EXCHANGE OF INFORMATION WITH CONCERNED INSTITUTIONS

REPORT ON A VISIT TO MITI MINGI MASHAMBANI, NAKURU AND VI-AGROFORESTRY PROJECT, KITALE.

15TH - 17TH FEBRUARY 1999.

Written by: LUCAS RATENG

PAUL BARAZA

HIROMI YAMAUCHI

Social Forestry Extension Model Project
(SOFEM)

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2. Institutions (Project) visited for exchange of Information

2.1 Miti Mingi Mashambani

The project staff visited the above project on 15/02/99 in Nakuru district. The visiting team was met by the following project personnel, Mrs. Charity Munyasia - District Forest Officer/Project Manager, Mr. Julius Kariuki - Asst. District Forest Officer/Deputy Project Manager, Mr. Joel Kahiga - Forester, Mr. G. K. Mwaura - Forester/Seed Manager and Mr. Kiare - Forester, Gilgil Division.

In the project area, we managed to visit Gochura catchment area, a contact farmer Kiamaina Primary and Secondary School and Kiamunyeka area of Bahati. All the above activities were mainly in Bahati division of Nakuru district.

2.1.1 Background

Miti Mingi Mashambani project was started in 1990 as a co-operation between the Government of Kenya and Finland. The project was implemented for five years in Nakuru and Nyandarua districts.

The phase II of the project started in 1997 and was to be implemented for another five years. But according to the District Forest Officer in Nakuru, the funding to the project by the Government of Finland is currently suspended, although the

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The VI-Agroforestry Project is conducted by Swedish NGO through Swedish Internation Development Agency (SIDA); the other donors are mainly readers of the VI Magazine, Swedish Consumers Association, NORAD and Consumer Co-operative Association in Norway.

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The project was extended to cover other areas in 1986 to include Trans Nzoia district and in 1991 project area was extended to include Masaka Rakal districts in Uganda and in Tanzania Mara and Mwanza districts.

2.2.2 Project Objective

The project main objective is to uplift the living standard of the rural small-scale farmers to achieve self-sufficiency in food production, increase fuelwood availability and increase sources of income through participatory silvo-pastoral agroforestry practices.

2.2.3 Project Activities

The current project activities included conducting PRAs in all target villages, training of all extensionists, participating farmers having on-farm nurseries, the farmers carrying out direct sowing, developing income generating activities, and conducting on agro-forestry technologies on adaptive research at Agroforestry Centres, Training of Trainers courses for Zonal Managers, conducting two annual, 2 week agroforestry courses for extensionists and lastly conducting monitoring and evaluation.

2.2.4 Input

Currently the project has a long-term financial support from SIDA and NORAD. In addition, they have collaboration with ICRAF. There is an established and efficient project organization with infrasture; field and office equipment of high quality and also necessary updating and upgrading of all equipment, lastly the project employs qualified extension agents for the implementation of their activities.

2.2.5 Organization

The project operates through a de-centralised extension organization led by the project management office in Kitale. The Project Coordinator represents the project management board in policy issues in East Africa region. Inorder for the project to achieve the objectives, the project is organized into several components, extension, seeds, land rehabilitation, monitoring and evaluation. Each zone is sub-divided into extension areas with 1-2 extensionist attached; therefore every farmer has access to an extension agent and administration. The project area is divided into 8 zones and are managed by the zonal managers based at the local office.

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project activities are still continuing. The organization chart for Miti Mingi Mashambani is attached. Annex 1.

2.1.2 Objectives

During the phase I of the project 1990-1995 the project had to main objectives as stated below: -

- Improving the environment through tree growing.
- Usage of tree products as a source of income.
- Achieving a sustainable supply of tree products.

The objectives of phase II of the project are similar in many ways to those of phase I and mainly focus on the following: -

- Developing an effective farm forestry extension programme.
- Encouraging farmers to act collectively on environmental conservation.
- Increasing tree products to achieve a surplus.

2.1.3 Project Activities

To achieve its overall objectives, the project engages in four main activities: -

- Training
- Logistical support
- Development of linkages
- Improvement of outreach.

2.1.3.1 Training

The project carries out in service training for both its extensions, Technical Assistants (TA) of FD, and management staff. Special training is also mounted for leaders and farmers. The training covers both technical subjects in tree management, but at the same time includes briefing by the chief of forestry extension development in the Ministry of Natural Resources, monthly meetings and study tours.

2.1.3.2 Logistical Support

Logistical support involves providing office facilities, classrooms and office equipment. Transport is considered as important component of the project and consequently the project provides cars for the Area Extension Managers, motorbikes for the Divisional Extension Officers and bicycles for locationalstaff. Some

nursery research is carried out. Seed collection and distribution is part of logistical support .The project distributed seeds to the farmers free of charge for the first three year and after that, the farmers were trained in collecting seeds. Seed stands and community seed sources are maintained see annex 2 photo 1. Seed stand established in the compound of the DFO Nakuru in 1992 in collaboration with KEFRI has Grevillea robusta, Casuarina equisefolia, and Eucalyptus species.

