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## **KULERA BIODIVERSITY PROJECT**

**FY 2 Annual Technical Report: October 2010 – September 2011**  
**4<sup>th</sup> Quarter Technical Report: July-September 2011**

*Prepared by:*

*Total Land Care*

*October, 2011*

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*The Malawi Kulera Biodiversity Project is being implemented by Total Land Care as the prime implementing organization in partnership with selected local and US organisations 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*

<b>Project Name:</b> Kulera Biodiversity Project
<b>Reporting Period:</b> October 2010 – September 2011
<b>Obligation Funding Amount:</b> US\$3.324 million
<b>Project Duration:</b> 3 years
<b>Evaluation Dates:</b>
<b>Person Responsible for Drafting this Report:</b> Dr Michael Whiteman, Chief of Party and/or Mwiriha Kapondamgaga, TLC Monitoring and Evaluation Specialist
<b>Project Objectives:</b> <ul style="list-style-type: none"> <li>- <b>Improved governance of PAs</b> through a participatory, decentralized structure that provides economic incentives to support sustainable natural resource management.</li> <li>- <b>Improved rural livelihoods</b> around the borders of protected areas under a framework that promotes increased food security, diversification, sound resource management, village savings and loans, and incomes. The ultimate goal is to transform livelihoods from subsistence survival to thriving rural enterprises that are self-sufficient.</li> <li>- <b>Increased rural incomes</b> from ecotourism and enterprises among local producers and entrepreneurs to produce process and market agricultural and natural products. A value chain approach will be used to evaluate the progress and status of products and enterprise initiatives to date to target interventions that address critical weaknesses or gaps.</li> </ul>

The following report summarizes both the activities and results of the 4<sup>th</sup> Quarter of FY2 and the cumulative results of the 4 quarters of FY2 as the annual report of the Kulera Biodiversity project. 4<sup>th</sup> Quarter results are presented with a green background to set them apart from the annual report results.

## I. Overall Progress of the Project in Year 2 – Annual Report

Key activities carried out during the Year 2 of the project (those highlighted in green occurred in the 4<sup>th</sup> Quarter) included the following:

### 1 Operational Setup Activities

The following activities were achieved under operational set up during Year 2 of the project:

**Kulera/Wada Joint Launch.** The Kulera/Wada Joint Launch took place on May 18, 2011 at the Sunbird Capital Hotel in Lilongwe. The event was attended by approximately 135 invited guests including the Deputy Minister for the Ministry of Tourism, Wildlife and Culture, the Honourable Augustine Mtendere. The U.S. government was represented by the U.S. Charge d’Affaires, Ms. Lisa Vickers. The event included speeches as well as exhibitions of nearly all of the interventions that the Kulera and WADA partners implement on the two projects. It was a great opportunity to publicize project activity and to familiarize project stakeholders in the activities and progress of the two projects.

**Progress in Joint Activities with Department of National Parks and Wildlife (DNPW) and the Department of Forestry (DOF).** Joint planning and collaborative activities with the Department of

National Parks and Wildlife were very successful over Year 2. Planning has continued for development of governance structures, carbon development activity and the implementation of activities leading to development of an Nkhotakota Association modelled after the Nyika-Vwaza Association. In addition, Terra Global Capital team members presented a day and a half long training in carbon development to DNPW leadership. Meetings and follow on activities with the Department of Forestry have not occurred due to scheduling issues and the availability of DOF officials. Livelihood activities in target communities that activities like carbon development which require access to the forest reserves will take place on the project. This will limit the amount of work that the project undertakes in collaboration with DOF. The major GOM partner over Year 2 has been the DNPW and this collaboration is scheduled to continue the Year 3 work plan currently under revision.

**In- country Terra Global Carbon Development Expert.** To address the complex issues of the carbon development component of the Kulera Project, Terra Global Capital determined that it would be advantageous to hire an in-country carbon development expert to work with the TLC team. The search process began in the Y2 – Q1. The searches failed to produce a final hire for the position. In Y2-Q4, TGC and Kulera administrators determined to not fill the position but rather redistribute work responsibilities among existing Kulera team members.

**Terra Global Capital Training.** Terra Global Capital partners, Cheri Sugal and Erica Smith conducted a day and a half long training for approximately 25 DNPW officials from the project zones in the development, measurement, financing and marketing of carbon with particular reference to REDD +. This training set the stage for work that Terra Global Capital teams conducted and continue to conduct in biomass inventorying in the Nyika, Vwaza and Nkhotakota Protected Areas during Quarters 3 and 4 of Year 2 and into Year 3.

**Vehicle Purchases.** With unused funds from the Equipment and Operational Setup, the Kulera project purchased a Toyota Hilux pickup, a Toyota Hilux Twin Cab and 4 motorcycles for implementation of Kulera project work.

**Table 1(A): Summary of operational setup activities for Year 2 (October 2010 – September 2011)**

<b>1</b>	<b>OPERATIONAL SETUP</b>	<b>Year 2 Targets</b>	<b>Achieved Targets Year 2</b>	<b>Cumulative Result</b>	<b>Remarks</b>
1.1	Prepare the Annual Work plan and PMP for FY2 with contributions from all project partners	1	1	1	Work plans done together with the partners in Year 2 1 <sup>st</sup> Quarter
1.7	Prepare sub-award agreements with key partners	WSU, TGC, CARE, SSLP, Mzuzu Coffee	5	WSU, TGC, CARE, SSLP, Mzuzu Coffee	All agreements prepared and signed by TGC, CARE, SSLP, Mzuzu Coffee and WSU in Year 2 1 <sup>st</sup> Quarter
1.9	Facilitate Project Steering Committee Meeting	2 Meetings	2	2	Meetings held on November 24, 2010 and September 29, 2011.
1.10	Facilitate Field Implementation Committees Meeting	2 Meetings	2	2	Second meeting scheduled for August 2011
1.11	Establish collaborative agreements with selected partner organizations	9 partners	5	5 partners	Annual collaborative agreements with 5 partners are in place. Collaborative agreements requiring renewal is limited to five of the project partners. Written collaborative agreements needed only for 5 of 9 partners.
1.15	Conduct meeting with key stakeholders (Department of National Parks and Wildlife—DNPW and Department of Forestry-DoF)	2 Meetings	1	1	One meeting was conducted with the Department of Parks and Wildlife. Attempts to organize meetings with the DOF have not been successful to date. This meeting and subsequent meetings with DNPW have focused on developing and improving governance structures in both the Nyika-Vwaza complex and Nkhotakota Wildlife Reserve.
1.16	Conduct a launch of the project with Government Officials, USAID,	1	1	1	The project Launch was held on 18 May,

	Partners & Stakeholders				2011 at the Sunbird Capital Hotel with approximately 135 invited guests in attendance. The keynote speaker was the Deputy Minister of the Ministry of Tourism, Wildlife and Culture. The Charge d’Affaires from the US Embassy represented the U.S. government at the event.
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## 2. Intermediate Result # 1: Improved Governance of Protected Areas

The main activities under improved governance of protected areas that took place during first quarter of the second year of the project included the following;

- **Target area identification and demarcation.** Have mapped 1220 villages within 10 km border of Nyika- Vwaza complex and Nkhotakota and Ntchisi PAs.
- **Support of Governance Structures.** The Nawira Initiative to create governance structures for NKK Wildlife Reserve began in Year 2 Quarter 4 (July 2011) and continues into Year 3. Discussions and agreement between KBP officials and the Department of Parks and Wildlife occurred to initiate activities for formation of PA committees and other governance structures in project target communities around NKK Wildlife reserve. Funding was approved for DNPW activities through Nawira initiative to create NRM structures and NKK Association. Further, Kulera involvement and support was provided in reorganization and planning for the Nyika -Vwaza Association (NVA) during the NVA annual meeting. A motorbike and bicycles have been delivered for transportation of NVA officials for implementation of NVA work in Year 3.
- **Zoning, formation of democratically elected PA committees and legitimization of NRM governance structures.** These topics of conversation began in the meeting that TLC had with DNPW and the Nyika-Vwaza Association on December 14, 2010 in Year 2 Quarter 1. These same topics were addressed in discussions with the NVA and with DNPW in development of the Nawira initiative proposals during Quarter 3.
- **Co-management Agreements.** Co-management agreements were discussed in the meeting between DNPW, the Nyika-Vwaza Association and TLC. This was also the follow on topic of conversation between Terra Global Capital representatives in Lilongwe during Quarter 3. The drafts are complete but need legal review in both the U.S. and in Malawi as there is a carbon management component included in the new agreement. Further discussion of the co-management agreements will occur between NVA, DNPW and Terra Global early in Year 3 Quarter 1. Arrangements for co-management agreements with communities around forest reserves will likely not occur as meetings with DOF have not materialized.
- **Building capacity in the PA governance structures through community worker training, awareness campaigns, improved delivery of CBNRM services and training, logistical support for PA officials and communities, environmental education training for elementary teachers and assistance with establishment of youth clubs.** Planning for these activities is underway, but will occur in the first two quarters of Year 3.
- **Formation of Village Umbrella Committees (VUCs) in selected villages:** A total of 74 VUCs were formed in Year 2 of the project in target communities outside of the Nyika and Ntchisi protected areas. Each VUC has 10 members coming from different committees in the village with each member representing one or more of the following committees: Village Health, CBO, livestock, VSL, NRC, Youth, Church and Society, VDC, CBCC, VRCC, Forestry, Mudstoves, Conservation Agriculture and School Committee among others. The formation of VUC aims at enhancing participatory governance of development activities at community level. A total of 823 (432 males and 391 females) community members including leaders (Group Village Heads and Village Heads) participated in the formation of the VUCs.

- **Training of VUCs and VDCs on Village Umbrella Committee Development**

Out of the 74 VUCs formed in Year 2, CARE trained 24 VUCs in the VUC Model with 255 (137 Males; 118 Females) VUC members as participants. The trainings were community based and each VUC had 10 members and one local leader participating in the training.

- **Incorporating a system to address cross-cutting issues:** During the Kulera implementing partners meeting to plan for Year 3 held on September 23, 2011, CARE and TLC began discussions on collaboratively developing a system to incorporate these issues into other project initiatives as well as providing training on how best to address these issues in a sustainable way. Planning will continue into Year 3 Quarter 1 and implementation will follow through the remainder of Year 3.

- **Awareness meetings on HIV/AIDS and DRR:** 85 Sensitisation/Awareness meetings were conducted at field level as a continued measure to mainstream gender and HIV&AIDS awareness in VS&L structures, microfinance enterprises, business development and NRM for communities. A total of 1371 (1,082 women and 289 men) were reached with HIV/DRR/Gender mainstreaming messages in Year 2. Cumulatively a total of 3783 community people in 180 villages (1,681 men 2,102 women) have been reached since the outset of project implementation.

- **Train field implementation staff on Gender/HIVAIDS and DRR:** CARE conducted a Field Implementation Staff Training on Gender, HIV/AIDS, and DRR with all Kulera Field Staff. In total, 28 (21men, 7 women) Field Officers were trained on VUC Model, VSL methodology, enterprise and value chain development, HIV/AIDS, DRR/Gender mainstreaming on the 27th and 28th of October 2010 in Rumphu Zone and 9th of October 2010 in Nkhotakota Zone. The training was aimed at boosting the capacity of the Kulera team by providing the staff with relevant know-how in issues associated with Gender/HIV/AIDS and DRR in project implementation.

- **Gender, HIV&AIDS and DRR training for PA executive members, local organizations, linking CBOs to HIV/AIDS service organizations as well as providing instruction to local governance structures on the use of community scorecard.** These activities are all slated to take place in Year 3 Quarters 1 & 2

- **Institute a system of natural resource monitoring.** Planned for Year 3 Quarter 1 based upon the Socioeconomic Baseline Survey and the Biomass Inventory which were completed during Quarter 4 of Year 2.

