from one re-seller.



Domanga based VGS or traditional scouts on patrol.

Table 7. Buyers and transaction volumes February 2018 to January 2019

Customer	Tonnes		Vintage	Total sale
R and J Knocker	9.9		Yaeda 2017-18	
HRSV / FEMI	45.8		Yaeda 2017-18	

Sustainable Travel International	460.0		Yaeda 2016-17	
African Environments	186.0		Yaeda 2017-18	
Native Energy	8000.0		Yaeda 2016-17	
Website sales	56.1		Yaeda 2017-18	
Native Energy	4000.0		Yaeda 2015	
The Map's Edge	337.2		Yaeda 2017-18	
African Environments	69.0		Yaeda 2017-18	
Dorobo Tours and Safaris	85.3		Yaeda 2017-18	
African Environments	122.5		Yaeda 2017-18	
African Environments	83.3		Yaeda 2017-18	
Zero Mission	2500.0		Yaeda 2016-17	
Cleavel	150.0		Yaeda 2016-17	
The Map's Edge	136.2		Yaeda 2017-18	
African Game Trails	11.0		Yaeda 2017-18	
Website sales	11.5		Yaeda 2017-18	
The Map's Edge	29.8		Yaeda 2017-18	
Website sales	21.8		Yaeda 2017-18	
Native Energy	3000.0		Yaeda 2015	
Mike and Bev Cristina	30.0		Yaeda 2017-18	
Website sales	50.6		Yaeda 2017-18	
Duma Explorer	173.0		Yaeda 2014	
Native Energy	8000.0		Yaeda 2016-17	
Asilia	1126.2		Yaeda 2018-19	
Wildlife Explorer	110.5		Yaeda 2017-18	
Nature Discovery	294.3		Yaeda 2018-19	
Hidde Backhuizen	663.0		Yaeda 2017-18	
Acacia Natural Resource Cons	13.9		Yaeda 2017-18	
Website sales	52.0		Yaeda 2017-18	
Totals	29,828.9			

NB. Carbon Tanzania pays communities aggregated payments in May and November as shown in the project timetable Part H. This is done to balance financial needs, such as school fees that are paid at a specific time of year and with availability of natural food (May being end of wet season and November end of dry season).

Part E. Monitoring Results

E1. Ecosystem services monitoring - Activity based monitoring

Monthly community-based monitoring of the project area forms part of the activity-based monitoring schedule. The community monitoring reports on three potential threats; 1) Illegal land incursion resulting in habitat loss, thus loss of above ground biomass (this is within the project area and leakage

area); 2) overgrazing or illegal cattle incursion and associated construction of cattle corals (known locally as a 'boma'); 3) poaching or illegal bush meat hunting, this being a socio-economic issue for the Hadzabe. In 2018 the SMART/Cybertracker system was fully launched. Using the same parameters as before the monitoring forms were converted to a mobile app, which the community members quickly adapted to. This allowed all incidents to be recorded with GPS locations and photos in a simple and secure system. This has proved invaluable for both project follow-up as well as internal community and legal uses.

The community-based monitoring aims to record events systematically to allow for presentation and discussion with the communities, village, project partners and district government. Importantly, the monthly community-based monitoring also outlines how these issues were dealt with by local authorities so that UCRT and Carbon Tanzania can follow up in village and district meetings with recommendations of how potential issues can be resolved. Since 2015 the Mbulu District Council has ordered the police to station one officer in Yaeda Chini in response to reported issues of land incursion, an issue not just in the Yaeda Valley but nationwide. As of 2018, a full police station has been constructed and soon a crew will be permanently stationed to deal with land incursion and conflict, and with the potential to support VGS in their routine natural resource protection activities. Also, in 2018 a force of over 100 youth has been trained locally and equipped by the government to increase security in the Yaeda Valley.

E.1 Activity-based monitoring results refer to the activity-based monitoring schedule in the appendix.

Green: Indicates that the project is on track to achieve the expected climate benefits and issuance continues as per the performance targets and contractual agreements with the communities.

Orange: Indicates some project activities are not on track to deliver the expected climate benefits. If one or more of these indicators are orange, then corrective actions are needed and are to be reported in the annual report to Plan Vivo. Issuance may be withheld from Carbon Tanzania and revenue may be withheld from communities depending on the indicator or the performance

Red: Indicates that project activities are not on track to deliver the expected climate benefits. If the project has one or more red indicators, corrective actions are required and issuance is withheld from Carbon Tanzania and payments are withheld from communities until evidence is shown of corrective action being taken.

Table 8. Activity-based monitoring results.

Indicator	Thresholds			Means of verification / comment on threshold
	Green	Orange	Red	
Community user rights over forest-based resources				Land use plans are in place, no changes made to law or policy on user rights
Community tenure, ownership and rights over land				CCROs are in place, no changes made to law or policy on ownership
Management Institutions				All bi-annual finance and grievance meetings are attended by all management institutions. Both Ujamaa Community Resource Team and

			and Carbon Tanzania are engaged and working within the Yaeda Valley. All village meetings are recorded and filed in the CT office.
Effort spent on conflict resolution by UCRT			Only 4 days have been spent in Yaeda by UCRT in 2018 related to pastoralist conflict and cattle enclosures in the project area. Target: <=14 days
Coverage by community guards			Monthly reports indicate approx. 70% of project area was covered in 2018 in Mongo wa Mono and Domanga and Yaeda Chini ⁷
Land use change			There has been a reduction in cattle enclosures built inside the project area and leakage area thus reducing land clearance, furthermore there has been no land use change related to agricultural clearing in either the project or leakage areas. All infringements of by-laws have been reported and acted upon. The verification has shown that land use change is decreasing compared to the baseline.
Payments to the community guards, communities and local government			All payment schedules have been met

Finance meetings in November 2017 – these meetings are always under a magnificent Baobab tree



⁷ SMART allows us to better understand and track patrolling and as such we are expanding the program.