2.1.3.3 Development of Linkages

The project makes deliberate effort to increase farmer to farmer linkages, creates contacts for farmers with industries which are likely to buy tree products, and laises with other institutions and Government departments involved in land use systems. Such linkages enable farmers to make rational decisions on the use of their land and to maximise on their time and other resources. Linkages with other institution e.g. Ministry of Agriculture during field day, train home economic officers, laises also with soil conservation unit and NGO (KENGO, WWF).

2.1.3.4 Improved Outreach

Intensified extension approaches are part of the strategy for the success of the project. DFEO make a monthly plan on visiting farmers to give advice with the TA, and TA is supposed to submit a monthly report to the DFEO. One TA has four contact farmers in addition to other targets. The project also organises training for farmers and group leaders. Training is carried out for farmers formally and through study tours. Field days and on farm demonstrations is also carried out.

The project is involved in publication of brochures, posters, calendars and development of manuals and distribution of publications. They even request other institutions to print extra copies of their publication, which the project buys and distributes. So far, the project has produced 22 technical reports.

The project also invited the radio broadcasting to the project site in order to publish the project at national level.

2.1.3.5 Technology Development

Although the project has not made any patent claims on its innovation, they claim that their STONE METHOD of tree planting is the most effective in dryland area of the Rift Valley Province. A seedling is placed in a prepared hole and stones are added to one

side up to the level of the ground. The stone acts as an improved water catchment area. When water is poured over the stones, it sinks right to the roots without causing flooding as the space between the stones allow the water to sink easily reducing surface evaporation from draining off. This method is superior in that it is inexpensive and any farmer can use it without specialised training, see annex 2 photo 3(i) and 3(ii).

Through this method of planting, school around Nakuru have succeeded in planting many trees on their compounds with little water. In 1998 around 500 seedlings were planted in Subukia area using this method, and very low mortality has so far been reported. Currently the trees that were planted acts also as seed stands.

2.1.4 Field Visit

2.1.4.1 Gochura Catchment

The Project Manager took us to a difficult site being rehabilitated jointly by the project and the community. It is a very deep sloppy side in Gochura giving rise to massive soil erosion due to poor vegetation cover. The farmers and the project have embarked on a scheme to make the area hospitable by constructing trenches, planting nappier grass and trees to check soil erosion. Every farmer in the area has agreed to construct trenches and plant nappier grass.

Farm sizes in Gochura measure roughly 1.6ha. The Catholic Church has been trying to assist farmers to construct water tanks to store rainwater. This makes water the most valuable resource in Gochura area. The dominant tree species in Gochura is *Grevillea robusta*. It is the preferred species due to its multiple uses as a timber species and also due to the fact that food crops can tolerate its presence in the garden, see annex 2 photo 2.

2.1.4.2 Kiamaina Primary and Secondary School

The project also approach to schools as demonstration and source of extension, although final targets of the project were individual farmers.
The visit took us to Kiamaina Primary and Secondary School. The headmaster Mr. Bosco Mithanga was very keen in forestry activities. There was a small nursery in the school and we were

informed that the students are encouraged to plant many seedlings in order to sell to the local people. There were few nursery activities going on, because all seedlings died at once, but all arrangements had been put in place in readiness for the onset of rains in March. The project is trying to establish seed stand even in schools.

2.1.4.3 Kiamunyeka Area of Bahati

We visited a private farm in Kiamunyeka area of Bahati belonging to Mr/Mrs Muregi. They settled in 1991 and started tree planting In 1993 and also started a nursery. The man is doing business in Nairobi. The wife manages their 2.5ha. farm, the family has occupied the farm for nine years and has planted, a live tree boundary of *Grevillea robusta* all round the farm. The couple is lucky to have piped water, which enables them to grow a variety of vegetables for sale. The farmer has planted more than 300 Grevillea robusta around her plot boundary, which provide sufficient fuelwood, *Carica papaya* in rows along the plot compartments and also citrus and oranges fruits. The family also raises chicken, cows and goats. Part of the farmers' activities is to raise tree seedlings for sale to the surrounding farmers. Due to poor development of roads in the area the farmer complained that she is forced to sell her farm products very cheaply, as it is very expensive to carry farm produce to lucrative markets in Nakuru and Lanet area. The dominant mode of transport is the bicycle and donkey cart. The road is poorly developed, murram and soil.

2.1.5 Government Telecommunication Industries

On February 17, 1999 during the return journey after visiting VI - Agroforestry project in Kitale, our group accompanied by the Project Manager, Miti Mingi Mashambani visited Gilgil Telecommunication Industries (GTI). According to Miti Mingi Mashambani Project Manager, GTI was an important focus point for the Miti Mingi project, because GTI project had started buying *Eucalyptus saligna* trees from farmers directly in 1997. This gave encouragement to farmers who now had an outlet for their farm forest products. At the GTI we met Mr. William O. Agwanda, the Assistant Core Plant Manager, responsible for the processing of wood products. We also met his assistants Mr. Gabriel Wamalwa and Mtero Simon.

According to Mr. Agwanda, GTI processes over 20,000 poles per year. The supply from farmers has risen to slightly over 40% from 1997. Previously the poles were only supplied from Government forest plantations. However, the current needs of GTI cannot

depend on Government plantations due to increase demand for production. The most preferred species of poles is *Eucalyptus saligna*. The reason for this is because the tree has a straight form, fewer nodes, uniform tapering and a higher resistivity to termite attack.