**Table 2: Results achieved under IR # 1: Improved Rural Governance of Protected Areas during Year 2 (October 2010-September 2011)**

<b>2 INTERMEDIATE RESULT # 1: IMPROVED GOVERNANCE OF PROTECTED AREAS</b>					
<b>2</b>	<b>ACTIVITIES</b>	<b>Year 2 Targets</b>	<b>Achieved Targets Year 2</b>	<b>Cumulative Result</b>	<b>Remarks</b>
2.1.1	Identify/demarcate target areas and communities in the border zone around the PAs	10,000 ha; 300 villages	1220	1670	Have mapped 917 villages within 10 Km border of Nyika-Vwaza Complex and 753 villages within 10 km of Nkhotakota and Ntchisi PA.
2.1.2	Facilitate zoning/re-zoning of the PAs in collaboration with all the stakeholders	50 zones	52 GVH (zones)	52 GVH (zones)	Kulera provided financial training for NVA staff, support for organizational sustainability planning and for an annual meeting in which new NVA leadership was elected. In Year 2, DNPW developed plans and a budget for the Nawira Initiative to begin development of the Nkhotakota Association and VNRMs in communities around Nkhotakota and Ntchisi. 52 GVHs were identified and sensitized in the first phase of the initiative. The initiative is in phase 2 as the project enters Year 3.
2.1.3	Facilitate formation of functional democratically-elected PA committees at different levels	3 PAs; 50 zones; 300 VNRMs	1	2	
2.1.4	Support the legitimization of NRM governance structures (constitutions, by-laws & registration)	3 PA Associations	1	1	
<b>2.2</b>	<b>Co-management Agreements</b>				
2.2.1	Identify key natural resources and areas for developing co-management agreements	1 study completed for 2 Pas	1	In progress	In progress. Co-management documents were discussed with the Department of Parks and Wildlife and are being drafted and reviewed by Terra Global Capital partners. Discussions took place between Terra Global Capital and DNPW in 3 <sup>rd</sup> quarter. Finalization anticipated in Year 3 after completion of legal review and acceptance by all parties.
2.2.2	Facilitate production of management plans for identified resources and areas within and outside Pas	2 Mgt Plans for 2 PAs	0	0	
<b>2.3</b>	<b>Build Capacity of PA Governance Structures</b>				
2.3.1	Recruit & train comm. workers to support NRM institutions in law	40 community	20	20	20 community volunteers have been

	enforcement, training & other needs	workers			recruited so far and recruitment is still in progress.
2.3.2	Conduct awareness campaigns and environmental rallies	200 campaigns/rallies	0	0	Planned for Year 3. The Nawira initiative beginning sensitization and creation of an Nkhotakota Association was approved and funded. Work to begin in Quarter 4.
2.3.4	Strengthen local CBOs, NGOs and other service providers in delivering CBNRM services	10 organizations	0	0	Planned for Year 3.
2.3.5	Train PA officials and counterparts in community mobilization, participatory law enforcement, etc.	20 PA Executives; 10 Orgs	0	0	Proposal has been accepted. Workshop is planned for Year 3, Quarter 2.
2.3.6	Provide logistical support to PA officials to improve communications and mobility	25 PA Officials	0	0	Planned for Year 3.
2.3.8	Train primary school teachers in environmental education	70 primary teachers	0	0	Planned for Year 3 Quarter 1. Proposal accepted. Materials have been developed.
2.3.9	Facilitate establishment of youth conservation clubs				
2.3.13	Form VUCs in selected villages	49 groups	74	74	The targeted number of forming and training 20 VUCs was exceeded as 74 were formed and 24 trained. The number trained is likely to be more as looking at the impact area it was not be feasible to do residential trainings hence the community ones, which increased the number of trained grouped. The number of VUCs is not equally apportioned to the PAs as the formation depends on availability and strengthens other community groups.
2.3.14	Train VUCs and VDCs on village umbrella committee development	35 groups	24	24	
2.3.15	Incorporate a system to address cross-cutting issues related to gender, HIV/AIDS, and DRR	4 PAs; 20 executive members	0	0	The activity has been scheduled to Year 3
2.3.16	Provide training /preparation in cross-cutting issues of gender, HIV and disaster risk reduction				

	Prepare training materials/tools on Gender/HIVAIDS and DRR	3 booklets	3 booklets, 6 leaflets	3 booklets, 6 leaflets	The 3 booklets prepared are on the following topics Gender, HIVAIDS and DRR; the leaflets were on VSL, Enterprise Development, VUC, DRR, Gender and HIVAIDS. The leaflets were originally developed in English and then translated into vernacular languages Chichewa and Tumbuka.
	Conduct awareness meetings on Gender, HIV/AIDS and DRR	12 meetings	85	86	85 Sensitisation meetings were conducted at field level to mainstream gender and HIV&AIDS awareness in VS&L structures, microfinance enterprises, business development and NRM for communities. Cumulatively, 180 villages have been sensitised since the project began. A total of 1371 (1082 females and 289 males) were reached with HIV/DRR/Gender mainstreaming messages.
	Train field implementing staff on Gender/HIVAIDS and DRR	10 field staff	28	28	The target was exceeded due to the strategy adopted of doing zonal training instead of residential training.
	Train PA executive members on Gender/DRR/HIVAIDS	20 members	0	0	Rescheduled to Year 3
	Train local organizations on Gender/DRR/HIVAIDS	10 organizations	0	0	
	Link CBOs and other groups to service providers on HIVAIDS care and support services	10 organizations	0	0	
	Train local governance structures on how to use community scorecard	4 training sessions	0	0	
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 & resources mapped	Nyika, Vwaza, NKK, Ntchisi and Mkuwazi	Completed for Nyika, Vwaza, NKK, Ntchisi	Completed in Year 2 for Nyika, Vwaza, Nkhotakota. Ntchisi was mapped as part of Nkhotakota. Mkuwazi was not mapped because access to that forest

	Identify methodologies for monitoring resource change over time based on the PMP indicators	Methodologies developed	2 Baseline Studies	2 Baseline Studies	reserve as not authorized.
	Establish baselines for target areas and key natural resources (vegetation, wildlife, soils, water)	Baselines established	2 Baseline Studies	2 Baseline Studies	Final Socioeconomic Baseline Survey and Biophysical Baseline Inventory were completed and submitted in Year 2.

### 3. Progress on Intermediate Result # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development

Key among activities in the Improved Rural Livelihoods and NRM Practices/Carbon Development were:

- **Awareness Meetings with Technology Assessment, Training & Extension Support:** 18,851 farmers in 1,062 villages were sensitized on VS&L, sustainable agriculture and NR interventions, and livestock production.
- **Procure and distribute materials/inputs/equipment on loan to support targeted interventions.** Treadle pumps, seed, livestock were procured and distributed
- **Promote targeted interventions broken down by type in terms of quantity, HHs, gender & PLWHA.**

#### **Crop diversification**

In Year 2 of the project, 133.6 hectares was planted with cassava, groundnuts, beans, rice and soya beans. A total of 3,292 households benefited from these crops.

#### **Conservation Agriculture**

During Year 2 of the project, 496 hectares was planted with maize under conservation agriculture. A total of 1,126 households practised conservation agriculture in their field.

#### **Soil and water conservation, and soil fertility improvement practices**

A total of 677.8 hectares of land were under soil/water conservation and soil fertility improvement practices.

#### **Natural woodland under community management**

During the year 446.9 hectares of natural woodland was managed by the 149 communities around the protected area

#### **Irrigation**

46.2 hectares of land were irrigated during Year 2 of the project impacting 361 households.

- **Coffee production and processing**

During Year 2 of the project, the following activities were conducted under coffee and honey production:

194 kgs of coffee seed was supplied with 95% germination rate and out of these 434,032 seedlings were planted in farmer's field.

503 farmers (392 men and 111 women) were trained in coffee husbandry and business development

11 review meetings were conducted for farmers growing coffee and keeping bees.

1 field day was conducted at Ntchisi Mountain Business Zone

1 Eco-Pulper (processing machine for coffee) has been procured and installation

1 board meeting, 1 AGM for Cooperative, 6 Zonal AGMs and 21 Business Centre AGMs were conducted

Ntchisi is now a registered Cooperative with 155 members and of these 65 members have bought shares.

300 beehives, 13 beesuits, 14 smokers, 2 pressors were distributed to 30 farmers.

- **Small Livestock Promotion**

**Training of farmers in livestock production**

A total of 1,206 farmers were trained in piggery, poultry and goat production. The total number of farmers trained in livestock production since Year 1 of the project is 1,856 (974 men and 882 women)

**Form and train livestock committees**

During Year 2 of the project, 44 livestock committees were formed making a total of 67 livestock committees so far formed since Year 1.

**Livestock distribution to beneficiaries.**

A total of 522 goats, 3,872 chickens and 32 pigs were distributed to 690 beneficiaries (381 men and 309 women) around the project protected areas.

**Develop contracts of agreement with farmer groups**

All the 690 farmers who benefitted from the livestock's distributed signed contracts of agreement regarding care for the livestock, use of livestock products and the requirement to pass on offspring as a gift to other beneficiaries.

**Newcastle Disease Vaccination:**

During the year, 172 farmers were trained as Community Based Vaccinators in order to assist in administering Newcastle disease vaccination. At the end of the year, 18,723 chickens had been vaccinated on all project sites.

- **Carbon Development**

**Prepare 4 feasibility studies (3.5.2)**

In Year 2, an initial collaborative workplan was uploaded into Terra's web-based monitoring system. This tool is currently being internally tested and will be used for workplan management between Total LandCare and Terra.

**Methodology development (3.5.3)**

In Year 2, the mosaic REDD methodology for Kulera was further refined with comments from Total LandCare and submitted to VCS. The designed VCS 2011 standard allows project grouping, which will allow for project parcels to be added in the future. Terra has received bids and will be selecting a AFOLU accredited VCS validator in the second quarter of Year 2.

Based on a review of a number of bids, Terra selected Rainforest Alliance as the first validator of the methodology.

In the third quarter of Year 2, Terra submitted the mosaic REDD methodology to first round validator, and methodology currently undergoing validation.

In the fourth quarter of Year 2, Terra responded to non-comformity requests (NRCs) from the validator, Rainforest Alliance.

In the fourth quarter of Year 2, Terra submitted a revised methodology addressing all NRCs.

### **Carbon development on feasible projects (3.5.4)**

Specific polygons for implementation of *F.albida* planting were rescheduled (as a lesser priority) for the 3-year duration of the project; however, Terra also began working with Total LandCare to broadly identify REDD priority project areas where carbon development work will be initiated.

In first quarter of Year 2, SOPs for preliminary biomass inventories, boundary demarcation and conducting social appraisals were refined based on initial field testing. In addition, Total LandCare received proposals for conducting both the biomass inventories and social assessments and is finalizing selection of the data collection teams.

In the first quarter of Year 2, Total LandCare with their zone managers and DNPW partners identified priority REDD sites for Nkhotakota, Nyika Vwaza and Ntchisi.

In the first quarter of Year 2, Terra supported Total LandCare and their zone managers for Nkhotakota and Nyika Vwaza, to conduct a meeting with Department of National Parks and Wildlife (DNPW) leadership and staff to 1) discuss how best Total LandCare can collaborate with the DNPW in conserving the biodiversity in the protected areas; and 2) to learn and build on the Nyika-Vwaza Association model as a governance structure in the protected areas, so that it can be applied to other protected areas in which Kulera Biodiversity Project is working.

In the second quarter of Year 2, Total LandCare's northern Zone Manager, with the Nyika-Vwaza Association, confirmed REDD priority areas that are part of the Association.

In the second quarter of Year 2, Terra reviewed contracts for Total LandCare to hire biomass inventory and social assessment teams that will be collecting data necessary for carbon development and field teams were hired. These baseline studies were completed at the end of Year 2.

