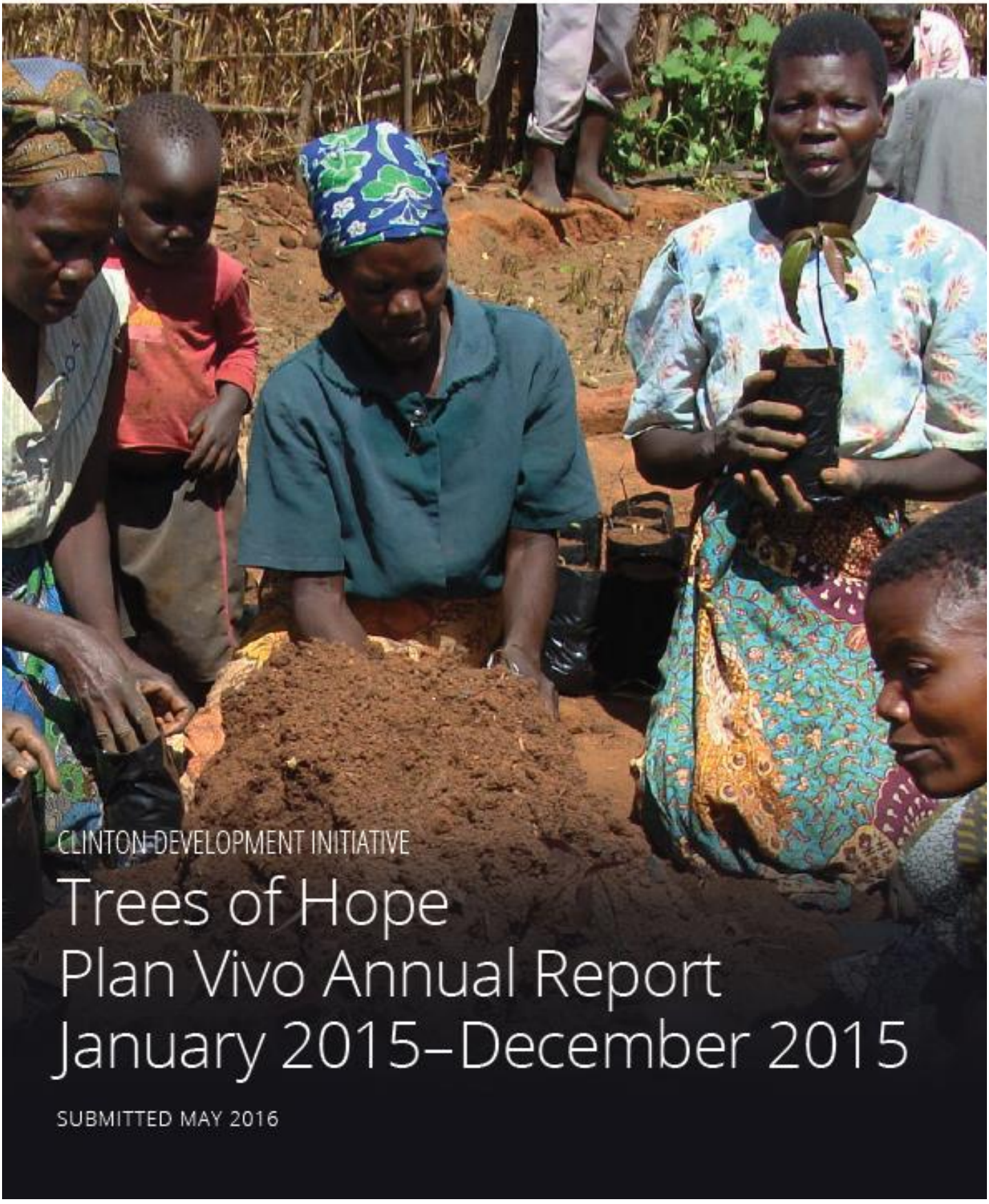

CLINTON DEVELOPMENT INITIATIVE

Trees of Hope
Plan Vivo Annual Report
January 2015–December 2015

SUBMITTED MAY 2016

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1.0 Background

The effects of climate change lead to decreasing food and water security, soil productivity, crop yields, forest cover, and biodiversity, all of which disproportionately affect smallholder farmers. These issues are further exacerbated by rampant deforestation and poor land management. As a result, these environmental changes are threatening the livelihoods for the majority of Malawians, who depend on subsistence agriculture.

The Clinton Development Initiative established the Trees of Hope Project in 2007 in the Dowa and Neno districts of Malawi to reverse deforestation, mitigate the harmful effects of climate change, and bolster a self-sustaining marketplace by making tree farming profitable and attractive for smallholder farmers. The Trees of Hope project coordinates community led efforts in climate change mitigation and adaptation through agroforestry and reforestation activities, reducing the local community's vulnerability to climate change through benefits derived from tree-based land use systems, while also providing farmers with increased income from the sale of Plan Vivo carbon credits.

Trees of Hope is a certified Payment for Ecosystem Services (PES) project. Plan Vivo supports communities in managing their natural resources by quantifying ecosystem services. Through the Trees of Hope project, rural farmers in Malawi decide how they can best address threats to their local ecosystems by choosing one of five land-use systems that addresses threats to their local ecosystem. These systems represent responsible land management strategies that benefit the environment by reducing soil erosion and increasing soil fertility.

The following report presents a general state of the project including but not limited to trainings, expansion, events, and challenges that occurred during the reporting period.