E.2 Land use monitoring

Table 9. Results of land use monitoring

Threat	Occurrence / incident per community area	Reporting and action by community	Reporting and action by village / district
Unplanned agriculture	In Domanga there were 2 minor incidents of unplanned agriculture within the project area.	Reported to village government.	Agriculture was halted.
	In Mongo wa Mono there were no incidents of unplanned agriculture within the project area	-	-
	In Yaeda Chini there were 4 minor incidents of unplanned agriculture	Reported to village government.	Agriculture was halted.
Illegal hunting (poaching)	In Domanga there were 2 illegal hunting incidents recorded in the project area. The incidents did not involve Elephant poaching; and were reserved to illegal meat poaching.	Incident reported to village and district government.	No arrest were made
	In Mongo wa Mono there were 2 illegal hunting incidents recorded in the project area. The incidents did not involve Elephant poaching; and were reserved to illegal meat poaching.	All incidents are reported to village and district government.	No arrests were made
	In Yaeda Chini there were no illegal hunting incident recorded.	-	-
Non-agricultural land conversion	In Domanga, though reduced, the construction of bomas by Taatoga pastoralists continues to be recorded both on the edge and inside the project area.	VGS ask the Taatoga not to clear land within the project and report to the village chairman.	Reported to village chairman who orders the boma to leave and refrain from any habitat clearance in the project area. District undertakes operation to relocate illegal settlers.
	In Mongo wa Mono, though reduced, the construction of bomas by Taatoga pastoralists continue to be recorded both on the edge and inside the project area.	VGS ask the Taatoga not to clear land within the project and report to the village chairman.	Reported to village chairman who orders the boma to leave and refrain from any habitat clearance in the project area. District undertakes operation to relocate illegal settlers.
	Whilst cattle are permitted in Yaeda Chini protected area. Boma construction is only allowed seasonally.	VGS record boma construction but these are gone by the onset of the rains in December.	-
Cattle incursion	Cattle incursions during the end of the dry season continue across the landscape though are reduced. Whilst this has no impact on above ground biomass, cattle herds displace wildlife so is a socio-economic issue for the Hadzabe.	The community and UCRT continue to communicate the land use plan. In most cases the cattle are coming from outside of the area and people are simply unaware that land use planning is in place.	UCRT and Carbon Tanzania will continue to educate people about land use planning and UCRT have conducted an exercise remarking the boundaries of the land use plan.

E.4. Biodiversity monitoring

The Hadza are one of Tanzania's most distinctive and threatened human cultures, with a deep reservoir of indigenous knowledge pertaining to natural resource use. The Hadza are strict, almost obligate, hunter-gatherers and do not raise any livestock, although some do keep fields of domestic crops (indigenous African millet). Whilst famine might be part of the cultural history of neighbouring pastoralists or agriculturalists, this is not the case for the Hadza as they can survive on a rich diversity of foods. As the Hadza are able to exploit a wide range of seasonally available birds, mammals and

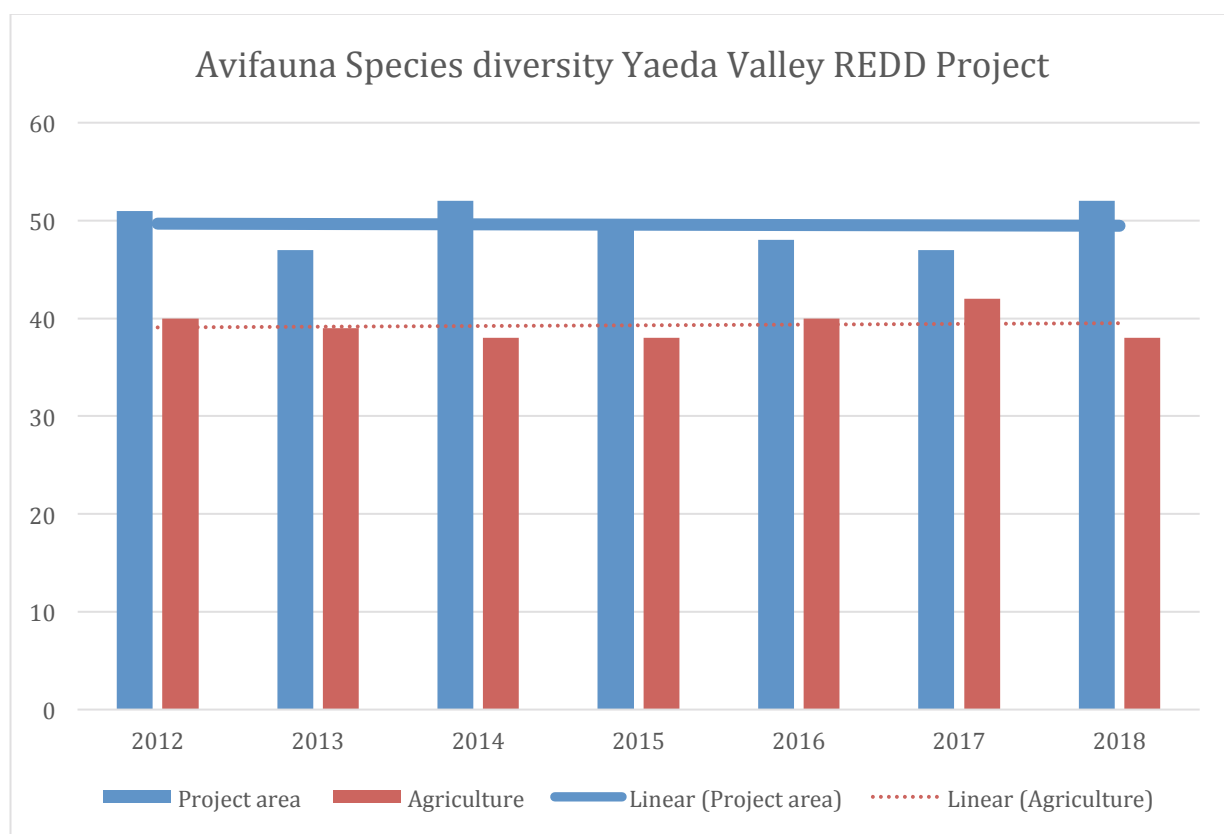
plant species our biodiversity monitoring program is interested in what types of mammals are consumed (Figure 11.) on an annual basis.



