



**Farm Forestry
Guideline**

November
2012

**Guideline of Farm Forestry on Private Lands for Income
Generation, Economic Biomass Production and Soil Amelioration**

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Farm Forestry Guideline

1. BACKGROUND:

OFSDP has made considerable progress on rehabilitation of degraded forests on lands owned by the state. However the project's coverage in terms of greening of private degraded lands has been very limited. Farm forestry component of the project could not make desired progress and an analysis of the same, indicated the need of a more comprehensive and strategic approach than the present model development/demonstration strategy adopted.

Most of the JFM villages being situated in hilly region have considerable private land on slopes, which has lost its top soil and have very limited agriculture productivity, due to acidic reaction and iron/aluminum toxicity. Similarly under Forest Rights Act, 2006 GOO so far has allotted individual land rights over 5.1 lakh acres of forest land. Rain-fed agriculture lands on lower slopes, those were traditionally maintained with scattered tree cover on the bunds are also fast losing their cover. As the policy of the Nation is to increase tree cover outside forests (TOF) and forestry as a land use has economic potential to augment livelihoods of the forest-fringe poor, farm forestry component of the project requires more comprehensive and strategic effort.

2. OBJECTIVE:

Objectives of project's farm forestry activities are to encourage VSS for tree plantations and tree based farming systems on their private lands simultaneously with degraded forest restoration under JFM approach

- (a) For increasing availability of timber, small timber, firewood & tree biomass from private land for enhancing income to households by meeting market demand as well as for household consumption to reduce pressure on their forest under restoration,
- (b) For rehabilitating lands on slopes through provision of hedge rows (of nitrogen fixing plants/trees) and
- (c) For capacity building of farmers to create tree plantations as a viable enterprise.

3. STRATEGY and PRINCIPLE

The principle of Farm Forestry Program in OFSDP in the consolidation phase is premised on

- Providing an Institutionalized and incentivized platform for tree plantation esp. Timber, Tree Borne Oil Seeds, NTFP and Fruit plantations on private farm lands to augment Natural Resource Base for sustainable and resilient livelihood
- Developing a collaborative platform of public-private-community partnership around tree planting on farm as a raw material for industry as a financial resources

- Promoting resource conservation and regeneration on degraded hill slopes of the eastern ghats

TEN Strategic elements in Farm Forestry in OFSDP	
1)	Financial support and incentives to farmers to match opportunity cost of alternate land use and additional efforts to ensure higher survival
2)	Enhancing productivity of plantations by supplying Quality Planting materials
3)	Ensuring better survival and growth by direct planting by technically sound Forest Department
4)	Provision of post-planting technical back up by Industry/Department
5)	Involvement of farmers/FIG (Farmer Interest Groups) in planning, implementation and monitoring.
6)	Encouraging Cluster approach – Village based (more number of farmers in a village) and multi-village (more number of farmers in neighboring villages) and encouraging farmer institutions (FIG)
7)	Informed choice of species and planting models by farmers;
8)	Promoting nursery raising by trained women SHG
9)	Capacity building of farmers for proper management of plantations.
10)	Participatory and robust monitoring system

FORESTRY MODELS

Increase of tree covers on these lands will be taken up through Industrial and NGO collaboration under following models- block including intercropping (agro-forestry) and farm boundary.

Models	Target Land	Planting Arrangement	Density (per ha) & Spacing	Target Species	Institutional Arrangement	Target DMU
TIMBER/TBO /NTFP MODEL	Rainfed up and medium lands with agriculture crops/ orchards/ backyards	Block plantation Bund Plantation	400- 1600 (between 5m X 5m & 2.5m X 2.5m) 200	Long rotation species	Department-VSS-NGO supporting the Farmer	All DMUs
PULPWOOD MODEL	Flatter and less sloping land, mostly fallow	Block Plantation	625 – 2500 (between 4m X 4m & 2m X 2m)	Short rotation species	Industry – Project – NGO supporting the Farmer	Rayagada, Koraput, Jeypore, PKD
HEDGEROW MODEL	Lands on hill slope with lost top soil and high erosion	Hedge row	Seeding at 1m line to line spacing	Nitrogen fixing/ self sprouting	VSS-NGO supporting the farmer	Rayagada, Koraput, Phulbani, Balliguda Gajapati

Hedge row model will be supported by the project as an incentive for VSS mobilizing more than 20 ha under first two plantation models. Hedges can be planted within these plantations at 1m Horizontal Interval if the land is on slope and farmers' are willing. Otherwise, it can be planted at a different location on hill slope with agriculture/horticulture as land use, as suggested by VSS.