Table 1: Summary Statistics

Summary Statistics	
Reporting Period	1st January, 2015 – 31st December, 2015
Technical Specifications in Use	1. Woodlot 2. Boundary Planting (BP) 3. Dispersed Systematic Inter-Planting (DSI) 4. Citrus Orchard 5. Mango Orchard

Payment for Ecosystem Services (PES) Agreements in Numbers			
	Total PES Agreements for Project	Agreements from Current Reporting Period	Agreements for New Certificate Issuance
Individual Smallholders	851 farmers	0	0
Farmer Groups	24 farmer groups	0 farmer groups	0
TOTAL	875 farmers and groups	0	0

Table 2: Historical Evolution

Project indicators	**Historical (2010-2014)**	**Added/ Issued this period (2015)**	**Total**
No. smallholder households with PES agreements	851	0	851
No. community groups with PES agreements (where applicable) by Dec 2015	24	0	24
Approximate number of households (or individuals) in these community groups	10	0	10
Area under management (ha) where PES agreements are in place	275 ha and 6,718 100 meter units		275 ha and 6,718 100 meter units
Total PES payments made to participants (USD)	$162,817 USD	$ 103,285 USD	$162,817
Total sum held in trust for future PES payments (USD)	199,889 USD	0	199,889 USD
Plan Vivo Certificates (PVCs) issued	79,402	0	79,402
Allocation to Plan Vivo buffer to date (tCO2)	19,850	0	19,850
Unsold Stock at time of submission, Vintage 2014 (PVC)	12,022	0	12,022
Plan Vivo Certificates (PVCs) requested for issuance this reporting period		**0**	0

2.0 Key Developments in the Project

2.1 Climate Change Impacts and Loss of Trees

Beginning in January 2015, Malawi experienced country-wide flooding that greatly impacted infrastructure and agriculture. Roads became impassable, limiting rural connectivity to markets and electricity, and agricultural land became waterlogged, damaging productivity and greatly impacting food and nutritional security. Families lost their homes, health related issues increased, and it was estimated that more than 20,000 people were displaced.

Trees of Hope farmers were impacted by the floods in Upper and Lower Neno. Our field officers reported that more than 14,000 trees were washed away or damaged and that 70 of our farmers were directly impacted by the floods. These farmers not only lost trees, but also had their crops washed away. One of our most successful and thriving fruit tree nurseries in Upper Neno lost 80% of its seedlings in the nursery, and the farmer who oversees the management of the nursery lost all of his crops as well.

Trees of Hope, and the Clinton Development Initiative more generally, took this opportunity to re-emphasize the important roles that trees play in building resilient ecosystems. Trees have the ability to break up hardpans in the soil, allowing water to penetrate more quickly and deeper than if they were not there. Trees therefore help mitigate against flooding.

After the challenges that the flooding caused throughout Malawi, there was a long period of drought, followed by increased prevalence of forest fires. Trees of Hope engaged in community sensitization campaigns on forest protection against fires, including the role that trees can play in mitigating fire damage as a “fire-break”.

2.2 New Project Manager

In April 2015, the Clinton Development Initiative began the process for hiring a new project manager for Trees of Hope. Sibusisiwe Limuwa was hired in May 2015. She has a Bachelor’s of Science in Forestry and a Master’s of Science in Sustainable Soil Resources Management. Mrs. Limuwa has more than 3 years of management experience in agriculture and forestry work in Malawi and Kenya.

2.3 Pest & Disease Control for Fruit and non-Fruit trees

Trees of Hope participants saw an increase in the numbest of pests and diseases that were impacting their trees. The fruit and non-fruit trees of Neno were disproportionately impacted. A Pathologist was engaged to assess the situation and farmers were provided with information to tackle these new issues with tree growth. Trees of Hope participants took the necessary measures as advised by the pathologist and the situation is currently being monitored.

2.4 Fruit Tree Viability Testing in Dowa

Dowa is significantly drier than Upper Neno, where most of our participant’s fruit trees are grown. Starting in April, Trees of Hope field officers working alongside community members and current participants, identified twenty new sites for mango and citrus seed nurseries in Dowa. Five thousand mango trees were planted with a 90% survival rate despite the drier conditions experienced in Dowa as compared to Neno. Trees of Hope field officers experienced difficulty in sourcing scions for grafting the citrus fruits so less than one hundred were planted as compared to about five thousand mango trees which were planted with a 90% survival rate.

2.5 Opening of New Bank Accounts

Trees of Hope, with the support of our finance team, began the process of opening new bank accounts for 581 farmers in 2015. This was done in two groups based on the metric tons of carbon that were bought. The first group of 205 farmers that

were sequestering 20,000 tCO_2 of carbon had their accounts opened in August 2015 and the second group sequestering 30,000 tCO_2 began the process of opening their accounts in December 2015.