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2.2.6 Linkage with Concerned Institutions

The VI-Agroforestry project cooperates closely with the communities at the local level of the local committees at village level and the Ministry of Agriculture's Extension branch and the Provincial Administration.

2.2.7 Extension Approach

The extension programme has undergone rapid change and development. As the project staff have gained more experience. The extension workers are directly employed by the project, having attained the level of diploma certificate in Agriculture or Forestry, and the project also pays them high salaries. The extension activities are a major part of the project activities, and the most important way of meeting the needs of small-scale farmers. The extension agents arrange field days for the farmers in their area. They also discuss area developments and regularly visit the farmers on their farms to advice and help on tree planting and management problems.

Currently the project applies the PRA method and invites all concerned people such as DFEO, MoA, the Provincial Administration and other stakeholders and this process enables local people to conduct their own analysis of what their particular needs are and to allow them plan and take action. Tree planting or agroforestry are not necessarily high priority, so that involving other ministries is important to have them follow other issues which the project cannot cover. This PRA helps the project to understand the needs and the capacity of the local communities and gives ways and means of assisting the local farmers and the means, which they are able to sustain. This aspect of sustainability is very important in the planning phase. The tree planting and management shared with the farmers should not be forgotten, but should be sustained beyond the project period.

2.2.8 Sustainable Approach

The direct sowing of the seeds in the fields and this has proved to be very successful. The extension programme is introducing to other farmers. School approach in the promotion of the tree planting and agroforestry activities is also being used by the project. Therefore, the project is trying to integrate these activities with close community participation.

2.2.9 Technology Development

The project does not have a technology development section, however it has a few meetings in a year with ICRAF on the technical issues. Based on it, the project try technology on the field.
The project has trained farmers on tree seed collection to enable be self-reliant. The women groups therefore collect seeds and the project distributes to the nurseries within the project area.
The seed collection is from the indigenous tree species and exotic species. Currently greater emphasise is being put on advising and training local farmers in seed collection from their immediate surroundings. VI-AFP continues to buy those seeds required which are not available from within the project area. According to the policy of Sweden, the project encourages indigenous trees.
Recently the project encouraged direct sowing on some species such as Calliandra calothyesus, Sesbania sesban. Croton megalocarpus by direct sowing has lower survival rate compared to seedling.

2.2.10 Field visit

This was one of the first programmes initiated by the project to halt the spread of desertification. During the visit to Cheperaria zone, we managed to meet one of the project contract farmer Mr. Moses Lopsikou who settled in a wasted or (bare land) in 1995, but has managed the area by planting trees issued by VI-Project. The farmer therefore currently is able to get benefits such as poles, firewood, humus (from leaves/pods) and windbreak. The farmer has also planted banana as a cash crop and at the same helps him on soil conservation measures, see annex 2 photo 12, 14, 15.

According to the farmer the major constraints in the area are water, soil erosion and termite. Hence, currently sisal is being planted in the gullies to prevent soil erosion on the sides of the gullies, and grass is also being planted around the area. Sesbania sesban are raised from direct seed sowing on the boundary. The project advises on selection of tree species to suit the local environment, which will improve soil and rehabilitate the land, see annex 2 photo 13, 16.
As evidence in this area livestock is the main source of livelihood in West Pokot, the project therefore has intensified its co-operation with the Ministry of Agriculture and livestock production and also advises on combined approach to land use.

3. **Recommendation for SOFEM**

3.1 PRA

The PRA method enables the local people and all other stakeholders to conduct their own analysis of what their particular needs and allows them to plan and implement. This PRA helps to understand the needs and the capacity of the local farmers.

3.2 Extension Networking

The extension network development through the contact farmers in order to enable the extension agents recruit more farmers to establish farm forests in their target areas, hence one extension agent is supposed to reach 100 - 300 farmers in a year and each extension agent should prepare monthly work schedule. Also efforts should be made to increase farmer to farmer linkages, and create contacts for farmers with industries which are likely to buy their tree products i.e. Gilgil Telecommunication Industries. It is also necessary to link farmers with other institutions and government departments undertaking similar activities.

3.3 School Approach

The school approach should be adopted for the promotion of tree planting and agroforestry activities. These activities should therefore be integrated with close community participation.

3.4 Field Day

The extension agents should arrange for field days for farmers in their area, and also discuss area developments and regularly visit the farmers on their farms to advice, and help on tree planting and management problems.

3.5 Extension Materials

Extension materials produced by some institution should be shared with concerned institutions to save time and cost to develop new similar materials. SOFEM should not hesitate to find and use extension materials produced by other institutions with their permission, and also SOFEM should distribute extension materials produced by SOFEM to other concerned institutions.

3.6 Information Dissemination

The information dissemination on other projects or institutions activities should be disseminated through the extension agents and the selected target farmers to other farmers and the local community. This information can be carried in a newsletter, pamphlets on the SOFEM or other institution activities on social forestry related.

3.7 Technology

On technology development the SOFEM project should try direct seed sowing as opposed to planting tree seedlings in the fields or on-farms. The "stone method" of tree planting developed by Miti Mingi Mashambani project in Nakuru should be tried by the SOFEM project, since it has proved to be very effective in dryland areas of the Rift Valley Province.