Models	Species Options
TIMBER/TBO /NTFP MODEL	Teak, Gamhar (<i>Gmelina arborea</i>), <i>A. mangium</i> , Pahadi sisso (<i>Dalbergia latifolia</i>); Piasal/ Bija (<i>Peterocarpus marsupium</i>); Mahanimb/ Mundaigatcha (<i>Ailanthus excels</i>);Batra (<i>Melia dubia</i>); Bali sisso (<i>Dalbergia sissoo</i>); Halanda (<i>Adina cordifolia</i>); Siris (<i>Albizia lebbek</i>); Karanj (<i>Pongamia pinnata</i>), Neem (<i>Azadirachta indica</i>), Simarouba (<i>Simarouba glauca</i>)
PULPWOOD MODEL	Jack fruit, Harida/ Haritaki (<i>Terminalia chebula</i>), Aonla (<i>Embilica officinalis</i>) <i>Acacia auriculiformis</i> , <i>Eucalyptus spp</i> , <i>Casuarina equisetifolia</i> , <i>Casuarina junghuhana</i>
HEDGEROW MODEL	<i>Gliricidia sepium</i> , Subabul (<i>Leucaena leucocephala</i>), <i>Indigofera teysmanii</i>

Farmer would make informed choice from suggestive farm forestry and agroforestry models at **Annexure I**

5. FARM FORESTRY EXTENSION/AWARENESS GENERATION

Considering the status of tree farming on private lands in Odisha, strategic use of extension channel has to be planned. Right dissemination of advantage and process of farm forestry options among potential target farmers through appropriate communication channel will be the key to generation of demand. OFSDP will develop following type of extension/communication materials

Objective of Communication/ Communication Contents	Forms of Communication
To explain the details of the programme including the models; terms and conditions related to eligibility; subsidy and incentives	Posters and Brochures in Local languages/ Orientation/ Village Meetings
Agro-forestry models for different agro-climatic zones	Brochures/ Hand outs/ Exposure Visits
Uses and market linkage, buy-back option (industrial collaboration around pulp wood for different tree species	Brochures/ Hand outs/ Exposure Visits
Nursery and planting techniques for different species	Brochures/ Hand outs, audio-visual displays/ Training

Project will organize/facilitate VSS meetings, Industry-farmer interfaces, CB programs to facilitate better and effective dissemination of information. OFSDP's NGO-P, CBSA & IGASA would undertake the supporting / facilitating role for farmers in VSS attended by them.

For pulp wood species, collaborating industry will provide the communication materials and also facilitate dissemination.

10.5

Operational arrangement / roles & responsibilities

Farm Forestry program in OFSDP will be promoted in a collaborative participatory framework, with different stakeholders like Forest Department, Industry, NGO and VSS Community complimenting with contributions as per their inherent strength to optimize synergy. Forest based industries will be invited to participate as per their location and willingness by the DMUs.

The overall principle of roles and responsibilities of the project shall be through facilitations and costs for planting material and planting (with pit digging & sapling planting) at farmer's field as well as incentives to farmers at two stages of plantation growth, and those of contribution of Farmer with land preparation with ploughing and clearing prior to pit digging and planting and post planting maintenance- weeding, soil working, farm manuring, watering, casualty replacement, watch & ward, irrigation and tending/ harvesting.

Following formal meetings and discussion on the PULPWOOD Model of farm forestry component, farmers/ FIG will sign a Memorandum of Understanding (MoU) with the Industry for provision of following supports:

- **Pulp and Paper Industry will**
 - Will cooperate with DMU in mobilizing the farmers through sharing of their IEC materials/platforms and commissioning of extension officials
 - Provide quality Planting materials at subsidized cost (₹7.5/ plant) at the nearest road point to planting site
 - Bear 50% cost of capacity building/awareness measure
 - Offer buy back guarantee at market price from farmers
 - Organize credit linkage with bank if assistance is required by farmers
 - Participate in the monitoring and review process; maintain and update database of farmers and survival/growth of plantations