2.6 Updates to the Payment for Ecosystem Services (PES) Agreement Form

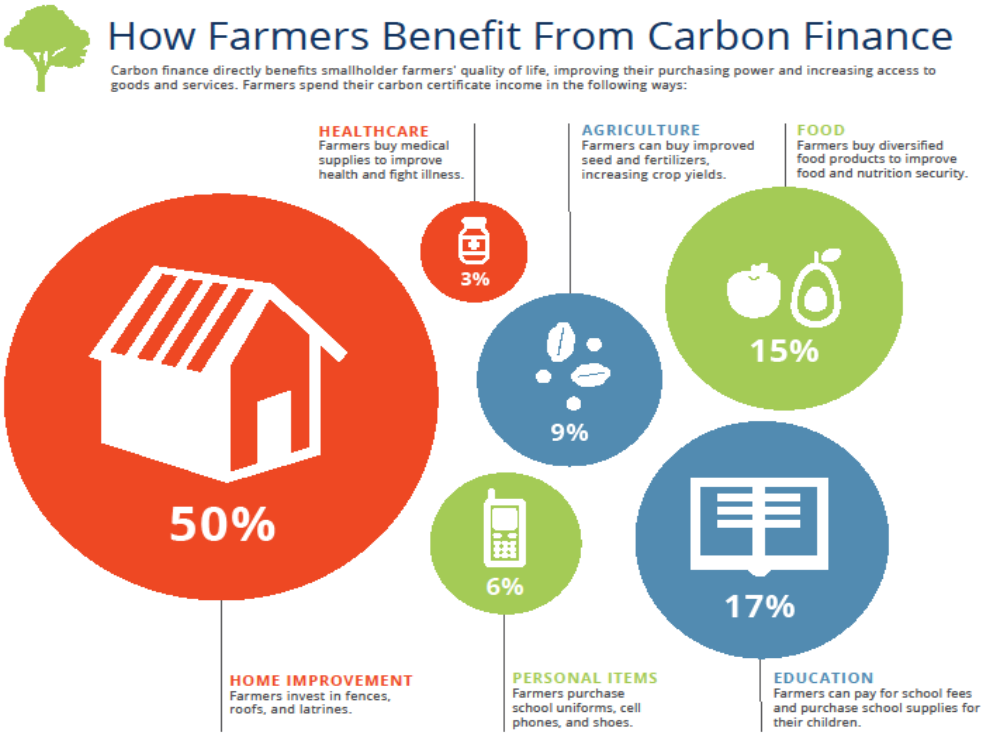
Trees of Hope, with the support of our legal and contracts team made amendments to the Payment for Ecosystem Services (PES) agreement form after realizing that the previous agreement form did not have any provision on how to deal with farmers that faulted from the agreed monitoring targets. The new form has therefore made for that provision and farmers will be dealt with on a case by case basis with some being either suspended for a period of time or permanently removed from the program. The amended PES agreement form can be found in Appendix I.

2.7 Monitoring and Evaluation

The M&E team of the Clinton Development Initiative hosted a training in the city of Blantyre, Malawi, about an hour away from Neno, of our seven field officers on monitoring and evaluation protocols. The focus was on measuring the age of trees by measuring the trees circumference (DBH), GPS location for all the gardens and fields for farmers who receive the carbon credit money. In line with the plan vivo agreements the training focused on the periodical check on farmers to make sure they have the minimum number of trees sequestrating carbon dioxide are always available in their fields.

Additionally, the team worked to help collecting increasing amounts of data for Trees of Hope. Below is a chart describing how farmers spend the money that they make through planting trees. Farmers selected the category that they spend the most of their money on, and were only permitted to select one choice.

Figure 1: Farmer's Spending and the Benefits of Carbon Finance



Furthermore, the Clinton Development Initiative collected their first year of baseline data from more than 300 farmers for Trees of Hope, providing more insight into the communities and individuals we are working with. Long term, this will allow us to better understand how our farmers are growing, and how we can better inform the way that we work with farmers. The full baseline survey questionnaire can be found in Appendix II.

Furthermore other trees like citrus fruits and mangoes help in the improvement of health of households through the consumption of fruits from these trees and also are sold to improve HHs income. Below is a table which summarizes the uses of the money obtained from sale of mangoes:

Table 3: Post-Harvest Mango Usage

USE OF MANGO	% of USE
Consumption	68 %
Selling	27 %
Sharing	5 %
Processing	1%

2.8 Partnership Development to Increase and Diversify Farmers Income Generating Opportunities and Avoid Expenses

Solar Mango Drying

Upper Neno farmers are to be trained in post-harvest handling using solar driers. The idea is to first establish market linkages for the farmers were they can then sell their dried fruit, vegetables or medicinal tree leaves in order for them to access other income apart from that related to carbon finance. Trees of Hope Plans to link with organizations like Cheetah Development, whose solar dryers are pictured below.

Clean Cook stoves

Trees of Hope participants were involved in an interactive presentation on clean cook stoves. Bearing in mind that ToH participants rely solely on wood for energy for cooking, it was considered to be beneficial for the participants to learn how

to use clean cook stoves. The clean cook stoves save farmer's time and money by minimizing the amount of fuel-wood consumed during meal preparation. The less wood their stoves consume, the fewer trees have to be cut down as a source of fuel. Trees of Hope hopes to provide farmers with access to resources to build their own cook stoves, or have access to resources to purchase their own cook stoves.

Bee- Keeping Initiative

From results collected from the baseline survey conducted by the ToH Monitoring and Evaluation Team, Trees of Hope farmers stated their interest in venturing into activities like Bee-keeping in order to produce honey and also candle making as alternative income generating activities. This is still in a concept phase and farmers are expected to begin trainings on the same within the next reporting period.

Mushroom production

Mushroom production was also one income generating activity highlighted by Trees of Hope farmers as a way to preserve their tree plantations. Farmer trainings will be carried out in the next reporting period.

3.0 Key Events in the Project

3.1 Plan Vivo Stakeholder Meeting

In September, Plan Vivo hosted its stakeholder meeting in Sigtuna, Sweden at the Sigtuna Foundation. The meeting brought together stakeholders from around the world to discuss challenges, opportunities, and solutions within the projects with a great focus on non-carbon impacts or benefits to the communities that we are serving. The event also focused on how Plan Vivo supports the new SDG's (Sustainable Development Goals). CDI was able to present on the Trees of Hope project, highlighting the benefits of tree planting beyond the carbon sequestration and general environmental benefits. The main focus was on the food security and income generating potential of trees, as well as providing technical agronomic assistance to our farmers across multiple value chains to help strengthen value chains and diversity and increase incomes.

3.2 Integration of Trees of Hope and other CDI programs

After a series of consultations, Trees of Hope staff and staff from CDI's other programs such as Small Holder Outreach Program (SHOP), Clinics and Tukula Farming Company (TFC), saw the need to integrate the various programs in areas of common ground.

