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KULERA BIODIVERSITY PROJECT

Year 3 Annual Technical Report: October 2011-September 2012
Year 3 4th Quarter Technical Report: July-September 2012

Prepared by:

Total LandCare

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The Kulera Biodiversity Project is being implemented by Total LandCare as the prime implementing organization in partnership with Washington State University, CARE International, Terra Global Capital, Small Scale Livestock Promotion Programme and the Mzuzu Coffee Planters Cooperative Union with funding from the United States government through the United States Agency for International Development(USAID) under Cooperative Agreement No. 674-A-00-09-00140-00

Project Name: Kulera Biodiversity Project
Reporting Period: July-2011-September 2012; July--September 2012
Obligation Funding Amount: US\$3.324 million
Project Duration: 3 years
Evaluation Dates:
Person Responsible for Drafting this Report: Dr. Michael R. Whiteman, Chief of Party, Mr. Blessings Mwale, Deputy Chief of Party and Ms. Chrissy Banda, TLC Monitoring and Evaluation Specialist
Project Objectives: <p>Improved governance of PAs through a participatory, decentralized structure that provides economic incentives to support sustainable natural resource management.</p> <p>Improved rural livelihoods around the borders of protected areas under a framework that promotes increased food security, diversification, sound resource management, village savings and loans, and incomes from agro, natural resource and carbon based enterprises. The ultimate goal is to transform livelihoods from subsistence survival to thriving rural enterprises that are self-sufficient.</p> <p>Increased rural incomes from ecotourism and enterprises among local producers and entrepreneurs to produce, process and market agricultural and natural resource based products. A value chain approach will be used to evaluate the progress and status of products and enterprise initiatives to date in order to target interventions that address critical weaknesses or gaps.</p>

Overall Progress of the Project in Year 3

Summary of Select Key Accomplishments

During the first quarter of the No Cost Extension, the project implementation teams continued to progress in meeting short-term and long-term project targets. During year 3 all of the proposed project activities were completed under the work plan category of **Operational Setup**.

In Year 3, significant progress was made under the work plan category of **Intermediate Result #1: Improved Governance of Protected Areas**. Of particular note is the on-going creation of Nkhotakota Wildlife Reserve Association (NAWIRA), a governance structure for the communities surrounding Nkhotakota Wildlife Reserve that is being modelled after the Nyika-Vwaza Association in the Rumpi zone. NAWIRA development is being administered by the Department of National Parks and Wildlife through Total LandCare with USAID funds. This activity, in addition to support of the Nyika-Vwaza Association, includes creating new governance structures as well as building the capacity of structures that currently exist.

Under **Immediate Result # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development** a total of over 6.3 million trees were planted as part of the project reforestation/afforestation effort. In addition, 10,754 households from 699 Kulera sites adopted improved mud brick woodstoves.

Progress was also significant in improved coffee production and processing. A new coffee pulper is operational and all the coffee harvested this year in the project area around Ntchisi Forest Reserve will be processed using the new machines. The project also facilitated production of an additional 600,419 coffee seedlings.

Project collaboration with HIMACUL has facilitated smallholder macadamia nursery capacity in key areas around Ntchisi and Ntchenachena. In addition, this collaboration has resulted in increased administrative capacity of the HIMACUL organization including budget management, planning and reporting. Project funds also supported training as well as consultation activities that have resulted in a business plan and progress in marketing strategies and nursery management.

During Year 3, Kulera Biodiversity Project partner, the Small Scale Livestock Promotion Programme (SSLPP) distributed 4,340 chickens, 104 pigs and 275 goats. 2,270 farmers participated in animal husbandry training. Demand for livestock, especially for chickens and goats, was extraordinarily high among target communities. It is anticipated that impacts of livestock distribution on the biodiversity of PAs will be particularly significant in project zones in close proximity to Nyika National Park. SSLPP field coordinators reported that some communities adjacent to Nyika had never seen goats and obtained meat for home consumption exclusively by poaching wild game from the park.

Kulera Biodiversity Project partner CARE Malawi conducted 298 sensitization meetings focusing on Village Savings and Loan groups during Year 3. These meetings resulted in formation of 147 new Village Savings and Loan committees. A total of 73 village groups were also trained in economic activities, selection, planning and management.

Over the course of the latter half of Year 3, teams hired by Terra Global Capital and managed by TLC conducted boundary demarcation activities in the selected carbon development areas surrounding communities within project zones around the Nyika-Vwaza and Nkhotakota Wildlife PAs. This work will continue through the first quarter of the no-cost-extension.

Under **Immediate Result # 3: Increased Incomes from Enterprise Initiatives**, the Kulera team made particular progress in Year 3 in its work in macadamia and honey through collaboration with the Highlands Macadamia Union Limited (HIMACUL). Through WSU consulting firm, Renewable Energy Solutions (RES), the project helped HIMACUL develop and draft a business plan moving the organization toward sustainable production, marketing and processing of macadamia nuts and honey. In addition, RES CEO, Ben Henson, facilitated HIMACUL's exploration of appropriate technological solutions for use of grade B nuts including production of nuts for the local market, edible oil and biodiesel. Marketing strategies were also explored for honey produced by smallholder HIMACUL farmers. Project collaboration with Mzuzu Coffee Planters Cooperative Union resulted in opening a pulping facility that will enable smallholder coffee producers in the Ntchisi area to process coffee "cherries" locally and thereby enhance added value of coffee at a local level.

Summary of Representative Activities in Year 3 and in Year 3 Quarter 4 Work Plans

(Year 3 Quarter 4 Activities are highlighted in yellow)

Key Activities in Year 3 and Year 3 Quarter 4

Key activities conducted and main achievements realized during the reporting period are summarised in narrative form under each intermediate result below and provided in a detailed summary in **Tables 1-5**.

1. Operational Setup Activities

As reported in the earlier quarters, most of the set up activities were completed during the first and second years of the project. **The recruitment of the 9 remaining community extension workers was completed during this reporting period. For more detail on results under Operational Setup, see Tables 1a-1b.**

2. Intermediate Result #2: Improved Governance of PAs

The details are shown in **Tables 2a-2c**, but the main activities under intermediate result #2 during the last 3 months and cumulative results for Year 3 included the following:

- **Strengthening governance structures:** TLC in collaboration with the Department of National Parks and Wildlife continued the establishment of the Nkhotakota Wildlife Reserve Association (NAWIRA). Work is still in progress. Monies will be allocated and NAWIRA development activities and the legitimization on NRM governance structures surrounding the Nkhotakota Wildlife Reserve will be completed during the no cost extension
- **Management agreements:** All planned activities under this component have been shifted to the no cost extension phase. Actions await establishment of the NAWIRA.
- **Building capacity of the governance structures in the Protected Areas:** During the Year 3 and Year 3 Quarter 4, the main activities included:
 - Recruitment of 9 Community Extension Workers were recruited and trained in Quarter 4.
 - Conducting 1 training course for 42 VUCs on leadership and conflict resolution. Information on cross-cutting issues in HIV/AIDS, Gender and DRR information was also shared;
 - Conducted training for 50 PA officials and counterparts in community mobilization, participatory law enforcement;
 - A total of 122 awareness meetings on gender, HIV/AIDS and DRR in all targeted areas;
 - Worked with 28 existing local organizations on Gender, HIV/AIDS and DRR in Ntchisi focussing on members growing coffee and beekeeping;

Table 1a: Summary of Operational Setup activities for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

No.	Activities	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
1	Operational Setup				
1.1	Prepare the Annual Work-plan and PMP for FY3 with contributions from all project partners	1	0	1	Completed
1.2	Agree on partner roles, responsibilities and targets with development of a project organogram		Completed		
1.3	Advertise, recruit & fill positions for specialist, field & support staff				
1.4	Advertise, recruit & fill position for new Chief of Party				
1.5	Advertise, recruit & fill positions for Community Extension workers	9	9	9	Completed
1.6	Establish field operation offices (1 in Rumphi & 1 in Nkhotakota)		Completed		
1.7	Prepare sub-award agreements and amendments with key partners	5	0	5	All agreements prepared and signed by TGC, CARE, SSLP, Mzuzu Coffee and WSU in Year 3 1 st Quarter
1.8	Establish Project Management Technical Working Group specifying composition and functions		Completed		
1.9	Establish Project Steering Committee specifying composition and functions				
1.10	Establish 2 Field Implementation Committees specifying composition and functions				

Table 1b: Summary of Operational Setup activities for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

No.	Activities	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
1	Operational Setup				
1.11	Establish collaborative agreements with selected partner organizations	9 partners	0	5 partners	Completed
1.12	Establish Financial System for procurement, accounting, and reporting with all partners		Completed		
1.13	Establish reporting structure, format and timeframe with all partners				
1.14	Develop & initiate procurement plan for vehicles and office/field equipment & supplies				
1.15	Conduct briefing meetings with district councils & other stakeholders on Kulera activities/approach				
1.16	Conduct a launch of the project with Govt Officials, USAID, Partners & Stakeholders				

Table 2a: Results achieved under IR # 1: Improved Governance of Protected Areas for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

2 INTERMEDIATE RESULT # 1: IMPROVED GOVERNANCE OF PROTECTED AREAS					
2	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
2.1	Strengthen Governance Structures				
2.1.1	Identify/demarcate target areas and communities in the border zone around the PAs	No targets	Work continued in Nkhotakota zone in the NAWIRA process	Target zones for Nyika-Vwaza and Nkhotakota identified in Year 2 of project.	Completed in Rumphi zone and in progress in Nkhotakota zone
2.1.2	Facilitate zoning/re-zoning of the PAs in collaboration with all the stakeholders	50 zones	Number of PA zones not captured.	Number of PA zones not captured.	Completed in Nyika-Vwaza in collaboration with the Nyika-Vwaza Association, the Department of National Parks and Wildlife and TLC. Zoning/rezoning in Nkhotakota will occur after creation of NAWIRA.
2.1.3	Facilitate formation of functional democratically-elected PA committees at different levels		0 PA	1 PA	Completed in Rumphi zone. In progress in Nkhotakota zone and scheduled for completion during the no-cost extension.
2.1.4	Support the legitimization of NRM governance structures (constitutions, by-laws & registration)	1 PA	0 PA	1 PA	Completed in Rumphi zone in progress in Nkhotakota zone scheduled for completion in no-cost extension
2.1.5	Facilitate review of legal/institutional frameworks for compatibility with PA governance structures	1 review	1 review	1 review	Completed in conjunction with planning for the REDD project in Nyika and Vwaza. To be completed during the no-cost extension for NKK after creation of NAWIRA.
2.2	Co-management Agreements				
2.2.1	Identify key natural resources and areas for developing co-management agreements	1 identification	0 identification	0 identification	Completed in Rumphi zone. Scheduled for completion in Nkhotakota zone during the no-cost extension.