- Provide any other support as mutually agreed upon
- OFSDP on behalf of farmers / FIG will
 - Mobilize farmers through P-NGO and VSS
 - Pay to industry the cost of subsidized QPM
 - Bear 50% cost of capacity building/awareness measure
 - Take up plantations/bear the cost of plantation (for first year only) in farmers' field*
 - Monitor and review the progress of farm forestry and the involvement of stakeholders
 - Release performance based incentive to farmers based on survival and growth of plantation

Under capacity building participating farmers has to be provided with at least 1 day each training and exposure per year apart from IEC materials/village meetings. While training can be provided by the project (through CBSA), Industry will organize the exposure visits. Both will develop mutually exclusive IEC materials e.g. OFSDP may develop program-related materials while technical aspects can be developed by industries. DMU Chief and Industry representative will review the fulfillment of mutual obligations as per the MoU every month to sort out any shortcomings if any.

DMU can also explore collaboration with other forest-based industries/corporate using biomass as raw materials. Herbs/Medicinal shrubs/ climbers being used as their raw materials can be raised in the farm forestry model as inter-crop or bio-fence with technical support and buyback guarantee. Memorandum of Understanding in line with that for pulp wood industries can be developed for supply of QPM, CB/technical back up and buyback guarantee.

Where industry has not come forward and the VSS with farm households have come forward for farm forestry activities, the FMU only would provide all facilitation of the project. The planting material would be raised at Central Nursery for planting at farmers' field.

Farm Forestry Guideline

Models	OFSDP	Industry	P-NGO	VSS/ SHG	Farmer	Remark
TIMBER/TBO /NTFP MODEL	Organize training through CBSA of farmers and SHG Lay out, pitting and Planting and CR Releasing performance based incentive to farmers based on survival Monitor the progress and involvement of stakeholders	Awareness measures Mobilization of farmer and SHG (for nursery) Coordination & Monitoring	Mobilize farmers with help of NGO SHG/CIG will raise nursery of QPM and sell to the farmers (VSS will make payment for farmer) Transfer funds to farmer as per performance	Application with land record to VSS Land preparation Take post plantation care; will get incentive on work and survival of plantation during 2 nd and 4 th year	Farmer can take up intercropping	
	Subsidized cost of the clone/seedling 50% cost of the CB Land preparation and Planting incl. other nutrient/chemical inputs in the first year Releasing performance based incentive to farmers based on survival Monitor the progress and involvement of stakeholders	Mobilization of farmers QPM at subsidized rate Technical Back up at field Buy-back guarantee 50% cost of CB; awareness measures Organize bank linkage if required	Mobilize farmers with help of Industry Host farmer's awareness/ CB Transfer incentive to Farmer, based on performance, on recommendation of FMU chief	Application with land record to VSS Signing of MoU Availing loan from Bank if required through assistance of Industry Post-planting care including causality replacement, input application; Watch and Ward Harvesting and selling	Farmer can avail bank loan to reduce investment; industry will facilitate bank-linkage; Farmer can take up intercropping	
HEDGEROW MODEL	Organize training through CBSA of farmers and SHG Releasing performance based incentive to farmers based on survival Monitor the progress and involvement of stakeholders	Awareness measures Mobilization of farmer Coordination & Monitoring	Mobilize farmers with help of NGO Transfer funds to farmer as per performance	Application with land record to VSS Land preparation and sowing Post plantation care; will get incentive and maintenance for 2 nd and 3 rd year based on work		

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6.2. Awareness Raising

Different mediums of communication will be used to spread the message about the farm forestry program of the project among potential farmers. IEC materials in local language will be developed and will be displayed in project VSS, FMU and DMU head quarters. Information about the program will also be broadcasted through radio (through programs like Banani etc). At the VSS, information about the program will be widely disseminated during EC/GB meetings to be conducted between November-March and also during the revisit for micro-planning exercise. Project partners like P-NGO, CBSA and IGASA will use their community interaction platforms (trainings/meetings/field visits) to spread the message across the project villages.

Participation of industry will be encouraged to spread the message through sharing of success stories, organizing video shows, facilitating farmer to farmer exchanges.

6.3. Selection of VSS

Cluster approach will be followed in targeting VSS in project fold as per the model. Farm Forestry of pulpwood model with industries will be targeted in divisions of Rayagada, Koraput, Jeypore and Paralakhemundi, considering their proximity to paper industries. Short rotation models and long rotation models of Timber/NTFP/TBO tree species will be targeted in all divisions.