Trees of Hope and Small Holder Outreach Program

To kick start the process, in September 2015 Trees of Hope field officers trained SHOP field officers in different tree establishment and management techniques as one way of integrating the two programs. SHOP field officers were trained on the Importance of fruit and non-fruit trees at household and community levels, challenges farmers face in growing fruit and non-fruit trees, key preference attributes farmers look for in fruit and non-fruit trees, potting media, best practices in establishing and managing tree nurseries, best practices in establishing and managing a tree plantation, practical work on grafting and budding fruit trees and tree seed collection and preservation. This was done in order that SHOP farmers can also benefit from establishing tree plantations apart from carbon credits. Further trainings will be conducted where SHOP field officers will train ToH field officers on best practice agronomy in groundnuts, soya beans and beans.

Trees of Hope and Clinics and Nutrition Program (CNP)

Trees of Hope and Clinic and Nutrition Program (CNP) saw the need of using locally available tree species for both nutritional and medicinal value to improve small-holder communities' livelihoods. CNP with assistance from ToH field officers expertise,

plan to establish small *Moringa oleifera* gardens as a way to increase community nutrition whilst also introducing a medicinal source for the community. These tree nurseries will be established in sites where CNP is operational.

Trees of Hope, Clinics and Tukula Farming Company

The three CDI programs are in the process of establishing a Farmer Training Center where demonstration plots of each program will be established and farmers can come to a one stop shop for trainings. The training center will comprise tree nurseries of trees currently being grown in ToH program, the different land use systems practiced. Farmers will be trained on nursery establishment, grafting, fire-break construction, seed collection amongst others. Other programs will also teach farmers in various techniques as per the program requirements. The Farmer Training Center will be hosted at Tukula Farming Company.

4.0 Key Challenges

4.1 Climate Change

Due to the climate change, Trees of Hope sites, Dowa and Neno, both experienced delayed onset of the rainy season. This resulted in delayed planting of tree seedlings. The rainy season usually begins as early as October and ends around February-March, but in the last year, rains only began to fall in late December and by end January most areas were dry. This resulted in loss of many of the established tree nurseries. Some farmer fields both in Dowa and Neno experienced fires due to the long dry spell before the onset of the rains and one farmer lost most of his woodlot in Neno.

4.2 Transition Period before Hire of New In-Country Manager

Almost six months passed before we were able to hire a new Manager for the Trees of Hope program. During this time, staff members from the Malawi office that were familiar with the program stepped in and helped manage programmatic activities including but not limited to: ensuring trainings were happening, monitoring results were being met, and farmers were being adequately supported.

4.3 Digitalization of Data

Since the inception of the project, Trees of Hope, and across CDI more broadly, reports and monitoring data have been collected with pen and paper. CDI has recognized that this can present a challenge when it comes to broader reporting to our certifying bodies, and completing annual reports, as Trees of Hope has had to hire data entry clerks to transfer the information captured on paper to the computer.

In 2015, CDI began the process of transitioning to digitalized reporting.

4.4 Delays in Payments to Farmers

Trees of Hope signed up 376 new farmers in late 2015 but were unable to pay them until April 2016. This has been a persistent problem that Trees of Hope has had because of historical issues with record keeping. In 2015, we updated our Payment for Ecosystem Services agreement, organized our reports, and began the process of digitalizing our reports.

5.0 Project Overview

Producers in the program are engaged in one or more of the five land-use systems described in the table below. For more information please explore the Trees of Hope technical specification documents on the Plan Vivo website. The graphic below explains the environmental and potential income generating benefits of each of the land use systems.

Figure 2: Land Use Systems

Each of the land use systems is described in further details in the table below.

Land Use System	Description	Density/Spacing
Woodlots	This system involves the establishment of indigenous and/or naturalized tree species on a plot of land in a systematic manner.	2,500 trees per hectare
DSI (Dispersed Systematic Inter-Planting)	This systems involved inter-planting trees with arable crops to improve soil fertility over time through the addition of degradable organic matter to the soil and biological nitrogen fixation.	200 trees per hectare
Boundary Planting (BP)	This system involved the linear planting around amenities. It is commonly used around producers farms for boundary demarcation, but can also be used to protect fields from livestock damage	3 meters within rows (or 33.33 trees per 100 meter segment)
Citrus Orchard	This system involves the planting of high-value citrus varieties produced from local seedling rootstock through bud-grafting. These improved varieties not only produce high value fruit, but also reach fruiting age in 4 years, much earlier than local varieties.	400 trees per hectare
Mango Orchards	This system involves the planting of high-value mango varieties produced through grafting improved scion varieties on to local rootstock. These improved varieties produce less fibrous, more fleshy fruits, that reach fruiting age in 3-5 years, much earlier than local varieties.	200 trees per hectare

Table 4: Description of Land Use Systems

6.0 Participant Overview

Producers registered with the program, each with a single plan vivo, are either individual households or communal groups. Producers can opt for more than one land use system and this is common among individual producers, while communal groups are typically engaged in woodlot land use system. Table 5 below shows producers and community groups with registered PES agreements.

Table 5: Profile of Producers with Registered PES Agreements

STATISTIC	VALUE
Total Number of Producers	875
Number of Community Groups	24
Number of Individual Producers	851

The total area coverage for the project as contributed to by each land use system is shown in Table 6 below. \

Table 6: Area Coverage for the Land-Use Systems

LAND-USE SYSTEM	UNITS	AREA COVERAGE FOR FARMERS WITH PES AGREEMENTS
Woodlot	Ha	101
DSI	Ha	157
Boundary Planting	100 meter units	6,717
Citrus Orchard	Ha	11.99
Mango Orchard	Ha	4.33

7.0 Sales & Issuances of Plan Vivo Certificates

Sales of Plan Vivo certificates were significantly higher in 2015 than in past years, prompting Trees of Hope to request an interim issuance of certificates to meet the order demand. Trees of Hope aims to continue to increase demand for certificates that will help facilitate more famers to finances from these sales.