In the third quarter of Year 2, Terra completed a field visit with Total LandCare to provide training to and review conservation agreements with Department of National Parks and Wildlife and Nyika Vwaza Association, as well as to train field data collection teams.

In the third quarter of Year 2, Total LandCare hired biomass inventory and social assessment teams who completed first round data collection.

In the third quarter of Year 2, Terra identified in-country law firm to assist in creation of seller's entity.

In the fourth quarter of Year 2, Terra completed a draft of tri-party agreement between Terra, DNPW and NVA that will formalize the roles and responsibilities of each of the Parties in carbon development.

In the fourth quarter of Year 2, Terra received first round data from biomass teams, and restratified the data from forest plots to select new locations.

In the fourth quarter of Year 2, social assessments were completed by field teams and reviewed by Terra.

In the fourth quarter of Year 2, all data and boundaries were collected and preliminary maps were created for REDD areas (NV and NKK). The first round QAQC was complete for ARR boundaries, and the remaining ARR boundary demarcation will be continued into Year 3. Progress was delayed by the fuel shortage in Malawi.

In the fourth quarter of Year 2, the draft workplan completed with an implementation schedule of 30 year project actions – to be used to determine relative effectiveness of each project action to address each of the drivers of deforestation.

In the fourth quarter of Year 2, all satellite images were purchased for land use classification and historical remote sensing analysis.

In the fourth quarter of Year 2, Section 1 of the VCS was completed and sent to TLC for review.

### **Customization of Terra’s web-based monitoring system to support the KBP(3.5.6)**

In the first quarter of Year 2, a primary workplan management tool was adapted for Kulera and is being tested internally by Terra.

In the second quarter of Year 2, a beta version of the remote sensing classification system for Kulera was developed and tested in-country.

In the second quarter of Year 2, in-country remote sensing experts were identified, who then began classifying remote sensing images to determine the baseline deforestation in and around the REDD priority areas.

In the third quarter of Year 2, Terra hired 3 in-country remote sensing experts for reference point collection.

In the third quarter of Year 2, a beta version of the project parcel manager for Kulera was developed by Terra and tested internally.

In the fourth quarter of Year 4, reference point collection began and image interpreters (including local experts) began interpreting the northern area.

- **Biomass and Energy Alternatives**

#### **Jatropha Production Training**

In fourth quarter of Year 2, Kulera partner, Bio Energy Resources Ltd. (BERL), conducted a two-day workshop for Kulera field coordinators to introduce them to the agronomy of Jatropha. Jatropha represents a potential cash crop that could be adopted by Kulera beneficiaries to increase benefit streams from agricultural production. The training will enable Kulera field coordinators to teach farmers about the production of Jatropha seedlings, the transplantation and maintenance of young plants including water, fertilization, pest control and other maintenance requirements as well as needs and expectations for marketing the seed for eventual use in biofuel production.

#### **Improved Brick Stoves**

A total of 10,485 households have adopted improved brick stoves. There is high demand for these stoves as they are easy to make and use less fuel wood.

#### **StrawJet**

StrawJet is a component of the sub-award contract for Washington State University. Funds were made unavailable for a StrawJet TDY in Year 2 of the project and the same will hold for Year 3 for not meeting performance expectations. Unused funds from Year 2 and funds from Year 3 will be moved to Renewable

Energy Solutions (RES) for expenditure in the RES Year 3 budget. Technologies associated with Renewable Energy Solutions are in much higher demand than those associated with StrawJet.

### **Renewable Energy Solutions**

Renewable Energy Solutions (RES) is also a sub-award contract for Washington State University. RES provided a three week consultancy beginning in the final quarter of Year 2. The focus of this visit was on consulting on RAM pumps and stream diversion irrigation technologies in the Rumphu zone; advising on development of a business plan to create organizational sustainability of the Highlands Macadamia Cooperative Union Limited (HIMACUL); conducting research and making recommendations for technologies that would increase value-added interventions for smallholder macadamia production and; exploring of possible small-scale biofuel production as part of the project activity in Malawi. RES will return in Year 3. In Year 3, RES will provide follow up on some of the solar energy systems currently in place in the project zones.

- **Microenterprise Value Chain Analysis.**

Washington State University faculty member, Dr. Thomas Byers, worked with project personnel in conducting value chain analysis on several smallholder products to determine microenterprise development potential of mushrooms, macadamia, fish farming and fruit drying in zones bordering Nkhotakota Wildlife Reserve and Ntchisi Forest Reserve. Based largely on Dr. Byer's findings, funds were shifted away from some of the potential microenterprise development activities, including fish farming, fruit drying, mushroom production and Jatropha oil extraction. Unused funds from Year 1 and Year 2 were reallocated for part of Years 2 and 3 to support capacity building for smallholder macadamia production through the Highlands Macadamia Cooperative Union Limited (HIMACUL). Further, based on Dr. Byers' analysis, Kulera project partners have determined that Year 3 microenterprise development will focus on the following four areas: smallholder macadamia production, honey, livestock and coffee. All of these areas seem to have the greatest potential for return of benefits to project stakeholders. Adjustments will be made in the Year 3 budget and work plan to reflect the consolidation of microenterprise development activity into these four areas. The planning conducted by the partners is also resulting in a collaborative approach among partners to develop microenterprise activities rather than a single partner executing the activity in isolation of the work of other partners. Dr. Byers will be returning in Year 3 as a follow up to his preliminary work.

- **Village Savings and Loans**

#### **Sensitize 300 villages in village savings and loans:**

122 villages were sensitized on the Village Savings and Loans concept in FY2 and within these villages 1,078 community members were reached (694 females and 307 males). Cumulatively this represents 180 villages and 3,442 community members (1,699 men and 1,714 women) reached since the beginning of the project.

#### **Facilitate establishment of 100 village savings and loan schemes for selected villages.**

In Year 2 of the project, 80 VSL groups were established and over the length of the project, 135 VSL groups have been formed.

#### **Train 50 village saving and loan groups in village savings and loan methodology**

During FY 2 of the project, 73 VSL groups were trained and are practicing the VSL Concept.

Initially data was being collected to analyse VSL financial performance as VSL training is a continuous process and some modules are handled at 36<sup>th</sup> week of group creation. The analysis helps to ascertain if

members who started with the group continue with active membership, if the members are able to save and lend their funds and if there are any difficulties in loan recoveries. This analysis did not occur in the fourth quarter of Year 2 but will take place in Year 3.

### **Train 30 VS and L groups in economic activities, selection, planning and management (EASPM)**

During the second year of the project 19 groups comprising of 93 members (32 men and 298 women) underwent EASPM training aimed at building capacity to manage economic activities. The ones that qualify for EASPM trainings are the groups that have gone at least one full cycle in VSL and also have shared with others and are deemed sustainable.

### **Conduct periodic follow ups to VS&L groups to assess performance and address bottle necks**

42 monitoring visits were done to some VSL groups by field staff. Specifically in FY2 four major visits were conducted by technical staff, one was by USAID Mission personnel and was led by TLC while the other three were conducted by technical team at CARE.

### **Evaluate the scheme for the purpose of replicating to other villages**

Two visits were made by technical staff and the team observed that the scheme was being replicated at the sites even before this recommendation was made by project staff. This shows that the VSL scheme is successful at least at the sites where the evaluation was conducted.

### **Select / train community agents in the methodology for scaling up and sustainability**

During the year, 22 Village Agents (10 females and 12 males) were identified and 15 of them (8 females and 7 males) participated in a Training of Trainers in VSL Methodology.

**Table 3: Results achieved under IR # 2: Improved Rural Livelihoods and NRM Practices/Carbon Development**

3 INTERMEDIATE RESULT # 2: IMPROVED RURAL LIVELIHOODS AND NRM PRACTICES					
3	ACTIVITIES	Year 2 Targets	Achieved Targets Year 2	Cumulative Result	Remarks
3.1	<b>Awareness Meetings with Technology Assessment, Training &amp; Extension Support</b>				
3.1.1	Conduct awareness meetings on potential interventions & responsibilities of project vs. Beneficiaries	15,000 farmers from 400 villages in 4 PAs including 40% female HH and 20% PLWHA	18,851 farmers; 1,062 villages	18,851 farmers; 1,062 villages	Sensitisation meetings were conducted on VS&L, sustainable agriculture and NR interventions, livestock production.
3.1.2	Identify & assist villages/households with the capabilities/interest to establish different interventions		823 villages	823 villages	These villages represent the villages where Kulera implementing partners have so far implemented projects interventions since Year 1
3.1.3	Evaluate potential markets and related linkages for marketable products from interventions		0	0	Planned for Year 3 Quarters 2 & 3
3.1.4	Organize villages/households into clubs by intervention to facilitate extension & training		408 clubs	408 clubs	Clubs established include those organized by CARE, TLC SSLPP.
3.1.5	Procure and distribute materials/inputs/equipment on loan to support targeted interventions		5,090 different types of livestock; 45 treadle pumps; 31 sets of equipment for stream diversion; 450 kgs of seed distributed	5,090 different types of livestock; 45 treadle pumps; 31 sets of equipment for stream diversion; 450 kgs of seed distributed	Treadle pumps, seed, livestock were procured and distributed.
3.1.6	Provide training & extension support on each intervention to targeted villages/clubs/households		13,869 farmers	13,869 farmers	The total number comprise of 8,382 men and 5,487 women. The farmers were trained on coffee and honey production, sustainable agricultural and natural resource interventions, VS&L methodology and livestock production.

<b>3.2</b>	<b>Sustainable Agricultural and NR Interventions (to be implemented in 2010/11 rainy season)</b>				
3.2.1	Promote targeted interventions broken down by type in terms of quantity, HHs, gender & PLWHA:				
	Crop diversification	500 ha; 4000 HHs	133.6ha; 3,292HH	133.6 ha; 3,292 HH	The crops that were distributed to the farmers were groundnuts, soya beans, beans, cassava and rice.
	Conservation agriculture	400 ha; 1000 HHs	496 ha; 1,126 HH	496 ha; 1,126 HH	The demand was high for conservation agriculture.
	Soil and water conservation practices	50 ha; 1000 HHs	677.8 ha; 2,378HHs	677.8 ha; 2,378HHs	The interventions implemented were organic manure use, interplanting soil improving trees, planting of agroforestry perennial intercrops & fallows and vetiver grass.
	Soil fertility improvement	50 ha; 500 HHs			
	Irrigation	250 ha; 2000 HHs	46.2ha; 361 HH	63.2 ha: 522HH	The total hectarage of land under irrigation comprise of 26.2 hectares under treadle pump irrigation and 20 hectares under stream diversion.
	Tree planting	1 million trees; 10,000 HHs	1,208,266 trees; 7837 HH	2,084,394 trees; 10,638 HH	This reflects the 2010-2011 tree planting season.
	Natural woodlands under community management	1000 ha; 100 communities	446.9 ha; 149 communities	578.9 ha; 202 communities	More villages are willing to manage natural woodlands
	New technologies tested and made available for transfer	2 new technologies	0	0	Planned in Year 3 Quarter 1 or 2
<b>3.3</b>	<b>Coffee Production and Processing</b>				
3.3.1	Coffee Planting/Production				
	Facilitate production of coffee seedlings with identified growers	600,000 seedlings 200 kgs seed	434,032 seedlings 194kgs seed	472, 032 Seedlings 194kgs seed	Coffee seed supplied since the inception of the project is 194kgs with 95% germination rate.
	Train new field staff in Coffee Husbandry and business development	1 course; 6 staff	1 course; 3 staff	1 course 3 staff	The 3 staff trained were all men.
	Train farmers in Coffee Husbandry and business development	4 courses; 110 growers	4 courses; 503 growers	4 courses; 503 growers	The 503 growers comprised of 392 men and 111 women.
	Conduct demonstrations of coffee production/husbandry	4 demonstrations	4	8	The demonstrations established last quarter are still being used for teaching farmers.
	Procure fertilizer	9.7 metric tonnes (mt)	9.7mt	9.7mt	The 9.7 metric tonnes procured is comprised of 2.7 mt organic fertilizer and 7 mt of chemical