2.2.2	Facilitate production of management plans for identified resources and areas within and outside PAs with DNPW and the Nyika-Vwaza Association (NVA), the Nkhokotakota Wildlife Reserve Association (NAWIRA) and the TLC zone offices	1 management plan for each of the 2 PAs	Completion planned for the no-cost extension period		
2.2.3	Facilitate the transfer of rights and access to natural resources, including where appropriate revenue sharing in the PAs from Govt to local communities through co-management agreements	1 co-Management agreement developed for Nyika-Vwaza			
2.2.4	Develop a community-based system for monitoring and evaluating the performance of the governance structures/groups in the administration of the co-management agreements/management plans	1 CBM&E system for evaluation performance in Nyika-Vwaza and Nkhokotakota			
2.3	Build Capacity of PA Governance Structures				
2.3.1	Recruit & train community workers to support NRM institutions in law enforcement, training & other needs		9 community workers	9 community workers	Recruitment and training of the remaining community workers was completed during Quarter 4.
2.3.2	Conduct awareness campaigns and environmental rallies	50 campaigns/rallies	0	0	This is not a stand alone activity. Numbers and environmental messages of campaigns and rallies are captured in sensitization and meeting data throughout this report.
2.3.3	Train PA NRM institutions in corporate governance, team building, fund raising, project write-ups, resource assessments/problem analysis, basic NR rights and conflict resolution	8 Executive members of PA Institutions trained	0	50 PA officials trained	Completed in Year 3 Quarter 2.
2.3.4	Train local CBOs, NGOs and other service providers in delivering CBNRM services	20 organizations	No target	No target	Funds were re-purposed to support NAWIRA development

Table 2b: Results achieved under IR # 1: Improved Governance of Protected Areas for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

2 INTERMEDIATE RESULT # 1: IMPROVED GOVERNANCE OF PROTECTED AREAS					
2	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
2.3	Build Capacity of PA Governance Structures				
2.3.5	Train PA officials and counterparts in community mobilization, participatory law enforcement, etc.	50 PA Executives; 10 Organisations	0 Training	81 participants from among PA executives (Nyika-Vwaza Association); NRCs, DNPW officials from NKK Wildlife Reserve, Vwaza Wildlife Reserve and Nyika National Park; the community policing forum, local judiciary and law enforcement officers	Completed. Inadvertently, this training was conducted without prior authorization by the USAID Agreements Office in Pretoria. USAID/Malawi and USAID/Pretoria were notified of this oversight in May 2012 and, as of July 2012, these offices are reviewing details of the training for procedural resolution.
2.3.6	Provide logistical support to PA officials to improve communications and mobility	2 PA	1 PA	1 PA; GPS units and Radios to be delivered to DNPW in no-cost-extension	Partially completed. 8 GPSs purchased and delivered to TLC; Radios ordered but not yet delivered.

2.3.7	Conduct a study tour to neighbouring countries with best practices in CBNRMN	1 tour; 20 participants	0	0	Funds were reallocated for NAWIRA development.
2.3.8	Train primary school teachers in environmental education	70 primary teachers	Completed in Year 3 Quarter 1	60 primary teachers	Completed.
2.3.9	Facilitate establishment of youth conservation clubs	50 clubs	0	50 clubs	Implemented or funds rolled over into no-cost extension
2.3.10	Organize PA visits by youth clubs	50 visits	9 visits	41 visits	Balance of funding from this activity to be rolled over into no-cost extension.
2.3.11	Initiate development of environmental education curricula development for primary schools and adults	1 for primary schools; 1 adult	0	1 curriculum for primary schools. Completed in Quarter 1.	An environmental teachers' curriculum for primary schools was developed as part of the primary school teachers' training. Allocation of funds for the development of an adult curriculum will be considered in the planning for the no-cost extension.
2.3.12	Provide linkages for NRM institutions to access better facilities for communication	2 NRM Institutions	1 NRM Institution	1 NRM Institution	One motor bike and 8 bicycles procured for NVA. Need to procure for NAWIRA during the fourth quarter in preparation for creation of NAWIRA.
2.3.13	Form VUCs in selected villages		4	74	Completed
2.3.14	Train VUCs and VDCs on village umbrella committee development	36 VUCs	23 VUCs	43 VUCs	Completed. During 4 th quarter, 23 and during Year 3 43 VUCs were trained in leadership and conflict resolution skills, and in addition cross cutting issues in HIV and AIDS, gender and DRR information was also shared

Table 2c: Results achieved under IR # 1: Improved Governance of Protected Areas for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

2 INTERMEDIATE RESULT # 1: IMPROVED GOVERNANCE OF PROTECTED AREAS					
2	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
2.3	Build Capacity of PA Governance Structures				
2.3.15	Provide training /preparation in cross-cutting issues of gender, HIV and disaster risk reduction				
	Conduct stakeholder analysis to identify existing CBO/NGOs involved in HIV/AIDS/DRR activities		0	0	Completed
	Conduct training needs assessment for identified CBOs/NGOs on gender, HIV/AIDS and DRR	1 Assessment; 1PA	0	0	Completed
	Prepare training materials/tools on Gender/HIVAIDS and DRR		0	3 booklets; 6 leaflets	The 3 booklets prepared are on the following topics: Gender, HIV/AIDS and DRR; the 6 leaflets are on the topics of VSL, Enterprise Development, VUC, DRR, Gender and HIV/AIDS. The leaflets were originally developed in English and then translated into Chichewa and Tumbuka.
	Conduct awareness meetings on gender, HIV/AIDS and DRR	14 meetings	8 meetings	122 meetings	Awareness meetings on gender, HIV/AIDS and DRR were conducted in all the targeted areas (Mpherembe, Ntchenatchena, Dwangwa, Nkhotakota and Ntchisi).
	Train field implementing staff on Gender/HIVAIDS and DRR				
	Train PA executive members on Gender/DRR/HIVAIDS	20 members	0 members	0 members	This activity was not completed. Funds will be used in the NCE.

	Train local organizations on Gender/DRR/HIVAIDS	10 organisations	28 organisations	28 organisations	The training was done in Ntchisi district focusing on members who are growing coffee and participating in bee keeping. These beneficiaries are members of existing local HIV and AIDS organisations in the implementing area.
2.3.15	Provide training /preparation in cross-cutting issues of gender, HIV and disaster risk reduction				
	Link CBOs and other groups to service providers on HIVAIDS care and support services	10 organisations	2 organisations	2	2 CBOs have been linked to service providers in human rights issues that target people living with the HIV and AIDS. Linkages will support counselling and HIV testing in an attempt to promote positive living.
	Train local governance structures on how to use community scorecard	3 training sessions	0	0	Not completed, funds will be rolled into the no-cost extension
	Facilitate scorecard processes between community structures and service providers	2 scorecard processes	0	0	Not completed, funds will be rolled into the no-cost extension
2.3.17	Institute a system for Natural Resource Monitoring				
	Identify key areas and resources within the PAs and in the border zone for monitoring	Key areas and resources mapped	0 Mapping	Key areas and resources mapped	Completed by Terra Global Capital
	Identify methodologies for monitoring resource change over time based on the PMP indicators	Methodologies developed	0 Methodologies	Methodologies developed	
	Establish baselines for target areas and key natural resources (vegetation, wildlife, soils, water)			Baselines established	
	Secure assistance from specialists to train staff for data collection	10 Staff trained by specialists	0 Staff trained	10 Staff trained	

	Monitoring system developed for each area and resource over the life of the project and beyond	M&E Plan developed	0 Monitoring system	Monitoring system developed	Completed. System developed by Terra Global Capital
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3.0 Progress on Intermediate Result #2: Improved Rural Livelihoods and NRM Practices / Carbon Development

The following are the highlights of activities conducted to achieve Intermediate Result #2. For more details, please refer to **Tables 3a-3h**:

3.1 Awareness Meetings with Technology Assessment, Training & Extension Support

Major accomplishments include:

- Held 726 awareness meetings in Quarter 4 and 1,355 meetings in Year 3 on potential interventions and the responsibilities of project personnel and beneficiaries
- Trained and provided extension support for 6,653 farmers in Quarter 4 and 10,154 farmers over Year 3 on each intervention in the targeted villages.
- Organized 14 clubs in Quarter 4 and 304 clubs over Year 3 to facilitate extension and training.
- Procured and distributed 3,477 fruit trees in Year 3.
- For more details, see **Table 3a**.

3.2 Sustainable Agriculture & NR Interventions

A major outcome of activities under this work plan category was the distribution of inputs to households to implement crop diversification, conservation agriculture, bean and soya production, groundnuts, sweet potato and cassava production and irrigation interventions across project sites. The actual achievements are shown in **Table 3a**. Highlights of key achievements are below:

- Over Year 3, 5 hectares were put to irrigated bean production.
- In Year 3, 179 hectares were added to soya production under rain-fed production
- 96 hectares were added to groundnut production over Year 3
- 344 hectares were put under summer maize production in Year 3.
- In Year 3, 192 hectares were added to cassava production totals
- Over the course of Year 3, 24 hectares were planted to sweet potatoes.
- During Quarter 4, 60 hectares were put under irrigation and over the course of Year 3, new irrigated areas totalled 68 hectares
- In Year 3, 10,754 households from 699 villages adopted improved mud brick stove technology.
- The Kulera project also facilitated the planting of 6,344,511 tree seedlings and involving 21,222 households over the course of Year 3.

For more detail, see **Table 3a**.

3.3 Coffee Production and Processing

The main milestones under coffee promotion during Year 3 were:

- The training of 37 coffee farmers in coffee husbandry and business
- Mzuzu Coffee facilitated production of 600,419 coffee seedlings in Year 3.
- The training of 24 farmers in monitoring and evaluation
- Undertaking 1 census to determine levels out planted coffee seedling mortality.

For more details, see **Table 3b**.

3.4 Macadamia Production

Macadamia was selected as one of the 4 key agricultural products for microenterprise development. The Kulera Biodiversity project worked with the Highland Macadamia Cooperative Union Ltd (HIMACUL) to build the capacity of smallholder farmers in macadamia production in the Ntchisi and Rumphi districts. A number of activities were carried out during the period of April to June 2012:

- Grafted 47,884 rootstocks, which involved use of 35 newly trained grafters.35 grafters. The grafters were trained during Year 3.
- In Year 3, trained 1,255 farmers in 19 sessions in macadamia tree management and orchard management.
- Trained 2 farmers and 1 staff in factory quality issues, as part of post- harvest handling and quality management training during Year 3 of the project. The training was aimed at increasing the participants' level of understanding of the macadamia market and industry.
- In Year 3, facilitated market linkages for macadamia kernel and sub-products.
- HIMACUL bought 218.5 litres of cooperative-produced honey that was sold on the local market during Year 3.
- During Year 3, HIMACUL facilitated the planting of 81,988 macadamia trees.

For more detail, see **Table 3c**.

3.5 Small-Scale Livestock Production

Many of the project targets were attained by Kulera partner, SSLPP, prior to Year 3 Quarter 4. Additional progress made toward small-scale livestock production goals this past quarter and the whole of Year 3 include:

- Procurement and distribution of 1570 chickens during Quarter 4 and a total of 4340 chickens during all of Year 3. In addition, 104 pigs were procured and distributed over the course of Year 3.
- Training of 2,270 farmers in proper care, feeding, feed sources and disease management of small scale animals in Year 3.
- At total of 17,550 fodder banks were established over the course of Year 3.

For more detail, see **Table 3d**.