For a VSS to be qualified for inclusion under the scheme, a minimum of 10 Acres (4 ha) have to be ensured. However, coverage in a VSS can be up to 50 ha if land is available and farmers are willing. Villages with applicants willing to form a collective (Farmer Interest Group/SHG/Cooperative) will be given preference. As far as possible cluster approach in selection of villages will be followed for better service/input delivery and marketing. Proximity/access to market (including wood-based industry) will be the criteria which DMU will use to select/prioritize the VSS.

Hedge Row model will be supported as an incentive for the VSS which mobilizes more than 20 ha on other two plantation models. Matching coverage will be 10 running Km for 1st 20 ha under Farm Forestry and additional 0.5 Km for every subsequent 1 ha coverage.

6.4. Selection of Farmer

Preference will be given to farmers having waste lands/fallow/surplus lands (which are usually not under any food production system) and who are keen to put land under complete tree cover for a longer period. However, option of intercropping (agro-forestry) with agriculture/medicinal/pasture on choice of farmer can be done depending on the situation, with planting design under

block plantation models. This will help farmers to continue their food production, while going for additional income from farm forestry.

There will be no limit to area by individual farmers for project facilitations. However, to have operational efficiency, minimum plot size of plantation will be 0.5 acre for block plantation and minimum 100 plants for bund plantations.

A list of willing farmers with quantity of land (along with land type) to be taken up under farm forestry will be listed during the micro-planning revisit exercise by the NGO.

Willing farmer will submit an application (**see Annexure II**) to VSS which has to be accompanied by copy of land record, a traced map showing the area to be planted and an undertaking about willingness to take up land preparation and maintenance of the plantation till harvesting. VSS will set up a Sub-Committee comprising 1 EC member, 1 experienced farmer, Member Secretary, Forest Guard, DO (NRM) of NGO and an Industry Representative (if pulpwood plantation with MOU is proposed) to screen the application. Committee will verify the willingness and land availability/quality and if required will make a field visit. Based on verification, Committee will recommend the names to the FMU through VSS, which will be compiled by the DO (NRM) and forwarded to DMU/shared with Industry (if pulpwood plantation is proposed) for further actions. Following verification of site and records, Industry will execute an agreement with individual farmers/FIG and for providing input, technical back up and buy back guarantee. In case of financial support through bank linkage, tripartite agreement has to be signed. A copy of such agreements has to be shared with concerned FMU chief for record and monitoring.

Depending on the eligibility of VSS for hedgerow model, land will be identified by the Sub-Committee of VSS for a resolution to that effect recorded in an EC meeting. VSS will make arrangements for the protection and management of the hedgerow and may accord the responsibility to a FIG/SHG, if required.

ing Nursery/Arranging Planting Materials

Based on the final list of the applicants and land available for plantation, planning for nursery raising and sourcing of quality planting materials will have to be planned at DMU level during December, 2012- January 2013. While nursery for block plantation will be raised in cluster/VSS through involvement of FIG/SHG members as decentralized nursery (or at Central Nursery by FMU

Chief where decentralized nursery not feasible), planting materials for pulpwood model will be sourced from Industries, with which buy-back arrangement will be finalized.

Decentralized Nursery

One decentralized nursery will be raised for a cluster/VSS with requirement of minimum 50,000 seedlings under TIMBER/TBO /NTFP MODEL. While calculating the number of seedlings required, provisions for 20% casualty replacement will be kept (i.e. 120% of the number of seedlings required will be raised) and accordingly raised seedlings would be carried to farmer's field. Quality seeds will be centrally procured by DMU from good seed stands/ provenances and will be provided to the nursery raiser. The Sub-Committee formed at the VSS level will assist FMU Chief in monitoring the quality of seedlings raised. Payment to the FIG/SHG raising the nursery will be routed through VSS @ ₹ 7.5/- per seedling. VSS will reimburse the labour expenses every month as well as advance fund to FIG/SHG for purchase of materials like polybags, fertilizers, pesticides etc. Respective forest based industries will organize raising and supply of quality planting materials at subsidized rate (₹ 7.5/- per seedling) based upon the Cluster/VSS-wise area to be taken up under pulpwood plantation. Payment will be made by the VSS to industry as per production of the receipts of planting materials at the site by the farmer concerned, endorsed by Cluster /VSS-wise Plantation Team (CPT) to VSS.

Based upon the area to be covered under Hedge-rows, FMU Chief will organize collection/ procurement of quality seeds and supply them to the VSS for seeding during the season.

