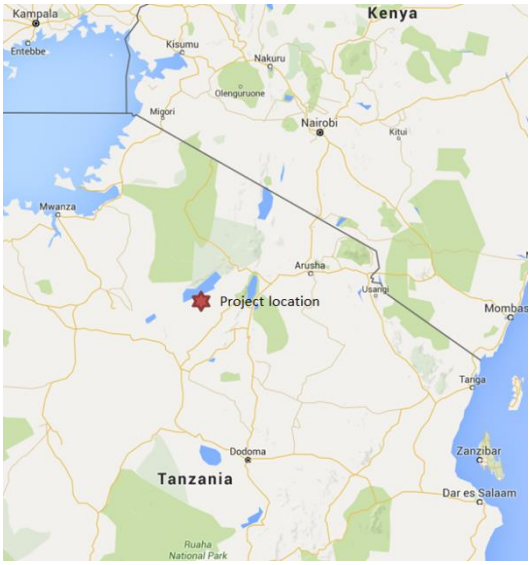
Reducing Emissions from Deforestation and Forest Degradation in the Yaeda Valley

Distinctive features

This project works with hunter-gatherer Hadza (or Hadzabe) and pastoralist communities in Mongo Wa Mono and Domanga villages, Mbulu District, Northern Tanzania. By working in conjunction with traditional leaders, elected village governments and a team of community members, Carbon Tanzania (CT) as the project coordinator, established a results-based payment for ecosystem services (PES) system through the sale of ex-post Plan Vivo Certificates (PVCs).

Conceptualisation of the project began in February 2010. A participatory and iterative process of project planning continued thereafter involving the target villages, Ujamaa Community Resource Team (UCRT) and CT. CT submitted the Technical Specifications and project design document (PDD) to Plan Vivo in February 2012. The project covers 20,600 ha of *Acacia-Commiphora* woodland, which is home to a number of indigenous species.



The first main objective of this REDD+ project is to improve local forest management by preventing land encroachment, which currently results in land conversion from natural woodland to agriculture under shifting agricultural systems. This land intrusion, conversion and resulting deforestation are contrary to the village by-laws, the village land use plan and national laws governing land acquisition and utilization within Tanzania. In order to reduce land intrusion the project will empower and train community guards to patrol, monitor and report on natural resource use contrary to the land use plan and take action against violators in accordance with the village by-laws and Village Land Act. The second objective is to generate real, additional and verifiable carbon offsets from avoided deforestation. This objective requires the project to minimize leakage by tackling the drivers of deforestation and incorporating neighbouring villages in a wider PES project. The project will arrange for training in intensified agricultural techniques suitable to the conditions found in the area so that land conversion becomes less necessary. There are plans to scale up the project with pastoralist communities in Mongo Wa Mono and the neighbouring village of Yaeda Chini (also spelt Yaida Chini) and other neighbouring areas where communities see the benefits of strengthened land tenure, sustainable natural resource use and resulting PES. The community members are trained to patrol and report any land use change and / or poaching activities which contribute to tackling illegal land intrusion and resulting land conversion at both local and district level.

	Heading	Explanation
Locational factors		
	**Location**	Mongo Wa Mono and Domanga villages, Mbulu District, Manyara Region, Northern Tanzania
	Spatial boundaries	Project area: 20,600 ha Reference area: 62,096 ha Leakage monitoring area: 20,800 ha, adjacent to project boundary Leakage management area: size not specified
	Land cover	*Acacia-Commiphora* woodland
	Agents and drivers of forest cover change	Agents: Small-scale local farmers Underlying drivers: ▪Local tribal people avoid confrontation and have allowed others to deforest the land ▪Main driver is agricultural expansion associated with following factors: • Policies – Policies and tax incentives encourage private investment in agriculture to meet increasing food demand • Environment – Agricultural practices are unsustainable, thus requiring further forest conversion; agriculture is rainfed and expansion takes place based on expectation of good rainy season • Culture and demographics – Population is increasing leading to increased food demand; Immigrants are clearing land for unsustainable agriculture; Settlement development is taking place and associated with deforestation Proximate causes: Shifting cultivation; Cattle and goat grazing
Basic project features		
	**Objectives**	▪Provide finance to preserve the protected area designated in the land use plan ▪Improve/intensify agricultural practices in the neighbouring villages ▪Promote the protection of indigenous species
	Proponent/s	Carbon Tanzania (CT) Mission: To encourage the development of in-country, value added carbon offset projects which directly benefit communities and ensure biodiversity protection and secure livelihoods for communities threatened by climate change.
	Tenure and Carbon	**Tenure:** Hadzabe communities within the villages of Mongo Wa Mono and Domanga collectively own village

