

Koraput Farmers Association (KFA)

A small Non Government Organisation working intensively with the indigenous population (tribal community) for building their sustainable livelihoods in the hinterland of Odisha province in India.

It works on two fronts: ensuring entitlement and enhancing endowment of the indigenous community

Besides livelihoods, it also works on strengthening elementary education, inclusive development of people with disabilities amongst the community.

About the project

Background

Sole dependency on monsoon rainfall for agriculture has made it a high risk proposition. This is more so in the hilly terrains where majority of indigenous population live and cultivate their land on hill slopes which are amidst the forested region. Thus, there has been an age old practice of slash and burn type of agriculture (called shifting cultivation) where before onset of monsoon (especially during dry summer) they fire the vegetated hill slopes and wait till first rain of monsoon and then they sow millets and pulses. This practice makes the patch of land least productive after two cycles of crops as the soil erosion becomes huge and water percolation becomes the least in the absence of vegetation. Therefore, cultivated old patches are abandoned and new patches are acquired for the purpose. Most often densely forested areas are also set on fire. Despite knowing this adverse impact, tribal people continue to practise this as they do not have alternatives. As a result most of the lands remain fallow after being abandoned for at least next three to four years and in-situ moisture conservation become the greatest casualty because of rampant deforestation in the process. If a suitable alternative is placed before them where they can not only ensure their food and nutritional security, but also get additional income from surplus productions as well as restore the eco-system to a considerable extent, then it can bring a turnaround in socio-economic and environmental the landscape of the region. The agro forestry is most suitable model to address this complex issue.

Challenge

The biggest challenge in bringing any change amongst indigenous community has remained as winning their trust and confidence. Over centuries of the past and decades of

having modern independent nations, the indigenous communities have been always neglected and robbed off their resources (rich forest and mines) at different points of time by the state or state supported corporate pushing them to further marginalisation. As a result, any development initiative by the state is looked upon by them with suspicion. Further, the systems in the state governance do not create enough space for officials to intensively t engage with the community for initiating any positive change. Wherever, the change has happened, it is mostly by philanthropic, not for profit and humanitarian agencies. Though many such change have been supported or taken over by the government at a later stage.

Agro Forestry Model

Though agro forestry model of development in hilly terrains has been very successful in some parts of the world including at few places in India, it has not been popularised and replicated much precisely due to lack of commitment and dedicated work with indigenous community.

It is estimated that majority of tribal households are having small and marginal landholdings out of which they cultivate an average of 40% which make them further subsistent. Agro forestry model will be most suited to Koraput's agro-climatic conditions. Here 80% of the total annual rainfall occurs during South-West monsoon and North-East monsoon. The average annual rainfall varies between 1320-1520mm, which is relatively higher while comparing with the rest of the state. KFA has been intensively engaged with the Kondh Tribal Community in the Badamanjari village of Koraput and is seriously pursuing to initiate a pilot on Agro forestry Model of sustainable livelihoods for the community and after establishing the same it will do policy advocacy with the government for its replication. The idea has been discussed with the community in several rounds of interfaces with audio-visuals borrowed from various sources. There has been very enthusiastic response from the community.

Definition - Agro forestry is a sustainable land management system which increases the overall yield of the land, combines the production of crops (including the horticulture trees) and forest plants and/or animals simultaneously or sequentially, on the same unit of land, and applies management practices that are compatible with the cultural practices of the local population.

Based on the above objectives farmers from Badamanjari would be motivated to try out integrated agro forestry as model farms in their own farm holdings (80 cents to 2 acre) and in the common hills (Common Property Resources- CPR) where they used to practices do PODU CULTIVATION (Shifting Cultivation). All practices would be organic and involve the

use of bio pesticides, bio fertilizers and farm yard manure (FYM) and usage of mulching to conserve the moisture.