The Yaeda Valley forest in Domanga village

Avifauna

Avifauna are good long-term indicators of ecosystem health. Monitoring is conducted in February every year by an external team, in conjunction with the VGS due to the skills required to identify specific species. Timed Species Counts (TSCs) were completed in two locations set in 2012 for the baseline, inside the project area (within undisturbed Acacia – Commiphora woodland) and outside the project area (within mixed woodland and agriculture). The use of TSC counts allows for comparative analysis of species diversity between the two areas and shows no significant variation from the baseline which is expected, in all cases species numbers; n=72 total species recorded in both areas, with an average of n=50 in the acacia-commiphora woodland and an average of n=38 in the edge of agricultural areas.













Mammals

Mammals were monitored by the community teams as an indication of presence. Larger mammal species can be split into two classes, resident and migratory, in 2018 the following mammal species were observed within the project area. Differing to previous years the newly introduced SMART/Cybertracker system identified specific species to be monitored and reported on rather than the open-ended sheets that were previously use. This reflects the change in the Data, which is now more specific and includes pictorial and spatial data for all mammal observations. It should be noted that many of these large mammals range over large areas and data on movement is limited, we ensure that our data is passed into the Tanzania Mammal Atlas, which in turn informs better conservation management across the larger landscape.

Table 10. Mammal records for 2018: R: known resident; M: Possibly migratory; R/M?: Unknown resident / migratory status.

Species	Resident or migratory	# of observations	Groups	Notes
Giraffe	R	18	Yes	Resident populations with some migrant individuals
Elephant	M/R	20	Yes	Resident populations with some migrant individuals
Zebra	R	3	Yes	Common resident
Impala	R	79	Yes	Common resident

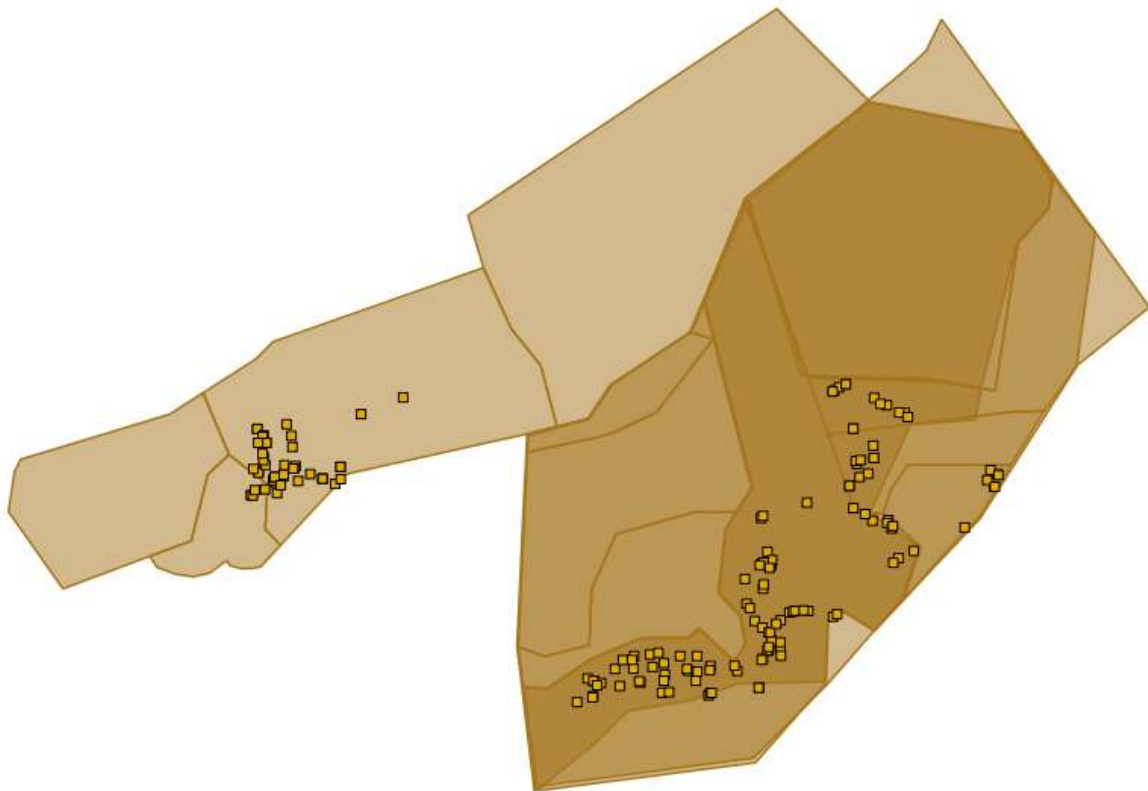
Kudu	R	38	Yes	Common and highly prized by Hadza
Eland	R/M?	11	Yes	Known to range over large areas
Warthog	R	5	Yes	Common
Leopard	R	1	No	Common but rarely seen
Buffalo	R	1	No	Would have been historically common

Ripoti Kitu Gani		Mnyama Gani	
Kilimo Haramu		Twiga	
Ukataji Wa Miti		Tembo	
Ujangili		Punda Milia	
Mifugo Haramu		Swalapala	
Wanyamapori		Tandala	

Screenshots from SMART/Cybertracker system to be used by scouts to monitor land use change and wildlife



Screenshots from community patrols using SMART/Cybertracker system. Leopard (Left) and Impala (Right)



GPS points representing some of the wildlife observations recorded on patrol using SMART/Cybertracker



Poachers traps discovered and removed by community guards while on patrol using SMART/Cybertracker

E5. Socio-economic baseline and actions to address issues arising

Issue identified during the survey	Action taken
Problem of transportation between villages was identified, specifically to travel faster between villages and to location of arising land use conflict. Gives the opportunity for guards to observe the area and react faster.	Yaeda project manager has a motorbike to respond to needs stated. Communities are allocating funds to purchase community motorbikes.
5%+ of the community fund from the carbon sale is paid to the local government (district).and In 2018 the district government requested a greater percentage of revenue. Community members want to better understand why the district should get more money.	The District government have greatly increased their visits to Yaeda in support of the land use plans. In 2018 some communities increased this percentage and the district took major actions in Yaeda including a large-scale operation to relocate illegal settlers from the protected areas. Carbon Tanzania has asked the district government to ensure they communicate this actions to the wider community to ensure there is more transparency.
The need to better understand economic inclusion was identified by community members and the Carbon Tanzania team. This relates mainly to decision making around gender and geographical understanding of revenue dispersal.	Carbon Tanzania has brought in a masters student to develop and conduct a study on economic inclusion in April 2019

