



# Annual Report

01 FEB 2015 – 31 JAN 2016

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

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**30<sup>th</sup> March 2016**

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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. 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 through successfully developing its flagship community project in the Yaeda Valley in northern Tanzania with a managed area of 20,790 hectares, which is now in its third year of generating internationally verified carbon offsets, represented by 16,011 PVC (tCO<sub>2</sub>e) per year in avoided emissions. 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 over US\$88,795 being channelled to communities in the area, with yearly income to communities from this single project set to exceed US\$60,000 per year going forward. Validated through the Plan Vivo Standard, this project is particularly noteworthy in that it is reinforcing the land and natural resource rights of the Hadza people, a unique hunter-gatherer community that has lived in the Yaeda Valley for some 40,000 years.

### 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 guarantee long-term sustainable returns or safeguards for traditional 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)<sup>1</sup>. 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

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<sup>1</sup> Sills *et al.* (2009), The evolving landscape of REDD+ projects.



## Summary of Yaeda Valley REDD project for 2015

In this project cycle, February 2015 to January 2016, we have continued to train and equip our community monitoring teams, improved data collection and increase the use of Garmin GPS/Camera units. Improved data collection has been augmented by ID cards and uniforms, which have all been requested by the community teams as they professionalise their important role in this project. Having a full time manager in Yaeda has made a huge difference to our ability to collect and collate data and the monitoring teams have increased both their coverage and data collection. Our focus on project expansion has been at the request of neighbouring communities and we have expanded our organisation with the employment of Sarah Borman as our Business Development Manager, her role is critical to Carbon Tanzania and the Yaeda project, to increase our social media presence for both existing and new clients and help us expand our overall sales and marketing effort. In 2015 we completed the land use planning, above ground biomass surveys and completed the project development document for an extension to the Yaeda valley project. This is in part thanks to HRSV, the social impact company who have invested in Carbon Tanzania to ensure we can make this next step in expanding our organisation and increasing our impact. The activity based monitoring system implemented in 2014 forms the basis for annual ex-post issuance of Plan Vivo Credits (see appendix). This monitoring system incorporates all the community monitoring data, tracks institutional arrangements, conflict, land security and of course financial flows to communities, the latter being critical to ensure this payment for ecosystem service project continues to deliver on its promises.

### Project summary and request for issuance for period 1<sup>st</sup> February 2015 – 31<sup>st</sup> January 2016.

Project overview			
Reporting period		1st February 2015 – 31st January 2016	
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. V2. January 2015.	
Area under management (ha)		20,790ha Project area	
Areas put under management since last report (ha)		(project extension of 11,140ha under review)	
Project indicators to date			
Community groups with <i>plan vivos</i> and PES agreements (total)		Two communities, Mongo Wa Mono and Domanga (approx. 1,350 people) following the CCRO / land use plan outlined in the Technical specifications.	
Total PES payments made to communities to date (USD)		88,795 USD	
Total PES in trust to be paid in May 2016		7,329 USD based on sales commitments	
Unsold stock / vintage		PVC 2014-15; 16,011 PVC.	
Project activity relating to this reporting period			
Community groups with PES agreements signed		Two communities, Mongo Wa Mono and Domanga (approx.1200 people) following the CCRO / land use plan outlined in the Technical specifications.	
	Historical (3 reporting periods: 2012-2015)	Added this reporting period (2015-2016)	Total (incl. this period)
Total ERRs achieved (tCO <sub>2</sub> e)	60,039	20,015	80,054
Allocation to PV buffer account (tCO <sub>2</sub> e)	12,006	4,004	16,010
Issuances to date & issuance requested this reporting period (PVC)	48,033	16,011	64,044

## Part A. Project updates

### A.1 Key Events in chronological order from February 2015 to January 2016

February 2015 – Prepare for above ground biomass (ABG) survey in Yaeda Chini for the project extension. This included conducting the initial analysis to consider the need stratify, to select and train community 30 community members and using R to randomly select sites for the survey. Carbon Tanzania signs Northern Tanzania Rangelands Initiative (NTRI) partnership agreement. Village government and village assembly meetings in Yaeda Chini to discuss the project extension and contract development. Mr. Issac Bryson Magombe starts to work part time for Carbon Tanzania.

March 2015 – Conducted AGB in Yaeda Chini for project extension. This two week exercise employed 35 people in 5 teams and conducted over 80 survey points to achieve the required 95% CI. Whilst in situ we were visited by our social impact investors (HRSV), NTRI partners and researchers interested in our work.

April 2015 – First meeting of the newly formed Technical Advisory Committee. Second annual off-setters event held in Arusha.

May 2015 – Sarah Borman, our business development manager starts work. First of the bi-annual payment meetings with communities in Domanga and Mongo wa Mono. CT engages, a communications partnership to begin the website development process.