Issuance Summary

Issuance One and Two (2010 Vintage)

Total Number of Beneficiaries: 294
Certificates Issued for Issuance One: 20,000
Certificates Issued for Issuance Two: 2,550
Number of Farmers: 277
Number of Community Groups: 17

Issuance Three (2013 Vintage)

Total Number of Beneficiaries: 205
Certificates Issued: 20,000
Number of Farmers: 201
Number of Community Groups: 4

Issuance Four (2014 Vintage)

Total Number of Beneficiaries: 376
Certificates Issued: 36,852
Number of Farmers: 373
Number of Community Groups: 3

Table 7: 2015 Sales

Date	Buyer	Volume (tCO_2)
Feb-15	COTAP - 4	705
Nov-15	COTAP - 5	229
Jan-15	ZeroMissionAB -125	1500
Feb-15	ZeroMissionAB -128	1000
Jan-15	ZeroMissionAB -129	1100
Apr-15	ZeroMissionAB -133	500
Aug-15	ZeroMissionAB -140	34325
Sep-15	ZeroMissionAB -149	1660
Dec-15	ZeroMissionAB -158	1000
Total		**42,019**

8.0 Summary of Monitoring Results

The current monitoring targets are based on farmers meeting minimum numbers of live trees on plots shown as (MT – Monitoring Target) in the appendices which are then compared to the actual number of trees on that plot designated as (MR – Monitoring Result) in the appendices. The project does not experience serious challenges to the monitoring process because it has over the years built enough community-based capacity for this exercise through involvement of Local Program Monitors (LPMs) based in the communities.

In some limited cases, producers get monitored unsuccessfully where they fail to meet the set targets for specific monitoring periods. Such cases are attributed to factors outlined in Table 7 below where corrective remedies are also presented for producers to implement ahead of the next monitoring period. Trees of Hope has determined a framework for suspension of farmers that fail to meet their monitoring targets, which result in temporary holding back payment for that monitoring period.

Table 8: Summary of Reasons for Target Failure and Recommended Corrective Actions

NUMBER	REASON FOR TARGET FAILURE	RECOMMENDED CORRECTIVE ACTIONS
1	Drought, where young seedlings die under water stress	• Digging planting holes of the recommended size for adequate water capture. • Use of compost manure to enhance water retention within the rooting zone of the tree. • Early planting to take advantage of the full rainy season. • Introducing tree species that are more tolerant to drought.
2	Termite attack, which kills young seedlings	• Application of inorganic termicides. • Use of organic termicides like *Tephrosia vogelii* extracts. • Keeping grass mulch clear of the tree base.
3	Late planting	• Early land preparation for tree plots to avoid competition for the limited labour with arable crops later in the season. • Timely establishment of nurseries to have seedlings ready for planting at the beginning of the rainy season.
4	Flooding	• Encouraging planting of more trees and grasses such as Vetiver to help absorb water during flooding season and minimize runoff.
5	Fire	• Clear brush during dry seasons. • In particularly prone regions, plant “fire breaks” of trees not particularly susceptible to burning.
6	Planted less than the target number of trees	• Early land preparation to avoid crisis planting • Establishment of enough seedlings for the planned planting
7	Passing on plot ownership to next of kin	• Criteria for who qualifies as next of kin should be drafted by LPMs and farmers to avoid selection of unworthy next of kins

9.0 Payment for Ecosystem Services (PES) Update

The project made its first set of payments to producers with PES agreements in the outgoing year where community groups and individual farmers received their payments following meeting of their respective monitoring targets. Table 8 below shows a summary profile of these.

The project instituted a system to administer these payments to producers that involves a local bank, First Merchant Bank (FMB) where bank accounts in the names of all the producers are hosted. All payments are made through these accounts on instructions from the project in keeping with the monitoring results at a given monitoring period. Moving forward, the project will make payments to producers every August-September of each year.

10.0 Community Participation

In order to ensure the communities continue participating in the program, Trees of Hope uses different program approaches including the use of Local Program Monitors (LPMs) who act as a link between Trees of Hope farmers and Field Officers. LPMs are volunteer lead farmers chosen by the communities within the various farmer groups that assist Field Officers in information collection, dissemination and even in trainings. The trees of Hope program currently has 45 LPMs, 15 in Lower Neno, 15 in Upper Neno and 15 in Dowa. LPMs are sometimes trained with FOs so they can assist in training of trainers campaigns when disseminating information to farmers. This lessens the workload on FOs whilst maintaining the quality of information disseminated. It also ensures information is kept at the community level for project sustainability even after project phase out.

Table 9: Training Module Components

NUMBER	MODULE	BRIEF CONTENT AND RATIONALE
1	Climate change and rural livelihoods	Covers definition, causes and illustration of climate change effects with local indicators and its impact on rural livelihoods.
2	Climate change adaptation and mitigation	Presents possible strategies for avoiding further dangerous climate change and mechanisms to learn to live with the present effects. The role of trees in climate change management is discussed.
3	Trees of Hope Project: An Overview	Presents the objectives of the project and other building blocks of the program as a vehicle available to the communities to address climate change and safeguard and improve livelihoods.
4	The Plan Vivo System	Covers all tenets of the Plan Vivo system touching on all aspects from definition of a plan vivo to payment of carbon finance.
5	The concept of carbon trading	Introduces the new paradigm of carbon trading and carbon markets by defining the product to be produced by them as producers and outlining requirements of the market.
6	Tree nursery establishment and management	Looks at nursery techniques including choice of site, fencing, seed pre-treatment, media preparation, pot filling, sowing, development of root stocks, grafting, budding, root pruning, pest and disease management and hardening off.

7	Establishment and management	Covers selection of site, pegging and marking according to the technical specification, pitting, planting, mulching, pest and disease management, fire breaks, thinning and pruning.
8	Field monitoring	This outlines monitoring indicators and specifies what data are to be collected, highlighting the target for each monitoring period.
9	Receipt of carbon finance	Covers mainly the dividing criteria between eligibility and non-eligibility for receipt of carbon finance depending on monitoring results. Also covers issues about farmer payment procedures.
10	Group dynamics	Looks at advantages of working in groups, group formation, group leadership, team building, motivation and trust building.