Components of Integrated Agro Forest Model Farm

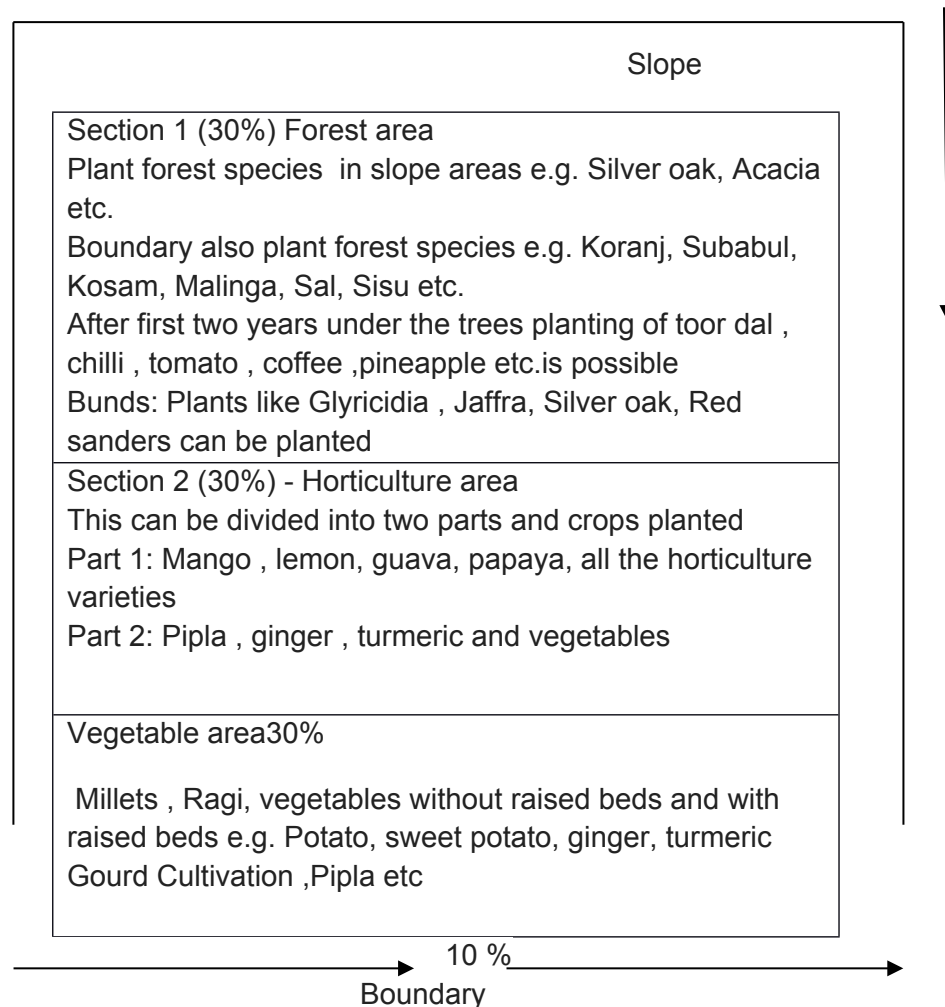
Land levelling (terracing) through bunding, trenching at different heights is the major task to start with where intensive engagement of labour from the family and friends in barter system is required. During this time food security must be ensured with subsistent provisional support and convergence with food security schemes of the government.

Each farm should fulfil the following three criteria's for the farmer

- 1 Home needs
- 2 Farm needs
- 3 Market needs

The model farms are ideal for 1 acre land where the farmer can use the available space into 3 sections demarcated for the following

Sections in one acre of model farm



(Trees like Silver oak, Acacia, Mangium, Jaffra other trees are fast growing species and are very helpful to break the wind velocity for protecting the crops)

Crops in a Model farm: The kind of crops and type will depend on several factors each farmer requires technical support including planning and discussion during this phase once this is complete it is easy for the farmer to continue with his other activities.

The process includes the following sub sets

- A. Crop Selection
- B. Crop- design/ Farm design
- C. Crop Plan

A. Crop Selection: - A lot of components have to be taken into account on the selection of any crop but the standard 6 criteria are

1. Suitability to the local soil
2. Suitability towards the water available in that locality
3. Is the farmer's own inputs sufficient enough for growing that particular crop
4. Availability of labour
5. Availability of seeds
6. Market Demand – Does the crop have any market value

Selection of any crop should be done only after analysing all the 6 criteria and gaining the confidence of the farmer

B. Crop design/ Farm design:- After selecting the individual crops, the placement of these crops on the field is to be done this placement is called as farm design/ crop design

The farmer has to decide on a crop if it's the main crop or the inter crop

Main Crop: Crops meant for commercial purposes are considered as main crops as they bring a fixed amount of cash flow for the farmer and substantiates the market needs within our model farms e.g. Mango, Pepper, Pineapple, papaya , chillies etc

Inter Crop: These are crops which can be used in between main crops e.g. Usage of coriander in between chillies

Companion crops: Here two plants support the growth of each other e.g. Tomato & Corn corn controls the wind velocity and tomato adds nutrients for corn

Once the farmer understands and chooses his crops then the farm design is done along with individual farmers for this each farm is divided into 3 sections with the boundary being the fourth section

Boundary/Fencing: Every agro forestry model farm requires a boundary to prevent livestock and stray animals from feeding on the produce preferably on all sides of the plot but in cases

where there is any canal, steep slope etc. there is no need to do a boundary. Boundaries are of different types

Ideal varieties of plants in one Acre of Integrated Agro Forestry

SI No.	Plant Variety	Requirement per Acre	Spacing in Feet
1	Acacia	10	10
2	Jaffra/bixa	100 (for boundary)	7
3	Silver Oak	140	10
4	Mangium	10	7
5	Mango	15	30
6	Lemon	7	15
7	Sapota	5	30
8	Papaya	5	5
9	Drumstick	5	5
10	Banana	10	6
11	Guava	5	15
12	Orange	5	15
13	Amla	2	8
14	Custard Apple	2	10
15	Pine apple (after 2 yrs)	100	2.5
16	Pepper (after 3 yrs)	2 saplings per tree of height 10- 12 feet	To be placed on the North and East of the tree
17	Coffee (After 4 years)	70	5

The above list is exclusive of vegetables and other spices like gourds, turmeric, ginger etc. which can be done on the 30% section allocated for the purpose

Livestock

There is a need to have organic manure and farm yard manure is the best suitable option and hence existing cattle have to be reared under a cattle shed with urine collection pit to enable the collection of cattle dung for manure preparation.