3.6 Biomass and Energy Alternatives

Following Year 1 of the project, StrawJet was dropped from the Project and funds were applied from that subcontract to Renewable Energy Solutions (RES). In addition to solar power installation at Kasamba Secondary school in Nkhotakota in Year 1, RES has been involved in alternative energy/irrigation systems including solar, RAM pumps and wood fired gasifiers. In addition, the modified mud brick cook stove advocated by TLC has been widely adopted in Kulera target communities and has been refined through the efforts of Aprovechio Research Center as part of another TLC project.

- During Year 3, 2 RAM pumps were installed in Rumphi zone to provide irrigation water for crop diversification and micro-enterprise development
- In year 3, 10,754 improved mud brick cook stoves were installed and are in use in Kulera Biodiversity Project target communities.
- Over Year 3, one full-time TLC employee has been trained to assist other TLC staff and interested community members in the installation of RAM pumps.

3.7 Carbon Development

In Year 3 of the Kulera project, Terra Global Capital's role in carbon development in the Kulera project focused on activities such as:

- Collecting boundary demarcation data for the A/R project from individual farmers in communities in the project target areas
- Contracting field teams to do Participatory Rural Appraisals (PRAs) with communities and the final rounds of biomass inventories as well as undertaking additional technical work collecting reference points for image classification and QAQC on biomass data received
- Completion and finalization of the tri-party agreement between Terra Global Capital, Department of National Parks and Wildlife (DNPW), Nyika-Vwaza Association (NVA) through appropriate government channels (via DNPW)
- Completing a 30-year budget in-country with DNPW and drafting additional sections of the REDD Project Document (PD) in-country with NVA Chairperson, Duncan Mkandawire. This document will be submitted to the Verified Carbon Standard (VCS) early in the no-cost-extension.

For more detail see **Table 3e**.

3.8 Village Savings and Loan (VS&L)

During Year 3, Quarter 4, 68 meetings were held to sensitize communities in village savings and loan schemes. Out of the villages sensitized, 55 new VS&L groups were formed. It was observed that many new groups formed independent of CARE field coordinator efforts after learning about VS&L from established groups. These groups are being assisted by 43 new Village Agents who were trained during 4th Quarter and who are currently working in the target communities.

In Year 3, 213 VS&L groups participated in trainings in actual methodology to form VS&L groups. An additional 73 groups participated in economic activities, selection, planning and management training.

The other major activity during Year 3 involved follow-up visits with VS&L groups to assess performance and address any issues. Of interest are the impact stories obtained from the first beneficiaries of these schemes. Many are witnessing a transformation of their income status and general livelihoods.

For more details, see **Table 3f**.

Table 3a: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

3 INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES/CARBON DEVELOPMENT						
3	ACTIVITIES	Year 3 Targets	Achieved Quarter 4	Targets	Achieved Targets Year 3	Remarks
3.1	Awareness Meetings with Technology Assessment, Training & Extension Support					
3.1.1	Conduct awareness meetings on potential interventions & responsibilities of project vs. Beneficiaries	100 meetings	726 meetings		1,355 meetings	Completed
3.1.2	Identify & assist villages/households with the capabilities/interest to establish different interventions	35,000 farmers, from 400 villages around 3 PAs (Ntchisi, NKK and Nyika-Vwaza)	6,653 farmers		10,154 farmers	Numbers seem to be on target for the three years of the project.
3.1.3	Evaluate potential markets and related linkages for marketable products from interventions	1 study	3 studies		3 studies	Target surpassed. 3 studies (Explored markets for B grade macadamia nuts, honey and edible oil with HIMACUL and RES)
3.1.4	Organize villages/households into clubs by intervention to facilitate extension & training	500 clubs; 2 associations	14 clubs		712 clubs	Association development was not undertaken but club goal was surpassed. The 14 clubs were under irrigation. 1 association existed prior to project (NVA) and the other is under development (NAWIRA).
3.1.5	Procure and distribute materials/inputs/equipment to support targeted interventions					
	Fruit tree seedlings	5,243	0 fruit trees planted		3477 fruit trees planted	3477 fruit trees were planted. Recommended activity for no-cost extension
3.1.6	Provide training & extension support on each intervention to targeted villages/clubs/households	35,000 farmers trained	6,653 farmers trained		10,154 farmers trained	Training and extension support was provided to farmers during the quarter in the areas of tree nursery management, natural woodland

					regeneration, improved woodstoves, conservation agriculture and irrigation. Trainings in these areas will continue in the no-cost-extension.
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Table 3b: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

3.2	Sustainable Agricultural and NR Interventions				
3.2.1	Promote targeted interventions broken down by type in terms of quantity, HHs, gender & PLWHA:				
	Crop diversification				PLWHA data were not captured because this element was not included in the data collection template.
	Beans (10,660 kgs)	177.7 hectares	295 kgs; 5 hectares	295 kgs; 5 hectares	Hectare target may be unrealistic
	Soya Beans (10,660 kgs)	133.25 hectares	0 hectares	10,135 kg; 433 hectares	Completed
	Groundnuts (10,660 kgs)	133.25 hectares	0 hectares	16,851 kg; 201.35 hectares	Completed
	Maize seed (8,056 kgs)	322.24 hectares	0 hectares	344 hectares	Completed
3.2.2	Promote targeted interventions broken down by type in terms of quantity, HHs, gender & PLWHA:				
	Crop diversification				PLWHA data were not captured because this element was not included in the data collection template.
	Cassava (30,000 bundles)	300 hectares	0 hectares	19,630 bundles; 433.1 hectares	Completed.

	Sweet potato		0 hectares	2,328 sack; 62.8 hectares	Completed (no target)
	Conservation Agriculture	760 Ha; 1,900 HHs	493 hectares; 1004 HHs	988.7 hectares; 1,927 HHs	Increase in hectares seems to reflect increased interest in adopting the technology.
	Soil and water conservation practices	1,221 Ha; 2,121 HHs	704 Ha; 1938 HHs	1,381.8 Ha; 4,316 HHs	Completed
	Soil fertility improvement				
	Irrigation	323 Ha; 2,152 HHs	60.3 hectares; 310 HHs	68.3 hectares; 362 HHs	Targets appear to be unrealistic.
	Tree planting	11 million trees; 10,000 HHs	0 trees planted	6,344,511 trees; 21,222 HHs	Bamboo starts were viewed as a scarce so the starts were given maximum care. Some non-bamboo seedlings produced in village nurseries were not out planted due to mortality in the nurseries.
	Natural woodlands under community management	2,794 hectares; 216 communities	335 hectares; 40,668 HHs	335 hectares; 40,668 HHs	The plots are smaller per household than anticipated. Number of households involved in community management surpassed target
	New technologies tested and made available for transfer	6 new technologies	1 new technologies	2 new technologies	Improved brick stoves were tested and refined during Year 3 in association with another TLC project. The most efficient model will become the technology most promoted through Kulera and other TLC projects in the no-cost-extension. Piteba oil expellers were also tested and will be distributed through the oil centre in Nkhotakota during the no-cost-extension.

Table 3c: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

3 INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES/CARBON DEVELOPMENT					
3	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
3.3	Coffee Production and Processing				
3.3.1	Coffee Planting/Production				
	Facilitate production of coffee seedlings with identified growers	1,147,968 seedlings/200kgs seed	0 seedlings	2,402,024 seedlings	Cumulative Year 3 seedling target surpassed
	Train new field staff in Coffee Husbandry and business development	1 course; 6 staff	0 courses; 0 staff	1 course; 3 staff	Completed
	Train farmers in Coffee Husbandry and business development	4 courses, 300 growers	2 courses; 37 growers	7 courses; 557 growers	Cumulative Year 3 targets surpassed
	Conduct demonstrations of coffee production/husbandry	4 demonstrations	0 demonstrations	8 demonstrations	Cumulative Year 3 targets surpassed
	Organize extension visits to sites with successful growers	4 visits	0 visits	13 visits	Cumulative Year 3 targets surpassed
	Conduct review meetings	6 meetings	1 review meetings	7 review meetings	Completed
	Hold farmers field days and open days	2 field days and open days	1 field day	2 field days	Completed
3.3.2	Promote Quality Processing of Coffee				
	Train staff and farmers in Coffee processing				
	Train farmers in Coffee processing	4 courses; 40 growers	1 course; 24 growers	2 courses; 74 growers	

	Maintain existing handpulpers in all Zones	2 hand pulpers	2 hand pulpers	5 hand pulpers	Completed
	Procure motorised eco-pulper processing equipment	2 motorized eco-pulper	2 eco-pulper	2 eco-pulper	Completed
	Procure processing materials	Hessians and Scales	0	200 m Hessian; 200m polysheet; 8 scales	No targets set
	Facilitate Construction of Warehouse	1 warehouse	0 warehouses	0 warehouses	Warehouse under construction; completion during no-cost-extension
	Conduct a tour to Union and Cooperative		0 tour	0 tour	2 tours over course of project but assisted only with Kulera bus and driver not operational funds. Tours were to Misuku and Tanzania.
3.3.3	Promote Beekeeping with Coffee				
	Procure and distribute beehives, suits and smokers		0 procurement and distribution	760 beehives, 13 bee suits, 14 smokers	No target set
	Train farmers in beekeeping	2 courses; 40 participants	3 courses; 144 participants	3 courses; 144 participants	Completed; Targets surpassed in both number of courses and number of participants
	Provide extension support services	monthly visits	2 visits	2 visits	On target.
3.3.4	Promote formation of sustainable coffee growers organization				
	Train farmers in Cooperative Development and Management	1 course; 30 farmers	0 courses	2 courses; 273 farmers	Completed; Targets surpassed in both number of courses and number of participants
	Elect board for the Cooperative				No target
	Conduct board meetings	4 meetings	1 meeting	6 meetings	Completed; Targets surpassed.
	Train farmers in M&E	1 training course	1 course; 24 participants	1 course; 24 participants	Completed
	Conduct census	Various	1 census	1census	The census was conducted to determine how many coffee trees are surviving.
	Carry out business performance analysis	1 study	1 study	1 study	Completed

Table 3d: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

3 INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES/CARBON DEVELOPMENT					
3	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
3.4	Macadamia Promotion and processing				
3.4.1	Increased volume of macadamia (Nut In Shell) NIS through consolidation of managed tree establishments using sustainable practices in the 10km buffer zone around Ntchisi and Nkhotakota forest reserve				
	Root stock production	55,000 kg	0	170,500 kg	The revolving fund established by the EE project bought the seed for this season's propagation, but Kulera has supported procurement of nursery materials. Target surpassed.
	Creation and training of field grafting teams	2 sessions	0 sessions	4 sessions	60 men and 35 women were trained. More people than planned were identified and trained as grafters.
	Grafting of established rootstocks	30,000 rootstocks	0 rootstocks	47,884 rootstocks	Rootstocks were grafted in both Rumphi and Ntchisi nurseries. Target surpassed.
	Trainings on tree and orchard management	60 sessions; 1200 participants	0 sessions; 0 participants	19 sessions; 1255 participants	HIMACUL has been included in the no-cost extension. Unused funding from the HIMACUL contract and/or funds for the no-cost extension might be used to continue these trainings.