3.8 Income Generation

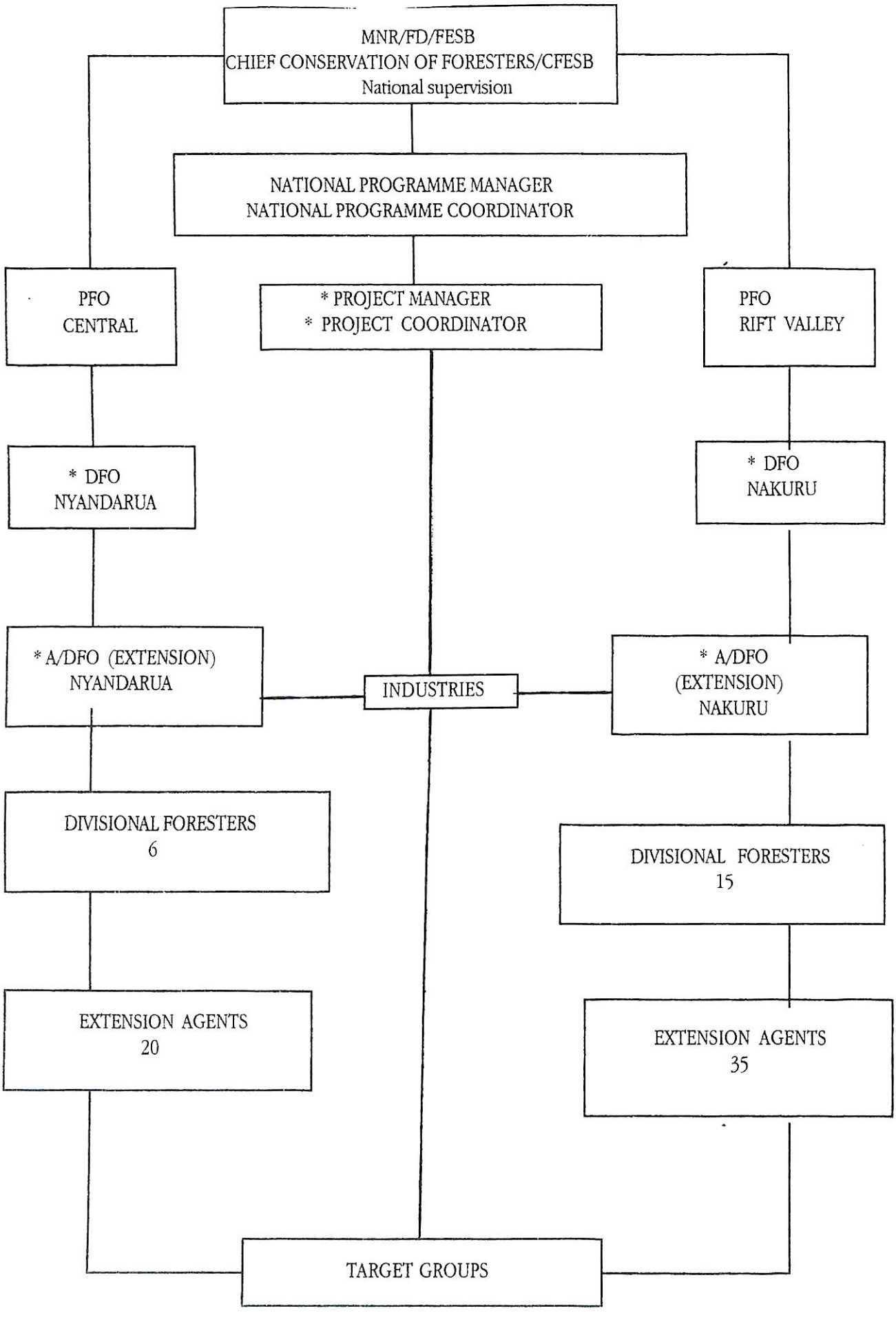
On the sustainability, the SOFEM project should try to avail farmers wishing to sell their tree products to interested institutions. Although the main purpose of SOFEM is not to promote income generation through tree planting, income generated by selling surplus tree products give farmers a strong incentive to continue with forestry activities as shown by Miti Mingi Mashambani Project.

In fact, it is difficult for SOFEM to assist much like conducting marketing survey, however, the following options can be given to the farmers:

- Conduct training courses and process or sale forestry products inviting outside lectures.
- Introduce tree species of commercial value.
- Cooperate with NGOs conducting small scale enterprises.

Annex 1.

ORGANIZATIONAL CHART FOR MITI MINGI MASHAMBANI PROJECT



1* Members of the project Techical Management Committee

Annex 2.

Photo 1. Miti Mingi Nursery in Nakuru.

Photo 2. Rehabilitation of Gochura catchment. Intensive nappier and tree planting to stem soil erosion.

Photo 3(i) Stone seedling planting. The bag has to be removed before soil is put back, followed by watering.

Photo 3(ii) Stone planting method demonstration.

Photo 4. *Eucalyptus saligna* poles supplied to GTI, Gilgil by the farmers.