Part F. Impacts

F1. Evidence of outcomes

Community

In terms of social impacts and outcomes, the community benefits continue to function at a high-level as shown in our Activity based monitoring results (Table 8). The Haydom fund allowing for more advanced medical treatments for project participants continues to be project highlight and is frequently utilized, evidenced by that fact that available funds are always fully deployed by community members. In addition, Carbon Tanzania set out to conduct a general medical outreach clinic in the medically underserved villages in the REDD project area. The Manyara Regional Referral Hospital was chosen as the implementing partner since the area is under their jurisdiction and because it provided a prime opportunity for positive engagement with public sector institutions. After several meetings with the Regional Medical Officer and his team all parties agreed on an implementation plan. The Hospital had never conducted a clinic of this sort and the area had never been served in such a way, so it was a new engagement for all sides. Carbon Tanzania also brought on an American MD with many years of experience in rural outreach clinics to serve in an advisory capacity throughout the process. The Clinic was structured to serve multiple purposes. A focus was put on Trachoma and TB testing and treatment. Eye medicine was to be provided free of charge as eye issues were understood to be a major health concern in the project area. Importantly the clinic was also designed to act as a needs assessment so that future interventions could refine their scope, with a view to providing gratis treatment for the highest prevalence ailments.

Results

The Clinic was executed by multiple teams which included several doctors and nurses from the regional hospital, local village dispensary staff, the advising paediatrician from Carbon Tanzania and Carbon Tanzania's project operations manager. The Clinic was mobile and did 2 days in the village centre of Yaeda Chini, as well as a day each in Mongo wa Mono and Domanga villages, with the aim to bring the medical services to areas most accessible to the various communities in the valley. Over the 4 days hundreds of people were seen at the various service points. Patients were generally screened for TB, HIV, eye disease, hypertension and diabetes; though the communities were told they could bring anything bothering them to the attention of the medical professionals. Due to the clinic many people were able to find out their HIV status for the first time and those found to be positive were advised on a treatment routine. Among over 200 eyes patients the most common problems were senile cataracts, bacterial conjunctivitis, allergic conjunctivitis, trachoma and refractive errors. Medicine for eye conditions was provided free of charge where appropriate.



In the case of children, TB, malaria, gastroenteritis, pneumonia, otitis media, severe eczema, and ringworm were all seen to be present.



Reflection and recommendations

Overall the clinic was seen as a success by both the implementers and the beneficiaries. The Regional Hospital as well as the communities all expressed great interest in continued medical outreach activities. Large numbers of people had access to medical services that otherwise would have not been possible to reach them. Furthermore the teams gained insights and information that will allow better service in the future. Recommendations and future actions include but are not limited to:

- Bi-annual clinics to be conducted in the area
- Education on ways to avoid respiratory diseases often caused by proximity to fire
- Education on HIV and other STI's identified within the area
- Providing for free medicines for commonly occurring issues
- Taking stock of locally available medicines and remedies, as part of greater investment in local village health centres
- Mechanism to provide for transport for critical cases to district and regional hospitals, and allotment of funds to provide for more complicated treatments such as surgical procedures etc...

This output was aimed at SDG 3:

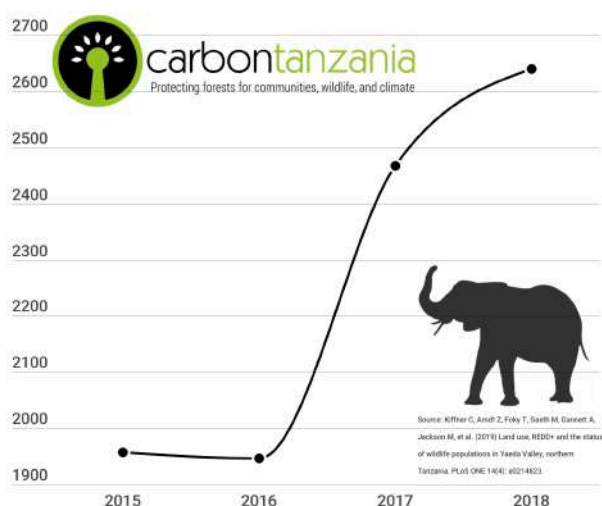
Ensure healthy lives and promote wellbeing for all at all ages



Biodiversity

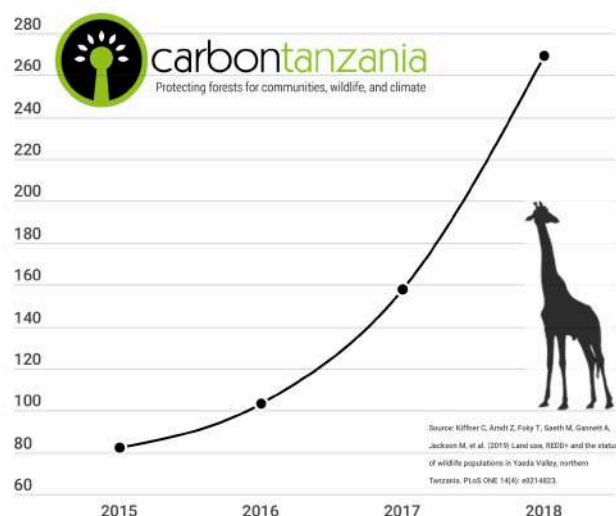
In partnership with the school for field studies, annual occupancy modelling for biodiversity is now in its fourth year and based on these results a paper has been published on the impact of the Yaeda REDD project on biodiversity in the Yaeda valley⁸. These results show that wildlife populations are either stable or increasing, increasing numbers of wildlife reported through Carbon Tanzania monitoring system is confirmed by this study. Of particular note are the increase in Giraffe populations that have seen declines throughout their range due to meat poaching.