June 2015 – Week spent in Yaeda with a professional photographer to create our photo bank. This is critical for telling our story, increasing our social media impact and the new website under development. Identify and engage with South African website developer Digital Hive.

August 2015 – Monitoring, evaluation and learning event to look at the last few months and take stock of our approaches and what we need to address. Social media strategy completed.

September 2015 – Quality assurance visit to Yaeda Chini, attended Plan Vivo stakeholders workshop in Stockholm, Sweden.

October 2015 – Begin rewriting the Project Development Document with the aim of updating the current project, Yaeda I to latest version of the Plan Vivo Standard and to incorporate Yaeda II as a technical specification within the PDD.

November 2015 – Attend the CODE REDD talks in Stockholm, Sweden. Second biannual payment meeting in Domanga and Mongo Wa Mono. Contract finalised for the project extension, Yaeda II. PDD

December 2015 – Attend COP21 in Paris.

January 2015 – Field visit with Dan Kelly from the Nature Conservancy to discuss the change detection analysis planned for 2016.

### A.2. Successes and challenges

#### Project operations

Land use and ownership rights to the forest resources remain secure. Ensuring by-laws are followed is dependent on ongoing project operations and revenue generated for communities and local governance structures by both this project and Dorobo safaris. Carbon Tanzania fully understands that this essentially means being able to continue sales so we can meet financial expectations and commitments. Whilst the walinzi wajadi (community scouts) are arresting small-scale meat poachers, greater effort is required to ensure these issues are taken seriously by authorities and the judicial system. In 2015 we have begun to implement better tracking and feedback of such issues and by working with the local government we continue to reinforce the projects aims. Our partners, Ujamaa Community Resource Team (UCRT) are constantly working with district government to improve the judicial process. The Tanzanian government is taking the poaching of mega-fauna more seriously due

to a number of cases in the press and pressure from outside of the country, this of course has a trickle down effect on our jurisdiction but the scale of elephant poaching currently sweeping across this region is of concern. The employment of a manager for the Yaeda valley, Mr. Isack Bryson Magombe has already increased our capacity to be more responsive to community needs and improve our communication and information gathering from the communities, this is explained in more detail in this report.

## Sales

Bringing credits to market at a value that reflects expectations and project operations means Carbon Tanzania must diversify and increase its sales of PVCs. Our Business Development Manager, Sarah Borman has developed a marketing and PR strategy and has been able to increase sales through social media marketing, an example of this is the 'tree for Christmas' campaign which enabled us to sell at [REDACTED] / tCO<sub>2</sub>e. However, based on current project expansion and our need to return investment on our social impact loan from HRSV, we need to double our rate of sales, potentially increasing both Tanzanian and overseas based markets for PVCs. Whilst our international agreements with Native Energy in the USA for 4000tCO<sub>2</sub>e at [REDACTED] /tCO<sub>2</sub>e reflects a more realistic price per PVC through brokers, Carbon Tanzania feels it can maintain [REDACTED] /PVC by developing and diversification of sales which in the long term should create a more robust business model.

## A.3. Project Developments

### REDD in the Yaeda Valley Phase I

In 2015, Carbon Tanzania continued to build its capacity to better manage the project, this included the employment of a full time Yaeda valley manager who is in part employed by Carbon Tanzania (50%) and in part by the three communities (20% Yaeda Chini, 15% Mongo and 15% Domanga), this is done to ensure the communities and village government know he is responsible to them as well as Carbon Tanzania. Our manager, Mr Issac Bryson Magambo, lives in Yaeda Chini, the ward capital and location of the project extension (Yaeda II). His role is to ensure the walinzi wajadi are conducting surveys, collecting and collating the required data, and provides the link between community and village governance structures. This key day to day role has been the missing link for Carbon Tanzania and has greatly improved our data collection and patrolling effort, one of our challenges in 2014.

### REDD in the Yaeda Valley Phase II – Project Extension

This extension to the existing REDD+ project will increase the area of land certified under Plan Vivo in 2015-16. Carbon Tanzania has operationalised this project in January 2016 by beginning to pay the scouts for Yaeda Chini who have begun to patrol and collect data following the activity based monitoring schedule with the aim of having the first ex-post issuance in January 2017. This land area is under the same type of management (CCRO) as the current project and is adjacent to the current project area. The new technical specification and updated PDD are currently with the Plan Vivo Foundation, we are hoping to have these completed by mid-2016.