					fertilizer.
	Organize extension visits to sites with successful growers	3 visits	3	4	The visits were conducted successfully
	Conduct review meetings	6 meetings	10	11	The review meetings were conducted both at Ntchisi and Mzuzu Cooperatives
	Hold farmers field and open days	2 field and open days	1	1	The open day was conducted at Ntchisi Mountain Business Zone and was attended by 215 coffee farmers (155 men and 60 women)
3.3.2	Promote Quality Processing of Coffee				
	Train staff in coffee processing	1 course; 5 participants	1 course; 2 participants	2 courses; 5 participants	The staff trained in the year were all men.
	Train farmers in coffee processing	4 courses; 110 growers	1course; 3 growers	2 course; 26 growers	The 26 growers trained comprised of 16 men and 10 women.
	Maintain hand pulpers	4 hand pulpers	1	3	The hand pulpers were maintained successfully
	Rehabilitate the pulper at Kalira	1 Eco-pulper	0	0	The activity has been suspended due to ownership wrangles with the Ministry of Agriculture, irrigation and Water development
	Procure processing materials	Scales, Hessian, Polysheet, Chicken wire	8 scales, 450m Chicken wire, 200m hessian; 400m polysheet, 200 gunny sacks	8 Scales, 450m Chicken wire, 300m hessian, 500m polysheet, 200 gunny sacks	The materials were distributed to the farmers
	Procure processing machine	1 Eco - pulper	1	1	The machine has been installed
	Conduct a tour to Union and Cooperative	1 Tour	1	2	The first tour was conducted to Tanzania with 19 coffee farmers (14 men and 5 women) and 7 members of staff. The second tour was conducted to Misuku Union with 26 coffee farmers (21 men and 2 women) and 2 members of staff.
3.3.3	Promote Bee Keeping with Coffee				

	Procure and distribute beehives, suits and smokers	400 Beehives; 40 farmers	300 Beehives; 13 beesuits; 14 smokers; 2 pressors; 30 farmers	760 Beehives; 26 farmers; 28 smokers; 2 pressors; and 10 goggles 76 farmers	To date 760 beehives have been distributed to 76 farmers comprising of 66 men and 10 women. Total loan Value= Principle + interest MK4,312,620.00
	Train farmers in beekeeping	1 course; 40 participants	2 courses; 134 participants	2 courses; 134 participants	
	Provide extension support services	Monthly visits	7	7	Monthly visit was done to farmers growing coffee and keeping bees
3.3.4	Promote formation of sustainable coffee growers organization				
	Train farmers in Cooperative Development and Management	1 course; 20 selected growers	0	2 courses; 273growers	The 273 growers comprise of 180 men and 93 women.
	Register the cooperative	1	1	1	Ntchisi coffee cooperative is now registered.
	Conduct board meetings	3 meetings	2	3	1 board meeting, 1 AGM for Cooperative, 6 Zonal AGMs and 21 Business Centre AGMs were conducted
	Train farmers in M&E	1 course, 20 growers	0	0	Planned for YR 3 Quarter 1
	Conduct census	Various	1	1	Incorporated in the Baseline Survey
	Carry out business performance analysis	1	1	1	The analysis was on coffee production and earnings
<b>3.4</b>	<b>Small Livestock Promotion</b>				
3.4.1	Planning, Awareness Meetings, Area Assessment, Training & Extension Support				
	Conduct baseline studies on livestock production in all sites	3 areas around the 4 PAs	1	1	The livestock baseline information was incorporated in the Kulera Socio-economic Baseline Survey.
	Evaluate and document availability of local extension services for livestock including vet medicines	5 areas around the 4 PAs	1	1	This information was incorporated into the Kulera Socio-economic Baseline Survey
	Identify and select farmers based on established criteria	2500 farmers	500	2500 farmers (1347 men and	This was done with guidance from members of staff from the Department of National Parkes

				1153 women)	and Wildlife. Communities were also involved in the process.
	Form and train livestock committees	50 committees	44 committees	67 committees	Out of 67 livestock committees/groups formed, 11 groups are for pigs, 19 for goats & 37 for poultry.
	Train farmers in piggery, poultry/G fowl production, goats and rabbits production	1729 farmers	1206	1856	Out of the 1856 farmers trained, 974 are men and 882 are women. Farmers have been trained in different aspects in livestock management which include improved livestock management practices (feeding, housing, parasites and disease control as well as breeding) and how to store and use manure effectively.
	Conduct visits to successful small and large livestock producers	3 visits; 50 committee members	0	0	The visits did not take place because farmers had just received animals and did not have much to exhibit as this is intended that the visiting farmers should learn from their colleagues. This activity will be done in the third year given that most of the animals have been purchased and some activities like how to take care of animals to prevent diseases, manure collection and storage and others are being done.
	Mount demonstrations in Kraal construction for respective livestock classes	12 demos	47 demos	47 demos	26 demonstrations were conducted on construction of standard structures for chickens using simple and locally available materials. 7 and 14 demonstrations were done on structures for goats and pigs respectively. These demonstrations have assisted many farmers to construct good livestock structures.
	Develop contracts of agreement with farmer groups regarding care of animals and pass on	50 committees; 2000 farmers	48 committees; 690 farmers	48 committees; 690 farmer	Only those groups that have received animals sign these forms so as to ensure that they follow

					good livestock management as promoted by the project. The 690 farmers who have benefited so far are drawn from 19 committees (groups) for goats and a total of 286 farmers (169 male; 117 females) have been assisted with goats; 26 committees for chickens with 388 famers (201 male; 187 female) being assisted with chickens; and 3 committees for pigs with 16 farmers (11 male; 5 female) being assisted.
3.4.2	Procure and distribute livestock under loan schemes for farmers with extension packs/vet kits:				
	Goats	765	522	522	Demand for goats is still high despite the fact that the budget for goats is finished. 286 farmers (169 male; 117 females) have benefited so far.
	Poultry/ G-Fowls	8830	3872	3872	These birds have been distributed in Rumphi, Ntchisi and Nkhotakota. Each farmer is getting 10 birds (1 cock and 9 hens/pullets). 388 famers (201 male; 187 female) were provided with chickens. Fuel shortages hampered mobility of staff and suppliers who were involved in procurement of birds. Besides this, there were no clean sources for local birds (where farmers followed the routine vaccination of local chickens against Newcastle disease). These factors retarded the procurement process.
	Pigs	387	32	32	There is little progress on purchase and distribution of pigs due to the outbreak of African Swine Fever in Rumphi where most of the farmers who were supposed to have been given pigs were not because of the ban the government put in place to contain the disease. This is in spite for the fact that the farmers had finished constructing recommended kholas/structures for pigs. Only farmers in Ntchisi

					have so far received some pigs. Each farmer gets two pigs 1 male pig (boar) and 1 female pig (gilt). A total of 16 farmers (11 males; 5 females) have been assisted. The ban has since been lifted in Rumphu and procurement of pigs is scheduled to be done in the first quarter of year 3. However, unconfirmed reports indicate that the same disease (African Swine Fever) has started in some of the project sites in Nkhotakota.
3.4.3	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	1729 farmers	1856	1856	Out of the 1856 farmers, 974 are men and 882 are women
	Provide start-up vet kits with information on local suppliers of veterinary medicines	50 club committees	50 committees	50 committees	The activity is on-going
	Promote improved stocks of vet drugs with local stockists/suppliers	6 stockists/suppliers	48 committees	48 committees	All the committees with farmers who have received animals have been trained on the need to stock essential livestock drugs. Currently this is done with assistance from SSLPP Malawi. These committees are in the process of establishing drug revolving funds for their respective groups as one of the means to ensure project continuity beyond the project life.
	Conduct New Castle Disease vaccination Campaign	14500 chickens	18723 chickens	18723 chickens	The number of birds vaccinated is lower than the previous campaign because the unavailability of fuel hindered mobility of field officers to administer and distribute the vaccine. However, this is an important exercise as it has led to an increase in number of birds kept by households who follow the routine vaccination campaign that is conducted once every three to four months. Community Based Vaccinators have been trained to assist in administering Newcastle

					disease vaccine. This training will also ensure sustainability of the vaccination campaign in the project sites. To date 172 farmers (101 males; 71 females) have been trained as Community Based Vaccinators.
	Procure seed of fodder trees and legumes	10 kgs	10kgs	10kgs	Seeds for <i>Leucaena diversifolia</i> and <i>L. leucosophala</i> , <i>Senna siamea</i> and <i>Senna spectabilis</i> were distributed in all project sites. By the end of the fourth quarter in Year 2, 21 livestock committees had established nurseries for the trees. The trees will be used a feed for goats that are more of browsers as well as provide building materials for the structures of livestock and firewood for the households involved.
	Procure planting material for Napier grass and other fodder species	5000 sticks	0	0	Procurement and distribution of planting materials will be done during the rainy season. Fodder plants/trees will be grown to ensure that livestock farmers have enough feed for their animals. When grown up, these trees will be used as construction material for livestock structures. They could also be used for firewood.
	Facilitate establishment of fodder banks	1000 banks	0	0	
	Facilitate proper use of livestock manure to improve crop production as a benefit of raising livestock	12ha	0.4	0.4	The activity is on-going. Project beneficiaries have been trained on how to use manure from goats as well as store it.
	Conduct review meetings, supervision and monitoring visits	4	2	5	The project sites in Rumphi, Ntchisi and Nkhotakota were visited. It was noted that there is good progress. The chicken numbers at the sites are increasing due to the Newcastle disease vaccination campaign being conducted by the project. Close to 50% of the goats that have been placed in the sites have kidded. The major challenge is the outbreak of African Swine Fever in the project sites in Rumphi and Mzimba. This has resulted in a ban on purchase and movement

					of pigs in the two districts where the demand for pigs is very high. All prospective beneficiaries for pigs have already built recommended structures.
<b>3.5</b>	<b>Carbon Development</b>				
<b>3.5.1</b>	<b>Project Identification, Planning and Design</b>				
3.5.1.4	Identify specific GPS polygons for implementation of Faidherbia planting			Rescheduled to year 3	<i>TLC task. Updated estimate is: General locations of F. albida identified by end of 2010, and specific locations by year 3</i>
3.5.1.5	Provide exact GPS polygons of identified Protected Areas and other forest areas for REDD		50%	50% Achieved	All data that can influence REDD boundary areas collected. Preliminary maps for NV and NKK created, awaiting results of social assessments for final boundaries
3.5.1.6	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		50% achieved	Rescheduled across years 1-3 in sync with project area identification	<i>TLC task. Updated estimate is: General locations identified by end of 2010, specific locations by year 3</i> Terra completed SOPs for boundary demarcation of broad areas of <i>F. albida</i> and specific project parcel areas Details see SOP: year 1 record village-governance information year 1-2 record broad level conservation agriculture boundaries year 1-3 record village and co-mgt area boundaries year 2-3 record parcel level conservation agriculture boundaries Boundary demarcation teams have completed 50% of project parcels for non-REDD areas. Terralytics on line system for syncing with field GPS underway.
3.5.1.7	Conduct initial social appraisals with involved communities		90% achieved	90% achieved	A field team from Bunda College of Agriculture, Malawi, was hired and submitted a draft report to TLC for review. Data was submitted to Terra, but requested in a different form.
3.5.1.8	Begin to negotiate / secure any necessary Government approvals		90% achieved	90% achieved	Terra with external legal support from SNR Denton drafted agreements for review by TLC that formalizes the carbon development role that