Number of Independent Wildlife Signs in Yaeda Valley



⁸ Kiffner C, Arndt Z, Foky T, Gaeth M, Gannett A, Jackson M, et al. (2019) Land use, REDD+ and the status of wildlife populations in Yaeda Valley, northern Tanzania. PLoS ONE 14(4): e0214823 <https://doi.org/10.1371/journal.pone.0214823>

Number of Independent Giraffe Signs in Yaeda Valley



Part G. Payments for Ecosystem Service update

All payments made to producers in May and November 2018 are based on contractual agreements and communities meeting their monitoring targets. Revenue dispersal is informed by scheduled community meetings - these payment structures are outlined in detail in Annex 2. In all cases no payments have been withheld during this reporting period.

Table 11: Summary of payments made and held in trust (next community payment event is scheduled for May 2019)

1. Reporting year	2. Total previous payments USD	5. Total payments held in trust
Feb 13 - Jan 14	29,674	0
Feb 14 – Jan 15	28,184	0
Feb 15 – Jan 16	30,937	0
Feb 16 – Jan 17	47,351	0
Feb 17 – Jan 18	49,636	0
Feb 18 – Jan 19	117,950	6,840
TOTAL	303,732	6,840

Part H. Ongoing Community Participation

Community participation has been on-going throughout the 2018 - 2019 project period. Carbon Tanzania has bi-annual financial planning and conflict resolution meetings with the community in May and October every year (see table 10). In addition to these meetings, quality assurance visits are made every trimester to collect monitoring data and carry out specific tasks. The dates of the financial planning meetings are chosen to coincide with project issuance, contractual agreements and peak

needs of the community (see figure 9 below), which are usually related to seasonal conditions. Carbon Tanzania schedules payments to the communities to coincide with the annual meeting in the first week of May, which allows for a delivery of the annual report and monitoring data to the communities and the payments which reflects the results-based payment plan.

Table 12. Time frame – meetings, data, seasonality and community needs. Green: wet season & brown: dry season.

Month & Season	Operational activities		Community revenue incoming / outgoing <i>Issues effecting communities</i>
	Carbon Tanzania role	Communities role	
January		Monthly patrols and reporting to project coordinator	Schools fees paid to government school
February	Quality Assurance visit trimester 1	Monthly patrols and reporting to project coordinator	<i>Availability of tubers and fruiting plants provides indigenous food.</i>
March		Monthly patrols and reporting to project coordinator	<i>Availability of tubers and fruiting plants provides indigenous food</i>
April		Monthly patrols and reporting to project coordinator	<i>Availability of tubers and fruiting plants provides indigenous food</i>
May	Bi-annual community/village government meetings Quality assurance trimester 2	Bi-annual community/village government meetings Monthly patrols and reporting to project coordinator	Revenue use is planned for the coming dry season -Haydom Medical Fund paid -allocation of revenue towards food purchase
June	Quality Assurance visit trimester 2	Monthly patrols and reporting to project coordinator	Maize crop becomes available at low cost so food can be bought in bulk and stored
July		Monthly patrols and reporting to project coordinator	Maize crop becomes available at low cost so food can be bought in bulk and stored
August		Monthly patrols and reporting to project coordinator	<i>Food scarcity begins, greater nomadic movement by communities – increased dependency on use of maize and agricultural output</i>
September	Quality assurance trimester 3.	Monthly patrols and reporting to project coordinator	<i>Food scarcity - dependency on use of maize and agricultural output</i>
October		Monthly patrols and reporting to project coordinator	<i>Undushibi berries become available – indigenous food begins end dry season (NB. This can vary)</i>
November	Bi-annual community/village government meetings	Bi-annual community/village government meetings	<i>Indigenous foods become more widely available reducing stress and increasing community cohesiveness. Revenue use is planned for the coming wet season (see section 8)</i>
December		Monthly patrols and reporting to project coordinator	

The main aim of these meetings is to discuss carbon sales and to inform the community as to how much money will be transferred into their accounts. This forum involves all community members and village government and allows for discussion on what money should be spent on and any problems arising from within the community (see section 5). These meetings are attended by Carbon Tanzania and UCRT.

Part I. Project operating costs

Table 13. Breakdown of Operational Costs 2018

Expense	Narrative	Cost (US\$)	Contribution from sales of Plan Vivo Certificates
Community payments (Scouts / benefits and services villages etc.)			
	Scouts	13,025	100%
	Hadza Community benefits	41,480	100%
	District, Ward and Villages	7,090	100%
	Other Payments (health, education, training)	19,375	100%
	Total	80,970	
Office / admin and organizational Costs			
	Printing and communication	0	
	Rent and utilities	1,600	100%
	Yeada Project Manager	3,130	100%
	Field expenses (vehicle, fuel, etc..)	1,615	100%
	Travel and accommodation	1,870	100%
	Total	8,215	
Consultancy	Professional fees	0	
Audits	Validation costs (2017-18 VV work)	15,200	100%
	PIN	n/a	100%
	PDD	n/a	100%
	Tech Spec	n/a	100%
	Issuance (2017)	8,245	100%
	Project visit	2,785	100%
	Total	23,445	
Marketing	Consultant fees / website development / conferences	3,750	100%
Total project related costs		116,380	100%

Annex 1. Activity monitoring indicators for issuance of annual ex-post credits (results are show in Part E.)

Green: Indicates that the project is on track to achieve the expected climate benefits and issuance continues as per the performance targets and contractual agreements with the communities.

Orange: Indicates some project activities are not on track to deliver the expected climate benefits. If one or more of these indicators are orange then corrective actions are needed and are to be reported in the annual report to Plan Vivo. Issuance may be withheld from Carbon Tanzania and revenue may be withheld from communities, depending on the indicator or the performance.

Red: Indicates that project activities are not on track to deliver the expected climate benefits. If the project has one or more red indicator, corrective actions are required and issuance is withheld from Carbon Tanzania and payments are withheld from communities until evidence is shown of corrective action being taken.