**Table 1. Document updates**

PDD Section	Date change	Description of update
REDD Yaeda Valley V2. 2012	December 2015	Entire PDD updated from 2012 to 2015 version of the PVF Standard and the technical specifications incorporated into Part G.
REDD Yaeda Valley extension (Yaeda II) Part G Technical Specifications	December 2015	New technical specification for the Yeada extension incorporated into updated 2015 version of the PDD

## A4. Future developments

Consolidation of the project extension in Yaeda will be the main focus of this coming year, improving the patrolling and on-site project management will continue to be a our priority. We are currently working on three major project interventions and developments;

We are seeking funding for a communication system using a combination of VHF radio base stations in each village and mobile radios for the patrolling teams. This will allow for the village centres to better communicate with each other. It will also allow for patrolling teams to inform village centres and the project manager of any issues they might come across. The funding application is in with a private donor and is expected to be realised in the first trimester of 2016.

Carbon Tanzania is currently developing a proposal to work with Farm Africa to build upon our current agricultural improvement process, a key part of enabling us to inform better land management. With the project extension incorporating Yaeda Chini, there is a growing need to professionalise agricultural extension officers, conduct a situation analysis of growing conditions and critically, attempt to improve links to market. Our Yaeda manager has begun the situation analysis this year with the onset of the rains so we have a baseline to work with, agricultural success varies every year which requires us to engage with the question; 'What agricultural output is likely to provide the best outcomes for land and regular marketable produce'. Our participatory analysis from the areas under makazi (agriculture) is on target for the second trimester of 2016 and will be reported on in the next annual report. UCRT have also made a proposal to increase rangeland health within the project area working with neighbouring pastoralist communities, the output from this is again a focus on rangeland health. All of these approaches play a role in reducing the need to impact the current project area.

By creating a working relationship with Uppsala University in Sweden and with the REAL partnership we have our first masters student arriving in March 2016. Her dissertation will be based around socio-economic questionnaires focused on our work in the Yaeda valley. This includes institutional arrangements, governance, finance and perceptions from a members of the community on this REDD project. Documenting socio-economic data has been a gap in our monitoring that we want to focus on this coming year and set in place a robust annual socio economic monitoring methodology.

Carbon Tanzania will plan to verify this REDD project in 2016. We are currently investigating the approach and considering verification bodies (VVBs) and costs associated with the process.

## Operational management and planning

Carbon Tanzania has continued its operational management and training exercises to clearly identify gaps and needs within the organisation. Our current focus is on trying to understand the post CoP21 environment and how business is going to engage with the deforestation taking place globally and what that means for us from a communication perspective. Two key employments of 2016 have helped us to achieve our aims;

### 1. Business Development Manager – Sarah Borman

- To maintain a portfolio of existing supporter relationships and donors;
- To research and develop relationships with potential new clients / off-setters;
- To actively participate in Carbon Tanzania's networks with businesses and major donors
- To complete tailored fundraising proposals and applications to funding bodies and potential off-setters
- To meet with and present to potential off-setters as appropriate
- To maintain all appropriate client records and returns
- To undertake ad hoc special projects



- To manage a business relationship management system
- To assist with the analysis of increasing clients against targets.
- To undertake general web maintenance and liaise with our communications support team to develop, and manage new revenue generating online marketing opportunities.
- To assist with events (which will involve some out of hours work)
- To assist with mailings of promotional material to members, clients, funders and key stakeholders

**2. Yaeda Valley Manager** – It is Carbon Tanzania’s policy that whenever possible we employ from within the project area. Mr Isack Bryson Magambo is now the project manager in Yaeda, his role is to represent Carbon Tanzania within the Yaeda Valley, coordinate the patrolling, collect and collate monitoring forms and advise on needs and improvements to project operations.

## Sales and Marketing

As a business primarily dependent on revenue generated from the sale of PVCs and other verified offsets, Carbon Tanzania sees the marketing of its current inventory of PVCs as critical to project operations. Carbon Tanzania has developed its own market in Tanzania with tourism companies and will be developing both national and international sales further in the coming year. Sales also link to project operations as Carbon Tanzania has incorporated payments to communities (see monitoring in appendix and results in section 5) as part of activity based monitoring.

## Part B. Project activities, total project size and participation

This project works with hunter-gatherer Hadza (or Hadzabe) and pastoralist communities in Mongo Wa Mono and Domanga 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.