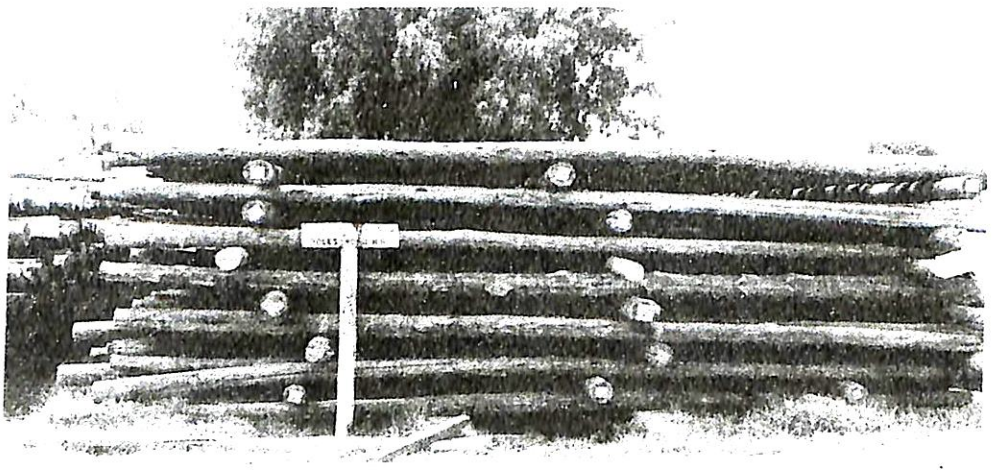


Photo 5. The poles after being treated with the chemicals at the plant.

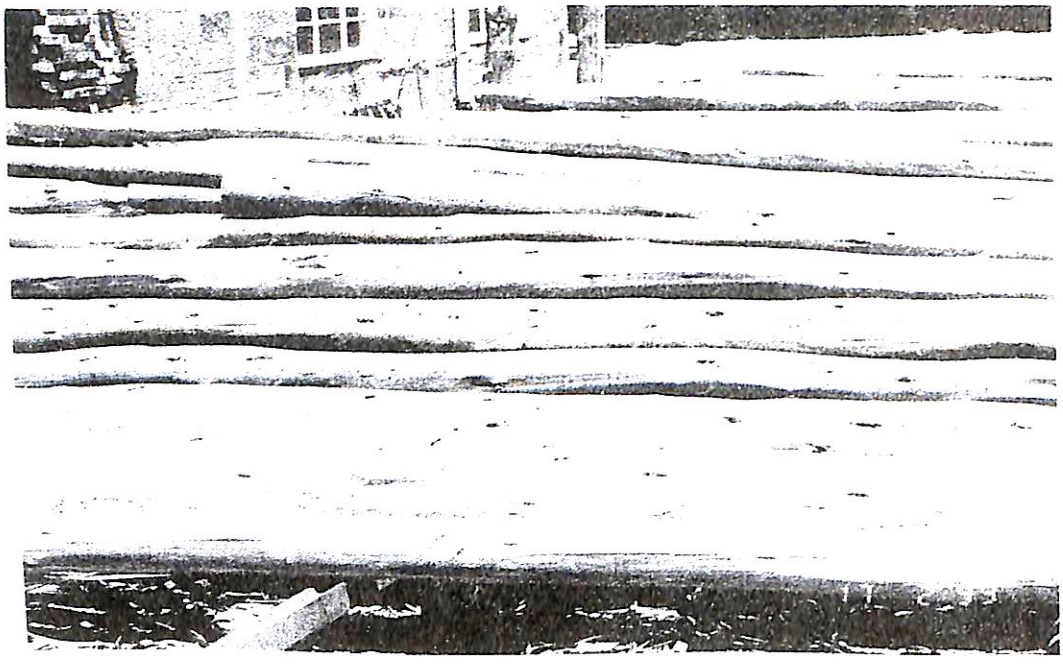


Photo 6. The poles with the trade mark of GTI, the name of manufacturer, numbers and date of manufacture.