Indicator	Sustainable Development Goals (SDG#)	Thresholds			Means of verification
		Green	Orange	Red	
Community user rights over forest based resources	SDG 2.3.1. Secure access to natural resources SDG 2.5.1. Plant and animal resources secured in conservation	User rights over forest based resources are enacted through national laws and acts governing natural resource use. Knowledge of these laws and acts is understood by participating communities.	User rights over forest based resources are enacted through national laws and acts governing natural resource use. These laws and acts are poorly understood by participating communities.	New acts governing resource use are proposed by the government removing ownership rights from participating communities that directly impact the legal basis of this project.	1. CT and UCRT and closely engaged in policy development with local and national government. 2. Training is continually being conducted on user rights with participating communities.
Community tenure and ownership over land	SDG 1.4.2. Secure Land rights for indigenous communities	Land use plan and associated by laws are documented and implemented. Boundaries are clear and well understood. Community rights over land is secure through Community Customary Rights of Occupancy (CCRO).	Conflict over land use zones, the land use plan or changes to village land planning laws create unplanned changes to the current land use plan and associated Community Customary Rights of Occupancy (CCRO).	Conflict over land use zones, the land use plan or changes to village land planning laws create unplanned changes resulting in voiding of current land use plan, management regime and CCRO.	1. CT and UCRT and closely engaged in policy development with local and national government. 2. Concrete boundary markers are in place and accompanied by clearly marked signs. 3. UCRT work to manage any potential land use conflicts
Coverage by community guards	SDG 8.3.1. Direct and sustainable employment	Community guards have covered and reported on >=50% of project area and leakage area that month.	Community guards fail to cover or report on >=30% of project or leakage area that month.	Community guards fail to patrol, collect data or report on project or leakage area.	1. Data loggers and GPS provide quantitative data on movement by community guards. 2. Monthly monitoring forms are collated and collected by CT and indicate activity.
Land use change	SDG 15.1.1. Protection of forest resources resulting in reduced deforestation SDG15.5.1.	Community guards reporting through the monthly monitoring system indicate no land	Community guards reporting through the monthly monitoring system indicate farming or	Community guards reporting through the monthly monitoring system indicate farming or	1. Monitoring reports collated monthly by the local project coordinators are sent to CT and UCRT, these document

	Protection of RED list species	use change occurred within the project area.	land clearance within the leakage area or project area $\geq 10\%$ buffer. Village government immediately acts on information and reports to CT and UCRT.	land clearance within the leakage area or project area $\geq 10\%$. Village government fails to act on information and report to CT and UCRT.	and georeference all land use change and the response by village / district government. 2. By-laws enacted through the land use plan make it illegal to farm or clear land in the project area.
Payments to the community guards, communities and local government	SDG 2.4.1. Sustainable agriculture. SDG 3.8.2. Coverage of community by health insurance SDG 3.8.1. Sustainable access to affordable medicines SDG 4.1.1./4.6.1. Access to primary and secondary education	Monthly payments to the community guards provide the incentive to carry out project activities and community payments are realized to ensure all community members and local government parties benefit from carbon revenue.	Monthly payments to the patrol teams provide the incentive to carry out project activities however revenue to communities and local government parties is not paid so limited benefits may in result discontent in the project.	No payments are made to patrol teams, communities, or local government and no benefits are realized from carbon revenue.	1. CT conducts its own sales and marketing to ensure revenue is available from sales of carbon offsets and is able to predict and manage payments to communities, village and district/ government. 2. CT pays the patrol teams directly using M-Pesa ensuring payments are always made

Annex 2. Payment structure to communities

May 2018

Carbon Tanzania

Community Payments

May 2018

Total funds available,
(based on Sales, Nov 2017
to April 2018)

TZS 51,600,000

<i>Domanga</i>	%	25,800,000	<i>Mongo wa Mono</i>	%	25,800,000
Hadza Community		23,010,000	Hadza Community		19,353,000
less Scout payments previous 6 months	15%	3,780,000	less Scout payments previous 6 months	17%	4,320,000
Other deductions - Walinzi Boots		200,000	Other deductions - Walinzi boots		240,000
less Haydom Fund	4%	1,000,000	less Haydom Fund	4%	1,000,000
Balance to Domanga Hadza May 2018	70%	18,030,000	Balance to Mongo Hadza May 2018	53%	13,793,000
Village Government	4%	1,000,000	Village Government	16%	4,126,000
Mbulu District	5%	1,290,000	Mbulu District	5%	1,290,000
Education fund	0%	0	Education Fund	0%	0
Kata ya Eshkesh	5%	500,000	Yaeda Chini Ward Gov.	5%	1,031,000
total		25,800,000	total		25,800,000

November 2018

Carbon Tanzania

Community Payments

November 2018

Total funds available,
(based on Sales, May
2018 to Oct 2018)

TZS 54,000,000

<i>Domanga</i>	%	27,000,000	<i>Mongo wa Mono</i>	%	27,000,000
Hadza Community		20,250,000	Hadza Community		20,250,000
less Scout payments previous 6 months	19%	5,220,000	less Scout payments previous 6 months	16%	4,350,000
Other deductions		0	Other deductions		0
less Haydom Fund	4%	1,000,000	less Haydom Fund	4%	1,000,000
Balance to Domanga Hadza Nov 18	52%	14,030,000	Balance to Mongo Hadza Nov 18	55%	14,900,000
Village Government	10%	2,700,000	Village Government	10%	2,700,000
Mbulu District	10%	2,700,000	Mbulu District	10%	2,700,000
Education fund	0	0	Education Fund	0	0
Kata ya Eshkesh	5%	1,350,000	Yaeda Chini Ward Gov.	5%	1,350,000
total		27,000,000	total		27,000,000