6.6. Taking up Plantation

Plantation will be taken up in the farmers' field by the project under supervision of FMU chief. While land preparation for TIMBER/TBO /NTFP MODEL & Pulpwood Model will include ploughing, cleaning/ clearing and plantation lay out of field by farmer for pit digging by project, it will be strip cleaning and soil loosening along contour strips for hedge row.

FMU chief will form Cluster/VSS-wise Plantation Teams (CPT) to take up the planting operation and will personally review the progress every week with each CPT & Member Secretary at VSS level one by one during the planting season (July -August). CPT will consist of concerned Forest Guard, Animator(s) of VSS, DO of the NGO team and Industry Representative (only for pulpwood plantations). Team will coordinate the plantation works in farmers' fields in the cluster/VSS for land preparation by Farmer and layout with digging of pit by FG by June, so as to finish the planting

task well in time, while ensuring best quality. The team will also have to submit a plantation completion certificate endorsed by the farmer concerned to the FMU chief.

Concerned farmer will have

- (a) to complete land preparation which will include ploughing, cleaning/ clearing of field and plantation lay out for block models and agro-forestry models,
- (b) to be present in the field during pit digging & planting operations and
- (c) to undertake post planting maintenance including casualty replacement till harvesting.

A Plantation record sheet (see Annexure III) supplied by VSS will be maintained for each site by the farmer himself.

Hedgerow planting will be supervised by the concerned VSS directly as per the arrangement made by VSS, who will submit a plantation completion certificate to FMU Chief.

Progress Monitoring

Progress of farm forestry will be reviewed at FMU and DMU level in monthly review meetings and the periodic review at RCCF and PMU level. During the plantation season, FMU chief will review the progress every week with each CPT one by one at VSS level.

DO (NRM) will be responsible for reporting the monthly progress of the farm forestry component to FMU Chief. DO (NRM) will collect the information on all models from FIG/SHG/Farmers/VSS. In all cases the information has to be corroborated with the records of Nursery, plantation record and VSS resolution register.

At DMU level a FMU-wise and Cluster/VSS-wise data base of farmers will be maintained for follow up of technical support and market linkage. Industry will maintain the database with respect to pulpwood farmers and share/update that with DMU.

FES (micro-planning/NRM) at DMU will be responsible for coordinating the activity /progress with facilitative support from FLE. During pre-planting season and plantation season, a team constituted by DMU chief, will visit some sample cluster/VSS to check quality of nursery operation, plantation operation and that of planting materials.

6.8. Incentivizing Survival

Each participating farmer will be informed about this provision of survival based incentive and accordingly encouraged to maintain better survival and growth. Incentive from the project is neither a compensation of farmers' effort nor a means to share from plantation in future. As such, it will be the responsibility of the farmer to maintain the plantation for realizing maximum benefit for themselves, once planting is done by Project. If required, industry will help eligible farmers to avail bank linkage to bear the cost of post-planting maintenance.

1st Monitoring of survival and growth for incentive will be taken up during post-monsoon period (Oct-Dec, 2014) of 2nd year by the CPT. CPT will visit each site and take up 100% tree count to report survival and also make a qualitative observation about the growth and maintenance. FMU Chief will randomly cross check 10% of the samples. Based on the survival and growth remarks, each farmer will be provided with incentive at the rate below.

Farm Forestry model	No. of plants growing well	Rate of incentive for plants surviving & growing well
Timber/TBO/NTFP Model <i>Long rotation tree species</i>	Above 60 % of planted seedlings	₹2.5 per plant
Pulpwood Model <i>Short term tree species</i>	Above 60 % of planted seedlings	₹1.5 per plant
Hedgerow model	Above 2 km of planted hedgerows	₹500 per km and proportion thereof

Following the monitoring and cross checking, FMU chief will forward the eligible farmers list VSS-wise with fund requirement to DMU chief with a copy to concerned VSS. VSS will display the list at VSS building and keep farmers concerned informed. DMU will release fund to the VSS, who will subsequently pass on the incentive to the concerned person during an EC meeting. VSS has to ensure the receipt of incentive by the farmer in January 2015.