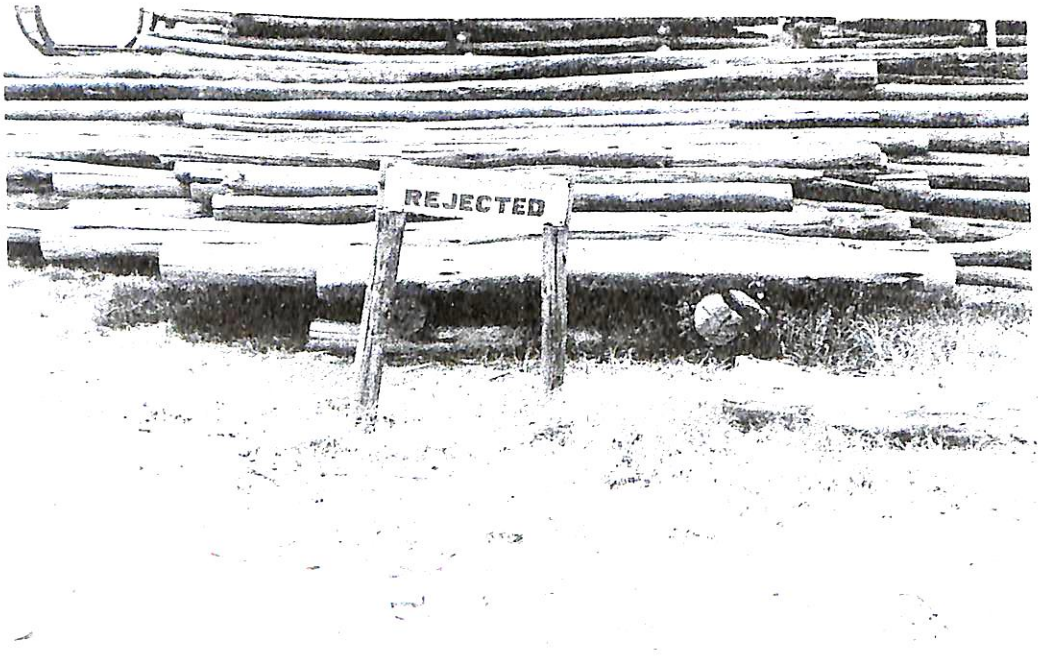


Photo 7 The rejected poles of Eucalyptus saligna not meeting the specifications required.

Photo 8. Shows the view of VI-Agroforestry project from the main road in Kitale town.

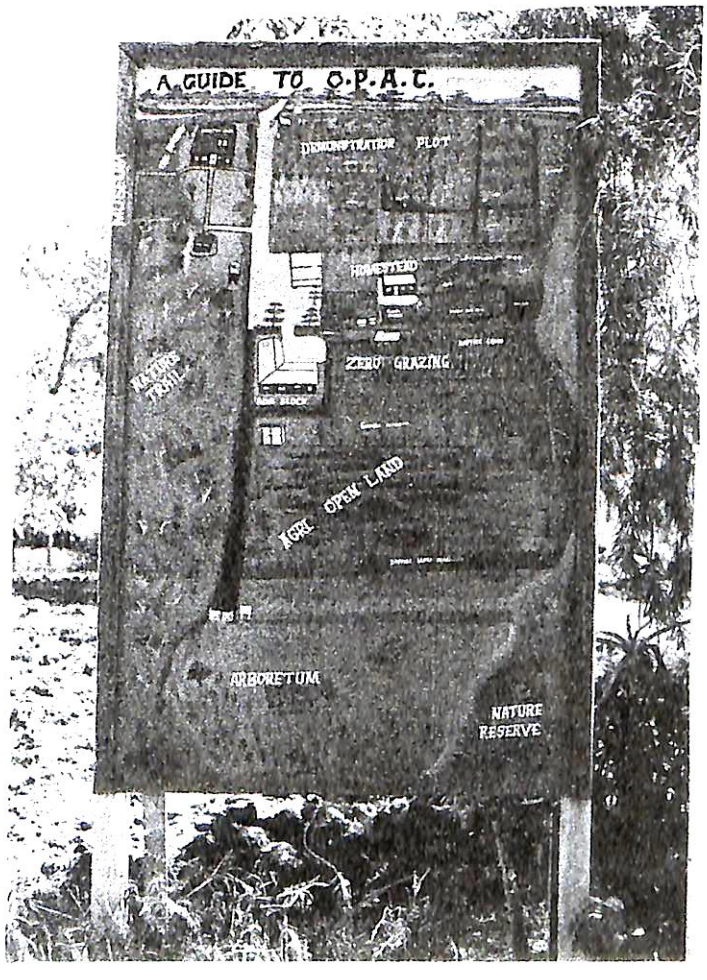


Photo 9. A guide map of the VI-Agroforestry Centre in Kitale.

