Farmer Field School (FFS) based Woodlot Development Promotion through Japan International Cooperation Agency (JICA) Forestry / Natural Resource Projects in East Africa
JICA technical cooperation projects in forest sectors in East Africa since 1985

1. Kenya
   - Social forestry training project phase I & II (1985-1997)
   - Social forestry extension model development project (SOFEM) (1997-2002)
   - **Intensified social forestry project (2004-2009)**
   - Project for Development of Drought Tolerant Trees for Adaptation to Climate Change in Dry Lands of Kenya (2012-2017)
   - Capacity development project for sustainable forest management (2016-2021)

2. Tanzania
   - Kilimanjaro village forestry project (1991-2000)

3. Ethiopia
   - Belete-Gera participatory forest management project (2003-2012)
   - Project for Supporting Sustainable Forest Management through REDD+ and Certified Forest Coffee Production & Promotion (2014-2020)
   - **Sustainable natural resource management project through FFS in Rift Valley areas in Oromia region (2012-2018)**
Most of projects are targeting Semi-Arid Areas
Natural tree stands are used for wood fuel

Ethiopia
Use of natural wood for charcoal
Free grazing tradition
Ethiopia
Disturbance to natural regeneration reduces trees on farm
Use of cow dung for fuel instead of compost to farm

Ethiopia
Secured wood fuel from planted woodlot

Kenya
It was always a challenge. How can we make farmers introduce such long term crops?
Farmer Field School approach was a good solution since 2004.
Set up of experiment and regular farm observation & monitoring
Equip farmers with systematic analytical skill
Build their capacity through presentation, discussion & decision making
Key issues for woodlot establishment with small scale farmers

1. Combination with short term crops / Agroforestry system
2. Seedling productions by farmers themselves
   are inbuilt to FFS by the projects
3. Capacity building and empowerment of farmers
4. Long term continuous interaction with farmers
   were already in FFS structure
1. Combination with short term crops / Agroforestry system

helps adoption of natural resource development activities
Maize and Avocado intercropping
Woodlot with food crop in FFS Host Farm

Kenya
2. Seedling productions by farmers themselves

Optimisations of types and sources of seedlings
Required tree seedling production by farmers at their locality
3. Capacity building and Empowerment

Situation of small scale farmers in rural areas:

(1) Little access to the information.
(2) Lack of knowledge and education.
(3) Lack of experiences on new practices.
(4) Lack of surplus land for experiments.
(5) Lack of resources for new trials.
(6) Existing high risks to the failures.
(7) Lack of the confidence in decision making.

Those are the reasons why they never try new ideas and continue conventional practices which they feel safe.
(1) Little access to the information

FFS is Weekly Session

FFS facilitator bring new ideas every week
(2) Lack of knowledge and education

Learning topics every week

FFS makes farmers more knowledgeable
(3) Lack of experience on new practices

Learning by Doing

In FFS, farmers learn with practices
(4) Lack of surplus land for experiment

FFS uses Host Farm

Use of some members surplus land no risks own farm
(5) Lack of resources for new trial

FFS provides materials just for learning purpose
All what farmers implement to their farms were already experimented and proved by themselves.

(6) Existing high risk of failure
(7) Lack of confidence on decision making

Empowerment

FFS empowerment process makes farmers as confident experts

Escape from the chain of poverty
Adoption Rate of New Enterprises

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Adoption Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>78</td>
</tr>
<tr>
<td>Cereal Intercropping</td>
<td>84</td>
</tr>
<tr>
<td>Fodder</td>
<td>51</td>
</tr>
<tr>
<td>Fruit Trees</td>
<td>48</td>
</tr>
<tr>
<td>Tree Nursery</td>
<td>82</td>
</tr>
<tr>
<td>Woodlot</td>
<td>82</td>
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</tbody>
</table>

73% of FFS Farmers applied New Enterprises

Source: SNRMP End-line Survey by Farm Africa (2017)
# Practice Rate of New Techniques

<table>
<thead>
<tr>
<th>Technique</th>
<th>Practice Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety selection (cereals)</td>
<td>90.6</td>
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<tr>
<td>Tree planting</td>
<td>92.5</td>
</tr>
<tr>
<td>Transplanting (veg)</td>
<td>82.6</td>
</tr>
<tr>
<td>Transplanting (fruits)</td>
<td>82.9</td>
</tr>
<tr>
<td>Traditional Pesticide (veg)</td>
<td>74.0</td>
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<tr>
<td>Traditional Pesticide (cereals)</td>
<td>64.0</td>
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<tr>
<td>Use of Polytube (fruits)</td>
<td>81.2</td>
</tr>
<tr>
<td>Seed treatment (fruits)</td>
<td>81.3</td>
</tr>
<tr>
<td>Seed bed preparation (veg)</td>
<td>78.3</td>
</tr>
<tr>
<td>Seed bed preparation (fruits)</td>
<td>79.3</td>
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<tr>
<td>Regular monitoring</td>
<td>87.4</td>
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<tr>
<td>Manure use (veg)</td>
<td>87.6</td>
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<tr>
<td>Line/row sowing (cereals)</td>
<td>84.2</td>
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<tr>
<td>Inter cropping (cereal)</td>
<td>73.4</td>
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<tr>
<td>Fruits Tree</td>
<td>90.0</td>
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<tr>
<td>Forage and Fodder production</td>
<td>61.4</td>
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<tr>
<td>Fencing for seedlings (fruits)</td>
<td>93.7</td>
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<tr>
<td>Farm record keeping</td>
<td>81.2</td>
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<tr>
<td>Cost benefit Analysis</td>
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<tr>
<td>Compost (fruit)</td>
<td>84.2</td>
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<tr>
<td>Close observation</td>
<td>88.2</td>
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<tr>
<td>Chemical Pesticide (veg)</td>
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<tr>
<td>Chemical Fertilizer (veg)</td>
<td>94.9</td>
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<tr>
<td>Buckwheat</td>
<td>74.4</td>
</tr>
</tbody>
</table>

82% of FFS Farmers applied New Techniques.

Source: Supplemental Endline Survey for SNRMP by Farm Africa (2017)
4. Long term continuous interaction

Woodlot preparation with maize crop

Kenya
FFS weekly sessions continues for a year and trees are continuously monitored.
Same site after 8 months
Woodlot intercropping site after 8 months

Kenya
Established *Grevillea robusta* woodlot
(Same place after five years)

Kenya
Support to Community Based Farm Forestry Enterprises in Semi-Arid Areas of Kenya Project (SCBFFE)
Kenya Forest Service with World Bank-Japan Social Development Fund (JSDF)
Woodlot developments are accelerated with micro-financing

Senna siamea woodlot by a FFS member

Eucalyptus woodlot by a FFS

Acacia polyacantha woodlot by a FFS member

Melia vilkensii woodlot by a FFS

Kenya
Asante sana

A charcoal kiln developed by FFS graduated farmers with micro-financing through SCBFFE Project