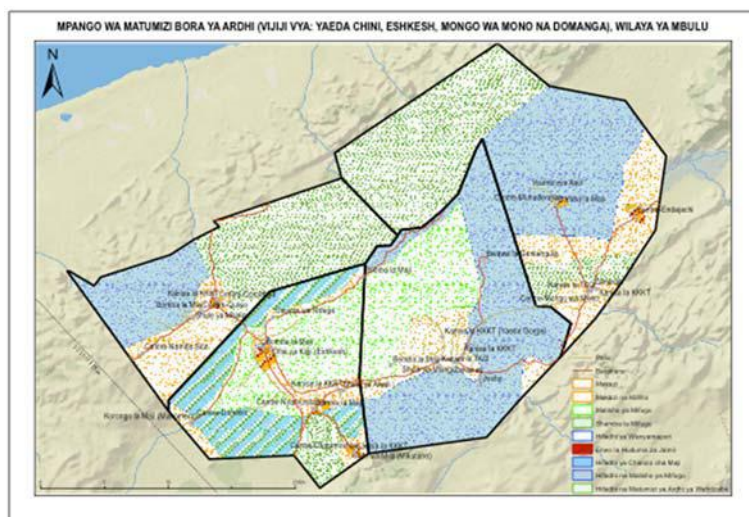
**Table 2. Project Activity Summary**

Name of Technical specification	Area (ha)	No households	No communities
REDD in Yaeda Valley v.2	20,790	n/a	2

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 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 and any carbon calculations).

### B1. Land use plan for Mongo Wa Mono, Domanga and Yaeda Chini villages



Sales of PVC have increased marginally in the 2015-16 to 9,574 tCO<sub>2</sub>e (PVC). Whilst this is encouraging and reflects a diversification of sales, Carbon Tanzania wants to be selling or have signed agreements to sell its 16,011 annual PVC issuance by June every year, the Yaeda phase II issuance will complement this and Carbon Tanzania estimates it will be selling approximately 22,000 PVCs per year based on project developments and sales projections. With this end in mind Carbon Tanzania has employed a business development manager with strong sales and marketing expertise to expand and diversify our offsets by the end of 2016 and beyond.

**Currently Carbon Tanzania has three sales channels for its offsets:** *direct sales, re-sellers and channel providers.*

**Direct Clients:** Direct sales are the primary means of distribution making up 51% of aggregated sales volume and achieving the highest retail price at █████ 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 monthly.

**International Resellers:** In 2015 two resellers have continued to offset with Carbon Tanzania and making up 48% of the sales volume during the year. Due to the large volumes requested by this individual reseller, a lower █████ per unit selling price has been achieved on these sales. However this pattern was not followed in 2014 when a smaller bulk sale was transacted with a European based re-seller where a price of █████ was obtained. This re-seller was similarly engaged directly by one of the founders of Carbon Tanzania, again emphasising the importance of personal contact with both customers and re-selling organisations. Re-sellers are set to become a cornerstone of Carbon Tanzania's sales and marketing strategy.

**Channel Providers:** Only 1% of sales are currently distributed through a single channel provider (Sustainable Travel International) although the low cost of distribution, higher margins and long-term growth potential make this a key channel in line with the long-term growth strategy. This US based web portal provides Carbon Tanzania with a means to attract individuals who wish to offset their carbon-related impacts (primarily travel) and defrays the risks associated with dealing with the US tax system.



Domanga based walinzi wajadi or traditional scouts on patrol.

**Table 5. Buyers and transaction volumes in Feb 2015 January 2016**

Company	Tonnes offset	Price	Vintage	Total sales
ME	179.3		Yaeda1 2013	
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	
Clevel	300		Yaeda1 2013	
TNC	345.5		Yaeda1 2013	
STI	904		Yaeda1 2013	
SOI	22.1		Yaeda1 2012	
Carbon Tanzania	23.8		Yaeda1 2012	
ME	242.5		Yaeda1 2013	
ME	222		Yaeda1 2013	
ND	105.3		Yaeda1 2013	
ME	30		Yaeda1 2012	
Dorobo	37.1		Yaeda1 2012	
Kisima Ngeda	35.7		Yaeda1 2013	
TSL	116.5		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
Wildlife Explorer	114.5	Yaeda1 2013
AE	232.5	Yaeda1 2013
ND	110.7	Yaeda1 2013
Acacia Natural Resource Cons	11.75	Yaeda1 2013
GP	183	Yaeda1 2013

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 (Bomas). 3. Poaching or illegal bush meat hunting, this being a socio-economic issue for the Hadzabe.

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. In 2015 the Mbulu District Council ordered the police to station one officer in Yaeda Chini in response to reported issues of land incursion, an issue not just in Yaeda but nationwide.

### 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 6. 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 functioning
Effort spent on conflict resolution by UCRT				12 days have been spent in Yaeda by UCRT in Yaeda in 2015 related to pastoralist conflict and cattle enclosures in the project area.
Coverage by community guards				GPS and monthly reports indicate approx 65% of project area was covered during January 2015 in Mongo wa Mono and Domanga. Patrolling has improved from 2015.
Land use change				Whilst there has been cattle enclosures built inside the project area and leakage area that requires some land clearance, this is minor (average size 25m in diameter) there has been no land use change related to agricultural clearing in either the project or leakage area. All boma construction has been reported and acted upon by UCRT and the village government
Payments to the community guards, communities and local government				All payment schedules have been met due to positive sales of PVCs in 2015 period