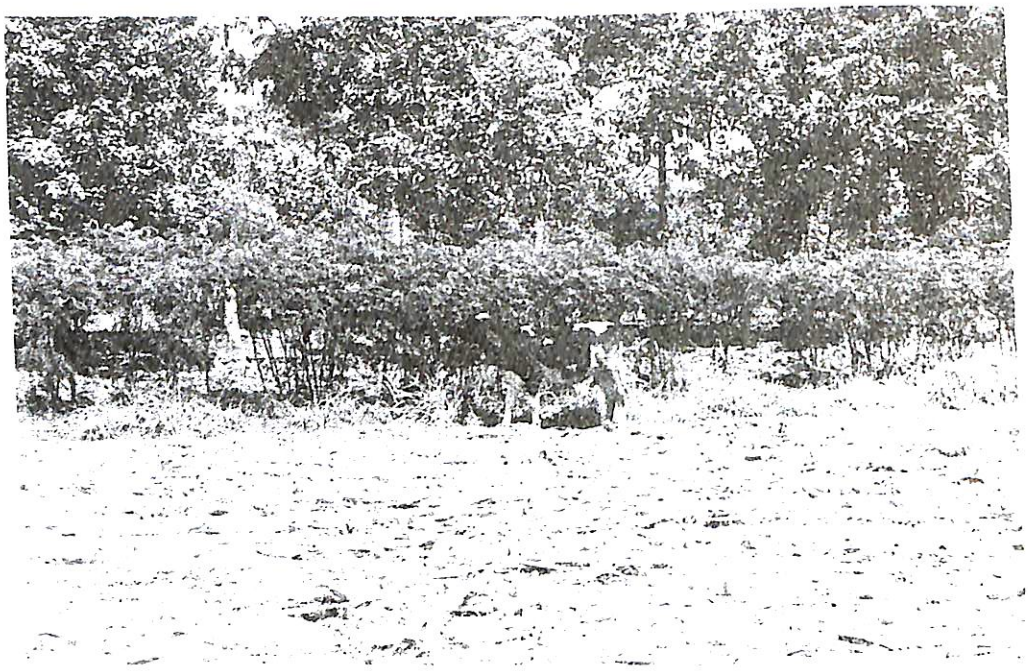


Photo 10. Shows a calf feeding alternately on *Leucaena leucocephala* leaves and nappier grass.

Photo 11 The Kapenguria area Extension Manager explains about the project activities in Chepareria to the visiting SOFEM team.

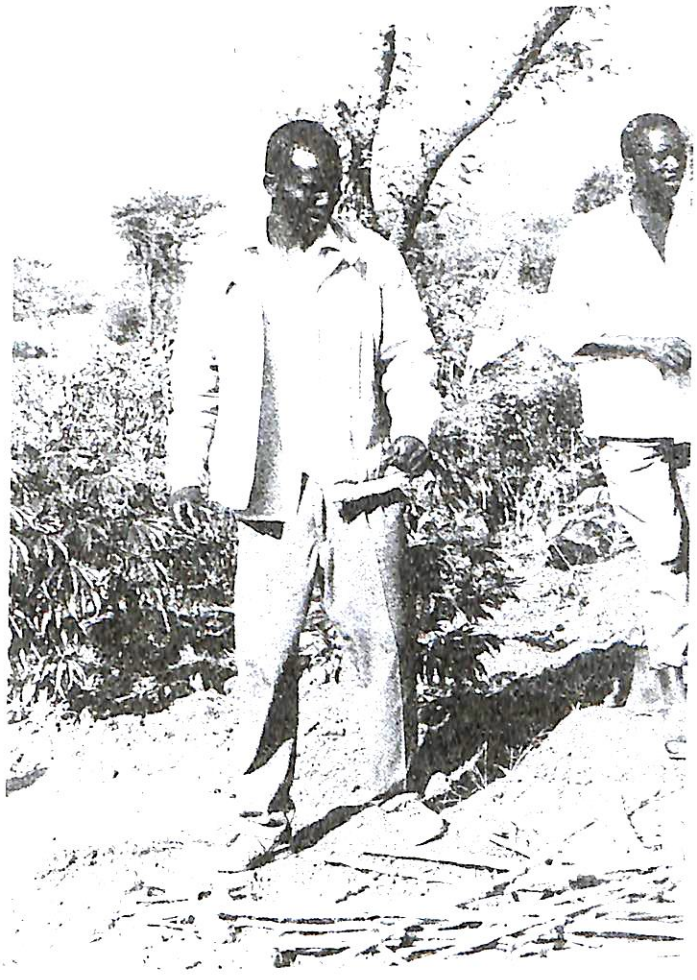


Photo 12. The VI-Agroforestry project contact farmer in Chepareria area Mr. Moses Lopsikou at his home (standing left).

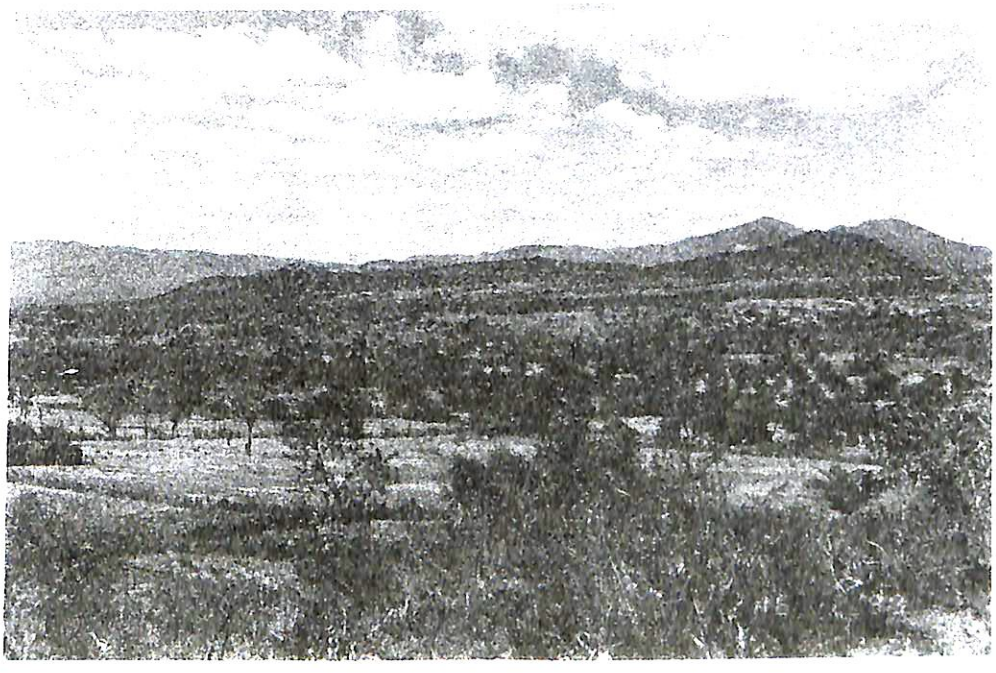


Photo 13. An overview of some parts of land in Cheperaria area being rehabilitated through tree planting.