	Trainings on sustainable farmer practices to macadamia farmers	2 sessions	0 sessions;0 participants	5 sessions; 55 participants	Year 3 target was surpassed. HIMACUL is included in the no-cost extension. Unused funding from the HIMACUL contract and/or funds for the no-cost extension might be used to continue these trainings.
	Planting of macadamia trees	36,000 trees	0 macadamia trees	81,988 trees	Completed; Target surpassed
	Establish demonstrations of Macadamia coffee inter-planting	15 demo plots	0 demo plots	28 demo plots	3 sites were selected in Ntchisi while 10 were selected in Rumphu. This was done jointly with Mzuzu coffee. Target surpassed.
3.4.2	Governance and technical capacities of the cooperatives are strengthened and are able to generate sustainable income for their members				
	Capacity building on post-harvest handling and quality management	2 sessions; 60 participants	0 sessions; 0 participants	2 sessions; 126 participants	In addition to general training in post-harvest/quality management, in Year 3, 10 HIMACUL leaders went to the Thyolo Nut Company Factory, 3 people were trained in assessing NIS quality and in sampling methodologies. Targets were surpassed in terms of numbers of participants.
3.4.3	Governance and technical capacities of the cooperatives are strengthened and are able to generate sustainable income for their members				
	Macadamia oil processing	75 litres	0 litres	181 litres	Demonstrations were conducted to show macadamia oil production using the Piteba expeller. Test showed that a larger expeller will be required to increase production efficiency and volume of oil. Test target surpassed.

	Development of local markets for macadamia kernel and sub-products (oil, cakes, shells)	3 markets	0 markets explored	3 markets explored	Completed.
	Training of farmers in Beekeeping	2 sessions; 100 participants	0 session; 0 participants	3 sessions; 207 participants	Training carried out in Ntchisi by experienced local beekeepers under compass gold standard. Target surpassed.
	Processing, packing and marketing of honey	200 litres	0 litres	218.5 litres	Lack of hives to build large volumes of honey production limited regional and national marketing opportunities. However, local household consumption was high and all commercial production was sold locally. Target surpassed.
	Development of macadamia production leaflets in vernacular language	4 leaflets	0 leaflets	5 leaflets	IPM, clones, and tree management leaflets were prepared and distributed to 150 farmers. Target surpassed.
3.4.4	Increase the range of value chains being utilised by small holder macadamia cooperative				
	Support fair trade processing with FLO	1 certification	0 certification	0 certification	HIMACUL had an initial audit done between 28-30 June 2012. An inspection was conducted and farmers were briefed in fair trade processes.
	Coordinate nut processing with Thyolo Nut Company	Develop processing agreement	0 processing agreement	1 processing agreement	Dates and volumes were agreed upon based on sample passing QC. A kernel recovery of 32%, demonstrated that the grading at district level is improving and thereby lowering the risk of rejection at the factory.
	Link farmers to international markets	1 supply chain	0 supply chain	1 supply chain	HIMACUL facilitated new market links with El Puente of Germany.

3.4.5	Meetings				
	Board meetings	5 board meetings	0 board meetings	7 board meetings	423 attended the board meetings (280 men and 143 women). Target surpassed.
	Cooperative committee meetings	84 cooperative meetings	0 cooperative meetings	65 cooperative meetings	1508 attended the cooperative committee meetings (1176 men and 332 women). Meetings will continue during the no-cost extension.
	Inter-regional meetings	No target	0 meetings	3 meetings	18 people attended inter-regional meetings.

Table 3e: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

3 INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES/CARBON DEVELOPMENT					
3	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
3.5	Small Livestock Promotion				
3.5.1	Planning, Awareness Meetings, Area Assessment, Training & Extension Support		Completed		
	Conduct familiarization of staff to projects sites				
	Conduct baseline studies on livestock production in all sites				
	Brief respective districts assemblies, communities on livestock interventions				
	Evaluate and document availability of local extension services for livestock including vet medicines				
	Identify and select farmers based on established criteria				
	Form and train livestock committees	6 committees		7 committees	23 committees

	Train frontline staff in piggery, poultry/Guinea fowl production, goats and rabbits production	3 training sessions	0 training sessions	4 training sessions	Completed. Target surpassed
	Train farmers in piggery, poultry/Guinea fowl production, goats and rabbits production	1,385 farmers	660 farmers	2,270 farmers	Completed. Target surpassed. Training of farmers is ongoing, especially for new beneficiaries. Numbers are expected continue to grow in the no-cost-extension.
	Conduct visits to successful small and large livestock producers	3 visits; 50 committee members	0 visits; 0 committee members	0 visits; 0 committee members	No funds budgeted to cover this activity.
	Mount demonstrations in Khola construction for respective livestock classes	15 demos	0 demos	37 demos	Completed. Target surpassed
	Develop contracts of agreement with farmer groups regarding care of animals and pass on	16 committees; 1000 farmers	193 farmers	660 farmers	To ensure farmer commitment to caring for livestock as well as to assisting fellow farmers within the group, farmers sign a contract of agreement. For Year 3 the target of 1000 farmers was not attained. However, the project total of 1,113 farmers surpassed the target number.
3.5.2	Procure and distribute livestock under loan schemes for farmers with extension packs/vet kits:				
	Pigs	120 pigs	0 pigs	104 pigs	Target was not reached because some of the areas where pigs were to be distributed suffered from an outbreak of African Swine Fever. In addition, some of the farmers previously opting for pigs decided to receive goats or chickens due to the high capital investment associated with pigs.
	Poultry/ G-Fowls	5003 chickens	1570 chickens	4340 chickens	There is still very high demand for chickens. This effort will continue during the no-cost-extension.
	Rabbits	0 rabbits	0 rabbits	0 rabbits	The rabbit program was dropped in Year 1 of the project and funds were moved to acquisition and distribution of goats.

	Goats	150 goats	0 goats	275 goats	There was high demand for goats in the target areas because of the low capital investment and ease of raising goats.
3.5.3	Support proper care, feeding and management of livestock to improve production				
	Train farmers on proper care, feeding, feed sources, veterinary care & diagnosis of common diseases	1385 farmers	0 farmers	2,270 farmers	Completed.
	Provide start-up information on local suppliers of veterinary services/drugs	25 club committees	0 club committees	26 club committees	Livestock groups were trained on the Drug Revolving Fund (DRF) concepts. Groups indicated here have functional drug revolving funds available.
	Procure seed of fodder trees and legumes				
	Procure planting material for Napier grass and other fodder species	5,000 sticks	0 sticks	10,700 sticks	This activity needs to take place early in the rains to ensure success.
	Facilitate establishment of fodder banks	1,000 banks	0 banks	1,750 banks	Completed. Target surpassed.
	Facilitate proper use of animal manure to improve crop production as a benefit of raising livestock	12 ha	0 ha	12.5 hectares	Completed.
	Conduct review meetings, supervision and monitoring visits	4 meetings/visit	1 meeting/visit	10 meetings/visits	Project sites in Rumphi, Nkhotakota and Ntchisi were visited to check on progress made so far. Key issues monitored were health of livestock distributed, pass-on progress in the field, as well as farmer/extension worker concerns and problems. Completed. Target surpassed.

Table 3f: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

3 INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES/CARBON DEVELOPMENT					
3	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
3.6	Biomass and Energy Alternatives				
3.6.1	Introduce improved kitchen stoves to reduce firewood consumption and impacts of deforestation	No target	No target	10,754 HHs	
3.6.2	Introduce and evaluate small scale solar systems, RAM pumps and gasifiers	2 RAM pump installations; Preparation for gasifier installation	1 gasifier unit processed for procurement;	2 RAM pumps in Rumphi zone; Kasamba school solar system repaired	Gasifier technology was introduced during Year 3 of the project and will be installed at Chelinda Lodge in Nyika National Park during the no-cost-extension
3.6.3	Identify and train individuals to help with projects and begin capacity building.	2 individuals trained	0 individual trained	1 individual trained	A TLC driver was trained in solar system and RAM pump installation
3.6.4	Install and test Solar Powered Community Center, RAM pumps and gasifier	2 RAM pumps	0 RAM pumps	2 RAM pumps	RAM pumps were installed in Rumphi zone.

Table 3g: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

No.	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Targets Year 3	Remarks
	Indicator 2.11: Number of carbon projects developed				
	Indicator 2.12: Quantity of greenhouse gas emissions (GHG), measured in metric tons of CO ₂ equivalent, reduced or sequestered as a result of USG assistance				
3.7	Carbon Development				
3.7.1	Project Identification, Planning and Design				
3.7.1.1	Identify questions and data requirements	100% Achieved			<p>During a series of phone calls and email conversations, the missing elements to understand the scope and extent of the carbon projects were identified.: Mainly</p> <ul style="list-style-type: none"> • identifying the areas, • defining the area size and key activities in avoided deforestation, forest management on woodlands and woodlots, and agroforestry with <i>Faidherbia albida</i>, • land tenure and management agreements • census data, and • financial planning of long-term project actions

3.7.1.2	Provide any additional required data/information	100% Achieved			<p>About half of the missing elements were clarified in Q2. The other half was clarified during a field visit in Q3. Such as:</p> <ul style="list-style-type: none"> • Plan for achieving government agreements on carbon, • timing of field measurement procedures, • Priority setting between the identified project types, • field testing of standard operating procedures (SOPs), • clarification of partner communication, • draft carbon agreements
3.7.1.3	Define discrete project activities (agroforestry, REDD, woodlots, conservation agriculture systems)	100% Achieved			The discrete project activities are mapped out and reported in the draft feasibility study
3.7.1.4	Identify specific GPS polygons for implementation of <i>F. albida</i> planting	100% Achieved			TLC task. Updated estimate is: General locations of <i>F. albida</i> identified by end of 2010, and specific locations by end of Project
3.7.1.5	Provide exact GPS polygons of identified Protected Areas and other forest areas for REDD	100% Achieved	50% Achieved		All data that can influence REDD boundary areas was collected in-country and exact polygons of REDD (forest) areas within protected areas identified from GIS work.
3.7.1.6	For each project parcel with GPS work, include planned actions, community ID, picture, historic practice statement, tenure/mgt scheme, and for REDD ranking of drivers	80% Achieved			Completion scheduled for Yr4 of the project. TLC task. Updated estimate is: General locations identified by end of 2010, specific locations by year 4. Terra completed SOPs for boundary demarcation of broad areas of <i>F. albida</i> and specific project parcel areas. Boundary demarcation teams have completed 80% of project parcels for non-REDD areas. Terralytics on line system for syncing with field GPS underway.