					Terra will provide to the government. TLC and Terra conducted initial meetings and reviewed terms with DNPW and Nyika-Vwaza Association during field visit in Q3 – Y2. Final agreement to be negotiated during field visit in Q1 – Y3..
3.5.1.9	Develop carbon agreements with communities		50% achieved	50% achieved	Terra developed framework/schematic for agreements to be signed with villages communities for the co-managed areas and the customary lands Terra reviewed these agreements with the Nyika-Vwaza Association.
3.5.3	<b>Methodology Development</b>				
3.5.3.3	Determine spatial extent of reference region and validate similarity with project area	1 methodology submitted for validation and 1 draft methodology	Year 3	Year 3	To be completed in the REDD PD in Year 3
3.5.3.4	Purchase or acquire satellite data for the reference region and pre-process as needed		10%	Achieved in Q4 – Y2	All satellite imagery necessary for land use classification has been purchased.
3.5.3.6	Perform land classification and forest stratification within the reference region		50%	50%	Terra trained and hired 3 in-country experts to reference point collection on remote sensing images to train classification. Image interpreters are currently interpreting the areas in the north.
3.5.3.7	Perform preliminary estimate of current carbon stocks in project area based on initial inventory plots		Year 3	Year 3	To be completed in the REDD PD in Year 3
3.5.3.8	Perform preliminary estimate of annual carbon stock changes in project area under baseline scenario				To be completed in the REDD PD in Year 3
3.5.3.9	Perform preliminary estimate of annual carbon stock changes for each project scenario				To be completed in the REDD PD in Year 3
3.5.3.11	Determine the spatial extent of the leakage area, and preliminarily quantify emissions from leakage		75%	75%	To be completed in the REDD PD in Year 3
3.5.3.12	Identify, quantify, and estimate all potential project-related emission sources		85%	85%	To be completed in the REDD PD in Year 3
3.5.3.13	Calculate initial net carbon estimates, including leakage & emissions sources		85%	85%	To be completed in the REDD PD in Year 3

3.5.3.14	Develop monitoring system to quantify on-going carbon stock changes in the project area & leakage losses		70%	75%	Incorporating monitoring system in to the AFOLU system. See 3.5.6
3.5.4	<b>Carbon Development for feasible projects</b>				
3.5.4.3	Execute baseline social appraisals to determine drivers of deforestation	1 Project submitted on Faidherbia or REDD	10%	Achieved	Field teams for social appraisals from Bunda College and have completed social appraisals around all of the protected areas except Mukwazi. Terra requested data be sent in a different format.
3.5.4.5	Execute preliminary biomass inventories		Achieved	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.
3.5.6	<b>Prepare beta version of web-based monitoring system for release</b>				
3.5.6.1	Purchase web-based server equipment and software	Basic monitoring tool to support AFOLU carbon projects		Achieved in Q2 – Y2	Server requirements for A&M tool identified. Purchase was completed in Q2 – Y2..
3.5.6.2	Install hardware and software in Terra’s California office		Achieved	Achieved	Software created and server local purchased for A&M tool.
3.5.6.3	Design system functionality and review system with stakeholders			Achieved in Q2 – Y2	Assessment of functional specs completed. Beta version of Terralytics collaborative workplans developed, project parcel manager and reference point collection complete and being tested..
3.5.6.4	Initial testing of system		75%	75%	Currently testing beta version of collaborative work plans, and project parcel manager internally. Introduced system to in-country partners during field visit in Q3-Y2. In country training for reference point collection complete.
3.5.6.5	Completion of beta-version		75%	75%	
3.5.6.6	In-country training		25%	25%	
3.6	<b>Biomass and Energy Alternatives</b>				
3.6.1	Introduce improved kitchen stoves to reduce firewood consumption & impacts of deforestation	30,000 HHs	6,611HHs	10,485HHs	The adoption of new improved brick stoves which were introduced at the end of Year 1 has been very impressive as 10, 485 households in 847 villages have adopted the improved stoves in the Nyika-Vwaza and Nkhotakota-Ntchisi protected area.
3.7	<b>Village Savings &amp; Loans</b>				

3.7.2	Sensitize 300 villages in village savings and loans	300 meetings	122	190	Within these villages 1078 people reached (694 females and 307 males) community members were reached with message on VSL concept. Cumulatively this represents 180 villages (in total reaching out to 3442 (1699M, 1714F) community members) reached since project inception.
3.7.3	Facilitate establishment of 100 village savings and loan schemes for selected villages	45 groups	80	135	The target for whole project has been exceeded
3.7.4	Train 50 village saving and loan group in VS&L methodology.	50 groups	73	128	
3.7.5	Train 30 VS and L groups in economic activities, selection, planning and management (EASPM)	30 groups	19	19	A total of 423 members were trained in EASPM in FY2 and Gender disaggregation of the groups' members was 50m, 373f. The training was aiming at building their capacity to manage economic activities. The ones that qualify for EASPM trainings are the groups that have gone at least one full cycle in VSL and also have shared out and are deemed sustainable.
3.7.6	Conduct periodic follow ups to VS&L groups to assess performance and address bottlenecks	4 visits	42 visits	4 technical visits 178 periodic visits	42 monitoring visits were done to some VSL groups by field staff within the quarter. Specifically in FY2 four major visits were done by technical staff, one was by USAID Mission visit led by TLC and the rest by technical team at CARE.
3.7.7	Evaluate the scheme for the purpose of replicating to other villages	4 visits	2 visits	2 visits	Two visits were done by technical staff and it was observed that already the scheme was being replicated even prior to receiving that recommendation from the project. This supports a conclusion of VSL success at the

					sites evaluated.
3.7.8	Select / train community agents in the methodology for scaling up and sustainability	30 village agents	22	22	During Year 2 of the project 22 Village Agents were identified (10 females and 12 males) and 15 of them were trained in VSL methodology as Trainers of Trainers (8 females and 7 males).

#### **4. Progress on Intermediate Result # 3: Increased incomes from enterprise development activities**

- **Enterprise Development:**

Funds totalling \$106,650 consolidated from Year 1 residuals in Enterprise Development along with funds allocated for purchase of fruit dryers and a Jatropha oil expeller were repurposed for development of capacity and sustainability for the Highlands Macadamia Cooperative Union Limited (HIMACUL). This organization is dedicated to the development of small-holder macadamia production in project zones in Ntchisi and Ntchenachena. The agreement between TLC and HIMACUL is a year-long contract for the development of a sustainable governance structure to support development of the small holder macadamia industry in two key Kulera project areas: Ntchisi and Ntchenachena. This will mean that some of the other microenterprise activities in the original proposal will not be pursued. These include fish ponds, mushroom production and fruit dyers. Analysis from Dr. Tom Byers' TDY in April 2011 supported this shift in funding. Viable markets for macadamia products are more significant than for mushrooms, dried fruit and/or farm pond produced fish. Discussion among project partners at the second Partners Implementation Team meeting in September resulted in a consensus among members of the team that the third year focus on microenterprise development should focus on macadamia, honey, coffee and livestock. Microenterprise development in Year 3 will reflect these greatly narrowed priority areas.

- **Micro-finance/Credit facilities:**

Micro-finance activities have been re-scheduled to Year 3 Quarters 1 and 2

- **M&E, Reports & Meetings:**

TLC has completed the annual report for Year 1, three quarterly Year 2 reports, and one Year 2 semi-annual report along with the requisite corresponding financial reports for Year 2. These were all submitted to USAID on time.

##### **Project Steering Committee Meeting**

As required by the Year 2 work plan, the Kulera Steering Committee met two times over Year 2. Meetings were held on November 24, 2010 and **September 29, 2011** to update committee members on activities and progress on the project as well as to seek input on future plans and directions. Kulera

##### **Partner Implementation Team Meetings**

Two meetings were also held among project partner implementation staff. These meetings occurred on November 24, 2010 and on **September 23, 2011**. The second meeting was particularly useful as the meeting was used to assess individual partner progress against targets in Year 2 to determine what was accomplished and what is yet to be done. The project targets that were not completed have been combined with Year 3 targets, prioritized and have been used to develop a revised Year 3 work plans for each partner. These revised work plans will then be correlated with Year 3 partner budgets. Individual partner plans/budgets will then be consolidated to develop the revised Year 3 master plan and budget to be submitted to USAID for approval. These documents will serve as the road map for the year ahead. We discussed in great detail what was working and what was not. Priorities for Year 3 will reflect these discussions. Requests will be made to shift funds from line item activities that are not working to those that are successful and could use additional funding. Appropriate procedures and authorization through USAID will be followed and sought to finalize the Year 3 work plan and budget. We also agreed it will be

important over the last year of the project for the implementation team to meet more frequently to ensure maximum synergy among the teams and to create a stronger sense of accountability to other members of the team.

- **First Year Audit:**

During Year 2 Quarter 3, Graham Carr initiated and completed the Year 1 audit of the Kulera Biodiversity Project.

**Table 4: Results achieved under IR # 3: Increased Incomes from Enterprise Initiatives**

<b>4 INTERMEDIATE RESULT # 3: INCREASED RURAL INCOMES FROM ENTERPRISE INITIATIVES</b>					
<b>4</b>	<b>ACTIVITIES</b>	<b>Year 2 Targets</b>	<b>Achieved Targets Year 2</b>	<b>Cumulative Achieved Target</b>	<b>Remarks</b>
<b>4.1</b>	<b>Enterprise Development</b>				
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)	1 study	1	1	Value chain analysis by WSU's Dr. Tom Byers' TDY in April 2011 supported shifting funds from mushrooms, fish farming and food dryers to small holder macadamia production. This study was followed by analysis conducted by Ben Henson from RES to assist HIMACUL in developing a business plan that could result in organizational sustainability to support the smallholder macadamia industry in the Ntchisi and Ntchenachena project zones. In addition, these studies resulted in agreement among team members that Year 3 microenterprise development activity should focus on macadamia, honey, livestock and coffee and that funding and planned interventions for other activities should be shift to reflect these priority areas.
4.1.2	Evaluate the value chains of the selected enterprises and identify intervention points	2 studies	2	2	
4.1.3	Train producer groups in production and processing skills (soya, groundnuts, beekeeping, fish farming, fish cages, food dryer, mushrooms, cassava)	20 groups	0	0	Planned Year 3, Quarters 1 & 2. Training will focus on honey, livestock, macadamia and coffee.
4.1.4	Determine sustainable harvest/use limits for the selected products with viable	1 study	0	0	

	markets				RES made some initial contacts with ecotourism providers at Chelinda to assist with provision of water. The TLC Kulera team is also working with the DNPW and a US Forest Service fire management team to explore better fire management practices in Nyika that would benefit ecotourism in the park.
4.1.5	Train producer groups and MSMEs in business skills and marketing with power to negotiate prices	20 groups	0	0	
4.1.8	Facilitate employment/venture opportunities with private tour operators for eco-tourism/NR enterprises	3 groups	0	0	
<b>4.2</b>	<b>Micro finance/Credit facilities</b>				
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	4	4	Planned for year three with focus exclusively on honey (beekeeping), macadamia, livestock and coffee.
4.2.2	Develop a credit worthiness assessment tool for MSME to facilitate access to credit from MFI	1 tool kit	0	0	Planned for Year 3
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	0	Planned for Year 3
4.2.4	Identify viable micro finance institutions for support services	4 Institutions	1	1	Negotiations are under way with CARE Country Office and OIBM on possibility to fund the MSMEs
4.2.5	Facilitate linkages/contracts between credit worthy MSMEs and Micro finance institutions	15 MSMEs	0	0	Planned for Year 3
<b>5</b>	<b>M &amp; E, Reports and Meetings</b>				
5.3	Conduct M&E training for relevant staff on different components of the project	6 M&E sessions	3 sessions	6 sessions	TLC Kulera Field Staff were trained new data collection and reporting template for Kulera Project. The total staff trained were 23 (21 men and 2 women)
5.4	Produce quarterly / annual technical and financial reports	4	3	7	The first, second quarter and the semi-annual technical and financial

					reports were prepared and submitted to USAID
5.5	Participate in meetings of project steering committee and field implementation committee	4	2	6	One Project Steering Committee meeting and a Kulera partners Re-planning meeting was conducted during the fourth quarter.