	rights holder/s	lands, including the project area, under the land laws of Tanzania. **Carbon rights:** Unclarified, although there is general statement in the current Forest Act (2002) which states that "village or community forest reserves confer all ownership and user rights to the village or designated community". In the meantime, the Tanzanian government with NGOs, including CT, has engaged with issues related to carbon rights for REDD.
	Actors involved in project design and implementation and their roles	▪Ecological Initiatives Ltd. – Project developer: Responsible mostly for financing and engagement with government ▪Carbon Tanzania, Registered not-for-profit Business Project of Ecological Initiatives Ltd. - Project Coordinator: Responsible for technical & administrative support ▪Hadzabe communities – Communities recognized by central government as holding land tenure rights in project area: Develop land use plans; Serve as community guards and patrol, monitor and report on natural resource use in violation of the land use plan; Take action against violators in accordance with village by-laws and Village Land Act; Monitor biodiversity impacts; Provide information on socioeconomic impacts ▪Ujamma Community Resource Team (UCRT) – Community Partner: Provide legal counsel to communities for the purpose of securing land tenure and entering into PES agreements; Provide knowledge of local context to ensure CT is able to carry out the necessary field operations; Organize meetings with ward and district officials; Engage with communities where project is expected to scale-up; Serve as key actor in dispute resolution
	Upfront financing	Provided by the consultancy partnership Ecological Initiatives Ltd. in which CT is a registered business activity
	Start date	Validation took place in November 2012 followed by certification, which marks the beginning of the crediting period
	Crediting period	20 years
	Baseline emissions	
	**Methodology**	Own methodology - Historical land cover change assessed using Landsat and Google Earth images; Carbon stock assessed through ground-based sampling
	Reference data (unplanned deforestation/degradation)	Reference period: 2000-2010 Imagery: Landsat and Google Earth images (dates and scene information not provided in project design document)

Reference data (planned deforestation/degradation)	Not applicable
Stratification of project area	*Acacia-Commiphora*
Deforestation rate and location	**Historical:** 0.93% **Projected:** 0.93% **Likely baseline scenario:** The deforestation rate would remain at least as high as the historical rate. **Modelling procedure:** The historical deforestation rate in the reference region.
Carbon pools	**Carbon pools included** ✓ × ▪Aboveground tree biomass ✓ ▪Belowground tree biomass ✓ ▪Non-tree woody biomass × ▪Litter × ▪Dead wood × ▪Soil × ▪Wood products × **Estimation method:** - For aboveground biomass, the Winrock aboveground biomass methodology was used. Plot selection was made based on the statistical analysis tool R. 70 plots were sampled. Plots were located randomly. A three-nest circular plot design (50m, 25m, 10m radius) was used. Diameter at breast height (dbh) measured. Baobab trees were excluded from the survey since they generally remain standing in converted land while all other trees are removed. Allometric equations, obtained from the Kasigau REDD project in Kenya were used. Some are species and genus specific. General equations were otherwise used. - Belowground biomass was calculated based on the root-to-shoot ratio of 0.4 provided in the IPCC LULUCF GPG.
Carbon stock changes	100% loss of carbon stock as forests in project area are going to be cleared.
GHG emissions	Not considered
Net emissions without project	444,744 tCO_2e over 20-year crediting period