11.0 Breakdown of Operational Costs

Expense	
Personnel	
Total Personnel	
Program and COGS	
Total Program and COGS	[redacted]
Office	
Total Office	[redacted]
Travel	
Total Travel	[redacted]
Total Expense	[redacted]

12.0 Appendices

Appendix I: New PES agreement form

CLINTON DEVELOPMENT INITIATIVE

TREES OF HOPE PROJECT

LILONGWE, MALAWI

PAYMENT FOR ECOLOGICAL SERVICES AGREEMENT

THIS AGREEMENT (the "**Agreement**") is made this _____ day of _____ in the year_____between the **Clinton Development Initiative** ("**CDI**"), an initiative of the Clinton Foundation, located off Chayamba Road on Kambuku Street, Area 43/2/24, Private Bag 68, Lilongwe, Malawi, hereinafter referred to as the "**Project Manager**."

AND

_____of Village Head_____ _____, Group Village _____Head _____Traditional_____ Authority _____ in _____ _____ district, hereinafter referred to as the "**Producer,**" which shall admit and include their respective successors in title and/or assignees.

WHEREAS the Clinton Foundation is a not-for-profit organization which operates CDI in Malawi to support the government in rural development, environmental rehabilitation and livelihood improvement, and runs the Trees of Hope Project, a Plan Vivo-certified project, to coordinate sales of carbon certificates;

AND WHEREAS the Producer is the owner of the piece of land described in Appendix I;

AND WHEREAS the Producer has agreed to produce the estimated volume of carbon credits by planting, using and maintaining the land herein described under the land use system(s) shown in Appendix II, Table A;

AND WHEREAS CDI has agreed to coordinate sales of carbon certificates generated by the Producer by way of the Carbon Emission Reduction Process under the Trees of Hope Project at the price and conditions herein appearing below, and based on meeting the monitoring targets annually as outlined in Appendix II, Table B;

AND WHEREAS both parties are committed to reforestation of rural Malawi through the promotion of tree species to improve the environment, the food security of rural communities and a source of income aside from traditional staple crop agriculture;

NOW THEREFORE it is agreed that the purpose of this Agreement is to provide terms and conditions between the parties for the sale of carbon under the Carbon Emission Reduction Process pursuant to the Plan Vivo project. It applies to all sites registered by the Producer with the Trees of Hope Project for the provision of carbon sales.

1. Producer shall:

a. *Meet monitoring targets*. Meet monitoring targets, as outlined in Appendix II, Table B, over the first ten year period of growth as set under the Plan Vivo standard.

b. *Maintain land use system.* Maintain the specified land use system(s) for 50 years (the "**carbon crediting period**") as described below:

i. Maintenance of the land use system is defined for the first ten years of tree growth by Appendix II Table B, and thereafter as at least 90% survival of mature trees past the ten year monitoring period and until the end of the 50 year carbon crediting period. Additional details regarding management of the tree systems are outlined in the technical specification documents on the Plan Vivo website.
ii. All payments, based on the projected carbon to be sequestered over the 50 year crediting period, are calculated to be paid out over a ten year period as shown in Appendix I.
iii. After ten years, Producer shall be held self-accountable for the survival of the trees.

c. *Rectify problem areas*. If Producer fails to meet monitoring targets, Producer shall be placed on probation and shall have one calendar year (12 months) to rectify problem areas, starting at the date of failure to meet set targets, during which time payment shall be withheld.

i. If the Producer has not yet taken steps to rectify the problem areas by the second year of being on probation, further payment may be withheld and the Producer will be evaluated by CDI to determine whether or not he or she will remain in the program.
ii. If the reason for tree-loss is deemed unacceptable by CDI, Producer shall be permanently removed from the Trees of Hope project, and shall forfeit all future payments.

2. CDI shall:

a. *Pay agreed purchase price*. CDI shall pay the agreed purchase price per ton at the rate described in Appendix I, after verification that monitoring targets as specified in Table B and described below have been met.

i. Monitoring shall take place during the years specified in Table B: Data will be collected by CDI field officers for each Producer. Thereafter, monitoring by CDI field staff shall stop. Details of the monitoring process are outlined in the Project Design Document on the Plan Vivo website.

b. *Pay in installments.* CDI shall pay total amount due to Producer (see Appendix I) via installments as detailed in Appendix II, Table B, following verification that corresponding monitoring targets have been met. Payment conditions are as follows:

i. CDI works with First Merchant Bank of Malawi ("**FMB**") to issue bank account cards to all producers under the Trees of Hope project. CDI submits annual payment summaries to FMB, which will distribute the funds into Producer's account if annual monitoring targets are met.
ii. If Producer fails to meet monitoring targets, payments shall be suspended, at which point the Producer will have one calendar year (12 months) to rectify problem areas, starting at the date of failure to meet set targets.
    1. Payment may be withheld for up to two (2) one-year payment periods (or 24 months) if Producer fails to rectify problem areas to meet monitoring targets by the end of their two year probation period. At that point, CDI will determine, based on the reason for tree-life loss, whether or not the Producer will remain in the project or if the Agreement shall terminate.
    2. If the reason for tree-loss is deemed unacceptable, Producer shall be permanently removed from the Trees of Hope project, and shall forfeit all future payments.

3. Jointly, the Parties agree to the following: *Risk Buffer*. The Producer agrees to allocate 20% of his/her total carbon sequestered into a risk buffer maintained by Project Manager (the remaining 80% shall be the basis for Producer's payments, or the salable carbon). In extreme cases of tree-loss by any given Producer, the risk buffer will ensure that if any losses are incurred, the total sequestered carbon in aggregate for the project can remain stable.