3.7.1.7	Conduct initial social appraisals with involved communities	100% Achieved		100% Achieved	A field team from Bunda College of Agriculture, Malawi, was hired by TLC and completed social surveys and Participatory Rural Appraisals, which completed the social data collection needed for the REDD project.
3.7.1.8	Begin to negotiate / secure any necessary government approvals	100% Achieved	10% Achieved	90% Achieved	Terra wrote and reviewed tri-party agreement btw DNPW and NVA, which is currently being reviewed by relevant government ministries. This will be the template for a similar agreement with DNPW and NAWIRA when it is established, projected for completion by August 2013. The beginning of these negotiations has been completed.
3.7.1.9	Develop carbon agreements with communities	80% Achieved		80% Achieved	Same as above for the co-managed areas inside protected areas. For the communal areas outside protected areas, Terra developed framework/schematic for agreements to be signed with communities for the customary lands. These will be finalized after initial tri-party agreement is signed.
3.7.2	Prepare 4 feasibility studies (Avoided Deforestation REDD, Conservation Agriculture w/ F. albida – both ARR and ALM, Woodlots ARR, Woodlands IFM)				
3.7.2.1	Identify target standards for registration for each project activity	100% Achieved			Two of the feasibility studies were achieved 3 months ahead of schedule. The feasibility studies indicate the likely standard for the project activities eligible for carbon credits, mainly for the first two project types.
3.7.2.2	Identify risks of project eligibility under target standards	100% Achieved			The feasibility studies identified the key risks, which were confirmed in the field visits and the following finalization of the first two studies in Q3.
3.7.2.3	Conduct initial remote sensing analysis for feasibility	100% Achieved			

3.7.2.4	Determine land-eligibility of Protected Areas and other REDD areas	100% Achieved			
3.7.2.5	Field visits by TGC specialists	100% Achieved			4 TGC specialists visited the project in Q3
3.7.2.6	Generate high-level net carbon estimates, with project costs (using available data)	100% Achieved			
3.7.2.7	Finalize feasibility studies	100% Achieved			
3.7.2.8	Deliver feasibility studies (1&2) to TLC	100% Achieved			A draft version of all four feasibility studies was submitted in one integrated document to TLC for comments in Q3. Final edits were completed in early Q4.
3.7.2.9	Review feasibility studies and provide any questions	100% Achieved			
3.7.2.10	Make any necessary changes and finalize feasibility studies (1&2)	100% Achieved			
3.7.3	Methodology Development				
3.7.3.1	Determine if existing methodology can be used, or if a new methodology must be developed	100% Achieved			Terra determined a new methodology for REDD would have to be created. A/R CDM methodology could be used for the A/R Project.
3.7.3.2	Determine relative extent of project actions to mitigate emission from deforestation & degradation	100% Achieved			Broadly identified in feasibility study.
3.7.3.3	Determine spatial extent of reference region and validate similarity with project area	90% Achieved		90% Achieved	This will be completed during final development of the REDD PD
3.7.3.4	Purchase or acquire satellite data for the reference region and pre-process as needed	100% Achieved			All satellite imagery necessary for land use classification has been purchased.
3.7.3.5	Acquire ancillary spatial information (roads, settlements, water, elevation) for the reference region	100% Achieved			

3.7.3.6	Perform land classification and forest stratification within the reference region	90% Achieved	10% Achieved	80% Achieved in Q3-Y3	Terra trained and hired 3 in-country experts to reference point collection on remote sensing images to train classification. They completed image interpretation for the areas in the north. The areas in the south are being completed by Terra.
3.7.3.7	Perform preliminary estimate of current carbon stocks in project area based on initial inventory plots				To be completed in the REDD PD
3.7.3.8	Perform preliminary estimate of annual carbon stock changes in project area under baseline scenario				To be completed in the REDD PD
3.7.3.9	Perform preliminary estimate of annual carbon stock changes for each project scenario				To be completed in the REDD PD
3.7.3.10	Develop leakage definition and develop protocols to monitor emissions from leakage	100% Achieved			Leakage definition and ways to monitor emissions identified in the Methodology.
3.7.3.11	Determine the spatial extent of the leakage area, and preliminarily quantify emissions from leakage	80% Achieved		80% Achieved in Q3-Y3	Spatial extent of leakage belt complete. Leakage tables completed. Remaining calculation to be completed in the REDD PD
3.7.3.12	Identify, quantify, and estimate all potential project-related emission sources	85% Achieved		85% Achieved in Q3-Y3	To be completed in the REDD PD
3.7.3.13	Calculate initial net carbon estimates, including leakage & emissions sources	85% Achieved		85% Achieved in Q3-Y3	To be completed in the REDD PD
3.7.3.14	Develop monitoring system to quantify on-going carbon stock changes in the project area & leakage losses	75% Achieved		70% Achieved in Q3-Y3	Incorporating monitoring system in to the AFOLU system. See 3.5.6

3.7.3.15	Identify all other on-going data requirements from project participants	100% Achieved			Data requirements identified in feasibility study.
3.7.3.18	Provide technical assistance with full biomass inventory sampling	100% Achieved			Technical assistance provided in biomass inventory SOPs that were field tested and refined in Q1 of year 2. Field trip completed to train field crews in 2011.
3.7.4	Carbon Development for feasible projects				
3.7.4.1	Develop method for conducting baseline social appraisals	100% Achieved			A procedure for conducting social appraisals was developed.
3.7.4.2	Identify group/organisation to carry out baseline social appraisals	100% Achieved			Baseline social appraisals were incorporated into TLC's planned social appraisals and were hired.
3.7.4.3	Execute baseline social appraisal to determine drivers of deforestation	100% Achieved			Field teams for social appraisals from Bunda College and have completed social appraisals around all of the protected areas except Mkuwazi. Terra requested data be sent in a different format.
3.7.4.4	Develop SOP and sampling design for preliminary biomass inventories	100% Achieved			A biomass procedure has been developed. This was tested in the field and has been refined.
3.7.4.5	Execute preliminary biomass inventories	100% Achieved			TLC hired field teams for biomass inventories; these were started at the end of Q2 – Y2, and completed for the first 22 plots in Q3 – Y2. Teams were trained and Terra completed first round QAQC on these first biomass plots. Additional biomass inventories will need to be completed.
3.7.4.6	Develop detailed collaborative work plan for each project with all actions and conditions	100% Achieved			Collaborative work plan developed and shared with TLC in Q4, a beta version of a web-based collaborative work plan was develop in Q1 of year 2.
3.7.6	Prepare beta version of web-based monitoring system for release	100% Achieved			Beta version complete, and under internal testing.
3.7.6.1	Purchase web-based server equipment and software	100% Achieved			Server requirements for A&M tool identified. Purchase was completed in Q2 – Y2.

3.7.6.2	Install hardware and software in Terra's California office	100% Achieved			Software created and local server purchased for A&M tool.
3.7.6.3	Design system functionality and review system with stakeholders	100% Achieved			Assessment of functional specs completed. Beta version of Terralytics collaborative work plans developed, project parcel manager and reference point collection complete and being tested.
3.7.6.4	Initial testing of system	100% Achieved	25% Achieved		Initially testing completed, while system still under development. Introduced system to in-country partners during field visit in Q3-Y2.
3.7.6.5	Completion of beta-version	75% Achieved			Currently testing beta version of collaborative work plans, and project parcel manager internally.
3.7.6.6	In-country training	25% Achieved			In country training for reference point collection complete

Table 3h: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

3 INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES/CARBON DEVELOPMENT					
3	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 3	Achieved Year 3 Targets	Remarks
3.8	Village Savings & Loans				
3.8.1	Assess potential for village savings and loan scheme in the target areas				
3.8.2	Sensitize 300 villages in village savings and loans	300 meetings	68 meetings	298 meetings	Sensitization meetings were conducted in all areas by field officers. Completed.
3.8.3	Facilitate establishment of 100 village savings and loan schemes for selected villages	100 VS & L groups	55 groups	147 groups	It has been noted that there are many self-formed groups after learning about the initiative from already established groups. Completed. Target surpassed.
3.8.4	Train 50 village saving and loan groups in VS&L methodology		0 groups	213 groups	The groups were trained in VS&L methodology.
3.8.5	Train 30 VS & L groups in economic activities, selection, planning and management (EASPM)	30 groups	55 groups	73 groups	EASPM trainings were conducted and 73 groups were trained in Year 3.
3.8.6	Conduct periodic follow ups to VS&L groups to assess performance and address bottle necks	4 visits	11 visits	6 technical visits and 154 monitoring visits by FAs	Visits were made to VS&L groups by field staff within the 4 th Quarter. Mainly, the visits focused on savings loan repayment and administration of the social fund.
3.8.7	Evaluate the scheme for the purpose of replicating to other villages	1 visit	1 visit	3 visits	The project management team visited all the targeted areas, with a purpose of reviewing the possibility of the initiative replication. It has been noted that the VS&L groups can easily be replicated as long as the Village Agents have the knowledge and skills to impart to the

					group members.
3.8.8	Select / train community agents in the methodology for scaling up and sustainability	30 village agents	43 Village agents	53 Village agents	Completed.

Progress on Intermediate Result # 3: Increased incomes from Enterprise Development Activities

The following are the highlights of activities conducted to achieve Intermediate Result #3. For more details, please refer to **Tables 4a-4b**:

4.1 Enterprise Development

In Year 2 Quarter 4 of the project, the Kulera team narrowed microenterprises for project development efforts to macadamia, honey, livestock and coffee. In Year 3, microenterprise development efforts have expanded to include edible oil production from groundnuts and Grade B macadamia. Oil extraction efforts were emphasized in Year 3 Quarter 4 and this will be continued into the no-cost-extension with the creation of an oil-processing centre in Nkhotakota.

Over the course of Year 3, Mzuzu coffee and HIMACUL trained prospective and participating farmers in production and processing of honey, coffee and macadamia. SSLPP trained prospective and participating farmers in livestock husbandry. 8,013 farmers were trained in microenterprise production and processing in Year 3 while **482 farmers were trained in these same topics during 4th Quarter.**

In addition to technical training, over year 3, Kulera partners also conducted training in business management. 50 groups were equipped with skills in business and marketing through formal CARE training. The training focused on how to identify and sustain markets. Representatives in the training groups came from Ntchisi coffee and macadamia groups, Nkhotakota livestock and beekeeping groups, Mpherembe livestock and beekeeping groups and Ntchenchena macadamia, beekeeping and coffee groups.

In Year 3, Kulera supported planning and development of honey and macadamia as business ventures through collaboration between Kulera partners, HIMACUL and Renewable Energy Solutions. RES assisted in development of a detailed business plan. RES also conducted research in oil extraction and assisted in development of facilities to extract edible oil on a small commercial scale from groundnuts and macadamia.

During Year 3, Renewable Energy Solutions (RES) and TLC began collaboration with the Department of National Parks and Wildlife (DNPW), the Nyika-Vwaza Foundation (NVF) and Central African Wilderness Safaris (CAWS) on development of alternative energy sources to support the ecotourism activities at the Chelinda Lodge in Nyika National Park. Also, Kulera leadership participated in discussions with DNPW, CAWS and NVF to address the obstacles and possible solutions to increasing tourism in Nyika National Park. Activities in this area focus on collaboration with private and public sector entities.

4.2 Micro Finance/Credit Facilities

Over the course of Year 3, the Kulera team focused on 5 potential MSMEs: 1) beekeeping (honey), 2) macadamia (both Grade A and Grade B nuts), 3) livestock, 4) coffee and, 5) edible oil extraction from macadamia (Grade B nuts and groundnuts). Efforts to create linkages between these MSMEs and credit/microfinance did not continue in Quarter 4 as there has not been much interest shown in commercially financing micro enterprise development on the part of the farmers or on the part of the banks. Funds supporting these linkages will be rolled over into the no-cost extension.