2nd Monitoring of survival and growth for last incentive of the project will be taken up during post-monsoon period (Oct-Dec, 2016) of 4th year of by the CPT. The DO of NGO-P under OFSDP would be replaced by nominee of DFO for each of FMU. CPT will visit each site and take up 100% tree count to report survival and also make a qualitative observation about the growth and maintenance. FMU Chief will randomly cross check 10% of the samples and send the final eligible list to DFO within December 2016. DMU will release from fund separately maintained for this purpose to the VSS, who will subsequently pass on the incentive to the concerned person during an EC meeting. VSS has to ensure the receipt of incentive by the farmer in January 2017.

Based on the survival and growth remarks, each farmer will be provided with incentive at the rate below.

Farm Forestry model	No. of plants growing well	Rate of incentive for plants surviving & growing well
Timber/TBO/NTFP Model <i>Long rotation tree species</i>	Above 60 % of planted seedlings	₹3.5 per plant
Pulpwood Model <i>Short term tree species</i>	Above 60 % of planted seedlings	₹1.5 per plant

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Suggestive Agro-forestry Models

Farmers who have made their own choice of block planting of tree species only, would be encouraged for such tree cultivation for their specific purpose.

Those farmers who would prefer to cultivate intercropping with tree cultivation e.g. agricultural crop, medicinal plant, horticultural crop, fodder crop and others, are suggested with following agro-forestry models. Some of the models recommended are as under:

1. Agri-silviculture system (Bund planting, Alley cropping, Tree block with intercropping of agril crops during initial 2-3 years)
2. Silvi- pastoral system
3. Horti-silvipastoral system
4. Cultivation of NTFPs / priority Medicinal plants that could be linked to IGA
5. Live fencing of species for income generation.

Zone wise suggested list design of tree planting with intercropping is also enumerated herewith. This is tentative listing. After farmers or group of farmers have been identified, and they have shown interest for agro-forestry model, type of models to be demonstrated and designed therein could be worked out in consultation with the identified NGOs for farmers depending on location / extent of land and preparedness of farmers for other crop inputs.

AGRO FORESTRY MODELS FOR DIFFERENT ZONES

Zone - I (Dist: Angul, Sambalpur, Deogarh, Keonjhar, Mayurbhanj) :

- Model 1: (2m x 2m) x 4 m:
Eucalyptus with Harida, Kolatha, Biri, Saru , Yam, Ground Nut, Grass (Broom), Til, Mandia, Malze /
Teak with Saru, Pineapple, Ginger
- Model 2: (8m x 8m) : Cashew or Eucalyptus with Paddy as intercrop.
- Model 3: (5m x 5m) (400 Nos per Ha.)
Tree species : *Acacia mangium*, Sisoo, Gambhari, Grafted Mango, Jack fruit
Agricultural Crop: 1st to 3rd year: Groundnut, Arhar, Black gram, Til.
After 3rd year: Pineapple, Turmeric, Ginger, *Colocasia* (Saru)
- Model - 4 : (Silvipasture) (5m x 5m)
Tree Species : Gambhari, Sisoo, *Sesbania grandiflora* (Agasthi), Subabul, Bamboo
Inter Cropping: Grass -Stylo , Dinanath
- Model - 6 : Spacing 2 m x 2 m (2500 plants per Ha.)
Design : Eucalyptus and Acacia in 2 m x 2 m alternatively.
Subabul planted along the Boundary, at same spacing.
Inter Cropping : Turmeric

Zone - II (Rourkela, Bonai):

- Model 1: (2m x 2m) x 4 m: Gambhari or Eucalyptus with Paddy and Arhar
Teak or Mango with Ginger, Arhar, Saru.
- Model 2: (2m x 2m) x 4 m:
Fodder crop along the boundary at 1 m x 1m. Tree Species at 1 m x 1 m, with every 5th plant being NTFP.
Inter Cropping: Groundnut, Biri, Moong, Til, Millet, Arhar, Ginger, Turmeric, Sweet Potato.

Zone - III (Balliguda, Phulbani, Rayagada) :

- Model 1: (1m x 1m) x 4 m:
Teak with Arhar, Kandula, Til, Kolatha, Muga, Haldi / Teak or Cashew or Eucalyptus with Haldi, Arhar, Kandula and pineapple.
- Model -2 : 5 m x 5 m
Tree Species : Gambhari, Grafted Cashew and Grafted Mangoes alternately at 5m x 5m.
Inter Cropping: 1st 10 rows Arhar and last 10 rows Biri.
- Model -3 : (For slop~~y~~- podu area)
Distribution along the slop: above 20% slop there are existing Cashew plants. Above 20% slope, planting of Bamboos at 30 m x 30 m in the gaps.
Between 10% to 20% slope, Hill Broom at 1 m x 1 m. Between 5% to 10% slope Topioca (katha kanda). Below 5% and plane, Bird chilli or Dhanua lanka (*Capsicum frutescens*).