**Table 5: Results of studies and evaluations achieved**

Study/Evaluation	Objective / Outputs / Activities	Approach / Method of Study	Remarks
Baseline survey	Gather and analyze socio-economic data of PAs; prepare socio-economic profiles; and specify key program M&E benchmark indicators to be used for project progress tracking and impact assessment	Consultancy	The final version of the Socioeconomic Survey Report was submitted prior to the close of Quarter 3. A draft of the Biomass Inventory report was submitted in Quarter 3 and the final draft at the end of Quarter 4. Data from these reports will be included as part of this document.
Carbon Feasibility study	Feasibility study of 4 types of project actions for carbon offsets, to select and prepare for full carbon offset development	Terra Global Capital analyses from US and in field visits	Terra Global Capital completed studies for 4 project types started in 1 <sup>st</sup> and 2 <sup>nd</sup> Quarters and completed during Quarter 3. Result: 4 carbon feasibility studies complete.
Value chain analysis of selected enterprises	Identify key players/BDS; identify constraints & opportunities; identify intervention points; establish markets; etc	Short-term TDY – Washington State University-Dr. Tom Byers  Short-term Consultancy by Ben Henson from RES through WSU	Year 2 Quarter 3. The consultancy is complete. A complementary consultancy looking at the viability of smallholder macadamia production was conducted in Year 2 Quarter 4.
Resource assessment	Inventory/Quantification of NRM products and harvest limits in co-management areas	Biomass inventory activity in conjunction with Terra Global Capital inventory	In progress. Began in Year 2 Quarter 2. To be completed in Year 3, Quarter 1 provided fuel availability allows teams into the field for data collection prior to rains.
Vegetation analysis	Establish tree species & density in co-management areas	Biomass inventory activity in compliance with Standard Operating Procedures submitted by Terra Global Capital	Began in Year 2 Quarter 2. To be completed in Year 3, Quarter 1 provided fuel availability allows teams into the field for data collection prior to

			rains.
Development & testing of fuel efficient fruit/mushroom dryer	Evaluate prototype fuel efficient fruit/mushroom drying systems; construct/build using local materials	Short-term TDY – WSU- Dr. Tom Byers.  Short-term consultancy by WSU subcontractor, Renewable Energy Solutions CEO, Ben Henson.	Dr. Tom Byers, Ben Henson from RES and Kulera Implementation teams concurred that this technology is producing a product for which there is not a viable market. Part of the monies originally dedicated to this technology were shifted to smallholder macadamia production in Year 2. In the Year 3 budget, a request will be made to shift any additional funds originally allocated for fruit/mushroom drying to macadamia production or to one of the other key microenterprise priorities (honey, livestock or coffee).
Small scale solar systems and RAM pumps	Evaluate appropriateness of different small scale solar systems and RAM pumps for household and community use.	Short-term TDY – WSU- Renewable Energy Solutions	Year 2 TDY occurred in Year 2 Quarter 4 with a focus on RAM pumps and stream diversion water projects, small business development assistance for HIMACUL, value added activities in macadamia production and exploration of biofuel development.
Biomass Study	Evaluate biomass alternative to wood for construction purposes	Short-term TDY – WSU- StrawJet	Completed Year 1 activities in Quarters 3 and 4  A follow on consultancy did not take place in Year 2 and will not occur in Year 3. Funds have been shifted to RES as RES interventions are

			in much greater demand.
Environmental Monitoring	Evaluate environmental impacts of some interventions –fruit/mushroom drying, etc	Consultancy	Will suggest examination of one of the key microenterprise development activities later in Year 3.
Impact studies of project interventions	Evaluate impacts of key project interventions on people’s livelihoods, levels of poaching, etc	Consultancy	End of Year 3
End of project evaluation	Assess the impacts of the project	Consultancy	End of Year 3

**Table 6: Results of Negative Environmental Impacts and Mitigation Measures as a Result of Sustainable Agriculture and Natural Resource Interventions**

<b>NEGATIVE ENVIRONMENTAL IMPACTS</b>	<b>MITIGATION MEASURES</b>	<b>MITIGATION MONITORING INDICATORS</b>	<b>REMARKS</b>
Introduction of herbicides to suppress weed growth may have negative effect on people during spraying	<ul style="list-style-type: none"> <li>a) Train farmers on handling of herbicides (safety measures)</li> <li>b) Procure recommended pesticides</li> </ul>	<ul style="list-style-type: none"> <li>a) 3,000 farmers trained on herbicides safety measures</li> <li>b) Round-up (1liter bottles) and Harness (1liter bottles) procured</li> </ul>	Ongoing training and sensitisation throughout the project.
Too much herbicide can damage emerging plants	Train farmers on recommended methods of mixing and spraying	3,000 farmers trained in recommended methods of mixing and spraying	
Excess use of treadle pump irrigation can cause the water table to be lowered	<ul style="list-style-type: none"> <li>a) Sensitize farmers on proper usage of wetlands</li> <li>b) Practice Conservation Agriculture to help recharge ground water table.</li> </ul>	<ul style="list-style-type: none"> <li>a) Attendance records during irrigation sensitisation meetings</li> <li>b) 50% of irrigation farmers practicing Conservation Agriculture</li> </ul>	
Reduced downstream water availability due to irrigation using river diversion	Facilitate formation of Water User Groups	# of functional Water User Groups	

**Table 7: Results of Negative Environmental Impacts and Mitigation Measures as a Result of Sustainable Agriculture and Natural Resource Interventions**

NEGATIVE ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	MITIGATION MONITORING INDICATORS	REMARKS
Deforestation due to timber used for kraal construction.	Encourage all participating farmers to plant trees around homesteads and in the fields	At least 100 trees planted by each benefiting farmer per year	Ongoing training and sensitisation throughout the project.
Improper usage of drugs by farmers which can have a health hazard.	Train farmers on safe drug use including dosage, container washing and disposal of used containers and other materials	All 1856 participating farmers trained in drug usage.	
Goats as browsers cause damage to environment	<ul style="list-style-type: none"> <li>a) Train farmers on proper goat management</li> <li>b) Encourage community participation in management of goats through the formation of community groups</li> <li>c) Establishment of fodder trees fields</li> </ul>	<ul style="list-style-type: none"> <li>a) 50 participating farmers trained in goat management</li> <li>b) At least 5 community groups formed</li> <li>c) At least 12.5 ha of fodder established.</li> </ul>	

**II. Table 8: Challenges, Solutions and Actions Taken**

No	Challenges	Solutions	Action taken
1	Initial delays in funding resulted in subsequent delays in field operations at the outset of the project. The late start continues to impact project implementation. Activities remain nearly 9 months behind schedule in many areas.	Recognize the delay and move project activities into subsequent timeframes with appropriate authorization of USAID. An additional possible solution would be a no-cost extension at the scheduled end of the project on September 30, 2012.	Reflect activities that have been delayed in subsequent work plans and budgets. This was done in Year 2 and is being done for Year 3. TLC will discuss the possibility of a no-cost extension of the project with USAID. If this is possible, TLC will learn how and when to proceed with an official request.
2	The funding flow to partners is working for all of the key project partners except CARE/Malawi. CARE/Malawi, initially adopted the system of monthly advances and liquidation but then opted to pursue the reimbursement option. The reimbursement option has not been successful in speeding the process. In fact, payments have fallen even further behind. For CARE, the complexity of the liquidation and approval process in combination with complicated requirements for making payments in dollars to an account in New York have created a backlog of outstanding payments from the project to CARE/Malawi. The problem has been further compounded by policies from CARE headquarters that limit the amount of accumulated unreimbursed expenditures. The delays in the Kulera processing cycle have pushed reimbursements past this limit. This impacted CARE's ability to deliver project services in the last couple of quarters in Year 2. CARE suspended some field activity in an effort to "reduce expenditures" pending receipt of funds that reduced the backlog. The current situation is that payments are nearly caught up.	Identifying and addressing the sources of delay in the liquidation process. Changing from the reimbursement option to the advance option. Eliminating steps in the financial review process.	TLC met with CARE and both partners are doing what they can to shorten the process required to liquidate expenses in our accounting units. USAID eliminated the full second review of financial documentation with each monthly liquidation which has greatly reduced the length of the process. CARE has adopted the advance rather than the reimbursement option. These steps should correct the lag problem. The first payment under the advance option will be in November 2011.
3	Developing an organizational structure that understands and can facilitate the numerous and complex activities of the Kulera Biodiversity Project. This includes comprehensive understanding of the project as a whole, understanding what all partners are tasked to do, creation of a system of	Clarify and improve the role and function of the Steering Committee and the Field Implementation Committee as well as	The Steering Committee and the Field Implementation Committee met twice over the course of first and second years of the project to set

	<p>communication, a system of resource disbursement, creation of a Kulera Biodiversity project identity, development of an effective monitoring, data collection and reporting mechanism as well as a system that ensures the safety and wellbeing of all Kulera Biodiversity project staff regardless of which partner is the direct employer.</p>	<p>strengthen the field organizational structure centering on the project zone managers. Conducting meetings that produce concrete action items. Conduct joint reporting, planning and budgeting activities that result in plans reflecting input and buy-in on the part of all partners.</p>	<p>priorities and address implementation issues. These two committees met in November (Year 2 Quarter 1) and also met in September (Year 2 Quarter 4) These meetings created a common understanding of the goals and objectives as well as organization of the Kulera Biodiversity Project. The second meeting of the Field Implementation Committee was particularly important as we collectively assessed Year 2 achievements and tasks not yet accomplished, created a Year 3 work plan and set Year 3 priorities. The implementation team will be meeting on a regular basis through Year 3 to create accountability for each partner in meeting targets and to discuss and resolve any ongoing or new implementation issues.</p>
4	<p>Establishing working relationships between the project and GOM partners in project activities designed to facilitate agency biodiversity goals.</p> <p>The success of the Kulera Biodiversity Project in impacting biodiversity in target zones is dependent upon the collaboration and effective communication that the project has with GOM and Association partners. The working relationship of the project with DNPW and NVA has been excellent and we are making substantial progress on project goals in and around the Nyika, Vwaza and Nkhotakota protected areas. However project officers have been unable to establish a similar working relationship with the Department of Forestry. As a consequence the project is having little to no impact on GOM biodiversity goals in Mkuwazi and Ntchisi Forest Reserves.</p>	<p>The solution is to open channels of communication with DOF similar to the channels established with DNPW. To date, efforts to do so have not been successful. We will continue to reach out to DOF to participate in the Kulera Project Steering Committee and other activities that seem appropriate given the late date in the implementation of the project.</p>	<p>Kulera will continue to collaborate with DOF to the extent possible, but the major GOM partner in the Year 3 implementation of the project will be DNPW and biodiversity goals will focus on Nyika National Park, Vwaza Wildlife Reserve and Nkhotakota Wildlife Reserve. Livelihood activities around Mkuwazi and Ntchisi Forest Reserves will also take place.</p>
5	<p>Fuel scarcity problems created a number of issues in delivery of services in the field over most of Year 2 with the situation becoming much more critical in the 4<sup>th</sup> quarter. This had particular impact on baseline inventories/surveys, FC field work and mapping activities and Terra Global Capitals data collection.</p>	<p>This problem will require a national solution but TLC can also build reserves when fuel is available and can develop contracts with fuel providers to bolster needed fuel when supplies are available. TLC will need to adopt fuel conservation practices that include enhanced travel planning, geographically focused project implementation practices, etc.</p>	<p>TLC has adopted a much more strategic approach to project implementation to encourage fuel conservation including careful planning so that each trip meets multiple goals, focusing travel on geographic areas so destinations are clustered instead of widely dispersed, etc. TLC is also working with fuel suppliers to build reserves for future work when supplies are available.</p>
6	<p>Carbon development work will need to be limited to those Protected Areas governed by the Department of National Parks and Wildlife (i.e. Nyika National Park, Vwaza Wildlife Reserve and Nkhotakota Wildlife Reserve). Collaborative efforts between the Department of Forestry</p>	<p>Limit the carbon development component of the Kulera Biodiversity Project to those Protected Areas governed by</p>	<p>Focus collaborative efforts for carbon development activity on Protected Areas governed by DNPW. Include target communities outside of</p>

	and Kulera have been hampered due to lack of discussion between Kulera and DOF as well as concerns on the part of DOF over possible conflicts with pre-existing DOF commitments with other carbon developers in the Mkuwazi Forest Reserve. The livelihood component of the Kulera Biodiversity Project working with communities outside of Mkuwazi and Ntchisi Protected Areas is unaffected and will be included among the target communities in the revised Year 3 work plan.	DNPW with whom Kulera has had productive discussions and planning sessions. Focus on livelihoods activities in target communities around Mkuwazi and Ntchisi.	Mkuwazi and Ntchisi for livelihoods activities in the revised Year 3 work plan.
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### III. Lessons, Best Practices and Recommendations