Economic Benefits (in USD) for one acre of Model Farm

COMPONENTS	1 ST YR	2 ND YR	3 RD YR	4 TH YR	5 TH YR	6 TH YR ONWARDS
VEGETABLE	39	78	96	109	125	160
HORTICULTURE	0	31	100	180	280	390
AGRO-FOREST PLANTATION	0	0	15	40	80	325
TOTAL	39	109	211	369	485	875

(The total monetary value of the produces they get from one acre of land currently shall be within 40-60 USD)

Other Benefits

- This model can be used as the best options possible to treat the common property resources under Forest Rights Act , wherever possible
- Due to multi cropping a varied vegetable basket is ensured for the farmer's family this enables in the reduction of malnutrition in the family
- The small and marginal farmers will be able to interact with the bigger traders for their cash crops enabling an overall increase in the income
- The model helps in “ Carbon Sequestration “ as it involves no carbon emission practices and the use of utilization of soil which act as an effective sink offsetting
- The use of trenches (10x3x1) aids in rain water harvesting and increases the ground water level (One trench can save 700 litres of water)
- Control of soil erosion by using stone bunds and trenches in the model farm Scope of this model in Koraput district

SOCIO-ECONOMIC IMPACTS

- Arresting Forced Migration
- Building Social Capitals
- Enhanced People's Participation in Local Governance
- Enhanced People's Participation Social Protection Schemes
- Employment Generation
- Reducing social unrest and violence by providing an alternate livelihoods
- Providing food security

ECOLOGICAL IMPACTS

- Soil and water conservation
- Increase in vegetative coverage
- Maintaining bio diversity
- Species and Resource conservation
- Soil carbon sequestration
- Maintenance of food chain

Additional Information about KFA

What was the motivation for setting up the organisation?

To organise and provide hand holding support to the farmers (who mostly belonged to excluded indigenous communities like Scheduled Tribes and Scheduled Castes), especially women farmers for building their community based collectives so as to avail the entitlements, have access to quality inputs and market their products without any exploitation and

distress.

The organisation also started helping the community for a better quality of life by addressing the related issues on general health, hygiene, maternity & child care, elementary education, village level sports & cultural activities etc. Making community more responsive to local governance was also a major focus for accessing entitlements.

Organisation's areas of expertise

- Promoting livelihoods: farm and non-farm
- Promoting low cost and sustainable technology for enhancing livelihoods and quality of life
- Strengthening local self governance and right based programmes
- Promoting Child Rights and their Participation in Development process
- Strengthening community based institutions
- Gender mainstreaming

The projects KFA is currently working

- Sustainable Micro-Hydro through Energizing Rural Enterprises and Livelihoods (SMRE)
- Capacity Development of Persons with Disabilities and Children with Disabilities
- Working on Swachh Bharat Abhiyaan (Total Sanitation Campaign) in 2 Blocks of Koraput District (Nandapur and Semiliguda)
- Facilitating Social Audit of MGNREGA (assured wage employment scheme) in Lamtaput and Koraput Blocks of the district

Significant achievements of KFA over the past five years

- Access to green energy through Micro-Hydro-electricity to 285 households
- Irrigation facilities to 350 farming households through diversion based system
- 500 households who used to go 30 km in hilly terrain for husking their rice and processing of ragi, maize, turmeric, now can do within the community itself with availability of power.
- 6400 Child Reporters created during till 2013, are now active in participating in different local governance forums such as Gram Sabha, School Management Committee, Parent Teacher's Associations, Mothers Teachers Associations,
- 135 Village Forest Protection Committee (Vana Samrakhan Samiti- VSS) promoted and capacitated to protect the forest resources and harvest minor forest produces in a sustainable manner

What has been the priority focus and why?

- Agriculture based livelihoods being the backbone of the local economy, its promotion both on production and marketing front is critical for the development of local community

- Sustainable farming being traditionally practiced in the area, their propagation and indigenous knowledge development has been our focus. Therefore, innovations in preparation of bio fertilizers and pesticides are have been our focus and we have been quite successful on this front.
- Promoting green energy such as micro-hydro power from the natural streams and solar power to reduce the carbon foot prints as well as promoting environment conservation and mitigating climate change impacts
- Promoting child participation in development process brings not only trigger in the community but also prepare them as powerful change agents in future

Photographs :



Slashed and burnt vegetation on hill slopes before the onset of monsoon for sowing millets and pulses



**Sometimes it is painful to observe
when grown up trees are burnt in
the process !!**



**Sometimes lush green
and dense forest is
also burnt for
cultivation !!**



For more details please write to us : kfakoraput@gmail.com



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