## E.2 Land use monitoring

**Table 7. Results of land use monitoring.**

Threat	Occurrence/incident per community area	Reporting and action by community	Reporting and action by village / district
<b>Unplanned agriculture</b>	In Domanga there were no incidents of unplanned agriculture within the project area.	-	-
	In Mongo wa Mono, small scale unplanned agriculture by pastoralists was recorded in Omboy in February 2015.	Reported to CT and UCRT and village government	Village government issues letter to cease farming. Pastoralists claim they didn't know the area was protected for Hadzabe and stopped farming
<b>Illegal hunting (poaching)</b>	In Domanga there were 6 illegal hunting incidents recorded in the project area. None of these incidents involved Elephant poaching, all were reserved to illegal meat poaching.	All incidents are reported to village and district government.	Whilst individuals were reported only one arrest was made by the police based in Yaeda Chini (see image). In two of these cases reports were made to the District Game Officer but no arrests were made.
	In Mongo wa Mono there were 2 illegal hunting incidents recorded, in both cases bush meat hunting was recorded at night using firearms. A hunting camp was located and photographed but no evidence of animal skins was found.	All incidents are reported to village and district government	No arrests were made in relation to these incidents but the police believe the man arrested in Domanga was the same poacher as firearms were confiscated during the incident (see image below)

<b>Non-agricultural land conversion</b>	In Domanga, the construction of bomas during the dry season (cattle enclosures measuring 25m in diameter) by Taatoga pastoralists continue to be recorded both on the edge and inside the project area. Whilst some scrub is cut to manufacture the boma, it is a minor issue relating to biomass. However, the Hadza community report that cattle displace wildlife leading to reduced hunting opportunities.	Community scouts ask the Taatoga not to clear land within the project and report to the village chairman. Several Taatoga are unsure of the boundary. Hadza have asked CT and UCRT to aid in boundary demarcation.	Reported to village chairman who orders the boma to leave and refrain from any habitat clearance in the project area. The village chairman has ordered community members to walk the boundary with Taatoga to clarify. Including the Taatoga within the project (Yaeda II) and clarifying boundaries between pastoralist and hunter gatherer land use zones is an ongoing process. UCRT and CT are putting effort into clearer land use demarcation.
	Bomas and cattle were recorded in Mongo wa Mono from July onwards, this is a normal pattern reflecting dry season movement by pastoralists.	Community scouts ask the Taatoga not to clear land within the project and report to the village chairman. Several Taatoga are unsure of the boundary. Hadza have asked CT and UCRT to aid in boundary demarcation	Reported to village chairman who orders the boma to leave and refrain from any habitat clearance in the project area. The village chairman has ordered community members to walk the boundary with Taatoga to clarify. Including the Taatoga within the project (Yaeda II) and clarifying boundaries between pastoralist and hunter gatherer land use zones is an ongoing process. UCRT and CT are putting effort into clearer land use demarcation.
<b>Cattle incursion</b>	Cattle incursions during the end of the dry season continue to be an issue, 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.	The opening of a police post in Yaeda Chini reflects a response by district government and greatly increases the response to illegal activity and reduces costs associated with taking people into custody. UCRT and Carbon Tanzania will continue to educate people about land use planning and UCRT are planning to re-mark the boundaries in 2016.
	Cattle incursions during the end of the dry season continue to be an issue, 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.	The opening of a police post in Yaeda Chini reflects a response by district government and greatly increases the response to illegal activity and reduces costs associated with taking people into custody. UCRT and Carbon Tanzania will continue to educate people about land use planning and UCRT are planning to re-mark the boundaries in 2016.



The contents of a poacher's bag caught in Domanga. Homemade bullets, a panga (machete) and recently killed Wildebeest.

#### E.4. Biodiversity monitoring

The Hadza are one of Tanzania's most unique and threatened human cultures, with a deep reservoir of indigenous knowledge pertaining to natural resource use. The Hadza are strictly 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 on what types of mammals are consumed (Figure 11.) on an annual basis.



The Yaeda valley wetland, adjacent to the project site this area is a globally recognised important biodiversity area.

### Avifauna

Avifauna are good long-term indicators of ecosystem health. Monitoring is conducted by the external Carbon Tanzania team in conjunction with the walinzi wajadi due to the skills required to identify specific species. Timed Species Counts (TSCs) were completed in two locations set in 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 the frequency of specific bird species between the two areas shows no significant variation from the baseline which is expected.