Over the course of this past year, TLC and other Kulera Biodiversity Project officers have met to assess progress on the implementation of the work plan and its relationship to the remaining budget. Meetings with the Steering Committee and the Field Implementation Committee in November 2010 and September 2011 resulted in a common understanding of challenges being faced by the project, where the project stands as well as lessons learned in order to better revise project priorities for the final year. These meetings with GOM partners, the NVA and project partners illustrate the importance of face to face conversations in the decision making and planning processes. It is absolutely critical that all of the stakeholders be engaged in the process.

Over the course of the past year, KBP through TLC worked actively with U.S. Peace Corps volunteers working in the project zones. KBP has been working with volunteers in macadamia and groundnut oil extraction activities in Rumphu zone, value chain analysis in the Ntchisi and Nkhotakota areas, and tree-planting in Nkhotakota. In addition, TLC is exploring development of a Memorandum of Understanding that would expand the collaboration between TLC and the Peace Corps.

Cross fertilization among project components is critical. The value chain analysis conducted by Dr. Tom Byers from Washington State University has provided valuable input on prioritization of microenterprises proposed in the initial project work plan. Following Dr. Byer's value chain analysis, project officials revisited some of the proposed microenterprise topics. Funding was appropriated for fish farming, mushroom production and dried fruit production. Based on Dr. Byers' consultancy, it appears that there is not significant demand for the products from these microenterprise activities. Dr. Byer's included discussions with the Highlands Macadamia Cooperative Union Limited (HIMACUL) to assess the potential of smallholder macadamia production to enhance the livelihoods of farmers in the project zones. Because of the positive results from this analysis, discussions were held with USAID to repurpose funding from proposed microenterprise activities that showed less promise to support of smallholder macadamia production. For Year 3 of the project, Kulera will work with HIMACUL to build capacity for sustained governance and support of macadamia production in the Ntchisi and Ntchenachena areas. **Follow on study by Mr. Ben Henson, CEO of Renewable Energy Solutions, supported the conclusion of Dr. Byers' analysis. In his consultancy, Ben Henson assisted HIMACUL in revision of its business plan to better enable HIMACUL to attain sustainability.**

In the Field Implementation Committee September meeting, project partners used Dr. Byers' and Mr. Henson's analysis to focus microenterprise development activities for Year 3. Microenterprise activity will focus on four commodities: livestock, honey, macadamia and coffee. All of these products appear viable for smallholder microenterprise development in appropriate project zones.

## **Success Stories**

The joint project launch for the Kulera Biodiversity and WADA project was a genuine success. The event was well attended and visitors and stakeholders had an opportunity to see exhibits and demonstrations of some of the interventions that are being used on both of these key projects. These exhibits ranged from a demonstration of improved cook stove construction and operation of a water purification system to small scale livestock being introduced into target villages and village level organizations. The invited guests included everyone from Ministry and Embassy officials, project partner administrators to field coordinators and village beneficiaries.

The levels of collaboration with the Department of National Parks and Wildlife led to some productive planning over this last year. Building on the participatory process of identifying key project target areas around Nyika, Vwaza and Nkhotakota, Kulera staff worked with DNPW to provide training in carbon development, amend co-management agreements, and begin the Nawira Initiative to develop village level governance structures that will eventually lead to creation of the Nkhotakota Association modelled after the NVA. Collaboration at both the headquarters and field levels in both NKK and Rumphi zone continue.

Collaboration between the Nyika Vwaza Association and the Kulera project has also breathed new life into the NVA. This organization has initiated a new plan and is conducting renewed work in collaboration with DNPW for smallholder microenterprise development with a particular emphasis on beekeeping.

## **IV. Management Issues in Year 2**

Issues surrounding KBP project activity in Mkuwazi Forest Reserve remained unresolved in Year 2 and are likely to remain so into Year 3. Issues between the Department of Forestry and Kulera continued to center on an inability to establish communication lines as well as on Plan Vivo and possible REDD activity currently taking place in Mkuwazi. Attempts to meet with Department of Forestry officials to date have been unsuccessful for a number of reasons. Because the project is nearing the end of the second year, carbon development in Mkuwazi and Ntchisi seem very unlikely. For this reason, the Year 3 plan will focus efforts on carbon development in the Nyika, Vwaza and Nkhotakota protected areas and on collaboration with the Department of National Parks and Wildlife. Project livelihood activities will continue in target communities around all five of the protected areas including Mkuwazi and Ntchisi.

The funding flow to partners is working for all of the key project partners except CARE/Malawi. CARE/Malawi, initially adopted the system of monthly advances and liquidation but then opted to pursue the reimbursement option. The reimbursement option has not been successful in speeding the process. In fact, payments over the first three quarters of Year 2 even further behind. For CARE, the complexity of the liquidation and approval process in combination with complicated requirements for making payments in dollars to an account in New York have created a backlog of outstanding payments from the project to CARE/Malawi. The problem has been further compounded by policies from CARE headquarters that limit the amount of accumulated unreimbursed expenditures. The delays in the payment processing cycle have pushed reimbursements past this limit. This impacted CARE's ability to deliver project services in the last couple of quarters in Year 2. CARE suspended some field activity in an effort to "reduce expenditures" pending receipt of funds that reduced the backlog. The current situation is that payments are nearly caught up, CARE has shifted back to an advance payment option, USAID has eliminated a second review of financial documentation in the monthly liquidation process, and both CARE/Malawi and TLC are working to speed their internal financial review processes. This should alleviate the problem in Year 3.

Fuel scarcity problems created a number of issues in delivery of services in the field over the first two quarters of Year 2. This issue was even more acute in Quarters 3 and 4. During the last two quarters of Year 2, shortages had a particularly strong impact on baseline inventories/surveys, FC field work and mapping activities and Terra Global Capital's data collection. This problem has a national impact and will likely call for a national solution. Kulera officials have asked field personnel to document any work stoppage days due to lack of fuel so that the extent of the problem can be quantified and TLC is working with local fuel providers to contract supplies when available for use when supplies are tight.

In Year 2 Quarter 4, Kulera officials led planning efforts with TLC and other project partner staff members to assess what has been accomplished to date, what things have not been accomplished and what priorities for next year might be. These data will all be tied to the project budget balances and used in the reformulation of the project work plan and budget for Year 3. This will be critical to facilitating the success of Year 3 and for the overall success of the project. Planning will be conducted by intervention in each EPA in each zone. It will include the activities of all partners. This will result in a blueprint that all partners can use to guide and prioritize activities going into and through the final year of the project.

## II. Update of the PMP

No	OUTPUT INDICATORS	2011 Targets	Achieved Targets Year 2	Cumulative Result	Remarks
<b>INTERMEDIATE RESULT # 1: IMPROVED GOVERNANCE OF PROTECTED AREAS</b>					
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	0	0	Biophysical Baseline Data must be assessed within satellite images of areas targeted by Kulera Project activity. Comparison are still in progress. The Biophysical Inventory is complete.
2.1.2	Indicator 1.2: Number of hectares in areas of biological significance under improved management as a result of USG assistance	35000	0	0	
2.1.3	Indicator 1.3: Number of hectares of natural resources showing improved biophysical conditions as a result of USG assistance	0	0	0	
2.1.4	Indicator 1.4: Number of hectares under improved natural resource management as a result of USG assistance	20000	1195	1195	
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)	12,374 (M=8081,F=4293)	25500 (M=14375,F=11125)	The people were trained in reforestation, management of natural woodlands
2.1.6	Indicator 1.6: Co-management agreements signed between Government Departments and Pas	2	0	0	Agreements are drafted, target villages are being identified; Anticipated co-management meetings with villagers will begin Year 2 Quarter 3 in Nyika Vwaza. Signatures will begin in 3rd year.
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	0	0	0	Indicator valid at close of project in Year 3

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 M=14000 F=6000	13869 M=8382 F=5487	13869 M=8382 F=5487	
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	20000 M=14000,F=6000	5344 M=3404,F=1940	5344 M=3404,F=1940	
3.1.3	Indicator 2.3: Number of MSMEs acquired new knowledge/skills in business administration & value-added processing	20	0	0	Scheduled for Year 3
3.1.4	Indicator 2.4: Number of hectares under sustainable agriculture practices	5230	812.4	1,307.4	The figure includes the area under crop diversification, conservation agriculture, soil and water conservation, and soil fertility improvement implemented since Quarter 1 of Year 2.
3.1.5	Indicator 2.5: Number of hectares under reforestation	3500	446.9	1146.9	
3.1.6	Indicator 2.6: Number of households with access to small livestock for nutrition and income (includes pass on)	5875	761	761	The total number comprised of 690 households (381 men and 309 women) who were the first beneficiaries of livestock and 71 households (48 men and 23 women) who benefitted on pass-on basis. The first beneficiaries received 522 goats, 3,872 chickens and 32 pigs. The pass on farmers received 142 goats.
3.1.7	Indicator 2.7: Area under irrigation	450	46.2	63.2	
3.1.8	Indicator 2.8: New technologies made available for transfer	4	0	0	

3.1.9	Indicator 2.9: Number of households / schools / individuals accessing alternative energy sources/fuel efficient systems	10000	265 students 10,485 Households	265 students 10,485 Households	Renewable Energy Solutions worked at the Kasamba Secondary School to electrify with solar energy in Year 1 Quarters 3 and 4  The households are the ones that have adopted the improved brick stoves and demand is still high
		M=7000, F=3000			
3.1.10	Indicator 2.10: Number of communities/ groups engaged in village savings and loan	100	80	135	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 <sub>2</sub> equivalent, reduced or sequestered as a result of USG assistance	TBD	0	0	End of project evaluation
<b>INTERMEDIATE RESULT # 3: INCREASED RURAL INCOMES FROM ENTERPRISE INITIATIVES</b>					
4.1.1	Indicator 3.1: Number of producer groups and MSMEs trained in production, processing, business and marketing skills	40	0	0	To be reported in year 3
4.1.2	Indicator 3.2: Number of MSMEs accessing loans from commercial banks / lending institutions / DCA facility	20	0	0	To be reported in year 3
4.1.3	Indicator 3.2: Volume of NRM and agro-based products produced and sold	1875	0	0	To be reported in Year 3
4.1.4	Indicator 3.4: Percentage increase in revenue from eco-tourism	50	0	0	End of project evaluation

### III Planned Activities for Next Quarter (Year 3—Quarter 1)

The plan includes activities that have been scheduled to take place in the 1<sup>st</sup> Quarter of Year 3 of Kulera Biodiversity Project.