Consultation by CARE with farmer groups indicated deep reservations on the part of farmers to finance entrepreneurial activities through formal micro-financing institutions. Interest rates are perceived by the farmers as too high to compete with other sources of microfinance like the VS&L. The credit institutions tend to be concerned about the high risk nature of loans to smallholder farmers.

The draft credit worthiness assessment tool was finalized in Quarter 4 and shared with MSMEs in target communities. There was no interest in the tool or in access to commercial credit on the part of these MSMEs.

Table 4a: Results achieved under IR # 3: Increased Incomes from Enterprise Initiatives for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

4 INTERMEDIATE RESULT # 3: INCREASED RURAL INCOMES FROM ENTERPRISE INITIATIVES					
	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Year 3 Targets	Remarks
4.1	Enterprise Development				
4.1.1	Assess potential for natural resource & agro-based enterprises in PA (3- beekeeping, 3-mushroom, 3- fish farming, 3- fish cages; 3 -groundnuts, 3- soya, 1-food dryer, 1- cassava)		0 study	1 study	The analysis from value chain and follow-up analysis indicated that honey, macadamia, livestock and coffee were the natural resource and agro-based enterprises with the greatest potential.
4.1.2	Evaluate the value chains of the selected enterprises and identify intervention points	1 value chain study	0 value chain studies	1 value chain study	Dr. Tom Byers from Washington State University and Mr. Ben Henson from RES did the value chain analysis. CARE has also documented activities among some VCs as well.
4.1.3	Train producer groups in production and processing skills (soya, groundnuts, beekeeping, fish farming, fish cages, food dryer, mushrooms, cassava)	120 groups	482 farmers trained in microenterprise production and processing	8,013 farmers trained in microenterprise production and processing	Individuals seem to be a better measure than groups. Mzuzu coffee and HIMACUL trained prospective and participating farmers in production and processing of honey, coffee and macadamia. SSLPP trained prospective and participating farmers in livestock husbandry.
4.1.4	Determine sustainable harvest/use limits for the selected products with viable markets	1 study	1 study/plan	2 studies/plans	Study is part of the value chain analysis and business plan/strategic plan development for HIMACUL. Plans focused on macadamia and honey as products. Completed.
4.1.5	Train producer groups and MSMEs in business skills and marketing with power to negotiate prices	120 groups ; 50 entrepreneurs	107 entrepreneurs; 50 groups	107 entrepreneurs; 50 groups	50 groups were equipped with skills in business and marketing through formal CARE training. The training focused on how to identify and sustain markets. Representatives in the training groups came from Ntchisi coffee and macadamia groups, Nkhotakota livestock and

					beekeeping groups, Mpherembe livestock and beekeeping groups and Ntchenchena macadamia, beekeeping and coffee groups.
4.1.6	Facilitate linkages/contracts between producer groups, MSMEs, traders and buyers	3 contracts	0 contracts	0 contracts	Producer groups are not yet at a developmental level suited for contracts of this nature.
4.1.7	Support the development of promising products as business ventures	7 potential ventures	3 potential ventures	3 potential ventures	In Year 3, Kulera supported planning and development of honey and macadamia as business ventures through collaboration between Kulera partners, HIMACUL and Renewable Energy Solutions. RES assisted in development of a detailed business plan. RES also conducted research in oil extraction and assisted in development of facilities to extract edible oil on a small commercial scale from groundnuts and macadamia.
4.1.8	Facilitate employment/venture opportunities with private tour operators for eco-tourism/NR enterprises	6 tour operators ; 10 tour guards	1 visit with Central African Wilderness Safaris (CAWS) to discuss possible installation of a wood gasifier at Nyika	1 site visit; 1 eco-tourism stakeholder meeting; visits with CAWS and DNPW about alternative energy options for Chelinda Lodge in Nyika National Park	Renewable Energy Solutions (RES) and TLC began collaboration with the Department of National Parks and Wildlife (DNPW), the Nyika-Vwaza Foundation (NVF) and Central African Wilderness Safaris (CAWS) on development of alternative energy power sources to support the ecotourism activities at the Chelinda Lodge in Nyika National Park. Also, the Kulera COP participated in discussions with DNPW, CAWS and NVF to address the problems and possible solutions to increasing tourism at Nyika National Park. Activities in this area focus on collaboration with private and public sector entities rather than on individual operators and/or guards.

4.2	Micro finance/Credit facilities				
4.2.1	Identify 20 potential MSMEs (3- beekeeping, 3-mushroom, 3- fish farming, 3- fish cages; 3 -groundnuts, 3- soya, 1-food dryer, 1- cassava) for credit/microfinance linkages	20 MSMEs	5 MSMEs	5 MSMEs	Over the course of Year 3, the Kulera team focused on 5 potential MSMEs: 1) beekeeping (honey), 2) macadamia (both Grade A and Grade B nuts), 3) livestock, 4) coffee and, 5) edible oil extraction from macadamia (Grade B nuts and groundnuts). Efforts to create linkages between these MSMEs and credit/microfinance did not continue in Quarter 4 as there has not been much interest shown in commercially financing micro enterprise development on the part of the farmers or on the part of the banks. Funds supporting these linkages will be rolled over into the no-cost extension.
4.2.2	Develop a credit worthiness assessment tool for MSME to facilitate access to credit from MFI	1 tool kit	1 Draft tool was finalized	1 Draft tool developed	The draft credit worthiness assessment tool was finalized in Quarter 4 and shared with MSMEs in target communities. There was no interest in the tool or in access to commercial credit on the part of these MSMEs.
4.2.3	Evaluate financial and credit needs of 20 MSMEs (3- beekeeping, 3- mushroom, 3- fish farming, 3- fish cages; 3 -groundnuts, 3- soya, 1-food dryer, 1- cassava)	1 study	0 studies	0 studies	Consultation by CARE with farmer groups indicated deep reservations on the part of farmers to finance entrepreneurial activities through formal micro-financing institutions. Interest rates are perceived by the farmers as too high to compete with other sources of microfinance like the VS&L. The credit institutions tend to be concerned about the high risk nature of loans to smallholder farmers.

Table 4b: Results achieved under IR # 3: Increased Incomes from Enterprise Initiatives for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

4 INTERMEDIATE RESULT # 3: INCREASED RURAL INCOMES FROM ENTERPRISE INITIATIVES					
	ACTIVITIES	Year 3 Targets	Achieved Targets Quarter 4	Achieved Year3 Targets	Remarks
4.2	Micro finance/Credit facilities				
4.2.4	Identify viable micro finance institutions for support services	4 institutions	Discussions with 1 micro finance institution	Discussion with 1 micro finance institution	CARE discussed Kulera microfinance opportunities with OIBM under the CARE SAVEUP project. However, there appears to be little interest among farmers to finance entrepreneurial activities through formal micro-financing institutions. Farmers report that they feel interest rates are too high to compete with other sources of microfinance like the VS&L. This activity will not be completed and funds that would have supported this evaluation will be rolled over into the no-cost extension.
4.2.5	Facilitate linkages/contracts between credit worthy MSMEs and Micro finance institutions	30 MSMEs	0 contracts	0 contracts	MSMEs not willing to commit.
4.2.6	Provide training to the selected MSMEs in financial management and loan servicing	30 MSMEs	0 trainings	0 trainings	Training not relevant in absence of linkage with MFIs.

Progress on M&E, Reports and Meetings

The following are the highlights of activities conducted to demonstrate progress on M&E, Reports and Meetings. For more details, please refer to **Table 5a**:

4.0 M & E, Reports and Meetings

Community-Based Monitoring and Evaluation (CBM&E) Systems for various interventions (livestock, governance, agriculture and natural resource interventions, carbon development, economic development, etc.) were discussed and modified by Kulera partners in Year 2 of the project. Over the course of Year 3, formal and informal training in CBM&E occurred for field coordinators to assist in data collection and analysis.

In addition to the database structure that is in use for Kulera and other TLC projects, in Year 3, TLC began and has continued its pilot program with Agro-Tech. Agro-Tech is a private firm that is supporting data collection and management through use of hand-held GPS devices and TLC data collection templates.

Table 5a: M&E, Reports and Meetings for Year 3 (October 2011-September 2012) and Year 3 Quarter 4 (July-September 2012)

5	M&E, Reports & Meetings	Year 3 Targets	Targets Achieved Quarter 4	Year 3 Targets Achieved	Remarks
5.1	Design Internal and Community based M&E Systems for the 3 different result areas	Circulate 3CBM&E systems to partners	CBM&E systems in place since Year 2	CBM&E systems in place since Year 2	Completed. CBM&E Systems for various interventions (livestock, governance, agriculture and natural resource interventions, carbon development, economic development, etc.) were discussed and modified by Kulera partners in Year 2 of the project. Training in M&E occurred for field coordinators to assist in data collection and analysis.
5.2	Develop data base structure for inputs and analysis of results for each result area	Initiate 3 databases	CBM&E systems in place since Year 2 included a data base structure for inputs and analysis of results.	CBM&E systems in place include a data base structure for inputs and analysis of results for all partners.	Completed. In addition to the data base structure that is in use for Kulera and other TLC projects, TLC began and continues a pilot program with Agro-Tech. Agro-Tech is a private firm that is supporting data collection and management through use of hand-held GPS devices and TLC data collection templates.
5.3	Conduct M&E training for relevant staff on different components of the project	1 M&E session	0 M&E training sessions	6 M&E training sessions	Completed. Target surpassed.
5.4	Produce quarterly technical and financial reports	4 quarterly technical & 4 quarterly financial reports	1 quarterly technical and 1 quarterly financial report	4 quarterly technical and 4 quarterly financial reports	Completed. Target achieved.
5.5	Participate in meetings of project steering committee	4 meetings	1	4	Completed. Target achieved.

