

QUARTERLY PROGRESS REPORT

1ST QUARTER OF YEAR 3

WESTERN KENYA INTEGRATED ECOSYSTEM MANAGEMENT PROJECT

Anja Boye
Louis Verchot



International Centre for Research in Agroforestry
P.O. Box 30677
Nairobi, Kenya

Table of Contents

1.	Introduction	1
2.	Bio-physical baseline	1
3.	Socio-economic baseline.....	2
3.1	<i>Upper Yala</i>	2
3.2	<i>Middle Nyando.....</i>	2
3.3	<i>Upper Nyando</i>	3
4	Species screening trials	4
4.1	<i>Lower Nyando</i>	4
4.2	<i>Lower Yala</i>	5
5	Degraded site rehabilitation trials.....	6
6	Other activities.....	7
6.1	<i>Data entry of bio-physical and screening trial data</i>	7
6.2	<i>Soils lab</i>	7
6.3	<i>Students</i>	7

1. Introduction

Western Kenya Integrated Ecosystem Management Project (WKIEMP) has been initiated with support from the World Bank for implementation through a grant from the Global Environment Facility (GEF). The project, which became effective in July 2005, seeks to improve the productivity and sustainability of land use systems in selected watersheds in the Nzoia, Yala and Nyando river basins through adoption of an integrated ecosystem management approach. In order to achieve this the project will: (i) support on-and off-farm conservation strategies; and (ii) improve the capacity of local communities and institutions to identify, formulate and implement integrated ecosystem management activities (including both on-and off-farm land use planning) capturing local global environmental benefits. The project is based in Kisumu and is achieving its objectives through a community driven development process whereby communities decide on resources for infrastructure investments, technical assistance and implementation of ecosystem management activities.

2. Bio-physical baseline

The biophysical team completed the survey of Upper Yala on July 27th. This block was formerly a white settlement area. Since Independence, the area has been sub-divided into small farms, which now have few indigenous trees in the surroundings, mainly on hill tops. A block summary report prepared by the biophysical team was provided to KARI to facilitate project implementation.

The biophysical team commenced the survey in Middle Nyando on August 7th and completed the survey by mid-September. This block has a very hilly terrain and clearance of woody vegetation is on-going, mainly for charcoal production. Poor farming practices are seen in the entire block such as farming on steep slopes without soil and water conservation measures in place, ploughing up-down the slope and not across as recommended, and farming close to the river banks.

3. Socio-economic baseline

3.1 *Upper Yala*

The socio economic survey completed the survey in Upper Yala early in the quarter.

Preliminary observations:

- Some farmers in this block are engaged in commercial farming (maize, wheat & dairy) – some farmers sell to KCC
- Generally, the farmers are very willing to plant trees
- Part of the areas surveyed floods occasionally
- Many farmers have high breed livestock and are food secure

3.2 *Middle Nyando*

Sensitization meetings took place between June 18th and 30th. Meetings were held at the Chief's offices in Koru, Fort Ternan, Kokwet, and Kunyak/Girimoi. Meetings were also held in Katuk Odeyo and Chilchila primary school. The meetings went on very well and there is a great interest in the project and the potential benefits the project will bring to the area in term of rehabilitation of the environment. On June 27th, the team commenced the survey in Middle Nyando. The following sub-locations have been sampled:

Sub location	Cluster	No. Households interviewed
Koru	1	10
Kesses	2	10
Koru	3	10
Kesses & Megun	4	10
Tulwet	5	10
Tulwet & Kesses	6	10
Kesses	7	10
Kesses	8	10
Tulwet	9	10
Tulwet	10	10
Kesses	11	10
Kesses	12	10
Koisagat	13	10
Siwot	14	10
Fort Ternan	15	10
Kokwet	16	10

Preliminary observations:

- Sugar cane is the main cash crop in this block
- Hilly cluster (No. 1, 4, 9, 13, 14, 16) have few or no soil conservation measures in place
- Deforestation of hill tops
- Welcomed tree planting but requested for training on species selection and management
- High-breed livestock was seen on many farms

3.3 Upper Nyando

Prior to the sensitization meetings, chiefs for the various sub-locations were briefed of the project (July 23-25th). Thereafter sensitization meetings were arranged, which took place between July 30th and August 9th. Meetings were held at the following sub-locations: Jagoror (Jua Kali Centre), Kipsirichet, Kimasian (Kimasian Dip), Kalyet (Kalyet Centre), Samarek, Kipkelion North (Kipkelion Centre), Macheisok (Macheisok Centre), Kimugul (Chief's office), Kiasbo, Barsiele (Chief's office) and Segetet. In this block, there was a large turn out to the meetings. One meeting had more than 150 participants. The main concern from the farmers and chiefs are land slides caused by deforestation. On August 7th, the socio economic team commenced the survey in Upper Nyando. The following sub-locations have been sampled:

Sub location	Cluster	No. Households interviewed
Kimugul	1	10
Kipkelion North	2	10
Kipkelion North	3	10
Segetet	4	10
Kimugul	5	10
Kimugul	6	10
Macheisok	7	10
Kaliet	8	10
Kisabo	9	10
Kimasian	10	10
Jagoror	11	10
Kipsirichet	12	10
Kimasian	13	10
Kimasian	14	10
Kipsirichet	15	10
Kipsirichet	16	10

Preliminary observations:

- The terrain is very hilly and difficult to cover by car
- Very sloping land with few soil and conservation measures in place
- General concern about deforestation and the consequences thereof
- Farmers are requesting to be trained on soil and conservation methods
- The area suffers from land slides in Kimasian, Kisabo, Kimugul and Macheisok sub-locations.
- Many farmers experience water logging during rainy seasons
- General interest in tree planting, however, there is limited access for farmers to tree seedlings and there are requests for trainings in nursery establishment and management
- Most farmers rear both local, cross-breed and high-breed livestock

4 Species screening trials

4.1 Lower Nyando

In Lower Nyando, the survival count was done in late July, three months after planting. ICRAF carried out a survival count in association with the four resource persons. The table below shows the results for the 45 screening trials:

Survival count 3 months after planting

Type of trial	Exotic species	Indigenous species
Screening trial	84%	83%

During the assessment of the survival of trees planted, the teams made general observation on how well the trials were managed. The table below summarized the observations made during the exercise:

Well managed	Well managed but problems with termites	Plots water logged	Plots browsed	Plots poorly managed
7 (16%)	8 (18%)	9 (20%)	5 (11%)	16 (36%)

Hence, more than 53% of the trials are well managed whereas 36% are poorly managed and 11% are still browsed by livestock. The main constraints at farm level are livestock, termites and water logging.

To address the problems of poor management and poor protection of the trials, a follow-up training was arranged for the farmers after the survival count exercise was carried out. The training focused on tree management with special emphasis on better-management practices based on specific cases observed during the assessment. The training was held on July 20th and 28th and 36 farmers participated. Topics covered were mulching, pruning, tree protection, and manure application. The outcome of the training was very positive and ICRAF made follow-up visits to each farmer's plots during the course of the following week. On all farms, better-management practices were already being implemented.

The results from the woodlots are still being assessed and will be presented in a later progress report.

4.2 Lower Yala

In Lower Yala, ICRAF held a training course in late June and early July for the 160 farmers with established screening trials and woodlots. The agenda was management of screening trials and environmental rehabilitation through planting of indigenous trees. Some of the topics covered were: water, general care for the trees planted, theft, termites, livestock, and farmer constraints such as lack of land and knowledge and interference from wild life. There was also field visits to various farms where farmers saw both good and poor management.

The outcome of the training was very positive. The farmers requested for more training sessions on environmental management and rehabilitation and requested for more nurseries to be established to cover the entire block. Also, the farmers decided to form CIGs to create awareness in the communities on tree planting.

Survival count of trees planted

The first survival count was carried out in Lower Yala in July, three months after planting. Four local resource people were trained on how to assess the survival of the trees planted and were given the task of assessing 40 farms each. An ICRAF technician then counter-checked 10 survival counts per resource person. This system was very successful and the ICRAF technician only found errors on five farms out of the 160 assessed.

Of the 160 screening trials planted, a number of plots were not planted with the appropriate number of trees (144). These plots were reclassified as woodlots and will be evaluated as such in the future. Thus, the total number of screening trials in Lower Yala is 110 and woodlots 29. The survival counts are given in the table below.

Survival count 3 months after planting

Type of trial	Exotic species	Indigenous species
Screening trial	91%	93%
Woodlot	89%	92%

The constraints at farm level were rated as follows: 1. Termites, 2. Livestock, 3. Drought, 4. Soil fertility, 5. Theft, 6. Pests, 7. Wild animals, 8. Management, 9. Erosion. Of the 139 plots planted in the long rains, 71% are well managed.

5 Degraded site rehabilitation trials

The nursery at ICRAF Kisumu has 7,000 seedlings of assorted species. These seedlings will be planted in the short rainy season in the Lower Nyando block. Several sites have been identified for planting of degraded areas: Lower Nyando

Kowala: The Kowala group is managing their degraded area very well. The survival count has been carried out and is showing very good survival. The results will be presented in the next progress report.

Kalacha: In Kalacha, the group has harvested 10 bundles of grass and is requesting if the project can assist them with the construction of a shed for the grass. This may be an opportunity for a small grant to the community. Also, the group is planning to start growing vegetables on the lower part of the area, since there is no longer any erosion taking place. The area is 50x50m and more than 20m away from the river bank.

The survival count has been carried out and trees are showing very good survival. The results will be presented in the next progress report.

Kokoto: The Kowala group is managing their degraded area very well. The survival count has been carried out and is showing very good survival. The results will be presented in a later progress report.

Kokumu Aora Gulley: This is a new site in the Lower Nyando block. The survival count has been carried out and is showing very good survival. The results will be presented in a later progress report.

6 Other activities

6.1 *Data entry of bio-physical and screening trial data*

Data has been entered for the bio-physical survey for Middle and Upper Yala. The databases have been shared with KARI. Data has also been entered for the screening trials (Lower Nyando and Lower Yala). This data still need to undergo a quality control and will be shared with KARI in the next bi-monthly meeting.

6.2 *Soils lab*

In the soils laboratory in Kisumu, soil samples have been dried for the socio economic survey for the Yala river basin as well as for the screening trials. For the biophysical survey, soil samples for 10 clusters have been dried. All these samples will be sent to Nairobi for further analyses.

6.3 *Students*

ICRAF has had two students on attachment this summer, Johannes Rupp and Peyton Smith. Johannes Rupp finished his attachment in July and ICRAF is awaiting his final report. Johannes' study was on how to link small-scale farmers to the global carbon market. Johannes interviewed farmers in Lower Nyando and Lower Yala.

Peyton Smith finished her attachment in August and assisted the project in geo-referencing project activities in Lower Nyando and Yala. She managed to create maps for the two blocks showing interventions for both KARI and ICRAF.