Zone - IV (Koraput, Jeypore, Parlakhemundi) :

- Model 1: 1m x 1m x 5 m: Teak or Eucalyptus or Cashew with Alasi (Niger), Mandia, Biri, Arhar
- Model - 2 : 5 m x 5 m
Tree Species : Grafted Mango / Jack fruit / Cashew / Tamarind as per the need of the community.
Inter Crop : Maize, Arhar, Turmeric, Ginger
- Model - 3 : (2 m x 2 m) x 4 m (1250 plants per ha)
Tree species : Eucalyptus
Inter Cropping: Niger, Ragi, Maize, Arhar, Turmeric, Ginger.

Zone - V (Balasore, Bhadrak) :

- Model 1: Bund Plantation: Acacia, Eucalyptus, Teak, *Sterculia foetida* (katha badam) and *Callophyllum inophyllum* (Polanga)
- Model - 2 : (2 m x 2 m) x 4 m.
Tree Species : Eucalyptus
Inter Cropping: Paddy, Arhar, Green gram, Black gram
- Model - 3 : (2 m x 2 m) x 4 m.
Tree species : Alternate Fire wood, Fodder species at 1 m x 1 m.
Fire Wood - Eucalyptus / Acacia / Chakunda - 2000 per Ha.
Fodder - Subabul / Agasti (*Sesbania grandiflora*) - 2000 /Ha.
Agriculture Crop: Ground Nut, Til.

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APPLICATION FOR REGISTRATION WITH VSS
FOR FARM FORESTRY UNDER OFSDP

1. Name of applicant
2. Name of father/husband or wife when married
4. (a) Date of birth-
(b) Sex (Male/Female)-
(c) Marital status (single/ married)-
5. Address in full
with telephone/mobile/ email wherever available
6. Profession (self-employed/ farmer/ housewife/ student/
employed in Govt. organization/ non-government
organization)
7. Proof of Identify / photo identity
9. Details of land
(a) Location (giving name of State/District/Tahasil/ Village
(b) Holding – Plot No. -
Khata No. -
Mouza Kisam-
Tahasil-
Area in (acre/hectare)-
Surrounding plots-
10. Details of tree grown/
Tree / model to be cultivated

DECLARATION

I, Shri..... hereby declare that the particulars submitted is true to the best of my knowledge and I undertake to take up tree plantation on my private holdings with my willingness as per OFSDP guidelines for farmers to cultivate, protect and maintain for harvest on maturity.

Place :
Date :

Signature
Name in full

List of documents enclosed:

- (1) Identity Certificate – Voter identity Card or identity certificate from Sarpanch, Ward Member
- (2) Copy of RoR
- (3) Trace map of Plot with surrounding plots
- (4) Any other material (Please specify)

For VSS use

Registration
Plantation record Sheet

Accepted/ Registered. Date.....
Not issued/ Issued. Date.....

Signature of VSS President

Format of Tree Plantation Record with Farmer
(in a card size of 21 cm X 28 cm from OFSDP for issue by VSS)

PART I (Entries to be made by VSS)

-----	Range (FMU)	.....	Block
-----	Forest Section	.....	G P
-----	Forest Beat	.....	Village
Name	.....	Plot No.	
Address	.....	Khata No.	
	.....	Mouza Kissam No.	
		Area (in acre/ in ha)	

PART II (Entries to be made by Farmer)

(a) About plantation and maintenance

Date Of entry by farmer	Period of Planting Followed by period of maintenance	Tree Plantation particulars						Number of plants surviving	REMARKS
		Species	No of plants planted	Farm forestry model and area planted (in ha)	Post planting activity taken up	Minimum & maximum height noted (in meter)	Minimum & maximum diameter in plantation noted (in centimeter)		
1	2	3	4	5	5	6	7	8	9

(b) About trees disposed at intervals and recorded by farmer

Date of disposal	About trees harvested/ removed		About timber/ Firewood quantity obtained		Remarks (for own use or for sale)
	Species	Number	Timber (in cft/ cum) Poles/ Bamboo in number	Firewood in qtl/ MT	
1	2	3	4	5	6

END