### Mammals

Mammals were monitored by the community teams as an indication of presence (*observed: Obs*) as well as consumption by Hadza (*eaten: eat*). Larger mammal species can be split into two classes, resident and migratory, in 2015 the following mammal species were observed within the project area. It should be noted than 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 8. Mammal records for 2014, Obs: observed but not eaten, Eat: eaten. R: known resident, M: Possibly migratory, R/M?: Unknown resident / migratory status.**

		Observed: Obs, Eaten: Eat												Notes
Species	Resident or migratory	Jan	Feb	Mar	Apr	Ma	Jun	July	Aug	Sep	Oct	Nov	Dec	
Giraffe	R	Obs/ eat	Obs	Obs	Obs	Obs	Obs	Obs	Obs	Obs	Obs	Obs	Obs	Resident populations with some migrants
Elephant	M/R	Obs	Obs			Obs	Obs	Obs	Obs	Obs		Obs	Obs	Resident populations with some migrants
Zebra	R	Obs	Obs	Obs	Obs	Obs/ eat	eat	Obs/ eat	Obs	Obs	Obs/ eat	Obs/ eat	Obs/ eat	Uncommon
Impala	R	Obs/ eat	Obs	Obs	Obs	Obs/ eat	Obs	Obs/ eat	Obs/ eat	Obs/ eat	Obs/ eat	Obs/ eat	Obs/ eat	Common resident
Kudu	R	Obs	Obs	Obs/ eat	Obs/ eat	Obs/ eat	Obs/ eat	Obs	Obs	Obs	Obs/ eat	Obs/ eat	Obs/ eat	Common and highly prized by Hadza
Dikdik	R	Obs	Obs	Obs	Obs/ eat	Obs	Obs	Obs	Obs	Obs	Obs	Obs	Obs	Common resident
Eland	R/M?	Obs	Obs/ eat						Obs	Obs	eat	Obs/ eat	Obs	Known to range over large areas
Hartebeest	R													Yaeda valley plains
Buffalo	R/M?			Obs			Obs				Obs			Possibly migratory from Ngorongoro highlands
Warthog	R	Obs/ eat	Obs/ eat			Obs/ eat	Obs/ eat	Obs/ eat			Obs	Obs/ eat	Obs/ eat	common
Bushbuck	R	Obs												Only recorded in certain habitats, secretive and possibly common
Leopard	R	Obs	Obs		Obs				Obs	Obs	Obs	Obs		Resident and often heard
Lion	R/M?		Obs	Obs									Obs	Almost certainly not resident
Baboon	R	Obs	Obs	Obs	Obs/ eat	Obs	Obs	Obs/ eat	Obs	Obs	Obs	Obs	Obs	Common
Jackal (species not specified)	R				Obs									-
African Wild Cat	R				Obs									Widespread but uncommon
Hyena (species not specified)	R				Obs			Obs			Obs			-
Bush Pig	R							Obs		Obs/ eat	Obs			Widespread
Klipspringer	R											Obs		Resident but habitat specific
Wild Dog	M				Obs					Obs	Obs	Obs	Obs	Wide ranging



Giraffe are resident to the Yaeda area but rarely eaten by the Hadza communities.



## Part F. Impacts

### F1. Evidence of outcomes

Carbon Tanzania has proven its concept through successfully developing its flagship community project in the Yaeda Valley with a managed area of 20,790 hectares, which is now in its fourth year of generating PVCs, represented by 16,011 tCO<sub>2</sub>e per year in avoided carbon emissions. This is evident in our expansion of the project at the request of neighbouring communities. One of the noticeable impacts Carbon Tanzania is starting to achieve is a *transformative change* in the way communities govern and manage their land. This impact, whilst difficult to measure, is outlined in the monitoring data where reported incidents are now seeing greater action from authorities. This is partly driven by the actions of UCRT and Carbon Tanzania at a district level, but mainly by the communities feeling that they have a *element of expectation as the communities have decided to pay a percentage of their revenue to the district government*.

The Haydom Medical Fund has been an extremely positive impact, this rolling fund means that instead of the Hadzabe having to ensure the fund has money in it, the hospital has agreed that the fund can temporarily dip into negative territory with the knowledge that both Dorobo Safaris and Carbon Tanzania have committed to pay money directly into the fund on behalf of the communities.

## Part G. Payment for Ecosystem Service update

All payments made to producers in May and November 2015 are based on contractual agreements and communities meeting their monitoring targets. Revenue dispersal is based on scheduled community meetings - these payment structures are outlined in detail in Annex 2. In all cases no payments have been withheld this reporting period.