Annex 3. Retirements and transfers Markit registry 2018

Retirements

Vintage	Quantity	Serial Number	Retirement Date	Retirement Remarks
2013	90	PV-PVC-TZ-103000000004180-01012013-31122013-2950173-2950262-MER-O-P	13-4-17	2016 offsets for The Map's Edge
2013	70	PV-PVC-TZ-103000000004180-01012013-31122013-2950263-2950332-MER-O-P	13-4-17	2016 offsets for Dorobo Tours and Safaris
2013	93	PV-PVC-TZ-103000000004180-01012013-31122013-2950333-2950425-MER-O-P	13-4-17	2016 offsets for African Environments safari client departures
2013	25	PV-PVC-TZ-103000000004180-01012013-31122013-2950426-2950450-MER-O-P	13-4-17	Offsets for Feb 2016 Serengeti Safari
2013	414	PV-PVC-TZ-103000000004180-01012013-31122013-2950451-2950864-MER-O-P	13-4-17	Operational offsets for Friedkin Conservation Fund, for year 2015
2014	324	PV-PVC-TZ-103000000004180-01012014-31122014-3120855-3121178-MER-O-P	13-4-17	Offsets for The Map's Edge safari departures 2016
2014	84	PV-PVC-TZ-103000000004180-01012014-31122014-3121179-3121262-MER-O-P	13-4-17	Operational Offsets for Braeburn International School Arusha, for Sept 2015 to July 2016
2014	57	PV-PVC-TZ-103000000004180-01012014-31122014-3121263-3121319-MER-O-P	13-4-17	Dorobo Tours and Safaris offsets for 2016
2014	154	PV-PVC-TZ-103000000004180-01012014-31122014-3121320-3121473-MER-O-P	13-4-17	Offsets for African Environments safari clients 2016
2013	986	PV-PVC-TZ-103000000004180-01012013-31122013-2950865-2951850-MER-O-P	13-4-17	Operational offsets for Asilia Camps, Lodges and Hotels for June 2015 to May 2016
2013	41	PV-PVC-TZ-103000000004180-01012013-31122013-2951851-2951891-MER-O-P	13-4-17	Operational Offsets for Kisima Need Tented Camp for 2015
2012	38	PV-PVC-TZ-103000000004180-01012012-31122012-2658404-2658441-MER-O-P	13-4-17	Operational Offsets for Fair Travel Tanzania for year 2015
2014	103	PV-PVC-TZ-103000000004180-01012014-31122014-3121474-3121576-MER-O-P	13-4-17	Operational offsets for Tarangire Safari Lodge for 2015
2014	100	PV-PVC-TZ-103000000004180-01012014-31122014-3121577-3121676-MER-O-P	14-4-17	Edward McAlpine domestic offsets for 2016
2014	194	PV-PVC-TZ-103000000004180-01012014-31122014-3121677-3121870-MER-O-P	14-4-17	Nature Discovery climb offsets for 2015-16

Transfers 2018

Source Account ID	Source Account Name	Destination Account ID	Destination Account Name	Vintage	Quantity
103000000002262	Carbon Tanzania	100000000000805	Sustainable Travel International	2014	1004
103000000002262	Carbon Tanzania	103000000012330	Plan Vivo Ex-post Project Buffer	2012 - 2016	16010
103000000002262	Carbon Tanzania	100000000000298	NativeEnergy, Inc.	2014	4000
103000000002262	Carbon Tanzania	100000000000298	NativeEnergy, Inc.	2015	16000
103000000002262	Carbon Tanzania	100000000001034	CLLevel	2014	150
103000000002262	Carbon Tanzania	100000000000432	ZeroMission AB	2016 - 2017	800
103000000002262	Carbon Tanzania	100000000000432	ZeroMission AB	2014	320

Annex 4: Historical Sales Data

Buyer	Tonnnes	Price	Vintage	Total sale
Reporting period 1 (start to Jan 2013)				
JAS	35		Yaeda1 2012	
MBS	53		Yaeda1 2012	
Braeburn School	57.7		Yaeda1 2012	
Summits Africa	59.7		Yaeda1 2012	
Traveller's Philanthropy	80.9		Yaeda1 2012	
Sanjan	96.5		Yaeda1 2012	
ME	8.4		Yaeda1 2012	
Theobald Barber	147.2		Yaeda1 2012	
ME	20.2		Yaeda1 2012	
Braeburn School	132.9		Yaeda1 2012	
Regional Air Services	376.2		Yaeda1 2012	
ME	21.4		Yaeda1 2012	
ME	99.6		Yaeda1 2012	
ME	76.7		Yaeda1 2012	
Summits Africa	55.9		Yaeda1 2012	
ME	57.5		Yaeda1 2012	
GP	5.7		Yaeda1 2012	
ME	12.1		Yaeda1 2012	
ME	42.1		Yaeda1 2012	
Summits Africa	55.8		Yaeda1 2012	
ME	37.97		Yaeda1 2012	
Asilia	187.7		Yaeda1 2012	
ME	39.75		Yaeda1 2012	
GP	50.94		Yaeda1 2012	
ME	186.9		Yaeda1 2012	
GP	135.7		Yaeda1 2012	
ND	59.8		Yaeda1 2012	
ME	85.2		Yaeda1 2012	
ME	18.81		Yaeda1 2012	
ND	78.3		Yaeda1 2012	
Sanctuary Retreats	122		Yaeda1 2012	
A&K	222.1		Yaeda1 2012	
Summits Africa	95.2		Yaeda1 2012	
Asilia	342.2		Yaeda1 2013	
GP	74.06		Yaeda1 2012	
ME	31.9		Yaeda1 2012	
ND	40.8		Yaeda1 2012	
GP	127.96		Yaeda1 2012	
Braeburn School	72.8		Yaeda1 2012	
ME	42.96		Yaeda1 2012	
ME	17.96		Yaeda1 2012	
Sanjan	18.9		Yaeda1 2012	
ME	88.47		Yaeda1 2012	
ND	54.1		Yaeda1 2012	
Cap Conseil	54		Yaeda1 2012	
ME	67.03		Yaeda1 2012	

ME	40	Yaeda1 2012
GP	109.32	Yaeda1 2012
Summits Africa	180	Yaeda1 2012
Braeburn School	126.5	Yaeda1 2012
Sanjan	10.3	Yaeda1 2012
Honeyguide Foundation	55.6	Yaeda1 2012
Asilia	602.7	Yaeda1 2012
ND	180.9	Yaeda1 2012
Totals	5153.33	
Reporting period 2 (Feb 2013 to Jan 2014)		
GP	65	Yaeda1 2012
ME	89.23	Yaeda1 2012
A&K	856.3	Yaeda1 2012
ME	123.3	Yaeda1 2012
Kisima Ngeda	35.1	Yaeda1 2012
ME	48.3	Yaeda1 2012
Wildlife Explorer	150	Yaeda1 2012
GP	117.88	Yaeda1 2012
ND	120.8	Yaeda1 2012
ME	57.62	Yaeda1 2012
Fair Travel TZ	41	Yaeda1 2012
Native Energy	2500	Yaeda1 2012
GP	31.94	Yaeda1 2012
ME	83.98	Yaeda1 2012
Asilia	719.7	Yaeda1 2012
Braeburn School	129.5	Yaeda1 2012
ND	169.8	Yaeda1 2012
ME	95.8	Yaeda1 2012
ME	94.4	Yaeda1 2012
Totals	5529.65	
Reporting period 3 (Feb 2014 to Jan 2015)		
GP	68.3	Yaeda1 2012
Dorobo	18.7	Yaeda1 2012
Zero Mission	500	Yaeda1 2012
Dorobo	11.2	Yaeda1 2012
ME	26.1	Yaeda1 2012
Kisima Ngeda	43	Yaeda1 2012
Native Energy	4572	Yaeda1 2012
STI	512	Yaeda1 2012
AE	57	Yaeda1 2012
Fair Travel TZ	79.9	Yaeda1 2012
ME	134.1	Yaeda1 2012
Summits Africa	195.3	Yaeda1 2012
Dorobo	26.9	Yaeda1 2012
GP	134.6	Yaeda1 2012
ME	44.3	Yaeda1 2012
A&K	936.1	Yaeda1 2013
Sanctuary Retreats	190.6	Yaeda1 2013