5.6	Produce annual technical and financial reports	1			Completed for Year 3.
5.7	Develop FY 3 Budget and Work plan	1	1	1	Completed. A budget and work plan for the no-cost extension was developed during Quarter 4 Year 3.
Acronyms & Codes: CB=Community Based; FD=Forestry Department; HI=Hestian Innovation; KK=Nkhotakota & Mkuwazi; M&E=Monitoring & Evaluation; MSME=Micro Small & Medium Enterprises; Ntc=Ntchisi; NP&W=National Parks & Wildlife; Ny-Vz=Nyika-Vwaza; PA=Protected Area; RES=Renewable Energy Solutions; SJ=StrawJet; TBD=To be determined; TGC=Terra Global Capital; TLC=Total LandCare; WSU=Washington State University					

Challenges, Solutions and Actions Taken

No	Challenges	Solutions	Action taken
1	Fuel shortage/Erratic fuel supply was a serious challenge in Year 3.	The fuel shortage situation improved significantly toward the end of Year 3 with the change in government. However, during the worst period of the shortage, it was necessary to car pool, plan travel very very carefully and to prioritize activities requiring fuel according to their importance to the project.	Kulera project managers took advantage of purchasing fuel any time that it became available and planned travel very very carefully. The project employed car pooling whenever possible and prioritized project activities that required travel and fuel.
2	Over the course of Year 3, competing and contradictory interventions among organizations operating in the same area resulted in confusing beneficiaries	Harmonization of methodologies and approaches among these organizations is necessary to address this issue.	Arrangements are being made to meet the organizations involved to harmonize methodologies and approaches to better serve the target communities.
3	Devaluation of the kwacha in Year 3.	Devaluation of the kwacha required salary and allowance adjustments due to increases in the cost of living. It also required revising project targets and expectations where costs of materials and other inputs have risen. Some positive impacts were felt in those projects funded in U.S. dollars. More money in kwachas will be available for future project activities.	TLC and its partners made adjustments in salaries and allowances to accommodate the increased cost of living. Project targets requiring more expensive inputs have also been considered in the project evaluation process.
4	Quarterly liquidation requirement	The best possible solution would likely be to require liquidation on a quarterly rather than a monthly basis. This would ensure that there was adequate time to reconcile partner expenditures and transfer funds in a timely way. Timely fund transfer has remained a problem throughout the project.	Streamlining the liquidation process to the greatest extent possible has reduced the problem to some extent, but the process complexity and the short turnaround time of a month has made it difficult to meet partner needs as efficiently as desired by both the partners and by TLC.
5	The fuel shortages over the past year in Malawi limited the ability of field teams do the necessary data collection, particularly on the demarcation of project parcels where Total LandCare will undertake Afforestation and Reforestation (A/R) activities, such as planting woodlots. In Q4 – Y2 there was not enough fuel for field teams to complete boundary demarcation of the areas around Nkhotakota, where communities are planting woodlots.	Adjustments to implementation schedules, inventory site locations and numbers of vehicles available for use were necessary.	Solutions to these challenges were identified and implemented between Total LandCare and Terra. Specifically, field teams that were forced to abandon field work due to fuel shortages, while still under contract, used their time effectively by entering data that will be useful for carbon development. They were sent back to the field when fuel was available. In addition, Total LandCare identified specific project areas close to where their personnel and partners are currently located, so that field

			work can begin with limited use of fuel.
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Lessons, Best Practices and Recommendation

- Year 3 of the project ends with the observation that there seems to be improving communication and relations between officers from the Department of National Parks and Wildlife (DNPW) and communities in the project target areas around Nyika National Park, Vwaza Wildlife Reserve and Nkhotakota Wildlife Reserve. This is evidenced by the co-management agreement drafted by DNPW, the Nyika Vwaza Association (NVA) and Terra Global Capital that has been forwarded to the Ministry of Justice for approval. The agreement will facilitate collaboration and cooperation on carbon development as well as other livelihood and biodiversity conservation activities within the project zone. Through funding from and collaboration with TLC, DNPW is forming the Nkhotakota Wildlife Reserve Association (NAWIRA), which is an association for communities surrounding Nkhotakota Wildlife Reserve that is modelled after the Nyika-Vwaza Association. This will further improve the working relationship between the DNPW and target communities. Further, 81 individuals from among community and agency leadership participated in the Participatory Law Enforcement Training Workshops. These workshops were intended to provide a clearer understanding of issues, responsibilities and roles of all the stakeholders in addressing the issue of poaching within the PAs. In addition, SSLPP field coordinators are reporting that the introduction of goats along the Nyika National Park boundary hold real promise as a mechanism to reduce poaching of wildlife within the park. This will further improve communication and relationship between target communities and DNPW.
- Data collection required for carbon development continued through the end of Year 3. Supplemental biomass sampling, Participatory Rural Appraisal of communities within the carbon development project zones, boundary demarcation of ARR areas, long-term planning for the Project Document and submission of the Co-management Agreement for approval of the Government of Malawi marked some of the key activities undertaken by Terra Global Capital. Terra will continue its Kulera partnership through the end of the no-cost-extension.
- The success of the reforestation/afforestation efforts of the project was very visible during year 3. The process began with production of seedlings and ended with out planting of these seedlings during the rains which fell in 2nd and 3rd Quarters of the project year. This year, TLC field coordinators oversaw the out planting of 8,205,494 tree seedlings. This activity involved a total of 31,860 households within the project areas.
- During the third year of the project, the collaboration between TLC, HIMACUL, Mzuzu Coffee and other project partners continued to produce significant advances in expanding the base of coffee, macadamia and beekeeping to the benefit of smallholder farmers in agronomically appropriate project areas. This collaboration also assisted target farmers in coffee and macadamia nursery production and business development. HIMACUL made significant progress toward sustainability with the development of a business plan, improvements in processing and exploration of new uses for Grade B nuts. This collaboration also fostered the idea of adding edible oil to the priority microenterprise development areas.
- Terra Global Capital has found it helpful to test Standard Operating Procedures (SOPs) for boundary demarcation, biomass inventories and social appraisals, with field crews, who will be working in the specific areas where TGC will be collecting data. The testing of the SOPs has provided critical feedback that has been integrated into the SOPs to account for local conditions and capacity, while, at the same time, being able to meet the VCS criteria for carbon accounting. Additionally, the training of field teams was critical to ensuring good quality data from the field, which resulted in less time for Terra doing QAQC.

Success Stories

- The successes of the Village Savings and Loan schemes became very apparent in Year 3 and are proving to be a model of uplifting the lives and livelihoods of the people living in rural communities. Successful case studies that emerged during the reporting period include:
 - Beatrice Chimwaza. Beatrice is 38 years old and is married with six children. She lives in Chambwanda village, GVH Msindwa Traditional Authority Kanyenda of Nkhotakota district. She joined a village savings and loan group promoted by the Kulera in 2011. With an initial loan of K15, 000.00 which was used to start a business of buying and selling

tomatoes and bananas, she has diversified her business into buying and selling second hand clothes. Her business is now valued at over MK250, 000.00. She has moulded 13,000 bricks in preparation to build a good and durable house.

- Alice Nkhoma. Alice lives in Sasani village, GVH Sasani in T/A Malenga chanzi in Nkhotakota District. She is 47 years old and is married with 8 children. She joined the Chisomo 1 village savings and loan group in January 2011. After her shares were adequate to receive a loan of MK12, 000.00, she bought a bicycle and began a bicycle taxi service. With the proceeds from this business she was able to buy fertilizer for her tobacco and maize. Alice Nkhoma managed to harvest 300kgs of tobacco which she sold for over MK120, 000.00. She also managed to harvest 40 bags of 50 kg each. From her crop and business income, she has bought 2 nanny goats; has started a dry fish and beans and has begun a vending business. Further, she is now able to pay secondary school fees for her children. She says that the days when women should just rely on their husbands are over. Women too can do something to be economically empowered and one such way is to join VS&L groups. She is a role model in the village.
- There are reports that National Parks and Wildlife officers who work around the protected areas have indicated that they believe that there has been a decrease in poaching incidents in the project border zones since the project began. They are attributing this change largely to the Kulera Biodiversity Project. One example of the project's positive impact is personified by a farmer in the Nyika-Vwaza-complex. He confessed that he had once been a poacher. He says that since the start of the project, however, he has given up poaching to concentrate on Kulera Biodiversity Project activities. He indicated that there are a number of other former poachers in his community who have done the same thing. He said that he felt the Kulera activities were more beneficial and less dangerous for him and his family than poaching.
- The livestock component of the Kulera Biodiversity Project is reported to have successfully increased a number of participating farmers' incomes. Mrs Banda in Nkhotakota admitted that she had had problems in paying for her daughters' school fees before she had received goats from the project. After receiving her livestock, and repaying her loan, her animals had twins. She sold the twins and used some of the proceeds earned to pay the school fees. Mrs.
- The Mzuzu coffee farmers are very excited about the coffee and honey interventions. The commitment the farmers have shown through their own contributions is impressive. They moulded bricks, crushed quarry stone and provided labour for the excavation of the pulping building. They also bought a building for office space at about MK100, 000.00.
- The approach taken in the development of carbon for the Kulera Biodiversity Project is an innovative model that can be applied elsewhere, particularly in East Africa. The project was highlighted at the Africa Carbon Forum in Addis, Ethiopia (April 18th – 20th 2012) during the Plenary session on Forestry and Agriculture as one of the first landscape approaches to REDD that, at scale, integrates mitigation activities to reduce drivers of deforestation, provides a sustainable source of fuel wood, improves agricultural practices and provides for local livelihoods. Project developers increasingly recognize that REDD activities must include these supporting components to successfully reduce drivers of deforestation in a sustainable manner far into the future. These multiple mitigation activities will lead to the development of two discrete, yet related, carbon projects under the Kulera Biodiversity Project -- Reduced Emissions from Avoided Deforestation and Forest Degradation (REDD) and Afforestation, Reforestation and Revegetation (ARR)--as well as the potential for two other projects in the future -- Improved Forest Management (IFM), and Agricultural Land Management (ALM).

Update of the PMP

No	OUTPUT INDICATORS	2012 Targets	Achieved Targets Quarter 4	Cumulative Year 3 Result	Remarks
INTERMEDIATE RESULT # 1: IMPROVED GOVERNANCE OF PROTECTED AREAS					
2.1.1	Indicator 1.1: Number of hectares in areas of biological significance showing improved biophysical conditions as a result of USG assistance.	25000	To be reported in the final NCE End of Project report	To be reported in the final NCE End of Project report	The data from the Biophysical baseline inventory established indicators for “improved biophysical conditions”. Indicators are: decreased illegal activity, decreased poaching numbers and decreased number of poaching bases. Unfortunately, these numbers are reported for each PA and not for each Kulera project zone adjoining the given PA boundary. For this reason, among others, it appears that poaching indicators do not provide a very meaningful measure of “ improved biophysical conditions”. At best, poaching statistics are proxy rather than direct indicators. Since, the project has been extended for a fourth year, the no-cost-extension will be used to collect data on non-poaching indicators as part of the final impact survey. Data addressing indicators beyond poaching will be presented in the final NCE PPR and End of Project report.
2.1.2	Indicator 1.2: Number of hectares in areas of biological significance under improved management as a result of USG assistance	35000	Reported as Year 3 data	90,693 hectares	The total maximum number of hectares projected to be impacted by activities in project target zones within the 5 km band inside Nyika-Vwaza and Nkhotakota PA boundaries (areas of biological significance) is 151,155 ha. Kulera field staff

					have conducted activities in conservation agriculture, village woodlots, afforestation, woodland regeneration, soil and water conservation, crop diversification, improved woodstove, irrigation, animal husbandry, etc. It is estimated that the area impacted by these activities radiates 5 km in all directions around target communities. Over the course of Year 3, TLC approximates that 60% of the communities have participated in Kulera activities. Therefore in Year 3, approximately 90,693 hectares in areas of biological significance have been impacted by improved management.
2.1.3	Indicator 1.3: Number of hectares of natural resources showing improved biophysical conditions as a result of USG assistance	302,310 hectares	Reported as Year 3 data	0	Measurement to be taken in Quarter 3 of the no-cost extension. This measurement, like Indicator 2.1.1 will require collection of a second set of data in order to determine “ improvement ” in biophysical conditions.
2.1.4	Indicator 1.4: Number of hectares under improved natural resource management as a result of USG assistance	10000	Reported as Year 3 data	8,125 hectares	This indicator is assumed to mean improved management within project zones but outside of protected areas. The results of work in Year 2 in project impact zones outside of protected area boundaries totalled 8,125 hectares in woodlots, natural regeneration and agroforestry sites. These estimates are based on actual measurements through the boundary demarcation process required for the carbon development component of the project. The 20,000 hectare set for Year 2 was too ambitious and