Project GHG emissions reduction strategy

Scope	Avoided deforestation
Activities	▪Improved land use planning and management through education and empowerment

	▪Avoided deforestation through the enforcement of district approved village land use plan and by-laws in accordance with national land laws ▪Training in improved agricultural techniques suitable to the conditions found in reference region to combat primary driver of deforestation
Leakage mitigation strategy	A series of conversations with community members to determine possible sources of leakage were conducted. The project's primary strategy is to involve tackling the underlying causes of the historic deforestation pattern and scaling up of project activities. To this end, an agricultural specialist in sustainable agriculture provides the neighbouring villages with an alternative to continued land conversion.
Non-permanence risk mitigation strategy	▪Results-based payments are made monthly and considered as sufficient incentive to prevent agricultural activity within the target villages. ▪Implementation of the land use plan and enforcements of village by-laws restrict agricultural activity initiated from outside of the village. ▪Conflict resolution mechanism is also in place.
Additionality	▪Legal and Regulatory test: this project has not been initiated to fulfil any government policies. ▪Financial and economic barriers: there is no commercial interest in the preservation of the habitat in the project area other than the small amounts of revenue generated through low impact ecotourism. ▪Social barriers: the population has been traditionally very passive in its interactions with outsiders. This has been a significant barrier to protect their remaining land and lifestyle. ▪Cultural barriers: convincing local farmers to adopt new practices is a significant barrier that this project must overcome in order to address the root causes of deforestation. ▪Ecological barriers: the essential problem that the project works to solve is unsustainable land use practices on the part of agriculturalists utilising shifting agriculture techniques and pastoralist communities overgrazing in and around the project area. ▪Institutional and political barriers: the project will focus on strengthening the villages' natural resource committee and other village institutions to enhance their ability to uphold their land use plan and by-laws. ▪Technical barriers: substantial efforts have been made by the project to build the technical capacity of the Hazabe community in terms of monitoring carbon,

		environmental and socioeconomic benefits of the project
With-project emissions		
	**Assumed effectiveness of measures**	80% effective in reducing deforestation
	Carbon stock changes	Only change accounted is the protection of carbon stocks in aboveground biomass and belowground biomass in areas that would have been deforested, assuming project activities are 80% effective in reducing deforestation
	GHG emissions	Not considered
	Leakage	**Types:** ▪Displacement of agricultural activity to other land within the reference region (medium risk) ▪Displacement of biomass collection (low risk) ▪Displacement of charcoal manufacture (low risk) ▪Revenue is not realised in neighbouring communities (low risk) **Deduction:** 10% discount to compensate for leakage
	Non-permanence risk	**Buffer:** 20% risk buffer as a protective measure in the case of non-permanence. The VCS Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination to assess permanent risk, level of risk, and management measures was used.
	Ex-ante estimated net greenhouse gas emissions reductions	**Total over crediting period:** 304,795 tCO2e **Annual average:** 15,240 tCO2e **Annual average per ha:** 0.740 tCO2e
	Monitoring of carbon stock changes and emissions	**Parameters** i. Historical deforestation rate in the reference region ii. Parameters for aboveground biomass iii. Leakage **Methods** i. iii. Landsat and Google Earth imagery (conducted by TNC) ii. Biomass survey following Winrock methodologies **Frequency** Every 5 years Note: Reporting on observed land use change is also undertaken by community guards on a monthly basis
Stakeholder identification and engagement		
	**Stakeholders identified**	▪District, ward and village governments ▪CT

