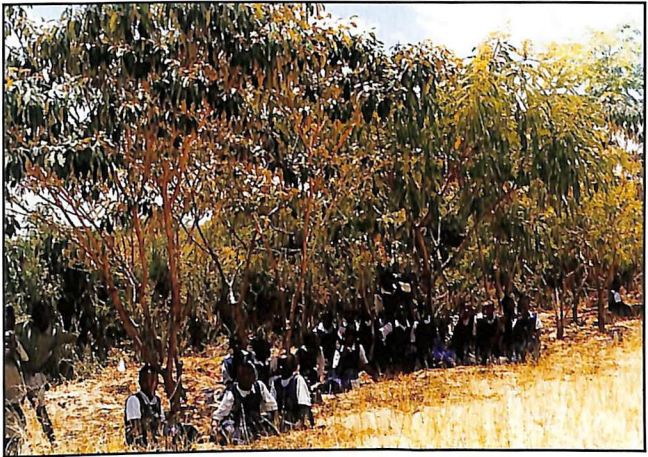


# ***SOFEM***

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## **Social Forestry Extension Model Development Project *for Semi-Arid Areas in Kenya* (Nov.1997 - Nov.2002)**



**Kenya Forestry Research Institute  
Japan International Cooperation Agency  
Forest Department**



## Background of the Project

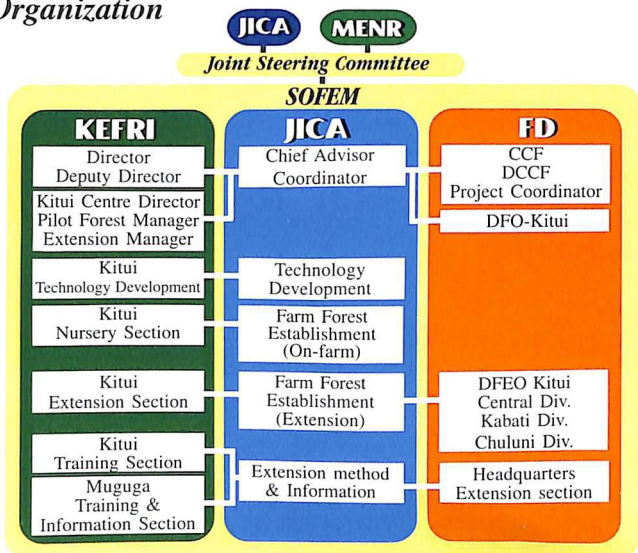
The arid and semi-arid lands (ASALs) covers over 80% of the total land in Kenya. Previously this area was considered abundant to possess resources adequate for the inhabitants and their livestock. However, due to immigration of people from the high potential areas and general increase population, immense pressure has been exerted on the limited natural resources including trees resulting in degraded land. With the increasing population, demand for wood and non-wood products has also risen dramatically. Therefore, the government and several other development agencies are focusing on rehabilitation programmes on ASALs, e.g. tree planting so as to make them more productive and thereby contribute to the rural economy.

## Objective of the Project

SOFEM aims at equipping the inhabitants of semi-arid areas in Kenya with appropriate techniques to plant and manage trees through establishing farm forests by the local residents. In order to achieve this, SOFEM is expected to have the following outputs.

1. Practical techniques for planting and tending trees for establishment of farm forest by conducting on-station and on-farm technology development activities.
2. Appropriate method of farm forest establishment developed with initiative of local residents through practical training of farmers and extension agents.
3. Information on social forestry extension shared with other people and other related organization by conducting information collection, synthesis and dissemination.

## Organization



## Technology Development Section



In order to develop practical technologies of planting and tending trees in semi-arid areas that are applicable to the farmers using their own resources, the technology development section is carrying out the following experiments.

1. Seed germination  
(to increase germination ratio of *Melia volkensii*)
2. Root system development  
(sketch root system, measure weight and depth of roots, etc.)
3. Water catchment  
(W-shape, V-shape, Turkana )
4. Weeding  
(complete weeding, slashing)
5. Spacing  
(1.0 x 1.0m, 2.0 x 2.0m, 3.5 x 3.5m, 4.0 x 4.0m, 5.0 x 5.0m)
6. Coppicing -cut the stem at the following heights ;  
(10cm, 40cm, 70cm, 100cm, 150cm height)
7. Measurement of water regime of tree  
(Soil Moisture, Water stress, Evaporation, Evapotranspiration)

## On Farm Section



On farm experiments consist of trials carried out on the farmer's land. The main purpose of this activity is to verify some technologies developed in TIVA Pilot Forest. It also demonstrates such techniques to the neighbours of the farmers showing the different performance of the planted trees. The techniques that the project is implementing include:

1. Site preparation (oxen plough, hand tilling)
2. Water harvesting (V-shape, W-shape)
3. Hole size (20x20cm, 45x45cm, 60x60cm)
4. Weeding (complete weeding, spot weeding, slashing)
5. Pruning (pruning at different heights)

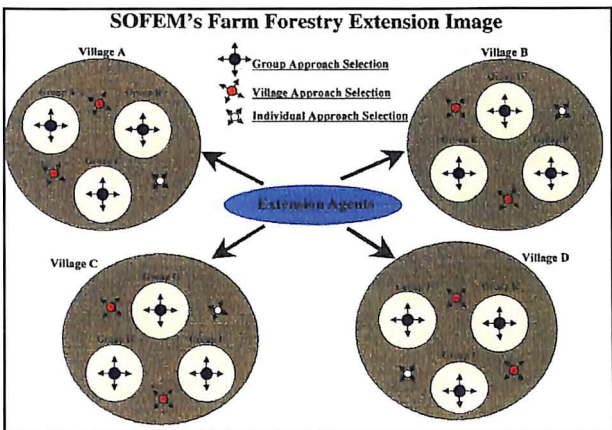
In addition, some varieties of grafted mangoes and oranges and some species of fodder trees are planted in order to find suitable ones for the dry areas. The project keeps records of rainfall and carries out soil profile studies of some selected farms in order to understand the land condition in the target area.

# Extension Section



The objective of the extension section is to establish farm forests with initiative of local residents through provision of practical techniques developed by the project. In order to achieve its objective, the section is conducting the following activities.

1. Identification of target farmers for farmer to farmer extension.
2. Conduct profile survey to establish farmer's status, needs, problems and opportunities and designing of farm forests.
3. Training of target farmers to provide necessary techniques for farm forest establishment.
4. Monitoring of established farm forest and feedback the result to technology development section.
5. Develop farm forest establishment guideline for extension agents.
6. Facilitation and training of grass-root extension agents.
7. Development of training materials, e.g. establishment of farm forest demonstration plot, manuals and leaflets.
8. Create favourable environment for promoting farm forestry activities by local residents, e.g. development of seeds/seedlings information system and cost sharing of planting materials.



## Extension Method & Information Section



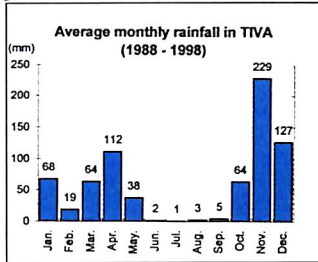
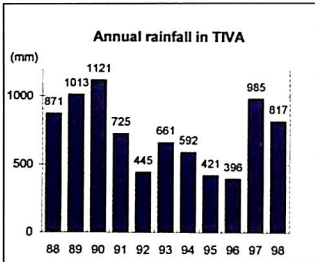
The section is mandated to develop appropriate extension methods on social forestry in semi-arid areas and to collect information on social forestry extension, process it and disseminate it to extension agents and others involved in related activities.

Activities being undertaken are:

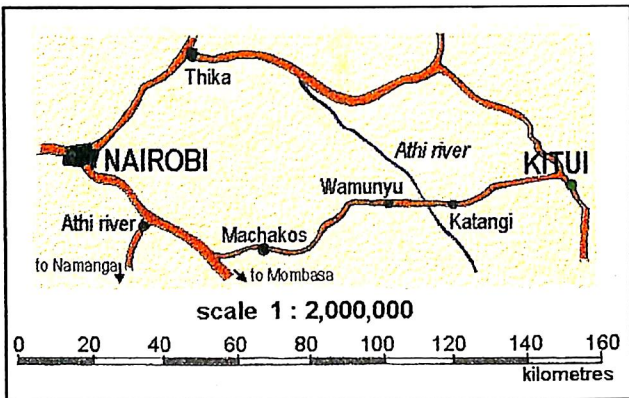
- Clarification of information flow on social forestry extension activities and preparations of guideline for information activities.
- Information gathering from outside of the project through; collecting publications, exchanging information with other relevant institutions.
- Keeping records of project activities and storage of information accumulated through project activities.
- Developing social forestry extension materials through activities such as producing videotapes on tree planting and issuing publications.
- Dissemination of information through publications or events such as: seminars, mobile shows, and publishing of the project newsletter.



## Rainfall



Average annual rainfall in Tiva between 1988 and 1998 was 731mm.



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