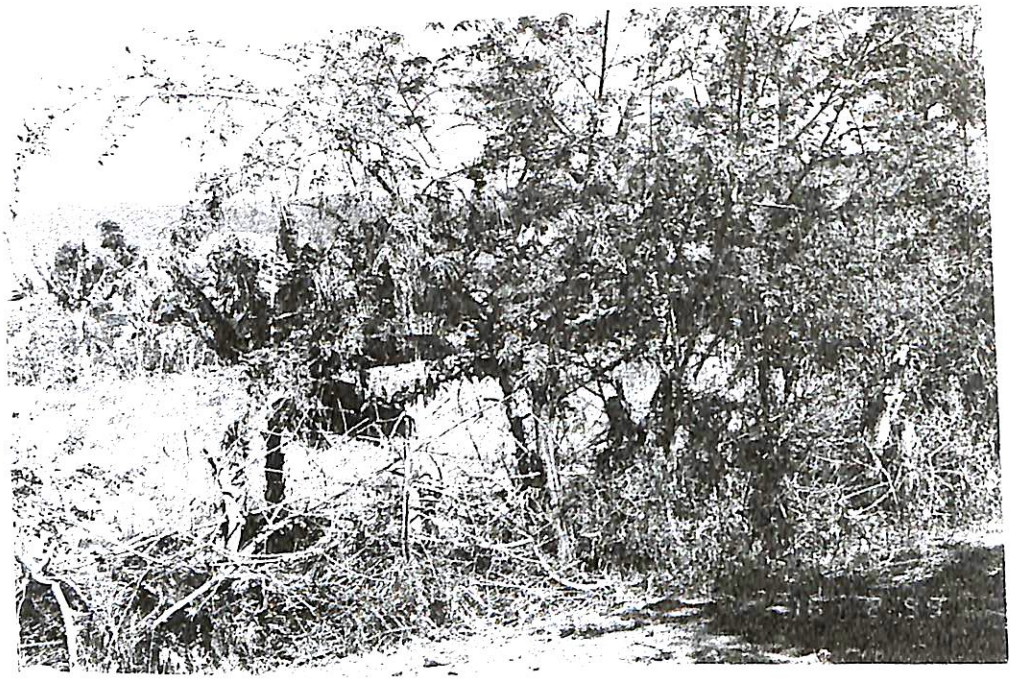


Photo 14. Shows *Sesbania sesban* planted along the fence using direct seeding method.

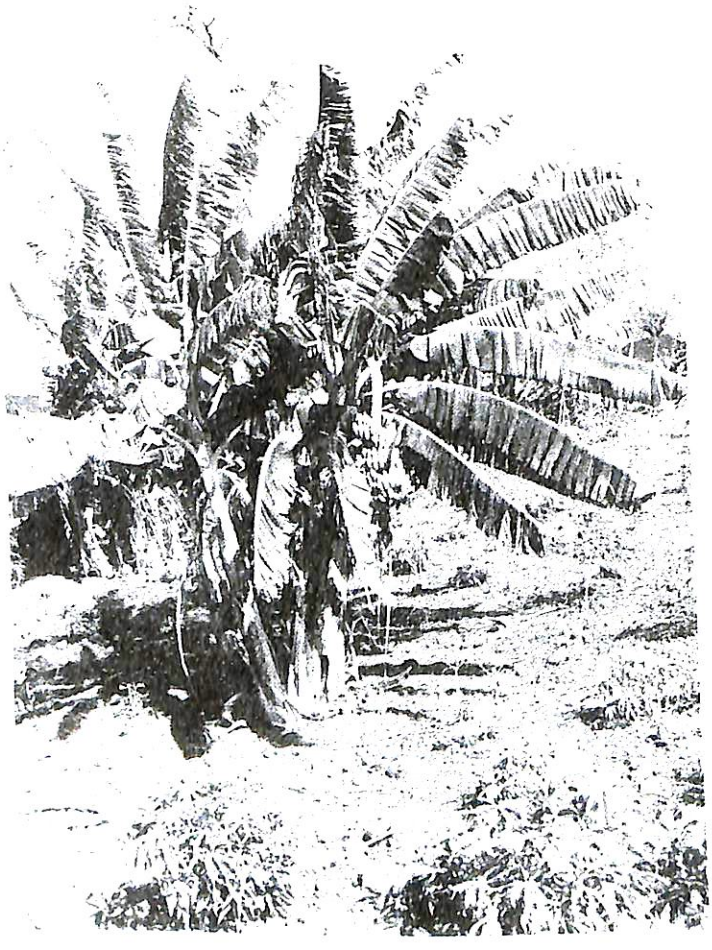


Photo 15. Shows crops of bananas and casava grown by Mr. Moses Lopsikou for food security..

Photo 16. Shows land rehabilitation through planting of sisal and grass.