STI	489.2	Yaeda1 2012
ME	216	Yaeda1 2012
Wildlife Explorer	128.7	Yaeda1 2013
Asilia	779	Yaeda1 2013
TSL	116.6	Yaeda1 2012
ME	97.5	Yaeda1 2012
Carbon Tanzania	23.8	Yaeda1 2012
ME	179.3	Yaeda1 2013
Totals	9580.2	
Reporting period 4 (Feb 2015 to Jan 2016)		
AE	174.5	Yaeda1 2013
Dorobo	39.2	Yaeda1 2013
ND	123.3	Yaeda1 2012
ME	24	Yaeda1 2013
Kate McAlpine	9.5	Yaeda1 2012
Native Energy	4000	Yaeda1 2013
Braeburn School	76.8	Yaeda1 2012
GP	131	Yaeda1 2013
AE	245	Yaeda1 2013
ME	242.5	Yaeda1 2013
STI	904	Yaeda1 2013
TNC	345.5	Yaeda1 2013
ME	222	Yaeda1 2013
ND	105.3	Yaeda1 2013
ME	30	Yaeda1 2012
Kisima Ngeda	35.7	Yaeda1 2013
TSL	116.5	Yaeda1 2013
Dorobo	37.1	Yaeda1 2012
Clevel	300	Yaeda1 2013
Zero Mission	165	Yaeda1 2013
Asilia	954.1	Yaeda1 2013
Braeburn School	76.8	Yaeda1 2013
ME	50.8	Yaeda1 2013
Duma Explorer	130.7	Yaeda1 2013
AE	232.5	Yaeda1 2013
Wildlife Explorer	114.5	Yaeda1 2013
ND	110.7	Yaeda1 2013
Acacia Natural Resource Cons	11.75	Yaeda1 2013
Tree Campaign	203	Yaeda1 2013
GP	183	Yaeda1 2013
Carbon Tanzania	17	Yaeda1 2012
East Africa Photo Safaris	25	Yaeda1 2013
Totals	9436.75	
Reporting period 5 (Feb 2016 to Jan 2017)		
Ker and Downey Safaris Ltd	25.2	Yaeda1 2013
SOI	29.9	Yaeda1 2013
Native Energy	4000	Yaeda1 2014
Fair Travel TZ	38.2	Yaeda1 2013

Dorobo	69.5	Yaeda1 2013
ME	9.24	Yaeda1 2013
Guiding Principles	44.2	Yaeda1 2013
AE	71.5	Yaeda1 2013
AE	21	Yaeda1 2013
ME	37	Yaeda1 2013
Matembezi	60	Yaeda1 2013
Regional Air Services	8.8	Yaeda1 2013
Zero Mission	1000	Yaeda1 2014
Native Energy	1000	Yaeda1 2014
ME	43.5	Yaeda1 2013
FCF	413.7	Yaeda1 2013
Clevel	300	Yaeda1 2013
Asilia	986	Yaeda1 2013
TSL	103.4	Yaeda1 2013
Kisima Ngeda	40.7	Yaeda1 2013
Dorobo	57.4	Yaeda1 2014
Native Energy	2000	Yaeda1 2014
STI	1236	Yaeda1 2014
Braeburn School	84.3	Yaeda1 2014
ME	89	Yaeda1 2014
ME	99.2	Yaeda1 2014
ME	136.3	Yaeda1 2014
STI	1004	Yaeda1 2014
AE	154	Yaeda1 2014
Edward McAlpine	100	Yaeda1 2014
ND	193.6	Yaeda1 2014
Totals	13455.64	
Reporting period 6 (Feb 2017 to Jan 2018)		
ME	76.8	Yaeda 2014
Carbon Tanzania	26	Yaeda 2014
Acacia Natural Resource Cons	12.7	Yaeda 2014
DPO - Individual offset sales	29.2	Yaeda 2014
DPO - Individual offset sales	161.4	Yaeda 2014
ME	81.9	Yaeda 2014
DPO - Individual offset sales	25	Yaeda 2014
Native Energy	16,000 ⁹	Yaeda 2015
Native Energy	4,000	Yaeda 2014
Clevel	150	Yaeda 2014
Zero Mission	800	Yaeda 2014
DPO - Individual offset sales	18	Yaeda 2016
TSL	103	Yaeda 2016

⁹ Please note that these credits have been transferred to the client, but under agreement the payments will be scheduled on an annual basis. Therefore there is no revenue associated with this sale as yet in the table.

Duma Explorer	123	Yaeda 2016
ME	43	Yaeda 2014
ME	139	Yaeda 2014
Zero Mission	317	Yaeda 2014
AE	345	Yaeda 2016
Asilia	1061	Yaeda 2016
Dorobo	128	Yaeda 2016
Kisima Ngeda	36	Yaeda 2016
ME	133	Yaeda 2016
Lakeside School	48	Yaeda 2016
WE	119	Yaeda 2016
Zero Mission	500	Yaeda 2016
ME	45	Yaeda 2016
DPO - Individual offset sales	122	Yaeda 2016
R and J Knocker	10	Yaeda 2016
Totals	24652.6	
TOTAL SALES	67,809	\$453,340