		▪UCRT ▪Hadzabe and the surrounding communities
	Identification process	Not described. (*Project actors have been involved in the area for a long time.* UCRT started working with Mongo Wa Mono in 2002 with the aim of securing land tenure for the Hadzabe)
Full and effective participation		
	**Access to information and consultation**	▪The project was first introduced in October 2010 and, as is custom, required a two-day meeting with a quorum of the Hadzabe community (270 people). ▪At all stages of project development the project's aims have been directly communicated to the Hadzabe community through informal training practices and through a community spokesmen ▪Informal training practices in the beginning of the project ▪CT must provide reports every six months on the development of the project through relevant committees and meetings ▪Community consultations continue to take place throughout the lifetime of the project
	Participation in design, implementation and monitoring	▪Mongo Wa Mono and Domanga village members have been involved in the planning of the project since its start ▪Project activities related to patrolling the project area and resolving conflicts with those who do not adhere to the land use plan as well as proposals for mitigating leakage were developed in a participatory fashion. ▪The contract as the producer sale agreement for this project stipulates that all community members are to be provided with the opportunity to participate in the project
	Feedback and grievance redress procedures	▪The communities have the opportunity to review, discuss, and revise the contents of the contract with legal guidance from UCRT. ▪The existing village structures will serve as a forum for representation of project participants and the community-at-large. The village assembly is a decentralized, democratic institution consisting of all male and female village members above the age of eighteen. This assembly meets on a bi-monthly basis and anyone is welcome to place an item on the agenda, including concerns relevant to this project.
	Worker relations and safety	Not described.
Communities		
	**Without-project**	The land of the Hadzabe is deforested.

	scenario	
	With-project scenario	**Expected net benefits** ▪Increased income stemming from the PES element of the project ▪A sustained supply of food and other essential items from the improved habitat ▪Improved watersheds **Possible negative impacts on other stakeholders and mitigation strategy** Measures to eliminate negative impacts by the project is taken, i.e. providing the neighbouring communities with training on intensified/improved agricultural techniques
	Impact monitoring	**Indicators** ▪The socioeconomic impacts of the project are, to a large extent, directly related to the environmental impacts due to the traditional lifestyle of the Hazda. Therefore monitoring variables for carbon benefits are overlapped with those for socioeconomic impacts, including community user rights over forest based resources, community tenure and ownership over land, management institution, effort spent on conflict resolution by UCRT, coverage by community guards, land use change, and payments to the community guards, communities and local government ▪Other socioeconomic variables are also considered to be developed. **Methodologies** Monitoring by both URCT and CT and community-based monitoring; CT will provide support to project participants to build their capacity to monitor carbon, biodiversity and socioeconomic impacts. **Frequency** Annual, though community based monitoring conducted every month
Biodiversity and ecosystem services		
	Without–project scenario	Species of mammals and birds, including ones listed under IUCN Endangered, Near Threatened, and Vulnerable will not be protected.
	With-project scenario	**Expected net benefits** ▪Anti-poaching protects large mammal species ▪Preservation of habitat for wildlife and fauna ▪Prevents land conversion and deforestation associated with slash and burn agriculture **Possible negative offsite impacts and mitigation strategy** Not described

	Impact monitoring	**Indicators:** Presence and frequency of species (Avifauna, Lion, Wild Dog, Zebra, Eland, Cheetah and Elephant) **Methodologies:** Timed Species Counts (TSC) for Avifauna species and community-based monitoring for the rest of the above species **Frequency** Annual

Progress

	**Validation**	Plan Vivo Validation conducted between November 19 and 23, 2012 (Registered as Plan Vivo project on 31 May 2013)
	Verification	See Credits issued
	Credits issued	Number: 32,022 Plan Vivo certificates issued As of: 17 November 2015

Further information

http://www.planvivo.org/project-network/redd-in-yaeda-valley-tanzania/

Documents reviewed

- Plan Vivo project design document: http://www.planvivo.org/docs/Yaeda_REDD_PDD_Jan15.pdf
- Technical specification: http://www.planvivo.org/docs/Tech-Spec-Yaeda-Valley-2015.pdf
- Plan Vivo project certificate: http://planvivo.org/docs/Project_registration_Cert_Yaeda-Valley.pdf
- Validation report: http://www.planvivo.org/docs/140605_Validation-Report_PV_update.pdf
- Project presentation: http://planvivo.org/docs/Carbon_Tanzania_Yaeda_Presentation.pdf