First Quarter(October - December 2011)		
No.	Activities	Targeted Outputs
<b>2</b>	<b>Result Area 1: Improved Governance of Protected Areas</b>	
<b>2.1</b>	<b>Strengthen Governance Structures</b>	
2.1.2	Facilitate zoning/re-zoning of the PAs in collaboration with all the stakeholders	50 zones
2.1.3	Facilitate formation of functional democratically-elected PA committees at different levels	3 PAs; 50 zones; 300 VNRM's
2.1.4	Support the legitimization of NRM governance structures (constitutions, by-laws & registration)	3 PA Associations
2.1.5	Facilitate review of legal/institutional frameworks for compatibility with PA governance structures	
<b>2.2</b>	<b>Co-management Agreements</b>	
2.2.1	Identify key natural resources and areas for developing co-management agreements	1 study completed for 2 Pas
2.2.2	Facilitate production of management plans for identified resources and areas within and outside Pas	2 Mgt Plans for 2 Pas
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-Mgt Agreement Developed
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 with 1 PA
<b>2.3</b>	<b>Build Capacity of PA Governance Structures</b>	
2.3.1	Recruit & train comm. workers to support NRM institutions in law enforcement, training & other needs	40 community workers
2.3.2	Conduct awareness campaigns and environmental rallies	100 campaigns/rallies
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	20 Executive members of PA Institutions trained
2.3.4	Strengthen local CBOs, NGOs and other service providers in delivering CBNRM services	10 organizations
2.3.5	Train PA officials and counterparts in community mobilization, participatory law enforcement, etc.	20 PA Executives; 10 Orgs
2.3.6	Provide logistical support to PA officials to improve communications and mobility	25 PA Officials
2.3.8	Train primary school teachers in environmental education	70 primary teachers
2.3.9	Facilitate establishment of youth conservation clubs	10 clubs
2.3.10	Organize PA visits by youth clubs	10 visits
2.3.11	Initiate environmental education curricula development for primary schools and adults	1 for primary schools; 1 adult
2.3.12	Provide linkages for NRM institutions to access better facilities for communication	3 NRM Institutions
2.3.15	Incorporate a system to address cross-cutting issues related to gender, HIV/AIDS, and DRR	4 PAs; 20 executive members

2.3.16	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	4 Pas
	Conduct training needs assessment for identified CBOs/NGOs on gender, HIV/AIDS and DRR	4 Pas
	Conduct awareness meetings on gender, HIV/AIDS and DRR	11 meetings
	Train PA executive members on Gender/DRR/HIVAIDS	20 members
	Train local organizations on Gender/DRR/HIVAIDS	10 organizations
	Link CBOs and other groups to service providers on HIV/AIDS care and support services	10 organizations
	Train local governance structures on how to use community scorecard	4 training sessions
	Facilitate scorecard processes between community structures and service providers	4 Pas
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 & resources mapped
	Identify methodologies for monitoring resource change over time based on the PMP indicators	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
	Monitoring system developed for each area and resource over the life of the project and beyond	M&E Plan developed
<b>3</b>	<b>Result Area 2: Improved Rural Livelihoods and NRM Practices/Carbon Development</b>	
<b>3.1</b>	<b>Awareness Meetings with Technology Assessment, Training &amp; Extension Support</b>	
3.1.1	Conduct awareness meetings on potential interventions & responsibilities of project vs. Beneficiaries	15,000 farmers from 400 villages in 4 PAs including 40% female HH and 20% PLWHA
3.1.2	Identify & assist villages/households with the capabilities/interest to establish different interventions	
3.1.3	Evaluate potential markets and related linkages for marketable products from interventions	
3.1.4	Organize villages/households into clubs by intervention to facilitate extension & training	
3.1.5	Procure and distribute materials/inputs/equipment on loan to support targeted interventions	
3.1.6	Provide training & extension support on each intervention to targeted villages/clubs/households	
<b>3.2</b>	<b>Sustainable Agricultural and NR Interventions</b>	
3.2.1	Promote targeted interventions broken down by type in terms of quantity, HHs, gender & PLWHA:	
	Crop diversification	6,856 ha; 4874 HHs
	Conservation agriculture	711.4 ha; 374 HHs
	Soil and water conservation practices	1,122 ha; 2,122 HHs
	Soil fertility improvement	
	Irrigation	201.9 ha; 1,346 HHs
	Tree planting	11 million trees; 5,000 HHs
	Natural woodlands under community management	2,767 ha; 50 communities

	New technologies tested and made available for transfer	2 new technologies
<b>3.3</b>	<b>Coffee Production and Processing</b>	
3.3.1	Coffee Planting/Production	
	Facilitate production of coffee seedlings with identified growers	1,147,968 seedlings/200 kgs seed
	Train new field staff in Coffee Husbandry and business development	1 course; 6 staff
	Train farmers in Coffee Husbandry and business development	4 Courses; 110 growers
	Conduct demonstrations of coffee production/husbandry	4 Demonstrations
	Organize extension visits to sites with successful growers	1 visits
	Conduct review meetings	1 meetings
	Hold farmers field days and open days	2 field days & open days
3.3.2	Promote Quality Processing of Coffee	
	Train farmers in Coffee processing	4 farmer/entrepreneurs
3.3.3	Promote Bee Keeping with Coffee	
	Train farmers in beekeeping	2 courses; 40 farmers
	Provide extension support services	Monthly visits
3.3.4	Promote formation of sustainable coffee growers organization	
	Train farmers in Cooperative Development and Management	1 course; 20 selected growers
	Conduct board meetings	1 meetings
	Train farmers in M&E	1 course, 20 growers
	Conduct census	Various
	Carry out business performance analysis	30 Courses
<b>3.4</b>	<b>Small Livestock Promotion</b>	
3.4.1	Planning, Awareness Meetings, Area Assessment, Training & Extension Support	
	Train farmers in piggery, poultry/G fowl production, goats and rabbits production	700 farmers
	Conduct training for livestock lead farmers	25 lead farmers
	Conduct visits to successful small and large livestock producers	3 visit; 50 committee members
	Develop contracts of agreement with farmer groups regarding care of animals and pass on	19 committees; 625 farmers
3.4.2	Procure and distribute livestock under loan schemes for farmers with extension packs/vet kits:	
	Pigs	112
	Poultry/ G-Fowls	5003
	Goats	150
3.4.3	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	700 farmers
	Provide start-up vet kits with information on local suppliers of veterinary medicines	50 club committees
	Promote improved stocks of vet drugs with local stockists/suppliers	6 stockists/suppliers
	Conduct Newcastle disease vaccination	14500 birds
	Procure planting material for Napier grass and other fodder species	5000 sticks
	Facilitate establishment of fodder banks	1000 banks
	Facilitate proper use of animal manure to improve crop production as a benefit of raising livestock	12 ha
	Conduct review meetings, supervision and monitoring visits	3
<b>3.5</b>	<b>Carbon Development</b>	

3.5.1	Project Identification, Planning and Design	
	Identify specific GPS polygons for implementation of Faidherbia planting	Identification of potential AFOLU carbon projects for feasibility
	Provide exact GPS polygons of identified Protected Areas and other Forest areas for REDD	
	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	
	Begin to negotiate / secure any necessary Government approvals	
	Develop carbon agreements with communities	
3.5.2	Prepare 4 feasibility studies (REDD, FA, woodlots, ALM)	
	Review feasibility studies and provide any questions	
	Make any necessary changes and finalize feasibility studies (3&4)	
3.5.3	Methodology Development	
	Purchase or acquire satellite data for the reference region and pre-process as needed	1 methodology submitted for validation and 1 draft methodology
	Perform land classification and forest stratification within the reference region	
	Perform preliminary estimate of current carbon stocks in project area based on initial inventory plots	
	Perform preliminary estimate of annual carbon stock changes in project area under baseline scenario	
	Perform preliminary estimate of annual carbon stock changes for each project scenario	1 methodology submitted for validation and 1 draft methodology
	Develop leakage definition and develop protocols to monitor emissions from leakage	
	Determine the spatial extent of the leakage area, and preliminarily quantify emissions from leakage	
	Identify, quantify, and estimate all potential project-related emission sources	
	Calculate initial net carbon estimates, including leakage & emissions sources	
	Develop monitoring system to quantify on-going carbon stock changes in the project area & leakage losses	
	Identify all other on-going data requirements from project participants	
	Provide required data	
	Capacity building for remote sensing and carbon credit quantification	
	Provide technical assistance with full biomass inventory sampling	
	Perform QA/QC on data from full biomass inventory sampling	
	Adjust estimate of current carbon stocks in project and leakage areas based on inventory plots	
	Submit first methodology to Validator	
	Complete draft of second methodology	
3.5.4	Carbon Development for feasible projects	
	Execute preliminary biomass inventories	
<b>3.7</b>	<b>Village Savings &amp; Loans</b>	
3.7.2	Sensitize 300 villages in village savings and loans	68 meetings
3.7.3	Facilitate establishment of 100 village savings and loan schemes for selected villages	55 groups
3.7.4	Train 50 village saving and loan group in VS&L methodology	55 groups
3.7.5	Train 30 VS and L groups in economic activities, selection, planning and management (EASPM)	11groups
3.7.6	Conduct periodic follow ups to VS&L groups to assess performance and address bottle necks	4 visits

3.7.7	Evaluate the scheme for the purpose of replicating to other villages	4 visits
3.7.8	Select / train community agents in the methodology for scaling up and sustainability	20 village agents
<b>4</b>	<b>Result Area 3: Increased Incomes from Enterprise Development Activities</b>	
<b>4.1</b>	<b>Enterprise Development</b>	
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)	<i>Completed</i>
4.1.2	Evaluate the value chains of the selected enterprises and identify intervention points	<i>Conduct detailed analysis on Coffee, Livestock, Macadamia and Honey</i>
4.1.3	Train producer groups in production and processing skills (soya, groundnuts, beekeeping, fish farming, fish cages, food dryer, mushrooms, cassava)	<i>Train producer groups in Coffee, Livestock, Macadamia and Honey</i>
4.1.4	Determine sustainable harvest/use limits for the selected products with viable markets	1 study
4.1.5	Train producer groups and MSMEs in business skills and marketing with power to negotiate prices	20 groups
4.1.6	Facilitate linkages/contracts between producer groups, MSMEs, traders and buyers	2 contracts signed
4.1.7	Support the development of promising products as business ventures	6 potential ventures
4.1.8	Facilitate employment/venture opportunities with private tour operators for eco-tourism/NR enterprises	3 groups
<b>4.2</b>	<b>Micro finance/Credit facilities</b>	
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	<i>20 MSMEs focused on macadamia production, beekeeping, livestock, coffee, groundnuts, soya and cassava (eliminate fish farming, fish cages and food dryer)</i>
4.2.2	Develop a credit worthiness assessment tool for MSME to facilitate access to credit from MFI	1 tool kit
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)	<i>1 study to evaluate needs of 4.1.1 redefined with a focus on Macadamia production , beekeeping, livestock and coffee, groundnuts, soya and cassava (eliminate fish cages, mushroom, fish farming and food dryer)</i>
4.2.4	Identify viable micro finance institutions for support services	4 Institutions
4.2.5	Facilitate linkages/contracts between credit worthy MSMEs and Micro finance institutions	15 MSMEs
4.2.6	Provide training to the selected MSMEs in financial management and loan servicing	15 MSMEs
<b>5</b>	<b>M&amp;E, Reports &amp; Meetings</b>	
5.2	Develop data base structure for inputs and analysis of results for each result area	3 data bases
5.3	Conduct M&E training for relevant staff on different components of the project	2 M&E sessions
5.4	Produce quarterly technical and financial reports	1
5.5	Participate in meetings of project steering committee	1

**Entries in italics indicate that the Activities and the Targeted Outputs are new entries to the list for Year 3**