					the Year 3 targets are set at 10,000 hectares. Actual demarcation measures to show additional area will be reported in NCE Quarter 1 or 2.
2.1.5	Indicator 1.5: Number of people receiving USG supported training in natural resources management and/or biodiversity conservation	25000 (M=17500,F=7500)	Reported as Year 3 data	192,775 (M=94460, F=98,315)	The trainings were in all areas of Kulera Biodiversity Project partner activities.
2.1.6	Indicator 1.6: Co-management agreements signed between Government Departments and PAs	2	Reported as Year 3 data	0	The agreement for Nyika-Vwaza area has been drafted and submitted to the Ministry of Justice for GOM approval. Work on the creation of NAWIRA in Nkhotakota zone is still in progress and will be completed during the no cost extension. The Nyika-Vwaza co-management agreement should be approved in NCE Quarter 1.
2.1.7	Indicator 1.7: Number of policies, laws, agreements or regulations promoting sustainable natural resource management and conservation that are implemented as a result of USG assistance	2	0	1	The indicator will be assessed at the close of the no-cost extension. However, the process of setting up by-laws and other agreements have been initiated and completed in Rumphu Zone while work is still continuing in Nkhotakota zone.
No	OUTPUT INDICATORS	2012Targets	Achieved Targets Quarter 3	Cumulative Year 3 Result	Remarks
INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES					
3.1.1	Indicator 2.1: Number of households acquired new knowledge/skills in improved livelihoods & NRM practices	20000	9,905 HH	37,981 HH	These are households that acquired new knowledge and skills in Kulera interventions, conservation agriculture, soils and water conservation, irrigation and tree planting.

3.1.2	Indicator 2.2: Number of farmers, processors & others who have adopted new technologies or management practices as a result of USG assistance	100,000	15,565 farmers	252,865 farmers	These are individual farmers who were involved in soil and water conservation and conservation agriculture plus tree planting as well as small stock livestock management practices
3.1.3	Indicator 2.3: Number of MSMEs acquired new knowledge/skills in business administration & value-added processing	20 MSMEs	107 Entrepreneurs and 50 Groups	107 Entrepreneurs and 50 Groups	107 entrepreneurs and 50 groups were trained in business skills and marketing with particular emphasis on price negotiation
3.1.4	Indicator 2.4: Number of hectares under sustainable agriculture practices	5230 hectares	1,262 hectares	2,443 hectares	The figure includes the area under crop diversification, conservation agriculture, soil and water conservation, and soil fertility improvement.
3.1.5	Indicator 2.5: Number of hectares under reforestation	3500 hectares	0 hectares	4,230 hectares	A total of 6,344,511 tree seedlings were planted across the project zones during Year 3. Hectarage was determined by dividing the total number of trees planted by 1500 trees/hectare.
3.1.6	Indicator 2.6: Number of households with access to small livestock for nutrition and income (includes pass on) (Each beneficiary represents a single household.)	5875 HH	193 HH	660 HH	The total number comprised households who were the first beneficiaries of livestock and households who benefitted on a pass-on basis.
3.1.7	Indicator 2.7: Area under irrigation	450	60 hectares	68 hectares	Irrigation activities picked up in quarter 4 of the year as farmers are normally busy with rain-fed harvesting activities during the previous quarter. This target seems unrealistic.
3.1.8	Indicator 2.8: New technologies made available for transfer	4	1	2	Improved brick stoves were introduced in target communities. Also a new oil extractor known as PITEBA has also been tested by TLC and RES for introduction to target community and the oil extraction centre.

3.1.9	Indicator 2.9: Number of households / schools / individuals accessing alternative energy sources/fuel efficient systems	10,000 HH	10,754 HH adopted woodstoves (annual not quarterly data)	10,754 HH adopted woodstoves	During the year a total of 10,754 HH adopted improved woodstoves.
3.1.10	Indicator 2.10: Number of communities/ groups engaged in village savings and loan	100	25 groups	147 groups	The project target has been exceeded
3.1.11	Indicator 2.11: Number of carbon projects developed	0	0	0	End of project evaluation
3.1.12	Indicator 2.12: Quantity of greenhouse gas emissions (GHG), measured in metric tons of CO ₂ equivalent, reduced or sequestered as a result of USG assistance	TBD	0	0	End of project evaluation
INTERMEDIATE RESULT # 3: INCREASED RURAL INCOMES FROM ENTERPRISE INITIATIVES					
4.1.1	Indicator 3.1: Number of producer groups and MSMEs trained in production, processing, business and marketing skills	40	24 producer groups	73 producer groups	24 producers groups were trained by CARE during Year 3 Quarter 4. During Year 3 73 producer groups were trained by CARE
4.1.2	Indicator 3.2: Number of MSMEs accessing loans from commercial banks / lending institutions / DCA facility	20	0	0	Farmers have indicated little interest in accessing loans from commercial lenders citing high interest rates as the reason. They seem to prefer loans from VS&L.
4.1.3	Indicator 3.2: Volume of NRM and agro-based products produced and sold	1875	0	558 kgs of honey reported by HIMACUL and Mzuzu Coffee	NRM and agro-based products produced and sold include honey, macadamia kernels, coffee and livestock. Honey production was 558 kgs.
4.1.4	Indicator 3.4: Percentage increase in revenue from eco-tourism	50	0	0	End of project evaluation, if an assessment is possible without baseline data.

Planned Activities for the Quarter 1 of No Cost Extension

KULERA BIODIVERSITY PROJECT NO COST EXTENSION QUARTER 1 WORK PLAN					
No.	Activities	No Cost Extension Targets	Time Frame		
			Oct	Nov	Dec
1.1	Operational Setup				
1.1.1	Agree on collaborator roles, responsibilities and targets	No Targets			
1.1.2	Prepare collaborator MOUs	TBD			
2.1	Strengthen Governance Structures				
2.1.1	Identify/demarcate target areas and communities in the border zone around the PAs for Kulera interventions including Water & Sanitation (WADA)	1 PA (Nkhotakota)			
2.1.2	Facilitate zoning/re-zoning of the PAs in collaboration with all the stakeholders	1 PA (Nkhotakota)			
	Complete NRU Zone demarcation	32 Natural Resource Use zones demarcated			
2.1.3	Facilitate formation of functional democratically-elected PA committees at different levels for all Kulera interventions and Water & Sanitation (WADA)	Committees in 1 PA (Nkhotakota)			
	Sensitize zone communities and form Zone NRCs				
	Train Zone NRCs in CM				
	Conduct NAWIRA conference				
2.2	Co-management Agreements				
2.2.1	Identify key natural resources and areas for developing co-management agreements				
2.3	Build Capacity of PA Governance Structures				
2.3.1	Train PA NRM institutions in corporate governance, team building, fund raising, project write-ups, resource assessments/problem analysis, basic NR rights and conflict resolution	1 Training for Nkhotakota PA that will also combine with Nyika-Vwaza Association			
	Procure measuring scales	52 measuring scales procured			

	Quantify Harvestable resources in all targeted Natural Resource Zones	52 Resource Use Zones resources quantified			
2.3.3	Facilitate establishment of youth conservation clubs	20 Clubs			
2.3.4	Organize PA visits by youth clubs	10 visits by clubs in each PA			
3	Sustainable Agricultural and NR Interventions				
3.1	Crop diversification				
3.1.1	Groundnuts	70 ha			
3.1.2	Conservation Agriculture	330 ha			
3.1.4	Tree planting	6,625,000 Trees			
3.2	Coffee & Macadamia Production and Processing & honey production				
3.2.1	Coffee Planting / Production				
	Facilitate production of coffee seedlings with identified growers in Ntchisi & Ntchenachena	800,000 seedlings (400,000 in Ntchisi & 400,000 in Ntchenachena)			
	Procure and distribute polypots & Coffee seed	800000 polypots; 250 kg of coffee seed			
	Manage coffee demonstration plots	4			
	Procure inputs	25.mt			
3.2.2	Coffee processing and post harvest quality Management				
3.2.2.1	Train farmers in coffee in post harvest handling and quality management	5 Courses			
3.2.2.2.	Construct post harvest storage facility	1			
3.2.2.3	Install processing machines	2			
3.3	Macadamia Promotion and processing				
3.3.1	Facilitate root stock production and grafting	60,000 Rootstocks			
3.3.2	Facilitate planting macadamia trees	40,000 Trees			
3.5	Small Livestock Promotion				
3.5.1	Identify and select farmers based on established criteria in EPAs where earlier Kulera livestock promotion did not occur (Nyika, KK, Ntch)	500 new beneficiaries			
3.5.2	Form and train livestock committees	25 committees			
3.5.3	Train farmers in piggery, poultry/G fowl production, goats and rabbits production	500 farmers trained			

3.5.4	Develop contracts of agreement with farmer groups regarding care of animals and pass on	500 contracts signed			
3.5.5	Train and support Newcastle disease vaccinators	20 NCD revolving funds established			
3.5.6	Mount Newcastle disease campaigns	20 campaigns, 95000 chickens vaccinated			
3.5.7	Produce quarterly reports	4 quarterly reports			
3.6	Carbon Development				
3.6.1	Project Identification, Planning and Design				
3.6.1.1	Identify specific GPS polygons for implementation of <i>F. albida</i> planting	Specific locations of <i>F.albida</i> identified			
3.6.1.3	Begin to negotiate / secure any necessary government approvals	1 NVA Agreement completed by November 2012 and 1 NAWIRA Agreement completed by August 2013			
3.6.1.4	Develop carbon agreements with communities	Finalized agreements for signature with communities in NVA (December) and NAWIRA (Sept)			
3.6.1.5	Determine spatial extent of reference region and validate similarity with project area	Validation of similarities between reference region and project areas			
3.6.1.6	Perform land classification and forest stratification within the reference region	Complete reference region land classification and forest stratification in Nkhotakota/ Ntchisi			
3.6.1.10	Determine the spatial extent of the leakage area, and preliminarily quantify emissions from leakage	20%			
4.1	Enterprise Development				
4.1.1	Identify intervention points in value chain analysis conducted in Yr 2 of the Kulera Project	1 Review			
4.1.4	Establish and train Wild Mushroom producer groups in processing and marketing. Special emphasis will be placed on inclusion of women and other underrepresented groups, exclusively in Nyika-Vwaza zone.	2 Courses			

4.1.8	Support eco-tourism infrastructure in Nyika National Park	Authorisation to install alternative energy technologies at Chelinda Lodge; installation of technologies and establishment of agreement on benefit sharing			
5	M&E, Reports				
5.1	Conduct quarterly technical and financial review and planning meetings with partners	4			
5.2	Produce quarterly technical and financial reports	4 quarterly technical & 4 quarterly financial reports			
5.3	Conduct project monitoring and supervision visits	12 project monitoring and supervision visits			