**Table 9: Summary of payments made and held in trust**

1. Reporting year	2. Total previous payments	3. Total ongoing payments	4. Total payments made (2+3)	5. Total payments held in trust until May 2016	6. Total payments withheld
Feb 13 - Jan 14	29,674	-	29,674		0
Feb 14 - Jan 15	28,184	-	28,184		0
Feb 15 - Jan 16	-	30,937	30,937	7,329	0
TOTAL	57,858	30,937	88,795	7,329	0

## Part H. On-going Community Participation

Community participation has been on-going throughout the 2015 - 2016 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 such as TSCs. 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 10. 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	TSC / Visit to project site to collate monthly data, Quality Assurance 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	<b>Revenue use is planned for the coming dry season</b>  -Haydom Medical Fund paid -allocation of revenue towards food purchase
June		Monthly patrols and reporting to project coordinator	<b>Maize crop becomes available at low cost so food can be bought in bulk and stored</b>
July		Monthly patrols and reporting to project coordinator	<b>Maize crop becomes available at low cost so food can be bought in bulk and stored</b>
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. <b>Revenue use is planned for the coming wet season (see section 8)</b></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 11. Breakdown of Operational Costs (inclusive of 2015-2016)**

Expense	Narrative	Cost (US\$)	Contribution from sales of Plan Vivo Certificates
Personnel	HR costs	16,535	No
Village/community payments	Scouts/field assistants / village	30,938	100%
	Scouts	7,713	100%
	Community Contribution	16,989	100%
	Others Payment	6,236	100%
Office/admin	Organizational Costs	13,247	30%
	Printing and communication	3,578	30%
	Rent and utilities	4,016	30%
	Other office costs	3,537	30%
	Fuel and vehicle expenses	310	100%
	Travel and accommodation	1,806	100%
Travel / field work	Vehicle hire, food and supplies in the field	33,908	40%
Consultancy	Professional fees	10,748	40%
Audits	Validation costs		100%
	PIN		
	PDD		
	Tech Spec		
	Issuance (2014)	5,083	
	Project visit		
Marketing	Consultant fees / website development / conferences	19,767	60%
Total project costs		130,226	

## 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	Thresholds			Means of verification
	Green	Orange	Red	
<b>Community user rights over forest based resources</b>	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.
<b>Community tenure and ownership over land</b>	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
<b>Management Institutions</b>	UCRT, CT, village government and tribal leaders continue to work towards the common goal of improved land management.	Either UCRT, CT, village government or tribal leaders decide to opt out of the goals of improved land management resulting in are structuring of contractual agreements.	Management institutions collapse leading to lack of cohesion within local government or tribal leadership. CT or UCRT cease to operate resulting in a failure of project operations.	1. Reports from village government and tribal leadership. 2. Monthly monitoring indicates discourse between parties. 3. CT and UCRT work closely with local, regional and national government agencies. 4. Scheduled bi-annual village, community, UCRT and CT meetings provide clear means of communication.

<b>Effort spent on conflict resolution by UCRT</b>	UCRT spend <= 14 days a year dedicated to land conflict in the project area.	UCRT spend <= 1 months a year dedicated to land conflict in project area.	UCRT spend >=2months a year dedicated to land use conflict in the project area	UCRT report activities to Carbon Tanzania through scheduled trimester meetings.
<b>Coverage by community guards</b>	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.
<b>Land use change</b>	Community guards reporting through the monthly monitoring system indicate no land use change occurred within the project area.	Community guards reporting through the monthly monitoring system indicate farming or land clearance within the leakage area or project area >=10% buffer. Village government immediately acts on information and reports to CT and UCRT.	Community guards reporting through the monthly monitoring system indicate farming or land clearance within the leakage area or project area >=10%. Village government fails to act on information and report to CT and UCRT.	1. Monitoring reports collated monthly by the local project coordinators are sent to CT and UCRT, these document and geo reference 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.
<b>Payments to the community guards, communities and local government</b>	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 2015

#### Carbon Tanzania

Community Payments

May 2015

Total funds available,  
(based on Sales, Nov  
2014 to April 2015)

**Tsh 36,000,000**

<i>Domanga</i>	%	<b>18,000,000</b>	<i>Mongo wa Mono</i>	%	<b>18,000,000</b>
Hadza Community	94.5	17,010,000	Hadza Community	79.2	14,260,000
less Scout payments Nov 14 to Apr 15		3,660,000	less Scout payments Nov 14 to Apr 15		3,660,000
less emergency food cash April 2015		1,000,000	Other deductions		0
less Haydom Fund		<b>1,000,000</b>	less Haydom Fund		<b>1,000,000</b>
Balance to Domanga Hadza May 2014		<b>7,340,000</b>	Balance to Mongo Hadza May 2014		<b>7,600,000</b>
Village Goivernment	2.75	<b>500,000</b>	Village Goivernment	15	<b>2,700,000</b>
Mbulu District	2.75	<b>500,000</b>	Mbulu District	2.8	<b>500,000</b>
Education fund	0	<b>4,000,000</b>	Eduation Fund	0	<b>2,000,000</b>
			Yaeda Chini Ward Gov.	3	<b>540,000</b>
<b>total</b>		<b>18,000,000</b>	<b>total</b>		<b>18,000,000</b>