4. Term/Termination. The term of this Agreement shall commence on and shall continue for an initial term of ten (10) years, provided however that (i) either party may terminate this Agreement if the other party fails to perform its obligations hereunder and such failure to perform is not cured within thirty (30) days or (ii) in accordance with sections 1.c and 2.b.ii above, following written notice from the complaining party of such failure to perform; and (iii) CDI may terminate this Agreement upon not less than sixty (60) calendar days prior written notice to Producer should the Clinton Foundation discontinue its work or make other significant programming changes requiring the termination of this Agreement.

Signatures Appear Below

Acknowledged and agreed to this ____ day of _____, 2015.

[ ]

By:_____

WITNESSED BY:

_____

CLINTON FOUNDATION

By:_____

WITNESSED BY:

_____

Producer Identity and Carbon Credits Profile

1.	**Name of Producer (Individual/Group and key point of contact)**	
2.	**Group Village Head**	
3.	**Traditional Authority**	
4.	**Project site (location)**	
5.	**Producer's Government ID number.**	
6.	**Total estimated size to be planted (Appendix II Table A)**	
7.	**Total carbon credits issued (tCO_2e for all land use systems implemented in the Producers field(s))**	
8.	**tCO_2 withheld as buffer (20% of total)**	
9.	**Total saleable tCO_2e**	
10.	**Total tCO_2e bought to date**	
11.	**Total unsold tCO_2e to date**	
12.	**Price per tCO_2e (euro)**	
13.	**Total amount (Euro and Kwacha) to be paid to the Producer for carbon sold over 10 year period**	

TABLE A

Selected Land Use System(s)

Land use system	`	Tick accordingly	Planting density per hectare	Total Area to plant (ha/m)	Number of trees to be planted	Plot location (GPS coordinates)	Rotation period
Woodlot	*S. siamea, S. spectabilis and A. polyacantha.*		2500				20 years
Dispersed Systematic Inter-planting (DSI)	*Faidhelbia albida, Acacia polyacantha.*		200				To be thinned progressively to 25 trees/ha at Year 50
Boundary planting	*A. polyacantha, S. spectabilis*		34 trees/ 100m				25 years
Mango orchard	*Mangifera indica*		200				50 years
Citrus orchard	*Citrus sinensis*		400				50 years

Monitoring and Payment Protocol

Monitoring period	Monitoring target to be met	Percentage (%) of total payment due	Number of payments	Amount to be paid ($) when target is met
Year 1	**50%** of plot established	20	1	
Year 2	**75%** of plot established.	20	1	
Year 3	Whole plot established with stand survival not less than **85%**	20	1	
Year 4	Whole plot established with at least **90%** survival.	10	1	
Year 5	Average DBH not less than 4cm	10	1	
Year 7	Average DBH not less than 8cm	10	1	
Year 10	Average DBH not less than 15cm	10	1	

Appendix II: Baseline survey questionnaire

TREES OF HOPE BASELINE SURVEY

Interviewer Information

a. Name of Interviewer: _____
b. Language the interview was conducted in: _____
c. How many interviews have you conducted in this village (including this one; if this is the first, put 1): _____
d. District of participant: _____
e. EPA of participant: _____
f. Village of participant: _____

Participant Demographics

g. Name of participant: _____
h. Gender of participant:
    a. Female
    b. Male
i. Age of participant in completed years: _____
j. Are you able to read and write? (Provide Sample in English and Chichewa, i.e. I am going to the market. Ndikupita ku msika)
    a. Yes- Chichewa Only
    b. Yes- English Only
    c. Yes- English and Chichewa
    d. No - neither of the two
k. How many children do you have? _____
l. How many people 18 years or older do you support financially? _____
m. How many people younger than 18 years do you support financially? (children < 18 = 0.5 person) _____

TOTAL people supported financially (l+m) _____

n. What type of roof is on your house?
    a. Grass thatched roof
    b. Iron roof
o. What are your household's sources of income? (circle all that apply)
    a. Crop farming
    b. Livestock
    c. Transportation
    d. Trade
    e. Wage employment
    f. Remittances
    g. Ganyu (piece work)
    h. Other. _____

p. How much (in Malawi Kwacha)did you earn in each of your income sources in the last 12 months? (Answer for all circled in 'o' above)
    a. Farming/gardening _____
    b. Livestock_____
    c. Transportation _____
    d. Trade _____
    e. Wage employment _____
    f. Remittances _____
    g. Ganyu (piece work) _____
    h. Other. _____

q. How have you spent your income in Malawi Kwacha in the past 12 months? (circle all that apply)
    a. Farm inputs _____
    b. Farm equipment_____
    c. School Fees_____
    d. Household Improvements_____
    e. Technology (cell phones, solar panels, etc)_____
    f. Power _____
    g. Transportation (bicycles)_____
    h. Health expenses_____
    i. Other _____

Trees of Hope Information

r. How many years have you been with Trees of Hope? _____
s. Do you have a Payment for Ecosystem Services (PES) agreement (Please circle one)?
    a. Yes
    b. No
t. Do you engage with Trees of Hope on an individual level and/or a group level? Circle all that apply.
    a. Individual
    b. Group
u. Have you received money through the sale of carbon credits (Please circle one)?
    a. Yes
    b. No
v. If yes, how much money have you received? _____
w. What land-use systems do you use? Circle all that apply and answer relevant follow up questions.
    a. Woodlot
        i. Land coverage (ha)_____
        ii. What species?
        _____
        iii. What is the primary use of the products from this system?
        _____
        iv. Do you generate any income from this system?
        _____
    b. Boundary Planting
        i. Land coverage (distance in meters) _____
        ii. What species?
        _____
        iii. What is the primary use of this system and its products (ex: protect field, animal fodder, etc.)? _____
        iv. Do you generate any income from this system?
        _____
    c. DSI
        i. Land coverage (ha)_____
        ii. What species?
        _____
        iii. What is the primary use of the products from this system (ex: improve soil quality, animal fodder, etc.)? _____
        iv. Do you generate any income from this system?
        _____
    d. Mango Orchard
        i. Land coverage (ha)_____
        ii. Are they grafted? _____
        iii. Are they fruiting? _____
        iv. What percentage is fruiting? _____