### November 2015

#### Carbon Tanzania

Community Payments

Nov 2015

Total funds  
available, (based on  
Sales, May 2015 to  
Nov 2015)

**Tsh 24,066,000**

<i>Domanga</i>	%	<b>12,033,000</b>	<i>Mongo wa Mono</i>	%	<b>12,033,000</b>
Hadza Community	100	12,033,000	Hadza Community	73.4	8,833,000
less Scout payments Nov 14 to Apr 15		3,780,000	less Scout payments Nov 14 to Apr 15		3,780,000
Other deductions		0	Other deductions		0
less Haydom Fund		<b>1,000,000</b>	less Haydom Fund		<b>1,000,000</b>
Balance to Domanga Hadza May 2014		<b>7,253,000</b>	Balance to Mongo Hadza May 2014		<b>4,053,000</b>
Village Goivernment	0	<b>0</b>	Village Goivernment	10.0	<b>1,200,000</b>
Mbulu District	0	<b>0</b>	Mbulu District	0	
Education fund	0	<b>0</b>	Eduation Fund	16.6	<b>2,000,000</b>
			Yaeda Chini Ward Gov.	0	
<b>total</b>		<b>12,033,000</b>	<b>total</b>		<b>12,033,000</b>

## Annex 3. Retirements and transfers Markit registry 2015

### Retirements

Vintage	Retired Quantity	Serial Number	Retirement Date	Retirement Remarks
2012	17	PV-PVC-TZ-103000000004180-01012012-31122012-2658387-2658403-MER-o-P	18-03-2016	Carbon Tanzania operational offsets 2015
2013	154	PV-PVC-TZ-103000000004180-01012013-31122013-2945644-2945797-MER-o-P	18-03-2016	Braeburn School operational offsets Sept 2013 - July 2015 (2 years)
2013	314	PV-PVC-TZ-103000000004180-01012013-31122013-2945798-2946111-MER-o-P	18-03-2016	Guiding Principles offsets 2015
2013	749	PV-PVC-TZ-103000000004180-01012013-31122013-2946112-2946860-MER-o-P	18-03-2016	The Map's Edge safari departure offsets 2015
2013	36	PV-PVC-TZ-103000000004180-01012013-31122013-2946861-2946896-MER-o-P	18-03-2016	Kisima Ngeda Tented Camp operational offsets 2014
2013	115	PV-PVC-TZ-103000000004180-01012013-31122013-2946897-2947011-MER-o-P	18-03-2016	Wildlife Explorer operational offsets 2014
2013	340	PV-PVC-TZ-103000000004180-01012013-31122013-2947012-2947351-MER-o-P	18-03-2016	Nature Discovery Kilimanjaro Climb offsets 2013 and 2014
2013	954	PV-PVC-TZ-103000000004180-01012013-31122013-2947352-2948305-MER-o-P	18-03-2016	Asilia Camps and Lodges operational offsets June 2014 to May 2015
2013	76	PV-PVC-TZ-103000000004180-01012013-31122013-2948306-2948381-MER-o-P	18-03-2016	Dorobo Tours and Safaris offsets July 2014 to July 2015
2013	117	PV-PVC-TZ-103000000004180-01012013-31122013-2948382-2948498-MER-o-P	18-03-2016	Tarangire Safari Lodge operational offsets 2014
2013	652	PV-PVC-TZ-103000000004180-01012013-31122013-2948499-2949150-MER-o-P	18-03-2016	African Environments safari departure offsets 2014 and 2015
2013	346	PV-PVC-TZ-103000000004180-01012013-31122013-2949151-2949496-MER-o-P	18-03-2016	The Nature Conservancy Africa office international flight offsets 2014
2013	131	PV-PVC-TZ-103000000004180-01012013-31122013-2949497-2949627-MER-o-P	18-03-2016	Duma Explorer operational offsets 2014
2013	12	PV-PVC-TZ-103000000004180-01012013-31122013-2949628-2949639-MER-o-P	18-03-2016	Acacia Natural Resource Consultants international flight offsets 2015
2013	203	PV-PVC-TZ-103000000004180-01012013-31122013-2949640-2949842-MER-o-P	18-03-2016	Carbon Tanzania "Buy a Tree" campaign Christmas 2015 tonnes assigned

### Transfers

Source Account ID	Source Account Name	Destination Account ID	Destination Account Name	Vintage	Quantity
103000000002262	Carbon Tanzania	10000000000298	NativeEnergy, Inc.	2013	4000
103000000002262	Carbon Tanzania	10000000000805	Sustainable Travel International	2013	904
103000000002262	Carbon Tanzania	100000000001034	CLevel	2013	300
103000000002262	Carbon Tanzania	100000000000432	ZeroMission AB	2013	165