v. What is the primary use of the products from this system (fruit, branches, bark, leaves for medicine)? _____

vi. Do you generate any income from this system? _____

e. Citrus Orchard

i. Land coverage (ha)_____

ii. Are they grafted? _____

iii. Are they fruiting? _____

iv. What percentage is fruiting? _____

v. What is the primary use of the products from this system (fruit, branches, bark, leaves for medicine? _____

vi. Do you generate any income from this system? _____

x. Which land-use system do you value most? _____

y. Why do you value that land-use system? (circle all that apply)

a. Shade
b. Consumable products (fruit, leaves, etc.)
c. Fuel wood
d. Construction materials
e. Livestock fodder
f. Soil fertility
g. Improve the environment
h. Income from the trees products. (list the products) _____
i. Other _____

z. How often are you visited by a Trees of Hope field officer?

a. Once a month
b. Twice a month
C. Three or more times a month_____

aa. How many trainings sessions do you receive each year?

a. Once a month
b. Every other week
c. Once a month
d. During out-planting season
e. Once a year
f. Other (Specify)_____

bb. Do you contact your Trees of Hope field officer(Please circle one)?

a. Yes
b. No

cc. If yes, how? Circle all that apply.

a. Cell phone
b. Visit his/her home.
c. Wait for her visit my home.
d. Through Local Program Monitor(LPM)
e. Other. Please explain _____

dd. If not, why not? Circle all that apply.

a. Lack of cell phone service
b. No need
c. Other. Please explain _____

ee. How often are you visited by your Local Program Monitor (LPM)? _____

ff. How many trainings sessions do you receive each year from your LPM? _____

gg. Do you contact your LPM?

a. Yes

b. No

hh. If yes, how? Circle all that apply.

a. Cell phone
b. Visit his/her home.
c. Wait for her visit my home.
d. Other. Please explain _____

ii. If not, why not? Circle all that apply.

a. Lack of cell phone service
b. No need
c. Other. Please explain _____

jj. Would you like more training(Please circle one)?

a. Yes
b. No

kk. If yes, what are you interested in learning more about (Circle more than one in order of priority)?

a. Nursery management
b. Field management
c. Carbon finance management
d. Tree products and processing
e. Group dynamics
f. Other_____

Land Cultivation

ll. What is your total landholding size? _____

mm. How many hectares of land do you cultivate annually? _____

nn. What type of crops do you grow? _____

oo. What type of staple food crops do you grow (Maize, soya, etc)? _____

pp. How many hectares of staple crops do you grow? _____

qq. What percentage of your staple crops do you sell? _____

rr. How do you acquire your seed for planting?

a. Input providers and shops
b. Saved seed from previous harvest
c. Seed subsidy (FISP)
d. NGOs
e. Others_____

Mango Specific Questions –Only answer if Mango Orchard Land-Use System is implemented

*** Please indicate how mangoes are measured in the villages – for example: buckets, sacks, etc.*

ss. What year were the hectares planted? _____

tt. Are your mangoes fruiting?

a. Yes
b. No

uu. If yes, what was your total yield last year (specify unit: kilos, buckets or 50 kg sacks)? _____

vv. What do you use your mango trees for? (circle all that apply)

a. Home consumption of fruit
b. Income generation (sale in local markets)
c. Traditional medicine
d. Pole wood
e. Fire wood
f. Other. _____

ww. Of your entire mango crop from last season, how was it utilized? Circle all that apply:

a. Sold at market
b. Consumed in the home
c. Lost to rot
d. Other _____

xx. If you sold/sell mangoes at the local market:
a. Number of units (kilos, buckets, 50 kg sacks) _____
b. Price per unit (kilos, buckets, 50 kg sacks) _____

yy. How much are grafted mangoes sold per unit (kilos, buckets, 50 kg sacks)? _____

zz. How much are local variety (non-grafted) mangoes sold per unit (kilos, buckets, 50 kg sacks)? _____

aaa. Can you give a price breakdown per month based on the price of mangoes in Malawi Kwacha?

Month	Grafted	Improved ungrafted	Local
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

bbb. What are the other ways you can buy mango and what is their cost? (circle all that apply and list cost)

Ways of buying mango	Unit price(MKW)
Dried	
Juice	
Pulp	
Other(Specify)	

ccc. Have you seen dried mangoes sold at the market?
a. Yes
b. No

ddd. If yes, how were dried mangoes sold? _____

eee. If yes, what was the price? _____

fff. Have you seen any other dried fruits or vegetables?
a. Yes
b. No

ggg. If yes, please list. _____

Market Data

hhh. How many kilometers are you away from the closest local market? _____

iii. What is the cost of travelling to the local market (roundtrip)? _____

jjj. How frequently do you go to the local market? _____

kkk. Why do you typically go to the local market?

a. Sell products
b. Buy products
c. Social
d. Charge electronics
e. Other. _____

lll. Can you fetch a higher price for products at a larger market further away?

a. Yes
b. No
c. Unsure

mmm. What is the cost of travelling to that larger market? _____

OTHER INFORMATION

nnn. How many of each tree species is in the plot per farmer?

Ser. #	Type of Tree Species	No of tree species per plot

ooo. What is the diameter of each tree , per species, per farmer?

Ser.#	Type of Tree species	No. per species	Diameter per each tree

End of questionnaire. Thank you for taking part in the Baseline Survey.